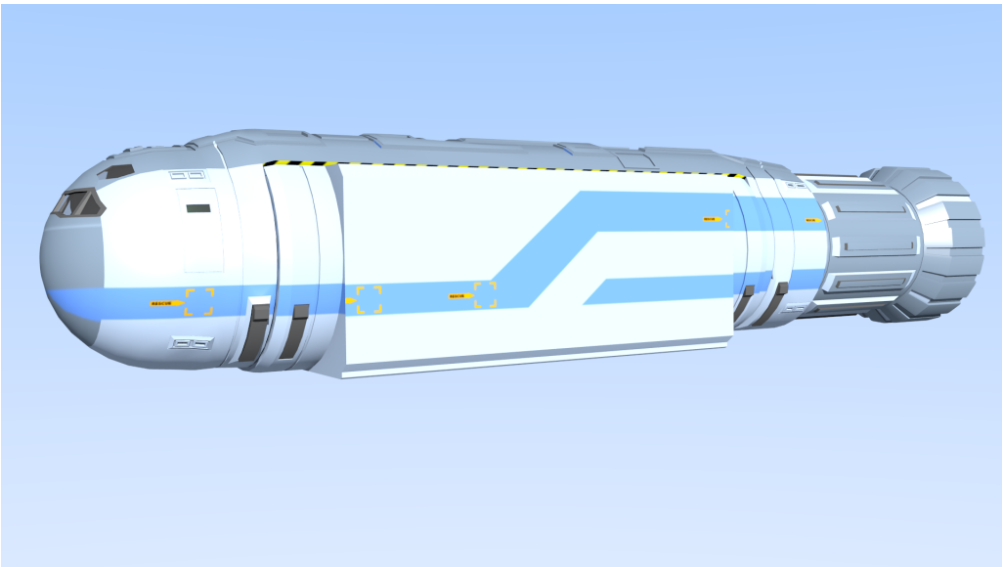
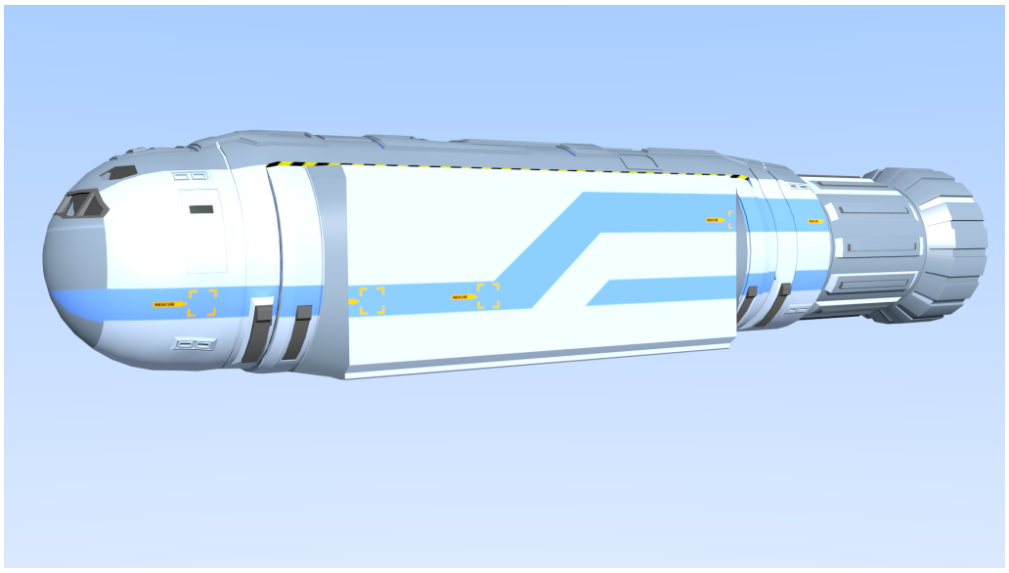
Small Craft – 50 ton Modular Cutter w Container Module

The Modular Cutter is a versatile craft. However in some cases the circular cross section is not optimal. The images below show a Cutter with a module that features a rectangular cross section almost over it's entire length. Only the end „caps" with the landing gear and cutter's connectors as well as the overhead fixtures remain the same as on any other module. It is an unstreamlined module however.

Vol;Name;TL;Free;Gs;Fuel;Duration;MCr;Computer;Notes
50 ;Modular Cutter ;11+ ;34 ;4 ;2t;4 weeks ;27 ;Model/3bis;



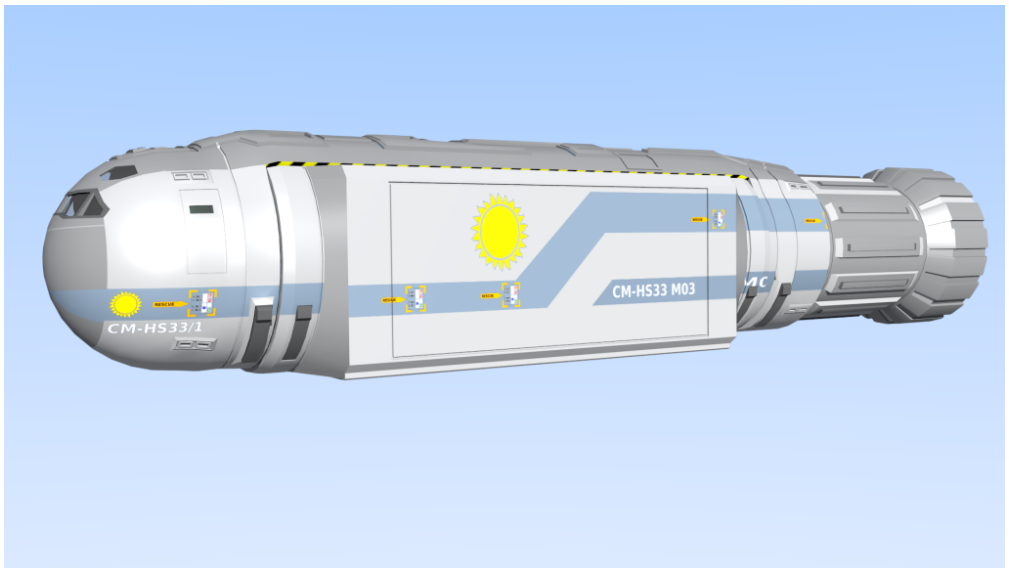
The Container Module has 35 tons and affects the performance of the cutter by reducing accelleration by 1g. The image below shows the same module with an optional AeroCowl installed, that partially streamlines the module and provides better handling capabilities in an atmosphere. The cowl can be installed by two workers within 30 minutes, provided they have access to some lifting device or a forklift.



