TRAVELLER®20

Science-Fiction Adventure in the Far Future

Melee Weapons

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Dagger	Cr10	3	250g	-	1.5/3 meters	1d4 (19)	Tiny	Piercing				
Blade	Cr50	3	350g	-	1.5 meters	1d6 (19)	Small	Piercing				
Foil	Cr100	3	500g	1	1.5 meters	1d6 (18)	Medium	Piercing				
Sword	Cr150	1	1kg	-	1.5 meters	1d8 (x2)	Medium	Piercing/Slashing				
Cutlass	Cr100	3	1250g	-	1.5 meters	1d8 (18)	Medium	Slashing				
Broadsword	Cr300	2	2500g	-	1.5 meters	2d6 (19)	Large	Slashing				
Bayonet	Cr30	3	250g	-	1.5 meters	1d6 (x2)	Medium	Piercing				
Spear	Cr10	0	2kg	-	3/6 meters	1d8 (x2)	Large	Piercing				
Halberd	Cr75	2	2500g	-	3 meters	1d10 (x2)	Large	Piercing/Slashing				
Pike	Cr40	1	4kg	-	3 meters	1d12 (x2)	Large	Piercing				
Cudgel	Cr10	0	1kg	-	1.5/3 meters	1d6 (x2)	Medium	Bludgeoning				

Bows

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Sling	Cr1	0	-	1	15 meters	1d4 (x2)	Small	Bludgeoning	-	-	100g	Cr1
Short Bow	Cr50	1	500g	1	18 meters	1d6 (x2)	Medium	Piercing	-	-	100g	Cr2
Long Bow	Cr75	2	1kg	1	30 meters	1d8 (x2)	Large	Piercing	-	-	100g	Cr2
Military xBow	Cr250	2	6kg	1	36 meters	1d10 (19)	Medium	Piercing	-	-	100g	Cr2
Sporting xBow	Cr150	3	3kg	1	24 meters	1d8 (19)	Medium	Piercing	-	-	100g	Cr2
Repeat xBow	Cr200	3	4kg	1	24 meters	1d8 (19)	Medium	Piercing	-	-	100g	Cr2

Handguns

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Revolver	Cr150	4	900g	1	30 meters	1d10 (x2)	Small	Piercing	Yes	6	100g	Cr5
Auto Pistol	Cr200	5	750g	1	24 meters	1d10 (x2)	Small	Piercing	Yes	15	250g	Cr10
Body Pistol	Cr500	8	250g	1	24 meters	1d8 (x2)	Small	Piercing	Yes	6	50g	Cr20
Snub Pistol*	Cr150	8	250g	1	18 meters	1d10 (x2)	Small	Piercing	No	6/15	30/75g	Cr10/25

Shotguns

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Shotgun**	Cr150	5	3750g	1	3 meters	3d6/2d6/1d6 (x2)	Small	Piercing	Yes	10	750g	Cr10

Rifles

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Rifle	Cr200	5	4kg	1	72 meters	1d12 (x2)	Medium	Piercing	Yes	10	500g	Cr20
Carbine	Cr200	5	3kg	1	45 meters	1d10 (x2)	Small	Piercing	Yes	20	125g	Cr10
Auto Rifle	Cr1000	6	5kg	1/4	60 meters	1d12 (x2)	Medium	Piercing	Yes	20	500g	Cr20
Assault Rifle	Cr300	7	3kg	1/4	45 meters	1d12+1 (x2)	Medium	Piercing	Yes	30	330g	Cr20
Accelerator Rifle	Cr900	9	2500g	1/3	60 meters	1d12 (x2)	Medium	Piercing	No	15	500g	Cr25
ACR****	Cr1000	10	3500g	1/4	72 meters	1d12+2 (x2)	Medium	Piercing	No	40	500g	Cr20
Gauss Rifle	Cr1500	12	3500g	1/4/10	96 meters	2d12 (x2)	Medium	Piercing	No	40	250g	Cr30

Machine Guns

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
SMG	Cr500	5	2500g	0/4	45 meters	1d10 (x2)	Small	Piercing	Yes	30	500g	Cr20
LMG	Cr1200	6	5500g	0/10/20	60 meters	1d12 (x2)	Large	Piercing	Yes	100	2500g	Cr120

Laser Weapons

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Laser Pistol	Cr1000	12	1200g	1	36 meters	2d10 (x2)	Small	Laser	No	25	500g	Cr100
Laser Carbine	Cr2500	8	5kg	1	48 meters	3d8 (x2)	Small	Laser	No	50	3kg	Cr200
Laser Rifle	Cr3000	9	6kg	1	45 meters	3d10 (x2)	Medium	Laser	No	100	4kg	Cr300

Support Weapons

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
LAG**	Cr600	8	4kg	1	96 meters	2d10 (x2)	Large	Piercing	Yes	-	500g	Cr20
Grenade Launcher	Cr200	7	3kg	1	100 meters	*	Medium	*	Yes	1	5kg	*
RAM Launcher	Cr400	8	5kg	1	200 meters	*	Large	*	Yes	1	1.4kg	*
Disposable Launcher	Cr200	7	1.5kg	1	100 meters	*	Medium	*	Yes	1	n/a	n/a

High Energy Weapons

	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
PGMP-12	KCr1	12	6kg	1	24 meters	6d12 (18)	Large	Energy	Yes	40	3g	KCr2.5
PGMP-13*****	KCr65	13	900g	1	36 meters	6d12 (18)	Large	Energy	Yes	40	7kg	KCr50
PGMP-14	KCr300	14	6kg	1	36 meters	8d12 (18)	Large	Energy	Yes	40	6kg	KCr50
FGMP-14******	KCr100	14	9kg	1	36 meters	8d12 (18)	Large	Energy	Yes	40	1.6kg/90g	KCr200
FGMP-15	KCr400	15	1kg/50g	1	45 meters	9d20 (18)	Large	Energy	Yes	40	2kg/110g	KCr900

x2 Weapon does double damage on a critical hit
18 Threat range is increased to 18-20 instead of just 20. Does double damage on a critical hit
19 Threat range is increased to 19-20 instead of just 20. Double damage on a critical hit
* Fires Tranquilizer (standard), High Explosive, or Armor Piercing rounds
** Can be worn under most other types, adding its rating to the rating of the other armor.
*** Fires Standard, High Explosive, or Flechette rounds
**** Fires Slug (standard) or Buckshot rounds
***** Fires Standard or High Explosive rounds
****** Requires the shooter to be wearing Battle Dress

ARCHAIC ARMOR

	Armor Rating	Max Dex Bonus	Armor Check Penalty	Cost	Weight	TL	Speed 9m	6m
Light Armor								
Padded	1 (0)	+8	0	Cr5	4.5kg	1	9	6
Leather	2 (1)	+6	0	Cr10	7.5kg	1	9	6
Studded Leather	3 (1)	+5	-1	Cr25	9kg	1	9	6
Chain Shirt	4 (2)	+4	-2	Cr100	11kg	2	9	6
Medium Armor								
Hide	3 (1)	+4	-3	Cr15	11kg	0	6	3
Scale mail	4 (2)	+3	-4	Cr50	13.5kg	1	6	3
Chainmail	5 (2)	+2	-5	Cr150	18kg	2	6	3
Breastplate	5 (2)	+3	-4	Cr200	13.5kg	1	6	3
Heavy Armor								
Splintmail	6 (3)	+0	-7	Cr200	20.5kg	2	6	3
Banded mail	6 (3)	+1	-6	Cr250	16kg	2	6	3
Half-plate	7 (3)	+0	-7	Cr600	22.5kg	2	6	3
Full plate	8 (4)	+1	-6	Cr1500	22.5kg	2	6	3

MODERN ARMOR

	Armor Rating	Max Dex Bonus	Armor Check Penalty	Cost	Weight	TL	Speed 9m	6m
Light Armor								
Jack	2	+8	0	Cr50	1kg	5	9	6
Mesh	4	+5	-1	Cr150	2kg	7	9	6
Flak jacket	4	+6	0	Cr100	1kg	7	9	6
Reflec */**	0/6	+8	0	Cr1500	1kg	10	9	6
Medium Armor								
Ablat ***/**	2/5	+5	-1	Cr75	2kg	9	6	3
Cloth	6	+4	-2	Cr250	2kg	6	6	3
Combat Env Suit	6	+4	-2	Cr500	2kg	9	6	3
Heavy Armor								
Combat Armor	7	+3	-4	Cr20,000	18kg	11	6	3
Combat Armor	7	+5	-1	Cr30,000	10kg	12	6	3
Combat Armor	8	+6	0	Cr60,000	6kg	14	6	3
Hostile Env Suit	5	+2	-4	Cr1000	40kg	12	6	3
Hostile Env Suit	4	+3	-4	Cr150,000	25kg	14	6	3
Tailored Vac Suit	2	+6	-0	Cr9000	-	14	9	6
OTHER								
Vac Suit	4	+0	-5	Cr6000	18kg	7	6	3
Vac Suit	3	+2	-3	Cr8000	2kg	8	6	3
Vac Suit	2	+4	-4	Cr7000	6kg	14	6	3

OTHER	Effects	Cost	TL
Chameleon	+2 to AC	Cr1000	12
Chameleon	+4 to AC	Cr5000	14
Psionic Shielding	Immunity to Psi attacks	Cr4000	12

* First number is the base armor rating, the second number is the armor rating vs. laser weapons.
** Can be worn under combat armor and battle dress.
*** Unlike other types of armor, the armor rating (vs. lasers) of Ablat is reduced by 1 point every time a laser weapon hits it. Thus after 5 hits by any type of laser, the Ablat armor will be rendered useless (against any type of attacks).

TACTICAL SPEED

Race	No Armor or Light Armor	Medium Armor or Heavy Armor
Aslan	18m	15m
Vargr, Ursa	12m	9m
Human, Lurian, Sydite	9m	6m
Virushi	6m	3m

CARRYING CAPACITY

Strength	Light Load	Medium Load	Heavy Load
1 Str	up to 1.3kg	1.4-2.7kg	2.8-4.5kg
2 Str	up to 2.7kg	2.8-5.8kg	5.9-9kg
3 Str	up to 4.5kg	4.6-9kg	9.1-13.5kg
4 Str	up to 7.2kg	7.3-14.8kg	14.9-22.5kg
5 Str	up to 9kg	9.1-18kg	18.1-27kg
6 Str	up to 9kg	9.1-18kg	18.1-27kg
7 Str	up to 10.4kg	10.4-20.7kg	20.8-31.5kg
8 Str	up to 11.7kg	11.8-23.8kg	23.9-36kg
9 Str	up to 13.5kg	13.6-27kg	27.1-40.5kg
10 Str	up to 14.8kg	14.6-29.7kg	29.8-45kg
11 Str	up to 17.1kg	17.2-34.2kg	34.3-51.7kg
12 Str	up to 19.3kg	19.4-38.7kg	38.8-58.5kg
13 Str	up to 22.5kg	22.6-45kg	45.1-67.5kg
14 Str	up to 26.1kg	26.2-52.2kg	52.3-78.7kg
15 Str	up to 29.7kg	29.8-59.8kg	59.9-90kg
16 Str	up to 34.2kg	34.3-68.8kg	68.9-103.5kg
17 Str	up to 38.7kg	38.8-77.8kg	77.9-117kg
18 Str	up to 45kg	45.1-90kg	90.1-135kg
19 Str	up to 52.2kg	52.3-104.8kg	104.9-157.5kg
20 Str	up to 59.8kg	59.9-120.7kg	119.8-180kg
21 Str	up to 68.8kg	68.9-137.7kg	138.8-207kg
22 Str	up to 77.8kg	77.9-155.7kg	155.8-234kg
23 Str	up to 90kg	90.1-180kg	180.1-270kg
24 Str	up to 104.8kg	104.9-209.7kg	209.8-315kg
25 Str	up to 119.7kg	119.8-239.8kg	239.9-360kg
26 Str	up to 137.7kg	138.8-275.8kg	275.9-414kg
27 Str	up to 155.7kg	155.8-311.8kg	311.9-468kg
28 Str	up to 180kg	180.1-360kg	360.1-540kg
29 Str	up to 209.7kg	209.8-419.8kg	419.9-630kg
+10 Str	x4	x4	x4

CARRYING LOADS

Load	Max Dex	Check Penalty	Speed (12m)	(9m)	Run
Medium	+3	-3	9m	6m	x4
Heavy	+1	-6	9m	6m	x3

MOUNTS AND VEHICLES

Mount/Vehicle Mount (carrying load)	Per Hour	Per Day
Light Ground	9.7km	77.6km
Average riding animal	8.0km	64.0km
Heavy riding animal	6.4km	51.2km
Light draft animal	8.0km	64.0km
Average draft	6.4km	51.2km
Heavy draft animal	4.7km	37.6km
Light combat mount	6.4km	51.2km
Average combat mount	4.7km	37.6km
Heavy combat mount	3.2km	25.6km
Watercraft		
Raft or barge (poled)*	0.8km	8.0km
Rowboat	2.4km	24.0km
Sailing boat	3.0km	96.0km
Sailing ship	4.0km	96.0km
Large sailing ship	4.8km	115.2km
Rowed Galley	6.4km	64.0km

TERRAIN/OVERLAND MOVEMENT

Terrain	Highway	Road	Trackless
Plains	x1	x1	x3/4
Scrub, rough	x1	x1	x3/4
Forest	x1	x1	x1/2
Jungle	x1	x3/4	x1/4
Swamp	x1	x3/4	x1/4
Hills	x1	x3/4	x1/2
Mountain	x3/4	x3/4	x1/4
Sandy	x1	x3/4	x1/2
Desert			

LIGHT SOURCES

Object	Light	Duration
Match	1.5m	30 seconds
Lighter	1.5m	5 minutes
Candle	1.5m	1 hour
Oil Lamp	4.5m	6 hours per half-liter of oil
Torch	6m	20 minutes
Campfire	9m	4 hours
Bonfire	12m	6 hours
Flashlight*	9m	5 hours
Electric Lantern	9m	8 hours
Pressure Tent	9m	3 days
Lantern		

*A cone 9m long and 9m wide

MOVEMENT AND DISTANCE

Speed	6m	9m	12m
One Personal Round/Tactical Movement — 6 seconds			
Walk	6m	9m	12m
Hustle	12m	18m	24m
Run (x3)	18m	27m	36m
Run (x4)	24m	36m	48m
One Vehicle Round/Local Movement — 1 minute			
Walk	60m	90m	120m
Hustle	120m	180m	240m
Run (x3)	180m	270m	360m
Run (x4)	240m	360m	480m
One Ship Round/Overland Movement — 1 hour			
Walk	3.6km	5.4km	7.2km
Hustle	7.2km	10km	14.4km
Run (x3)	10.8km	15.4km	21.6km
Overland Movement - 1 day			
Walk	28.8km	43.2km	57.6km
Hustle	57.6km	86.4km	115.2km

(Assumes 8 hours spent actually traveling)

HAMPERED MOVEMENT

Condition	Example	Movement Penalty
Obstruction		
Moderate	Undergrowth	x3/4
Heavy	Thick undergrowth	x1/2
Surface		
Bad	Steep slope or mud	x3/4
Worse	Deep snow	x1/2
Poor visibility		
Poor visibility	Darkness or fog*	x1/2

*Includes any effects that create a "fog"

Personal Equipment

	TL	Cost	Weight
Artificial Gill	8	Cr4000	4 kg
Cold Weather Gear	1	Cr200	4 kg
Combination Mask	5	Cr150	1kg
Filter Mask	3	Cr10	0.5kg
Oxygen Tanks	5	Cr500	5 kg
Protective Suit	5	Cr700	5 kg
Respirator	3	Cr10	0.5kg
Swimming Gear	3	Cr200	1kg
Scuba Tanks	5	Cr800	5 kg
Vision Aids			
Binoculars	5	Cr75	1 kg
Cold Light Lantern	6	Cr20	0.25 kg
Electric Torches	5	Cr10	0.5 kg
Gas or Oil Lamp	2	Cr10	0.5 kg
IR Goggles	6	Cr500	0.25kg
LI Goggles	7	Cr600	0.25kg
Torches	1	Cr1	0.25 kg

Personal Devices

	TL	Cost	Weight
Artificial Psionic Shield Helmet	8	Cr4000	1 kg
Bull-Horn	5	Cr120	5 kg
Hand Calculator	7	Cr120	1 kg
Hand Computer	11	Cr1000	0.5 kg
Inertial Locator	9	Cr1200	1.5 kg
Long Range Communicator	6	Cr500	5 kg
Magnetic Compass	3	Cr10	0.5 kg
Medium Range Communicator	6	Cr200	10 kg
Metal Detector	6	Cr300	1 kg
Radiation Counter	6	Cr250	1 kg
Short Range Communicator	5	Cr100	5 kg
Wrist Watch	4	Cr25+	negligible

Tools

	TL	Cost	Weight
Carpentry Tool Set	2	Cr300	25 kg
Chain Saw	6	Cr500	8 kg
Disguise Kit	1	Cr1000	5 kg
Electronic Tool Set	5	Cr1000	20 kg
Lock Pick Set	4	Cr10	0.25kg/
Mechanical Tool Set	5	Cr1000	20 kg
Medical Kit	7	Cr1000	10 kg
Metalwork Tool Set	4	Cr1500	50 kg
Shelters			
Advanced Base	8	KCr50	6000 kg
Pre-Fabricated Cabin	6	KCr10	4000 kg
Pressure Tent	7	Cr2000	25 kg
Tarpaulin	4	Cr10	2 kg
Tent	2	Cr200	3 kg

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Melee Weapons	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Dagger	Cr10	0	250g	-	1.5/3 meters	1d4 (19)	Tiny	Piercing				
Blade	Crr50	3	350g	-	1.5 meters	1d6 (19)	Small	Piercing				
Foil	Cr100	3	500g	-	1.5 meters	1d4 (18)	Medium	Piercing				
Sword	Cr150	1	1kg	-	1.5 meters	1d8 (x2)	Medium	Piercing/Slashing				
Cutlass	Cr100	3	1250g	-	1.5 meters	1d8 (18)	Medium	Slashing				
Broadsword	Cr300	2	2500g	-	1.5 meters	2d6 (19)	Large	Slashing				
Bayonet	Cr10	3	250g	-	1.5 meters	1d8 (x2)	Large	Piercing				
Spear	Cr10	0	2kg	-	3/6 meters	1d8 (x2)	Large	Piercing				
Halberd	Cr75	2	2500g	-	3 meters	1d10 (19)	Large	Piercing/Slashing				
Pike	Cr40	1	3kg	-	3 meters	1d12 (x2)	Large	Piercing				
Cudgel	Cr10	0	1kg	-	1.5/3 meters	1d6 (x2)	Medium	Bludgeoning				
Bows												
Sling	Cr1	0	-	1	15 meters	1d4 (x2)	Small	Bludgeoning	-	-	100g	-
Short Bow	Cr50	1	500g	1	18 meters	1d6 (x2)	Medium	Piercing	-	-	100g	Cr2
Long Bow	Cr75	2	1kg	1	30 meters	1d8 (x2)	Large	Piercing	-	-	100g	Cr2
Military xBow	Cr250	2	6kg	1	36 meters	1d10 (19)	Medium	Piercing	-	-	100g	Cr2
Sporting xBow	Cr150	3	3kg	1	24 meters	1d8 (19)	Medium	Piercing	-	-	100g	Cr2
Repeat xBow	Cr200	3	4kg	1	24 meters	1d8 (19)	Medium	Piercing	-	10	100g	Cr2
Handguns												
Revolver	Cr150	4	900g	1	30 meters	1d10 (x2)	Small	Piercing	Yes	6	100g	Cr5
Auto Pistol	Cr200	5	750g	1	45 meters	1d10 (x2)	Small	Piercing	Yes	15	250g	Cr10
Body Pistol	Cr500	7	250g	1	24 meters	1d8 (x2)	Small	Piercing	Yes	6	50g	Cr20
Snub Pistol*	Cr150	8	250g	1	18 meters	1d10 (X2)	Small	Piercing	No	6/15	30/75g	Cr10/25
Shotguns												
Shotgun**	Cr150	5	3750g	1	3 meters	3d6/2d6/1d6 (x2)	Medium	Piercing	Yes	10	750g	Cr10
Rifles												
Rifle	Cr200	5	4kg	1	72 meters	1d12 (x2)	Medium	Piercing	Yes	10	500g	Cr20
Carbine	Cr200	5	3kg	1	45 meters	1d10 (x2)	Small	Piercing	Yes	20	125g	Cr10
Auto Rifle	Cr1000	6	5kg	1/4	60 meters	1d12 (x2)	Medium	Piercing	Yes	20	500g	Cr20
Assault Rifle	Cr300	7	3kg	1/4	45 meters	1d12+1 (x2)	Medium	Piercing	Yes	30	330g	Cr20
Accelerator Rifle	Cr900	9	2500g	1/3	60 meters	1d12 (x2)	Medium	Piercing	No	15	500g	Cr25
ACR****	Cr1000	10	3500g	1/4	72 meters	1d12+2 (x2)	Medium	Piercing	Yes	20	500g	Cr15
Gauss Rifle	Cr1500	12	3500g	1/4/10	96 meters	2d12 (x2)	Medium	Piercing	No	40	400g	Cr30
Machine Guns												
SMG	Cr500	5	2500g	0/4	45 meters	1d10 (x2)	Small	Piercing	Yes	30	500g	Cr20
LMG	Cr1200	6	5500g	0/10/20	60 meters	1d12 (x2)	Large	Piercing	Yes	100	2500g	Cr120
Laser Weapons												
Laser Pistol	Cr1000	12	1200g	1	36 meters	2d10 (x2)	Small	Laser	No	25	500g	Cr100
Laser Carbine	Cr2500	8	5kg	1	45 meters	3d8 (x2)	Small	Laser	No	50	3kg	Cr200
Laser Rifle	Cr3500	9	6kg	1	60 meters	3d10 (x2)	Medium	Laser	No	100	4kg	Cr300
Support Weapons												
LAG***	Cr600	8	4kg	1	96 meters	2d10 (x2)	Large	Piercing	Yes	5	500g	Cr20
Grenade Launcher	Cr200	7	3kg	1	100 meters	*	Medium	*	Yes	1	1kg	*
RAM Launcher	Cr400	8	5kg	1	200 meters	*	Large	*	Yes	3	1.4kg	*
Disposable Launcher	Cr200	7	1.5kg	1	100 meters	*	Medium	*	Yes	1	n/a	n/a
High Energy Weapons												
PGMP-12	KCr10	12	6kg	1	24 meters	6d12 (18)	Large	Energy	Yes	40	3lg	KCr2.5
PGMP-13*****	KCr65	13	900g	1	36 meters	7d12 (18)	Large	Energy	Yes	40	7kg	KCr50
PGMP-14	KCr300	14	9kg/50g	1	36 meters	8d12 (18)	Large	Energy	Yes	40	1.6kg/90g	KCr250
FGMP-14*****	KCr100	14	1kg	1	45 meters	7d20 (18)	Large	Energy	Yes	40	9kg	KCr65
FGMP-15	KCr400	15	1kg/50g	1	45 meters	9d20 (18)	Large	Energy	Yes	40	2kg/110g	KCr300

x2 Weapon does double damage on a critical hit

18 Threat range is increased to 18-20 instead of just 20. Does double damage on a critical hit

19 Threat range is increased to 19-20 instead of just 20. Does double damage on a critical hit

* Fires Tranquilizer (standard), High Explosive, or Armor Piercing rounds

** Fires Slug (standard) or Buckshot rounds

*** Fires Standard, High Explosive, or Flechette rounds

**** Fires Standard or High Explosive rounds

***** Requires the shooter to be wearing Battle Dress

	TL	Cost	Weight
Personal Equipment			
Artificial Gill	8	Cr4000	4 kg
Cold Weather Gear	1	Cr200	4 kg
Combination Mask	5	Cr150	1kg
Filter Mask	3	Cr10	0.5kg
Oxygen Tanks	5	Cr500	5 kg
Protective Suit	5	Cr700	5 kg
Respirator	5	Cr100	0.5kg
Swimming Gear	3	Cr200	1kg
Scuba Tanks	5	Cr800	5 kg
Vision Aids			
Binoculars	3	Cr75	1 kg
Cold Light Lantern	6	Cr20	0.25 kg
Electric Torches	5	Cr10	0.5 kg
Gas or Oil Lamp	2	Cr10	0.5 kg
IR Goggles	6	Cr500	0.25kg
LI Goggles	7	Cr500	0.25kg
Torches	1	Cr1	0.25 kg

	TL	Cost	Weight
Personal Devices			
Artificial Psionic Shield Helmet	8	Cr4000	1 kg
Bull-Horn	5	Cr120	5 kg
Hand Calculator	7	Cr10	1 kg
Hand Computer	11	Cr1000	0.5 kg
Handcuffs	2	Cr25	0.3 kg
Inertial Locator	9	Cr1200	1.5 kg
Long Range Communicator	6	Cr500	15 kg
Magnetic Compass	3	Cr10	negligible
Medium Range Communicator	5	Cr200	10 kg
Metal Detector	6	Cr300	1 kg
Radiation Counter	5	Cr250	1 kg.
Short Range Communicator	5	Cr100	5 kg
Wrist Watch	4	Cr25+	negligible

	TL	Cost	Weight
Tools			
Carpentry Tool Set	2	Cr300	25 kg
Chain Saw	6	Cr500	8 kg
Disguise Kit	7	Cr1000	5 kg
Electronic Tool Set	7	Cr2000	5 kg
Lock Pick Set	4	Cr10	0.25 kg
Mechanical Tool Set	5	Cr1000	20 kg
Medical Kit	7	Cr1000	10 kg
Metalwork Tool Set	4	Cr1500	50 kg
Shelters			
Advanced Base	8	KCr50	6000 kg
Pre-Fabricated Cabin	6	KCr10	4000 kg
Pressure Tent	7	Cr2000	25 kg
Tarpaulin	1	Cr10	2 kg
Tent	2	Cr200	3 kg

ARCHAIC ARMOR

	Armor Rating	Max Dex Bonus	Armor Check Penalty	Cost	Weight	TL	Speed 9m	6m
Light Armor								
Padded	1 (0)	+8	0	Cr5	4.5kg	1	9	6
Leather	2 (1)	+6	0	Cr10	7.5kg	1	9	6
Studded Leather	3 (1)	+5	-1	Cr25	9kg	1	9	6
Chain Shirt	4 (2)	+4	-2	Cr100	11kg	2	9	6
Medium Armor								
Hide	3 (1)	+4	-3	Cr15	11kg	0	6	3
Scale mail	4 (2)	+3	-4	Cr50	13.5kg	1	6	3
Chainmail	5 (2)	+2	-5	Cr150	18kg	2	6	3
Breastplate	5 (2)	+3	-4	Cr200	13.5kg	1	6	3
Heavy Armor								
Splintmail	6 (3)	0	-7	Cr200	20.5kg	2	6	3
Banded mail	6 (3)	+1	-6	Cr250	16kg	2	6	3
Half-plate	7 (3)	+0	-7	Cr600	22.5kg	2	6	3
Full plate	8 (4)	+1	-6	Cr1500	22.5kg	2	6	3

MODERN ARMOR

	Armor Rating	Max Dex Bonus	Armor Check Penalty	Cost	Weight	TL	Speed 9m	6m
Light Armor								
Jack	2	+8	0	Cr50	1kg	5	9	6
Mesh	3	+5	-1	Cr150	2kg	7	9	6
Flak jacket	4	+6	0	Cr100	1kg	7	9	6
Reflec */**	0/6	+8	0	Cr1500	1kg	10	9	6
Medium Armor								
Ablat */***	2/5	+5	-1	Cr75	2kg	9	6	3
Cloth	6	+4	-2	Cr250	2kg	6	6	3
Combat Env Suit	6	+2	-3	Cr1500	3kg	10	6	3
Heavy Armor								
Combat Armor	7	+3	-4	Cr20,000	18kg	11	6	3
Combat Armor	7	+5	-1	Cr30,000	10kg	12	6	3
Combat Armor	8	+6	0	Cr60,000	6kg	14	6	3
Hostile Env Suit	5	+2	-3	Cr18,000	40kg	12	6	3
Hostile Env Suit	7	+3	-4	Cr150,000	25kg	14	6	3
Tailored Vac Suit	2	+6	-0	Cr9000	-	14	9	6
Vac Suit	4	+0	-5	Cr9000	8kg	9	6	3
Vac Suit	3	+2	-3	Cr8000	2kg	12	6	3
Vac Suit	2	+4	-2	Cr7000	-	14	6	3

OTHER	Effects	Cost	TL
Chameleon	+2 to AC	Cr1000	12
Chameleon	+4 to AC	Cr5000	14
Psionic Shielding	Immunity to Psi attacks	Cr4000	12

* First number is the base armor rating, the second number is the armor rating vs. laser weapons.

** Can be worn under most other types, adding its rating to the rating of the other armor. Reflec may not be worn under combat armor and battle dress.

*** Unlike other types of armor, the armor rating (vs. lasers) of Ablat is reduced by 1 point every time a laser weapon hits it. Thus after 5 hits by any type of laser, the Ablat armor will be rendered useless (against any type of attacks).

MOUNTS AND VEHICLES

Mount/Vehicle	Per Hour	Per Day
Mount (carrying load)		
Light riding animal	9.7km	77.6km
Average riding animal	8.0km	64.0km
Heavy riding animal	6.4km	51.2km
Light draft animal	8.0km	64.0km
Average draft animal	6.4km	51.2km
Heavy draft animal	4.7km	37.6km
Light combat mount	6.4km	51.2km
Average combat mount	4.7km	37.6km
Heavy combat mount	3.2km	25.6km
Watercraft		
Raft or barge (poled)*	0.8km	8.0km
Rowboat	2.4km	24.0km
Sailing boat	3.2km	76.8km
Sailing ship	4.0km	96.0km
Large sailing ship	4.8km	115.2km
Rowed Galley	6.4km	64.0km

TERRAIN/OVERLAND MOVEMENT

Terrain	Highway	Road	Trackless
Plains	x1	x1	x1
Scrub, rough	x1	x1	x3/4
Forest	x1	x1	x1/2
Jungle	x1	x3/4	x1/4
Swamp	x1	x3/4	x1/2
Hills	x1	x3/4	x1/2
Mountain	x3/4	x1/2	x1/4
Sandy Desert	x1	x3/4	x1/2

LIGHT SOURCES

Object	Light	Duration
Match	1.5m	30 seconds
Lighter	1.5m	5 minutes
Candle	1.5m	1 hour
Oil Lamp	4.5m	6 hours per half-liter of oil
Torch	6m	20 minutes
Campfire	9m	4 hours
Bonfire	12m	6 hours
Flashlight*	9m	6 hours
Electric Lantern	9m	8 hours
Cold Light Lantern	9m	3 days

* A cone 9m long and 9m wide

TACTICAL SPEED

Race	No Armor or Light Armor	Medium Armor or Heavy Armor
Aslan	18m	15m
Vargr, Ursa	12m	9m
Human, Lurian, Sydite	9m	6m
Virushi	6m	3m

CARRYING CAPACITY

Strength	Light Load	Medium Load	Heavy Load
1 Str	up to 1.3kg	1.4-2.7kg	2.8-4.5kg
2 Str	up to 2.7kg	2.8-5.8kg	5.9-9kg
3 Str	up to 4.5kg	4.6-9kg	9.1-13.5kg
4 Str	up to 5.8kg	5.9-11.7kg	11.8-18kg
5 Str	up to 7.2kg	7.3-14.8kg	14.9-22.5kg
6 Str	up to 9kg	9.1-18kg	18.1-27kg
7 Str	up to 10.3kg	10.4-20.7kg	20.8-31.5kg
8 Str	up to 11.7kg	11.8-23.8kg	23.9-36kg
9 Str	up to 13.5kg	13.6-27kg	27.1-40.5kg
10 Str	up to 14.8kg	14.6-29.7kg	29.8-45kg
11 Str	up to 17.1kg	17.2-34.2kg	34.3-51.7kg
12 Str	up to 19.3kg	19.4-38.7kg	38.8-58.5kg
13 Str	up to 22.5kg	22.6-45kg	45.1-67.5kg
14 Str	up to 26.1kg	26.2-52.2kg	52.3-78.7kg
15 Str	up to 29.7kg	29.8-59.8kg	59.9-90kg
16 Str	up to 34.2kg	34.3-68.8kg	68.9-103.5kg
17 Str	up to 38.7kg	38.8-77.8kg	77.9-117kg
18 Str	up to 45kg	45.1-90kg	90.1-135kg
19 Str	up to 52.2kg	52.3-104.8kg	104.9-157.5kg
20 Str	up to 59.8kg	59.9-119.7kg	119.8-180kg
21 Str	up to 68.8kg	68.9-137.7kg	138.8-207kg
22 Str	up to 77.8kg	77.9-155.7kg	155.8-234kg
23 Str	up to 90kg	90.1-180kg	180.1-270kg
24 Str	up to 104.8kg	104.9-209.7kg	209.8-315kg
25 Str	up to 119.7kg	119.8-239.8kg	239.9-360kg
26 Str	up to 137.7kg	138.8-275.8kg	275.9-414kg
27 Str	up to 155.7kg	155.8-311.8kg	311.9-468kg
28 Str	up to 180kg	180.1-360kg	360.1-540kg
29 Str	up to 209.7kg	209.8-419.8kg	419.9-630kg
+10 Str	x4	x4	x4

CARRYING LOADS

Load	Max Dex	Check Penalty	Speed (12m)	(9m)	Run
Medium	+3	-3	9m	6m	x4
Heavy	+1	-6	9m	6m	x3

MOVEMENT AND DISTANCE

	Speed 6m	9m	12m
One Personal Round/Tactical Movement – 6 seconds			
Walk	6m	9m	12m
Hustle	12m	18m	24m
Run (x3)	18m	27m	36m
Run (x4)	24m	36m	48m
One Vehicle Round/Local Movement – 1 minute			
Walk	60m	90m	120m
Hustle	120m	180m	240m
Run (x3)	180m	270m	360m
Run (x4)	240m	360m	480m
One Ship Round/Overland Movement – 1 hour			
Walk	3.6km	5.4km	7.2km
Hustle	7.2km	10.km	14.4km
Run (x3)	10.8km	15.4km	21.6km
Overland Movement - 1 day			
Walk	28.8km	43.2km	57.6km
Hustle	57.6km	86.4km	115.2km

(Assumes 8 hours spent actually traveling)

HAMPERED MOVEMENT

		Movement Penalty
Condition	Example	
Obstruction		
Moderate	Undergrowth	x3/4
Heavy	Thick undergrowth	x1/2
Surface		
Bad	Steep slope or mud	x1/2
Very bad	Deep snow	x1/4
Poor visibility	Darkness or fog*	x1/2

*Includes any effects that create a "fog".

UNTRAINED SKILLS

Skill	Key Ability
Appraise	Int
Balance	Dex*
Bluff	Cha
Bribery	Cha
Broker	Int
Climb	Str*
Craft [cascade]	Int/Dex
Disguise	Cha
Driving	Dex
Entertain [cascade]	Int/Dex
Forgery	Int/Dex
Gambling	Int
Gather Information	Cha
Handle Animal	Cha
Hide	Dex*
Intimidate	Cha
Jump	Str*
Leader	Int/Cha
Liaison	Cha
Listen	Wis
Move Silently	Dex*
Recruiting	Edu
Ride	Dex
Search	Int
Sense Motive	Wis
Spot	Wis
Survival	Wis
Swim	Str
Throw	Dex

ABILITY SCORE MODIFIERS

Ability Score	Modifier
0-1	-5
2-3	-4
4-5	-3
6-7	-2
8-9	-1
10-11	+/-0
12-13	+1
14-15	+2
16-17	+3
18-19	+4
20-21	+5
22-23	+6
24-25	+7
26-27	+8
28-29	+9
30	+10

OBJECT ARMOR RATING AND STRUCTURAL INTEGRITY

Item	AR	SI
Rope	0	1
Synthetic Rope	0	1
Light Fixture	0	2
Simple Wooden Door	0	2
Small Wood Crate	0	4
Metal Storage Barrel	2	4
Heavy Wooden Door	2	7
Fireproof Box	2	4
Metal Door	3	4
Brick, Rock, or Concrete Wall (30cm)	3	17
Reinforced Concrete Wall (1m)	9	50
Steel Chain	5	2
Handcuffs	5	1
Interior Wooden Wall	0	2
Int. Metal (Hard Steel) Wall	5	1
Bulkhead	10	50

VISUAL ENCOUNTER RANGES

Terrain	Detection and Distance	Hexes	Basic Range
Arcology, popular starport, dense pedestrian and vehicle traffic	2d4 x 75m (avg. 375m)	5T	Close
City or town center, moderate pedestrian and vehicle traffic	3d6 x 150m (1575m)	1S	Short
Suburban neighborhood, light pedestrian and vehicle traffic	6d6 X 300m (6300m)	4S	Medium
Smoke, heavy fog, dense clouds	2d4 X 75m (avg. 375m)	5T	Close
Jungle, dense forest	2d4 X 150m (750m)	10T	Long
Heavy mountainous terrain	6d6 X 150m (3150m)	1S	Short
Rugged hills or low mountains	6d6 X 150m (3150m)	2S	Short
Light forest, low rolling hills	6d6 X 300m (6300m)	4S	Medium
Scrub, brush, or bush	3d6 X 150m (1575m)	1S	Short
Grasslands, plains, or other open terrain with little cover	4d6 X 1.5km (10.5km)	7S	Long
Observer is in flight, clear skies	4d6 x 1.5m (18.0m)	12S	Very Long
Observer is in flight, dusk or dawn	3d6 x 1.5km (15.0km)	10S	Long
Observer is in flight, dusk or dawn	4d6 x 1.5km (10.5km)	7S	Long
Observer is in flight, heavy clouds or night	4d6 x 1.5km (5.0km)	3S	Short

ENCOUNTER AWARENESS DIFFICULTY

Circumstance	DC
Base	20
Target size	Target's per size category
Running silent	+15
Jamming	Special
Passive scan	+10
Not moving	+5
Camouflage	Special
Six or more Vessels	-2
Moonlight	+5
Starlight	+10
Deep Darkness	+20
Total Darkness	Impossible

COMM. AND SENSOR RANGES

Range	Distance
Close	up to 1km
Short	up to 50km
Medium	up to 500km
Long	up to 5000km
Continental/V, long	up to 500km
World-wide/Extreme	up to 10,000km

EDUCATION SCORE EQUIVALENTS

2 Elementary	12 Bachelor's Degree
4 Middle School	14 Master's Degree
10 High School	16 Doctorate Degree

EXAMPLE DIFFICULTY CLASSES (DCs)

Difficulty	DC	Example
Simple	0	Walk across the floor
Very Easy	5	Climb a ladder
Easy	10	Climb a knotted rope
Average	15	Plot a course to a familiar star system
Hard	20	Jump a horse over an obstacle while riding
Difficult	25	Swim in churning, storm driven water
Formidable	30	Plot a course to an uncharted star
Challenging	35	Pilot a course to an uncharted star, while under fire and without a computer.
Incredible	40	Convince the judge that a pardon scrawled on the back of a cocktail napkin really is from the planetary governor
Nearly Impossible	45	Perform brain surgery with a low-tech field surgical kit, under fire, in the rain, while wounded

Degree of Success

DC or higher	Success
DC+10 or higher	Great Success
DC+20 or higher	Incredible Success

DEMOLITIONS

Structural Material	Penetration	Breach	Damage
		Type of Charge	
Wood	250 grams	4kg	1d6
Rock/Stone	500 grams	7.5kg	1d8
Interior Starship Material	600 grams	9kg	1d10
Concrete	750 grams	11kg	1d12
Reinforced Concrete	1kg	15kg	2d6
Vehicle Hull	1kg	15kg	2d8
Vehicle Armor	+1kg per AR	+15kg per AR	4d20
Interior Starship Bulkhead	8kg	75/9kg	4d20
Starship Hull	8kg	120kg	6d20
Starship Armor	+10kg per AR	+150kg per AR	

Penetration Charge: Minimal penetration, normal damage.

Breaching Charge: 1m breach hole, x10 damage. Moving through a breach hole is treated as if moving through an open hatchway (a move action).

Placing a Charge: 2 full round actions, DC15. Max. 10kg.

Carefully Placing a Charge: 3 minutes, DC10. Any size.

Tamping a Charge: 6 minutes, DC20. x2 damage.

Failing a Placement or Tamping Check: Demolition skill check (DC15) to avoid failing to inflict any damage at all. A successful check still results in half damage.

Damage to a Demolition Charge: Roll 1d20. If less than the damage inflicted then it goes off prematurely.

SUBSTANCE ARMOR RATING AND THICKNESS

Substance	TL	Base AR	Max AR	Thickness
Paper	1	0	3	up to 40mm +1 AR per +20mm thickness (22cm)
Rope	1	0	3	up to 40mm +1 AR per +30mm thickness (33cm)
Synthetic Fibers	7	1	10	up to 50mm +1 AR per +15mm thickness (15cm)
Glass	1	1	8	up to 10mm +1 AR per +5mm thickness (5cm)
Ice	1	0	6	up to 20mm +1 AR per +10mm thickness (44cm)
Wood	1	1	8	up to 150mm +1 AR per +150mm thickness (150cm or 5')
Brick, Rock, Concrete	1	3	25	up to 120mm +1 AR per +120mm thickness (120cm or 4')
Reinforced Concrete	5	5	25	up to 90mm +1 AR per +90mm thickness (90cm or 3')
Iron	1	1	10	up to 60mm +1 AR per +60mm thickness (60cm or 2')
Steel	3	5	15	up to 30mm +1 AR per +30mm thickness (30cm or 1')
Aluminum	7	1	15	up to 45mm +1 AR per +45mm thickness (45cm or 1.5')
Hard Steel	6	2	20	up to 15mm +1 AR per +15mm thickness (15cm or 6")
Composites	8	2	20	up to 10mm +1 AR per +10mm thickness (10cm or 4")
Industrial Ceramics	9	2	25	up to 50mm +1 AR per +10mm thickness (5cm or 2")

PERSONAL COMBAT ACTIONS

Not an Action	AoO?
Delay	No

Standard Actions

Aid another	No
Attack (melee)	No
Attack (ranged)	Yes
Bull Rush	No
Burst Fire	No
Feint	No
Head a dying friend	No

Full Actions

Called Shot	Yes
Charge	No
Coup de grace	Yes
Dive Attack	Yes
Double move	Varies
Escape from a net	Yes
Extinguish flames	Yes
Full attack	Varies
Open a hatchway	Yes
Patch a pressure suit breach	Yes
Prepare to throw oil	Yes
Put on a pressure or vac suit	Yes
Run	Yes
Suppressive Fire	Yes
Throw a two-handed weapon with one hand	Yes

Move Equivalent Actions

Climb	No
Control a frightened mount	Yes
Draw a weapon	No
Mount or dismount an animal	No
Mount or dismount a vehicle	No
Move any heavy object	Yes
Open a door, iris valve, or sliding door	No
Pick up an item	Yes
Ready a shield	No
Reload	Yes
Retrieve a stored item	Yes
Sheathe a weapon	Yes
Stand up from prone	Yes

Varied Actions

Disarm(4)	Yes
Grapple	Yes
Trip an opponent	Yes
Use a skill	Varies
Use feat	Varies

Free Actions

Activate an item	No
Drop an item	No
Drop to the floor	No
Speak	No

Partial Actions

Start full round action	No

BASIC STARSHIP & VEHICLE COMBAT ACTIONS

Not an Action	AoO?
Delay	No

Standard Actions

Command (Command)	No
Range Check (Astrogator)	No

Full Actions

Aid another (Gunner)	No
Point Defense Sandcasters (Gunner)	No
Point Defense Lasers (Gunner)	No
Point Defense Repulsors (Gunner)	No
Reload Vessel or Vessel's Weapon	No
Tactics (Command)	Yes
Avoid Collision (Pilot/Driver)	No
Break Pursuit (Pilot/Driver)	No
Evade Attack (Pilot/Driver)	Yes
Pursuit (Pilot/Driver)	No
Ram (Pilot/Driver)	Varies
Atmospheric Entry (Pilot)	Yes
Dock Ships (Pilot)	Yes
Orbital Insertion (Pilot)	Yes
Tactical Communications (Comm)	Yes
Comms Jamming (Comm)	Yes
Intercept Enemy Communications (Comm)	Yes
Sensor Jamming (Sensor)	Yes
Sensor Targeting (Sensor)	Yes
Damage Control (Engineer)	Yes
Power Routing (Engineer)	Yes
Excess Power Routing (Engineer)	Yes
Overpower Weapons (Engineer)	Yes

Free Actions

Computer Fire Control (Comp)	No
Computer Targeting (Comp)	No

ATTACK ROLL MODIFIERS

	Melee	Ranged
Attacker flanking defender	+2	
Attacker on higher ground	+1	+0
Attacker prone	-4	-
Attacker invisible	+2**	+2*
Attacker firing blind	+2**	+2*
Defender sitting or kneeling	+2	-2
Defender prone	+4	-4
Defender stunned, cowering, or off balance	+2**	+2**
Defender surprised or flat-footed	+0**	+0**
Defender running	+0**	-2**
Defender grappling (attacker not)	+0**	+0**
Defender pinned	+4**	-4**
Defender has cover	See Cover	
Defender concealed or invisible	See Concealment	
Defender helpless	See Helpless Defenders	

* Most archaic ranged weapons cannot be used while the attacker is prone, but a character can use a crossbow while prone.

** The defender loses any Dexterity bonus to AC.

CROSS-SCALE COMBAT

Circumstance	Dmg. Dice Adj.
Personnel vs. Vehicle	-5 dice
Personnel vs. Starship	-10 dice
Vehicle vs. Personnel	+5 dice
Vehicle vs. Starship	-5 dice
Starship vs. Personnel	+10 dice*
Starship vs. Vehicle	+5 dice

*Ignores any armor ** Two internal dmg. rolls

COVER

Degree of Cover	Cover AC Bonus	Cover Reflex Save Bonus
1/4	+2	+1
1/2	+4	+2
3/4	+7	+3
9/10	+10	+4*
Total	-	-

*Half damage if save is failed; no damage if successful.