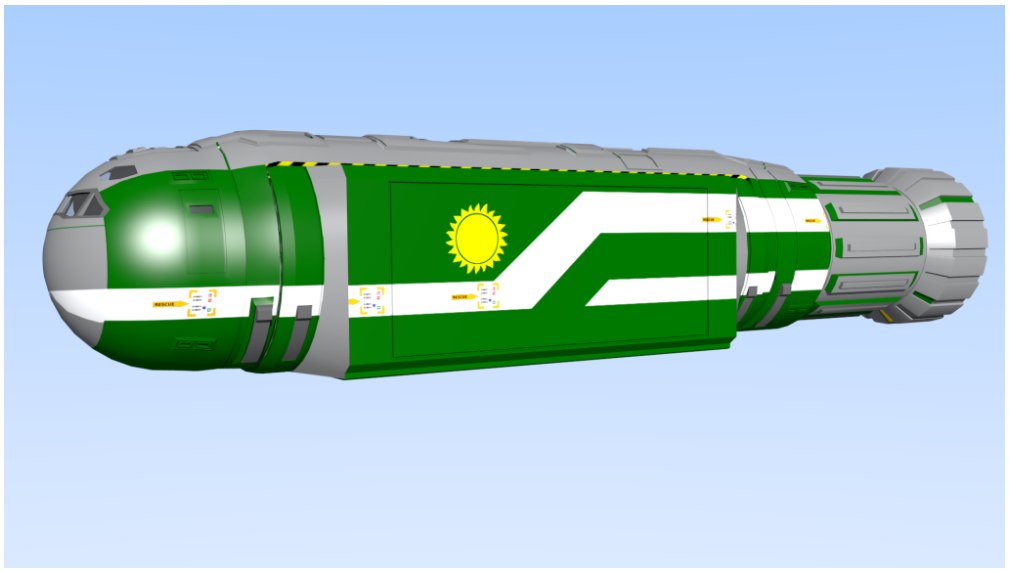
Various Variants

Imperiallines

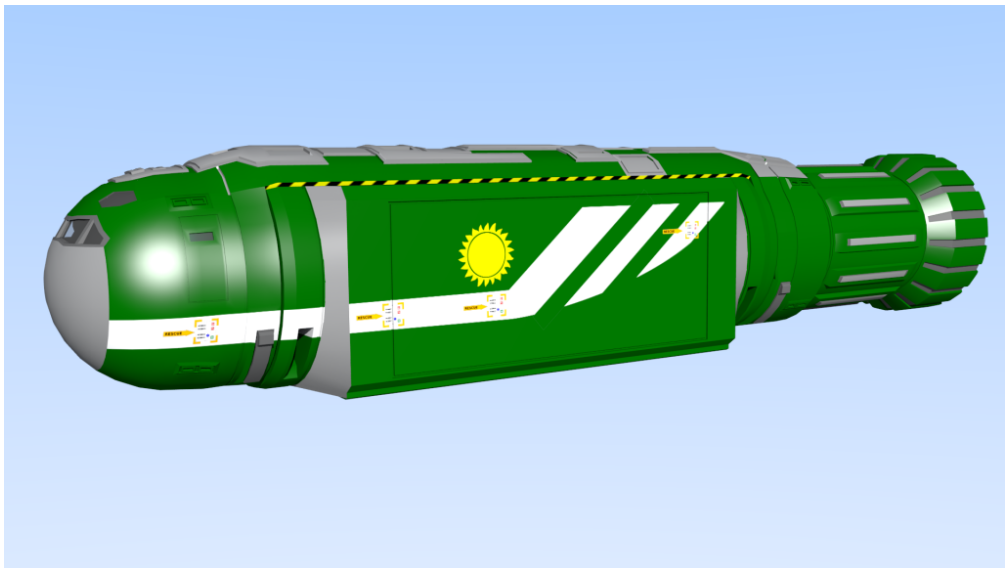
Navy



Navy 2



Navy 3

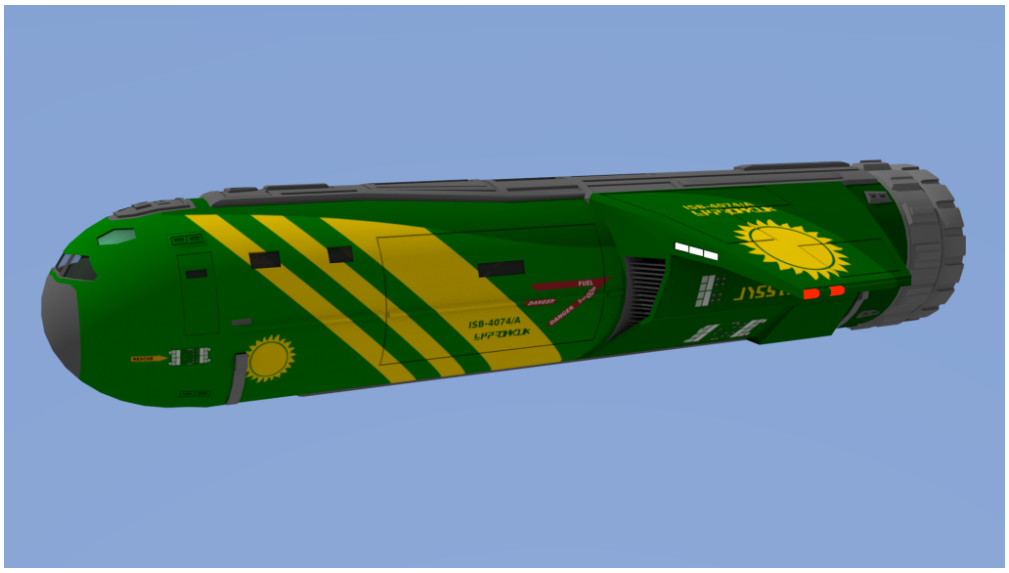


More to come…

Small Craft – 30ton Slow Cargo Boat

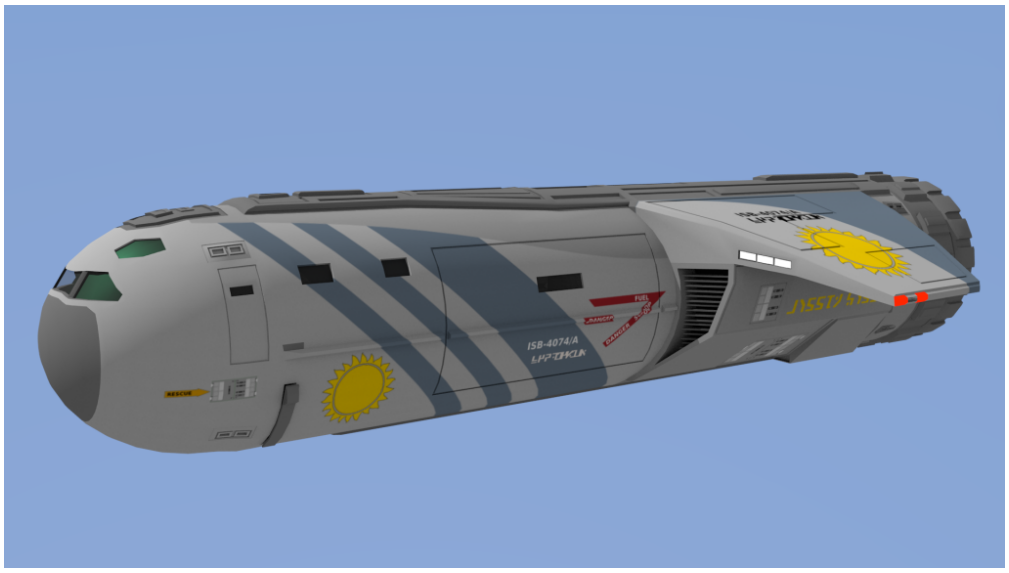
Based on my 30ton Ships Boat Model with a slightly shortened hull, this winged boat has much greater cargo capacity than the Ship's Boat at the cost of accelleration.