CONCEALMENT

Concealment	Miss Chance
One-Quarter	10%
One-Half	20%
Three-quarters	30%
Nine-tenths	40%
Total	50%

SUPPRESSIVE FIRE DAMAGE

RoF	Extra Damage
3-4 rounds	none
10 rounds	+1 die of damage
20 rounds	+2 dice of damage
100 rounds	+4 dice of damage

BURST FIRE EFFECTS

Burst Size	Attack Bonus	Extra Damage
1 round	+0	+0 damage
3 round burst	+1	+1 die of damage
4 round burst	+2	+2 dice of damage
10 round burst	+3	+3 dice of damage
20 round burst	+5	+5 dice of damage
100 round burst	+10	+10 dice of damage

CALLED SHOT MODIFIERS

Item Size	Modifier	Example
Fine	-12	Ring on hand, Button on jacket
Diminutive	-8	Foot, Hand, Eye, Heart, Hand Computer
Tiny	-6	Leg, Arm, Hat on head
Small	-5	Chest, Groin, Small Weapon, Backpack
Medium	-2	Medium Weapon
Large	-2	Large Weapon
Huge	-1	

RELATIVE SPEED MODIFIERS

Relative Speed Difference	Target AC Modifier
0-25 kph	-
26-50 kph	+1
51-100 kph	+2
101-200 kph	+4
201-400 kph	+8
401-800 kph	+10
801-1000 kph	+12
1001+ kph	+16

GRAVITY EFFECTS

Local Gravity	Check Modifier
Zero Gravity	-
Trace Gravity (0.1 - 0.3 G)	-
Very Low Gravity (0.4 - 0.7 G)	-1
Standard Gravity (0.8 - 1.2 G)	-0
Heavy Gravity (1.3 - 1.5 G)	-2
Oppressive Gravity (1.6 G or higher)	-3
Weapons with recoil (in Low Gravity or less)	-2

SIZE MODIFIERS TO ATTACK BONUS AND ARMOR CLASS

Size	Weight (kg or Volume (m³))	Size Modifier	Natural Reach (long/tall)	Face W x L (long/tall)	Starships and Smallcraft Tonnage (tons)	Ship Size	Size Modifier
Fine	0 to 0.05	+8	0	-	-	-	+16
Diminutive	0.05 to 0.5	+4	0	-	-	-	+14
Tiny	0.5 to 5	+2	0	-	-	-	+10
Small	5 to 30	+1	1.5m	1.5m x 1.5m	-	-	+8
Medium	30 to 250	+0	1.5m	1.5m x 1.5m	-	-	+8
Large	250 to 2000	-1	3m / 1.5m	1.5m x 1.5m / 1.5m x 3m	-	-	+4
Huge	2000 to 15,000	-2	4m / 3m	3m x 3m / 3m x 6m	1-9 tons	Tiny	+2
Gargantuan	15,000 to 115,000	-4	6m / 3m	6m x 6m / 6m x 12m	10-99 tons	Small	+1
Colossal	115,000 to 1,315,000	-8	7.5m / 4.5m	12m x 12m / 12m x 24m	100-999 tons	Medium	0
Enormous	1,315,000+	-10	9m / 6m	24m x 24m / 24m x 48m	1000-9999 tons	Large	-1
Monstrous	-	-12	-	-	10,000-99,999 tons	Huge	-2
Stupendous	-	-14	-	-	100,000-999,999 tons	Gargantuan	-4
Incredible	-	-16	-	-	1,000,000+ tons	Colossal	-8

ADJUST RANGE MODIFIERS

Circumstance	Modifier
Higher Current Speed	+1 per 10kph difference in speed
Higher Acceleration	+1 per difference in maximum acceleration
Range Agility	+0-6

EVASIVE MANEUVERS

Situation	AC Bonus
1-10	+0
11-20	+1
21-28	+2
29-33	+4
34-38	+6
39++	+8

RANGE VALUES IN SPACE

Range	Hexes	Distance (in Kilometers)
Visual	1	up to 15,000
Close	1	up to 15,000
Short	1-3	up to 45,000
Medium	4-5	up to 75,000
Long	6-8	up to 120,000
Extreme	9-16	up to 240,000
Extreme 2	17-20	up to 300,000
Extreme 2	21-24	up to 360,000
Extreme 3	25-28	up to 420,000
Extreme 4	29-32	up to 480,000
Far	33-320	up to 4,800,000
System-wide	321+	beyond 4,800,000

COLLISIONS

Vehicle Speed	Damage on Target
Not Moving	-
Very Slow	Vehicle SI x 0.1
Slow	Vehicle SI x 0.25
Cruising Speed	Vehicle SI x 0.5
Fast	Vehicle SI
Max Speed	Vehicle SI x 2

Target	Damage on Vehicle
Lifeform	SI x Damage on Target ÷ Armor Rating
Another Vehicle	Its Damage on Target
Stone/Concrete/Steel	SI x 3
Large Tree	SI x 2
Wooden Structure	SI x 1.5
Small Tree	SI x 1.25
Plant (shrub or bush)	See Vehicle Speed

COLLISION AVOIDANCE

Situation	DC
Base	5
Traffic (5 or more vessels within short range)	+5
Heavy debris	+10
Small debris field, heavy traffic, light vessels	+15
Asteroid field, light density	+20
Asteroid field, average density	+25
Asteroid field, heavy density	+30
Every 6 points of speed (starships and small craft)	+5
Very Slow (vehicles only)	+5
Slow or Offroad speed (vehicles only)	+10
Cruising speed (vehicles only)	+5
Fast (vehicles only)	+15

SHIP'S WEAPONS AREA EFFECT

Weapon System	Area of Effect (AoE)
Lasers	5m per USP rating
Missiles or Energy Weapons	10m per USP rating
Meson Guns	10m per USP rating
Nuclear Missiles	100m per USP rating
Particle Accelerators	1m per USP rating

WEAPON EFFICIENCY vs. BLACK GLOBES

Weapon Type	Energy Absorbed
Lasers, Plasma Gun	None
Fusion Gun, Meson Gun	Absorbed Damage X 2
Missile	-
Particle Accelerator	Absorbed Damage X 5
Meson Gun	Absorbed Damage X 2
Nuclear Missile	Absorbed Damage X 100

TACTICAL SPEED

Race	No Armor or Light Armor	Medium Armor	Heavy Armor
Aslan	18m	15m	-
Vargr, Ursa	12m	9m	-
Human, Lurian, Sydite	9m	6m	-
Virushi	6m	3m	-

SHIP CONFIGURATION vs. MESON ATTACKS

Configuration	Mod
Needle/Wedge	-6
Cone	-4
Cylinder	-2
Closed Structure	-1
Sphere	-1
Flattened Sphere	-2
Dispersed	-4
Structure	-
Planetoid	-6
Buffered	-8

SHIP'S WEAPONS

Missiles

	Damage
Standard	d6 (18) x1
Nuclear	d6 (17) x2
Laser	d10 (19) x2

Ship's Lasers

Configuration	Damage
Mining	d6 (20) x1
Beam	d8 (20) x1
Pulse	d10 (19) x2

Ship's Weapons

	Damage
Particle Acc.	d12 (18) x2
Plasma Gun	d12 (16) x5
Fusion Gun	d20 (16) x5
Meson Gun	d20 (15) x10

SENSOR ENCOUNTER RANGES (Vehicles Only)

Sensor Model	Detection	Encounter Distance	Hexes	Basic Range
Model1	up to 5km	1d3 X 1.5km (4km)	1S	Short
Model2	up to 5km	1d4 X 1.5km (10km)	7S	Very Long
Model3	up to 50km	2d6+8 X 1.5km (22km)	15S	Very Long
Model4	up to 100km	30km	20S	Extreme
Model5	up to 500km	30km	20S	Extreme
Model6	up to 1000km	30km	20S	Extreme
Model7	up to 5000km	30km	20S	Extreme
Model8	up to 10,000km	30km	20S	Extreme
Model9	beyond 10,000km	30km	20S	Extreme

SENSOR ENCOUNTER RANGES (Small Craft and Starships Only)

Sensor Model	Detection	Encounter Distance	Hexes	Basic Range
Model1	up to 15,000km	1d20 X 750km (avg 3km)	10T	Close
Model2	up to 75,000km	3 X 15,000km (10km)	3S	Short
Model3	up to 75,000km	1d2+3 X 15,000km (22km)	3S	Short
Model4	up to 120,000km	1d3+5 X 15,000km (33km)	12S	Very Long
Model5	up to 240,000km	1d4+8 X 15,000km (53km)	35S	Extreme
Model6	up to 300,000km	300,000km	20S	Extreme
Model7	up to 4,800,000km	300,000km	20S	Extreme
Model8	up to 9,600,000km	300,000km	20S	Extreme
Model9	beyond 9,600,000km	300,000km	20S	Extreme

BATTLEFIELD REPAIRS

System to be Repaired	Skill Req.	DC
Engineering		
Jump Drive	T/Eng	40
Maneuver Drive	T/Eng	36
Power Plant	T/Eng	36
Screens	T/Elec	30
Fire Control or Vehicle Weaponry	T/Elec or T/Mech	36 or 34
Low Berths	T/Med	30
Electronics	T/Elec	24
Mechanical	T/Mech	22
Other Miscellaneous	T/Mech or T/Elec	20 or 20
Grav Units	T/Mech	20
Personal Equipment	T/Elec or T/Mech	20 or 20

STARPORT CODES

Code	Description
A	Large, hi-capacity installations capable of constructing starships and offer complete repair facilities. Refined fuel available.
B	Large, high quality ports capable of constructing non-jump capable ship and small craft, along with handling their maintenance. Refined fuel is available.
C	Smaller average quality ports. Repair facilities available along with refined fuel.
D	Frontier or backwater ports that see little traffic. Repair facilities are minimal at best, and only unrefined fuel is available.
E	Little more than a marked landing area with no facilities.
X	No port of any kind exists.

WORLD SIZE

Digit	Average Size	Gravity Description	Typical Gravity
R	Ring (around a world)	No Gravity	-
S	Small (200-800 km)	No Gravity	-
0	Asteroid Belt	No Gravity	-
1	1600 km	Very Low Gravity	0.125g
2	3200 km	Very Low Gravity	0.25g
3	4800 km	Very Low Gravity	0.375g
4	6400 km	Low Gravity	0.5g
5	8000 km	Low Gravity	0.625g
6	9,600 km	Low Gravity	0.75g
7	11,200 km	Average Gravity	0.875g
8	12,800 km	Average Gravity	1g
9	14,400 km	Average Gravity	1.125g
A+	16,000 km	Heavy Gravity	1.25g

WORLD ATMOSPHERE

Digit	Description
0	No Atmosphere.
1	Very Thin, Tainted.
2	Very Thin.
3	Thin, Tainted.
4	Thin.
5	Standard.
6	Standard, Tainted.
7	Dense.
8	Dense, Tainted.
9	Exotic.
A	Corrosive.
B	Insidious.
C	Dense, High Pressure.
D	Ellipsoid.
E	Thin, Low Pressure.

WORLD HYDROGRAPHICS

Digit	Description
0	No free-standing liquid. Desert
1	10% surface liquid
2	20% surface liquid
3	30% surface liquid
4	40% surface liquid
5	50% surface liquid
6	60% surface liquid
7	70% surface liquid
8	80% surface liquid
9	90% surface liquid
A	No large land masses. Water or Fluid World

WORLD GOVERNMENT

Digit	Description
0	No Government Structure: In many cases family bonds predominate.
1	Company Corporation: Government by a company managerial elite. Citizens are company employees.
2	Participatory Democracy: Government by advice and consent of the citizens.
3	Self-Perpetuating Oligarchy: Government by a restricted minority, with little or no input from the masses.
4	Representative Democracy: Government by elected representatives.
5	Feudal Technocracy: Government by specific individuals for those who agree to be ruled. Relationships are based on the performance of technical activities that are mutually beneficial.
6	Captive Government: Government by an imposed leadership answerable to an outside group. A colony or conquered area.
7	Balkanization: No ruling authority exists; rival governments compete for control.
8	Civil Service Bureaucracy: Government by agencies employing individuals selected for their expertise.
9	Impersonal Bureaucracy: Government by agencies that are insulated from the citizenry.
A	Charismatic Dictator: Government by a single leader enjoying the confidence of the citizens.
B	Non-Charismatic Leader: A previous charismatic dictator has been replaced by a leader through normal channels.
C	Charismatic Oligarchy: Government by a select group, organization, or class enjoying the overwhelming confidence of the citizenry.
D	Religious Dictatorship: Government by a religious organization without regard to the specific needs of the citizenry.
E	Religious Autocracy: Government by a single all-powerful leader having absolute power over the citizenry.
F	Totalitarian Oligarchy: Government by an all-powerful minority which maintains absolute control through widespread coercion and oppression.

WORLD POPULATION

Digit	Description	Population
0	No Inhabitants	0-9
1	Tens of Inhabitants	10-99
2	Hundreds of Inhabitants	100-999
3	Thousands of Inhabitants	1000-9999
4	Tens of Thousands	10,000-99,999
5	Hundreds of Thousands	100,000-999,999
6	Millions of Inhabitants	1,000,000-9,999,999
7	Tens of Millions	10,000,000-99,999,999
8	Hundreds of Millions	100,000,000-999,999,999
9	Billions of Inhabitants	1,000,000,000-9,999,999,999
A	Tens of Billions	10,000,000,000+

WORLD TECH LEVEL

Digit	Description
0	Stone Age, primitive
1	Bronze Age to Middle Age
2	circa 1400 to 1799 AD
3	circa 1700 to 1860 AD
4	circa 1860 to 1900 AD
5	circa 1900 to 1939 AD
6	circa 1940 to 1969 AD
7	circa 1970 to 1979 AD
8	circa 1980 to 1989 AD
9	circa 1990 to 2000 AD
A	circa 2100+ AD
B	Extreme. Weapon possession of civilian.
C	Extreme. Unlimited invasion of privacy.
D	Extreme. Constant law enforcement.
E	Extreme. Full-fledged police state.
F	Extreme. All facets of daily life rigidly controlled.
G	Extreme. Severe punishment for petty infractions.
H	Extreme. Legalized oppressive practices.
J	Technical Maximum Interstellar Community
K	Extreme. Routinely oppressive and restrictive.
L	Extreme. Excessively oppressive and restrictive.
M	Extreme. Totally oppressive and restrictive.

WORLD LAW LEVEL

Digit	Description
0	No Law. No prohibitions.
1	Low. Body pistols undetectable by standard detectors, explosives (bombs, grenades), and poison gas prohibited.
2	Low. Portable energy weapons (laser carbine, laser rifle) prohibited. Ship's gunnery not affected.
3	Low. Weapons of a strict military nature (machineguns, automatic rifles) prohibited.
4	Moderate. Light assault weapons (submachineguns) prohibited.
5	Moderate. Personal concealable firearms (such as pistols and revolvers) prohibited.
6	Moderate. Most firearms (all except shotguns) prohibited. The carrying of any type of weapon openly is discouraged.
7	Moderate. Shotguns are prohibited.
8	High. Long bladed weapons (all but daggers) are controlled, and open possession is prohibited.
9	High. Possession of any weapon outside one's residence is prohibited.

UWP LEGEND

0123456789

0) Starport
1) Size
2) Atmosphere
3) Hydrographics
4) Population
5) Government
6) Law Level
7) Tech Level

PBG: Population

Multiplier, Planetoid Belts Present, Gas Giants Present.

WORLD DATA FORMAT SAMPLE

Name	Hex #	UWP	Bases	Trade Classification	Travel Zone	PBG	Allegiance	Stellar Data
Speer	0108	C432430-8	S	Poor, Non-industrial	R	404	Im	K8 V J

NOBLE TITLES VS. SOCIAL STANDING

16 Knight	24 Duke
18 Baron	26 Archduke
20 Marquis	30 Crown Prince
	32 Emperor

UNTRAINED SKILLS

Skill	Key Ability
Appraise	Int
Balance	Dex*
Bluff	Cha
Bribery	Cha
Broker	Int
Climb	Str*
Craft [cascade]	Int/Dex
Disguise	Cha
Driving	Dex
Entertain [cascade]	Cha
Forgery	Int/Dex
Gambling	Int
Gather Information	Cha
Handle Animal	Cha
Hide	Dex*
Intimidate	Cha
Jump	Str*
Leader	Int/Cha
Liaison	Cha
Listen	Wis
Move Silently	Dex*
Recruiting	Edu
Ride	Dex
Search	Int
Sense Motive	Wis
Spot	Wis
Survival	Wis
Swim	Str
Trader	Wis

EXAMPLE DIFFICULTY CLASSES (DCs)

Type	DC	Example
Simple	0	Walk across the floor
Very Easy	5	Climb a ladder
Easy	10	Climb a knotted rope
Average	15	Plot a course to a familiar star system
Hard	20	Jump a horse over an obstacle while riding
Difficult	25	Swim in churning, storm driven water
Formidable	30	Remove a bullet from a victim.
Challenging	35	Plot a course to an uncharted star, while under fire and without a computer.
Incredible	40	Convince the judge that a pardon scrawled on the back of a cocktail napkin really is from the planetary governor
Nearly Impossible	45	Perform brain surgery with a low-tech field surgical kit, under fire, in the rain, while wounded

Degree of Success

DC or higher	Success
DC+10 or higher	Great Success
DC+20 or higher	Incredible Success

ABILITY SCORE MODIFIERS

Ability Score	Modifier
0-1	-5
2-3	-4
4-5	-3
6-7	-2
8-9	-1
10-11	+/-0
12-13	+1
14-15	+2
16-17	+3
18-19	+4
20-21	+5
22-23	+6
24-25	+7
26-27	+8
28-29	+9
30	+10

DEMOLITIONS

		Type of Charge	
Structural Material	Penetration	Breach	Damage
Wood	250 grams	4kg	1d6
Rock/Stone	500 grams	7.5kg	1d8
Interior Starship wall	600 grams	9kg	1d10
Concrete	750 grams	11kg	1d12
Reinforced Concrete	1kg	15kg	2d8
Vehicle Hull	1kg	15kg	2d8
Vehicle Armor	+1kg per AR	+15kg per AR	-
Interior Starship Bulkhead	5kg	750kg	4d20
Starship Hull	8kg	120kg	6d20
Starship Armor	+10kg per AR	+150kg per AR	-

Penetration Charge: Minimal penetration, normal damage.

Breaching Charge: 1m breach hole, x10 damage. Moving through a breach hole is treated as if moving through an open hatchway (a move action).

Placing a Charge: 2 full round actions, DC15. Max. 10kg.

Carefully Placing a Charge: 3 minutes, DC10. Any size.

Tamping a Charge: 6 minutes, DC20. x2 damage.

Failing a Placement or Tamping Check: Demolition skill check (DC15) to avoid failing to inflict any damage at all. A successful check still results in half-damage.

Damage to a Demolition Charge: Roll 1d20. If less than the damage inflicted then it goes off prematurely.

OBJECT ARMOR RATING AND STRUCTURAL INTEGRITY

Item	AR	SI
Rope	0	1
Synthetic Rope	0	1
Light Fixture	0	2
Simple Wooden Door	0	2
Small Wood Crate	0	4
Metal Storage Barrel	1	6
Heavy Wooden Door	2	7
Fireproof Box	2	4
Metal Door	5	10
Brick, Rock, or Concrete Wall (30cm)	3	17
Reinforced Concrete Wall (1m)	9	50
Steel Chain	5	2
Handcuffs	5	1
Interior Wooden Wall	0	2
Int. Metal (Hard Steel) Wall	5	8
Bulkhead	10	50

SUBSTANCE ARMOR RATING AND THICKNESS

Substance	TL	Base AR	Max AR	Thickness
Paper	1	0	3	up to 40mm +1 AR per +20mm thickness (22cm)
Rope	0	0	5	up to 60mm +1 AR per +30mm thickness (33cm)
Synthetic Fibers	7	1	10	up to 15mm +1 AR per +15mm thickness (15cm)
Glass	1	1	8	up to 5mm +1 AR per +5mm thickness (5cm)
Ice	0	0	2	up to 80mm +1 AR per +40mm thickness (44cm)
Wood	0	1	6	up to 150mm +1 AR per +150mm thickness (150cm or 5')
Brick, Rock, Concrete	0	1	25	up to 120mm +1 AR per +120mm thickness (120cm or 4')
Reinforced Concrete	5	1	25	up to 90mm +1 AR per +90mm thickness (90cm or 3')
Iron	1	1	10	up to 60mm +1 AR per +60mm thickness (60cm or 2')
Steel	5	1	15	up to 30mm +1 AR per +30mm thickness (30cm or 1')
Aluminum	7	1	15	up to 45mm +1 AR per +45mm thickness (45cm or 1.5')
Hard Steel	6	2	20	up to 15mm +1 AR per +30mm thickness (15cm or 6")
Composites	8	2	25	up to 10mm +1 AR per +20mm thickness (10cm or 4")
Industrial Ceramics	9	2	25	up to 5mm +1 AR per +10mm thickness (5cm or 2")

VISUAL ENCOUNTER RANGES

Terrain	Detection and Distance	Hexes	Basic Range
Arcology, popular starport, dense pedestrian and vehicle traffic	2d4 X 75m (avg. 375m)	5T	Close
City or town center, moderate pedestrian and vehicle traffic	3d6 X 150m (1575m)	1S	Short
Suburban neighborhood, light pedestrian and vehicle traffic	6d6 X 300m (6300m)	4S	Medium
Smoke, heavy fog, dense clouds	2d4 X 75m (avg. 375m)	5T	Close
Jungle, dense forest	2d4 X 150m (750m)	10T	Close
Heavy mountainous terrain	3d6 X 150m (1575m)	1S	Short
Rugged hills or low mountains	6d6 X 150m (3150m)	2S	Short
Light forest, low rolling hills	6d6 X 300m (6300m)	4S	Medium
Scrub, brush, or bush	2d6 X 1.5km (10.5km)	7S	Long
Grasslands, plains, at sea, or other open terrain with little cover	3d6 X 1.5km (15.0km)	10S	Very Long
Observer is in flight, clear skies	4d6 X 1.5km (18.0km)	12S	Very Long
Observer is in flight, cloudy skies	3d6 X 1.5km (15.0km)	10S	Very Long
Observer is in flight, dusk or dawn	2d6 X 1.5km (10.5km)	7S	Long
Observer is in flight, heavy clouds or night	1d6 X 1.5km (5.0km)	3S	Short

ENCOUNTER AWARENESS DIFFICULTY

Circumstance	DC
Base	20
Target size	+/-4 per size category
Running silent	+15
Jamming	Special
Passive scan	+10
Not moving	+5
Camouflage	Special
Six or more Vessels	-2
Moonlight	+5
Starlight	+10
Deep Darkness	+20
Total Darkness	Impossible

NOBLE TITLES VS. SOCIAL STANDING

16	Knight	24	Duke
18	Baron	26	Archduke
20	Marquis	30	Crown Prince
		32	Emperor

EDUCATION SCORE EQUIVALENTS

3	Elementary	12	Bachelor's Degree
6	Middle School	14	Master's Degree
10	High School	16	Doctorate Degree

PERSONAL COMBAT ACTIONS

Not an Action

	AoO?
Delay	No

Standard Actions

	AoO?
Aid another	No
Attack (melee)	No
Attack (ranged)	Yes
Bull rush	Yes
Burst Fire	Yes
Feint	No
Heal a dying friend	Yes
Open or close an airlock	No
Overrun (charge)	Yes
Ready	No
Strike a weapon	Yes
Strike an object	Maybe
Total defense	No

Full Actions

	AoO?
Called Shot	Yes
Climb	No
Charge	No
Coup de grace	Yes
Dive Attack	Yes
Double move	Varies
Escape from a net	Yes
Extinguish flames	No
Full attack	No
Open a hatchway	Yes
Patch a pressure suit breach	Yes
Prepare to throw oil	Yes
Put on a pressure or vac suit	Yes
Run	Yes
Suppressive Fire	Yes
Throw a two-handed weapon with one hand	Yes

Move Equivalent Actions

	AoO?
Climb	No
Control a frightened mount	Yes
Draw a weapon	No
Mount or dismount an animal	No
Mount or dismount a vehicle	Yes
Move a heavy object	Yes
Open a door, iris valve, or sliding door	No
Pick up an item	Yes
Ready a shield	No
Reload	Yes
Retrieve a stored item	Yes
Sheathe a weapon	Yes
Stand up from prone	No

Varied Actions

	AoO?
Disarm(4)	Yes
Grapple	Yes
Trip an opponent	No
Use a skill	
Use feat	Varies

Free Actions

	AoO?
Activate an Item	No
Drop an item	No
Drop to the floor	No
Speak	No

Partial Actions

	AoO?
Start full round action	No

COMM. AND SENSOR RANGES

Range	Distance
Close	up to 1km
Short	up to 5km
Medium	up to 50km
Long	up to 500km
Continental/V. Long	up to 5000km
World-wide/Extreme	up to 10,000km

BASIC STARSHIP & VEHICLE COMBAT ACTIONS

Not an Action

	AoO?
Delay	No

Standard Actions

	AoO?
Command (Command)	No
Range Check (Astrogator)	No

Full Actions

	AoO?
Attack (Gunner)	No
Point Defense Sandcasters (Gunner)	No
Point Defense Lasers (Gunner)	No
Point Defense Repulsors (Gunner)	No
Reload Vessel or Vessel's Weapon	No
Tactics (Command)	Yes
Avoid Collision (Pilot/Driver)	No
Break Pursuit (Pilot/Driver)	No
Evade Attack (Pilot/Driver)	Yes
Pursuit (Pilot/Driver)	Yes
Ram (Pilot/Driver)	Varies
Atmospheric Entry (Pilot)	Yes
Dock Ships (Pilot)	Yes
Orbital Insertion (Pilot)	Yes
Tactical Communications (Comm)	No
Comms Jamming (Comm)	No
Intercept Enemy Communications (Comm)	No
Sensor Jamming (Sensor)	No
Sensor Targeting (Sensor)	No
Damage Control (Engineer)	No
Power Routing (Engineer)	No
Excess Power Routing (Engineer)	No
Overpower Weapons (Engineer)	No

Move Equivalent Actions

	AoO?
Adjust Speed (Pilot/Driver)	No
Adjust Range (Pilot/Driver)	Yes
Move (Pilot/Driver)	No

Free Actions

	AoO?
Computer Fire Control (Comp)	No
Computer Targeting (Comp)	No

ATTACK ROLL MODIFIERS

Circumstance	Melee	Ranged
Attacker flanking defender	+2	
Attacker on higher ground	+1	+0
Attacker prone	-4	*
Attacker invisible	+2**	+2**
Defender sitting or kneeling	+2	-2
Defender prone	+4	-4
Defender stunned, cowering, or off balance	+2**	+2**
Defender climbing (cannot use shield)	+2**	+2**
Defender surprised or flat-footed	+0**	+0**
Defender running	+0**	-2**
Defender grappling (attacker not)	+0**	+0**
Defender pinned	+4**	-4**
Defender has cover	See Cover	
Defender concealed or invisible	See Concealment	
Defender helpless	See Helpless Defenders	

* Most archaic ranged weapons can't be used while the attacker is prone, but a character can use a crossbow while prone.

** The defender loses any Dexterity bonus to AC.

RELATIVE SPEED MODIFIERS

Relative Speed Difference	Target AC Modifier
0-25 kph	+0
26-50 kph	+1
51-100 kph	+2
101-200 kph	+4
201-400 kph	+8
401-600 kph	+10
601-800 kph	+12
801-1000 kph	+14
1001+ kph	+16

CROSS-SCALE COMBAT

Circumstance	Dmg. Dice Adj.
Personnel vs. Vehicle	-5 dice
Personnel vs. Starship	-10 dice
Vehicle vs. Personnel	+5 dice
Vehicle vs. Starship	-5 dice
Starship vs. Personnel	+10 dice*
Starship vs. Vehicle	+5 dice**

* Ignores any armor ** Two internal dmg. rolls

COVER

Degree of Cover	Cover AC Bonus	Cover Reflex Save Bonus
1/4	+2	+1
1/2	+4	+2
3/4	+7	+3
9/10	+10	+4*
Total	-	-

*Half damage if save is failed; no damage if successful.

CONCEALMENT

Concealment	Miss Chance
One-Quarter	10%
One-Half	20%
Three-quarters	30%
Nine-tenths	40%
Total	50%

SUPPRESSIVE FIRE DAMAGE

RoF	Extra Damage
3-4 rounds	none
10 rounds	+1 die of damage
20 rounds	+2 dice of damage
100 rounds	+4 dice of damage

BURST FIRE EFFECTS

Burst Size	Attack Bonus	Extra Damage
1 round	+0	+0 damage
3 round burst	+1	+1 die of damage
4 round burst	+2	+2 dice of damage
10 round burst	+3	+3 dice of damage
20 round burst	+5	+5 dice of damage
100 round burst	+10	+10 dice of damage

CALLED SHOT MODIFIERS

Item Size	Modifier	Example
Fine	-12	Ring on hand, Button on jacket
Diminutive	-8	Foot, Hand, Eye, Heart, Hand Computer
Tiny	-6	Head, Leg, Arm, Hat on head
Small	-5	Chest, Groin, Small Weapon, Backpack
Medium	-4	Medium Weapon
Large	-2	Large Weapon
Huge	-1	

GRAVITY EFFECTS

Local Gravity	Check Modifier
Zero Gravity	-4
Trace Gravity (0.1 - 0.3 G)	-2
Low Gravity (0.4 - 0.7 G)	-1
Standard Gravity (0.8 - 1.2 G)	-0
Heavy Gravity (1.3 - 1.5 G)	-1
Oppressive Gravity (1.6G or higher)	-3
Weapons with recoil (in Low Gravity or less)	-2

SIZE MODIFIERS TO ATTACK BONUS AND ARMOR CLASS

Size	Weight (kg) or Volume (vl)	Size Modifier	Natural Reach (long/tall)	Face W x L (long/tall)	Starships and Smallcraft Tonnage (tons)	Ship Size	Size Modifier
Fine	up to 0.05	+8	0	0	-	-	+16
Diminutive	0.05 to 0.5	+4	0	0	-	-	+14
Tiny	0.5 to 5	+2	0	0	-	-	+12
Small	5 to 30	+1	1.5m	1.5m x 1.5m	-	-	+10
Medium	30 to 250	0	1.5m	1.5m x 1.5m	-	-	+8
Large	250 to 2000	-1	3m / 1.5m	1.5m x 1.5m / 1.5m x 3m	-	-	+4
Huge	2000 to 15,000	-2	4.5m / 3m	3m x 3m / 3m x 6m	1-9 tons	Tiny	+2
Gargantuan	15,000 to 115,000	-4	6m / 3m	6m x 6m / 6m x 12m	10-99 tons	Small	+1
Colossal	115,000 to 1,315,000	-8	7.5m / 4.5m	12m x 12m / 12m x 24m	100-999 tons	Medium	0
Enormous	1,315,000+	-10	9m / 6m	24m x 24m / 24m x 48m	1000-9999 tons	Large	-1
Monstrous	-	-12	-	-	10,000-99,999 tons	Huge	-2
Stupendous	-	-14	-	-	100,000-999,999 tons	Gargantuan	-4
Incredible	-	-16	-	-	1,000,000+ tons	Colossal	-8

ADJUST RANGE MODIFIERS

Circumstance	Modifier
Higher Current Speed	+1 per 10kph difference in speed
Higher Acceleration	+1 per difference in maximum acceleration
Vehicle Agility	+0-6

COLLISIONS

Vehicle Speed	Damage on Target
Not Moving	-
Very Slow	Vehicle SI x 0.1
Slow	Vehicle SI x 0.25
Cruising Speed	Vehicle SI x 0.5
Fast	Vehicle SI
Max Speed	Vehicle SI x 2

Target	Damage on Vehicle
Lifeform	CON Score + Armor Rating
Another Vehicle	Its Damage on Target
Stone/Concrete/Steel	SI x 3
Large Tree	SI x 2
Wooden Structure	SI x 1.5
Small Tree	SI x1.25
Plant (shrub or bush)	SI x1.1
Another Vehicle	See Vehicle Speed

TACTICAL SPEED

Race	No Armor or Light Armor	Medium Armor or Heavy Armor
Aslan	18m	15m
Vargr, Ursa	12m	9m
Human, Lurian, Sydite	9m	6m
Virushi	6m	3m

EVASIVE MANEUVERS

Result	AC Bonus
1-10	+0
11-20	+1
21-28	+2
29-33	+4
34-38	+6
39+	+8

COLLISION AVOIDANCE

Situation	DC
Base	5
Traffic (5 or more vessels within short range)	+5
Heavy brush	+10
Small debris field, heavy traffic, light woods	+15
Asteroid field, light density	+20
Asteroid field, average density	+25
Asteroid field, heavy density	+30
Every 6 points of speed (starships and small craft)	+5
Very Slow (vehicles only)	+0
Slow or Offroad speed (vehicles only)	+5
Cruising speed (vehicles only)	+10
Fast (vehicles only)	+15

RANGE VALUES IN SPACE

Range	Hexes	Distance (in Kilometers)
Visual	(0)	up to 50
Close	0	up to 15,000
Short	1-3	up to 45,000
Medium	4-5	up to 75,000
Long	6-8	up to 120,000
Very Long	9-16	up to 240,000
Extreme 1	17-20	up to 300,000
Extreme 2	21-24	up to 360,000
Extreme 3	25-28	up to 420,000
Extreme 4	29-32	up to 480,000
Far	33-320	up to 4,800,000
System-wide	321+	beyond 4,800,000

SHIP'S WEAPONS AREA EFFECT

Weapon System	Area of Effect (AoE)
Lasers	5m per USP rating
Missiles or Energy Weapons	10m per USP rating
Meson Guns	10m per USP rating
Nuclear Missiles	100m per USP rating
Particle Accelerators	1m per USP rating

WEAPON EFFICIENCY vs. BLACK GLOBES

Weapon Type	Energy Absorbed
Lasers, Plasma Gun	None
Fusion Gun, Non-Nuclear Missile	Absorbed Damage X 2
Particle Accelerator	Absorbed Damage X 5
Meson Gun	Absorbed Damage X 20
Nuclear Missile	Absorbed Damage X 100

SHIP CONFIGURATION vs. MESON ATTACKS

Configuration	Mod
Needle/Wedge	+2
Cone	+1
Cylinder	+0
Closed Structure	-3
Sphere	-4
Flattened Sphere	-2
Dispersed Structure	+5
Planetoid	-6
Buffered Planetoid	+4

SHIP'S WEAPONS

Missiles	Damage
Standard	d6 (18) x1
Nuclear	d6 (17) x2
Laser	d10 (19) x1
Ship's Lasers	
Mining	d6 (20) x1
Beam	d8 (20) x1
Pulse	d10 (19) x2
Other Weapons	
Particle Acc.	d12 (18) x2
Plasma Gun	d12 (16) x5
Fusion Gun	d20 (16) x5
Meson Gun	d20 (15) x10

SENSOR ENCOUNTER RANGES (Vehicles Only)

Sensor Model	Detection	Encounter Distance	Hexes	Basic Range
Model/1	up to 5km	1d3 X 1.5km (avg 3km)	2S	Short
Model/2	up to 10km	1d3+6 X 1.5km (10km)	7S	Long
Model/3	up to 50km	2d6+8 X 1.5km (22km)	15S	Very Long
Model/4	up to 100km	30km	20S	Extreme
Model/5	up to 500km	30km	20S	Extreme
Model/6	up to 1000km	30km	20S	Extreme
Model/7	up to 5000km	30km	20S	Extreme
Model/8	up to 10,000km	30km	20S	Extreme
Model/9	beyond 10,000km	30km	20S	Extreme

SENSOR ENCOUNTER RANGES (Small Craft and Starships Only)

Sensor Model	Detection	Encounter Distance	Hexes	Basic Range
Model/1	up to 15,000km	1d20 X 750km (avg 3km)	10T	Close
Model/2	up to 45,000km	1d3 X 15,000km (10km)	2S	Short
Model/3	up to 75,000km	1d2+3 X 15,000km (22km)	3S	Short
Model/4	up to 120,000km	1d3+5 X 15,000km	7S	Long
Model/5	up to 240,000km	1d8+8 X 15,000km	12S	Very Long
Model/6	up to 580,000km	1d4+16 X 15,000km	18S	Extreme
Model/7	up to 4,800,000km	300,000km	20S	Extreme
Model/8	up to 9,600,000km	300,000km	20S	Extreme
Model/9	beyond 9,600,000km	300,000km	20S	Extreme

BATTLEFIELD REPAIRS

System to be Repaired	Skill Req.	DC
Engineering	-	-
Jump Drive	T/Eng	40
Maneuver Drive	T/Eng	36
Power Plant	T/Eng	26
Screens	T/Elec	38
Fire Control or Vehicle Weaponry	T/Elec or T/Mech	36 or 34
Low Berths	T/Med or T/Elec	36 or 34
Electronics	T/Elec	24
Mechanical	T/Mech	22
Other Miscellaneous	T/Mech or T/Elec	20 or 20
Grav Units	T/Grav	20
Personal Equipment	T/Elec or T/Mech	20 or 20

STARPORT CODES

Code	Description
A	Large, hi-capacity installations capable of constructing starships and offer complete repair facilities. Refined fuel available.
B	Large, high quality ports capable of constructing non-jump capable ship and small craft, along with handling their maintenance. Refined fuel is available.
C	Smaller average quality ports. Repair facilities available along with refined fuel.
D	Frontier or backwater ports that see little traffic. Repair facilities are minimal at best, and only unrefined fuel is available.
E	Little more than a marked landing area with no facilities.
X	No port of any kind exists.

WORLD SIZE

Digit	Average Size	Gravity Description	Typical Gravity
R	Ring (around a world)	No Gravity	0
S	Small (200-800 km)	No Gravity	0
0	Asteroid Belt	No Gravity	0
1	1600 km	Very Low Gravity	0.125g
2	3200 km	Very Low Gravity	0.25g
3	4800 km	Very Low Gravity	0.375g
4	6400 km	Low Gravity	0.5g
5	8000 km	Low Gravity	0.625g
6	9600 km	Low Gravity	0.75g
7	11,200 km	Average Gravity	0.875g
8	12,800 km	Average Gravity	1g
9	14,400 km	Average Gravity	1.125g
A+	16,000 km	Heavy Gravity	1.25g

WORLD GOVERNMENT

Digit	Description
0	No Government Structure: In many cases family bonds predominate.
1	Company Corporation: Government by a company managerial elite. Citizens are company employees.
2	Participatory Democracy: Government by advice and consent of the citizens.
3	Self-Perpetuating Oligarchy: Government by a restricted minority, with little or no input from the masses.
4	Representative Democracy: Government by elected representatives.
5	Feudal Technocracy: Government by specific individuals for those who agree to be ruled. Relationships are based on the performance of technical activities that are mutually beneficial.
6	Captive Government: Government by an imposed leadership answerable to an outside group. A colony or conquered area.
7	Balkanization: No central ruling authority exists; rival governments compete for control.
8	Civil Service Bureaucracy: Government by agencies employing individuals selected for their expertise.
9	Impersonal Bureaucracy: Government by agencies that are insulated from the governed.
A	Charismatic Dictator: Government by a single leader enjoying the confidence of the citizens.
B	Non-Charismatic Leader: A previous charismatic dictator has been replaced by a leader through normal channels.
C	Charismatic Oligarchy: Government by a select group, organization, or class enjoying the overwhelming confidence of the citizenry.
D	Religious Dictatorship: Government by a religious organization without regard to the specific needs of the citizenry.
E	Religious Autocracy: Government by a single religious leader having absolute power over the citizenry.
F	Totalitarian Oligarchy: Government by an all-powerful minority which maintains absolute control through widespread coercion and oppression.

WORLD ATMOSPHERE

Digit	Description
0	No Atmosphere.
1	Trace.
2	Very Thin, Tainted.
3	Very Thin
4	Thin, Tainted.
5	Thin
6	Standard
7	Standard, Tainted.
8	Dense
9	Dense, Tainted.
A	Exotic.
B	Corrosive
C	Insidious
D	Dense, High Pressure
E	Ellipsoid
F	Thin, Low Pressure

WORLD HYDROGRAPHICS

Digit	Description
0	No free-standing liquid. Desert
1	10% surface liquid
2	20% surface liquid
3	30% surface liquid
4	40% surface liquid
5	50% surface liquid
6	60% surface liquid
7	70% surface liquid
8	80% surface liquid
9	90% surface liquid
A	No large land masses. Water or Fluid World

WORLD POPULATION

Digit	Description	Population
0	No Inhabitants	0-9
1	Tens of Inhabitants	10-99
2	Hundreds of Inhabitants	100-999
3	Thousands of Inhabitants	1000-9999
4	Tens of Thousands	10,000-99,999
5	Hundreds of Thousands	100,000-999,999
6	Millions of Inhabitants	1,000,000-9,999,999
7	Tens of Millions	10,000,000-99,999,999
8	Hundreds of Millions	100,000,000-999,999,999
9	Billions of Inhabitants	1,000,000,000-9,999,999,999
A	Tens of Billions	10,000,000,000+

WORLD LAW LEVEL

Digit	Description
0	No Law. No prohibitions.
1	Low. Body pistols undetectable by standard detectors, explosives (bombs, grenades), and poison gas prohibited.
2	Low. Portable energy weapons (laser carbine, laser rifle) prohibited. Ship's gunnery not affected.
3	Low. Weapons of a strict military nature (machineguns, automatic rifles) prohibited.
4	Moderate. Light assault weapons (submachineguns) prohibited.
5	Moderate. Personal concealable firearms (such as pistols and revolvers) prohibited.
6	Moderate. Most firearms (all except shotguns) prohibited. The carrying of any type of weapon openly is discouraged.
7	Moderate. Shotguns are prohibited.
8	High. Long bladed weapons (all but daggers) are controlled, and open possession is prohibited.
9	High. Possession of any weapon outside one's residence is prohibited.
A	Extreme. Weapon possession prohibited.
B	Extreme. Rigid control of civilian movement.
C	Extreme. Unrestricted invasion of privacy.
D	Extreme. Paramilitary law enforcement.
E	Extreme. Full-fledged police state.
F	Extreme. All facets of daily life rigidly controlled.
G	Extreme. Severe punishment for petty infractions.
H	Extreme. Legalized oppressive practices.
J	Extreme. Routinely oppressive and restrictive.
K	Extreme. Excessively oppressive and restrictive.
L	Extreme. Totally oppressive and restrictive.

WORLD TECH LEVEL

Digit	Description
0	Stone Age, primitive
1	Bronze Age to Middle Age
2	circa 1400 to 1700 AD
3	circa 1700 to 1860 AD
4	circa 1860 to 1900 AD
5	circa 1900 to 1939 AD
6	circa 1940 to 1969 AD
7	circa 1970 to 1990 AD
8	circa 1990 to 2100 AD
9	circa 2100+ AD
10	Early Interstellar Community
11	Average Interstellar Community
12	Average Interstellar Community
13	Above Average Interstellar Community
14	Above Average Interstellar Community
15	Technical Maximum Interstellar Community
16	Occasional Interstellar Community

UWP LEGEND

0123456-7

0) Starport
1) Size
2) Atmosphere
3) Hydrographics
4) Population
5) Government
6) Law Level
7) Tech Level

PBG: *P*opulation Multiplier, Planetoid *B*elts Present, *G*as Giants Present.

WORLD DATA FORMAT SAMPLE

Name	Hex #	UWP	Bases	Trade Classification	Travel Zone	PBG	Allegiance	Stellar Data
Speer	0108	C432430-8	S	Poor, Non-industrial	R	404	1	K8 V

MAIL AND CHARTERS

Mail: 1d6-1 tons waiting. Cr25000 no matter what the actual tonnage carried is, even if no mail at all is waiting. Only subsidized merchants may carry Imperial mail.

Charters

Non-Starships

Per hour (12 hour min.)	Cr1 per ton of vessel

Starships
Per 2-week block

Per ton of cargo space	+Cr900
Per High Passage accommodation	+Cr9000
Per Low Passage accommodation	+Cr900

CREW SALARIES

Crew Position	Monthly Salary
Master/Captain, First Officer, Bridge Crew	Varies
Pilot	Cr6000
Astrogator	Cr5000
Communications or Sensor Operator, Asst Engineer, Purser, Steward	Cr3000
Chief Engineer	Cr4000
Drive Hand, Medical Officer, Security, Technician, Boat Pilot	Cr2000
Cargo Handler, Gunner, Deck Hand	Cr1000

MISJUMP

Base	DC21
Unrefined fuel	+2 to the roll
Within 100 diameters	+5 to the roll
Within 10 diameters	+15 to the roll
Using Drop Tanks	+2 to the roll
Failed Astrogation Check	Automatic

Misjump Effects

d100	Result

Minor Misjump

01-20	Crew and passengers suffer Jump Sickness (-2 to all checks) for 1d6 hours after emergence from Jump space.
21-40	Ship arrives 1d6+1 x 100 diameters from the destination.
41-55	Ship arrives late or early (1d6: 1-3 late; 4-6 early) by 1d4 days.
61-70	Jump drive is damaged (reduce rating by 1).

Serious Misjump

71-75	Crew and passengers suffer Jump sickness (-4 to all checks) for 4d6 hours after emergence from Jump space.
76-80	Ship arrives late or early (1d6: 1-3 late; 4-6 early) by 1d6 days.
81-85	Jump drive suffers major damage (reduce rating to 0).
86-90	Ship Misjumps 4d6 parsecs in a random (1d6) direction.

Catastrophic Misjump

91-92	Ship is destroyed on entry into Jump space.
93-94	Ship is destroyed on emergence from Jump space.
95-96	Ship never emerges from Jump space.
97-00	Other catastrophic effect (Referee's discretion)

TRAVEL FORMULAS

Time	Distance	Acceleration
$2 \times (D / A)^2$	$(A \times (T^2))/4$	$4 \times (D / (T^2))$

SHIP OPERATING EXPENSES

Fuel and Life Support

Fuel	Cost
Refined	Cr500/ton
Unrefined	Cr100/ton

Life Support (per week)	Cost
Per High Psngr/Crew Officer	Cr1000
Per Mid Psngr/Crewmember	Cr750
Per Low Passenger	Cr50

Starport Fees and Services

	Starport Classification				
Service Provided	A	B	C	D	E or X
Landing Rights	Cr100	Cr50	Cr20	Cr10	-
Landing and Berthing (6 days)	Cr500	Cr250	Cr100	Cr50	-
Berthing per day after 6	Cr500	Cr250	Cr100	C50	-
Orbital Berthing (6 days)	Cr100	Cr50	Cr20	Cr10	-
Orbital Berthing per day after 6	Cr100	Cr50	Cr20	Cr10	-
Cargo Handling per ton	Cr40	Cr30	Cr20	Cr10	-
Security Cargo Handling per ton	Cr50	Cr40	Cr30	Cr20	-
Hazardous Cargo Handling per ton	Cr70	Cr60	Cr50	Cr40	-
Cargo Shuttle Service per ton	Cr30	Cr20	Cr10	Cr5	-
Security Cargo Shuttle Service per ton	Cr40	Cr30	Cr20	Cr10	-
Hazardous Cargo Shuttle Service per ton	Cr60	Cr50	Cr40	Cr30	-
Passenger Shuttle Service	Cr100	Cr75	Cr50	Cr25	-
Warehousing per week per ton	Cr15	Cr10	Cr5	-	-
Security/Refrigerated Warehousing per week per ton	Cr25	Cr15	Cr10	-	-
Hazardous Warehousing per week per ton	Cr50	Cr25	Cr15	-	-

STARSHIP ENCOUNTER CHECKS

Check when entering or leaving a star system, or as appropriate.