Vol;Name;TL;Free;Gs;Fuel;Duration;MCr;Computer;Notes
30 ;Slow Boat ;10 ;20 ;3 ;0.5t;16 days ;13 ;Model/1 ;C

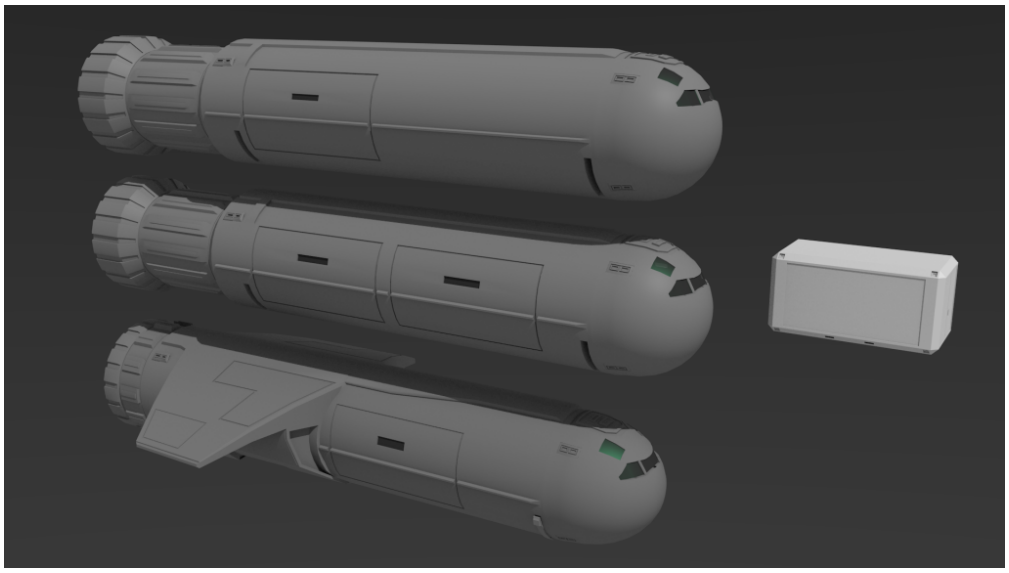


Texture variant „Imperiallines“

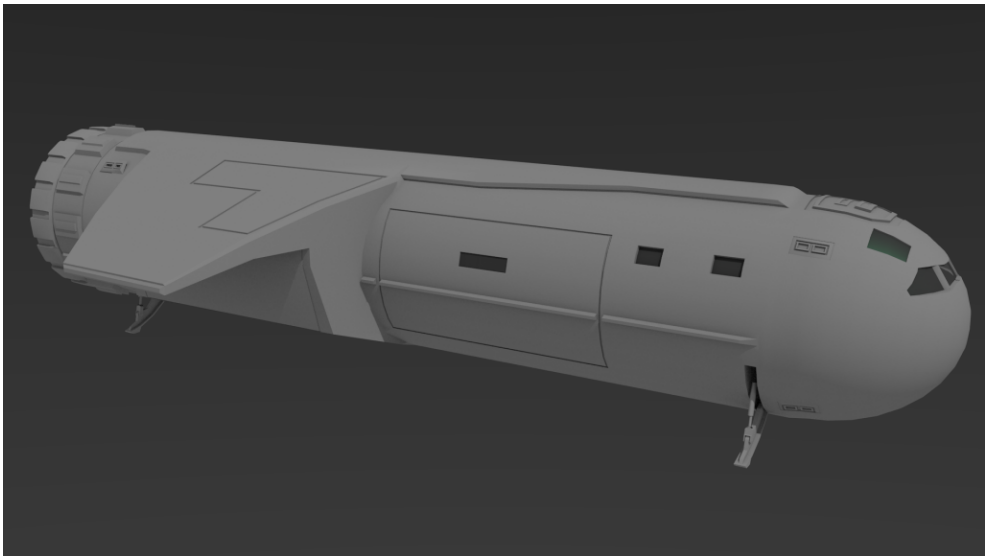
Texture Variant „Navy“



It features the same landing gear as the Boat or Cutter, is based on a 5m diameter hull with a slightly elongated nose cone.