Check DC: 17+

Local Starport

Class A or B	+10
Class C	+5
Class D	+2
Class E or X	+0

TYPE OF ENCOUNTER

1d100	Type of Encounter
01-05	Pirate Vessel
06-65	Merchant Vessel or Liner
66-85	System Defense Vessel
86-90	Other Vessel or Craft
91-95	Scout Service Vessel
96-100	Navy Vessel

Encounter Modifiers:

Class A or B Starport	+5
Class C Starport	+0
Class D Starport	-5
Class E or X Starport	-10
Naval Depot Present	+25
Naval Base Present	+10
Scout Base Present	+5
Carrying Security Cargo	-10
Carrying Cargo worth KCr100+	-10
Carrying Cargo worth MCr1+	-15
Carrying Cargo worth MCr10+	-20

STANDARDIZED CARGO CONTAINER MODULES

Cargo Capacity	H x W x L	Shape	Cost
½ ton	3 x 1.5 x 1.5	Square	Cr6,000
1 ton	3 x 1.5 x 3	Rectangle	Cr10,000
2 tons	3 x 3 x 3	Square	Cr18,000
2 tons	3 x 1.5 x 6	Square	Cr18,000
4 tons	3 x 3 x 6	Rectangle	Cr32,000
4 tons	3 x 1.5 x 12	Rectangle	Cr32,000
8 tons	3 x 6 x 6	Square	Cr58,000
8 tons	3 x 3 x 12	Rectangle	Cr58,000

Specialized Containers

Type	Cost Modifier
Temperature/Humidity Controlled	+20%
Security Container	+10%
Liquid or Gas Storage Tank	x2
Controlled Environment	x3
Habitat	x5

Traveller²⁰ Referee's Quick Reference Card

TYPICAL TRAVEL TIMES

		Acceleration Rate				
Typical Distances	1-G	2-G	3-G	4-G	5-G	6-G
Planet to Orbit (10,000km)	33.33m	23.57m	19.25m	16.67m	14.91m	13.61m
Planet to Moon (400,000km)	3.51h	2.48h	2.03h	1.76h	1.57h	1.43h
Inner System Orbits (45,000,000km, orbits 0-5)	1.55d	1.10d	21.52h	18.63h	16.67h	15.21h
Outer System Orbits (600,000,000km, orbits 6-12)	5.67d	4.01d	3.27d	2.84d	2.54d	2.31d
Extreme Orbits (1,000,000,000km, orbits 13+)	7.32d	5.18d	4.23d	3.66d	3.27d	2.99d
Size 0 World to Safe Jump Distance	1.76h	1.24h	1.01h	52.70m	47.14m	43.03m
Size 1 World to Safe Jump Distance	2.22h	1.57h	1.28h	1.11h	59.63m	54.43m
Size 2 World to Safe Jump Distance	3.14h	2.22h	1.81h	1.57h	1.41h	1.28h
Size 3 World to Safe Jump Distance	3.85h	2.72h	2.22h	1.92h	1.72h	1.57h
Size 4 World to Safe Jump Distance	4.44h	3.14h	2.57h	2.22h	1.99h	1.81h
Size 5 World to Safe Jump Distance	4.97h	3.51h	2.87h	2.48h	2.22h	2.03h
Size 6 World to Safe Jump Distance	5.44h	3.85h	3.14h	2.72h	2.43h	2.22h
Size 7 World to Safe Jump Distance	5.88h	4.16h	3.39h	2.94h	2.63h	2.40h
Size 8 World to Safe Jump Distance	6.29h	4.44h	3.63h	3.14h	2.81h	2.57h
Size 9 World to Safe Jump Distance	6.67h	4.71h	3.85h	3.33h	2.98h	2.72h
Size A World to Safe Jump Distance	7.03h	4.97h	4.06h	3.51h	3.14h	2.87h
Small Gas Giant to Safe Jump Distance	11.11h	7.86h	6.42h	5.56h	4.97h	4.54h
Large Gas Giant to Safe Jump Distance	16.67h	11.79h	9.62h	8.33h	7.45h	6.80h

m = Minutes, h = Hours, d = Days

Melee Weapons	Cost	TL	Weight	RoF	Range	DMG (Crit)	Size	Type	Recoil	Ammo Rounds	Ammo Weight	Ammo Cost
Dagger	Cr10	0	250g	-	1.5/3 meters	1d4 (19)	Tiny	Piercing				
Blade	Crr50	3	350g	-	1.5 meters	1d6 (19)	Small	Piercing				
Foil	Cr100	3	500g	-	1.5 meters	1d4 (18)	Medium	Piercing				
Sword	Cr150	1	1kg	-	1.5 meters	1d8 (x2)	Medium	Piercing/Slashing				
Cutlass	Cr100	3	1250g	-	1.5 meters	1d8 (18)	Medium	Slashing				
Broadsword	Cr300	2	2500g	-	1.5 meters	2d6 (19)	Large	Slashing				
Bayonet	Cr10	3	250g	-	1.5 meters	1d8 (x2)	Large	Piercing				
Spear	Cr10	0	2kg	-	3/6 meters	1d8 (x2)	Large	Piercing				
Halberd	Cr75	2	2500g	-	3 meters	1d10 (19)	Large	Piercing/Slashing				
Pike	Cr40	1	3kg	-	3 meters	1d12 (x2)	Large	Piercing				
Cudgel	Cr10	0	1kg	-	1.5/3 meters	1d6 (x2)	Medium	Bludgeoning				
Bows												
Sling	Cr1	0	-	1	15 meters	1d4 (x2)	Small	Bludgeoning	-	-	100g	-
Short Bow	Cr50	1	500g	1	18 meters	1d6 (x2)	Medium	Piercing	-	-	100g	Cr2
Long Bow	Cr75	2	1kg	1	30 meters	1d8 (x2)	Large	Piercing	-	-	100g	Cr2
Military xBow	Cr250	2	6kg	1	36 meters	1d10 (19)	Medium	Piercing	-	-	100g	Cr2
Sporting xBow	Cr150	3	3kg	1	24 meters	1d8 (19)	Medium	Piercing	-	-	100g	Cr2
Repeat xBow	Cr200	3	4kg	1	24 meters	1d8 (19)	Medium	Piercing	-	10	100g	Cr2
Handguns												
Revolver	Cr150	4	900g	1	30 meters	1d10 (x2)	Small	Piercing	Yes	6	100g	Cr5
Auto Pistol	Cr200	5	750g	1	45 meters	1d10 (x2)	Small	Piercing	Yes	15	250g	Cr10
Body Pistol	Cr500	7	250g	1	24 meters	1d8 (x2)	Small	Piercing	Yes	6	50g	Cr20
Snub Pistol*	Cr150	8	250g	1	18 meters	1d10 (X2)	Small	Piercing	No	6/15	30/75g	Cr10/25
Shotguns												
Shotgun**	Cr150	5	3750g		3 meters	3d6/2d6/1d6 (x2)	Medium	Piercing		10	750g	Cr10
Rifles												
Rifle	Cr200	5	4kg	1	72 meters	1d12 (x2)	Medium	Piercing	Yes	10	500g	Cr20
Carbine	Cr200	5	3kg	1	45 meters	1d10 (x2)	Small	Piercing	Yes	20	125g	Cr10
Auto Rifle	Cr1000	6	5kg	1/4	60 meters	1d12 (x2)	Medium	Piercing	Yes	20	500g	Cr20
Assault Rifle	Cr300	7	3kg	1/4	45 meters	1d12+1 (x2)	Medium	Piercing	Yes	30	330g	Cr20
Accelerator Rifle	Cr900	9	2500g	1/3	60 meters	1d12 (x2)	Medium	Piercing	No	15	500g	Cr25
ACR****	Cr1000	10	3500g	1/4	72 meters	1d12+2 (x2)	Medium	Piercing	Yes	20	500g	Cr15
Gauss Rifle	Cr1500	12	3500g	1/4/10	96 meters	2d12 (x2)	Medium	Piercing	No	40	400g	Cr30
Machine Guns												
SMG	Cr500	5	2500g	0/4	45 meters	1d10 (x2)	Small	Piercing	Yes	30	500g	Cr20
LMG	Cr1200	6	5500g	0/10/20	60 meters	1d12 (x2)	Large	Piercing	Yes	100	2500g	Cr120
Laser Weapons												
Laser Pistol	Cr1000	12	1200g	1	36 meters	2d10 (x2)	Small	Laser	No	25	500g	Cr100
Laser Carbine	Cr2500	8	5kg	1	45 meters	3d8 (x2)	Small	Laser	No	50	3kg	Cr200
Laser Rifle	Cr3500	9	6kg	1	60 meters	3d10 (x2)	Medium	Laser	No	100	4kg	Cr300
Support Weapons												
LAG***	Cr600	8	4kg	1	96 meters	2d10 (x2)	Large	Piercing	Yes	5	500g	Cr20
Grenade Launcher	Cr200	7	3kg	1	100 meters	*	Medium	*	Yes	1	1kg	*
RAM Launcher	Cr400	8	5kg	1	200 meters	*	Large	*	Yes	3	1.4kg	*
Disposable Launcher	Cr200	7	1.5kg	1	100 meters	*	Medium	*	Yes	1	n/a	n/a
High Energy Weapons												
PGMP-12	KCr10	12	6kg	1	24 meters	6d12 (18)	Large	Energy	Yes	40	3lg	KCr2.5
PGMP-13*****	KCr65	13	900g	1	36 meters	7d12 (18)	Large	Energy	Yes	40	7kg	KCr50
PGMP-14	KCr300	14	9kg/50g	1	36 meters	8d12 (18)	Large	Energy	Yes	40	1.6kg/90g	KCr250
FGMP-14*****	KCr100	14	1kg	1	45 meters	7d20 (18)	Large	Energy	Yes	40	9kg	KCr65
FGMP-15	KCr400	15	1kg/50g	1	45 meters	9d20 (18)	Large	Energy	Yes	40	2kg/110g	KCr300

x2 Weapon does double damage on a critical hit

18 Threat range is increased to 18-20 instead of just 20. Does double damage on a critical hit

19 Threat range is increased to 19-20 instead of just 20. Does double damage on a critical hit

* Fires Tranquilizer (standard), High Explosive, or Armor Piercing rounds

** Fires Slug (standard) or Buckshot rounds

*** Fires Standard, High Explosive, or Flechette rounds

**** Fires Standard or High Explosive rounds

***** Requires the shooter to be wearing Battle Dress

	TL	Cost	Weight
Personal Equipment			
Artificial Gill	8	Cr4000	4 kg
Cold Weather Gear	1	Cr200	4 kg
Combination Mask	5	Cr150	1kg
Filter Mask	3	Cr10	0.5kg
Oxygen Tanks	5	Cr500	5 kg
Protective Suit	5	Cr700	5 kg
Respirator	5	Cr100	0.5kg
Swimming Gear	3	Cr200	1kg
Scuba Tanks	5	Cr800	5 kg
Vision Aids			
Binoculars	3	Cr75	1 kg
Cold Light Lantern	6	Cr20	0.25 kg
Electric Torches	5	Cr10	0.5 kg
Gas or Oil Lamp	2	Cr10	0.5 kg
IR Goggles	6	Cr500	0.25kg
LI Goggles	7	Cr500	0.25kg
Torches	1	Cr1	0.25 kg

	TL	Cost	Weight
Personal Devices			
Artificial Psionic Shield Helmet	8	Cr4000	1 kg
Bull-Horn	5	Cr120	5 kg
Hand Calculator	7	Cr10	1 kg
Hand Computer	11	Cr1000	0.5 kg
Handcuffs	2	Cr25	0.3 kg
Inertial Locator	9	Cr1200	1.5 kg
Long Range Communicator	6	Cr500	15 kg
Magnetic Compass	3	Cr10	negligible
Medium Range Communicator	5	Cr200	10 kg
Metal Detector	6	Cr300	1 kg
Radiation Counter	5	Cr250	1 kg.
Short Range Communicator	5	Cr100	5 kg
Wrist Watch	4	Cr25+	negligible

	TL	Cost	Weight
Tools			
Carpentry Tool Set	2	Cr300	25 kg
Chain Saw	6	Cr500	8 kg
Disguise Kit	7	Cr1000	5 kg
Electronic Tool Set	7	Cr2000	5 kg
Lock Pick Set	4	Cr10	0.25kg
Mechanical Tool Set	5	Cr1000	20 kg
Medical Kit	7	Cr1000	10 kg
Metalwork Tool Set	4	Cr1500	50 kg
Shelters			
Advanced Base	8	KCr50	6000 kg
Pre-Fabricated Cabin	6	KCr10	4000 kg
Pressure Tent	7	Cr2000	25 kg
Tarpaulin	1	Cr10	2 kg
Tent	2	Cr200	3 kg

ARCHAIC ARMOR

	Armor Rating	Max Dex Bonus	Armor Check Penalty	Cost	Weight	TL	Speed 9m	Speed 6m
Light Armor								
Padded	1 (0)	+8	0	Cr5	4.5kg	1	9	6
Leather	2 (1)	+6	0	Cr10	7.5kg	1	9	6
Studded Leather	3 (1)	+5	-1	Cr25	9kg	1	9	6
Chain Shirt	4 (2)	+4	-2	Cr100	11kg	2	9	6
Medium Armor								
Hide	3 (1)	+4	-3	Cr15	11kg	0	6	3
Scale mail	4 (2)	+3	-4	Cr50	13.5kg	1	6	3
Chainmail	5 (2)	+2	-5	Cr150	18kg	2	6	3
Breastplate	5 (2)	+3	-4	Cr200	13.5kg	1	6	3
Heavy Armor								
Splintmail	6 (3)	0	-7	Cr200	20.5kg	2	6	3
Banded mail	6 (3)	+1	-6	Cr250	16kg	2	6	3
Half-plate	7 (3)	+0	-7	Cr600	22.5kg	2	6	3
Full plate	8 (4)	+1	-6	Cr1500	22.5kg	2	6	3

MODERN ARMOR

	Armor Rating	Max Dex Bonus	Armor Check Penalty	Cost	Weight	TL	Speed 9m	Speed 6m
Light Armor								
Jack	2	+8	0	Cr50	1kg	5	9	6
Mesh	3	+5	-1	Cr150	2kg	7	9	6
Flak jacket	4	+6	0	Cr100	1kg	7	9	6
Reflec */**	0/6	+8	0	Cr1500	1kg	10	9	6
Medium Armor								
Ablat */***	2/5	+5	-1	Cr75	2kg	9	6	3
Cloth	6	+4	-2	Cr250	2kg	6	6	3
Combat Env Suit	6	+2	-3	Cr1500	3kg	10	6	3
Heavy Armor								
Combat Armor	7	+3	-4	Cr20,000	18kg	11	6	3
Combat Armor	7	+5	-1	Cr30,000	10kg	12	6	3
Combat Armor	8	+6	0	Cr60,000	6kg	14	6	3
Hostile Env Suit	5	+2	-3	Cr18,000	40kg	12	6	3
Hostile Env Suit	7	+3	-4	Cr150,000	25kg	14	6	3
Tailored Vac Suit	2	+6	-0	Cr9000	-	14	9	6
Vac Suit	4	+0	-5	Cr9000	8kg	9	6	3
Vac Suit	3	+2	-3	Cr8000	2kg	12	6	3
Vac Suit	2	+4	-2	Cr7000	-	14	6	3

OTHER	Effects	Cost	TL		
Chameleon	+2 to AC	Cr1000	12	-	-
Chameleon	+4 to AC	Cr5000	14	-	-
Psionic Shielding	Immunity to Psi attacks	Cr4000	12	-	-

* First number is the base armor rating, the second number is the armor rating vs. laser weapons.

** Can be worn under most other types, adding its rating to the rating of the other armor. Reflec may not be worn under combat armor and battle dress.

*** Unlike other types of armor, the armor rating (vs. lasers) of Ablat is reduced by 1 point every time a laser weapon hits it. Thus after 5 hits by any type of laser, the Ablat armor will be rendered useless (against any type of attacks).

PATRON ENCOUNTERS

	1	2	3	4	5	6
1	Arsonist	Cutthroat	Assassin	Hijacker	Smuggler	Terrorist
2	Crewperson	Peasant	Rumor	Clerk	Soldier	Shopkeeper
3	Shipowner	Tourist	Merchant	Police	Scout	Rumor
4	Diplomat	Courier	Spy	Scholar	Governor	Administrator
5	Mercenary	Naval	Marine	Scout	Army	Mercenary
6	Noble	Playboy	Avenger	Émigré	Speculator	Rumor

RADIATION DAMAGE

Severity	Rads	Stamina	Lifeblood	CON*	Symptons
Mild	51-150	1d6	-	-	Mild to moderate nausea and vomiting
Moderate	151-300	2d6	1d4	-1 once	Hair loss, mild skin burns, nausea, vomiting
Severe	301-500	2d10	2d6	-1 per hour	Hair loss, moderate skin burns, nausea, vomiting, internal bleeding.
Extreme	501-800	3d10	2d10	-2 per hour	Hair loss, severe skin burns, nausea, vomiting, internal bleeding, sterility
Lethal	800+	4d10	3d10	-4 per hour	Hair loss, massive skin burns, nausea, vomiting, internal bleeding, sterility

*Requires a Fortitude save (DC10 + 2 per 100 rads of exposure), to avoid this permanent loss to Constitution.

Solar Flares: The effects of a solar flare will last 1d12 hours during which time it will bombard any exposed living creature to 100x1d20 rads per hour.

RANDOM PLANETSIDE ENCOUNTERS

Die	Type	Qty	V	Weaponry	Armor
11	Peasants	1d6	-	Clubs and cudgels	—
12	Peasants	2d6	-	Clubs and cudgels	—
13	Workers	2d6	-	Clubs	—
14	Rowdies	3d6	-	Clubs	—
15	Thugs	2d6	-	Daggers	—
16	Riotous mob	4d6	-	Clubs and daggers	—
21	Soldiers	2d6	-	Rifles and bayonets	Cloth
22	Soldiers	2d6	V	Carbines	Mesh
23	Police patrol	1d6	V	Automatic pistols	Cloth
24	Marines	2d6	V	Revolvers and cutlasses	Mesh
25	Naval security troops	3d6	V	Carbines	—
26	Soldiers on patrol	2d6	V	Submachineguns	Jack
31	Adventurers	1d6	-	Swords	—
32	Noble with retinue	2d6	-	Foils	—
33	Hunters and guides	2d6	-	Rifles and spears	Jack
34	Tourists	2d6	V	Cameras	—
35	Researchers	2d6	V	—	—
36	Police patrol	1d6	V	Revolvers	—
41	Fugitives	1d6	-	Clubs	—
42	Fugitives	2d6	V	Blades	Jack
43	Fugitives	3d6	-	Revolvers	—
44	Vigilantes	2d6	V	Rifles and carbines	Jack
45	Bandits	3d6	-	Swords and pistols	—
46	Ambushing brigands	3d6	-	Broadswords and pistols	Cloth
51	Merchant and employees	1d6	-	Daggers	—
52	Traders	2d6	V	Blades	—
53	Religious group	2d6	-	—	—
54	Beggars	1d6	-	—	—
55	Pilgrims	5d6	-	—	Jack
56	Guards	3d6	-	Halberds and daggers	Jack
61-66					

Additional Weapons

	1	2	3
1	Laser rifle	Shotgun	Broadsword
2	Auto rifle	Carbine	Sword
3	Reroll column 2	Revolver	Halberd
4	Reroll column 2	Reroll column 3	Cutlass
5	Reroll column 2	Reroll column 3	Foil
6	Reroll column 2	Reroll column 3	—

REACTIONS AND ATTITUDES

Unless otherwise noted, most randomly encountered NPCs will have an *Indifferent* attitude towards the PCs. When interacting with an NPC using any of the skills listed in the table below, the current attitude of the NPC may affect the use of the skill. As well, there is the possibility that the interaction will affect the future attitude of the NPC toward the character whether this was by design or coincidence.

1d6	Attitude	Skill Modifier	Affected Skills	
0-	Enemy *	-6	Bluff	P/Administration
1	Hostile	-4	Bribery	Recruiting
2	Unfriendly	-2	Broker	Trader
3-4	Indifferent	+/-0	Entertain	
5	Friendly	+2	Gather Information	
6	Helpful	+4	Intimidate	
7+	Ally **	+6	Liaison	

* An NPC usually can only become an Enemy as the result of a critical failure. An obviously hostile act towards the NPC will also often cause this sort of change in attitude…

** An NPC usually can only become an Ally as the result of a critical success. An obviously heroic act such as saving the NPC's life will also often cause this sort of change in attitude…

Using the skill successfully automatically improves the NPC's attitude one level regardless of any other effect of the use of the skill. A critical success improves the NPC's attitude by two levels.

Consult the table below for failure results. A critical failure automatically drops the NPC's attitude one level in addition to any other failure effects.

Skill	Effects of Failure
Liaison	Unless a critical failure, attitude is not affected
Broker, Gather Information, P/Administration Recruiting, Trader	Make CHA check (DC8) or attitude drops one level
Bluff	Make CHA or SOC check (DC10) or attitude drops one level
Bribery	Make CHA check (DC12) or attitude drops one level
Intimidate	Make CHA or SOC check (DC16) or attitude drops two levels
Entertain	Failure automatically drops the audience's attitude by one level

SPECULATIVE GOODS

Die	Trade Goods	Base Price	Purchase Modifiers	Resale Modifiers	Quantity
0-			Add 10 to the roll and redetermine the result		
01	Grain	300	A-2, NA+1, I+2	A-2	8d6x5
02	Scrap Metal	300	P-2, NI-2	I+2, R-2	5d6x10
03	Steel	500	I-2, R-1, P+1	I-2, R-1, P+3	4d6x10
04	Lead	500	P-6, NI-4	I+4, R-1	10d6x10
05	Livestock	1,000	A-4	NA+4, NI+2, A-2	1d6x5 (4/ton)
06	Plants	1,000	A-4	NA+2, R+2, I-1	4d6x5
07	Aluminium	1,000	I-3, R-2, P+1	I-3, NI+4, R-1	5d6x10
08	Carbon	1,000	NI-3, P-2	I+2, A+1, R-2	5d6x10
09	Fruit	1,000	A-3, NA+1, I+2	A-2, I+3, P+2	2d6x5
10	Rope	1,000	A-6, NI-1	I+2, NA+1	4d6x5
11	Meat	1,500	A-2, NA+2, I+3	A-2, I+2, P+1	4d6x5
12	Wire	1,500	I-4, R-2, NI+2	A+4, NI+2, P+2	2d6x10
13	Paper Products	1,500	P-1, A-4, I+2	R+2, NA+4	5d6x10
14	Workable Stone	1,500	P-4, NI-2, NA-2	I+4, R+4	5d6x10
15	Wood	2,000	A-6	A-6, I+1, R+2	2d6x10
16	Copper	2,000	I-3, R-2, P+1	I-3, R+1	2d6x10
17	Organic Oils	2,000	A-6	I+2, R+4, P+1	1d6x10
18	Inorganic fertilizer	2,000	P-4, NI-2	A+4, R+2, NA-2	5d6x10
19	Herbs	2,500	A-6	I+2, R-3	5d6
20	Textiles	3,000	A-7, NA-5, NI-3	A-6, NA+1, R+3	3d6x5
21	Piping	3,000	I-4, P-2, NI+2	NI+4, R-2	2d6x5
22	Caustic Alkali	3,000	P-4, NI-2	I+2, R-2	4d6x10
23	Brass	4,000	NI-2	I+1, R-1	4d6x10
24	Glass	4,000	I-2, P-2	NI+1, R-1	2d6x10
25	Agricultural Seeds	5,000	A-6, R-2, I+2	NA+3, P+2	2d6
26	Minerals	5,000	NI-2, I+4, P-3	I+3, R-1	2d6x10
27	Liquid Pavement	5,000	I+2, P-2, NI-1	I+4, R+2	2d6x10
28	Bulk Plastic	5,000	NI-2, I-2, NA-2	I+4, A+2	5d6x10
29	Dishware	5,000	P-2, NI-2, NA-2	R+1	1d6x10
30	Fireworks	5,000	P-3, NI-2	R+2, A+4, NA-1	2d6
31	Abrasive Powders	5,000	P-4, NI-2	I+4	4d6x10
32	Pigments/Dyes	5,000	P-2, A-4	NA+4, R+2	2d6x10
33	Spices	6,000	A-2, NA+3, I+2	A-2, R+2, P+3	1d6x5
34	Coatings (Paint)	6,000	I-2, NA-1	I+4, A+1, R-1	1d6x5
35	Polymers	7,000	I-2, R-3, P+2	I-2, R+3	4d6x5
36	Adhesives	7,000	P+2, I-2	I+2, R+2	1d6x5
37	Tin	9,000	I-3, R-2, P+1	I-3, R-1	3d6x10
38	Books	10,000	P-6, A-2	R+4, I-2, NI+2, NA+2	1d6x10
39	Liquor	10,000	A-4	A-3, I+1, R+2	1d6x5
40	Petrochemicals	10,000	NA-4, I+1, NI-5	NA-4, NI+3, NI-5	1d6
41	Compressed Gasses	10,000	NI-2, P-4	I+4, R+2	2d6
42	Blades	10,000	I-3, R-2, P+3	I-2, R-1, P+3	2d6
43	Tools	10,000	I-3, R-2, P+3	I-2, R-1, P+3	2d6
44	Preserved Foods	10,000	I-4, A-2	I+2, NA+4, P+2, R-1	1d6x10
45	Leather	10,000	A-4, P-2	R+4, I+2	4d6
46	Strong Acids	15,000	NI-2, P-1	I+4, R-1	2d6
47	Canned Beverages	15,000	P-4, NI-2, I-2	R+4, I+4	1d6x10
48	Insecticide	15,000	NI-2, NA-4	A+4, R+2	1d6x10
49	Mercury	15,000	NI-2, P-4, I+2	I+4, R-1	2d6
50	Furniture	15,000	P-2, I-4, A-1	I+2, R+4	2d6x5
51	Crystals	20,000	NA-3, I+4	NA-3, I+3, R+3	1d6
52	Animal Skins	20,000	A-4, P-1	NA+1, R+4	2d6
53	Tea	20,000	A-4, NI-2	R+8, I+4	3d6
54	Chemical Catalysts	20,000	NI-2, P-2	I+4, R+2	1d6x5
55	Chemical Solvents	20,000	NI-1, AG-1	I+4, R+2	1d6x10
56	Coffee	25,000	A-4, NI-2	R+8, I+4	4d6
57	Starship Hull Plates	25,000	I-2	R+2, NI-2	4d6
58	Explosives	25,000	P+2, I-2	I+2	2d6
59	Toys	25,000	P-2, NA-2, I-4	R+4, A+2	4d6
60	Firearms	30,000	I-3, R-2, P+3	I-2, R-1, P+3	2d6
61	Ammunition	30,000	-3, R-2, P+3	I-2, R-1, P+3	2d6
62	Refined Silicon	35,000	NI-2, I-4, P-1	I+6, R+2	2d6x10
63	Info Cubes/Disks	50,000	R-2, R-3	P+3, A+6, R+4	1d6
64	Modular Buildings	50,000	I-2, R-2	P+4, NI+2	2d6
65	Body Armor	50,000	I-1, R-3, P+3	I-2, R+1, P+4	2d6
66	Fragrance Oils	50,000	P-2, NI-2, A-4	I+2, R+6	1d6
67	Silver	70,000	I+5, R-1, P+2	I+5, R-1	1d6x5
68	Mechanical Parts	70,000	I-5, R-3	N I+3, A+2	1d6x5
69	Construction Equipment	75,000	I-4, R-2	NI+4, P+4, NA+2	2d6 (4 tons ea)
70	Computer Software	100,000	I-4, R-2	I+2, NI+2	1d6
71	Pharmaceuticals	100,000	NA-3, +4, P+3	NA-3, I+5, R+4	1d6
72	Electronics Parts	100,000	I-4, R-3	NI+2, P+1	1d6x5
73	Starship Electronics Parts	150,000	I-4	R+4, NI-2	2d6
74	Farm Machinery	150,000	I-5, R-2	A+5, NA-8, P+1	1d6
75	Computer Parts	150,000	I-5, R-3	NI+3, A+1, NA+2	1d6x5
76	Special Alloys	200,000	I-3, NI+5, R-2	I-3, NI+4, R-1	1d6
77	Holo-Vid Cubes	250,000	I-4	R+4, P+2	4d6
78	Statuary	250,000	P-6, NI-2, NA-2	R+4, I+2	2d6
79	Cybernetic Parts	250,000	I-4, R-1	NI+4, A+1, NA+2	1d6x5
80	Starship Engine Parts	250,000	I-2	R+2, NI-2	4d6
81	Art Work	250,000	P-4, NI-2, NA-2	R+6, I+2	1d6
82	Vacc Suits	400,000	NA-5, I-3, R-1	NA-1, NI+2, P+1	1d6x5
83	Cloned Human Organs	500,000	P-1, I-2	R+6, I+2, NI-2	1d6
84	Human-Cybernetic Parts	500,000	I-4	R+2, I+4	2d6
85	Robot Parts	500,000	I-4	R+2, P+4, NI+4	4d6
86	Energy Cells	500,000	I-4, NI+2, P+2	R+2, NA+2	2d6
87	Antiques	500,000	P-2	R+6, I+2	2d6
88	Machine Tools	750,000	I-5, R-4	NI+3, A+1, NA+2	1d6x5
89	Computer Memory Modules	1,000,000	I-4	R+2	2d6
90	Radioactives	1,000,000	I+7, NI-3, R+5	I+6, NI-3, R-4	1d6
91	Gems	1,000,000	I+4, NI-8, P-3	I+4, NI-2, R+8	1d6
92	Aircraft	1,000,000	I-4, R-3	NI+2, P+1, NA-2	1d6
93	Robots	1,500,000	I-4	R+2, P+4, NI+4	2d6 (4/ton)
94	All Terrain Vehicles	3,000,000	I-2, R-2	NI+2, P+1, A+1	1d6
95	Jewelry	5,000,000	I-4, NI-4, P-3	R+8	1d6
96	Air/raft	6,000,000	I-3, R-2	NI+2, P+1	1d6
97	Armored Vehicles	7,000,000	I-5, R-2, P+4	NA-2, A+2, R+1	1d6
98	Gold	8,000,000	P-2, NI-2, NA-2	I+4, R+6	1d6
99	Computers	10,000,000	I-2, R-2	NI+2, P+1, A-3	1d6
100	Starship Weapons	Per weapon	I-2	R+2	2d6 (4/ton)
101+			Subtract 10 to the roll and redetermine the result		

LOCATING/SELLING SPECULATIVE CARGO

Starport Type	DC	Potential Buyers or Speculative Cargo	Broker Fee
A	15	1d8 available	Cr1000
B	20	1d6 available	Cr500
C	25	1d4 available	Cr250
D	30	1d3 available	Cr200
E	35	1d2 available	Cr150
X	40	1 available	Cr100

Modifiers

Per World Population UWP digit   -1 or more

ACTUAL VALUE

3d6	% Value
3 -	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100
11	110
12	120
13	130
14	140
15	150
16	160
17	170
18	180
19	200
20	300
21 +	400

TRADE CLASSIFICATIONS

A/Ag	Agricultural	LoPop	Low Population
As/Ast	Asteroid Belt	NA	Non-Agricultural
De	Desert World	NI	Non-Industrial
Fl	Fluid Oceans	P/Po	Poor
HiPop	High Population	R/Ri	Rich
Ic	Ice Capped	Wa	Water World
In	Industrial	Va	Vacuum World

HIRING A BROKER

Sell/Buy	Broker %
+/-1 AVT Modifier	5% commission
+/-2 AVT Modifier	10% commission
+/-3 AVT Modifier	15% commission
+/-4 AVT Modifier	20% commission

PC BROKERS/BRIBERY

Bonus	DC	Minimum Bribe
+/-1 AVT Modifier	15	5% of final price
+/-2 AVT Modifier	20	10% of final price
+/-3 AVT Modifier	25	15% of final price
+/-4 AVT Modifier	30	20% of final price

PASSENGERS

World Pop Digit	High	Middle	Low
0	-	-	-
1	-	1d6-1	2d6-6
2	1d6-1d6	1d6	2d6
3	2d6-2d6	2d6-1d6	2d6
4	2d6-1d6	2d6-1d6	3d6-1d6
5	2d6-1d6	3d6-2d6	3d6-1d6
6	3d6-2d6	3d6-2d6	3d6
7	3d6-2d6	3d6-1d6	3d6
8	3d6-1d6	3d6-1d6	4d6
9	3d6-1d6	3d6	5d6
A	3d6	4d6	6d6
	Cr10,000/Cr16,000	Cr8000/Cr13,000	Cr1000

Modifiers:

Skills		Destination World	
Recruiting 5+	+2	Population 4+	-3
P/Administration 5+	+1	Population 8+	+3
K/Interstellar Law 10+	+1	Amber Zone	-6
		Red Zone	-12, no middle or low
		Technology Level	+/- TL difference.

BULK CARGO

World Pop Digit	Priority	Hazardous	Security	Major (x10)	Minor (x5)	Incidental
0	-	-	-	-	-	-
1	-	-	-	1d6-4	1d6-4	-
2	-	-	-	1d6-2	1d6-1	-
3	-	-	-	1d6-1	1d6	-
4	-	-	-	1d6	1d6+1	-
5	1d6-4	-	1d6-4	1d6+1	1d6+2	-
6	1d6-3	1d6-4	1d6-3	1d6+2	1d6+3	1d6-3
7	1d6-2	1d6-3	1d6-2	1d6+3	1d6+4	1d6-3
8	1d6-1	1d6-2	1d6-1	1d6+4	1d6+5	1d6-2
9	1d6	1d6-1	1d6	1d6+5	1d6+6	1d6-2
A	1d6+3	1d6	1d6+1	1d6+6	1d6+7	1d6
	Cr1000 per ton per Jump Distance	Cr10,000 per ton	Cr5,000 per ton	Cr1000 per ton	Cr1000 per ton	Cr1000 per ton

Modifiers:

Liaison skill 5+	+2	Amber Zone	No Major cargo
Population 4-	-4	Red Zone	No cargo except Priority, Security, and Hazardous
Population 8+	+1	Technology Level	+/- TL difference between the world of origin and the destination world.

RETIREMENT PAY

Terms Served	Retirement Pay
5 Terms	Cr4000/year
6 Terms	Cr6000/year
7 Terms	Cr8000/year
8+ Terms	Cr10,000/year

PSIONIC TALENTS

Telepathy Sphere

	Rank	Cost	Duration
Telepathy	1	0	-
Life Detection	1	2	60s
Telempathy	2	2	60s
Read Surface Thoughts	4	3	60s
Send Thoughts	5	3	120s
Probe	9	12	10m
Assault	10	14	2s

Clairvoyance Sphere

	Rank	Cost	Duration
Sense	2	2	30s
Clairvoyance	5	3	30s
Clairaudience	5	3	30s
Combined Clairaudience/ Clairvoyance	9	3	30s

Awareness Sphere

	Rank	Cost	Duration
Suspended Animation	2	5	7d
Enhanced STR	4	v	60m
Enhanced CON	5	v	60m
Regeneration	9	v	-

Telekinesis Sphere

	Rank	Cost	Duration
1 gram	1	2	60s
10 grams	2	3	60s
100 grams	3	5	60s
1 kilogram	5	8	60s
10 kilograms	8	12	60s
100 kilograms	10	14	60s
1000 kilograms	14	16	60s
10,000 kilograms	18	18	60s

Teleportation Sphere

	Rank	Cost	Max Wgt.
Self, Unclothed	5	R	Body Weight
Self, Clothed	7	R	+1000g
Self + Light Equipment	9	R	+ STR x 1kg
Self + Moderate Equipment	12	R+2	+ STR x 10kg
Self + Heavy Equipment	15	R+5	+ STR x 20kg

R = Range

PSIONIC RANGE TABLE

Range	Telepathy	Clairvoyance	Telekinesis	Teleport	Range Descriptions
Close	0	0	0	2	in physical contact, touching.
Short	2	2	2	3	sword or polearm point. 1 to 5 meters.
Medium	3	2	3	5	pistol range. 6 to 50 meters.
Long	4	3	7	5	rifle range. 51 to 250 meters
Very Long	5	3	14	5	extreme range. 251 to 500 meters.
Distant	6	5	-	7	beyond normal contact. 501 to 5000 meters.
Very Distant	7	5	-	7	out of sight. 5 to 51 kilometers.
Regional	8	6	-	8	51 to 500 kilometers.
Continent	8	6	-	8	501 to 5000 kilometers
Planetary	9	6	-	8	5001 to 50,000 kilometers.

SKILL LIST

Skill Name (Key Ability)	THB Page #
Animal Empathy (CHA)	67
Appraise (INT) *	67
Balance (DEX) *	67
Bluff (CHA) *	68
Bribery (CHA) *	69
Broker (INT) *	69
Climb (STR) *	69
Combat Engineering (INT)	70
CRAFT (INT/DEX) *	71
Decipher Script (INT)	72
Demolitions (DEX) *	72
Disguise (CHA) *	72
Driving (DEX) *	73
ENTERTAIN (CHA) *	73
Forgery (INT/DEX) *	74
Forward Observer (INT)	74
Gambling (INT) *	74
Gather Information (CHA) *	75
Gunnery (WIS)	75
Handle Animal (CHA) *	75
Hide (DEX) *	76
Innuendo (WIS)	76
Intimidate (CHA) *	77
Intuit Direction (WIS)	77
Jump (STR) *	77
KNOWLEDGE (EDU)	78
Leader (INT/CHA) *	79
Liaison (CHA) *	79
Listen (WIS) *	79
Move Silently (DEX) *	80
Navigation (EDU)	80
Pilot (INT/DEX)	80
PROFESSION (WIS)	80
P/Administration	81
P/Hunter	82
P/Prospecting	84
P/Survey	84
Read/Write Language	86
Recruiting (EDU) *	87
Ride (DEX) *	87
Search (INT) *	88
Sense Motive (WIS) *	88
Speak Language	88
Spot (WIS) *	89
Survival (WIS) *	89
Swim (STR) *	89
TECHNICAL (EDU)	90
T/Astrogation	92
T/Communications	93
T/Computer	93
T/Medical	95
T/Sensors	96
Trader (WIS) *	98
Tumble (DEX)	98
Use Alien Devices (WIS)	99

BOLD – Cascade Skill
* Untrained Skill

FEAT LIST

Feat Name	Prerequisites or Limitations	THB Page #
Acrobatics		102
Acting Prodigy		102
Alertness		102
Ambidexterity	Dex 15+	102
Armor Proficiency (Light)		102
Armor Proficiency (Medium)	Armor Proficiency (Light)	102
Armor Proficiency (Heavy)	Armor Proficiency (Medium)	102
Armor Proficiency (Vac Suit)		102
Armor Proficiency (Battle Dress)	Armor Proficiency (Vac Suit)	102
Zero-G Combat	Armor Proficiency (Vac Suit)	113
Assassin		103
Athletic		103
Barter		103
Brawling		103
Carousing		103
Combat Reflexes		103
Connections		103
Credit Line		103
Dodge	Dex 13+	103
Mobility	Dodge	107
Spring Attack	Mobility, BAB +4 or higher	109
Dumb Luck		104
Endurance		104
EW Specialist		104
Fast Talk		104
First Aid		104
Gearhead		104
Miracle Worker	Gearhead	107
Geological Survey	P/Prospecting 5+ or K/Geology 5+	104
Great Fortitude		104
Hacker	T/Computer 5+	104
Override Ship Security	Hacker	108
Heavy Gravity Adaptation	Not have Zero G/Low Gravity Adaptation	105
Heavy Metal		105
Hobby		105
Improved Critical	BAB +8 or higher	105
Improved Initiative		105
Improved Unarmed Strike		105
Interrogation		105
Iron Will		105
Jury Rig		106
Legal Eagle	K/Interstellar Law 5+	106
Lightning Reflexes		106
Martial Training	Not Barbarian, Mercenary, or Marine	106
Medical Specialization		106
Mounted Accuracy	Ride or Drive 1+	107
Mounted Combat	Ride 1+	107
Ride-By Attack	Mounted Combat	108
Spirited Charge	Ride-By Attack	109
Trample	Mounted Combat	110
Natural Born Leader		107
Natural Compass		107
Natural Talent		107
Naval Architect	T/Engineering 1+	107
Nerves of Steel		108
Point Blank Shot		108
Far Shot	Point Blank Shot	104
Precise Shot	Point Blank Shot	108
Rapid Shot	Point Blank Shot, Dex 13+	108
Shot on the Run	Point Blank Shot, Dex 13+, Dodge, Mobility	109
Primary Military Occupational Specialty	Skill 5+, Skill Focus	108
PSI Training		108
Quick Draw	BAB +1 or higher	108
Research		108
Run		108
Shield Proficiency		109
Ship's Tactics	Vessel/Starships or Vessel/Ship's Boat	109
Fleet Tactics	Ship's Tactics	104
Sixth Sense		109
Skill Focus		109
Sniper		109
Stealthy		109
Surgery	T/Medical 8+	109
Tolerance	Aslan Only	110
Toughness		110
Tracker		110
Trapping		110
Trustworthy		110
Two Weapon Fighting		111
Improved Two-Weapon Fighting	Two-Weapon Fighting, Ambidexterity, and BAB +9 or higher.	105
Vessel		111
Vessel Specialization		111
Weapon Focus	Proficiency, BAB +1 or higher	111
Weapon Specialization	Weapon Focus, Army, Barbarian, Marine, Mercenary only	113
Weapon Proficiency (Archer)		112
Weapon Proficiency (Armsman)		112
Weapon Proficiency (Combat Rifleman)		112
Weapon Proficiency (Field Artillery)		112
Weapon Proficiency (Heavy Weapons)		112
Weapon Proficiency (High Energy Weapons)	Armor Proficiency (Battle Dress)	112
Weapon Proficiency (Lasers)		112
Weapon Proficiency (Marksman)		112
Weapon Proficiency (Ship's Weaponry)		112
Weapon Proficiency (Swordsman)		112
Xeno-Empathy		113
Xeno-Medicine	T/Medical 1+	113
Zero-G/Low Gravity Adaptation		113
Improved Zero-G/Low Gravity Adaptation	Zero-G/Low Gravity Adaptation	105

STARPORT CODES

Code	Description
A	Large, hi-capacity installations capable of constructing starships and offer complete repair facilities. Refined fuel available.
B	Large, high quality ports capable of constructing non-jump capable ship and small craft, along with handling their maintenance. Refined fuel is available.
C	Smaller average quality ports. Repair facilities available along with refined fuel.
D	Frontier or backwater ports that see little traffic. Repair facilities are minimal at best, and only unrefined fuel is available.
E	Little more than a marked landing area with no facilities.
X	No port of any kind exists.

WORLD SIZE

Digit	Average Size	Gravity Description	Typical Gravity
R	Ring (around a world)	No Gravity	0
S	Small (200-800 km)	No Gravity	0
0	Asteroid Belt	No Gravity	0
1	1600 km	Very Low Gravity	0.125g
2	3200 km	Very Low Gravity	0.25g
3	4800 km	Very Low Gravity	0.375g
4	6400 km	Low Gravity	0.5g
5	8000 km	Low Gravity	0.625g
6	9600 km	Low Gravity	0.75g
7	11,200 km	Average Gravity	0.875g
8	12,800 km	Average Gravity	1g
9	14,400 km	Average Gravity	1.125g
A+	16,000 km	Heavy Gravity	1.25g

WORLD ATMOSPHERE

Digit	Description
0	No Atmosphere.
1	Trace.
2	Very Thin, Tainted.
3	Very Thin
4	Thin, Tainted.
5	Thin
6	Standard
7	Standard, Tainted.
8	Dense
9	Dense, Tainted.
A	Exotic.
B	Corrosive
C	Insidious
D	Dense, High Pressure
E	Ellipsoid
F	Thin, Low Pressure

WORLD HYDROGRAPHICS

Digit	Description
0	No free-standing liquid. Desert
1	10% surface liquid
2	20% surface liquid
3	30% surface liquid
4	40% surface liquid
5	50% surface liquid
6	60% surface liquid
7	70% surface liquid
8	80% surface liquid
9	90% surface liquid
A	No large land masses. Water or Fluid World

WORLD GOVERNMENT

Digit	Description
0	No Government Structure: In many cases family bonds predominate.
1	Company Corporation: Government by a company managerial elite. Citizens are company employees.
2	Participatory Democracy: Government by advice and consent of the citizens.
3	Self-Perpetuating Oligarchy: Government by a restricted minority, with little or no input from the masses.
4	Representative Democracy: Government by elected representatives.
5	Feudal Technocracy: Government by specific individuals for those who agree to be ruled. Relationships are based on the performance of technical activities that are mutually beneficial.
6	Captive Government: Government by an imposed leadership answerable to an outside group. A colony or conquered area.
7	Balkanization: No central ruling authority exists; rival governments compete for control.
8	Civil Service Bureaucracy: Government by agencies employing individuals selected for their expertise.
9	Impersonal Bureaucracy: Government by agencies that are insulated from the governed.
A	Charismatic Dictator: Government by a single leader enjoying the confidence of the citizens.
B	Non-Charismatic Leader: A previous charismatic dictator has been replaced by a leader through normal channels.
C	Charismatic Oligarchy: Government by a select group, organization, or class enjoying the overwhelming confidence of the citizenry.
D	Religious Dictatorship: Government by a religious organization without regard to the specific needs of the citizenry.
E	Religious Autocracy: Government by a single religious leader having absolute power over the citizenry.
F	Totalitarian Oligarchy: Government by an all-powerful minority which maintains absolute control through widespread coercion and oppression.

WORLD POPULATION

Digit	Description	Population
0	No Inhabitants	0-9
1	Tens of Inhabitants	10-99
2	Hundreds of Inhabitants	100-999
3	Thousands of Inhabitants	1000-9999
4	Tens of Thousands	10,000-99,999
5	Hundreds of Thousands	100,000-999,999
6	Millions of Inhabitants	1,000,000-9,999,999
7	Tens of Millions	10,000,000-99,999,999
8	Hundreds of Millions	100,000,000-999,999,999
9	Billions of Inhabitants	1,000,000,000-9,999,999,999
A	Tens of Billions	10,000,000,000+

WORLD LAW LEVEL

Digit	Description
0	No Law. No prohibitions.
1	Low. Body pistols undetectable by standard detectors, explosives (bombs, grenades), and poison gas prohibited.
2	Low. Portable energy weapons (laser carbine, laser rifle) prohibited. Ship's gunnery not affected.
3	Low. Weapons of a strict military nature (machineguns, automatic rifles) prohibited.
4	Moderate. Light assault weapons (submachineguns) prohibited.
5	Moderate. Personal concealable firearms (such as pistols and revolvers) prohibited.
6	Moderate. Most firearms (all except shotguns) prohibited. The carrying of any type of weapon openly is discouraged.
7	Moderate. Shotguns are prohibited.
8	High. Long bladed weapons (all but daggers) are controlled, and open possession is prohibited.
9	High. Possession of any weapon outside one's residence is prohibited.
A	Extreme. Weapon possession prohibited.
B	Extreme. Rigid control of civilian movement.
C	Extreme. Unrestricted invasion of privacy.
D	Extreme. Paramilitary law enforcement.
E	Extreme. Full-fledged police state.
F	Extreme. All facets of daily life rigidly controlled.
G	Extreme. Severe punishment for petty infractions.
H	Extreme. Legalized oppressive practices.
J	Extreme. Routinely oppressive and restrictive.
K	Extreme. Excessively oppressive and restrictive.
L	Extreme. Totally oppressive and restrictive.

WORLD TECH LEVEL

Digit	Description
0	Stone Age, primitive
1	Bronze Age to Middle Age
2	circa 1400 to 1700 AD
3	circa 1700 to 1860 AD
4	circa 1860 to 1900 AD
5	circa 1900 to 1939 AD
6	circa 1940 to 1969 AD
7	circa 1970 to 1990 AD
8	circa 1990 to 2100 AD
9	circa 2100+ AD
10	Early Interstellar Community
11	Average Interstellar Community
12	Average Interstellar Community
13	Above Average Interstellar Community
14	Above Average Interstellar Community
15	Technical Maximum Interstellar Community
16	Occasional Interstellar Community

UWP LEGEND

0123456-7

0) Starport
1) Size
2) Atmosphere
3) Hydrographics
4) Population
5) Government
6) Law Level
7) Tech Level

PBG: *P*opulation Multiplier, Planetoid *B*elts Present, *G*as Giants Present.

WORLD DATA FORMAT SAMPLE

Name	Hex #	UWP	Bases	Trade Classification	Travel Zone	PBG	Allegiance	Stellar Data
Speer	0108	C432430-8	S	Poor, Non-industrial	R	404	1	K8 V

SPECULATIVE GOODS

Trade Goods	Base Price	Purchase	Resale
Grain	300	A, NA, I	A
Scrap Metal	300	P, NI	I, R
Steel	500	I, R, P	I, R, P
Lead	500	P, NI	I, R
Livestock	1,000	A	NA, NI, A
Plants	1,000	A	NA, R, I
Aluminium	1,000	I, R, P	I, NI, R
Carbon	1,000	NI, P	I, R, P
Fruit	1,000	A, NA, I	A, I, P
Rope	1,000	A, NI	I, NI
Meat	1,500	A, NA, I	A, I, P
Wire	1,500	I, R, NI	A, NI, P
Paper Products	1,500	P, A, I	R, NA
Workable Stone	1,500	P, NI, NA	A, I, R
Wood	2,000	A	A, I, R
Copper	2,000	I, R, P	I, R
Organic Oils	2,000	A	I, R, P
Inorganic fertilizer	2,000	P, NI	A, R, NA
Herbs	2,500	A	R, I
Textiles	3,000	A, NA, NI	A, NA, R
Piping	3,000	I, P, NI	NI, R
Caustic Alkali	3,000	P, NI	I, R
Brass	4,000	NI	I, R
Glass	4,000	I, P	NI, R
Agricultural Seeds	5,000	A, R, P	NA, P
Minerals	5,000	NI, I, P	I, R
Liquid Pavement	5,000	I, P, NI	I, R
Bulk Plastic	5,000	NI, I, NA	I, R
Dishware	5,000	P, NI, NA	R
Fireworks	5,000	P, NI	R, A, NA
Abrasive Powders	5,000	P, NI	I
Pigments/Dyes	5,000	P, A	NA, R
Spices	6,000	A, NA, I	A, R, P
Coatings (Paint)	6,000	I, NA	I, A, R
Polymers	7,000	I, R, P	I, R
Adhesives	7,000	P, I	I, R
Tin	9,000	I, R, P	I, R
Books	10,000	P, A	R, I, NI, NA
Liquor	10,000	A	A, I, R
Petrochemicals	10,000	NA, I, NI	NA, I, NI
Compressed Gasses	10,000	NI, P	I, R
Blades	10,000	I, R, P	I, R, P
Tools	10,000	I, R, P	I, R, P
Preserved Foods	10,000	I, A	I, NA, P, R
Leather	10,000	A, P	R, I
Strong Acids	15,000	NI, P	I, R
Canned Beverages	15,000	P, NI, I	R, I
Insecticide	15,000	NI, NA	A, R
Mercury	15,000	NI, P, I	I, R
Furniture	15,000	P, I, A	I, R
Crystals	20,000	NA, I	NA, I, R
Animal Skins	20,000	A, P	NA, R
Tea	20,000	A, NI	R, I
Chemical Catalysts	20,000	NI, P	I, R
Chemical Solvents	20,000	NI, AG	I, R
Coffee	25,000	A, NI	R, I
Starship Hull Plates	25,000	I	R, NI
Explosives	25,000	P, I	I
Toys	25,000	P, NA, I	R, A
Firearms	30,000	I, R, P	I, R, P
Ammunition	30,000	, R, P	I, R, P
Refined Silicon	35,000	NI, I, P	I, R
Info Cubes/Disks	50,000	R, I	P, A, R
Modular Buildings	50,000	I, R	P, NI
Body Armor	50,000	I,R,P	I,R,P
Fragrance Oils	50,000	P, NI, A	I, R
Silver	70,000	I, R, P	I, R
Mechanical Parts	70,000	I, R	N I, A
Construction Equipment	75,000	I, R	NI, P, NA
Computer Software	100,000	I, R	I, NI
Pharmaceuticals	100,000	NA, , P	NA, I, R
Electronics Parts	100,000	I, R	NI, P
Starship Electronics Parts	150,000	I	R, NI
Farm Machinery	150,000	I, R	A, NA, R
Computer Parts	150,000	I, R	NI, A, NA
Special Alloys	200,000	I, NI, R	I, NI, R
Holo-Vid Cubes	250,000	I	R, P
Statuary	250,000	P, NI, NA	R,I
Cybernetic Parts	250,000	I, R	NI, A, NA
Starship Engine Parts	250,000	I	R, NI
Art Work	250,000	P, NI, NA	R,I
Vacc Suits	400,000	NA, I, R	NA, NI, P
Cloned Human Organs	500,000	P, I	R, I, NI
Human-Cybernetic Parts	500,000	I	R, I
Robot Parts	500,000	I	R, P, NI
Energy Cells	500,000	I, NI, P	R, NA
Antiques	500,000	P	R, I
Machine Tools	750,000	I, R	NI,A, NA
Computer Memory Modules	1,000,000	I	R
Radioactives	1,000,000	I, NI, R	I, NI, R
Gems	1,000,000	I, NI, P	I, NI, R
Aircraft	1,000,000	I, R	NI, P, NA
Robots	1,500,000	I	R, P, NI
All Terrain Vehicles	3,000,000	I, R	NI, P, A
Jewelry	5,000,000	I, NI, P	R
Air/raft	6,000,000	I, R	NI, P
Armored Vehicles	7,000,000	I, R, P	NA, A, NI
Gold	8,000,000	P, NI, NA	I, R
Computers	10,000,000	I, R	NI, P, A
Starship Weapons	Per weapon	I	R

TRAVEL FORMULAS

Time	Distance	Acceleration
$2 \times (D / A)^2$	$(A \times (T^2))/4$	$4 \times (D / (T^2))$

SHIP REVENUE SOURCES

Bulk Cargo

Type	Fee	Min. Pop.
Priority	Cr1000 per Jump #	5+
Hazardous	Cr10,000	6+
Security	Cr5000	5+
Standard	Cr1000	1+

Passengers

	Occupancy Fees		
Class	Single	Double	Min. Pop.
High	Cr10,000	Cr16,000	2+
Middle	Cr8000	Cr13,000	1+
Low	Cr1000	-	1+

Mail

0-5 tons. Cr25,000 per Jump regardless of cargo load. Subsidized Merchants only.

Charters

Non-Starships	Fee
Per Hour (12hr min.)	Cr1 per ship ton

Starships	Fee
Minimum 2 week charter	
Per ton of cargo	Cr900
Per High Passenger	Cr9000
Per Low Passenger	Cr900

SHIP OPERATING EXPENSES

Fuel	Cost
Refined	Cr500/ton
Unrefined	Cr100/ton

Life Support (per week)	Cost
Per High Psngr/Crew Officer	Cr1000
Per Mid Psngr/Crewmember	Cr750
Per Low Passenger	Cr50

Crew Salaries

Crew Position	Monthly Salary
Master/Captain, First Officer, Bridge Crew	Varies
Pilot	Cr6000
Astrogator	Cr5000
Communications or Sensor Operator, Asst Engineer, Purser, Steward	Cr3000
Chief Engineer	Cr4000
Drive Hand, Medical Officer, Security, Technician, Boat Pilot	Cr2000
Cargo Handler, Gunner, Deck Hand	Cr1000

Starport Fees and Services

	Starport Classification				
Service Provided	A	B	C	D	E or X
Landing Rights	Cr100	Cr50	Cr20	Cr10	-
Landing and Berthing (6 days)	Cr500	Cr250	Cr100	Cr50	-
Berthing per day after 6	Cr500	Cr250	Cr100	C50	-
Orbital Berthing (6 days)	Cr100	Cr50	Cr20	Cr10	-
Orbital Berthing per day after 6	Cr100	Cr50	Cr20	Cr10	-
Cargo Handling per ton	Cr40	Cr30	Cr20	Cr10	-
Security Cargo Handling per ton	Cr50	Cr40	Cr30	Cr20	-
Hazardous Cargo Handling per ton	Cr70	Cr60	Cr50	Cr40	-
Cargo Shuttle Service per ton	Cr30	Cr20	Cr10	Cr5	-
Security Cargo Shuttle Service per ton	Cr40	Cr30	Cr20	Cr10	-
Hazardous Cargo Shuttle Service per ton	Cr60	Cr50	Cr40	Cr30	-
Passenger Shuttle Service	Cr100	Cr75	Cr50	Cr25	-
Warehousing per week per ton	Cr15	Cr10	Cr5	-	-
Security/Refrigerated Warehousing per week per ton	Cr25	Cr15	Cr10	-	-
Hazardous Warehousing per week per ton	Cr50	Cr25	Cr15	-	-

LOCATING/SELLING SPECULATIVE CARGO

Starport Type	Potential Buyers or Speculative Cargo	Broker Fee
A	1d8 available	Cr1000
B	1d6 available	Cr500
C	1d4 available	Cr250
D	1d3 available	Cr200
E	1d2 available	Cr150
X	1 available	Cr100

TRADE CLASSIFICATIONS

A/Ag	Agricultural	LoPop	Low Population
As/Ast	Asteroid Belt	NA	Non-Agricultural
De	Desert World	NI	Non-Industrial
Fl	Fluid Oceans	P/Po	Poor
HiPop	High Population	R/Ri	Rich
Ic	Ice Capped	Wa	Water World
In	Industrial	Va	Vacuum World

HIRING A BROKER / BROKER/BRIBERY SKILL USE

Sell/Buy	Broker Commission or Minimum Bribe
+/-1 AVT Modifier	5% commission
+/-2 AVT Modifier	10% commission
+/-3 AVT Modifier	15% commission
+/-4 AVT Modifier	20% commission

TYPICAL TRAVEL TIMES

	Acceleration Rate					
Typical Distances	1-G	2-G	3-G	4-G	5-G	6-G
Planet to Orbit (10,000km)	33.33m	23.57m	19.25m	16.67m	14.91m	13.61m
Planet to Moon (400,000km)	3.51h	2.48h	2.03h	1.76h	1.57h	1.43h
Inner System Orbits (45,000,000km, orbits 0-5)	1.55d	1.10d	21.52h	18.63h	16.67h	15.21h
Outer System Orbits (600,000,000km, orbits 6-12)	5.67d	4.01d	3.27d	2.84d	2.54d	2.31d
Extreme Orbits (1,000,000,000km, orbits 13+)	7.32d	5.18d	4.23d	3.66d	3.27d	2.99d
Size 0 World to Safe Jump Distance	1.76h	1.24h	1.01h	52.70m	47.14m	43.03m
Size 1 World to Safe Jump Distance	2.22h	1.57h	1.28h	1.11h	59.63m	54.43m
Size 2 World to Safe Jump Distance	3.14h	2.22h	1.81h	1.57h	1.41h	1.28h
Size 3 World to Safe Jump Distance	3.85h	2.72h	2.22h	1.92h	1.72h	1.57h
Size 4 World to Safe Jump Distance	4.44h	3.14h	2.57h	2.22h	1.99h	1.81h
Size 5 World to Safe Jump Distance	4.97h	3.51h	2.87h	2.48h	2.22h	2.03h
Size 6 World to Safe Jump Distance	5.44h	3.85h	3.14h	2.72h	2.43h	2.22h
Size 7 World to Safe Jump Distance	5.88h	4.16h	3.39h	2.94h	2.63h	2.40h
Size 8 World to Safe Jump Distance	6.29h	4.44h	3.63h	3.14h	2.81h	2.57h
Size 9 World to Safe Jump Distance	6.67h	4.71h	3.85h	3.33h	2.98h	2.72h
Size A World to Safe Jump Distance	7.03h	4.97h	4.06h	3.51h	3.14h	2.87h
Small Gas Giant to Safe Jump Distance	11.11h	7.86h	6.42h	5.56h	4.97h	4.54h
Large Gas Giant to Safe Jump Distance	16.67h	11.79h	9.62h	8.33h	7.45h	6.80h

m = Minutes, h = Hours, d = Days

PERSONAL COMBAT ACTIONS

Not an Action	AoO?
Delay	No

Standard Actions

Aid another	No
Attack (melee)	No
Attack (ranged)	Yes
Bull rush	Yes
Burst Fire	Yes
Feint	No
Heal a dying friend	Yes
Open or close an airlock	No
Overrun (charge)	Yes
Ready	No
Strike a weapon	Yes
Strike an object	Maybe
Total defense	No

Full Actions

Called Shot	Yes
Climb	No
Charge	No
Coup de grace	Yes
Dive Attack	Yes
Double move	Varies
Escape from a net	Yes
Extinguish flames	No
Full attack	No
Open a hatchway	Yes
Patch a pressure suit breach	Yes
Prepare to throw oil	Yes
Put on a pressure or vac suit	Yes
Run	Yes
Suppressive Fire	Yes
Throw a two-handed weapon with one hand	Yes

Move Equivalent Actions

Climb	No
Control a frightened mount	Yes
Draw a weapon	No
Mount or dismount an animal	No
Mount or dismount a vehicle	Yes
Move a heavy object	Yes
Open a door, iris valve, or sliding door	No
Pick up an item	Yes
Ready a shield	No
Reload	Yes
Retrieve a stored item	Yes
Sheathe a weapon	Yes
Stand up from prone	No

Varied Actions

Disarm(4)	Yes
Grapple	Yes
Trip an opponent	No
Use a skill	
Use feat	Varies

Free Actions

Activate an Item	No
Drop an item	No
Drop to the floor	No
Speak	No

Partial Actions

Start full round action	No

COMM. AND SENSOR RANGES

Range	Distance
Close	up to 1km
Short	up to 5km
Medium	up to 50km
Long	up to 500km
Continental/V. Long	up to 5000km
World-wide/Extreme	up to 10,000km

EXAMPLE DIFFICULTY CLASSES (DCs)

Type	DC	Example
Simple	0	Walk across the floor
Very Easy	5	Climb a ladder
Easy	10	Climb a knotted rope
Average	15	Plot a course to a familiar star system
Hard	20	Jump a horse over an obstacle while riding
Difficult	25	Swim in churning, storm driven water
Formidable	30	Remove a bullet from a victim.
Challenging	35	Plot a course to an uncharted star, while under fire and without a computer.
Incredible	40	Convince the judge that a pardon scrawled on the back of a cocktail napkin really is from the planetary governor
Nearly Impossible	45	Perform brain surgery with a low-tech field surgical kit, under fire, in the rain, while wounded

Degree of Success

DC or higher	Success
DC+10 or higher	Great Success
DC+20 or higher	Incredible Success

BASIC STARSHIP & VEHICLE COMBAT ACTIONS

Not an Action	AoO?
Delay	No

Standard Actions

Command (Command)	No
Range Check (Astrogator)	No

Full Actions

Attack (Gunner)	No
Point Defense Sandcasters (Gunner)	No
Point Defense Lasers (Gunner)	No
Point Defense Repulsors (Gunner)	No
Reload Vessel or Vessel's Weapon	No
Tactics (Command)	Yes
Avoid Collision (Pilot/Driver)	No
Break Pursuit (Pilot/Driver)	No
Evade Attack (Pilot/Driver)	Yes
Pursuit (Pilot/Driver)	Yes
Ram (Pilot/Driver)	Varies
Atmospheric Entry (Pilot)	Yes
Dock Ships (Pilot)	Yes
Orbital Insertion (Pilot)	Yes
Tactical Communications (Comm)	No
Comms Jamming (Comm)	No
Intercept Enemy Communications (Comm)	No
Sensor Jamming (Sensor)	No
Sensor Targeting (Sensor)	No
Damage Control (Engineer)	No
Power Routing (Engineer)	No
Excess Power Routing (Engineer)	No
Overpower Weapons (Engineer)	No

Move Equivalent Actions

Adjust Speed (Pilot/Driver)	No
Adjust Range (Pilot/Driver)	Yes
Move (Pilot/Driver)	No

Free Actions

Computer Fire Control (Comp)	No
Computer Targeting (Comp)	No

CROSS-SCALE COMBAT

Circumstance	Dmg. Dice Adj.
Personnel vs. Vehicle	-5 dice
Personnel vs. Starship	-10 dice
Vehicle vs. Personnel	+5 dice
Vehicle vs. Starship	-5 dice
Starship vs. Personnel	+10 dice*
Starship vs. Vehicle	+5 dice**

* Ignores any armor
** Two internal dmg. rolls

COVER

Degree of Cover	Cover AC Bonus	Cover Reflex Save Bonus
1/4	+2	+1
1/2	+4	+2
3/4	+7	+3
9/10	+10	+4*
Total	-	-

*Half damage if save is failed; no damage if successful.

CONCEALMENT

Concealment	Miss Chance
One-Quarter	10%
One-Half	20%
Three-quarters	30%
Nine-tenths	40%
Total	50%

NOBLE TITLES VS. SOCIAL STANDING

16	Knight	24	Duke
18	Baron	26	Archduke
20	Marquis	30	Crown Prince
		32	Emperor

EDUCATION SCORE EQUIVALENTS

3	Elementary	12	Bachelor's Degree
6	Middle School	14	Master's Degree
10	High School	16	Doctorate Degree

ABILITY SCORE MODIFIERS

Ability Score	Modifier	Ability Score	Modifier	Ability Score	Modifier	Ability Score	Modifier
0-1	-5	8-9	-1	16-17	+3	24-25	+7
2-3	-4	10-11	+/-0	18-19	+4	26-27	+8
4-5	-3	12-13	+1	20-21	+5	28-29	+9
6-7	-2	14-15	+2	22-23	+6	30	+10

SIZE MODIFIERS TO ATTACK BONUS AND ARMOR CLASS

Size	Weight (kg) or Volume (vl)	Size Modifier	Starships and Smallcraft Tonnage (tons)	Ship Size	Size Modifier
Fine	up to 0.05	+8	-	-	+16
Diminutive	0.05 to 0.5	+4	-	-	+14
Tiny	0.5 to 5	+2	-	-	+12
Small	5 to 30	+1	-	-	+10
Medium	30 to 250	0	-	-	+8
Large	250 to 2000	-1	-	-	+4
Huge	2000 to 15,000	-2	1-9 tons	Tiny	+2
Gargantuan	15,000 to 115,000	-4	10-99 tons	Small	+1
Colossal	115,000 to 1,315,000	-8	100-999 tons	Medium	0
Enormous	1,315,000+	-10	1000-9999 tons	Large	-1
Monstrous	-	-12	10,000-99,999 tons	Huge	-2
Stupendous	-	-14	100,000-999,999 tons	Gargantuan	-4
Incredible	-	-16	1,000,000+ tons	Colossal	-8

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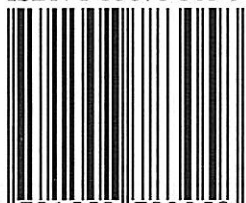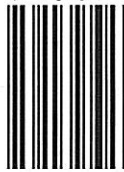
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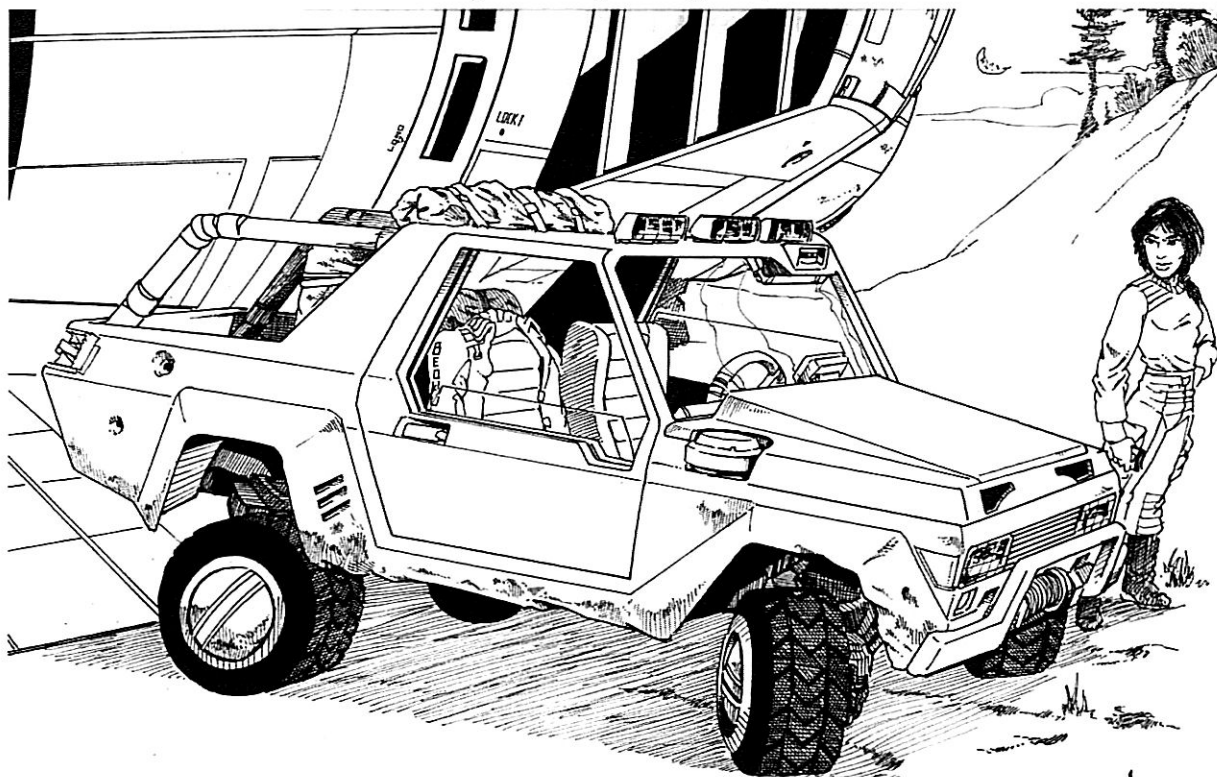
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The Linkworlds Cluster is a complete game setting designed for use with T20 or T20 Lite. The Linkworlds (are located in Ley Sector of Gateway Domain, a region covered in the forthcoming Gateway Domain Sourcebook from QLI. Thus everything in this setting is compatible with future T20 product releases. The setting can of course be used with other rule sets. UWPs (Universal Word Profiles) are standard throughout all versions of the Traveller game. Codes are explained in the T20 or T20 Lite rules (or any other Traveller rules set).

Standard Traveller measurements are used in this setting; most distances are in Kilometers or Parsecs (a parsec is 3.27 light years, corresponding to the size of a map hex and the distance a Jump-1 ship can travel in 1 week).

Directions are given as follows:

- **Coreward:** Towards the Galactic Core (Conventionally, "up" on a map)
- **Rimward:** Away from the Core (Conventionally, "Down" on a map)
- **Spinward:** In the direction of galactic spin (Conventionally, "Left" on a map)
- **Trailing:** Away from the direction of spin (Conventionally, "Right" on a map)

Standard Traveller Unidigit notation is used where appropriate (e.g. in UWP codes). This is based on Hexadecimal, where A=10, B=11, and so on to F=15. Numbers greater than 15 are uncommon, but the system continues, missing out I and O for reasons of clarity.

Of course, the UWPs of these worlds could have been interpreted in a variety of ways – one Charismatic Dictatorship is not necessarily like another. But perhaps these seven planets will serve to show how an entire world or star system can be extrapolated from the UWP code.

Note that while a certain amount of detail is given about the worlds of the cluster, some things are left for the referee to decide. Exactly how many outsystem worlds (rockballs or iceballs) there are is left vague, as is their exact location (inside or outside the mainworld orbit). Thus if the referee wants a second inhabited planet in system, or a mining outpost, pirate base or whatever, he/she is free to place one as needed on a rockball, gas giant moon or large asteroid.

Large areas of some worlds are entirely unexplored. There could be almost *anything* there, and even those areas that ARE detailed may not include the whole story. Thus the system and world writeups included here are a beginning, not a closed book. They are not a restriction to creativity; they are a springboard to imagination!

We've provided the basics of the setting here. What you do to make it yours is up to you!

THE SETTING – AN OVERVIEW

The Linkworlds (more correctly named the Shanape Link Worlds) lie in Ley Sector, close to the border of the human-dominated Third Imperium. The cluster, which consists of 7 star systems, is something of a backwater, lying off the major trade routes and accessible only by ships capable of Jump-2 or higher.

All seven worlds are members of the Imperium. The population is mostly human, though cultures vary considerably. The cluster sees only a little through-trade due to its remote location, though an Imperial Xboat (Express Boat) link runs through Sentry, which dominates the cluster's economy and can be considered to be a sort of capital. Internal trade is a mix of regular routes and tramp freighters plying the spacelanes as they will.

The most important astrographic features in Charted Space are the Mains and Clusters. Both are groups of stars where one is within 1 parsec of the next. This allows navigation by Jump-1 starships, which is important in terms of how much cargo can be carried by a ship – higher Jump-capable ships need to carry more fuel, so they are less economical.

Mains are long chains of stars, while clusters are clumps. Jump-1 trading ships tend to ply a main or circuit a cluster for long periods, as crossing from one to the next is problematical. In Ley Sector, the most important Main is the Reaching Arm, which rambles more than halfway across the sector. A number of clusters lie on the arm or its spurs, and others can be reached by a Jump-2 vessel at the right point on the Arm.

The most important clusters in Ley Sector are the Great Ley Cluster and the four Lesser Ley Clusters, all of which are simply "fat" parts of the Reaching Arm. The Imperial Trade Cluster, at the Rimward edge of the sector, is gaining importance as it is the location of the new Domain capital, Annapabar.

Other important clusters include the Dukh Cluster (actually small and minor, were it not the location of the sector capital), the Riftsedge Group, and the Shanape Cluster. The Shanape Link Worlds is not particularly important, except in that it provides an astrographic stepping-stone to the Shanape Cluster and the minor clusters beyond.

Areas between mains are termed rifts, though the word more correctly applies to the vast, almost empty regions that border on Ley Sector. A "rift" of a couple of parsecs between mains can be crossed by high-jump ships. The Lesser Rift, away to Coreward-Trailing, presents far more of an obstacle.

A POTTED HISTORY

Sometime in the distant past, a race now known as the Ancients seeded Terran humans (and at least one other species) on various worlds throughout Charted Space. Some of these races were genetically modified, some were altered by millennia of evolution on strange worlds, and some remained more or less unaltered.

One altered group became the Luriani, a human subspecies genetically adapted for the aquatic environment of their new homeworld, Daramm. Others (unaltered) included the ancestors of the Vilani people who came to rule this region of space.

The Ancients eventually disappeared from the cosmic stage. The existence of a few new asteroid belts, scoured worlds and the occasional runaway war machine suggests that the Ancients' departure was not a peaceful one. Perhaps they were destroyed by some titanic foe, or perhaps they

turned on themselves in civil war. Historians do not know for sure.

What is known is that the Ancients are gone, though they have left behind occasional artifacts and ruins, and a legacy of far greater import – Humaniti.

Humaniti (the spelling was adopted when Terran humans realized they were not the only humans in the universe) was left to its own devices on thousands of worlds. Some human groups died out; others flourished. The humans seeded on Vland were one of the latter groups, rising to rule an interstellar empire of thousands of worlds.

This empire, the Ziru Sirka (Grand Empire of Stars) or First Imperium as it is now known, lasted for millennia but finally decayed and began to collapse from within. This slide into twilight was accelerated by another Human species; the Terrans, who came boiling out of their single star system to conquer the stars.

The Terrans were little more than a nuisance at first, and the Ziru Sirka had more pressing problems than a planetful of upstart barbarians. The Terran threat was underestimated, and their area of influence grew. Eventually, after centuries of intermittent warfare, during which the power of the Terran Confederation grew and that of the Vilani Imperium waned, Vilani resistance began to crumble and Terran fleets punched deep into the First Imperium, capturing world after world.

The Terran conquerors took a new name for themselves; the Solomani, or Men of Sol. They declared a Second Imperium, the so-called Rule of Man.

But the Ramshackle Empire (as it came to be known) was built on the foundations of the collapsing Ziru Sirka, and though the fall was postponed for a time, the Rule of Man slid into darkness. This period, in which interstellar travel all but ceased, is now known as the Long Night. It lasted the better part of 2000 years.

Here and there small interstellar states held on, as around them worlds regressed or died. For a time interstellar war and piracy was rife as would-be successors fought over the wreckage of the Ramshackle Empire. Finally, the wars died down as the wilderness between civilized worlds widened, and the technology to repair or rebuild starships was slowly lost.

But not all the lights went out. Individual worlds and small clusters retained their technological base, while on planets that could support life without artificial aids the fall from technological grace did not mean extinction. For the next few centuries, beacons flickered in the Long Night and the occasional glow of False Dawn was seen as new starfaring cultures arose. Most failed, and fell back into the night. History will never know what deeds were done in that time, what civilizations arose, in those dark days.

But in time, Dawn came.

In what is now known as Year Zero, the Sylean Federation, a trade and mutual defense organization centered on Sylea (which had been for a time the capital of the Ramshackle Empire) defeated its immediate enemies and began to expand out into local space. At this time the Federation took up the mantle of the First and Second Imperium, and a new identity as the Third.

The Third Imperium grew steadily, and not without setbacks. The Pacification Campaigns, the Aslan Border Wars, The Civil War, three Frontier Wars and innumerable crises and border conflicts were weathered, with varying success. But now, the Third Imperium is a thousand years old. It rules 11,000 worlds. But all is not well in the Imperium.

By the time the Rule of Man tumbled into darkness, its rulers had moved into the heart of the old First Imperium. However, Terra remained an important world, and from –1690 was the center of a small interstellar community named the Terran Mercantile Confederation. The TMC survived the Long Night, becoming the Old Earth Union. Thus as the Third Imperium was struggling up onto the galactic stage, Terra was also increasing in importance, gaining influence over the worlds that would eventually be known as the Solomani Confederation.

The Solomani eventually ran into the expanding Third Imperium, and a long period of border skirmishing began. Tensions never really dissipated, and in 990, after a long and particularly fraught period, open war broke out.

The Solomani Rim War is now 3 years old. The Solomani made good initial gains in the Old Expanses and Diaspora sectors, but were eventually fought to a standstill by the Imperial Navy. The situation at the front is currently rather fluid, with gains of a few parsecs being made as one side or the other launches a new offensive, then grinds to a halt. Force densities in the region continue to increase, stripping naval vessels from non-war-zone areas such as Ley Sector – and therefore, from the Linkworlds.

THE THIRD IMPERIUM

The Third Imperium is actually a federation of 11,000 worlds, most of which are self-governing. A few are defined as "Imperial Territory", such as prison worlds and so on, but the vast majority are free to run their own affairs as they think best, so long as they comply with a few Imperial High Laws. High Laws mainly deal with interstellar commerce, taxation paid to the Imperium, and sentients' rights.

In return for a percentage of planetary income, the Imperium handles foreign affairs, deals with collective defense, and generally ensures that worlds are safe and free to govern themselves. Thus local laws apply on various planets, rather than a blanket "Imperial Law".

Worlds also vary considerably in terms of technological level, society and culture. There is no reason why high-tech items should not be traded to any world, but most low-tech worlds cannot pay for them nor maintain them if they are obtained. Thus while some off-planet imports may be present on a given planet, they will not be widespread.

Each world has one or more Imperial Nobles associated with it. These individuals are rarely the planetary rulers, but may well be citizens or hold property there. The nobles act as liaison between member worlds, and between worlds and the Imperium as a whole. Nobles often have some personal holdings or an estate on the world they represent.

Other nobles are not world representatives but may be "honor nobles", elevated for service, or members of old noble houses that head large corporations. While some nobles are rich layabouts, the majority have a strong service ethic. Thus nobles often serve for a time as troubleshooters, negotiators, naval officers and such like.

While each world maintains whatever security and local defense forces are deemed appropriate, and some have starfaring warships at their disposal, the main armed forces are those of the Imperium. Of these, the Navy is most important.

The Imperial Navy protects commerce, keeps the peace, and repels invaders. It is currently understrength and overstretched due to the Solomani Rim War, but still tries to fulfil its obligations.

The most common Navy vessels sighted in the Linkworlds are small escorts and patrol ships assigned to commerce protection and anti-piracy duty. Occasionally a couple of destroyers, a light cruiser or even a task force centered on a light fighter carrier will sweep a couple of the cluster systems on a flag-showing and deterrent exercise, but for the most part major warships are not seen in the region, except while transiting through Sentry.

The exception to this rule is Aleif, where a small Naval squadron is permanently on-station to enforce a Red Zone. The system is off-limits to unauthorized vessels, which will be boarded or even fired upon if attempting to approach the mainworld.

Major naval units are on call from the Naval depot at Depot, but the communications lag is such that it would be 4 weeks before even a ready-reaction force could arrive at a trouble spot.

Imperial Marine Corps troops are stationed in small detachments at some of the starports in the cluster. In addition to guarding starports, the Marine Corps serves in an assault role, and ready-reaction forces are stationed at various points throughout the sector. However, it is rare to find a force on-station in the cluster, so any significant Marine force must be summoned from Depot, with a 4-week or greater time lag.

The Imperial Army, which specializes in defending worlds from the ground and low orbit, has few units stationed in the cluster. Advisors are sometimes present with the armed forces of the various cluster worlds.

The Imperial Interstellar Scout Service has an Xboat (Express Message Boat) service link through Sentry, and maintains a small presence at the starport there, consisting mainly of support personnel and tender crews. Scout vessels can sometimes be encountered on outsystem charting missions and routine surveys.

IMPERIAL TERRITORY

The Imperium claims as its territory the space between the stars and worlds of the Imperium. In effect, this means that it controls to flow of trade and commerce. In practice, vessels registered on any member world are free to navigate where they please unless a restricted area has been declared. Restricted areas include Red Zones (some worlds are interdicted for a variety of reasons), the immediate "security" region around a naval base or warship, and hazardous areas such as free-fire exercise zones.

A world may have several (or many) spaceports, some of which are specialized, such as freight terminals or a spaceport serving a military base, while others will be general freight and passenger handling facilities. However, the main port on any given world is designated the Starport. The Imperium claims Starports as its territory. Starports sometimes have a small Imperial Marine garrison, and are subject to Imperial, rather than local, law. Assume a law level of 3 at a Starport, and whatever the local law level is at a Spaceport.

Starports are often the site of Imperial embassies and other facilities, and are usually served by some kind of "startown" where services are available to visiting offworlders. Startowns can be rough, especially on frontier worlds, but the mingling of offworld and local cultures does create an exotic and often unique environment. The startown is usually outside the Starport "extrality line" and therefore not Imperial territory, but some shared jurisdiction exists.

LEY SECTOR

The Linkworlds are located in Ley Sector. This sector is right at the Rimward/Trailing edge of the Imperium, though the cluster is safely inside the border and cannot really be considered a frontier.

Ley Sector is part of the Imperial Domain of Gateway, which is ruled by Archduke Marcus Aaron Erechs from his capital at Annapabar. The sector itself is ruled by Duke Marshal Nells, whose seat is at Dukh. Nells was also Archduke of the Domain until recently, when he was stripped of his titles by the Emperor. The rivalry and hatred between Nells and Erechs runs deep. Both are businessmen; Erechs a hugely successful entrepreneur and Nells the champion of established interests.

Beyond Ley sector to Spinward and Coreward is the rest of the Imperium. An arm of the Lesser Rift (an area almost completely devoid of stars) lies to Coreward-Trailing. To Trailing lies Gateway Sector (not to be confused with Gateway Domain), which is mainly populated by small human states and individual worlds. Beyond that lies the 2000 worlds of the K'Kree, a race of militant vegetarians descended from herd creatures. There is a great deal of tension between the Imperium and the 2000 worlds, stemming mainly from the fact that the K'Kree have openly stated that it is their destiny to wipe out all meat-eaters.

Rimward-Trailing lies Crucis Margin Sector, again populated by minor human states, and beyond that is the Hive Federation; a huge interstellar polity ruled by the Hivers and their various subject races. The Hivers have a reputation for devious designs and manipulation of others, as individuals or as species. They do sometimes journey as far as Ley Sector, but are quite uncommon in the region.

Directly to Rimward is a small rift and the Glimmerdrift Reaches sector. Mostly populated by humans, there is a small Imperial enclave in the Glimmerdrift Reaches, but most worlds are independent. This region is subject to influence by the Solomani Confederation, which sometimes sends commerce raiding warships up through the reaches and into Ley Sector.

THE SHANAPE LINK WORLDS

The Linkworlds is a cluster of 7 worlds lying at the junction of the Alpha and Gamma quadrants of Ley Sector.

High-jump ships traveling Rimward sometimes use a shortcut via Sentry and the Shanape Cluster; lower-jump ships have to follow the Jump-1 Reaching Arm Main. Transiting the Linkworlds can thus save weeks for a high-priority mission. It has been joked that a person living at Shanape or Sentry can accurately predict the location of the next major war by simply watching for Navy ships coming through the port, and finding

out where they are headed.

Be that as it may, the cluster is still very much a backwater. Most shipping (even J-2 vessels) takes the long way round; down the Reaching Arm. Interstellar events take place elsewhere; rarely in the cluster. News filters in through Sentry and then spreads out into the cluster; thus most worlds are a week or two behind everyone else as regards current events.

Sentry has received a considerable amount of investment over the years and has a powerful economy. It is a local base for Tukera Lines, an Imperial Megacorporation that specializes in shipping throughout the Imperium. Tukera has a small flotilla of Jump-4 transports for moving urgent cargoes across the link into the Shanape cluster and beyond, out towards the Rimward border. These vessels also handle much of Sentry's exports.

Jump-2 access to the cluster from the Reaching Arm can be made only via Kerin's Tyr and Miip. The Shanape Cluster can be reached from Adukgin and Liar's Oath. From the Shanape Cluster it is possible it is possible to return to the Reaching Arm via Daggar's Edge, or to cross into the several minor clusters on the edge of the Rift to Rimward.

The cluster can only be reached by Jump-1 ships using special deep-space refuelling techniques, so through traffic is rather low.

The Linkworlds have seen waves of colonists from the First and Second Imperium, then the Third. Bloodlines on all worlds are thoroughly mixed. The main Imperial presence (other than the blockade squadron at Aleif) is at Sentry, where Marquis Hallentein maintains his court. Technically, parts of the cluster fall under the jurisdiction of three different Subsector Dukes, but normally matters are resolved at Sentry rather than "outcluster".

PEOPLE OF THE CLUSTER

The majority of the people of the cluster are Imperial Humans of very mixed descent. Almost any skin color or cultural heritage can be encountered in the cluster. Most people consider themselves to be citizens of their homeworld first, and of the Imperium second. Some do leave their planet of birth to work, study, or serve in the Imperial forces, but most cluster citizens will never leave their homeworld.

Each world has a fairly strong and distinctive culture, though centuries of offworld contact have eroded most extremes. Some cultures have a strong Solomani heritage. This does not mean that they have any affinity with the Solomani Confederation, merely that their cultural traditions can be traced back to Old Earth. Other areas have equally strong Vilani traditions, tracing their culture back to the First Imperium. Most worlds are a melting-pot that combines ancient traditions with local conditions to create a distinct and unique culture.

In addition to Solomani and Vilani humans, three other groups are fairly common in the cluster.

Luriani humans are fairly common, since their sub-species is prevalent around Daramm, just a few parsecs away. Luriani are slightly tubby and have webbed hands and feet (adaptations for their aquatic environment) but are obviously and definitely human. A small minority of the cluster's population are Luriani humans. In some cases these enclaves have remained separate and maintained their culture; in other cases they are fully integrated.

Vargr are also fairly common (about 1-2% of planetary populations are likely to be Vargr). The Vargr are another of the Ancients' genetic manipulation projects, and are descended from Terran canines. They are no more dogs than humans are apes, however. In the Imperium, Vargr are often completely integrated into society, though some worlds have separate enclaves. A number of Vargr states exist far to Coreward, but in this region Vargr are a minority ethnic group. Some prejudice is sometimes encountered, since Vargr have a reputation as pirates and rogues, but most people who actually know a Vargr or two understand that individuals are as varied as any other racial group.

The third important minority is Ursa. One of the worlds of the Cluster, Miip, is an Ursa homeworld. In fact, only a few thousand actually live there, but for the Ursa, this is a significant fraction of the total racial population. Ursa, who are descended from Terran brown bears uplifted by Solomani scientists during the Rule of Man, tend to live apart from humans in small villages. They are unwelcoming to outsiders, though friendly enough with those they have come to know. A small number of Ursa leave each year, "wandering", and others arrive from time to time.
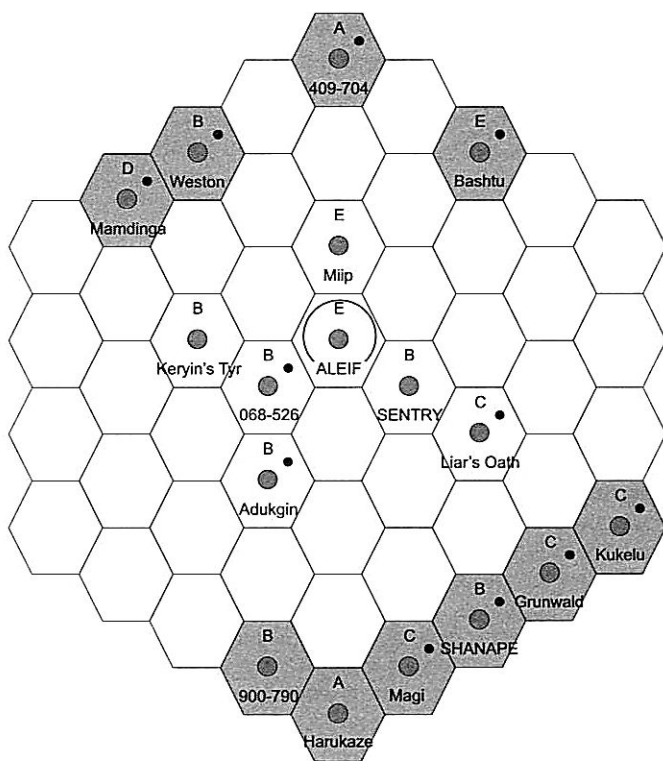
Shanape Link Worlds Cluster

KERIN'S TYR

0620 B575775-6 Ag   320 I F8 V

Kerin's Tyr is the mainworld of a system containing two planetoid belts and several small rocky planets, but no gas giants. One consequence of this is that visiting ships have to come to the mainworld for fuel, or else waste time looking for ice asteroids.

THE STARPORT

Kerin's Tyr is served by a large orbital facility (Warne Highport), to which all traffic is directed. The port is a private venture, owned and operated by Venture Ports, LIC. Most Jump-2 traffic that comes through the cluster arrives or departs via Kerin's Tyr. This means that so long as the Colonial Office keeps subsidizing the port, it remains just about profitable.

However, Warne Highport has seen better days. Originally constructed as a high-quality Class B port, it is now rather seedy and run-down. A large Startown of some 60,000 inhabitants forms part of the facility; laws are liberal (level 2) and rather patchily applied. What order there is, is kept by Portside Security, a private security force that seems to believe that court cases are a needless waste of everyone's time. Minor infractions usually result in a "spot fine" payable in cash or personal possessions, or in on-the-spot justice administered with shock batons. Crime rates are fairly low.

The Port and associated startown are run as a commercial concern, and have the air of a lively, if rather seedy, market. The port is considered neutral ground, so merchants from the various nations of Kerin's Tyr often come to the Highport to conduct their business. Goods are usually shipped direct on-planet.

Traffic through the port is a mixture of tramp traders and regular services plying the cluster, Jump-2 vessels crossing the rift from the Reaching Arm, and Tukera Lines vessels heading to Sentry for refit (or out again).

A platoon of Imperial Marines is stationed at the Highport, protecting the Imperial trade mission and the residence of Baron Marie Iskuulii, the Imperial noble assigned to the world. The Baron makes regular visits to the nations of Kerin's Tyr, and meets with ambassadors on a regular basis. She has no desire to live on the planet, however.

For port security and traffic control, Warne Highport operates a force of 10-ton light fighters to back up its inspection cutters. The latter are unarmed, and crewed by professional if unenthusiastic personnel drawn from the Portside Security force.

Six 200-ton System Defense Boats are also deployed to provide immediate defense of the port. Their mercenary crews are long-service professionals. They are reliable and skilled, and so far have rebuffed all efforts by various on-planet groups to bribe them.

THE MAINWORLD

Kerin's Tyr itself is a mid-sized world, with a standard oxygen-nitrogen atmosphere. However, the atmosphere carries a (relatively mild as these things go) taint; some of Kerin's Tyr's plant life produces pollen that causes a violent allergic reaction in about 25% of humans. This reaction is rarely fatal, but causes breathing difficulties that more or less incapacitate the victim for periods of a day or two at a time, occurring at fairly random, but frequent, intervals. Filter masks are required to keep out the pollen. It is possible to gain a temporary immunity through drugs (though the drugs cause a mild version of the reaction which can be physically limiting and extremely unpleasant). Immunity can be developed over time; this normally takes several months and is lost after a couple of years without exposure to Kerin's Tyr Pollen.

Kerin's Tyr has about 50% surface water coverage. This is mainly in the form of wide seas between the large continental land masses. Seas are fairly shallow at most points, but there exist several monumental deep-ocean trenches which have never been fully explored.

Kerin's Tyr's land masses are mainly distributed in three main continents, plus the Great Arctic Wilderness, a land mass that covers the North Pole region and extends far south. The Wilderness is large enough that not all of it lies under ice; there are regions of taiga and tundra, though few inhabited areas.

Kerin's Tyr is home to some 30 million inhabitants, of whom about 50 thousand are Vargr. The world is heavily Balkanized; i.e. fragmented into many small states. These range from isolated city-states to large nations. Law and Technology levels are thus an approximation.

There are four main nations on Kerin's Tyr: The Kingdom of Harven, The Confederation of City-States, the Grand Theocratic Republic and the Liberty Alliance.

The Kingdom of Harven (Hereditary Oligarchy, Law level 5, Tech level 6) is the largest state by a good margin, dominating the smallest of the three main continents. The Kingdom is reasonably well-ordered and organized, and welcomes offworlders. It maintains a large spaceport at the capital (Tersberg), which sees considerable traffic coming down from orbit.

As befits the major nation of a world designated "agricultural", the Kingdom exports a great deal of foodstuffs and natural products; mainly grain, vegetables, fish from the coastal fishing towns, and hardwood from the abundant forests that cover large areas of the continent.

The Confederation of City-States (Balkanized, Law Level 2, Tech Level 5) is a loose conglomeration of independent cities scattered across the Eastern side of the largest continent. A steam-powered railroad system links the cities, most of which operates a small spaceport (equivalent to Type D). The Confederation has no central government or capital, but each city-state sends representatives to squabble and bicker aboard a "parliament train" that travels between the cities. Little is ever settled aboard the train, and politics in the Confederation is a constantly-shifting web of alliances, embargoes, sanctions and even outright conflict.

The Confederation attempts to maintain a joint armed force for mutual defense and a small (maritime, or 'wet') navy to deter territorial aggression from the Kingdom of Harven. However, given the nature of Confederation politics, these forces are little more than political footballs. Operations rarely even get started, let alone completed. However, popular

militias of citizens well-armed with TL 5 small arms do exist (indeed, they rule some of the cities), and these are capable of putting up a stiff fight at need.

The Western side of the large continent is mainly wilderness, populated by scattered settlements of hardy frontiersmen (who rarely have access to more than TL 4) and nomadic groups (TL2-3). They have no overall political affiliation.