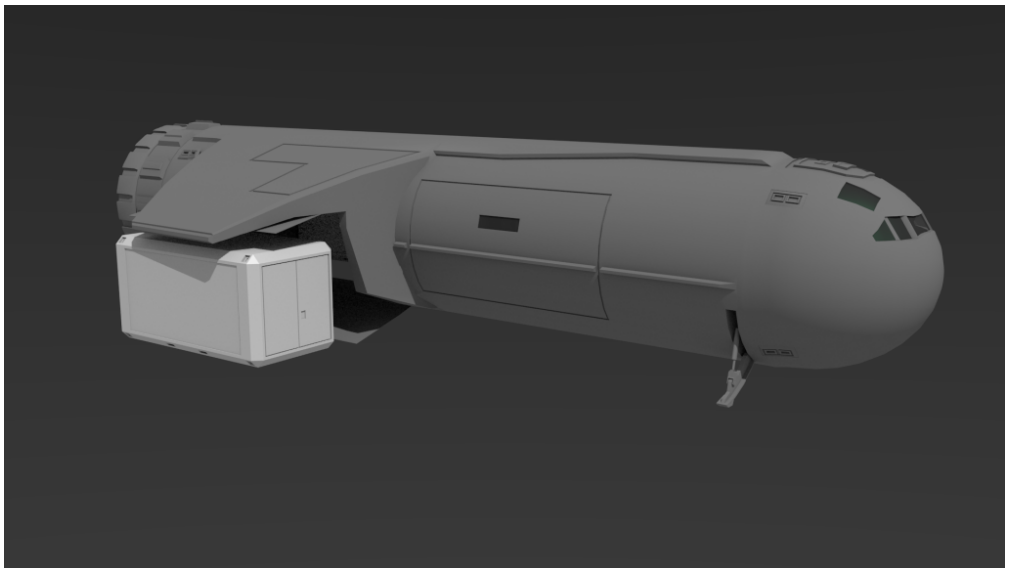


The container visible in the Render above is a 4 dton Container measuring 6m x 3m x 3m. All three craft are designed to be loaded with this container in mind. Of course a lot of capacity is wasted carrying containers due to the circular cross section, Except for the slow boat whose cargobay rear of the loading gate has a rectangular crossection.



30ton Slow Cargo Boat w Container Extension (closed)

However loading two of these boxes side by side would be a very tight fit there too. Considering this the Rhaan Interstellar variant of this craft has side loading gates at the rear section too. These are complemented by loading davits that hoist one container into the bay on each side. The container however needs to be placed beneath the wings with the cargo gates open.



All „tubular“ Traveller RPG small craft follow the same basic layout. Maybe I should to try to explain…

The bow section houses cockpit, sensors, computer, fresher,

weapon control and airlock, next to the center is either a passenger compartment or the cargo bay, wich is always located in front of the powerplant housed in the rear section just in front of the maneuver drive. Front and rear are seperated by bulkheads. Fuel and piping or wiring, safety equipment and sometimes more storage space is located beneath the deck. Wings, fins and the like were also used as a distinguishing feature.

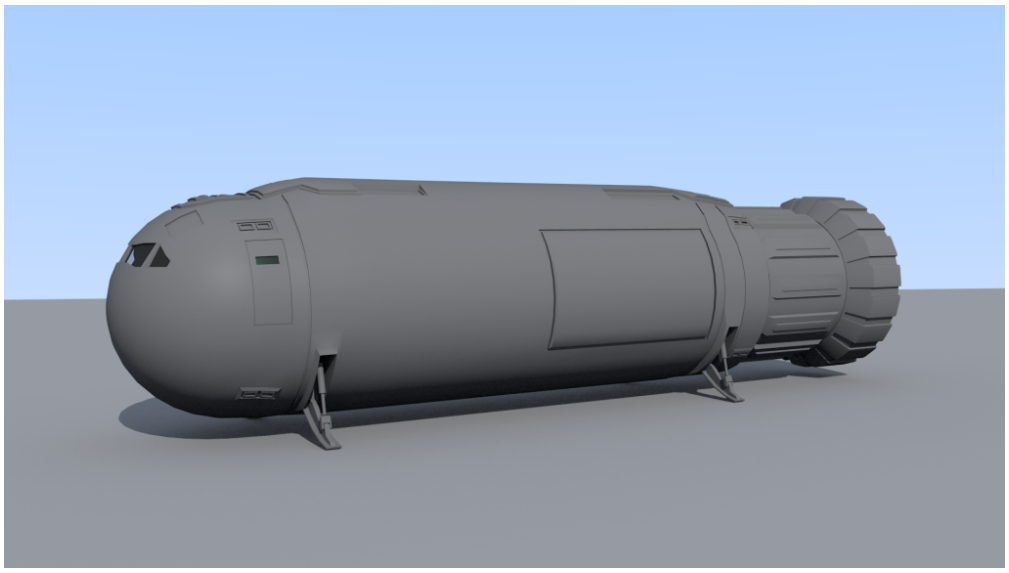
Here are deckplans that illustrate the concept (not this particular craft):
http://juliahwest.com/Traveller/Peter_Vernon/smallcraft.html

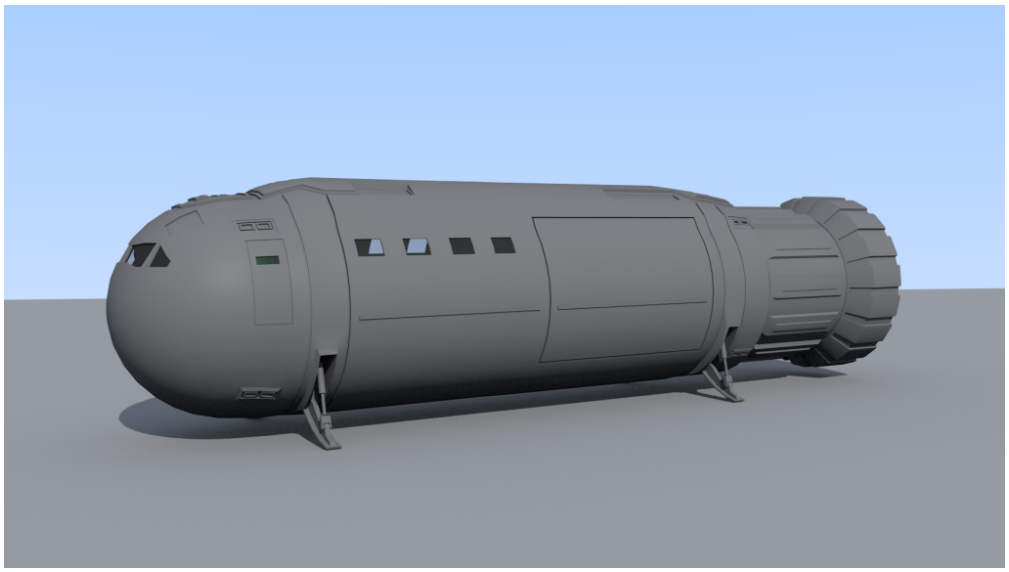
Typical craft were a small 20ton Launch, the larger 30ton Boat, an even larger 40ton Pinnace and at 50ton the Cutter, each with several slow, fast or modular variants. These are very typical Traveller subcraft dating back to the mid 70ies. ☺

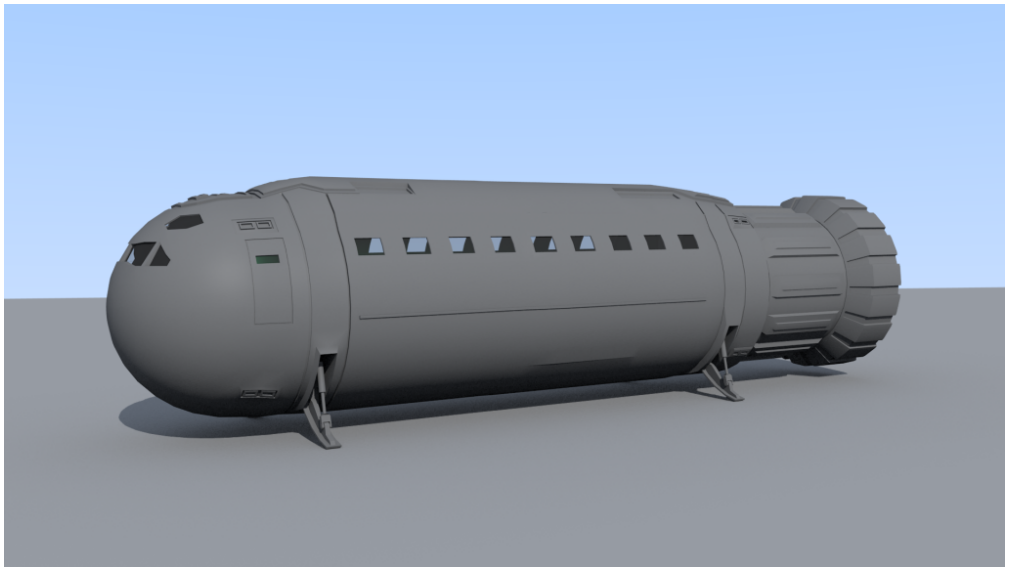
40ton Research Pinnace revisited…

Vol;Name;TL;Free;Gs;Fuel;Duration;MCr;Computer;Notes
40 ;Pinnace ;12+ ;24 ;5 ;2t;4 weeks ;19.4 ;Model/2 ;L2

Tiny update on that craft. I already had the combi-variant with a cargo compartment behind the passenger compartment. But I figured a passenger only „shuttle“ variant and a pure cargo variant would be nice too. So here are all three.





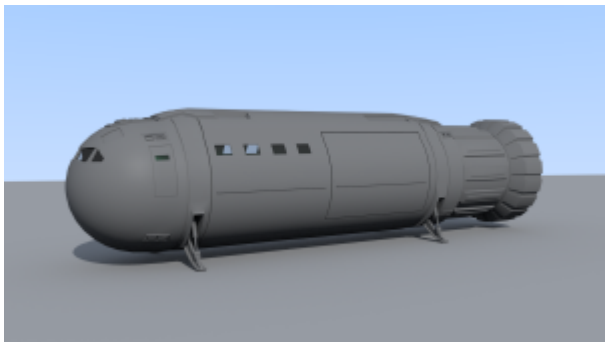


The 30ton Ship’s Boat and 20ton Launch share the same diameter hull and front section. As visible at the cockpit window

configuration these craft have three windows out front. The 50ton Modular Cutter and the 40ton Research Pinnace however share a 6m diameter hull and the same front section to. These cockpits have four windows out front.

Small Craft – Boquist Class 40ton Research Pinnace

This boat is supposed to dock with the central hub of 400ton Lab Ship / Ring Laboratory. The Boquist Class Research Pinnace differs from the ordinary Pinnace in it's tubular shape. It is basically a shortened Cutter with a fixed interior configuration. The 40ton craft show here is designed to carry up to 24 Passengers plus 9tons of cargo in its hold. The cargo bay occupies most of the boat's height in front of the engineering section, which can carry one or two 4-Seater Air/Rafts (e.g. a Hurricane enclosed Air/Raft). Or one such vehicle plus some Equipment and supplys.



The Research Pinnace serves a multitude of roles including but not limited to transferring Passengers and scientific personnel between the Lab Ship and orbital or ground destinations, performing supply and service runs to stationary sensor installations as well as various pieces of research equipment left on interesting sites or satellites as well as

signalling and marker buoys deployed in a planetary or stellar orbit.

There are specialised equipment containers specifically designed for use in Aircraft or tubular spacecraft hulls, which have a bevelled short side normally facing the outer wall of the hold and a straight short side facing the inside of the hold.

I actually never planned to do a lab ship, but I like the idea of building it just to complement the Research Pinnace.

Has anyone ever calculated the Labship stats when docking a modular cutter instead of the Pinnace? Will it suffer dramatically in Performance (we might argue about the term “performance” but we know she’s no racing ship)? Well maybe I should just go for it myself…

Hope you like.

PS: Though I have a half finished Donosev on my workspace, I quite enjoy modeling tubular small craft atm, so a 20ton Launch and 30ton Ship’s Boat are possibly next in line.

Here’s a tiny preview to what I have in mind (click on image to jump to article)…

Stats and Info: Boquist Class 40ton Research Pinnace
Variants

Lundquist Class 40ton Modular Pinnace. This is basically the same Ship but configured to operate like the modular cutter. Pinace modules however are 20 ton modules.