The third continent is shared by the Grand Theocratic Republic and the Liberty Alliance. The Republic is actually quite democratic (Representative Democracy, LL 5, TL 6), though only initiates of the ruling Church of Stellar Divinity are allowed to stand for election (this is pretty much everyone, however). The Republic is rather stiff-necked and unwelcoming to outsiders. The only spaceport is at a special "star city", away from the mass of the population. It is no coincidence, given the locals' beliefs, that Star City is also a holy place. Offworlders are not venerated as holy, but they are considered special and treated well. However, most ships' crews are not permitted to leave the Offworld Enclave (which is not holy). Only those of sufficient "purity" – i.e. those who the theocrats don't think will cause trouble – are allowed into Star City proper where the pilgrims will come into contact with them.

The Liberty Alliance (Tribal Government, Law Level 2, Tech level 3) is a collection of nomadic groups, small settlements and two city-states housing most of the world's Vargr population. These groups have absolutely nothing in common except a desire to ensure that the Grand Theocratic Republic does not expand into their territory. Armed clashes have occurred, and for a long time guerrilla warfare was common as the Republic attempted to expand its territory. An uneasy truce now exists.

Even on the inhabited continents, there is still a lot of wilderness remaining unexplored. The Arctic region is almost wholly untouched, except for a couple of Kingdom outposts.

THE REST OF THE SYSTEM

The Kerin's Tyr system also includes several rocky planets and two planetoid belts. The inner belt (in the next orbit out from Kerin's Tyr) is little more than gravel for the most part, but the outer belt is composed of a broad mix asteroid types, and is occasionally picked over by private Belter ships seeking a new claim. There have been a few minor finds but no big strikes.

Since the nations of Kerin's Tyr cannot maintain a space force of any kind, and the port mercs are assigned to local patrol only, the outsystem is almost completely lawless. Imperial Navy vessels do sweep the area from time to time, but since the beginning of the Solomani Rim War this has become a rare occurrence.

069-526

0721 BAAA630-7 Ni Wa   103 I M4 V K8 D

069-526 is the Mainworld of a binary system consisting of Klesiter Alpha, a dim red main-sequence star and its far-companion white dwarf companion, Klesiter Beta.

Klesiter Beta has no habitable worlds; it is orbited by a small gas giant close in and a tiny iceball in a distant, eccentric orbit. Between them is nothing more than a collection of rock and ice fragments. The Beta system is distant enough that it is quicker to go there under Jump drive than to use sublight travel. Of course, there is nothing to go there for.

The Klesiter Alpha system is somewhat more populous. The system boasts three gas giant planets and a number of rockballs, but no planetoid belts, in addition to the Mainworld.

THE STARPORT

069-526 is served by a small orbital Highport of recent construction. The port (named Fonnein Orbital) is constructed out of the gutted hulls of two bulk freighters joined together by gantries. To this ugly but functional base have been fitted various appendages; docking arms, expanded personnel accommodation, a small-craft shipyard and a maintenance works. The result is a hideous sprawling mess, but one that does the job.

Inside the port, surroundings are surprisingly pleasant (though some areas are rather oddly shaped due to the limitations of the original structure. The port cannot support a large number of personnel; no more than 500 people live and work aboard the station.

Fonnein Orbital is a business unit in its own right. The yards manufacture small craft (mainly cargo shuttles and slow boats) for buyers across the sector, but most of the port's income is from annual maintenance work on Far Trader ships. The port yards have a reputation for fast, efficient refits, and are highly adept at upgrades to standard small merchant vessel designs. The yards at Sentry can handle most classes of ship; those here specialize, and are thus competitive. It is an open secret that the yards can supply, fit and calibrate obsolescent military weapons and targeting systems that, while not up to current Navy standards, are a quantum leap ahead of the usual civilian models. Thus some captains feel that the journey to Fonnein Orbital is worth it.

The port has a light missile armament for defensive purposes, and operates a flotilla of unusual defense craft. Most of these are converted from civilian small craft, and armed with missiles, backed up by military-standard electronics. The stealthy *Lurker* class Missile Shuttle has been offered for sale on the open market, but so far has found no buyers.

The port operates at a standard law level of 3 – no automatic weapons – which is enforced by a mercenary security unit. Facilities, in terms of shops and hotels, are somewhat limited due to the small size of the port, but there will usually be a few ships in dock at any given time, so business is quite brisk.

THE MAINWORLD

069-526 is known unofficially as Fonnein to its 1 million or so inhabitants. The world is huge, almost entirely covered in water, and has a carbon-dioxide-rich exotic atmosphere that is unbreathable to humans. The planet is rather cold, with extensive ice-caps. Large icebergs can be encountered even quite close to the equatorial region.

What land there is, is for the most part rocky and barren, with very little vegetation and almost no animal life of any kind. However, the seas are rich with life. Some species have been identified as being descended from Terran stock, while others are definitely not of Terran origin (though they may not have evolved on this world).

Fonnein is a fairly recent colony, established in 922 on a world that was previously uninhabited. The 1 million inhabitants live in undersea cities situated on the continental shelves of the few small land masses. There are 12 such cities, with an

average population of about 65,000 people, and a number of outlying settlements.

Each major city has a spaceport situated atop a tower that rises from the sea. Bad weather can close these ports, but each city also has a submarine dock. Most bulk cargoes move by sea.

Between the cities, the oceans are very deep and largely unexplored. Some underwater archaeology is currently taking place, and scientists are reporting two puzzling discoveries. First, there seem to be ruins of some sort on one of the uninhabited shelves, and more in deep water under the Antarctic ice cap. Second, expeditions have found what seem to be Dolphin skeletons in seabed sediment. They have been dated at tens or even hundreds of thousands of years old, yet the Dolphin race only left Terra 3-4000 years ago, with the early Solomani colonists. There is no indigenous species analogous to Dolphins, and Terran Dolphins could not breathe 069-526's atmosphere. No explanation has yet been found.

The cities of Fonnein are ruled by a hereditary leader caste, descended for the original colonists' elected leaders. Despite the complete lack of written laws, society is peaceable and friendly. This owes a lot to the fact that in an underwater environment, stupidity or malice on the part of one individual can kill everyone. Thus the children of Fonnein are raised from birth into a culture of permissive cooperation. Society is very informal; even the rulers (who live among the general populace) are addressed by first name, usually with friendly (and mutual) respect.

Fonnein has zero unemployment, and everyone is a part of the system that keeps the populace warm, fed, and undrowned. Thus everyone is respected and valued, and knows it. Citizens are (for the most part) well-adjusted and content. Some offworlders find them annoyingly smug.

A small volunteer security force exists to deal with serious problems, and the capital city (Fonnein Prime) spaceport is also the base for a small space service. Equipped entirely with vessels constructed at the Highport, the space service exists mainly as a patrol and rescue force, able to reach any point in orbit or on the planet quickly. Its six cutters are armed with beam lasers, and have proven willing to engage smuggling vessels at need.

The Fonnein ruling caste is (collectively) a large minority shareholder in the orbital port, and makes a small income from this source. Otherwise, the world has little exportable industry, though it does make good TL-7 submarines and deep-submergence exploration vessels.

THE REST OF THE SYSTEM

The Klesiter Beta system, as already mentioned, is more or less empty. There is not much more activity in Klesiter Alpha. There is one exception: the mining Megacorporation Sternmetal Horizons maintains a base on Estorr, a tidally locked moon of the gas giant Praimen.

Estorr is a typical "rockball", with no atmosphere and no water. It does have significant deposits of radioactive minerals and rare earths, however; sufficient that Sternmetal has built a small city capable of holding 20,000 people, and a spaceport to serve it. By contract, ore from Estorr is trans-shipped to Foreinn Orbital for loading onto bulk freighters. This arrangement is somewhat cumbersome, and is the product

of long negotiations. Starships (other than courier vessels operated by Sternmetal) are not permitted to approach Estorr, and must proceed to the starport.

In addition to surface mining, the Estorr operation is also involved in petrochemical skimming, using specially designed shuttles operating from refining rigs suspended in the gas giant's atmosphere by antigravity lifters. This is a small-scale operation at present, but if the hydrocarbon clouds of Praimen prove worthwhile, the operation will be expanded. This will bring yet more miners and their support workers, dependents etc to Estorr.

ADUKGIN

0722 B434431-A Ni   704 I A1 V

Adukgin orbits a very hot, white main sequence star. The system also contains four gas giants, several rockballs, but no planetoid belts. Adukgin is one of two possible transit points for Jump-2 ships moving into or out of the Shanape Cluster.

Adukgin has for several years been the site of a regular Imperial Navy deployment. The Guardship is normally a destroyer, but with the outbreak of war the deployment was withdrawn. For a time, a pair of small escorts replaced the Guardship, but these were reassigned to patrol duty in 992, leaving the port undefended and the system more or less unpatrolled.

THE STARPORT

Adukgin's B class starport is located on the surface, close to the world's south pole. A small orbital facility (Adukgin Highport) allows unstreamlined ships to moor and personnel to transfer to interface shuttles, but there is little more to the highport than this.

Adukgin Downport is also the site of the world's capital, and only, city. About 40,000 people live and work in the port city, mainly in starfaring-related industries or in the service sector. The world's income comes almost entirely from interstellar commerce.

The port city is home to the world's ruling elite, made up of the managers responsible for various important sectors (power, logistics, and commerce, for example). These positions are not hereditary, but managers select their successors from a small group of favored subordinates, family members etc. However, so far all the successors have been selected as much for competence as for any other reason. The port and capital city are thus well run, clean, and reasonably safe despite the low law level.

Trade is free and unrestricted at the port (hence the low law level) though all dealings must be legal under Imperial law. The port boasts numerous brokers, and there is always cargo to be had. Many cargoes are offloaded at Adukgin Starport, to be transferred to local vessels plying the cluster, or to regular trans-rift services bound for the Shanape Cluster.

THE MAINWORLD

Adukgin is rather dry and possesses a very thin atmosphere, making compressor masks necessary. Temperatures vary widely between day and night, especially near the equator. The poles are more habitable, though only the southern region is populated. Almost all the planet's water is concentrated in an ocean-belt around the southern pole. The northern polar

region is a dry desert for the most part.

About 30,000 people live outside the port city, mainly in small communities of 2-300 citizens. The only major population center outside the port is Grand Mine, home to the world's tiny mineral-extraction and manufacturing industry – and 3,000 people. The facilities are highly automated, with everything from mineral extraction to cargo container loading being carried out by robots. Grand Mine is connected to the main port city by a Maglev railroad, which also serves several small communities lying along its route. In general, standards of living are quite high, as befits TL A (10) citizens.

Adukgin has no armed forces as such. A customs & security service guards the starport and mans a flotilla of four utility cutters for customs work.

Wildlife on Adukgin is generally small and hardy, with burrowing creatures being common. Few predators capable of tackling a human exist, but the Graddin is a persistent nuisance. This small armadillo-like creature tunnels close to the surface and has a knack of getting into settler compounds, compromising the environment and chewing up cables, which for some reason it finds delectable. The Graddin can deliver a nasty bite, and its saliva is mildly toxic to humans. They are also very hard to kill, being armored in tough scales and very quick on their feet. Offworlders usually find the antics of a bunch of port techs or settlement citizens as they try to corner a Graddin hilarious – right up until they see how much damage the little beast has caused. Graddin have been known to get aboard starships, where they secrete eggs in awkward places, then set about chewing up the control cables.

THE REST OF THE SYSTEM

The system's two large and two small gas giants and their moons, and the various rockball worlds of the system, are sometimes visited by hopeful prospectors. They remain largely unexplored. A Scout Service charting expedition in 790 produced a good set of preliminary data, but was never followed up. With the war in progress, this situation seems likely to continue.

MIIP

0819 E999546-3 Ni   300 IU F1 V

Miip orbits a hot, yellow-white main sequence star. The system is unusually barren; no belts, no giants, just a couple of tiny rockballs and a scattering of individual asteroids.

Miip is the other point of entry to the cluster from the Reaching Arm, but sees very little traffic. Most vessels go via Kerin's Tyr, mainly because there is very little at Miip to make it worth the trip.

THE STARPORT

Miip Downport is little more than a marked area where ships can land safely. It is adjacent to a small village, which is populated entirely by humans. The locals are familiar enough with starships, but other than trading for a few minor luxuries, they have little interest in offworlders. Meals and lodging can be obtained for a modest price, however.

Like most of the buildings on-planet, the port village structures are part-sunken into the ground, and starships are directed to a berthing-pit protected by an impressive earth berm Starfarers arriving on a sunny, hot day may wonder why,

but if they stay more than 24 hours, they are likely to find out why these precautions are necessary.

THE MAINWORLD

Miip is almost 90% covered in water. However, it is a very large world, which means that there is a great deal of land for the taking. The atmosphere is dense, but not unbreathably so. However, it carries a taint in the form of radioactive dust particles that are extremely hazardous if breathed. Simple filters (and measures as simple as tying a scarf over the face) will protect against the taint.

Miip's weather is incredibly violent, especially near coastal regions where the air over land and sea heats up at different rates during the day, and cools down differentially at night. Violent rainstorms are frequent, turning streams into raging torrents and causing mudslides in areas that seemed stable not long before.

Another cause of violent weather is the ionizing effect of the star's radiation. As the dense atmosphere becomes charged and ionized, incredible displays of lightning begin. Strikes can be devastating, and storms can rage for whole days at a time. They are usually (but not always) followed by a deluge of huge raindrops that may last minutes, hours or (rarely) up to a week.

In between storms, powerful winds howl across the surface, uprooting trees and demolishing weak structures.

The planet's population numbers about 30,000, of whom about a third are Ursa. The Ursa mostly live in the uplands, apart from humans (though some mixed villages do exist). They do not care to receive visitors, though it is possible to befriend them, given patience and persistence. The Ursa make their way by herding an (extremely hardy) upland quadruped and hunting wild game with their lovingly made TL-3 rifle-muskets. They are apparently content with this lifestyle, and keep to themselves for the most part. A few do descend to the lowlands to attend market fayres and to participate in the democratic running of the planet.

The human population are mainly farmers and crafters, who also have a TL-3 pre-industrial society. They trade vegetable foodstuffs to the Ursa for meat, cloth for leather, and otherwise leave their Ursine neighbors alone. The few mixed communities seem to get along well enough, but there is little desire t integrate, and given the tiny population to space ratio, no need to compete.

The entire planetary population is located on one large island land mass, part of a chain in the northern polar ocean where the climate is less violent than elsewhere (everything is relative!). Government is a loose system of village and town representatives that meets to decide everything from salt prices to judgement of criminals. There is no formal military, just a few village leaders who will lead a hue and cry for wrongdoers or gather a mob of pitchfork and musket armed locals to fight off any threat.

Away from this one island, Miip is largely unexplored. There is extensive wildlife, and rumors speak of ruins sighted on a distant island. The atmospheric taint may be the result of nuclear bombardment at some distant time in the past, but as yet this is unproven.

THE REST OF THE SYSTEM

There is very little in the rest of the Miip system to attract visitors. It is known that one of the largest asteroids is a rogue, captured after millennia in deep space. Its orbit is still settling down, and Scout Service vessels occasionally visit it to take samples. Otherwise, there is little activity in-system, and no reason why that would change.

ALEIF

0820 E672978-8 In R   410 I K3 V

The Aleif system orbits a cool orange star, and comprises one major planetoid belt, no gas giants, a number of small rocky worlds and one extremely large rocky planet (Named Duruusa).

Aleif is a Red Zone, an interdicted world. Several of the nations of Aleif are involved in open warfare (which is usually a cause for Amber, rather than Red, zoning). The Red Zone was implemented as a "status Quo" measure, as various states were bankrupting themselves to bring in mercenary forces and high-tech equipment. Not only was this practice causing irreparable economic damage, but it also escalated the conflict further. The Red Zone is intended to keep matters from getting any worse while Diplomatic Service mediators try to resolve the various conflicts.

Ships of the Imperial Navy patrol nearby space to prevent any vessel from approaching the planet. The Interdiction Squadron is built around a 30,000-ton Interdiction Tender, which ships a phalanx of 40 light and 20 heavy fighters, for patrol work and area coverage, plus 20 armed cutters to carry the ship's Marine company for boarding and planetary rescue operations.

The remainder of the squadron varies in composition, but normally comprises a pair of escort destroyers (1000t) and a number of patrol ships or close escorts (typically 4-6, of which at least two will be on distant patrol, away from the squadron).

Monitoring satellites provide area coverage, but vessels have slipped through the blockade from time to time. More commonly, incoming vessels are picked up by patrolling fighters and warned off, or caught attempting to slip through the satellite net and dissuaded by a few laser salvoes across the bow.

Like most Red Zones, it is possible to obtain permission to visit Aleif. This would normally come from the Marquis at Sentry. Vessels presenting permission are boarded and carefully inspected by Marine contingents, whose job it is to ensure that no unauthorized personnel or items get through the blockade – in either direction.

THE STARPORT

Aleif has no Starport to speak of, though there are a number of known safe landing spots (safe as in your ship won't sink into the ground or be washed away by floods, rather than safe and welcoming). The locals do have airports and even a few space-research bases, but off-worlders would not want to land there.

THE MAINWORLD

Aleif is a mid-sized world with very little surface water. This is the source of the "tainted" indicator in the UWP – much of the planet is desert, and the air is filled with fine dust that can make breathing difficult. Filter masks are thus necessary.

It appears that Aleif is drying up still further. The cause is unknown, though a steady drop in world temperatures cannot be helping. Aleif's sun is apparently undergoing a brief and minor (in cosmic terms) fluctuation in energy output, resulting in a general cooling of the system.

Aleif's population (all 4 billion of them, of whom 100 million are Vargr) are concentrated around sources of water, and gathered into dozens of distinct nations. As water sources have gradually dried up, so competition for control of those remaining has greatly increased. Alliances have formed and open conflict has broken out in various regions.

This is the reason for the Red Zone – significant areas of Aleif's surface are war zones. The locals possess good TL-8 weaponry (including nuclear, chemical and biological weapons) plus some offworld imports. The Red Zone has kept further high-tech weapons and mercenaries out – mostly. No blockade is airtight, so offworld advisors and equipment are available to some of the factions. There are also a few mercenary units on-planet. These units were permitted to remain when the Red Zone was established, as a "status quo" measure. As merc personnel are wounded or surrender, they are shipped offworld and not permitted to return, removing their influence by a process of natural wastage. High-tech weapons are removed by a similar – but more destructive – process.

Every major nation on Aleif is capable of building high-quality jet aircraft, tracked armor and personal small arms, and of maintaining those grav vehicles that are already present. Some lower-tech states cannot match these capabilities, but can still put up a fight with TL-7 or –6 smallarms and converted civilian vehicles. One of the favorite conversions is to take the standard desert-operations hovercraft use by many civilians, and to fit grenade or rocket launchers. These fast-moving vehicles with their inaccurate but powerful armament can cause a great deal harm to either side, depending upon how well or badly they are handled.

Not every nation is in conflict, of course. There is tension everywhere, but much of the competition is of a diplomatic or economic nature (sometimes backed by the threat of military force, true…) and various projects are in motion to remedy the situation rather than simply fighting over the dwindling resources. This is one reason why permits are sometimes granted to offworlders to visit Aleif; scientists and engineers are working on ice-melting or desalination plants, recycling operations, and other long-term solutions to the problem.

When war does break out, it typically follows one of two patterns. If a developed nation attempts to annex a region and drive out the lower-tech inhabitants (or "benevolently subjugate" them), a guerrilla war results, sometimes with other developed nations supplying arms to the desperate underdogs. Such struggles can drag on indefinitely. The pattern between more developed nations is rather different, following a "strike and negotiate" pattern. The availability of weapons of mass destruction to all nations makes all-out conquest a dangerous option, so the plan is "grab what you can and sue for peace."

THE REST OF THE SYSTEM

Aleif is a necessary destination for Jump-1 vessels plying the

cluster, but vessels are not permitted to visit the mainworld. To ensure continued commerce, a fuelling station has been set up in orbit around the smallest, innermost gas giant (named Urlainn). The station consists of nothing more than a small Navy Surplus tanker owned and operated by a private company. Fuel is obtained by shuttles, which skim Urlainn's atmosphere for hydrogen to be processed by the tanker's onboard machinery and sold to passing ships. (Very) limited space is available aboard the tanker for ship crews to stretch their legs before resuming their journey. Life support supplies are available for sale aboard, and one or more free traders are usually docked to the tanker, delivering goods or offering them for sale direct to passers-by.

The large planet Duruusa is something of an oddity; it is extremely large but has virtually no atmosphere, and thus no life. It lies in a very distant orbit and has not been properly explored yet. Some regions are extremely volcanic, though most of the surface seems stable enough.

SENTRY

0921 B5A8ACB-D   410 I M4 V

Sentry is the heart of the cluster. While all worlds are self-governing, issues are normally resolved here, at the court of Marquis Hallentein. The Marquis does not actually live on Sentry, but dwells in a subterranean city on the smallest of Sentry's three moons, Luramii. The Marquis owns the moon outright, and uses it as a base for his small trading fleet.

The Sentry system orbits a red dwarf star. As well as Sentry and its three moons, it contains a collection of rockball worlds and one planetoid belt, but no gas giants. The system is an important economic hub, at least locally.

THE STARPORT

Sentry's Starport (Sentry Downport) is situated on a large island off the coast of the main land mass. It is a large, impressive and recently-modernized installation, with plush facilities for travellers, conference and auction suites, and whole streets of brokers.

The port sees a great deal of traffic, both local (in-cluster) and through-traffic moving on to the Shanape Cluster or the Reaching Arm. Business is brisk, and the supporting Startown is home to over 5 million people. The Startown is considered to be an "interface area" between the strict local laws and the more permissive Starport-standard code. A law level of 9 is observed, enforced by efficient, polite security personnel who back their civil requests up with a range of powerful weaponry. The Extrality Line is considered to be the island shore – once in or over the sea, all local laws apply.

The Starport is also the headquarters of the Sentry Colonial Space Force, the planetary navy. This force mainly operates SDBs and monitors from berths on the largest moon, Yrech. The port facility is a command base only.

Sentry Starport does have an orbital component. This too is a custom-built installation. A small section of the Highport is open to commercial traffic, but streamlined vessels normally proceed directly to the Downport. A section of the Highport is given over to Scout Service personnel and vessels serving the Xboat link. The port does a brisk trade in annual refits for commercial vessels, and the yards take up the remainder of

the installation.

180 degrees around the planet from the Highport is a private facility owned and operated by Tukera Lines. This is the regional headquarters of the Megacorporation, and the site of their extensive repair and refit yards. At any given time, one or more vessels will be in for refit. The main section of the Tukera facility caters to high-Jump freighters stopping over on the way in or out of the Shanape Cluster.

THE MAINWORLD

Sentry is not a very large world. Its surface is 80% covered with water; the oceans are deep and chilly. The atmosphere is an exotic mix, high in Nitrogen, which prevents much in the way of air-breathing life from developing.

About a tenth of the 40 billion inhabitants of Sentry are crowded into sealed high-tech cities that cover most of the available land. Each of these has a small spaceport, and docks for the advanced submarines that provide much of the world's transport.

The rest of the population dwells in deep-sea arcologies, each with a population of a billion or more. Most of these arcologies has no spaceport, and must be reached by submarine. A few hybrid submersible/grav craft do exist, mainly for government use. Most citizens never leave their home arcology.

Sentry society is highly ordered, with strict laws governing many aspects of life. Government is representative, with a system of Guilds and professional bodies representing the interests of their members to a World Senate, which answers to the Hereditary Adjudicators. The system is highly effective, and for the most part the Adjudicators' rulings are accepted as being in the best interests of all. Perhaps the only real drawback is that the representation process takes time.

Although the world is not a major industrial center, Sentry's TL 13 arcologies manufacture and export a wide range of goods. Sentry products dominate the local (cluster) economy, and are sold as far afield as Fornast and Antares Sectors. Most of the raw materials for manufacturing come from seabed mining operations, a task mainly carried out by robotic or remote-controlled equipment. Deep-sea engineers are paid very highly, and are mainly trained at the world's University.

The University of Dukh (Sentry Campus) specializes in aquatic engineering, but offers the usual range of courses, from Fine art and Imperial History to Jumpspace Dynamics and Xenobiology. Most of the students are from Sentry or other worlds of the cluster, but some come from far afield, especially those seeking to learn deep-sea techniques from the experts.

Sentry's military includes a large and powerful planetary defense force, which mainly crews deep-submarines armed with meson guns. These represent the ultimate in mobile firepower, being almost impossible to locate in the deep waters, able to move at will, and possessing the capability to shatter a starship in orbit. Missile-launching submarines are also deployed, as are remote-site PAD (planetary Aerospace Defense) Missile units constructed in the sparsely-populated uplands of the world's land masses. Given the fragile nature of arcologies and the hostility of the deep-ocean environment, it is deemed wise to keep military installations away from population centers, other than light local-defense weapons.

Other defenses include squadrons of aerospace interceptors

flying out of land bases to reach targets in orbit, plus the system defense squadron. The latter is a powerful force, capable of deploying several heavy cruiser and destroyer sized monitors (non-jump-capable warships) and hordes of System Defense Boats (SDBs). The system squadron is berthed on the largest moon, Yrech, which is heavily fortified and equipped with deep-site meson guns and missile emplacements.

The Imperial Army has a small training base on Sentry, where local deep-water combat experts help specialist Imperial Army units develop their skills and train up new recruits.

Sentry also operates a small force of Jump-Capable warships. Most of these are Patrol Cruisers and Close Escorts assigned to commerce protection in the cluster. However, the world's pride is carried abroad by a small squadron of real warships. These are obsolescent ships – two *Michealson* Class light cruisers and four *Stalwart* class escort destroyers – but they do represent a powerful force. Currently all these ships are deployed outside the cluster, helping to fill the gap left behind by the transfer of many first-line Navy units.

THE REST OF THE SYSTEM

As has been noted, Sentry has three moons. The largest, Yrech, is a fleet base for the world's formidable system defense force. The smallest is the personal fief of Marquis Hallentein, and base for his private shipping fleet of six Jump-2 freightliners.

The middle moon, Ruria, is an industrial complex that processes ore mined outsystem and either tranships it to the Highport for transit outsystem, or uses it in various manufacturing processes, including the construction of sublight warships for system defense.

The system also includes a number of rockball worlds, of which the outer one (Orlainne) is the site of a Scout Service outpost. The work undertaken there is mainly interstellar radio-frequency interception. The site is part of a project to separate background noise and recent radio chatter out of the intercepted signals in the hope of finding messages, perhaps millennia old, that might contain historically important information.

The system's planetoid belt is worked by a number of local firms and independent belters. It is regularly patrolled by the system squadron, but there is a lot of territory to cover.

LIAR'S OATH

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Liar's Oath is mainly significant as one of two jumping-off points to the Shanape Cluster. The mainworld orbits one of the system's two gas giants, just at the outer edge of the life zone of the system's weak red star.

THE STARPORT

The Starport at Liar's Oath is an unremarkable C class port. Its only orbital component is a navigation and mooring beacon. On-planet, Covenant Downport is a small facility capable of handling half a dozen ships at a time. More vessels can be accommodated, but they have to be moved to holding areas and thus takeoff and landing will be delayed at busy times. The port is operated by planetary army personnel, and military engineers are constantly at work on expansions to the facility.

Covenant Startown is home to about half a million people, who support the port and provide services, own and operate businesses, etc.

THE MAINWORLD

Liar's Oath is not a very welcoming world. Even in daytime, the sky is dark due to the dim sun and very thin atmosphere. The world is dryish, with a large proportion of its surface water being locked up in ice caps and glaciers.

The population of some 60 million is ruled by a military dictatorship, which enjoys the confidence of the bulk of the population. The current military ruler, Major Alice Lakaii, took power twelve years ago, in a short but bloody coup that toppled the previous dictator (who was also a military officer).

Major Lakaii's government is more progressive, and far less corrupt, than the previous junta. Vigorous efforts are underway to turn around the world's stagnant economy. The first step is an expansion and improvement of the starport. There is little money for this, but there are plenty of soldiers to do the work.

Indeed, the Planetary Army is more and more becoming a civil engineering force, and as units are increasingly deployed across the planet on various upgrade tasks, standards of training are falling. However, Liar's Oath has found a source of revenue that offsets this disadvantage. Given the very thin atmosphere, all troops of the Planetary Army are trained as Protected Forces (i.e. trained to operate in vacuum suits and in hostile environments). The dictator has begun to hire out small units of her solders as mercenary shipboard or hostile-environment troops. Personnel return from merc service with new experience to share among their comrades.

The mid-tech (TL-8) cities of Liar's Oath are widely spread across the globe, though the extremely cold polar regions are unpopulated. Cities are not domed; instead the cities consist of building complexes, each of which has a controlled environment, linked by transit tubes within which electrically-powered railcars run. The cities themselves are connected by railroads; air travel is not possible, though many imported grav vehicles are in use.

Between the cities, the land is largely undeveloped. It is inhospitable and uninviting at best, and there is little sophisticated animal life.

THE REST OF THE SYSTEM

Of the two gas giant planets the inner one, Honora, is rather small. Liar's Oath is the largest of Honora's seven moons. Occasional alignments can make navigation a little tricky, but for the world's inhabitants the main consequence of living on a gas giant moon is the spectacular sight of the gas giant in the sky (day or night).

The outer gas giant, Giranuu, is much larger. Giranuu is one of the angriest planets in Charted Space; a, radioactive hell-hole of titanic storms. No sane captain would try to skim fuel from her churning atmosphere. At some time in the past, Giranuu seems to have smashed her moons to fragments, and she is now orbited by a collection of broken pieces and gravel rings.

A tiny huddle of asteroids follows timidly in Giranuu's trailing Trojan point, and a similar collection scurries ahead of her in the leading Trojan. Attempts to prospect in these clusters are unprofitable and fraught with disaster; they have a bad reputation among belters, to the point that there is some superstition about Giranuu being cursed. A few members of the Church of Stellar Divinity hold that Giranuu is an evil star, cast down to smoulder in demonic fury forever, and that her anger will curse and crush any who venture near. Others say that radioactivity and gravity will do the job nicely, and don't hold with such superstition. However, both groups agree that Giranuu is a bad place to go.

INTRODUCTION

This is the second part of the Linkworlds mini-setting for Traveller. It consists of several kinds of material:

Amber Zones are short descriptions, which outline a situation and the people involved in it, and suggest how matters are likely to unfold. It is up to the referee to flesh out these situations and to resolve the players' actions.

Patron Encounters are even shorter. They outline a situation (typically, an encounter with someone who wants something doing) and several possible outcomes. Which actually applies is determined by rolling 1d6. The referee must resolve further actions.

Mercenary Tickets are similar to Patron Encounters, but they deal with situations of a military nature.

Ship Encounters are brief descriptions of a common or distinctive vessel and some members of her crew, along with an indication of where the vessel might be encountered and what it might be doing. Ship encounters can add depth and flavor to an adventure, they may be red herrings, or they may lead to new adventures.

We will present at least one example of each here. QuikLink Interactive would like to receive additional submissions for this or any other Traveller setting. The format used here should be followed when submitting material.

AMBER ZONES

Two of the following Amber Zones are set on specific worlds of the cluster (though they could be transplanted to any similar location). The others can be dropped in anywhere.

PREACHER MAN
Location: Kerin's Tyr
Situation: While enjoying the sights of the Kingdom of Harven on Kerin's Tyr, the characters are approached by a youngish man in the remains of a fashionable but sober suit. He has clearly been roughed up, though not particularly seriously.

The man explains that he is Jerayme Varrian, a priest-aspirant of the Church of Stellar Divinity, and a citizen of the Grand Theocratic Republic, which dominates one of the other continents of Kerin's Tyr. There is a certain amount of tension between the Kingdom and the Republic at present, and some of the locals resented Jerayme's presence.

In fact, he adds ruefully after a moment, what they resented was his preaching. As a priest-aspirant, he is charged with spreading the word of the gods, and was touring the local holy places. This is nothing especially disagreeable – many of the Kingdom citizens are members of the Church too. However, the Republican slant on his sermons touched a few raw nerves, and he was thrown bodily out of the church where he was speaking.

This, too, would have been no major problem, except that Jerayme took it upon himself to punish the people who threw him out. He stormed back into the church declaiming solar flares and radiation upon the heathens who denied the word of the gods. This time he got a beating for his trouble, and only escaped worse by fleeing. Some of the locals are still following

him.

To cut a long story short, Jerayme wants to get out of town and would like the characters (who are offworlders and not likely to be offended at him like the locals seem to be). To accompany him as escorts. He has enough money to pay passage on a train or a maritime vessel for everyone, and can arrange payment of a modest fee from Church "eventuality funds".

Before the characters can do much, a half-dozen or so locals round a nearby corner, point at Jerayme, and charge. They are armed with melee weapons (mainly improvised) and consider anyone near their quarry to be helping him. A beating and maybe a lynching awaits anyone who does not run, or fight.

Resolution: Things are actually worse than Jerayme thinks. He has managed to stir up a lynch mob, and even if the characters manage to escape the first locals on the scene, it quickly becomes apparent that they are in big trouble. Several bands of locals are now after the group, and the Royal Constabulary seems to think that they have committed some major crime (perhaps they have, depending upon how they dealt with the first lynch mob.)

There appear to be only two options: hand over the preacher man and hope the locals let them go, or flee town. Getting out of town, even just for a few days, will allow things to cool off (and Jerayme will move on). Of course, if the characters kill or seriously injure someone, even in self-defense, they will have the Royal Constabulary after them, at least until they can get out of the Kingdom of Harven.

TORPEDO LOS(T)!
Location: 069-526
Situation: 069-526 (known as Fonnein to its inhabitants) is attempting to develop a maritime (wet) naval force. Since most of the world's population live in undersea cities, this force mainly crews long-range submarines. The force is a new development for the people of Fonnein, and is having teething problems. It supposedly exists to deter smuggling and unauthorized expeditions to certain historic ruins. Although Fonnein has a zero law level, these activities are becoming a nuisance and the population as a whole want something done about it.

The Maritime Security Force (as it is known) currently has four TL-7 submarines powered by imported fusion reactors. The crews are experienced submariners, but are not yet very skilled with their weapons. This deficiency is made worse by the fact that some of the weapons used by the Maritime Security Force are offworld imports of a higher TL than local equipment and – far worse – some are rather dubious systems.

One such system is the MkII Seabed-Mounted Airspace Denial System (SMADS). Basically a deep-water mine, SMADS is deployed by a specially-converted submarine to a general target area. It then proceeds under its own power to a suitable location (usually well-hidden), while dropping off remote sensor drones.

When a vessel or starship passes near the mine, a drone demands a transponder signal, and if the signal does not

match authorized vessels, the mine attacks. Its weapon is a dual-use Supercavitating torpedo/missile, capable of more than 200 knots through water. Upon hitting the air/water interface, the gas-jet drive system changes mode, allowing the weapon to engage airborne targets to a height of several thousand feet. SMADS is used mainly to deter unauthorized vessels from using ocean refuelling.

The crew of the patrol submarine *Guardian Streala,* while conducting a test live deployment, configured the sensor package for a SMADS mine wrongly. The weapon could not receive transponder data, and thus treated everything in the region as hostile. Thirty minutes after deployment, the mine armed itself. There was only one target in the vicinity – *Guardian Streala*. The sub was hit amidships, broke in half and sank in deep water. This occurred four hours ago.

It is possible that there are survivors aboard the sub, but there is a problem. SMADS mines carry two missiles, and the state of the second weapon is unknown. No Security Force vessels are within range of the downed sub, but a rescue vessel could be flown to the area quickly. However, with a possibly live ship-killing torpedo lost in the waters nearby, a rescue presents certain problems.

The Security force needs skilled technicians; people with high-tech (TL 10+) electronics and hostile-environment skills. A team must quickly be assembled to find the mine, reach it using personal diving equipment, and disable it. This is a scratch mission, desperately flung together from the available people. Deep-diving suits and a few minutes' instruction are available. It'll be tough, and there may not even be any survivors aboard the sunken boat.

But there might, so somebody has to try and get them out. The characters' mission is to prevent that becoming a suicide assignment.

Resolution: There is a small band of survivors aboard the sub, but they have not got long left. As the rescue gets underway, they manage to establish crude communication using active sonar pings. What they convey is dreadful news.

The sub's weapon bay was open when she was hit, and at least one other mine was live at the time. The crew don't know if it was a conventional CAPTOR (Captive Torpedo) mine, in which case it contains "only" a TL-7 aquatic homing torpedo, or another SMADS weapon. Either way, if the rescue vessel approaches the wreck, the weapon will launch.

The location of this missing mine (and its type) is up to the referee. There may be more than one, and it is possible that the weapons are actually still inside the wreckage. Either way, they will have to be cleared before rescue can take place, and the clock is ticking.

It gets worse even than this. The sub broke in two, and there are survivors in BOTH sections. One segment is perched on the lip of a deep trench, and is unstable. Both sections are badly damaged, and would not survive being winched up to a surface vessel. The only way is to clear the mines, enter the wrecks, and get the survivors out. The entire Maritime Security Force has volunteered to save their comrades, but they can't deal with the mines. The only people who really understood how to program them were aboard the sunken sub.

The referee should feel free to add whatever hazards will make the characters' lives most miserable, including hostile deep-water creatures, dangerous wreckage, over-zealous rescue crews and whatever other fiendish obstacles he/she can create.

SURVEY MISSION
Location: Any world with a breathable atmosphere
Situation: The characters are stuck in port for a few days, waiting for a delayed cargo. While they are cooling their heels, they are approached by a local investor.

The investor (Suzanne Morgan-Vens, a representative of an offworld mining company) says she needs a survey carrying out in order to verify some information she's received. Her company conducts exploratory drilling and sampling operations, selling the data or the rights to the site on to exploitation firms if the site turns out to be worth exploiting.

However, a test well or mine is an expensive proposition, and she's not completely satisfied with the data she's been given by a local survey team. There are good indications that there might be deposits of hydrocarbons (oil) in the region, but nothing worth staking Megacredits on. Suzanne proposes that the characters repeat the survey. They're impartial; they have nothing to gain by over- or underplaying the data.

Suzanne will provide a converted wheeled ATV that can serve as a mobile lab and sensor platform. The team will be shown how to take densitometer readings and rock samples. There is no need to do analysis – just collect reliable data and deliver it.

The team can be transferred to a regional survey base by speeder, but the trip out to the site will have to be overland (the ATV is too big to be flown out without specialist equipment that's not available). This will take a couple of days each way, plus a day or so to take the samples. The characters are offered Cr 500 apiece, plus a letter of introduction to Suzanne's contacts in the industry.

The outback region where the data is to be gathered is pretty wild, Suzanne warns. The climate and local wildlife might pose some problems.

Resolution: A journey overland in an ATV is never without hazards. Terrain hazards include canyons, foul weather, flash floods or other dangers appropriate to the terrain. However, this is not the worst the characters will face.

Upon arriving at the site, the characters conduct their survey. The data presented was basically correct, and sufficient to warrant a test rig. However, the locals (homesteaders, ranchers, nomads, prospectors or whatever is appropriate to the setting) don't want a petrochemical refinery and a series of wells on their doorstep. They will harass the team as they work. The locals are not willing to use violence, though they may shout and threaten, and would certainly respond in kind to an attack.

After a day or so of this, the characters are about to turn for home when an exhausted local rushes into the site. He's come, quite simply, to beg for help. The locals don't want the mining corp on their doorstep and they stand by their earlier words and deeds. But a major prairie fire has broken out, and one of the local homesteads is directly in its path. The locals have no vehicles capable of getting through the flames, but an ATV is sealed. It might be possible for the characters to reach the (wooden) homestead and rescue the family that lives there. The local can't offer them anything, and knows they'd be justified to just drive away... but he had to swallow his pride

and come to the only people able to help.

If the characters won't help, they will hear later about how a dozen homesteaders were killed trying to rescue their neighbors, who were killed anyway.

If they agree, the local man (whose name is Raimarii) can direct them towards a ridge, behind which a thick pall of smoke is beginning to rise. The fire is just getting going, but it is broad and moving fast down the valley.

The ATV can pass through the fire, but it won't do it any good. The gel-filled tires are designed to withstand high temperatures, though they will fail if exposed for too long, especially while under load. The ATV, if driven recklessly enough, can reach the homestead just ahead of the fast-moving wall of flames. It is obvious that the family (two adults, three young children and a couple of hands) cannot escape in time. They are busy trying to damp everything down (utterly pointless, but the alternative is passively waiting to burn alive) and calm the screaming children as they are bustled into an inadequate fire-cellar.

The characters have minutes to get everyone out, and into the ATV. The referee should create a situation of intense pressure as the character try to deal with panicking kids, a farmer who believes he actually has a chance to save something if he can get enough water on it, a farmhand with severe burns and family members who won't leave without their missing dog.

After the family are in the ATV, there only remains to get clear of the fire. That means an insane run ahead of it, or angling through it. Both are fraught with risk. It is obvious that the burned hand will die if he can't reach a hospital in time. The characters will have to come up with a solution. Air transport may or may not be available, but certainly no pilot will be wanting to fly into the immediate area around the fire.

COUNTRY RETREAT
Location: Anywhere
Situation: The characters are working on a big deal – perhaps a shipping contract – with Josef Taii, a partner in Taii and Daughter, a prominent local merchant house. Josef has invited them to his country estate for the weekend, to settle the details in comfort and incidentally enjoy a little sport, fine wine, and relaxation.

The house is in a quiet country area, with good hunting land nearby. The nearest town, Fultonville, is a couple of kilometers down the road. Fultonville is a logging town and a riverport for the local villages. A quiet place.

Until today.

Resentment against offworlders has been growing for some time, as the locals perceive that their traditional industries are losing out to large offworld concerns. Radical speakers have been few and far between, but one, Amanda Ulaird, arrived in Fultonville this morning. Her fiery rant against the "offworld menace" triggered an ugly incident in which rocks were thrown at a party of offworld consultants. The local constabulary tried to protect them, and to arrest Ulaird for instigating the incident.

Unfortunately, Ulaird's (armed) followers decided to resist, and a gunfight ensued. When one of the offworlders attempted to defend himself with a policeman's handgun, Ulaird managed to turn the incident into a riot.

Now some of the offworlders have been executed, others are held hostage, and an armed mob is on the way to the Taii residence to punish Josef for colluding with the "offworld menace". The mob is mainly armed with improvised weapons, but at least a quarter of them have shotguns, others handguns and rifles from the police armoury. Ulaird's followers are armed with SMGs.

Help is on the way – a hostage-rescue unit has already been despatched by speeder from the capital, and police reinforcements are being rushed to the town. However, it is going to be some hours before an effective response can be made, and the mob will be at the estate in minutes.

Resolution: The Taii family retainers are reliable and loyal. Most are non-combatants, but a couple of gamekeepers and some of the grounds staff are willing to fight (they can guess what'll happen to them if they don't and the mob catches them).

Josef has a few weapons at the estate, sporting rifles and shotguns, a couple of scoped revolvers for hunting – nothing military or capable of autofire.

The situation is simple. The characters must throw together some kind of defense, and hold out until police or army units can arrive to chase off the mob. The mob is angry and violent, but not particularly determined. They will snipe, or fall on individuals and kick them to death, but they won't engage in "human wave" assaults or anything so suicidal.

Ulaird is the lynchpin of the whole riot. She can persuade some of the locals to engage in extreme violence or even take massive risks, but if she is killed, the whole thing will fall apart. She knows this and takes care with her safety.

PATRON ENCOUNTERS
A Patron Encounter is a short "adventure seed". Patron Encounters are presented as follows:

PATRON TYPE
Required Skills; Required Equipment

Players' Information
This describes the situation as it appears to the players

Referee's Information
This section outlines the real situation (if different) and several possible outcomes. Which one of them actually applies is determined by rolling 1d6. The referee must resolve further actions.

MERCENARY
Required Skills: Shipboard Skills; Required Equipment: None

Players' Information
The party is approached by a member of a small mercenary unit, Madsen's Strikers. His unit is a small team of six experts, who specialize in rapid in-and-out operations, from hostage rescue to corporate espionage. He explains that the unit has a contract pending, but needs to find a crew capable of handling a small craft such as a pinnace (an aerodynamic spacegoing small craft). The unit has access to a suitable vessel, but

cannot crew it.

The mission is fairly simple. The Strikers have been hired by a businessperson to recover some "sensitive" documents that are being used to blackmail her. The documents are located in a remote villa in a mountainous region; approaching by land is out of the question. The mercs intend to make a surprise landing directly at the villa, overrun the guards, and get out again.

What the characters are required to do is simple and fairly safe. The mercs will "detain" the crew of a supply pinnace, and the characters will replace them (this will require some slight bluffing, but nobody should look too closely at them). After taking off (with the mercs aboard) the pinnace will report lifter trouble and veer off course, flying low and fast to the villa site. The mercs will then carry out their mission and return to the pinnace, which will be sued to get them out of the immediate area and abandoned at a pre-arranged rendezvous point.

All access codes and documentation are provided by the mercs. All the characters have to do is fly the pinnace and secure it while the mercs perform their mission. The characters will be provided with their choice of an autopistol, shotgun or carbine for the purpose, if they don't have weapons of their own.

Payment is Cr 1000 each, success-only, on completion.

Referee's Information
All is as presented. Getting aboard the pinnace without arousing suspicion is easy enough for people who wear the right clothing, behave like skilled flight crew, and don't do anything stupid. Everything goes to plan until the pinnace grounds at the Villa.

1d6 (1D):
1. All is as planned. The guards are shocked and fail to react effectively. The mercs return quickly with the documents.
2. All is as planned. The guards are quite numerous (armed with handguns, SMGs and carbines). They attempt to storm the pinnace to prevent the mercs from escaping, and the characters must resist.
3. The mercs run wild, and the whole thing turns into a bloodbath. The numerous guards attempt to storm the pinnace. They are armed as above.
4. As 3, but the guards are mercenaries armed with Advanced Combat Rifles and light body armor.
5. As 4, but the guards and the mercs get involved in a long battle, during which two air/rafts filled with reinforcement guards arrive and attempt to storm the pinnace.
6. The mission is a fiasco. As the mercs enter the villa, they are ambushed and take several casualties. The radar shows air/rafts inbound, and the mercs are pinned down. The players must stage a rescue or abandon them.

NAVAL OFFICIAL
Required Skills: Shipboard skills, electronics, mechanical, vac suit; Required Equipment: None

Players' Information
The party is approached by a young Imperial Navy officer on assignment to the world as an advisor. He explains that he needs help with a salvage operation, and has no Navy or

Marine assets available.

The mission is simple enough. He will provide a Cutter (and a pilot, if necessary) and a set of navigation data, which will lead to a collection of wreckage in deep space. He explains that this is the remains of a corsair vessel shot up by a navy patrol ship some weeks ago. He has come to believe that the corsair is part of an organized band, and that there may be information in its data cores, if any have survived.

The party is offered Cr 500 each to enter the wreck and search for data cores. A bonus of Cr 5000 is payable for successful recovery of one or more readable cores. The patron wants holo-footage of the interior of the ship to prove the characters searched thoroughly.

Referee's Information
The trip out is uneventful, but getting into the wreckage is quite difficult. The vessel was quite large (1000t or more) and even this incomplete fragment will take a long time to search. This requires cutting wreckage away and avoiding a vacc suit puncture from jagged edges. There are corpses in the wreckage too.

1d6 (1D)
1-2 All is as planned. The recovery is difficult, but eventually accomplished.
3 The wreck has a little power available; enough for its automated defenses to fire a missile at close range into the cutter. The characters must rescue themselves before proceeding.
4-5 As 3, but the wreck is extremely unstable. Characters are constantly assailed by loose fragments of metal, entangled by cables, and similarly hampered.
6 As 1, but the vessel is no corsair. She was in fact an innocent merchant ship, which was suffering a communications failure and could not reply to the challenge made by the trigger-happy Navy captain. The data in the cores could be extremely embarrassing to the Imperial Navy.

ÉMIGRÉ
Required Skills: None; Required Equipment: None

Players' Information
The party is approached by a well-dressed young couple. They were recently married, an arrangement between their families (both of which are quite wealthy, and the couple are the eldest children, and thus the heirs of both). However, the families have fallen out.

The couple have been leaned on by both sides of their family to make a choice about where their loyalties lie. They have now made that choice, and have decided that their loyalty is to one another. Despite the artificial arrangement, they have discovered that they are truly happy together, a happiness that will suffer if their families keep interfering. They therefore wish to get away, several Jumps if possible, and start a new life.

The couple have money, and are willing to pay to get free of their stifling families. They offer Cr 1000 a week to each member of the party, to assist them in the following ways:

The couple think their families will try to stop them leaving. They may try to intimidate or even kidnap them. Tough

characters able to face down or fight off kidnappers are a necessity. Also, the families will be looking for a fleeing couple, not a party. If the characters can provide them with a cover (e.g. part of a group of students on a study trip or a team of consultants journeying to their next assignment), then it is likely that they will avoid notice.

If the party has a starship, the couple are willing to pay for Mid passage plus the Cr 1000 per week, but would prefer to have a "cover" rather than being obvious passengers.

If the couple can make it far enough (say 3 jumps, or when they are about to board a ship bound for a different main or cluster), they say they can offer a bonus.

Referee's Information

The bonus is real enough; bearer bonds and personal stock in the banking Megacorp Hortalez et Cie, to the value of Cr 10,000.

1d6 (1D)

1. All is as it seems. A good cover plan will keep either family from catching up.
2. All is as it seems. Earnest but arrogant and overbearing relatives may catch up and try to convince one or both of the couple to come home. They will not attempt violence.
3. As 2, but an attempt to use force will follow. This is likely to be a non-lethal kidnap attempt rather than a murder.
4. One family is incensed, and attempts to kill one or both of the fugitives.
5. Both families are after the couple. One wants to kidnap them or, failing that, kill them. The other is actually protecting them in the hope of winning them over later, but will attempt earnest remonstrations as in 2. The couple don't trust either group, whatever they may say, and the situation is very confused.
6. The couple have stolen stock and documents from both their families, and are hotly pursued by family members trying to get them to come back before more extreme measures (which are already in motion) catch up. In fact, the couple also have hired assassins, a rejected lover, angry cousins (who will move up the inheritance ladder if the couple die or meet with disgrace), bounty hunters and the Imperial Ministry of Justice after them. On the plus side, if they actually make it, the bonus is Cr 100,000.

MERC TICKETS

Mercenary Tickets are presented in the following format:

TITLE

Mission Type; Unit Size

Mission types are normally descriptive: Striker, Commando, Cadre, Escort, Bodyguard or Security. Unit sizes range from Team or Squad, through the normal range of military unit sizes – platoon, company, battalion, brigade or even division.

   Background: This section presents the basic information associated with the mission

   Mission: Details of the actual mission.

   Resolution: Special information for the referee, if necessary. The resolution is normally left very open, so that the referee can create any kind of scenario around the ticket that he/she wishes.

SECURE LOGISTICS

Mission Type: Escort; Unit Size: Ship Crew

   Background: The Imperial Navy is very short of auxiliary vessels at present, and is finding it difficult to maintain its logistic support for current operations. A small Marine force is currently deployed to a remote region of a world two jumps away, and requires supplies to remain on station. With no auxiliary vessels available to carry out the resupply mission, the navy is offering it as a merc ticket to any suitable (armed) merchant ship.

   Mission: Cr 50,000 is offered to the owner and crew of a suitable vessel, to deliver 20 tons of supplies (some ammunition and spares, but also uniform, boots, rations, mail, etc.) to a Marine platoon in the Orrell Badlands, which is currently guarding a crashed Navy vessel until salvage can be arranged.

   The ship's crew will be responsible for securing the cargo in transit. It contains high-tech weapons components, so may be the target of thieves.

   Resolution: The mission requires loading, Jump, refuelling, a second Jump and delivery of the supplies. During the fuelling stopover, a band of terrorists posing as ground crew will attempt to storm the ship. They wish to seize the weapon components, but scuttling a military transport ship would be a great propaganda victory for them too. The terrorists will be armed with concealable weapons – pistols, SMGs and perhaps an ACR or two. Exact numbers are up to the referee.

SEVEN STARFARERS

Mission Type: Cadre; Unit Size: Squad

   Background: Life in the outlying Shulgil Province has become too hard to bear. Not only do bands of armed raiders terrorize the countryside and steal everything the local farmers grow or raise, but the Landowners' Collective, far from dealing with the problem, simply ensures it doesn't lose money by squeezing the farmers further. Dissent is dealt with by armed bands whose methods are no different to those of the brigands.

   Mission: The farmers of Tarshell Crossing have decided they have nothing to lose. They are determined to defend what remains of their crops, their herds and their pride to the last. Initial attempts to resist the raiders (with hunting shotguns and rifles) were a disaster. The farmers have decided that they need expert help – but they can't afford it.

   Since an experienced merc unit is out of the question, they plan to form one. They have scraped a few thousand credits together to purchase weaponry and someone to teach them to use it. Cr 50,000 is available. This represents everything the locals can sell, mortgage or bargain for. The desperate farmers are willing to hand over this sum to anyone willing to help them. However, some of this money will be used to buy weaponry.

   The deal is this: a party of mercs or adventurers will undertake to obtain weapons for the farmers, and remain in the region for 3 months to train up a militia. Whatever money is not spent on weaponry is the mercs' pay. The deal is success-only: that is, the mercs will only be paid of the farmers are still

hanging on after 3 months. There is actually nothing to stop the mercs from just taking all the money and running, except their own consciences.

Resolution: The Landowners' Collective will of course try to warn off mercs, and make it hard to bring weaponry. The characters will then face the challenge of turning inept but determined farmers into a fighting force capable of taking on the armed bands and whatever force the Collective brings to bear – and winning.

There are about 5000 people in the valley. Perhaps 1000 of them (at the absolute outside) could be given weapons and training, though most of these would be tied to their farms by the necessity of keeping them working. Perhaps 200 could be spared as a mobile force at any one time.

The armed bands are mainly armed with carbines, shotguns and rifles. The landowners' bullies are similarly armed, but will quickly be re-armed with assault rifles, light machineguns and similar light military hardware if the farmers start to pose a real threat.

The aim for the characters is not to defeat the Collective but to create a force that can face them down and assure the farmers' rights. However, they will have to fight several small, sharp actions against raids and attempts to frighten the farmers. This may lead to some big skirmishes, but this is not a mission that can be decided by a decisive battle. The best the mercs can hope for is to create a balance of power that forces some cooperation and perhaps even an alliance against the brigands.

Just as likely, some of the mercs will be killed trying to rally the farmers – they are determined and desperate but also scared and inexperienced. They need leadership to give them confidence. Without it, they are nothing but a bunch of people with guns.

SHIP ENCOUNTERS

A vessel plying the spacelanes will encounter many other ships. Some will be little more than sensor blips, but a friendly hail will usually reveal more about the character of the vessel. There is always more to a starship than "it's a free trader".

Some vessels will be encountered again and again, becoming old friends or familiar nuisances. Others provide momentary color and depth. The shock of finding a merchant floating dead in space, her crew massacred, is driven home when the players realize that they KNOW these people. Perhaps in passing, perhaps in a barfight, but these people touched their lives…

STARLANCER

Starlancer is a Patrol Cruiser. Built for the Imperial Navy, she was crippled in an engagement some years ago and sold off as surplus, being too expensive to repair to full capability. The hulk was purchased by Escort, LIC, a Starmerc outfit specializing in commerce-protection. She was rebuilt as far as possible, and a crew was hired. Finally, the hulk returned to the stars as the third ship in Escort, LIC's flotilla.

Her crew of twelve are experienced mercenaries, all with experience as commercial spacers, Imperial Marines or Navy personnel. The vessel is normally employed in close-escort of high-value cargoes, but currently serves as a patrol vessel, on retainer to the planetary government of Sentry.

Starlancer has seen combat, and is known to have suffered casualties in performance of her duties. Her crew are considered to be tough and reliable, but her captain, Mayliza Arrentein, (an ex-Imperial Marine Lieutenant) is abrupt and abrasive in her dealings with "dumb merchies". The crew also have a reputation for getting into fights when ashore on liberty. Although there are some impressive small arms in the locker, these are used for boarding and inspections when on ticket as a customs ship, not for ground combat. The crew are spacers, not ground-pounders.

HONEST AB'S INTERSTELLAR MERCANTILE EMPORIUM

The Emporium is a very distinctive ship. Painted in garish colours, and displaying a huge holographic logo down her sides, she is a heavily converted Type M Subsidized Merchant. Her launch is gone, and where it used to ride piggy-back there is an ugly weapons blister which mounts two turrets. The aft one is a defense mount, carrying a pair of sandcasters and a rapid-fire point-defense laser. The forward one mounts a triple missile rack. Both systems are fed from a magazine in the cargo hold, with ordnance rising through a "handling room" where the low berths would normally be. This armament is shipped in addition to the two triple laser turrets on her sides, just abaft the bridge. For a merchantman, The Emporium is very well armed.

These days, the Emporium is less of a freighter than a flying salesroom. Her cavernous cargo bay is lined with racks of goods, mainly fairly expensive items. Upon landing, she opens her side doors and lights up the "open for business" sign, selling individual items as cheerfully as the bulk containers that line her forward cargo area.

Honest Ab himself is a Sydite, a four-armed humanoid from the Khuur League. He is (and this is the cause of many a joke) primarily an arms dealer. The forward cargo bay is filled with containers of expensive goodies, to be sold only by the container or in large lots. Ab deals in everything from planetary defense missiles to TL-7 small arms. He seems to be able to obtain quite rare items, including combat armor and the occasional grav tank.

However, Ab is just as happy to sell assault shotguns or flak jackets from the racks lining his main cargo hold. He is enthusiastic about his product and willing to spend all day with a client whose requirements run to a knife and a single hand grenade.

Ab does sometimes ship high-value cargo (his ship is very secure and has an excellent reputation) for clients, but never passengers. His crew is very mixed; a Luriani first officer, a Vargr engineer and an ever-changing collection of temporary crewmembers that has at times included Ursa and even Droyne.

Perhaps the oddest thing about Ab is that he really is honest. His prices are fair (but high, as might be expected from the only vendor of plasma guns for 25 lightyears), and all his goods are entirely legal. They even come with correct (non forged!) paperwork. Ab's only weakness is that he collects "stuff". Ab's stuff collection includes much obvious junk, plus a few really unique or valuable items. Some of them are technically illegal, such as Restricted artifacts. This is Ab's only foray into illegal dealings.

Despite the weaponry on Ab's ship, he is not a fighter by choice. Most privateers would think twice before tangling with the Emporium, and that's fine with Ab. If other ships choose to mount inadequate armament that's their business. He'll advise them of what they should buy (and offer to supply and fit it). If they decline, and get into trouble, that's their lookout. Ab has never changed course to assist a vessel under attack and never will. He'll comply with the law, but fighting pirates on behalf of people too cheap to defend themselves properly is not on his to-do list.

CELESTIAL MESSENGER

There is something very odd indeed about this vessel.

Celestial Messenger is a converted Yacht, built long ago for some noble who decided he or she could not afford to finish fitting her out. The vessel was bought up by the Most Holy Reverend Jarmaine Kastariis, a priest of the Church of Stellar Divinity, and fitted out as a Jump-capable cathedral.

The Celestial Messenger has been the subject of a string of legal injunctions and civil suits, since her master and his equally devout crew believe that works done in the name of the Gods transcend the petty laws of Humaniti. Normally, this means parking in a restricted orbit and blanketing out part of the world communications network with a broadcast service. However, the vessel has been involved in some genuinely good deeds, and on a couple of occasions has received what certainly seemed like divine assistance.

When a flash-flood struck an Ursa village on Miip and several individuals were cut off without hope of rescue, the Messenger came out of nowhere to pick them up. There was simply no reason for her to be there, and no way to know about the crisis, yet the villagers were saved. The Most Holy Reverend didn't feel the need to explain, beyond announcing that "The Gods sent us". On another occasion, the vessel and her crew rescued a diplomatic envoy from street riots on Aleif. Setting down in a park, the Reverend (accompanied by two of his crew and a choir-robot) walked through the middle of a lynch-mob, picked up the battered envoy and her bodyguard and walked back to the ship with them. Witnesses report that shots were fired at the party, and several individuals attacked them with clubs, but to no avail.

There is no explanation for these activities, beyond what the Reverend has offered.

The Messenger is a nuisance to other spacefarers, and is constantly being fined. However, she continues to ply the spacelanes and bring the message of the Gods to everyone who can't avoid listening.

BREAKEVEN

The Breakeven is a free trader registered out of Daramm. She is at least 20 years old, but shows the signs of careful maintenance. Even her paintwork is crisp and frequently redone. The ship is beautifully maintained, has a complete set of spares for everything, and her steward is famous across the sector for the quality of his cooking. Most other Free Trader crews view the crew of Breakeven as some kind of freaks or mutants; Free Traders are not supposed to BE like that!

Breakeven ships passengers, freight and mail (she has an Imperial Mail Contract) around the local worlds, occasionally taking on a speculative cargo. She has a reputation for reliability and a certain arrogance. Both are richly deserved.

The Breakeven is owned and operated by a human named Douglass Sorgan, who serves aboard as her master but (as befits a ship's master) does not hold a crew position. The rest of the personnel are all Vargr. The ship has a distinctive "corporate identity", with all of the crew dressing in dark gray coveralls (unusually dowdy for Vargr), boots and a crimson ship-jacket and peaked cap, with identical sidearms and even dress-swords for formal events.

Breakeven is listed as an Imperial Navy Reserve Auxiliary, and has been called up a couple of times in the recent war, mainly for routine transport work. Her personnel are mainly recruited from ex-Navy or ex-Megacorporate Merchant Service personnel, and it shows.

Clients and passengers find the quiet efficiency and reliability of the vessel reassuring. Other spacers find it sickening.

BILL'S SHIP

Bill's Ship is a regular sight in the ports of the Linkworlds. The vessel is an extremely battered old Scout/Courier operated by an equally battered old Detached Duty Scout, whose ID is the only place where he is referred to as William Portman. Bill is known throughout the cluster, as merely "Bill".

Bill operates his vessel alone, and despite the interference of his several cats (nobody is quite sure exactly how many) and a pet bird of some description, which seems to get along with the felines well enough. Since his ship is maintained and fuelled by the Scout Service, Bill's pension is enough for him to get by. However, he makes a little extra money working the personal courier or 'gray mail' trade.

There is nothing illegal about gray mail, unless of course the packages contain contraband. Bill is not a smuggler; he is a bad-tempered, foulmouthed old coot who thinks he owns the spacelanes, but he is not a criminal. He will deliver packages, letters and the odd passenger to his next destination for a small fee. Passengers rarely speak highly of the experience. Anyone taking passage aboard Bill's ship can expect to fend for themselves or be subjected to Bill's intermittent and highly experimental cooking. They also quickly discover that it isn't Bill's ship at all – it's run by a brawling committee of cats.

Underneath his cranky and uninviting exterior, Bill is cranky and uninviting, but has an embarrassingly broad heroic streak. He once took his unarmed ship into the middle of an action between Navy vessels and a pack of Solomani commerce raiders to pick up survivors. This, and other suicidally brave incidents, earned him the Emperor's Thanks and a knighthood. Somewhere, under the heaps of trash in his stateroom, is a patent of nobility and a letter of enfeoffment, granting Bill an estate that he's never bothered to visit.

When Bill arrives in port, beer share prices go up. His drunken sprees are notorious. If caught with just the right amount of ethanol in his system, Bill can be induced to explain why he'll never quit the life of an interstellar wanderer. He will wax poetic about the stars, the freedom, the grand destiny of Humaniti and his deep love of space… then get embarrassed and pick a fight with someone.

THE KURSIS CHARTER
A Linkworlds Campaign

What follows is an extended scenario in the form of a minicampaign. It can be played with any group of characters, with or without a starship. It is particularly suitable for a party of Merchants created using the T20 Lite rules.

The minicampaign can be expanded by dropping in some of the Amber Zones and Patron Encounters as asides. For example, characters with a ship may be offered a charter mission that takes them to a different system and away from the adventure thread they are pursuing. There, they may have several minor adventures as a result of patron encounters and amber zones, before finally returning to pick up their interrupted adventures.

Resources: This adventure needs some version of the Traveller rules. T20 or T20 Lite is ideal, though the adventure is compatible with any version.

Theme: This adventure is designed around the crew of a small starship. A Far Trader or a Scout/Courier is ideal.

Setting: The adventure is set early in 993, in the Linkworlds Cluster, Ley Sector, in Gateway Domain of the Third Imperium.

Referee's Overview: The crew of a small merchant ship are chartered to carry out a number of deliveries on behalf of a shipping company whose vessels are over-committed. The deliveries will take the crew to various worlds of the cluster and occasionally impose delays that may result in "aside" adventures while the characters cool their heels.

Along the way, the characters pick up clues to the location of a derelict ship that supposedly contains a fortune in precious metals. Unravelling the clues will lead them to undertake a dangerous descent into the atmosphere of a gas giant world.

Style: The adventure is presented as a series of "Acts", within which there will be one or more "scenes". Some Scenes are "Key" scenes, and playing them out is necessary to the resolution of the plot. Others can be modified or ignored as necessary. Extra Scenes can be added to an Act if the players' actions require it. Whole additional Acts can be dropped in as and when necessary, say if the characters are on-planet and decide to follow up a rumor, leading to an unexpected adventure (and one unconnected to the main plot).

Stats: This adventure is more or less statless, since it is intended to be played with any version of Traveller. Stats for three generic T20 NPCs are found at the end of the adventure. These three (which can be used as the basic combat stats for a range of opponents) are drawn from the forthcoming Travellers' Aide supplement "76 gunmen", which contains, oddly enough, pregenerated stats for 76 thugs, mercs and goons for use with T20.

Characters: The characters are all members of the crew of a small starship, or at least have some interest aboard. Possible character roles include:

- The vessel's owner-aboard
- Crewmembers (Captain, Pilot, Astrogator, Engineers, Stewards, Medic, Gunners, Cargo Handlers, Technicians, Security Personnel)
- Non-crewmembers with a financial interest (e.g. backers, investors)
- Non-crewmembers with other interests (e.g. partners

or friends of crewmembers)

Almost any mix of characters can be used, so long as they have the basic skills to operate their ship.

The Ship: The adventure assumes that the characters have a small Jump-2 vessel available. The *Grendelsbane* presented at the end of this adventure is a typical example.

PLAYERS' INTRODUCTION

The *Grendelsbane* is badly in need of a refit. Some systems are decidedly erratic, and others are showing signs of wear. Sooner or later the vessel will fail a spaceworthiness inspection and be condemned, or worse, enter Jumpspace and never come out.

The only way to keep the ship in service is to find the funds for a comprehensive overhaul, but what Free Trader captain has that kind of money handy? The answer, of course, is "a successful one", and that's one thing that *Grendelsbane's* captain is not. At least, not right at the moment. It was with some relief, then, that the crew took on their latest job. Not that there's a lot of actual money in it, but at least it'll pay for the refit.

The job itself is fairly simple. *Grendelsbane* has been chartered to pick up several large containers of hard-copy records from various starports. All port authorities routinely ship their records in electronic facsimile form, but hardcopy logs are also maintained by most ports. These accumulate, and when there is enough of them to be worth it, they are shipped in bulk containers to be held at the sector capital.

Normally, these records are transhipped by registered mail vessels, but with the recent disruption in the sector, the mail schedule is badly off. The three vessels operated by Kursis Mail, LIC have all been requisitioned by the Imperial Navy as auxiliaries, leaving a gaping hole in the service.

Kursis Mail LIC has sub-contracted several vessels to fill the gaps, and in most cases the situation is entirely satisfactory. However, the vessel intended for the Linkworlds run defaulted on its contract, and a replacement had to be found quickly. That replacement was, of course, *Grendelsbane.*

The terms of the deal are simple. The *Grendelsbane* will Jump into the Linkworlds cluster from the Shanape Cluster, via Liar's Oath, then proceed to Miip, Kerin's Tyr and 069-526, picking up the hardcopies (there will be 2-5 tons at each port of call) before conveying them to Sentry. At Sentry, they will be delivered into the high-Jump mail system and payment will be made.

Payment consists of the following: Normal overheads and fuel will be covered (i.e., the players need not worry about normal life support and fuel costs). Extras such as high-class foodstuffs and software upgrades will NOT be covered.

A complete refit at 069-526 will be paid for by a voucher issued by Kursis Mail LIC, and validated by the transhipping agent at Sentry. The voucher is good for a maintenance upgrade only – any additional or upgraded components will have to be paid for by the ship's funds.

The vessel must leave room in its cargo bay for the records, but is otherwise free to trade as desired.

The deal basically means that the crew get to operate their

ship for free while they make the pickups (so long as they stick to the planned route) and can make some extra cash on the side. At the end of the mission, the ship gets that overhaul it so desperately needs. It's a good deal.

After a hundred and seventy-three hours in Jump, the Far Trader *Grendelsbane* emerges into normal space at 109 diameters out from Liar's Oath. All systems are within normal parameters (normal for this ship, anyway). The fuel tanks are more or less empty, but that's not a problem. Ahead lies Liar's Oath; gateway to the Linkworlds cluster....

REFEREE'S NOTES

The referee has as much latitude as he or she thinks necessary about things like the contents of a survival kit or the ship's locker. Where weapons are listed, it is assumed that "some" ammunition is present (how much is up to the referee) and that suitable webbing or other accessories are also available.

The exact contents of the locker are up to the referee. If the characters need light, it is likely that there are a couple of cold light lanterns or a torch in the locker – though these items may be beat-up or less than reliable. Common sense should suggest what is – and is not– likely to be present.

Similarly, character may well have weapons and equipment of their own. Players should be allowed a few minutes to buy equipment with their mustering-out cash, though again common sense should be applied, to prevent characters from loading themselves down with every conceivable weapon, item and accessory.

The charter is a reason for the characters to move about the cluster rather that a super-important task upon which the fate of the region may rest. The actual plot of the adventure is not directly related to the charter. However, the players should be encouraged to fulfil it despite the difficulties encountered – they can't afford their refit unless they find a way to complete the mission. Thus to them it IS rather important!

However, completing the charter will not be all that easy. Various obstacles (some related, some not) stand in the way. Characters may choose to go off at tangents from time to time. This is not a problem; it's an opportunity to use some of the Patron Encounters or Amber Zones presented in the COTI webzine…

Note that common information (such as that contained in the world writeups) is easily available from the ship's library computer. This information may or may not be 100% accurate, but it will be basically true. Library data is frequently updated, so any major events on-planet will be included in the library program within a few weeks.

ACT 1: LIAR'S OATH

For full details of the world, see the setting notes.

Liar's Oath is a dryish, chilly world orbiting a red dwarf star. It has a small Class C port (Covenant Downport). The world is a TL-8 dictatorship. There is little animal or even plant life due to the very thin atmosphere. Anyone going outside a ship or a pressurized building should wear a vac suit; it is possible to survive using just a compressor mask and goggles, but this is very uncomfortable and tiring.

Within the cities, most of the population are human, with

a few Vargr and (far more rarely) Ursa. Clothing styles are mostly sober and "military" in cut, except for those worn by a segment of the population who delight in bucking the trend. For them flowing, colourful garments are the norm, accompanied by garish facial tattoos or makeup. This is a current fashion trend, and is viewed as such by the mainstream of citizens. Many government and official posts are held by serving Army personnel, who will be in uniform at work. The population generally reacts much better to tidy, soberly-dressed individuals.

Overall, the society of Liar's Oath is polite and fairly formal. People seem content for the most part. Services are efficient and discreet, except for the military, which is heavily involved in government and takes pains to ensure everyone knows it.

SCENE 1: COVENANT DOWNPORT

When the characters enter orbit over Liar's Oath, their ship is quickly picked up on radar and challenged. Landing permission is quickly and courteously granted, and the ship is directed to Pad Three.

Coming in on approach, the characters get their first good look at Liar's Oath. The terrain is rugged and dry, with vast open expanses (and jagged mountains) between the cities. Here and there spectacular bridges and cuttings have been constructed to accommodate the inter-city railroad system, but for the most part the planet's surface is uninhabited and in virgin condition.

The characters' ship will pass over the Startown adjoining the port. Covenant Startown is large and bustling, with sealed building complexes linked by transit tubes and sealed electric railroads. Few buildings are over six storeys high, though many have grav vehicle landing pads atop them. There are a lot of grav vehicles (mainly sealed air/rafts) buzzing about, even though they cannot be built at the local tech level.

Clearing the city, the ship descends towards the port. Covenant Downport is a small facility, capable of handling no more than four or five small ships at a time. Facilities are fairly basic, as might be expected at a TL-8 installation, but the personnel are smart and good at their jobs. The port is secured by an impressive (and deliberately obvious) array of PAD (Planetary Aerospace Defense) missiles and by troops loyal to the world government. A wing of advanced jet fighters (aerospace interceptors) armed with combat lasers and missiles is based at a special area outside the main starport. Again, this facility is made very obvious as a deterrent.

The ground crews at Liar's Oath are efficient, even working in their bulky TL-8 vac suits. Once the ship is connected up to the local power feeds and has been inspected by customs staff, the crew can disembark.

Anyone who has been in space for a week aboard a small vessel will want to get out for a while, and even the sealed environment of Covenant Downport is a great improvement on the interior of a Far Trader. As the characters pass through the starport extrality line, they are informed by the efficient guards that the Startown (and the rest of the planet) has a Law Level of 8. This means that no weapons may be carried, though small knives that are obviously tools rather than fighting implements are legal. The guards have access to imported TL-12 weapon scanners, and are highly skilled at detecting weapons.

Referee: This may be the first time the players have "seen" a starport. It is a fairly utilitarian place, busy but efficient and functional. There will be a couple of ships in at any time; mostly small traders and couriers. The arrival of a big freighter (probably a Tukera vessel) would cause heads to turn, but no great amazement.

The referee should ensure that the players understand that breaking local laws will have consequences. Specifically, stunts like trying to sneak heavy weapons through customs will not work. Shooting at the guards or trying to intimidate them with powerful weaponry will simply bring the equivalent of a SWAT team to the scene. These people have the full weight of a planetary army behind them. There is little or nothing that a Free Trader crew could do to back them down or defeat them. It is important that players unused to the game setting understand this – characters who attempt to maraud about planets shooting up the locals will get killed – fast.

SCENE 2: A NIGHT ON THE TOWN

Typical practice for characters just arriving is to book into a hotel for a couple of nights, then go out and seek entertainment of some kind. Covenant Startown caters to a wide variety of visitors, though unduly rowdy behavior is dealt with by the local law enforcement personnel.

An encounter with the law is likely to be a bad experience for characters wanting to punch it out with the local constabulary, since the police force (like all the local emergency services) is part of the planetary army, and is drawn from its ranks. The upshot of this is that incidents will be attended by experienced personnel, equipped with batons, Tranq sprays and body armor. A "panic button" radio call to the nearby barracks will bring a backup squad armed with assault rifles and support weapons.

The Startown is clean and well-ordered (no surprise when the local police policies are considered), and offers a wide range of dining and entertainment facilities. These range from theaters and sports venues (to play or to watch), to live music and licensed casinos. The more "dubious" kind of establishments can be fund by streetwise characters, but even these are fairly tame by the standards of some worlds.

Characters can get about easily enough, using the (slow, but frequent and free to ride) electric trains between the building complexes or by walking. Nobody goes outside the sealed city, unless they really have to, but the characters should find plenty to do while they're here.

Referee: This is an opportunity to encounter people (and maybe patrons with a job offer) and to use those social skills like gambling and carousing. The referee should provide the characters with opportunities to see and do pretty much what they want – this is downtime, unwinding from the shipboard routine. It's also part of the "starfaring experience" as the players get to experience the very different cultures along their way.

This scene can be glossed over or can run to several sessions, depending upon who much roleplaying effort the players want to put into their recreation time. Friends and enemies) made in one port can crop up in another, or be waiting when the characters return. It all adds to the richness of the game....

SCENE 3: THE MISSION BEGINS

Obtaining the hardcopy records at Covenant Downport could not be simpler. After checking the characters' ID and authorization, the Port Authority is only too happy to have the document crates delivered to the ship. The crates have been ready for some weeks now, awaiting transit, and the efficient local bureaucrats are delighted to clear the space they've been taking up. There are 4 tons of hardcopies here.

The characters may also want to find passengers and cargo for shipment to their next destination (Miip). This will prove difficult. While a lot of ships pass through the port, few people want to go to Miip. However, there are two routes the characters can take to get there. They could travel via Sentry (dropping off the first load of hardcopies if they like) and then on to Miip, or they could go via Aleif.

Travel via Aleif is something of a problem, since the system is interdicted by the Imperial Navy. However, a fuelling station has been set up to allow vessels to pass through the system without visiting the mainworld. If the characters choose to travel via Aleif, there will be no passengers, but 2d6 (2D) tons of supplies are available to be delivered to the refuelling station. These are mainly perishable foodstuffs. Payment is standard shipping rate – Cr 1000 per ton.

If the characters choose to travel via Sentry, passengers and freight will be available normally, though there will not be anyone wanting to passage from Sentry to Miip, either here or at Sentry.

Once cargo and passengers are loaded, takeoff clearance is granted. The characters are expected to follow fairly strict flight protocols to orbit, and may be shadowed by an interceptor at some point of their flight. Eventually they reach 100 diameters and prepare to Jump.

Referee: Once the characters have decided upon where they're going, they have a chance to use the trade & commerce rules if they like. Procedures are fairly standard here at Liar's Oath. There is sufficient passing trade to support a number of independent brokers.

Before the Jump can be initiated, the characters receive a distress signal.

SCENE 4: SIGNAL GK (KEY 1)

Just minutes before the characters initiate their Jump procedure, the comms alarm begins to sound. The vessel (and everyone else around) is receiving a GK (distress) signal!

A few seconds' work with the comms system shows that it is coming from the atmosphere of Honora, the gas giant world that Liar's Oath orbits. It is being automatically broadcast by the ship's computer, which is not a good sign.

Interrogation of the distressed ship's computer by the players' comms officer will yield the following data:

- The distressed vessel is the Scout/Courier *Malfeasant*
- She is on an upowered ballistic path, scorching upward out of the depths of the giant's soupy atmosphere. Her velocity is insufficient to reach orbit.
- There is no response from her crew.
- She has been broadcasting for some time, but the signal was blocked by Honora's atmosphere.

- Shortly, the *Malfeasant* will reach the top of her arc and begin the long fall back to the giant's rocky core. Her crew – of any of them are still alive – will be killed long before she strikes bottom.
- The players' ship is in range to make an intercept just after she crests and begins to fall. It might be possible to tow her out or board her and take any survivors off.
- No other ships are in range.

Interstellar law requires that assistance be rendered to any distressed vessel, unless this would unduly endanger the rescuing ship. In this situation, the characters clearly have no duty to even try, but their conscience, curiosity or greed may prompt them to try.

As the characters decide what to do, a big Tukera freighter (the *Laskalmii Goddess*), which entered the system as the characters were climbing to orbit, responds in clear (and as a general broadcast) that she is responding. The huge, ponderous freighter starts to change course, but her vector is all wrong. Even the pair of pinnaces she drops have basically zero chance of reaching the wreck in time – though clearly they're willing to try (or maybe to win a few PR points for being seen to!).

A new broadcast comes from the stricken *Malfeasant*. A horribly distorted image of the little ship's control room can just about be made out. Two vac-suited (human) figures are slumped over the control consoles. Another has collapsed next to an open access panel, apparently while working on the ship's systems. A male Ursa, dressed in a strange-looking vac suit (even for an Ursa) lurches into view, clearly distressed. He slurs out some words in the direction of the viewscreen pickup before collapsing to the floor. He tries to rise for the duration of the transmission, but clearly cannot.

After a few seconds, the image breaks up to be replaced by the automated beacon signal. The characters' computer managed to clean up some of what the Ursa said, but it is fragmentary. The only decipherable words are:

Project… partial… malfunction…drive burned out… orbital velocity… failed.

A quick computer projection shows that the characters' ship could reach the *Malfeasant*, but only by diving under power after her into Honora's atmosphere. This would not present an undue risk - the ship is designed to perform this maneuver in order to skim fuel from a gas giant – but unless the rescue was conducted quickly, they thickening atmosphere will present a danger, both from turbulence and from gas seepage into a suit.

The characters' ship is not equipped to attach a tow cable to another vessel (a dedicated salvage vessel would be), and there are of course no convenient Transporters or Tractor Beams to effect a clean rescue with. If the crew of the *Malfeasant* are to be saved, it will have to be done with old-fashioned guts and brains.

Referee: The *Malfeasant* was engaged in testing systems designed to let it (and its crew) dive very deep into a gas giant's atmosphere and remain there for some time. The crew were equipped with specialist suits designed to resist the giant's atmosphere. However, while the test was ongoing, a malfunction in the ship's drive system prevented her from climbing back to a safe altitude. The giant's atmosphere slowly seeped into the ship, poisoning the crew. Realising too late what was happening, the crew donned their suits. They decided to make a last desperate attempt to escape before gas narcosis rendered them helpless.

Jury-rigging the ship's engines to burn themselves out in a huge burst of power, the crew set their ship on a ballistic course aimed at reaching orbit, and gave their fate to the gods. Even as the ship lunged at the heavens, they knew it was too little – they could not escape Honora's gravity. Their only hope was that a ship might be in range, and be willing to chase them down and launch a rescue before they plunged to their deaths.

SCENE 5: BOARDING THE MALFEASANT (KEY 2)
Requires: A1S4

Piloting the players' ship in the atmosphere of even a fairly "tame" gas giant like Honora is a difficult task. Incredible gusts bounce the vessel about as she streaks after the stricken scout/courier. Sensor range is greatly reduced. However, at this altitude, the players' ship is well within her design tolerances.

Approaching the vessel as she begins to arc gently back down, it is obvious that she has been heavily modified. To the normal wedge-shaped hull form have been added a pair of vertical stabilizers (fins). Some kind of streamlined extension has been added to her lower cargo area, perhaps to function as an oversized airlock. Her drive section is twisted and blackened, testimony to the power her drives briefly delivered. The remains of a decaying Contragravity field and her residual velocity (plus her basically aerodynamic shape) are keeping her on a fairly straight course, but her dive is steepening.

Matching course in Honora's (relatively) thin upper atmosphere, even with computer assistance, is fraught with danger. The ships are pushed together then bounced apart. It is, however, just about possible to dock airlock-to-airlock. The alternative is to try to swing across on a rescue cable, a well-nigh impossible task.

If the ships can be successfully docked, the players' vessel can use her contragravity and drives to stabilize the *Malfeasant* and slow her fall somewhat, but it is clear that they don't have the engine power to save her. Nor would the docking clamps be strong enough to lift another ship by. In short, the clock is ticking.

Boarding the vessel (she has power and her airlocks work, though the atmosphere within is toxic), the characters find a well-kept, tidy vessel. With the exception of items clearly shaken loose or in use during the fight to survive the gas giant's atmosphere, the comprehensive stocks of tools and spares are neatly stowed in custom-built racks. Monitor panels have been wired into the ship's electronics conduits. They display hull stress readings and similar data. It seems obvious that this vessel has been specially modified to dive deep into a gas giant atmosphere. There is, of course, no suggestion as to why.

Searching the ship reveals the following information:

Engineering: Engineering is open to the gas giant's atmosphere (and thus not a healthy place to be for long, even in a vac suit). It has been wrecked by an explosion, probably

as a result of the overpowered drive.

Crew Areas: Crew areas are neat and contain few personal effects. There are changes of clothes and personal equipment (data pads, wristcomps, etc) for four individuals. The captain's stateroom was occupied by an Ursa, whose portacomp lies on the floor, battered but functional.

Lower Cargo Bay: The lower cargo area has been converted into an EVA room, with racks on the walls for standard vac suits and very heavy-duty suits similar to the hostile-environment gear used on certain worlds. The forward cargo door is now surrounded by salvage gear, including winches, tow cables and cutting equipment. It might just conceivably be possible to attach the tow cable to the players' ship. This would be a nearly suicidal EVA, and the vessel still would not have enough engine power to tow the *Malfeasant* out.

In a rack by the door (and obviously designed to be within easy reach for the tow cable operators) are several long spear-like weapons that seem to be some kind of electrified prod, and a pair of laser carbines. All these weapons are quite functional.

What appears to be a decontamination area has been set up at the rear of the cargo area.

Upper deck: The Scout's small upper deck is almost empty. The vessel's dual laser turret is functional but inactive. The rest of this area is crammed with stores (air scrubbers, food, electronics spares and other mundane items).

Bridge: The crew are on the bridge. The scene is little different from what the characters saw on the screen, other than the fact that the Ursa has passed out and fallen to the floor. Two of the others are female humans, one a male. All are deeply unconscious, and show signs of advanced gas narcosis.

First Aid or Medical skill can be used to prevent the crew from becoming any worse. Otherwise there is a 50/50 chance that any one of them will die before they reach a hospital. In any case, none of the crew will be able to help themselves or talk to the characters. It is up to the players to find a way to get them to safety before the ships fall too deep into Honora's atmosphere.

Finally, with little time to spare, the characters should cast off from the *Malfeasant* (fiendish referees may want to give them a jammed or buckled docking clamp to contend with at the last moment) and begin the long climb to safety. Finally, they break through the ammonia clouds and set course for Liar's Oath. The pinnaces from the *Laskalmii Goddess* (which are much faster than the players' ship) will offer to convey the injured crew to a hospital groundside, and the planetary government urges the characters to comply.

The characters will be expected to file a report on their actions, which can be done in the form of a video statement as they run out to Jump, if they're in a hurry. Signals come in from every transmitter in the system, hailing the characters as heroes (even if they didn't get anyone out alive, what they've just done is AWESOMELY courageous and compassionate). The captain of the *Laskalmii Goddess* offers her personal congratulations, and extends an open invite to dinner aboard her vessel, any time the characters want.

Referee: Make sure the characters feel the pressure. The *Malfeasant* will be creaking and groaning around them, bouncing around like a cork. The docking clamps are seriously strained, threatening to separate the two vessels and cut off their retreat.

The characters should have time to pick up some items, but not to systematically loot the vessel. But do ensure that they either get the portacomp form the captain's cabin, or they manage to find a dataslug lying around. Perhaps the delirious captain of the *Malfeasant* pushes it into someone's hand in a brief moment of consciousness.

Whatever else they pick up, the characters aren't asked about. So any loot from the *Malfeasant* is theirs to keep.

SCENE 6: AFTERMATH (KEY 3)
Requires: A1S5

The characters resume their interrupted journey (via Sentry or Aleif), running out to 100 diameters, laying in a Jump plot and initiating Jump. There is now nothing to do but routine maintenance, looking after any passengers aboard... and perhaps trying to view that dataslug they found aboard the wreck.

The slug isn't encrypted, but it's basically meaningless. It consists of a sort of video "project diary" by the Ursa captain, who speaks in his native tongue throughout. This is a highly colloquial dialect that the computer can't translate. For that, the characters are going to have to persuade a native speaker to interpret for them.

Viewing the diary, it is obvious that the Ursa and his crew had modified the ship and obtained equipment for a very specific purpose – a salvage operation deep in the atmosphere of a gas giant planet. It seems that most of their equipment functioned well enough, but something went wrong with the drives on their ship during the test.

It is also clear that Honora was not the intended salvage site. Without translating the Ursa's video diary, it is impossible to say where they intended to carry out the mission, nor what they hoped to find. However, the characters are headed for Miip, home to thousands of Ursa. Perhaps....

Referee: The characters have found a clue, a piece of a puzzle that will lead them to further adventures. Meantime, the mundane business of travelling between the stars will keep them occupied for a while.

Note that while the characters didn't earn any actual money from their rescue effort, the story will spread, and they'll be able to dine out on it from time to time. And occasionally, someone will say, "Hey, you're the guys who saved the *Malfeasant*", and extend friendship, respect or cooperation that wasn't there a moment ago. Or they may expect the characters to display similar heroics... a reputation can be two-edged sword.

ACT 2: LIAR'S OATH TO MIIP

After salvaging the *Malfeasant*, the characters are free to proceed with their mission. Their next destination is Miip, which is two Jumps away whatever route they take. They have the option of traveling via the busy port at Sentry, or the outsystem refueling post in Aleif.

SCENE 1: SENTRY

The Sentry system is the economic hub of the cluster, and as such sees a great deal of local and through mercantile traffic.

The system has no gas giants, so it is not possible to skim fuel and move on – ships must pass through the main starport (Sentry Downport).

Emerging from Jump a safe distance out from Sentry and her three moons, the characters are directed by traffic control to remain in an approach lane and proceed to the planetary surface at a steady speed. The system is obviously very busy, with small merchant craft coming in and leaving all the time.

As the characters proceed inward, they witness a few events of note:

1: A 10,000-ton freightliner emerges from Jump and immediately sets course for one of the moons. Sensors show other vessels being routed out of its way by traffic control. This is one of Marquis Hallentein's ships, and he has clearly obtained priority clearance for his ships. Comms chatter includes some grousing, but also a few friendly greetings from local and independent ships.

2: A squadron of six System Defense Boats, returning from patrol, makes a parade flyby of the Highport as the characters pass it. They then proceed to the naval base on the moon Yrech.

3: A non-Jump capable Xboat tender departs the Highport, heading out to pick up a newly arrived express boat.

4: Dozens of small utility craft buzz about on errands for the Highport, while merchant ships and couriers wait their turn to dock at the orbital facility.

The characters' ship is directed to a small-ship pad, one of dozens at the Port. There, the friendly and efficient tech crews (suited against the exotic atmosphere) conduct basic safety checks and attach cables and hoses. The characters are given permission to disembark, though they are warned about the atmosphere and that Law Level 9 applies outside their ship. No weapons are to be carried.

The delivery of any cargo or passengers is a simple matter, after which it is likely that the characters will want to get out of their ship for a day or two, and maybe look for cargo or passengers to Miip.

The main port complex is very impressive, and it leads into a partially underground sealed city that is home to several million people (most of whom have nothing to do with the Starport or its operations). The port sees a lot of trade, and facilities are extensive. Characters can find leisure or business facilities easily enough, and most of the major corporations have offices and/or sales premises within the city. If the characters are in a buying mood, it should not be hard to find what they want.

However, the high law level on Sentry means that weapons can only be purchased "for export" and will be delivered to a ship in locked carry cases. Standard smallarms and blades, body armor and accessories, are available, but permit requirements are scrupulously observed (see Traveller's Aide #1 for details).

The characters' stopover at Sentry will likely be short and uneventful. They can deliver the Liar's Oath batch of records if they please, clearing cargo space. Note that it is unlikely that anyone will want to travel to Miip, nor to ship anything there, but the characters are welcome to try to find something.

Soon, enough, it is time to leave. The characters will have to wait a little while for takeoff clearance, but eventually they are given a departure lane and clearance to go. As they climb into high orbit and proceed out to the Jump point, they are intercepted by a pair of local fighters on traffic-control duty, which come into visual range, signal good wishes to the players, and break off to eyeball an incoming ore freighter. This is Sentry policy; a reminder that the local Navy is on the ball.

Reaching the Jump point, the characters can lay in their course and proceed to Miip.

Referee: Sentry is a safe, civilized world that sees a lot of interstellar trade. Society is cosmopolitan and for the most part friendly. Unless the players are deliberately offensive, they should have no problems here. Make sure that they get a good impression of what a busy starport looks like; ships and crews everywhere, technical staff and the bustle of a thriving market. This is interstellar commerce at its most vibrant.

SCENE 2: ALEIF

The Aleif system is under Naval Interdiction, and vessels arriving are immediately challenged by Navy vessels. The characters' vessel will be intercepted by a cutter escorted by a pair of light fighters, and permission to board will be requested (this is a routine inspection, and is not optional!) If the characters try to flee or resist, they will be fired on by the fighters, and more vessels will pursue them. This will be a mix of heavy or light fighters, likely supported by a couple of Close Escorts or even a Destroyer. If the characters do not surrender, their ship will be disabled. Either way, they are in big trouble.

Assuming the characters comply, they will be boarded by a squad of Imperial Marines in Combat Armor, equipped with Snub Pistols, Cutlasses and Snub SMGs. The Marines are polite and respectful, but wary. Their officer (a young lieutenant) inspects the ship's papers, and questions the captain about his reasons for passing through Aleif while the Marines conduct a quick but detailed inspection of the ship. All of this is entirely routine, and any experienced starfarers will have been through it all before. The marines are courteous, but they will not be messed around.

After the inspection, the characters are free to proceed to the fueling station, where they can dock and stretch their legs for a few hours aboard the converted tanker. There may be another ship docked when they arrive, if the referee so chooses.

Facilities aboard the station are utilitarian and basic, but at least there is room to walk around and see a different set of bulkheads. The crew is glad to chat with anyone coming through, and some of them will arrange to share a meal with the characters. This will be mostly preserved and ration fodder with a few fresh components, but the change of company is the main thing. This is a good opportunity to exchange gossip and rumors.

There are no cargoes or passengers to be had on the station and after a day or so, the characters will want to proceed to Miip. The Navy vessels make it obvious that the characters are being tracked out to the Jump point, to ensure they don't try to sneak down to the planet.

Referee: Aleif is a war zone, and the Navy vessels overseeing the Red Zone are under constant threat of attack by smugglers and blockade runners. Suspicious actions by the characters will be met with curt warnings and an intrusive investigation; resistance will be crushed with military force.

Make sure the players understand that they cannot take on the Imperial Navy. Even if by some miracle they escaped, they will be hunted down.

ACT 3: MIIP

The characters have business on Miip, but also the opportunity to find out what is on the dataslug (or portacomp) the Ursa captain possessed.

Miip is a backwater world on the route to nowhere. There is little in the system, and hardly any starship traffic. Approaching Miip, the characters can see that it is a large world almost entirely covered in water. Huge cloud formations boil and swirl in the atmosphere, suggesting violent weather patterns.

Shipboard library data shows that only one island is inhabited, and indicates an E class Starport – no actual facilities but a safe site that is used by occasional traffic. A village, named Arodu, is nearby.

SCENE 1: LANDING AT MIIP STARPORT

As the characters make their landing approach, they pass over a pastoral area. Farmers (whose faces are all covered by brightly-colored cloths) look up from their work as the ship passes over. Some wave; most just get back to work. Other than the fact that the village is surrounded by a high (and weed-overgrown) earth berm and the houses are half-sunken and sturdily built, this seems a peaceful, of backward, place.

The landing pad is actually a pit about eight feet deep, with a paved base and a berm like the one around the village surrounding it. A set of paved steps is cut into the side; the only facilities to be had here. Fuel will have to be obtained by taking the ship to a water source and filling up with hoses, then cracking the water for fuel.