Comments (0)

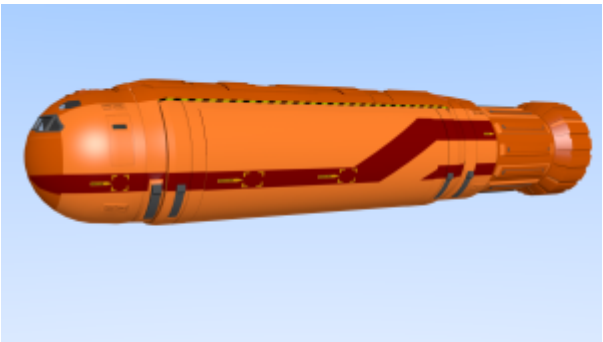
Small Craft – Boquist Class 40ton Research Pinnace
Category: 3D-Model,Pinnace,Space Craft,Traveller,WIP – admin @ 19:07
Apr

19 2013

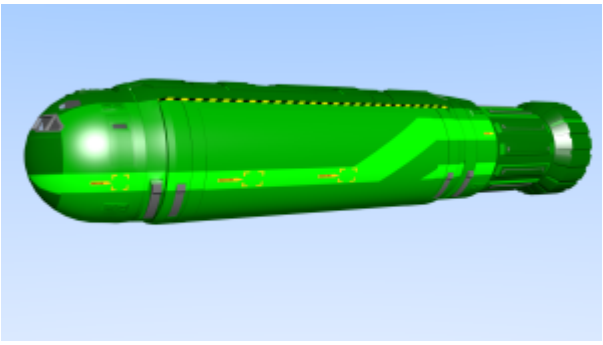
Small Craft – 50ton Modular Cutter and ATV-Module

Vol;Name;TL;Free;Gs;Fuel;Duration;MCr;Computer;Notes
50 ;Modular Cutter ;11+ ;34 ;4 ;2t;4 weeks ;27 ;Model/3bis;

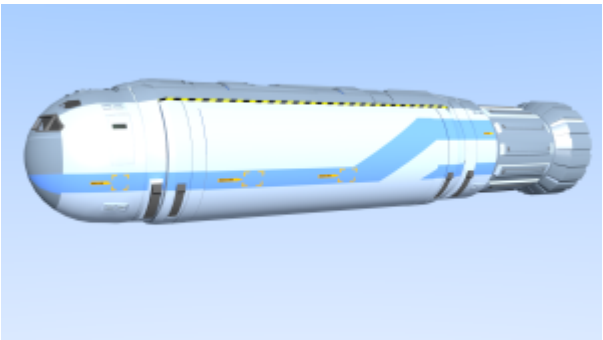
Ever since I modeled my variant of the Horronon ATV the idea of doing a matching ATV-Module for the cutter was planted inside my head. So I finally started to tackle that darn thing. If you ever wanted to know why only one 10ton ATV fit into a 30ton Module: here is the answer, rendered and clear.



Above: A bold orange and red scheme that could belong to a deep space salvaging or SAR service.



The green scheme might fit to a local hauler or passenger service providing regular scheduled in system freight or ferry service where the craft ciuld be seen on a ground port regularily.



Actually this blue on ligt bluish grey reminds me of Scandinavia. The trucks from up there have these pastel colors sometimes. Translating to Traveller this could be the scheme of a freight service on the fringes of settled space.

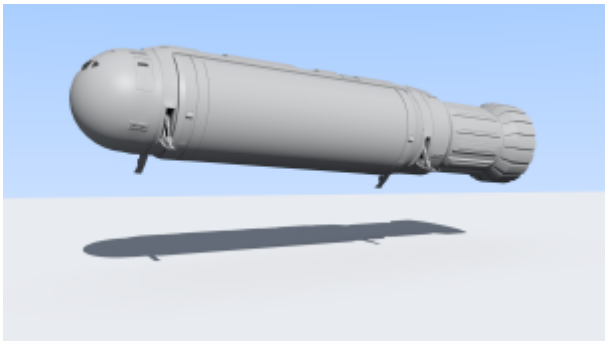
The 50ton Modular Cutter and the 40ton Research Pinnace share a 6m diameter hull share same front section to. These cockpits have four windows out front. The 30ton Ship's Boat and 20ton Launch also share the same hull and front section, but a 5m diameter hull. As visible at the cockpit window configuration these craft have three windows out front.

Setting out a module and ATV in 8 easy steps

I thought about a mechanism to deploy the Horronon ATV and stick as close to the vehicles description as possible. Accoding to CT Adventure 3 the ATV featured collapsible tracks. For this reason rolling onto the module was ot of the question.

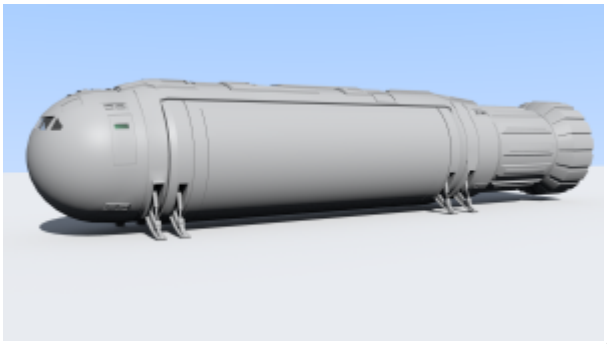
So i came up with the heavy duty hoist mechanism attached to a rotating boom. The Horronon gets parked beneath the rotated boom under the module. The crew attaches the lifting hooks and lifts the Horronon, so the tracks can savely collapse. After

rotating about 90 degrees, the Horronnon is lifted so that its rear gate can be opened to the cutters front compartment and that the tracks clear the path of the telescopic or clamshell gates of the module. After closing the gates the module is ready for pickup. Depending on the vehicle the hoist mechanism can mount clamping adapters that safely secure the vehicle during transport.