By the time the characters have climbed out of the landing pit, a small gaggle of locals will be waiting for them. About half of these villagers are armed; mainly with flintlock rifles and shotguns. Some have more advanced weapons; semi-automatic rifles and a revolver or two, and one (an older man) wears a Marine NCO's dress-cutlass on a ceremonial belt. These weapons are "just in case", and there is no sign that the locals actually mean the characters any harm.

The older man steps forward and introduces himself as Andrew Karrilane, Elected Elder of the village of Arodu. The starfarers are welcome to his village, he says, but he would like to request that they respect local customs and behave with decorum. Handguns and similar sidearms are quite acceptable, but could the characters leave powerful rifles and such like in their ship?

Andrew's request is that they comply with a general law level of 6. Refusing or ignoring the request will result in a change in the villagers' attitude. They will refuse to deal with the characters and will retreat to the village. Assuming the characters comply, they will be invited to the village as guests, and offered free lodging with local families. Low-tech techniques for keeping the dust taint out of dwellings are demonstrated, and compliance with these is expected.

As might be expected, Miip's Starport records consist of a small box of hand-written papers stored in Andrew's house.

He says he will deliver them in the morning when he's had a chance to makes sure everything is there. Meanwhile, the characters can spend a pleasant evening eating home-cooked food and drinking local wine and liquors.

As the characters settle in for the night, a fearsome wind and torrential downpour begins. This doesn't bother the locals (it's mild by local standards), but the characters may worry that the landing pit might be filling up with water (it won't; it's well drained).

The villagers are fairly prosperous at present, and don't stint on their hospitality. They don't have any freight or passengers, but it might be possible to trade for a couple of tons of pelts and furs brought in by Ursa hunters, or some bottles of the local vintage.

As to the Ursa, Andrew and the villagers can tell the characters that the nearest village is about 30 km from their present location. The Ursa mainly live inland, in the highlands, and keep to themselves except for trade and the occasional gathering. They're hunters and herders, and "good, solid people" who live apart from humans because they prefer the upland conditions, rather than for any desire to keep their distance. A few humans do live among them.

If asked about the sword, Andrew explains that it's a family heirloom, as of 2 years ago. His daughter, a Marine Corps corporal serving on the Solomani Rim, was given a battlefield commission to command her devastated platoon. Naturally, (he says with great pride), she has an officer's dress sword now, so she sent her old one to her father.

Referee: The villagers are tolerant and friendly, and not awed by offworlders, who are seen as a welcome break from routine but nothing more. Events in the wider universe are of distant interest. These people are content where and as they are.

The records will be presented as promised in the morning, at which time the rain will have stopped.

If the characters try to lord it over the ill-armed low-tech peasants, or display contempt for their customs and requests, Andrew will not release the records, and the characters will not be allowed in the village. A suitable apology will be necessary in order to get the locals' cooperation.

Alternative approaches, such as attempting to steal the records, will get the characters in trouble in the future, when the villagers report them to the authorities via the next ship through. If the characters try to use force, the locals will resist. Their weapons are low-tech but could still be deadly. If necessary, the locals will shut themselves in their houses and resist attempts to dominate them with superior firepower, though they will flee to save themselves from a massacre.

If this happens, the authorities WILL find out, one way or another. Mass-murder of this kind is an Imperial crime, meaning that the characters will be hunted by the Ministry of Justice, and their ship by the Navy. They will be caught sooner or later, and mass murder carries the death penalty. The players should be reminded of this – once – if they decide to use force.

SCENE 2: THE URSA VILLAGE (KEY 4)
Requires: A1S5
The characters need to translate the colloquial dialect of the

recordings, and for that they need a native speaker. The obvious place to look for one is in the Ursa villages nearby. The locals will warn against taking the starship into the uplands – the combination of hills and violent weather may endanger it.

However the characters reach the Ursa village, they find it quite similar to the human one, except (obviously) that 90% of the people there are Ursa. There is a little cultivation (vegetables for the most part) but the Ursa are mainly herders and hunters.

The characters will likely be met by a couple of hunters on the way in. Equipped with long, large-bore flintlock rifles, the hunters are neither surprised nor impressed to see the characters. Their attitude is simply that this is happening now, and must be dealt with. They offer to accompany the characters to the village, and along the way they ask what the characters' business might be.

These two are Termeigh, and his nearly-adult daughter Yvonne (Many Ursa use human names. This is not a surprise, considering their heritage). They have no special status in the village community, and are dealing with the characters' arrival because they happened to be on the spot.

At the village, Termeigh and his daughter depart to resume their hunting trip. The characters find themselves being more or less politely ignored as folks (Human and Ursa) get on with their business all around, but take little notice of the starfarers. It is obvious that they are being watched, in case they do something unacceptable, but otherwise the Ursa and the culturally-Ursa humans don't seem to want to know.

Anyone the characters stop will be polite, listening to the explanation of what they want, but the response is the same over and over again. It would take time to make a translation, and the people are all busy. Money isn't as valuable as their time.

As the characters become increasingly frustrated, the temperature suddenly drops and the wind picks up. The villagers look around, almost nervously. They start to move things indoors, and in passing one of the Ursa says to the characters, without amplification, "you'd better come inside".

The characters are led to the village hall, a large building, and ushered inside. As they enter, a monumental peal of thunder rolls across the hills, then another, and another, and it is followed by the heaviest rain anyone has ever seen. This is bad, even by Miip's impressive standards, and within moments everyone (and all the animals) is under cover, waiting out a downpour that rapidly becomes a horizontal sheet of water as the raging wind picks up.

A few Ursa share the hall with the characters – the place was being cleaned for a forthcoming festival, and work carries on in a subdued fashion as the storm lashes the village. The workers are offhandedly pleasant to the characters, but don't want to chat. They will explain that sudden storms like this one are not uncommon, but this is a particularly bad one.

Proof of that is provided when the outer doors open and despite the fact that the doorway is recessed at the bottom of a set of stone steps, a howling wind blasts through the hall. A human family reels into the hall, assisted by the biggest Ursa the characters have ever seen. He forces the doors closed as the family – a young couple and a screaming, drenched baby – are comforted by the people already in the hall. It is obvious from overheard comments that their house lost its roof to the storm.

The evening drags on into night, and this scene is repeated several times, as houses fail in the awesome storm and their occupants come into the hall for shelter. The structure of the hall creaks and groans, and leaks begin to form. One of the great supporting timbers is suspect, and every time it shudders, all eyes turn to it.

It is a kind of hell in the main hall, a hell of screaming babies, frightened children and angry adults, frustrated at their impotence. There will be obvious resentment towards the characters unless they do something to help.

Then, around midnight, with the storm at its incredible height, the door opens again and the large Ursa returns. He collapses through the door carrying another male Ursa. The latter is drenched and exhausted, unable to even stand. A quick glance shows that all the claws on his forepaws are snapped off, his fur a mat of blood and rainwater. It is Termeigh.

Before losing consciousness, Termeigh manages to tell his tale. He and his daughter were caught on a steep hillside over the stream. They tried to find shelter but Yvonne slipped and fell down the slope into the river. She was swept downstream a short way. Termeigh managed to find her, but she was jammed between a fallen log and a boulder. Termeigh tried to free her, but could not. Not knowing what else to do, he struggled back to the village for help. He knows she was alive when he left her, but the water was rising.

The effect on the Ursa and their human friends pronounced. To lose one of their own is a terrible, shocking thing. To lose a child like this is unthinkable. After a moment bordering upon panic, everyone in the room (who isn't cradling a baby) gets up to attempt a rescue.

The big Ursa motions them down with a curt paw. "Family people stay," he growls. "I'll need rope and tools." As he loops the rope around his body, and picks up a haversack of tools, he doesn't even look at the characters. Others do, though.

If the characters move to assist, the big Ursa says to them, "This is not your affair." If they still seem to want to help, he nods and adds, "I am Thomas Arhein. I'm glad of your help. Before we go… tell the village your names."

Astute characters may infer that the villagers want to know what to put on the gravestones….

Referee: Ursa don't like strangers, and want to be left alone. They are loving and friendly people with those they trust, but give that trust grudgingly. They feel that outsiders are best discouraged by what can only be described as polite stonewalling. If anyone starts deliberately getting in the way or otherwise trying to force a reaction, they'll get one. Ursa are descended from bears, and can push, hurl or bat aside a big human without effort. Their weapons are primitive, but numerous. Basically, anyone throwing his weight around in the Ursa village will find it being thrown for him.

If the characters participate in the rescue, all that changes. They will not instantly become family, but the frosty welcome will thaw considerably.

SCENE 3: DOWN BY THE RIVERSIDE
(KEY 5)
Requires: A3S2
Thomas has a good idea where the accident occurred, and can

lead the characters there. However, this does mean an hour of slogging through what isn't far short of a hurricane, in the dark. Everyone is thoroughly chilled (no matter what they're wearing) and will at times be blown around alarmingly, having to cling to the huge bulk of Thomas to stay on the ground.

There is a real risk of hypothermia out here. Characters will take 2d6 Stamina damage (1d6 if they have good waterproof, windproof or cold-proof clothing on). In addition, characters should make a Reflex save to avoid an additional 1d6 damage from being blown into a tree or falling in the dark.

After an eternity of stumbling (and crawling) through wet darkness, Thomas yanks the lead character to a halt just before he goes over the edge of a short slope and into a dark, raging torrent below. The Ursa yells that the characters will have to search around to find Yvonne – and quickly.

After a period of searching (fiendish referees may require rolls to see if a character gets blown over the edge and falls in the water), Yvonne is found. As described, she is jammed half under a fallen log, against a boulder. She is at best semi-conscious, and apparently hurt by her fall. The water is up to her shoulders.

Thomas has a plan. He'll try to free the log or loosen it a bit. Others can then drag Yvonne free and get her to the bank. However, this means that someone has to go into the water with him. Even roped together, this is insanely dangerous. That said, he's going to try it whether anyone is willing to help or not.

The river is waist-deep on most humans, fast flowing and extremely cold. The characters are in trouble from the moment they enter the water. Just avoiding being swept away is a challenge for anyone less huge and powerful than a large male Ursa.

Characters who do nothing but brace themselves and cling to something (Thomas, a rock, etc.) can maintain their footing without a roll. Anyone attempting to move must make a Reflex save at DC 15 or slip. Roll on the Slip Table below for the effects.

It will take the characters 1d3+1 minutes of successful movement to reach the boulder. Thomas gets there in the 3 rounds, after slipping and going completely under at one point. He then squeezes under the log as best he can and tries to lift it.

Freeing Yvonne is DC 40. The attempting character can add his STR (not his bonus) to his roll, plus half the STR of each person assisting him. However, this roll must be made in the same round that Thomas succeeds in moving the log. There is a 50% chance each round that he will manage it. If he fails, there is a further 50% chance that he will slip and go under the water, losing the next round attempt while he regains his footing.

Each character attempting to free Yvonne (or to do anything else but maintain their footing as mentioned above), must make a Reflex save at DC 15 or slip. Anyone clinging to Thomas if he slips automatically also does so.

Once Yvonne is freed, she must be kept alive (i.e. her head out of the water; she is unable to help herself) and dragged out of the river. Getting her to the bank will take 2d6+5 minutes or more, even with Thomas taking her weight. Each character helping (up to a maximum of 3) reduces this time by 1d3 minutes.

As the characters struggle back to the bank, each of them must make a Reflex check every 3 minutes to avoid slipping. Anyone who slips is separated from the others and is too busy trying not to drown to be any further use. He may also be swept away. This will increase the time for Yvonne to reach the bank, unless someone takes that character's place.

Another character cannot take the place of someone who slipped without everyone stopping for an additional minute, and the new character needs a Reflex save to take over, or he slips, too.

Slip Table:
Each time a character slips, roll 1d6
1: The character gets a good scare, and a ducking. The character cannot do anything useful this round.
2-3: The character slips and goes under, breathing in a fair proportion of the river. He takes 1d3 Lifeblood damage and can do nothing useful this round. Next round, he can only stand and splutter.
4-5: The character falls or is swept against something. He takes 2d6 Stamina damage, but manages to grab hold and stabilize himself. He can act normally next round.
6: Oh dear. The character goes under and is swept away. He breathes in water and bangs against rocks for 1d3 Lifeblood and 2d6 Stamina damage. If someone can grab him (Reflex check) next round, he is still with the party. If not, he is swept downstream. Roll on this table until a 1 is obtained. At that point, he fetches up in a battered heap against the bank. Apply all damage results.

Once the characters have gotten Yvonne clear of the river and found any lost comrades, they will have to find shelter. Nobody has the strength to carry Yvonne back to the village tonight. All they can do is treat injuries as best they can and huddle together for warmth until the storm breaks and the villagers come looking for them.

If the villagers find the party in an exhausted huddle around Yvonne, they're instant heroes and will always have a place in the village. If she's dead or they failed to rescue her, the Ursa will still treat them with sad respect. Either way, the villagers will help decode the data, and Thomas will become a lifelong friend of anyone who went into the water with him.

Referee: It is possible that characters could die here. Well, nobody said being a hero was a safe occupation. Play the scene out for tension. The characters should be cold, wet, and exhausted, and probably half dead too. Hypothermia (see the THB for details) could also be a threat if the characters haven't suffered enough already.

SCENE 4: TRANSLATION (KEY 6)
Requires: A3S3
If the characters helped rescue Yvonne, the Ursa will agree to have a go at translating the text of the dataslug. This is a time-consuming task, but after a couple of days (during this time some of the characters might be involved in rebuilding the village or finding lost herdbeasts after the storm, while others write the transcription down.)

The translation is somewhat vague, but the gist of it is:

Some years ago, a transport vessel Misjumped into the Klesiter Beta system with a disabled communications system. Klesiter Beta is the companion star of Klesiter Alpha, the primary of the 069-526 system. Klesiter Beta is almost entirely empty, and seldom visited.

After patching up damage caused by the Misjump, the transport attempted to refuel by skimming the atmosphere of the system's only gas giant, Railarii. Something went wrong during the refueling operation, and the crew was forced to abandon their vessel aboard a launch. They placed their ship

in a stable, powered orbit before doing so, trusting to the ship's automatics and her Contragravity field to keep her safe until they could return to salvage her or take the cargo off.

The crew transferred their emergency low berths to the ship's launch, set the navigation controls and entered cryogenic suspension as their craft began crossing the vast distance to the inhabited system.

The launch arrived just over a year ago, though a low berth failure (the berths were jury-rigged and had apparently malfunctioned) had killed the entire crew. The launch was picked up and intercepted by the *Malfeasant*, which was running courier duty at the time.

The *Malfeasant*'s captain, an Ursa named Vilis Kline, puzzled over the fragmentary data he found in the launch's computer and deduced that something valuable was aboard the transport. He quietly deleted the data before calling in the authorities, then set about modifying his vessel for a salvage attempt.

The local Ursa don't understand the technical parts of the data, but overall some things do emerge:

- The transport, the *Vraidercalt*, is probably still there, hidden in the atmosphere of the gas giant.
- Its position is deeper than normal for a skimming operation, but within the tolerances of the characters' ship.
- If a salvage operation were attempted, the characters would need some minor modifications to their ship, and advanced hostile-environment suits. Both are probably obtainable.
- If the ship is abandoned, its cargo is there for the taking. No one alive (other than the *Malfeasant* crew, and they're in hospital) knows about it.

Referee: This is a big opportunity for the Travellers, if they are bold enough to take it. The salvage operation is tricky but should be doable – they already have experience, after all.

Careful analysis of the data implies that the Malfeasant was somewhat over-prepared (other than having a faulty drive). A standard vessel should, with difficulty, be able to conduct the operation. The modifications required are fairly minor, and deal mainly with sensor upgrades to allow navigation and stress monitoring.

Players should be encouraged to realize that the orbital facility at 069-526 can handle their requirement for modifications, and they are headed there anyway. However, it will take a couple of weeks to work out what they need, and they're on a charter, so the characters may want to carry out their pickup at Kerin's Tyr first. There is also the problem of paying for it.

Hostile environment suits (like the one the Ursa and his crew were wearing) are necessary for everyone who may be exposed to the gas giant's atmosphere. It should be obvious that if the transport is damaged, parts of it may be open to atmosphere. H-Env suits cost Cr 100,000 new, and it is unlikely that the characters have the resources to just buy some over the counter. Looking for used suits at a bargain price is an option, though they will take time and the characters will have to be careful.

If the characters do have a great deal of money, the referee should set the price of the ship modifications plus the suits

sufficiently high that they cannot just buy what they need and head off to Klesiter Alpha.

ACT 4: KERIN'S TYR

While they are working up a list of needs (and trying to decide how to raise the cash they need), the characters will likely proceed to Kerin's Tyr to pick up the port records there.

Kerin's Tyr is a Balkanized world, with several states of varying importance. The government, tech level, outlook and laws of these states vary considerably. Tension and border incidents are more common than actual warfare, but the situation is still fairly unsettled. More importantly, the various states of Kerin's Tyr do not cooperate with one another very well. This has implications for the characters' mission.

SCENE 1: ARRIVAL AT WARNE HIGHPORT

Approaching Kerin's Tyr, the players' ship is directed to the Highport (even if they want to proceed direct to the planet) for a mandatory customs inspection. This will take a day or so, after which the characters are free to proceed. It is not much of an imposition, since they have papers to pick up here anyway.

Arriving on the orbital station, it is clear that the place has seen better days. It is run-down and somewhat scruffy; spacer crews strut about the station alongside mercenaries and thugs; armed bands are not uncommon, and violence (normally of a non-lethal sort) is quite frequent. Most bars and other establishments have a gun rack at the door and enforce a strict no-weapons policy, backed up with an array of weaponry if necessary.

Although seedy, the port is not a den of thieves. If the place became a haven for lawlessness, the Imperium would correct the situation vigorously. At present, it is a rough port, but a legal one. Indeed, it is likely that an Imperial Navy patrol ship may be in port, her crew enjoying a few days of liberty.

Picking up the records isn't too difficult, but the characters are advised that the papers are incomplete. The world's states insist on keeping their own records on-site, and will not deliver them. The characters are going to have to go planetside and pick them up.

This would be no real problem, other than a few hops between starports, except that the customs inspection has found a problem with the characters' ship. Apparently, one of her fuel transfer pipes is unsafe. The port authority will not clear her for space in this condition.

This has the air of a blatant scam (which is pretty much what it is); a way of creating business for the repair yards, but the characters are over a barrel. They could do the repair themselves, though from the inside and without a cradle it'll take a couple of weeks, mainly to remove the stuff in the way of the pipe. Cost would be about Cr 7500. The port's yards can do the job in 4 days for Cr 12,500.

Of course, they can go planetside while the repair is underway. Return shuttle flights cost Cr 25 per person from the Highport to any of the world's spaceports. Internal flights (when not suspended due to tensions) cost Cr 100 per person, return, or Cr 75 single. This cost is mainly due to tolls loaded

on by the various states to discourage movement and casual spying. It is actually cheaper to go to orbit and back down.

The characters need a couple of cases of records from the following ports:

- Tersberg in the Kingdom of Harven
- Unity Downport in the Confederation of City-States
- Star City in the Grand Theocratic Republic
- Neigsten and Comore, city-states in the Liberty Alliance.

These records have to be picked up in person. The locals will not ship them. This means that the characters will have to visit these locations, though in what order they do so does not matter. Once the papers are turned over, they can be sent direct to the port via the mail system for Cr 10 a time.

Referee: Warne Highport is the scene for some very borderline trading and other operations, like the repair yard scam the characters' ship is tied up in. This is the nature of business there; most traders will do whatever they think they can get away with, and with local laws being very lax it is all about what power you can bring to bear rather than your legal position.

However, this is an Imperial port, and the home of an Imperial noble. Gang warfare and blatant illegality will be stamped on. Thus most of the illegal dealings are of the nature of extortion or black marketeering.

Note that the characters may decide to visit the various ports in any order; it really makes no difference whether they visit them in the sequence listed here.

SCENE 2: TERSBERG (KINGDOM OF HARVEN)

Tersberg is the capital of the Kingdom, and is also the site of the main spaceport on planet.

The port is a fairly major affair, seeing considerable shuttle traffic to and from the Highport. Bulk grain barges, taking the Kingdom's agricultural produce to the orbital warehouses for shipping onward, are a frequent site, as a re smaller personnel shuttles. Starships are less common, but some do come here after being cleared at the Highport. Adjacent to the spaceport is an airbase used by the Kingdom's small aerospace defense force.

Obtaining the records is easy in Tersberg; the local bureaucrats are quite efficient, and will not keep the characters waiting for very long. There is a fair amount of paperwork to be dealt with, but otherwise the transfer is uneventful.

Referee: Unless the characters decide to look around the city for a while, it is unlikely that they will have any significant encounters.

SCENE 3: UNITY DOWNPORT
(CONFEDERATION)

Unity Downport is situated in a barren area, and linked to the city-states only by a steam railroad. The port is jointly controlled by all member states of the Confederation, meaning that it is a hotbed of political infighting and intrigue.

Inquiring about the records will elicit a number of blank looks from local officials, followed by a frenzy of buck-passing. Characters skilled in Admin or similar tasks can eventually cut through this haze of red tape to determine two facts:

The records are considered to be important "confederation government" documents, and thus are carried aboard the Parliament Train.

There is a great deal of tension between some of the city-states at present, with occasional "armed incidents" taking place.

It would seem that the characters will have to journey overland to meet the parliament train and obtain the records they need. The parliament is quite distant from the port region at present, being en route for the city of Katter to mediate a land dispute. It will not be difficult to get a train to Katter, though the journey will take a couple of days.

The Confederation imposes a Law Level of 2, so the characters should be able to take along more or less what they please. The journey is somewhat slow, but not unpleasant. Confederation steam trains are large and powerful, and the carriages well appointed. Long-distance train travel is a fact of life in the Confederation.

Referee: The journey is pleasant enough, though the characters will have to be careful about coming into contact with the allergen pollen.

SCENE 4: KATTER

Katter is a minor city in the Confederation, but it is situated on large deposits of iron and copper. Large segments of the population are employed in mining and support industries.

The dispute is between some of the mine companies and the city government, which is challenging some of the exploitation leases held by the mine owners. The dispute has dragged on for many months and is affecting production, so the local government has decided to intervene. This may or may not actually improve the situation.

The records the characters are after are held aboard the parliament train, and can be easily obtained upon request (and some filling-in of forms). However, the tension in the region has recently become much worse, with shooting incidents becoming common. Security around the train and the officials it carries is tight, and anyone wanting to get close is carefully scrutinized. The players will be refused access several times before finally getting an appointment with a minor official. After that, it is a simple matter of filling in the correct forms and taking custody of a couple of briefcases full of hard-copy records.

Referee: Although frustrating, the delay is not serious. It should be obvious that all is not well in the region. The guards are alert and wary; government officials have been attacked several times by angry mobs (on both sides of the disputes). The players should be glad to get the job done and get clear of the region. But it's not over.

SCENE 5: AMBUSH AT KATTER

Requires: A4S4

As the characters make their way back to the station to head back to the starport (or at some other appropriate moment), a group of locals bars their way. These are local landholders, farm workers and so on, whose side of the dispute is represented by the city government. They are afraid that the parliament will interfere and cause a settlement in favor of the miners. This will be bad for the locals, who will lose land and

maybe their livelihoods. They think that the documents the characters are carrying have something to do with the dispute, and have decided to take them.

The mob is angry; they are not interested in explanations. There are dozens of them, and some have shotguns, rifles and hand guns (mainly TL 5 equipment), plus clubs and rocks. Their intent is not homicidal, but it is obvious that they will give the characters a good beating and take the cases if they don't escape.

The mob closes in, throwing the odd rock. It is obvious that the characters can't just fight them all, and if someone starts shooting, well, there are a lot of weapons among the locals. Characters with automatic weapons and no brains could in theory just cut down everyone in sight, but this will bring down local law enforcement on them, and a massacre will not be seen as self-defense.

It is obvious that the characters need to make a break for it. They should be able to barge or thump their way past the nearest locals and flee, pursued by a shouting mob. This leads to a chase through the streets.

Referee: Play the chase for tension and excitement, with small groups of the locals managing to cut off the characters and having to be fought past, or larger groups forcing a detour. The more manic the chase becomes, the better. Characters scrambling across rooftops or racing through crowded shops with a baying mob in pursuit should be a memorable experience.

Groups that want to shoot it out with the mob should get one warning if necessary: returning fire at someone who is trying to kill them will probably be seen as self-defense; random gunfire will probably get them hanged for murder (the Confederation has a death penalty). It would be acceptable to use weapons to create a momentary standoff, or to drive pursuers into cover. But there are never any guarantees with local laws.

If the players still want a bloodbath, the local military will be called out to take them down, and they don't care about due process or a fair trial….

SCENE 7: STAR CITY (GRAND THEOCRATIC REPUBLIC)

Star City is a peculiar place. Most offworlders are not allowed out of the special enclave, but within it they are treated as "slightly holy" since they have been out into space where the gods reside. The locals aren't reverential, but they are very respectful. Unless, of course, offworlders behave in an antisocial manner. In this case, the locals are at first stiffly disapproving, and then quietly outraged. Church enforcers will be summoned to convey wrongdoers for a period of "penance" in the local slammer.

However, unless the characters are particularly obnoxious, Star City will be a pleasant experience for them. Locals refer to them as "noble starfarers" and work hard to ensure they are comfortable. Tales of starfaring adventure are avidly sought, and it is entirely possible that the characters won't have to spend any money when they're in town, so long as their supply of tall tales holds up.

There will be a few other spacers in town; mainly crews on the orbital shuttles that carry goods up to the Highport, but also a couple of merchants or couriers.

Referee: This is an opportunity to drop in a couple of encounters. Perhaps one or more of the ships from the encounters section of this adventure might be in port here.

ACT 5: NEIGSTEN & COMORE
(LIBERTY ALLIANCE)

Neigsten and Comore are both predominantly Vargr in population, although both have substantial human contingents. Both are large towns served by a minor spaceport (equivalent to D class), surrounded by outlying stead farms.

SCENE 1: GETTING THE RECORDS

Picking up the records should not be much of a problem, except that the local port officials are Vargr, and as such are very conscious of their own importance. Dealing with them will be a challenge. Possible approaches include a very deferential, diplomatic approach, which will appeal to the official's ego. However, he or she will run the characters around or make them wait, just to show how much power he/she has.

The alternative is to cow the official with a display of power and importance. Appearance and acting ability (or real power!) are the keys here. A port official, protected by security forces, will not be impressed with a character who displays fearsome weaponry. He will be impressed by a smart uniform or noble-style clothing, medal ribbons, etc., and more than anything by demeanour. Characters who roleplay well, projecting power and confidence, will have little trouble with the local authorities. Empty strutting will just amuse them.

The local ports are not very busy; just a shuttle every few days and the occasional merchant coming in via the Highport. If the characters came in by shuttle, they will have to wait a couple of days for the next one (no matter how important they seem to be, the characters will not be able to obtain the records they want during the shuttle's 4-hour turnaround time). Officials at either port can get the records from the other transferred easily enough, but it'll take 2 days or so.

During this stopover, the characters are approached with a job offer. A Vargr by the name of Jorjak Miiliaki approaches them. Jorjak is a landholder, and is in a difficult position. Some of his tenant farmers are stuck in the middle of a dispute between two of the nomad groups. Jojrak's tenants have for a long time had a cordial relationship with the Artath clan, a tribe of human pony nomads who wander the plains close to his stead.

The Vargr farmers and the human nomads get along well, and trade a few minor items. They share festivals and respect one another's customs. Until now, that is. A second nomad clan, the Carval, has recently moved into the area. The Carval have been engaged in a long struggle with border forces of the Grand Theocratic republic. They have suffered in this war, and finally have moved away from other clans and the farmsteaders.

This has lead to an increasing amount of raiding, and Jorjak's tenants are on the front line. He has decided to provide his tenants with better weaponry, and even to trade a few guns to the Artath clan in return for promises of friendship (which he sincerely believes will be binding). If the Carval can be driven off (or find the locals too much of a challenge) then

his tenants will be safe.

Jorjak has obtained several cases of TL 8 Bullpup carbines; 60 weapons in all, plus six magazines per weapon. He has several thousand rounds of ammunition on had. The problem is that the steaders are demoralized and about ready to pack up.

Jorjak therefore wants to hire a band of adventurers, who will undertake the following tasks:

- Deliver the weaponry to his tenants' farmstead
- Show the tenants and their neighbors how to use the guns effectively
- Show the tenants and their neighbors how to improve their defenses
- Rally the tenants and raise their morale
- Deliver 20 of the guns to the Artath clan

Jorjak has arranged a gathering at one of the steads. Clansmen and farmers will be there, but their patience is wearing thin in the face of the constant Carval raids. Jorjak needs a quick result if his people aren't to lose their land. He'd hire mercs, but he can neither afford them nor fins any quick enough. The characters are what there is, and Jorjak is willing to trust their judgement and unique skills. He is offering Cr 1000 apiece for the job, with a Cr 10,000 bonus (divided as the characters see fit) if he feels that the characters have given the steaders a real chance.

Referee: Everything is pretty much as presented here. The job will only take a few days. However, it will have unexpected consequences.

SCENE 2: AT THE STEAD
Requires: A5S1

Getting to the stead means travelling overland by horse or aboard a vehicle. The local steaders can maintain TL3, so much of their transportation is by river or canal craft, or animal-powered. The journey is safe enough for most of the way, though the land gets obviously wilder away from the city-states. This far out, the countryside has been unchanged for millennia, except for small, cultivated areas around the steads and the towns that serve them. The characters travel through open country, mainly grassland with small forests where there is sufficient water.

The stead is owned by the Sarragh family, an extended family of Vargr who have raised cattle in this region for many years. The total population, with family members and hired hands, is normally about 30 adults, but this has recently dropped to 20 due to hands leaving to find safer work, and a couple of shootings.

The stead is constructed of wood for the most part, and would not look out of place in the West of the US in, say 1800. A fenced and cleared area is cultivated for vegetables and used as grazing for pigs and a stupid, furry sheep-like animal called an Arked, which is raised for meat and its hide. There is a single main stead-house, which is large and solidly built, plus several outbuildings, a barn, etc.

When the characters arrive, most of the workers are out with the herd, in the hope of deterring more raids. Those individuals still at the stead are wary, but word has been sent that Jorjak is going to help them, so once it is realized that the characters

are here for that reason, the locals warm to them and offer hospitality.

By the evening, as the herds are rounded up and corralled, it is obvious that these people live in a state of siege. Nobody goes out of doors unless they are accompanied by an armed individual. All the workers are armed in some fashion (mainly flintlock rifles and shotguns, but also a few single-shot cartridge weapons imported from the other states of Kerin's Tyr.)

Morale is also obviously low. One of the farm hands is restricted to light work while a gunshot wound heals, and his brother is buried out back. The raids, they say, are becoming ever more frequent. The Carval clan members want to increase their herds and drive the steaders away. They don't care who they kill to do it. One stead has already been burned down, and the Sarragh family are pretty sure they're going to be next.

Spirits are lifted by the arrival of the guns, but not much. Some of the older family members express gratitude that their landowner has made this gesture, but they are sure it won't be enough. In short, it is obvious to the characters that, guns or no guns, these people are too demoralized to save themselves. They need a shove in the right direction.

SCENE 3: THE GATHERING
Requires: A5S2

Word has been sent around the local steaders, and the friendly Artath clan, that the characters are coming. Thus, the next morning, people start arriving at the stead. Hardy farmers and leather-clad nomads arrive, greeting one another and asking news as old friends do. The meetings are tinged with sadness; too many people have been killed in the skirmishes already, and everyone is despondent.

The nomads are mainly armed with flintlock weapons, just like their neighbors. A few have cartridge weapons that they have captured from the Carval clan, who in turn took them from the Republic's border troops.

Asking about the Carval gets the same story whoever is asked. The Carval is a large clan, which has absorbed several others through conquest. Its leaders see themselves as lords of this region, which they have "preserved" from the expansion of the Grand Theocratic Republic. They think they have the right to ride into clan encampments or farm steads and demand "tribute" in the form of animals, goods, weapons – and people. When anyone resists, they begin a series of raids intended to kill individuals and steal herds, until the victim is forced to surrender or move away.

The situation has been getting steadily worse for some time, and has now reached crisis point. As the various groups talk to one another, it becomes obvious that everyone is ready to give up. The clansmen are considering pulling out of the region and seeking new pastures; many of the steaders are for packing up what they have left and heading into more civilized lands, where they'll be poor, but safe. Even the few speaking out for staying are half-hearted, and again and again the demand is made – "Even with these weapons, what can we do?"

If the steaders are to have any chance, the characters are going to have to provide leadership and some concrete ideas. There is room for all kinds of characters to utilize their strengths:

Leaders can give rousing speeches, or show their resolve by example

Combat-Experienced characters can teach the steaders effective use of their weapons

Medics can improve casualty-handling capabilities

Technically-minded individuals can lay out defenses, show how to build redoubts and knock loopholes in the buildings

Referee: This is a key point in the adventure. The referee will have to adjudicate a wide range of character actions, deciding what skill rolls are necessary depending upon the situation. As a rule, the locals will be inspired by anything that seems to suggest they have a chance of holding onto their lands without getting killed.

If the characters don't bother rallying the locals, or make a serious mess of it, then the eventual outcome of the gathering is an implosion of despair. Some of the steaders stubbornly decide to sit it out and defend themselves, others make plans to pull out with what they have left. The clansmen decide to move their herds away to safer lands. The result in this case is defeat for Jorjak and his people. The characters may find themselves part of an exodus of steaders, harassed by the Carval raiders as they try to make their way overland to safety. This terrible journey could be an adventure in its own right, but hopefully – if the characters give them any reason whatsoever to hope – the steaders and their clansmen friends will decide to hang on and battle it out.

The meetings should be role-played out, with people suggesting various options and declaring for staying or going depending upon their preferences. The characters' input should be critical, allowing them to feel that they have really taken control of the situation. Which may simply mean they've persuaded a bunch of people to stay and get killed.

SCENE 4: THE SKIRMISH
Requires: A5S3
Scarcely has the gathering wound down (after 2-3 days of wrangling) when a group of Carval raiders is reported. They are approaching the herds. Some of the Artath clansmen, riding patrol, are keeping tabs on them.

This is obviously a small raiding party; perhaps 15-20 individuals, armed with hand weapons, revolvers, single-shot breech-loading carbines (treat as a standard carbine, but must be manually reloaded after every shot), and a few flintlock weapons. They are probably not aware of the gathering, nor of the numbers they are opposed by. If they follow the normal pattern, they'll aim to kill a couple of the herdsmen and make off with some cattle.

The herders are trying to get the cattle in, but they probably won't make it. The Artath clansmen offer to ride out and give the Carval raiders a fight, though their weaponry is inferior (unless the characters have already handed out the carbines). However, there is another option…

The raiders think they're about to terrorize some demoralized farmers armed with flintlock weapons. Instead, the characters have an opportunity to give the Carval a good scare and hand the steaders a victory that'll harden their resolve.

Time is limited; the characters will have to hand out weapons, mount up, and rush out to meet the attack (and defend the herders). The Artath clanners have a few spare mounts with

them. There are 10 of their people here, all of whom are willing to fight for their friends. A few of the steaders are willing to go along, but they aren't enthusiastic – morale is fragile.

In all, about 20 steaders and nomads, hastily armed with carbines, plus the PCs, ride out to meet the raid. They will sight the herd pretty soon – the herders are driving in as fast as they can, and the raiders are closing fast. It is clear that without help, the herders aren't going to make it.

Referee: The skirmish will be a nasty, messy affair of galloping horses and semi-random shots. Play up the tension and confusion as players try to control their mounts, shoot one-handed at the gallop, clash in hand-to-hand combat, become unhorsed, and generally have a truly horrible time.

The raiders are not expecting a fight, and will break off if they take a few casualties. The characters can gain an additional advantage by using the herd to conceal their approach, and charging suddenly (if they think of it).

After the initial clash, the situation will degenerate into a wild, dusty scramble with people galloping about all over the place. Targets will be fleeting, and hard to hit.

The Carval raiders are equipped with melee weapons in addition to their firearms. Rather than reloading on horseback, some of them will close with lances and swords (actually a curved scimitar-like weapon). Others are adept at loading their carbines and revolvers at the gallop. It is not possible to reload a flintlock weapon unless stationary, so anyone so armed will have to resort to hand weapons.

SCENE 5: PREPARATIONS
Requires: A5S3 or A5S4
The herd is brought in and corralled. After a short period of jubilation at driving off the raid, reality sinks in – the steaders have started a war. The Carval have been challenged, and will need to eradicate the stead in order to demonstrate their invincible power. They will be coming, in force, and soon. Chances are the only ones they leave alive will be those they make slaves.

Morale wavers, requiring more role-playing from the characters as they try to bolster the frightened steaders. The clansmen offer to stand by their friends, and to send a couple of their number for aid. Meantime, some sort of defensive preparations need to be made.

A quick analysis shows the following facts:
- The stead buildings and the barn are stout, but wooden. If the raiders can get close enough they'll burn them.
- The corralled herd will make a fine obstacle, so long as the raiders don't break the fence and let the cattle stampede.
- The fence itself provides no cover and is no real obstacle to a mounted attacker.
- With only 3 magazines apiece, the main limitation on the carbines' firepower is reloading speed. Determined defenders can lay down a withering fire until they have to start reloading magazines.
- There are about 10 clansmen and 60 steaders present for the gathering. Of these about 15 are non-combatants who live here. Everyone who came from elsewhere is an able-bodied human or Vargr adult, and willing to fight.

The characters don't know how long they have, but they are going to have to make at least some preparations. This should be role-played. Possible ideas include:

- A quick introduction to the carbines and how to use them.
- Creation of small earth redoubts outside the house, to keep the raiders away from the walls.
- Knocking loopholes in the walls of the buildings to allow defenders to shoot from cover.
- Creation of a "reaction force" or reserve to conduct a mobile defense and deal with crises as they happen.
- Improvisation of barricades and other defenses from farm stores etc.
- Setting-up of procedures for casualty evacuation, fire-fighting etc.

The Stead-house is large, with 2 floors and a cellar for storage. It is built of impressive timbers and fairly resistant to small arms fire. The other buildings are as solid, but less defensible. It would be possible to cram everyone into the house, just about, but this would not be an effective way to defend the place.

A good plan would be to create a few small strongpoints outside the house, supported by carbine fire from the house, barn and outbuildings. It should be possible to make holes in the roof and create good shooting positions there. A mobile force can move between threatened areas and reinforce them as necessary.

Referee: The characters have a couple of days to prepare, but they don't know that. The first Carval scouts arrive late on the first day of preparations, but they just observe from a safe distance. By noon on the second say, a large body of riders can be seen approaching.

They attack at dawn on the third day.

SCENE 6: THE BATTLE OF SARRAGH'S STEAD

Requires: A5S5

Although they prefer to fight on horseback, the Carval nomads have become adept at fighting dismounted, at using cover, and at waging guerrilla war against well-armed foes. However, they have nothing but contempt for their enemies at the stead, and their first attack will be an over-confident rush on horseback. Assuming this fails, they will become rapidly more cunning, making feint attacks on horseback to allow a dismounted party to get in close in the hope of setting fire to the buildings. The raiders are also skilled at using sniper tactics; skilled riflemen concealed in the grass will attempt to pick off anyone making himself an easy target. This sniping will go on all day, even between other attacks.

STAGE #1: THE RUSH

About half the nomads (i.e. about 300 of them!) gallop towards the house from three sides, firing from the saddle or brandishing swords and lances. Wild and badly-aimed fire breaks out from the steaders, often at too long a range.

The raiders plunge on, jumping the fence and racing to close range where their revolvers are most effective. If they

can reach the house or barn, some dismount and try to break in through the doors and windows. In places, the fighting becomes hand-to-hand, but (unless the defenders panic and their morale collapses; this depends upon what they characters do) they are eventually repulsed, leaving a couple of dozen bodies within the grounds.

STAGE #2: THE LULL

The raiders withdraw to a safe distance, leaving a few snipers to harass the defenders. They confer for a couple of hours, then begin moving up (still on horseback) again.

STAGE #3: THE SECOND CHARGE

This attack is more subtle. It goes in about midmorning. As about 300 nomads make another charge from three sides, 100 or so attempt to sneak up, using the herd as cover. Their primary aim is to clear some of the defenders out of the grounds to make the approach to the house more practicable. If they can get close enough, they will rush any strongpoints and try to overcome the defenders inside hand-to-hand. They are not too bothered about the house just yet; they want to clear the way first.

A party of raiders will occupy any strongpoints they capture, and snipe at the house from there.

STAGE #4: THE PARLAY

Having failed a second time but obtained a toe-hold in the grounds, the raiders offer a parlay. They respectfully return the bodies of anyone they killed or captured in the grounds to the defenders (this is actually a psychological ploy to weaken the defenders' morale), and offer a settlement. Basically this boils down to:

- All the steaders' weapons will be turned over to the raiders
- The steaders will be allowed to pack up some belongings and a few cattle, and will be allowed to leave the region without further harassment.
- Further resistance will result in the stead being burned with everyone in it.

The raiders offer a truce of 1 hour for the defenders to consider the offer, but warn that they will fire on anyone trying to conduct defensive works (like building a new redoubt or carrying ammunition to an outpost).

Unless the defenders break the truce, the raiders respect it, and allow the lull to drag out for several more hours. Their snipers begin firing occasionally after about 3 hours (1-2PM or so), and this intermittent sniping is all that happens until about 5PM.

The defenders are involved in constant debate about what to do – should they trust the offer? Do they have a choice? Divisions begin to appear among the defenders as some demand they be allowed to surrender and others insist that surrender is suicide.

STAGE #5: THE ASSAULT

About 1/3 of the nomads remain mounted and are held back to sweep down on anyone in the open. These remain unengaged unless the defenders attempt to abandon the house and flee.

The remaining raider forces attack, coming in from all sides. Most infiltrate through the long grass, crawling close and making themselves very hard targets. As these individuals open fire or begin their rush, others race in on horseback, some as decoys and some in an attempt to reach the house by speed. They dismount to force the doors, or attack anyone in the open with hand weapons.

This assault is pretty determined, but is beatable. Eventually the nomads fall back, though casualties have been high on both sides.

STAGE #6: THE LAST HOURS

Another lull descends, and night draws slowly in as snipers on both sides take the occasional potshot at targets of opportunity. The mood in the house and among the defenders will be somber – they can't take much more of this. Again, ideas are tossed about – surrender, an attempt at a breakout, and so on. Arguments and even fights among the defenders become common. The characters may be able to hold the defense together with some good role-playing. Possibly some small groups will attempt to escape or surrender. After seeing the raiders shoot down anyone who tries to escape, it is obvious that the only chance is to hold out and hope that help arrives in time – or that the nomads lose heart.

The latter is actually possible. The Carval clan has taken fearful casualties, and is continuing the assaults mainly out of pride and the knowledge that if this stead holds out, others will also resist. Thus the fate of the steaders right along the border region is in the balance here. Even if the defenders are wiped out to the last man, woman, child and Vargr, the carnage wreaked among the attackers might be sufficient that they choose not to keep attacking the frontier steads.

At dusk, another parlay is offered. The attackers have deduced that offworlders are involved, and now offer them a chance to get out alive. They announce that if the stead is surrendered, they will allow offworlders to go free – indeed they will be given mounts and provisions. Even if the rest of the defenders won't surrender, the Carval will honor their promise to any offworlder who comes out of the stead in the next hour.

The Carval are honorable people in their way. Steaders or Artath clansmen will grudgingly admit (if asked) that they will probably keep this bargain. There is a golden bridge for the characters here – but they will have to abandon the steaders to their fate. The alternative, right now, seems to be to share it. The Carval promise to burn the stead with everyone in it unless surrender is immediate.

If the characters want to surrender, some of the defenders will despairingly honor their decision and let them go. Others will become angry and even violent towards the "cowards" that talked them into this and are now about to abandon them. Some will come out and surrender with any characters who give up. They will be disarmed and taken away under guard while the characters are allowed to go free.

If the characters surrender, the stead holds out for a while before the defense collapses and more or less everyone inside is killed. Some of those who surrender are "adopted" by the Carval, mainly children and young women. The rest are executed as a warning to anyone who resists. Shortly afterward, the other steads are abandoned and the Artath chased off their lands. By then, of course, the characters will

be offworld, and anyway, it wasn't their fight, was it?

On the other hand, if the characters choose to resist, they do have a slim chance for victory.

STAGE #7: TO THE KNIFE

After an hour, a party of nomads rides close to the house under a flag of truce. They (sincerely) salute the defenders as heroes, and promise that they will honor the dead, and care for the children they take into the clan. They will have to kill everyone in the stead now, they say, but they do respect them.

As a fresh wave of terror goes through the defenders, one of the characters gets a message on his comm. It's audio-only, from a breathless Jorjak using a borrowed personal comm. All he says is, "We're coming. Just hold on until we get there."

Before any details can be obtained, the final assault begins.

Infiltrators and snipers have managed to get quite close to the house, while groups approach on horseback or run, using cover. In the gathering darkness, shooting is difficult, and the battle quickly gets in to close quarters.

This is it; the Carval intend to smash into the house and kill everyone in it. Setting it on fire is proving more difficult than they expected – though from inside it might be easier. Despite the best efforts of the defenders, parties manage to get in through windows, or break the doors. Desperate fighting, some of it hand-to-hand, is going on in and around the house. Defenders turning from a window to battle a swordsman inside the house are shot from outside. The defenders are forced back to the upper floor, and still the hordes pour in.

The characters at this point may be acting as a "fire brigade", racing from crisis to crisis, but it's clear that they can't be everywhere, and the defense is failing. No sooner is one area cleared and barricaded with furniture than another area is threatened.

Then dimly heard above the din of shooting and the clash of steel, is a new sound – the hum of contragravity lifters. Several air/rafts slam down close to the house, and people of all shapes and sizes leap out firing. Humans wearing borrowed shirts over their Highport Security uniforms (their presence here is totally illegal), Vargr steaders, Downport clerks, a four-armed Sydite gunslinger, a couple of Scouts (who are here as observers and are "shooting only in self-defense" - with assault rifles) and militia members from the Comore region.

Leading them is Jorjak, an ill-fitting flak jacket over his suit, a smoking Sector Knight revolver in one shaking paw. As the battle rages, he is everywhere, snarling hysterical orders in a frenzy of flat-eared terror. He's scared, and way out of his depth. But he's here.

Referee: This is the turning point. The Carval are shocked and dismayed by the sudden attack, but they still vastly outnumber their foes. If allowed, they will rally and crush the defenders by weight of numbers. However, a stout counter-attack will scatter them, and by dawn 300 riders of the Artath clan will arrive, many of them riding double, transporting a hundred or so Vargr from the other steads. The Carval will be unable to do much in the face of this force – and they'll be too demoralized to even try.

Surviving that long depends on one last piece of heroism from the characters – they must clear the house and lead the steaders out to join the battle outside.

RUNNING THE BATTLE

Depending on the nature and tastes of the group, this battle can play out in many different ways. Play should focus on what the characters are doing, with everything else as backdrop. It is possible that the battle may be seen from the point of view of a central strategy team, directing the defence but not taking part, or it might be a medical drama if that's the group's focus. Most likely, it will look like a cross between *Zulu*, *Seven Samurai* and *Cross of Iron*. The important thing is that every character should contribute in some way, and that the characters' actions should be pivotal in determining the outcome.

The referee should play up the tension, the terror and the tragedy. People under pressure can crack, or become incredibly heroic. Others are reckless or paranoid.

The characters should witness horrific and inspiring events as the battle unfolds. Sometimes people die pointlessly or have unbelievable escapes. Possible events include:

- During an argument about whether to surrender or not, someone shooting from a window turns to those arguing and tells them to be quiet. His head explodes as a sniper picks him off, spraying everyone in the room with brains.
- A previously stalwart defender loses it and races out of the building, hurling away his weapon. Dozens of attackers shoot at him, but somehow he manages to run straight through the maelstrom of fire to reach clear ground. A group of mounted warriors will chase and subdue him with carbine butts and boots.
- An argument breaks out among the defenders about what to do about some injured raiders who have been captured. Some are for treating their injures, others for slitting their throats.
- A Carval prisoner helps treat the injured, saving the life of a Vargr he shot. The whole time, he talks about how his people are going to burn the stead and kill everyone inside.
- A young child runs out of the house, and a farm hand drops his weapon to chase her. Several shots are fired, and the hand is hit, but he hobbles after the child as everyone on both sides spontaneously stops shooting. A raider grabs the kid, holds her out to the tottering Vargr, and supports the pair of them to the doorway. There, he spits into the house and haughtily walks away, back to his firing position. After a moment, the shooting starts again.

SCENE 7: AFTER THE WAR

Requires: A5S6

As dawn breaks over the devastated stead, the survivors begin the grim task of burying the dead. The Artath clanners ride out to chase the Carval off, and Jorjak meets with the characters.

Jorjak can't believe what has happened here – he asked the characters to help him out by delivering some guns; they won a war. He's confident that the Carval have had more than a bloody nose – they've taken a pounding they won' forget in a hurry. He'll procure more guns for his tenants and for the Artath people, and try to create a militia to hold these lands.

The rescue force, Jorjak says, comprised everyone he could find who owed him a favor or who'd take credits to fight. Some of these people jeopardized their jobs by coming here; all of them risked their lives. Some of them are dead.

But the steaders have held their lands, the characters have prevented Jorjak's people from being massacred (he really does care about them; many of them are his relations), and he's got a problem.

Jorjak explains that he doesn't have much liquid cash – his money is all tied in to the steads and their produce (which means the characters have just saved his fortune, too). He can pay them what he promised, but nothing more.

However, he can do something for them. His holdings are extensive, and he'll give the characters a validated letter that entitles them to guarantee credit against his lands. That means that the characters will be able to (once) get something really expensive for nothing more than a promise of regular payments and a deposit. If they default, Jorjak will be hit for the debt.

In short, Jorjak doesn't have the money to give them a fat reward, but he can at least ensure that they can get a loan or credit against their next refit – or whatever else they need money for (like maybe a few hostile environment suits and some modifications to the ship?)

Jorjak will have to go to the Highport with the characters to get this letter (which is in fact an impressive, unforgable electronic document) set up. He will do so as soon as he can. For now, there is a cleanup to be started.

Referee: This is what the characters need to outfit their expedition. They don't make a lot of money here, but they've got friends now who'll always welcome them as heroes.

ACT 6: SALVAGE AT KLESITER

The characters need to pick up some documents at the Highport; there is no need to visit the planet (069-526, known as Fonnein to its inhabitants). They can obtain the supplies they need for the salvage operation at the Highport.

SCENE 1: FONNEIN ORBITAL

Fonnein orbital is a very ugly structure, constructed out of a couple of old bulk freighter hulks, sprouting appendages at all angles and junctures. The port is fairly small, but pleasant and well-kept. Facilities are limited but acceptable.

Obtaining the records is no problem at all; the port authority keeps good records and is happy to hand them over after validating the characters' requisition forms.

Despite the small size of the port, it does see quite a lot of traffic, and hostile environment suits are fairly easy to obtain (especially considering the presence of the mining operation at Estorr in the outsystem). The combined price of suits and ship modifications is beyond the characters' means, but with Jorjak's letter they should be able to obtain the equipment they need for a partial payment and a contract to pay the rest after a suitable period. The referee should determine a suitable down payment and full price for the equipment and modifications, depending on what the characters have available.

The ship modifications are fairly minor, but will take a few days. During this time the characters may decide to visit the planet (where it is possible they will become involved in an

unrelated adventure) or they may just hang around and enjoy a few days off in the port.

Referee: The characters deserve a little downtime, and this is their last chance before launching the salvage operation. The operation will require some good planning and preparation; smart groups will take their time and get it right.

SCENE 2: KLESITER BETA (KEY 7)
Requires: A3S3

When all the preparations are made, the characters depart Fonnein Orbital and lay in a Jump course for the Klesiter Beta system.

Klesiter Beta is fairly empty, with nothing but a small gas giant planet and a tiny iceball orbiting its feeble white dwarf star. The characters' ship emerges into this empty wasteland of space at a safe distance from the gas giant and begins its run in.

There is an intense feeling of loneliness out here. There are no other ships, no Navy patrols, nothing. A distress signal might not even be picked up in the Alpha system, and help is at least a week in Jump away. The characters are very much on their own.

The first thing that needs doing is a careful sensor sweep of the gas giant (which is named Liisik Gara) to see if the *Varaidercalt* (the transport ship) can be located. This is quite a lengthy process, and requires several orbits of the giant planet. It is also possible to gather data on the weather patterns of the world.

Liisik Gara is a small and relatively calm gas giant (as those worlds go). There is a fair amount of radiation, but individuals within a ship or a hostile environment suit should be safe enough, so long as they limit their exposure.

After a period of searching, the characters manage to locate a metallic object deep in the giant's atmosphere. It is a little deeper than the *Malfeasant* was at the time of the rescue, but (just) within reach. The object is not in orbit, but is being blown around by local weather conditions. This is not a good sign. Presumably the ship's contragrav systems are keeping it from falling, and its drive is supplying a minimum of thrust. However, this is not enough to keep the ship from bouncing around like a cork.

Time is clearly of the essence here; the transport's drive system is failing.

Referee: Smart players will want to gather and analyze supporting information like weather patterns in the gas giant. Detailed analysis by anyone who knows about the subject (a planetologist would, or an astrophysicist, or a spacer who has skimmed for fuel from gas giants before) will give an insight into local conditions that will allow a small bonus to whatever activates (like docking with the derelict) the referee deems appropriate.

Anyone looking over the data can see on important fact – there is a big storm approaching the derelict. The characters can get there ahead of it and hopefully get out again before it strikes, but it is unlikely that the derelict will survive.

In short, it's now or never.

THE STORM, OPERATIONS IN A GAS GIANT ATMOSPHERE, AND RELATED MATTERS

There is no clearly predictable moment when the storm will strike; instead it will gradually escalate in severity until it hits its peak intensity.

The weather in the vicinity of the derelict is currently "normal". The storm begins to arrive after 1 hour plus a random time equal to 2d6X 5 minutes. Conditions will deteriorate quickly after this. Determine the time to storm arrival as the characters begin their run in, and keep track secretly.

Once the characters reach "striking distance" (i.e. they are close enough to the derelict to begin a docking operation) use the following procedure:

Each activity by the characters is termed a "sequence". Each sequence takes 7+2d6 minutes. During a sequence, characters can undertake a typical action, such as attempt to dock, search a few compartments, cut through a bulkhead etc. Some actions (e.g. a brief combat or a glance into a compartment) are negligible and do not take up a whole sequence.

As the characters' actions eat up time, the storm front will eventually arrive. Once it does, continue to keep track of the elapsed time. Every 15 minutes, roll on the Storm Event Table, below.

Storm Events (2d6)

2-3	Weather Improves one condition (e.g. Rough to Normal). It cannot get any better than Normal
4	Superlightning Strike (see below)
5	A moment of calm. All skill rolls are at normal this sequence
6	Buffeting adds +2 to DC of all tasks undertaken this sequence
7	No event
8	Superlightning Strike (see below)
9	Wild gust – Anyone on the hull must make a reflex save at DC 30 or be slammed into the hull for 3d6 Stamina damage. If the save is failed by 10 or more, the character falls off. All Pilot rolls during this sequence are at an additional +5 to DC
10-12	Weather deteriorates one condition (e.g. Turbulent to Raging)

Weather Conditions (1d4)

1. Normal: There is a great deal of turbulence in the gas giant atmosphere, and ammonia precipitation which interferes with the ship's sensors. Sensor tasks are at +5 to normal DC.
2. Rough: The methane wind picks up, making piloting more difficult. Sensor conditions are appalling. All Pilot roles must add 5 to DC, and sensors tasks must add +10. Anyone outside adds +10 to the DC of any task he or she attempts.
3. Turbulent: Howling winds and eddies make piloting ludicrously difficult, but clear the precipitation somewhat. Pilot tasks are at +10 DC, sensors at +5, and EVA (i.e. tasks undertaken outside in a vac suit) are at +20 to DC. EVA is suicidally dangerous. Radio is broken and difficult to make out.
4. Raging: Ships are tossed about like toys, and may suffer structural damage. Make a Pilot roll at DC 30 to try to mitigate the worst of the weather effects. Failure means the ship takes 1 structural hit. All tasks aboard ship are at +15 DC, and anyone outside in a suit will be battered to death in moments if they can't find shelter. Communications are also severely disrupted. Radio range is limited to a few feet.

Superlightning Strike Results

To determine if the ship is damaged, roll 1d6:

1-2 Sparks and a corona discharge. Anyone on the hull suffers 2d6 (Stamina) damage despite their suit.

3-4 Momentary loss of some system (sensors, helm, contragrav) which may have secondary effects such as needing a Pilot roll to regain control.

5 Ship takes 1 structural hit.

6 Ship takes 1d6 structural hits.

Damage to the Ships

The players' ship can take 6+2d6 structural hits, and the derelict 9+1d6 hits (both of which the referee should secretly roll as atmosphere is entered). The players should not be informed how much damage the ships can take, though increasing damage should be apparent from system failures and general signs such as structural warping, leaks, etc.

When a ship suffers its last structural hit, its systems will rapidly fail and it will plunge to its destruction in the gas giant's vast core. There is no chance of survival for characters aboard when this happens, and they should know this.

SCENE 3: APPROACHING THE VRAIDERCALT (KEY 8)

Requires: A6S2

The characters have two choices about their approach. They can go in slowly and carefully, which will be somewhat easier on the Pilot and Sensor rolls, or they can forge ahead and hope to gain some extra time before the storm arrives. They run the risk of overstressing their ship and possibly losing their target if they do this.

Piloting in the gas giant's atmosphere is tricky; base DC for even normal maneuvers like docking is 20. Sensor tasks are also DC 20. Any EVA activity (i.e. going outside in a suit) is at a base DC of 15 just to move about and keep from falling off the hull. Work-related tasks are at +5 to their normal DC. Note that it is not possible to use reaction-jet maneuvering units and other aids outside in the atmosphere – characters must walk or crawl across the hull.

Going in Cautiously: If the characters choose to approach cautiously, they can automatically keep a sensor lock on the derelict. This type of approach takes 40 +2d6 minutes, at the end of which the characters should be within striking range. However, a Pilot skill roll is required (normal difficulty for the conditions; DC 20). If it is failed, the characters have been blown badly off course and lose 2d6 more minutes getting into position.

Going in Fast: Plunging in fast is dangerous, but will get the characters there much quicker if everything goes well. They will be within striking range in 20+2d6 minutes, but their ship suffers a structural hit in the process. A pilot skill roll is required at DC 25 to remain on course, or else the sensor lock on the derelict will be lost.

If the characters have to search, each search attempt is a new sequence and requires a Sensors check at a DC of 20 (this includes the penalty for sensor ops in a gas giant's atmosphere mentioned above). The characters can search as many times as they like, but every sensors task (only 1 person can search each time) is an additional sequence (7+2d6 minutes).

Once the characters have reached striking distance, they can attempt to close and dock.

Approaching: As the characters close to dock, it is apparent that the *Vraidercalt* is in a bad way. She is a 1000-ton transport, lightly armed for frontier operations. It looks like she has suffered an internal explosion of some kind; some of her compartments are open to space. Her hull is battered and twisted, though that probably happened after she entered the gas giant's atmosphere.

Docking is going to be very tricky. It requires a DC 20 Pilot roll (plus any penalty for the weather conditions as mentioned above), and an entire Sequence to set up an approach. If the docking roll is failed by 10 or more, the ships clash together, causing 1d3 structural hits to each.

Once docked, the players' ship should be safe enough, and entering through the airlock is a simple task.

If the characters don't want to dock, the only option is to go out the airlock and jump on a line. This is a ridiculously difficult Dex-based task, starting at DC 30 and further penalized for the weather. It will then be necessary to enter the hull somehow, perhaps by crawling to an airlock or cutting the hull (an entire sequence in either case).

Referee: This is a hideously dangerous environment, and very difficult conditions. The players' ship will be bouncing around, rattling ominously, and perhaps being struck by lightning. That, and the "ticking clock" provided by the storm, should create plenty of tension.

SCENE 4: ABOARD THE VRAIDERCALT (KEY 9)

Requires: A6S3

The *Vraidercalt* is a wreck. Power is low, and many compartments are breached. She has suffered at least one interior explosion. She is also bouncing about in the storm, vibrating and occasionally lurching wildly as her autopilot tries to keep her stable.

The interior is a mess, with the personal items of the crew and the small number of passengers she was carrying, plus tools, galley plates, and other items scattered about all over the place.

There are also a number of bodies; most are not in plain view, and show the effects of decompression, explosion, fire, atmospheric exposure and... something else. It's as if some of them had partially dissolved. Many are in strange corners, like they were dragged there. Thus bodies may be missed at first or found in places that suggest they were put there for some reason.

A couple of the bodies are suited, and armed (with weapons ranging from steak knives to snub pistols). They seem to have died of suit breach.... Or rather, suit dissolvement...

The ship has three decks. The upper one is crew quarters and ship systems, (with the exception that the engineering rooms drop right through all 3 decks, the next is passenger accommodation, and the bottom deck is a large cargo hold for most of its length.

Searching one section of each deck will take one sequence.

ENTRY TO THE DERELICT

It is possible to gain entry to the derelict through the dorsal maintenance airlock (which opens into a corridor in the crew area) or the ship's launch docking area (the launch is of course gone). This opens into the aft end of the crew quarters, at a shaft that allows access to the passenger deck but not the holds.

Access via the passenger airlocks is somewhat easier. These are situated port and starboard, just behind the observation area. They are wider than usual, to allow for

luggage and such like.

CONDITIONS INSIDE THE DERELICT

Artificial gravity is still operating aboard the wreck, though at 1/5 of a g. This is low enough that movement is an awkward combination of zero-g procedures and normal walking. Note that although objects possess only 1/10 of their normal weight, they still have mass and inertia. It is just as hard to get something moving aboard the wreck as on Earth, and once moving it will not stop until it hits something or eventually falls to the deck. Since the ship is bobbing about, objects will crash around from time to time, presenting a real hazard of being crushed.

Combat aboard the derelict will be extremely awkward. Treat as low-g combat, and increase all hit rolls by the penalty given on the weather conditions chart above.

The only light in most areas is dim red emergency lighting. Characters' lamps are sufficient, but the combination of bright beams, dim areas and loose objects sliding around (and hanging in the air for long periods) creates a tense environment characterized by sudden movements seen in peripheral vision, familiar objects mis-identified in torchlight, and obvious things overlooked. In this eerie environment, even characters expecting to find corpses may be shocked.

MOVING BETWEEN SECTIONS

The various sections of the ship (detailed below) are separated by heavy bulkheads (some of which have buckled alarmingly!). Bulkheads are penetrated by iris valves, most of which are not sealed shut. Lack of power means that they must be cranked open manually, requiring an entire sequence. Once open, characters can move about freely.

Within a section, rooms have light doors which can easily be forced open. Movement is simple enough. Searching an area takes an entire sequence (and this is a quick search. A detailed combing of a single room can be accomplished in a sequence, but there are several rooms in each area). If characters just move straight through, they may still spot obvious things. Moving through a section takes negligible time, unless the characters want to keep running the length of the ship, in which case the referee should decide how much time they're wasting.

MOVING BETWEEN DECKS

There are two shafts that run vertically through the ship. One descends from the fore end of the crew quarters, one from the aft end. They are closed off by iris valves but most will not be sealed when the characters board. There is insufficient power to operate the iris valves, so they will have to be cranked open manually, meaning that the first use of any given shaft will take an entire sequence. After this, transit is quick and simple.

There is an elevator shaft at the aft end of the crew quarters, but it is unpowered. Access can also be gained through the engineering room, which drops through all three decks.

Referee: The ship's internal monitoring systems were partially disabled, so many of the iris valves that should seal off the various areas are open. This means that everything within those areas has been exposed to the gas giant atmosphere for some time. The referee should determine which, if any, valves are shut as appropriate. It is possible that some are thoroughly jammed, forcing the characters to find a way around. It should be possible to get to any area of the ship eventually, however.

The Upper Deck

Bridge, Avionics, Computers and Flight Systems: The ship's bridge has emergency power and its environmental systems are working. There is nobody here, of course, and the "mutiny pistols" are gone from their bracket. The ship's autopilot can be over-ridden, but there is insufficient drive power to do anything more than it was already doing.

Crew Quarters: The crew quarters have several bodies, and some sections are open to space. Various personal items can be found in the staterooms, but the ship's locker has been looted for weapons and supplies.

General Stores: The ship's stores are basically intact, but open to atmosphere. Food for the passengers, electronic components, spares etc. are strewn about at random.

Engineering: The drive rooms drop through 3 decks, with gantries at all levels. They seem relatively intact, though an examination of the drive records shows a serious Misjump that brought the vessel out very close to the gas giant and resulted in a dive into the atmosphere before the crew could come to their senses and change course. The ship's maneuver drive was damaged while in the atmosphere; the records do not show how.

The Middle Deck

Passenger Lounge and Forward Areas: The fore end of the middle deck is taken up with the passengers' galley, ship's store (a very modest little shop run for the passengers), lounge and an observation room that allows passengers to watch the stars while in normal space.

The view from the observation lounge is even more spectacular than normal, since the glazed section of the bow has been shattered into the room.

Passenger Accommodation: The passenger staterooms (and adjoining stores lockers containing cleaning and maintenance equipment, e.g. mops) look like a hurricane of methane and ammonia came suddenly blasting through (which is actually what happened). Many of the stateroom doors have been buckled or torn off, and there is debris everywhere. Few of the passengers survived, and there has been no effort to deal with the bodies. Not by humans, anyway.

Low Berths: The ship's low berths are barely functional on emergency power. Some of them contain passengers who made the trip this way, and some contain people who were injured and placed here to await rescue, or who froze themselves when it became apparent there was no way off the ship. Some of the berths have failed, some have been breached from the outside (!) and three have survivors in them. Berths can be demounted and manhandled to the airlock. This will take a complete sequence each, and require two people to accomplish.

The Lower Deck

Main Hold: The cavernous main hold contains numerous freight containers and pallets. The contents are varied – plastic sandals, frozen prawns, tractor parts (real ones, not disguised weapons), microwave communicator collimating antennae, bulk cheese… all kinds of stuff. Most of it is not particularly

valuable.

Minor Hold: The aft hold (accessed through the main one, but separated by a bulkhead) is where secure cargoes are carried. Several boxes are carefully stowed here. Each could be just about carried by one person (they are very bulky). They contain high-technology electronics spares marked as manufactured by Ling Standard Products, and certainly valuable.

Referee: People carrying boxes or low berths (which takes 2, remember) can fight very awkwardly, at a –6 penalty. This is important, because the characters are not alone in the ship.

The gas giant's atmosphere is home to a species of protoplasmic "flying tentacled cloud" creatures currently unknown to science. (Hereafter, they are just referred to as Clouds).

Three fairly small clouds have got on board the vessel, and fed on the rich nutrients provided by human and Vargr bodies. They can float in the low gravity at a little less than the speed of a running human (i.e., it is just about possible to escape from one by recklessly swinging along a corridor using every projection for leverage, like a demented monkey in a vac suit. This is, of course, extremely dangerous and requires DEX checks at DC 15 + any penalties each round.) Failure indicates that the character has slammed into something for 1d6 Stamina damage, and may be caught by his pursuer.

Protoplasmic Clouds: Small (15kg) Omnivorous Eater; Init +0; Attack 6+; Flee 8+; Spd 6m; AC 11 (+1 small); AR 5/0 (see below); St/Lb 50/25; Atk +2 melee (tentacle slap 1d8/20); SV Fort +3, Ref +5, Will +3; SZ S; Str 15, Dex 12, Con 25, Int 1, Edu -, Wis 1, Cha 2, Soc -.

Skills: Intuit Direction +0
Feats: None
Special Abilities: Each cloud has the following three special abilities:
Damage Resistance: Clouds, being soft gloopy blobs of dense protoplasm, are not easily hurt by bullets or melee weapons (a blade might sever a tentacle, but they just grow more). Electrical, fire, and energy weapon damage will harm them. (The *Malfeasant* crew knew this; hence the laser carbines and shock prods). Against non-energy weapons, the clouds have an effective AR of 5. Against energy weapons they have an effect AR of 0.
Regeneration: Clouds regenerate by eating. Ingesting a corpse or a character will allow them to begin regeneration of any damage. Once begun, a cloud will regenerate stamina damage at a rate of 1 every 2 rounds, and lifeblood damage at a rate of 1 every 4 rounds. This regeneration will only last for 10 minutes unless another source of food is found.

While killing a cloud is somewhat difficult, they will usually attempt to retreat from combat if they have taken 25 or more stamina damage or 12 or more lifeblood damage, in an attempt to find something to eat and start their regeneration cycle.
Tentacle Slap: Attacks can also take the form of a tentacle slap. Tentacles are not strong enough to grab and hold a character. A tentacle slap is a melee attack. A cloud's tentacle slap attack causes 1 point of suit damage (see below) in addition to any normal damage.
Envelopment: If a cloud comes into contact with a character's suit, it begins to corrode it (see Suit Failure, below). Envelopment is automatic – the cloud just gloops around its target unless the target evades. An enveloped character suffers 1d6 Suit Integrity damage per round, until his suit is breached. He then suffers 1d6 Lifeblood damage per round from the cloud (in addition to normal effects of a suit breach).

Avoiding Envelopment is a Reflex save at DC 20, or the character can just flee as mentioned above.

Once a character is enveloped, he begins to dissolve, suit first. The clouds can eventually penetrate walls and bulkheads (this takes a long time for walls, as measured in days). A character who is enveloped has less time to escape. He or she can struggle free by making a Dex check at DC 30. Another character can automatically plunge into the cloud and yank his comrade free, but he is exposed to corrosion that round.

Discharge: Once per 10 minutes a cloud can create an electrical discharge that zaps everyone within 10 feet (no save) for 1d6 Stamina damage, and causes various frightening glitches in electrical and electronic equipment (like vac suit environment monitors or helmet lights).

Climate/Terrain: Gas Giant atmospheres only.
Organization: Small groups (1d6).

SUIT FAILURE

The characters' hostile-environment suits have 25 Integrity Points. Normal vac suits have 10, and emergency softsuits 5.

Suits can be damaged by accident, such as when a character falls or is thrown against something by turbulence (1d4 suit integrity damage each time). Tentacle slaps from the clouds do 1 point of suit damage, and envelopment does 1d6 points per round.

A character whose suit reaches 5 points of integrity or less is in danger (thus softsuits are not a good choice in this environment.) Each sequence, roll equal to or under the suit's remaining Integrity rating on 1d6, or suffer 1d6 Stamina damage from minor leaks, chilling, gas narcosis etc.

If a character's suit reaches 0 Integrity, it fails completely. The character begins suffering damage as if exposed to vacuum (the atmosphere here is thin enough and toxic enough to count as vacuum!) – see THB for details.

Characters can attempt to fix their suits in the field. One complete sequence spent making repairs allows the character to add 1d3 Integrity points back onto his suit – IF he makes a DC20 T/Mechanical skill check. If he possesses the Vac Suit proficiency feat, the repair value is 1d6 points. Characters may repair other people's suits.

SALVAGE

As well as the survivors, the characters may be able to get several of the electronics spares boxes (there are 10 in all) out of the wreck and into their vessel. Other objects might be picked up along the way, such as passengers' jewellery. Taking anything back to the characters' ship takes a complete sequence.

RUNNING THE EXPLORATION OF THE SHIP

The referee should play for tension and creeps, like a "haunted house" movie. Let the characters find half-eaten corpses, be startled by sudden movements, before encountering one of the clouds.

The clouds are (probably) possessed of animal intelligence only. They can sense the characters, and will be quite cunning in attempting to corner them or to get them to flee into another cloud. Clouds will not fight to the death, but will retire if hurt. They much prefer to ambush a lone, encumbered or fleeing individual than to fight it out with the whole party.

And note that stray shots have to go somewhere. In a starship, there are few good places to shoot a laser carbine…

The players may get on top of the cloud situation, but still they will not know what crippled the transport though. They are about to find out…

SCENE 5: DEPARTURES (KEY 10)
Requires: A6S4
The characters are already pushed for time. The storm is

worsening (this is just the edge!) and the wreck's contragravity system is failing. As if this was not bad enough, their ship's automated sensors relay a disturbing image… a large, semi-solid object displacing perhaps 2000 tons (twice the size of the transport) is closing fast. Its composition is very similar to that of the clouds.

This is what happened to the *Vraidercalt*. It ran into an adult cloud.

Chances are the characters won't wait around to see what happens next. They would be well advised to flee. However, it is possible that they will try to grab more salvage or otherwise hang around.

Referee: The adult is closing quickly; the characters are advised to flee to their ship and escape. The adult reaches the transport 10+3d6 minutes after it is detected. It engulfs the aft section of the ship and begins to gloop around both vessels. 2d6 minutes after contact, both ships are engulfed.

The adult can somehow bring force to bear on parts of the ship. It will attempt to crush the hull by constriction. Meanwhile, it is digesting antennae, control surfaces etc. Airlocks, such as where the two ships are docked, are particularly vulnerable and will quickly begin to fail. Smaller clouds (perhaps young) break away from the adult and roam over the two hulls, entering at any point they can and seeking living people to digest.

If the characters still don't feel like escaping, the following timeline applies, starting the moment the adult engulfs the two ships. Events occur during the period and are implemented at the end (i.e., the *Vraidercalt*'s drive section collapses 8 minutes after she is engulfed. The players should be able to perceive warning signs about what is happening that period – and plenty of other bad things should be happening aboard ship to keep them occupied.

Period 1: 8 minutes: The drive section of the *Vraidercalt* collapses inward, and her contragrav field begins to fail.

Period 2: 11 minutes: the contragrav field fails completely. The characters' ship cannot maintain altitude for both vessels. They begin to descend rapidly. Atmospheric pressure and temperature outside rises rapidly.

Period 3: 4 minutes: the characters' ship hull is breached. Clouds enter the ship 6 minutes; the characters' ship has serious hull breaches. Systems failures begin

Period 4: 14 minutes: the *Vraidercalt* breaks up. Anyone aboard is killed instantly and digested by the cloud.

Period 5: 2 minutes: massive systems failures aboard the characters' ship.

Period 6: 2 minutes: temperatures and pressure soar. The adult cloud breaks away, but the players' ship is falling out of control.

Period 7 2 minutes: despite the temperature, the atmosphere here is a boiling sea of liquid methane. The characters' ship plunges into it, bobs for a while, then sinks. There can be no survivors.

Chances are the characters will try to escape this fate. A DC 30 Pilot skill check is necessary to win free of the cloud. Failure means the ship is still engulfed. The pilot can try again after 2d6 minutes. After Period 3, DC is 35.

During Period 5 and after, DC is 40. Whatever the time situation, the pilot gets to make a skill check at least once per period.

Once free of the cloud, the players can begin the long climb to orbit. It is a rough ride, what with the storm and the damage. Fiendish referees may decide that some small clouds are on the hull and need to be dislodged by characters going outside. If they are not, they may get into the ship and cause havoc.

Assuming they got this far, the characters have one consolation; their fuel tanks have been filled up with liquid hydrogen skimmed from the atmosphere while they worked. Unless they have really bad systems failures, they should be able to Jump for Klesiter Alpha. If the ship is in a truly horrible state, they should be able to enter low berths and coast home. They'll get there eventually.

EPILOGUE

Completing their mission (the delivery of the records to Sentry) should be a simple matter for the characters once they reach the Klesiter Alpha system. They can profit from their adventures in several ways:

Salvage: The boxes of spares are indeed valuable. They would sell for Cr 25,000 apiece on the open market if the characters were willing to search for good buyers and use appropriate skills such as Broker. However, there is another option. LSP (Ling Standard Products, the manufacturer, offers a fee of Cr 20,000 plus Cr 15,000 per box, subject to an agreement that the characters will certify that they have returned or witnessed the destruction of all the spares. LSP will be pleased if the characters will take this deal, and may have work for them in the future. If they refuse, and sell cutting-edge LSP products to their competitors, they'll be less impressed and may make life difficult for the characters.

Survivors: Who are the people in the low berth tubes? The referee has a free rein to make them wealthy, influential, important, evil, annoying or whatever. Perhaps the characters' good deed will bring them fortune, perhaps a useful contact… or perhaps a new set of problems.

Other Opportunities: Characters can profit in other ways too, including selling their story to a chat show or writing papers on gas giant ecology or hostile-environment salvage operations. Inventive players will find a way to make a buck out of the adventure, and inventive referees can use this to drag them into the next.

Experience: The referee should award experience at the end of the adventure, or after each episode. It is recommended that characters who made sure the survivors were safe before going after loot should be rewarded in some way, perhaps with bonus experience.

The Future: The characters' ship has had its refit. They have a load of hostile environment gear at hand. They've proved themselves reliable and trustworthy, and able to handle themselves. What now? What indeed? Time, perhaps for one of the adventure seeds presented elsewhere in this minicampaign. Or maybe the characters have had enough of the Linkworlds and want to move elsewhere. It's only a couple of Jumps to Shanape, or to the Reaching Arm.

Wherever they go next, the characters are sure to find adventure!

FINAL WORDS

This adventure does require the use of a ship, but it shouldn't be too hard to incorporate that. Many groups already have one. Those that don't might use normal passenger tickets to carry out their mission and hire a small craft for the final Episode (using low berths to coast back and forth between Klesiter Alpha and Beta). However, it might be better to give a group without a ship the use of one. This isn't so hard. Perhaps the characters are assigned to pick up a battered old Scout/courier along the way and take it to the yards at Sentry for disposal, or to be refitted. Perhaps they can recruit an adventurous semi-retired ("detached") scout – like Bill, who is detailed in the ship encounters section along with his vessel.

Like so much else about an adventure, it is up to the referee to tailor the written work to his or her players. No published adventure can cover everything, especially in a universe as vast as that of Traveller. Instead, we present you with a framework, allowing you to expand and create at will. This adventure is set in the Official Traveller Universe (OTU) but the moment you get your hands on it, it moves to Your Traveller Universe (YTU). Which means you can do with it as you damn well please!

Just be sure to have some fun, okay?

By the end of this adventure, the travellers have seen a great variety of cultures and worlds. They've flown in space, fought a wild-west style pitched battle, fled a mob, ridden a steam train, frozen half to death in the wilderness and plunged into the depths of a gas giant world.

And hopefully, they've met interesting people (human and otherwise), visited restaurants and bars, been hot and cold and tired and hungry; hopeful and desperate. They've seen breathtaking wonders and been bored by mundaneity. In short, hopefully the characters haven't just made some skill rolls and beaten some enemies. Hopefully, just for a little while – they've lived.

Because Traveller isn't about adventure in the far future. Not really.

It's about PEOPLE having adventures in the far future.

'Nuff said. Enjoy.

— Martin J. Dougherty

EPIC ADVENTURE CHECKLIST

Key?	Done?	Scene	Required
Act 1: Liar's Oath			
-		Scene 1: Covenant Downport	
-		Scene 2: A Night on the Town	
-		Scene 3: The Mission Begins	
K1		Scene 4: Signal GK	
K2		Scene 5: Boarding the Malfeasant	A1S4
K3		Scene 6: Aftermath	A1S5
Act 2: Liar's Oath to Miip			
-		Scene 1: Sentry	
-		Scene 2: Alief	
Act 3: Miip			
-		Scene 1: Landing at Miip Starport	
K4		Scene 2: The Ursa Village	A1S5
K5		Scene 3: Down by the Riverside	A3S2
K6		Scene 4: Translation	A3S3
Act 4: Kerin's Tyr			
-		Scene 1: Arrival at Warne Highport	
-		Scene 2: Tersberg (Kingdom of Harven)	
-		Scene 3: Unity Downport (Confederation)	
-		Scene 4: Katter	
-		Scene 5: Ambush at Katter	A4S4
-		Scene 6: Star City (Grand Theocratic Republic)	
Act 5: Neigsten and Comore (Liberty Alliance)			
-		Scene 1: Getting the Records	
-		Scene 2: At the Stead	A5S1
-		Scene 3: The Gathering	A5S2
-		Scene 4: The Skirmish	A5S3
-		Scene 5: Preperations	A5S3 or A5S4
-		Scene 6: Battle of Sarragh's Stead	A5S5
-		Scene 7: After the War	A5S6
Act 6: Salvage at Kleister			
-		Scene 1: Fonnein Orbital	
K7		Scene 2: Kleister Beta	A3S3
K8		Scene 3: Approaching the Vraidercalt	A6S2
K9		Scene 4: Aboard the Vraidercalt	A6S3
K10		Scene 5: Departures	A6S4

Key?: Denotes if this is a *key* scene and in what order it should be played before other *key* scenes. These scenes should never be skipped or played out of key order if the adventure is to have a reasonable chance of being completed successfully.
Done?: Place a checkmark here if this scene has been played.
Scene: The name and number of the scene.
Required: The act and scene number of any scene that must be played before this scene can be introduced.

THE RUMOR MILL

Adventurers are fond of collecting rumors. Some of the following are relevant to the storyline, some are misleading, some irrelevant… and some are simply untrue. It is up to the referee to determine the veracity of any given rumor in his or her campaign.

Rumors fall into one of the following categories: Street (General), Commercial (Merchant), Spacer, Military, and Political. Depending upon a character's location and his/her contacts, the nature of rumor heard will vary.

Whenever the referee decides there is a possibly of hearing a rumor, roll on the following table. Rumors should be embellished and perhaps altered each time they come up.

Roll two dice to determine what kind of rumor is heard, then determine on the appropriate table, or pick one.

First Die Modifiers:
Character has military background: -1
Character has mercantile background: +1

Second Die Modifiers:
Character has low SOC (7 or less in T20, 5- in other systems): -1
Character has high SOC (14 or more in T20, 9+ in other systems) +1

First Die gives Column, Second is Row:

		1st Die							
		0	1	2	3	4	5	6	7
2nd	0	M	M	G	X	G	G	S	S
Die	1	M	G	X	G	G	S	S	S
	2	M	S	G	X	C	G	G	P
	3	X	G	X	G	C	P	S	C
	4	X	G	S	X	S	C	C	X
	5	M	X	G	S	G	C	C	C
	6	P	G	S	X	C	C	C	P
	7	P	G	S	C	C	P	P	P

Key:
X = No Rumor, or referee's invention.
G = General Rumor
S = Spacer Rumor
M = Military Rumor
P = Political Rumor
C = Commercial Rumor

GENERAL RUMORS

1d6 Rumor
1   The amount of Solomani and Imperial agents around here makes normal criminal activity impossible! This place is a hive of spies and counterspies!
2   Business is good for the arms dealers. The militias and the terrorists are buying up anything and everything.
3   Military-grade weapons are available on the black market if you know where to look.
4   Been an unusually large number of Ursa coming through recently. The don't normally travel much.
5   There's a new Hiver colony just over the Imperial border, out to Rimward-Trailing. Why they've set that up is a mystery.
6   Two minor government officials were assassinated last week.

GENERAL RUMORS 2

1d6 Rumor
1   A new round of colonial expansion, pushing the border out to Rimward, has been curtailed by the war. Prospective colonists are cooling their heels and equipment is just lying around.
2   Transfers of Imperial Army units to the war front are not being made good any more.
3   Vilani megacorps never had much of a hold in this region. Local, and generally smaller, firms make up much of the market.
4   The Imperial Navy is looking into creating a class of small escort-sized "peacekeeper ships" to take up the burden of patrol work. Contractors and designers are queuing up, but there's so much politics involved that you can bet the end result will be a turkey.
5   Since the Domain capital moved to the border, it's obvious that there is going to be a sudden lurch outwards; a rush of colonial operations.The annexation of a couple of systems seems likely.
6   Property prices are suddenly rising. Seems like someone's quietly buying up real estate. Perhaps they've heard there's going to be another round of ICO investment.

SPACER RUMORS

1d6 Rumor
1   Fragments of the hull of an *Ishkami* class cruiser have turned up two or three times in the past seven years, but in truth nobody knows what happened to INS *Melkami*.
2   A whole lot of Scout ships were transferred to Coreward-Trailing recently. On the quiet, so nobody knows how many.
3   A very old ship, declared lost in 823, limped into a border port a few weeks back. She was battered but still serviceable, and still crewed by her original personnel!
4   Some strange starships have been sighted lurking about the outsystems – they don't answer comms and run from the Navy, but otherwise don't seem to do much. The design is very unusual and has not yet been identified.
5   Commerce raiding and privateering are both on the up. It's only to be expected with the Navy so distracted, but it's not good.
6   There's good money to be made as a technician or a backup pilot at the bigger spaceports. They're always hiring, especially at Sentry. Mostly pretty dull work, but secure. Funny that they can't seem to retain the staff.

MILITARY RUMORS

1d6 Rumor

1 Those new *Lightning* class cruisers are on constant patrol, or so it seems. Given their mobility, the patrols could be a cover for fire-brigade response work.

2 Some of the mercs operating in the region are Solomani units preparing for an inside operation.

3 Instellarms is quietly recalling a large quantity of anti-shipping missiles.

4 The merc trade is so busy that new outfits are appearing all the time. Many are little more than armed bands.

5 Demands on the fleet are such that refits are being missed and leaves cancelled. The strain is beginning to tell.

6 The Navy has a number of "testbed" ships in the sector, undergoing trials with cutting-edge electronics systems. They're so short of vessels that these ships are being deployed as patrol and escort ships.

COMMERCIAL RUMORS

1d6 Rumor

1 Instellarms is quietly recalling a large quantity of anti-shipping missiles. Problem is, some of the missiles can't be traced.

2 Lack of escorts has prompted a crash-acquisition program by the Navy. Candidate designs in the 400-1000ton range are being evaluated.

3 MAE Lines has recently shaken up its security system, after sabotage by unknown parties.

4 Some small firms have recently been bailed out of financial trouble by the "Old Guard", which is odd given the resentment among Old Guard firms for the newcomers.

5 Ship construction is undergoing something of a boom. Some of the newer market entrants are cheap, but very shoddy.

6 Instellarms recently suffered a sharp dip in share prices for reasons unknown.

POLITICAL RUMORS

1d6 Rumor

1 For all the talk about new starts, the new Archduke is coming down hard on dissent of any kind.

2 A recent attempt to poison the Archduke has been blamed on Solomani sympathisers.

3 A delegation form the Lords of Thunder is travelling through Imperial space on a "goodwill visit". That seems unlikely!

4 Plans to outfit all Imperial Marines with Battle Dress have recently been mooted again, but as usual practicality and cost considerations prevent this. Rumours suggest that the arms firms leaned on a number of officials to push this through, and a scandal is imminent.

5 Prince Garlan is expected to announce an increase in his personal funding for the Imperial Planetological Society sometime soon.

6 A measure to allow "licensed psions" to undertake specialist duties within Imperial Security was recently placed before the Emperor. It was thrown out, of course.

LIBRARY DATA

URSA

Ursa are a race genetically uplifted from Terran brown bears during the Rule of Man period. They are large and powerful, and were intended for high-gravity colonies. However, the experiment was deemed a failure and the entire species slated for extermination by GenAssist, the Solomani corporation responsible for their development. Several thousand Ursa escaped, fled, and formed the basis for the modern race.

Ursa are rare, and this is reflected in their racial psyche. They see life as utterly precious, and mostly just want to be left alone. They have little malice, but they are reserved with strangers and slow to trust anyone.

Ursa are described as a player-character race in the T20 rulebook.

SHOCK PRODS

The spear-like weapons found aboard the *Malfeasant* are shock prods. Basically a long spear with an electrified tip, fed by a belt power pack. They are designed for fending off dangerous animals of various types.

The weapons are not sharp enough to be used as a spear against a normal creature, though they can be plunged into protoplasmic creatures and activated inside. Using the prod requires a normal to-hit roll for a spear or staff-like weapon. If the target is a protoplasmic creature and the prod has already hit, it hits automatically each round unless the creature moves out of reach.

The belt packs contain 15 power units, and can be recharged from a shipboard power plant at the rate of 5 points every hour. The prods have 3 settings: Setting 1 uses 1 power unit per hit, and delivers 2d6 Stamina damage. Setting 2 uses 3 power units for 3d6 Stamina damage, and setting 3 uses 6 power units for 4d6 damage.

Most creatures will recoil from the shock and be unwilling to approach again.

GAS GIANTS

Gas giant planets are awesome things, with deep atmospheres of methane and other gases. While ships often skim the upper reaches for hydrogen fuel, little is really known about these hostile worlds. What lies deep in the atmosphere? What strange beings might be encountered there? If travellers can find a way to survive the winds, the temperatures (high AND low, depending upon the level), the radiation, the pressure and any other hazards along the way, then they may reach a level where the atmosphere is liquid. Below that may be a rocky core. All that is certain is that no creature that lives there is likely to resemble anything found anywhere else.

THE CLOUDS

Are they sentient? Hostile? Psionic? Can contact be made with them? Is there something that THEY are afraid of, gliding through the depths of the atmosphere? Who can say?

Actually, the referee can.

GENERIC NPCS

The following rather generic NPCs are provided for use by the referee when one or more opponents may be needed for a given encounter. These NPCs may be used 'as is', or the referee is free to adapt them to suit their needs.

Regular Guard: Human Professional 3/Mercenary 3; TL 10+; Init +1 (+1 Dex); AC 17 (+6 CES, +1 Dex); AR 6 (CES); Spd 6m (4sq); St/Lb 26/11; Atk +7 ranged (snub pistol 1d10/20), +4 melee (shock baton 1d6+1d6+1/20), +7 ranged (snub smg 1d10/20); +7 ranged (light ACR 1d12/20), +5 melee (fist 1d4+1/20); SV Fort +4, Ref +3, Will +5; SZ M; Str 12, Dex12 Con11, Int 10, Wis 10, Cha10, Edu 11, Soc 10.

    Skills: Pilot +4, Spot +5, Listen +5, P/Security+6, T/Electronics +6, T/Communications +6, T/Computer +6, T/Sensors +6, K/Interstellar Law +8, P/Admin +8, Sense Motive +5

    Feats: Vessel (grav), Armor (light, medium, vac suit), Weapons (armsman, marksman, combat rifleman), Alertness, Quick Draw, Professional Specialty (Security), Brawling, Interrogation, Legal Eagle, Skill Focus: Sense Motive

    Equipment: Combat Environment Suit, Snub pistol with HUD, shock baton, access to Snub SMG with HUD or Light ACR with HUD.

Regular Thug: Human Rogue 6; TL 5+; Init +5 (+1 Dex, +1 Improved Initiative); AC 13 (+2 jack, +1 Dex); AR 2 (jack); Spd 9m (6sq); St/Lb 32/12; Atk +5 melee (fist 1d4/20), +4 melee (dagger 1d4/19), +4 ranged (shotgun 3d6/2d6/1d6/20), +4 ranged (revolver 1d10/x2), +4 ranged (auto-pistol 1d10/x2), +4 ranged (SMG 1d10/x2); SV Fort +2, Ref +6, Will +2; SZ M; Str 11, Dex 12 Con 11, Int 10, Wis 10, Cha 10, Edu 6, Soc 5.

    Skills: Driving +10, Innuendo +9, Intimidate +9, Listen +11, Spot +11

    Feats: Vessel (wheeled), Weapons (marksman, swordsman), Armor (light, medium), Alertness, Toughness, Brawling, Improved Initiative, Spot Trouble, Quick Draw, Point Blank Shot

    Equipment: jack armor and 1-2 of the following: revolver, autopistol, shotgun, SMG, dagger.

Regular Merchant Crew: Human Merchant 6; TL 12+; Init +0; AC 13 (+3 vac suit); AR 3 (vac suit); Spd 6m (4 sq); St/Lb 22/10; Atk +1 ranged (snub pistol 1d10/20), +2 melee (fist 1d4/20), +1 melee (lead pipe 1d4/20), +1 ranged (shotgun 3d6/2d6/1d6/20); SV Fort +3, Ref +2, Will +3; SZ M; Str 10, Dex 10, Con 10, Int 11, Wis 11, Cha 10, Edu 12, Soc 10.

    Skills: all: Pilot +9, P/Merchant +9, K/Trade Law +10, Appraise +9, Gather Info +9

    a) Bridge Crew: T/Astrogation +10, T/Computer +10, T/Sensor +10

    b) Tech Crew: T/Engineering +10, T/Mechanical +12, T/Electronics +12

    c) Trade Crew: Trader +11, Broker +11, Liaison +9

    Feats: all: Vessel (grav), Armor (light, vac suit), Weapons (Marksman), Barter, Brawling, Connections (merchant), Zero-G/Low-G Adaptation, First Aid

    a) Bridge Crew: Vessel (ship's boat, starship), Hacker

    b) Tech Crew: Jury Rig, Gearhead. Miracle Worker

    c) Trade Crew: Steward, Calculating Eye, Chief Steward

    Equipment: vac suit, snub pistol, lead pipe.

THE GRENDELSBANE

Type A2 Far Trader *Grendelsbane*, registered out of Daramm. 200 tons displacement.

Fuel Requirements:	44 tons
Jump Capability:	One Jump-2
Maneuver Drive:	2 constant
Cargo Capacity:	66 tons
Passenger Capacity:	4 Low Berths
	10 Staterooms (including crew accommodation)
Crew:	4 (Pilot, Astrogator, Engineer, Steward/Medic)
Armament:	2 Hardpoints for standard turrets
	1 dual beam laser fitted. 1 hardpoint empty
Ship's Vehicles:	None
Ship's Locker:	8 emergency softsuits (vacc suits for persons who don't have their own)
	Portable Mechanical and Electronic toolkits
	2 standard Survival Kits (each for 4 persons)
	1 portable medical kit (TL 11)
	8 Cold Weather Clothing kits
	8 Combination Filter/Compressor Masks
	4 Blades
	4 Autopistols
	2 Shotguns
	Assorted other junk, including:
	Broken and misplaced tools
	Souvenirs from planetary visits
	Old shoes and clothing
	Several issues of Popular Gravitics magazine

The *Grendelsbane* is a typical Far Trader. A little beat-up but basically spaceworthy. She normally engages in tramp freighting and speculative trading, but can also carry passengers. 4 low passengers can be accommodated, and up to 8 High or Mid passengers, assuming a crew of 4 using double-occupancy.

However, double-occupancy is uncomfortable, so it is more likely that each crewmember has a stateroom of their own. Additional crew (e.g. a gunner) might be added, further reducing the ship's passenger capacity.

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- The UWP stats for each world in the Cluster.
- The slip rules found on pages 20-21
- The Storm Events, Weather Conditions, and Superlightning Strike Results tables on page 27.
- The ship to ship docking rules found on pages 27-28.
- The Protoplasmic Clouds and the Suit Failure rules on page 29.
- The Shock Prods on page 31.
- The *Grendelsbane* ship information and Generic NPCs on page 32.
- Any other sections using the Arial Narrow Font.

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