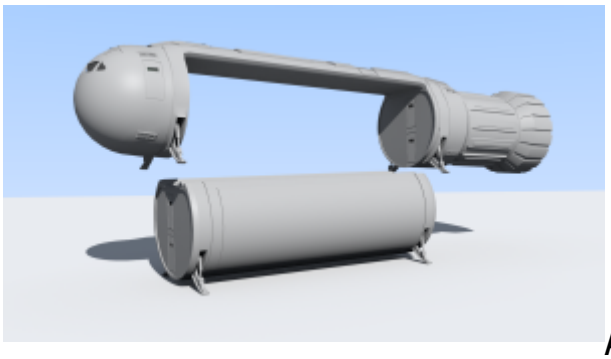
Above (1): The 50ton Modular Cutter as it would aproach with a module

Above (2): Touched down with main langing gear extracted

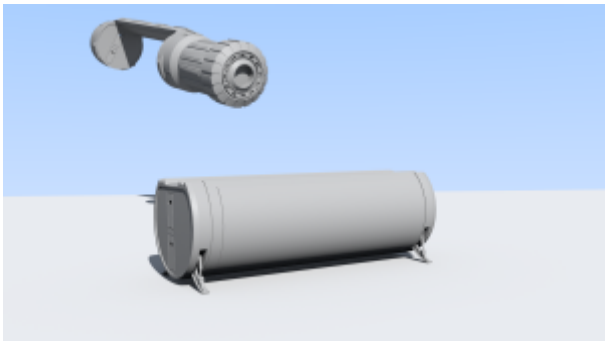


Above (3): The modules supporting landing gear will be extracted prior to the actual setout.

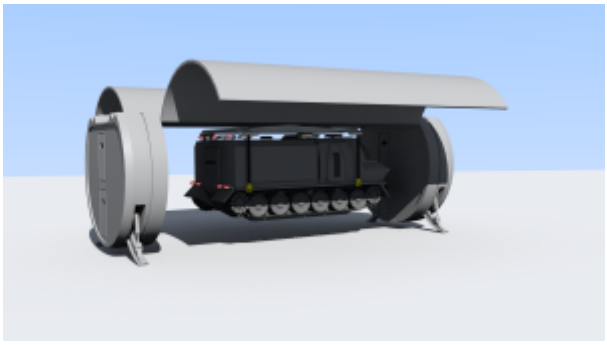
The Pilot might opt to land with both the cutter’s and module’s gear extracted.



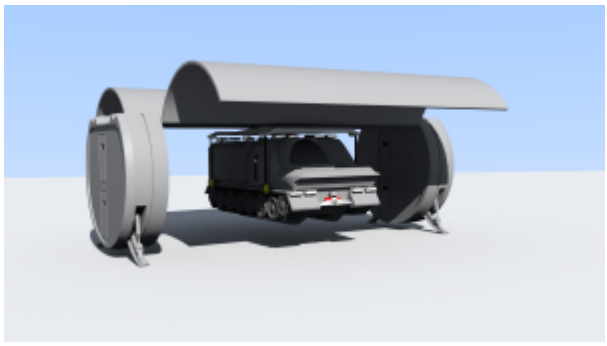
Above (4): After unclamping the module (autoreleasing support circuity inside overhead spine of the cutter), the cutter lifts straight up from the module and turns onto its new course only when clear from the module.



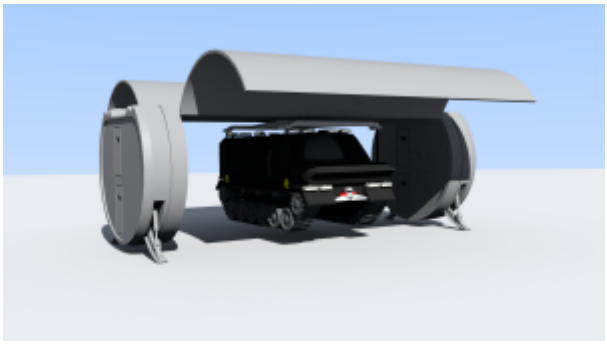
Above (5): The Modular Cutter leaves the module and heads of again to fetch the next or to park away in the distance…



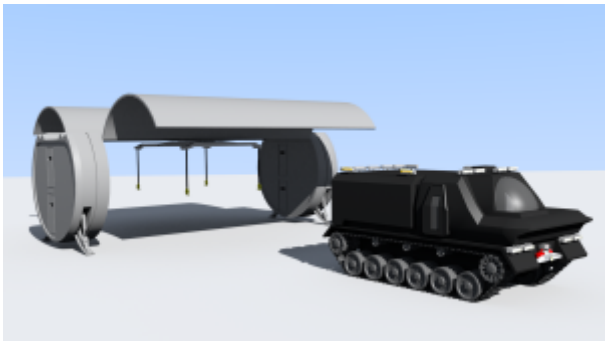
Setting out the ATV above (6): The open grounded ATV-Module



Setting out the ATV above (7): The open Module, with ATV rotated 90 degrees but tracks still collapsed



Setting out the ATV above (8): ATV hoist mechanism rotated by 90 degrees, ATV tracks deployed



Ready for exploration or action: ATV trundling away from the empty module

This is a work in progress, so changes are very likely.

I might go ahead and design a few variants of these small

craft using these rules on CotI:

http://www.travellerrpg.com/CotI/Discuss/showthread.php?t=29680&highlight=cutter

Comments (0)

Small Craft – 50ton Modular Cutter and ATV-Module
Category: 3D-Model,Cutter,Ground Vehicle,Space Craft,Traveller,Vehicle,WIP – admin @ 02:18
Apr
15 2013

Starship – 400dton Donosev Class ISV (WIP)

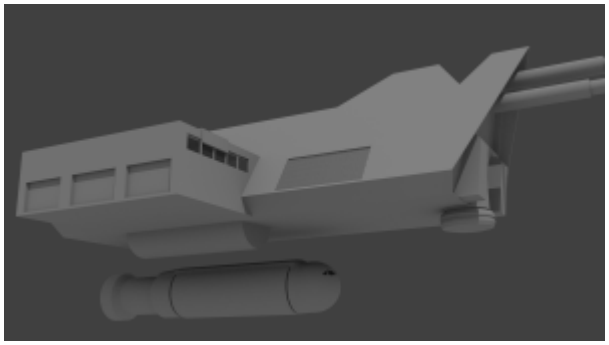
The survey scout is a typical ship in service with the Imperial Interstellar Scout Service. Its function is to continually re-survey the interior regions of the Imperium, updating maps and charts, and maintaining beacons and markers for astrogation hazards. The ship essentially serves much the same role as a modern day coast guard seagoing buoy tender, offshore supply vessel or ice breaker (or any combination thereof).

The ship is catagorised as Type SZ, or “Scout Experimental”, and in fact three different versions of this ship have been built.

The most recent, was the result of improvements to sensor placement made during the Second Survey and was producved in two variants. The Donosev Class Interstellar Survey Vessel was named after Master Chief Surveyor Villemina Donosev.

Individual ships are named for famous scouts in the Imperial service.

As is the case with most modern Scout vessels, the Donosev-class is not equipped for use in hostile areas. The survey scout is a peaceful vessel, typically unarmed and inoffensive. It does, however, mount four hardpoints and can be armed with a variety of turrets and weaponry if necessary. The Donosev class survey scout is named for famous scouts in the Imperial service.

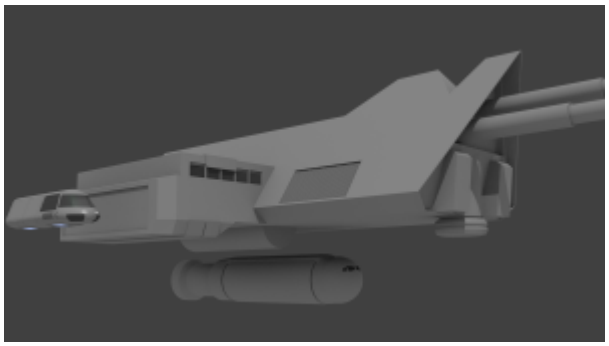


The Donosev ISV2 with three Air/Raft Hangarbays and the Modular Cutter undocked

This is probably the one ship that is truly asymmetrical in shape among the Traveller starships and possibly because of this it was not very highly regarded amongs players I used to play Traveller with. However, I liked the old Donno because it is the perfect base ship for a medium crew.

I plan to model two variants. One variant I call the ISV2 with three Hurricane Air/Rafts and the one variant I call ISV1 with a Kankurur Grav Carrier in a single larger Hangarbay in place of the Air/Rafts. Both vehicles are depicted in DGP’s 101 Vehicles, so I’ll go from there. No idea how to fit that Kankurur into the hull though.

Please note that the designations ISV1 and ISV2 that I use in this text are non-canon and used only to differentiate the two models. Both are Donosev Class vessels.



The Donosev ISV1 with a large Hangar for the Kankurur Grav Carrier and the Modular Cutter undocked

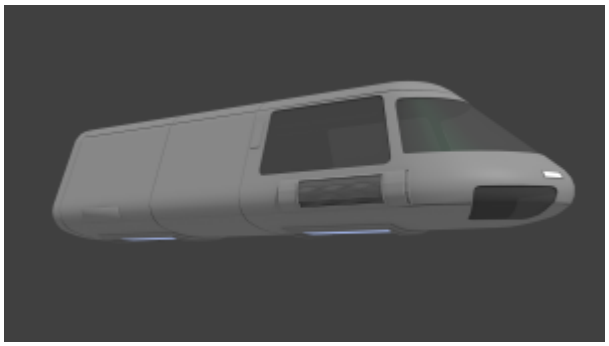
I remeber to have read somewhere (DGP's Grand Survey?) that the Hangar Bay of roughly a quarter of the Donosevs in service is about 2m higher and 1.5m wider but the remainder of vessel otherwise unchanged. That's not easy to implement without outer changes on the craft, as you can't simply go up or inward as there are are likely staterooms, corridors and laboratory spaces (as well as the brigde above the bay.

Perhaps a bulge beneath the vehicle bay to allow for the extra height and width. The render above shows my approach with the bulge beneath the command section which was widened by pushing the outer wall another 1,5m into space.

The resulting ship will be 135kl or aproximately 10dt larger in tonnage, which is or could be a problem. 410dt is well within the often cited 5% tollerance, which on the other hand was only meant to account for deckplan variance.

Just from a modeling point of view one could assume the ISV1 being at about 405dt and the ISV2 at 395dt which would account for the ten tons difference and reduce the error to plus/minus 1.25% as compared to the calculated volume of 400dt. At least I am well prepared to accept that, until I have my copy of Traveller5 which I plan to use for calculating all my Traveller ships.

The Subcraft and Vehicles

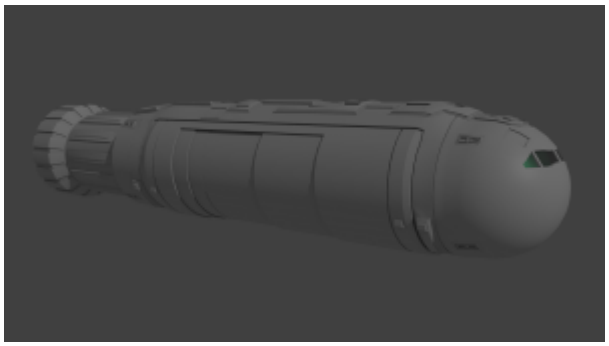


The Tech level 15 Kankurur class Scout survey Grav Carrier was commissioned in 1097 – following a design dating back to 1095 – and is equipped to support both survey and exploration missions with full crews. . The Kankurur is a large pradtory bird native to Vland that was often trained as a courier animal capable of carrying up to 20kg of cargo in its talons. Consequently named vehicles often carry the names of significant native animals of the worlds of the Imperium.

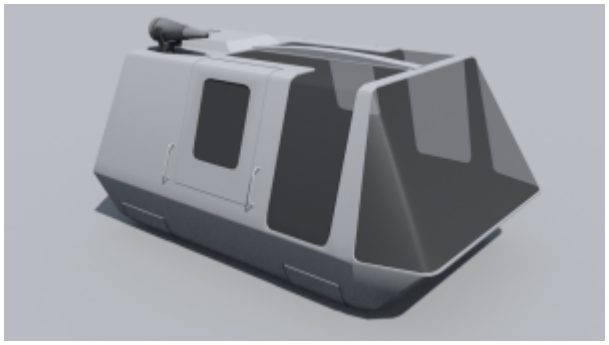
The vehicles' sealed environment allows forl full pressurized life support for its crew. An airlock in the aft section opens to the roof as well as aft. A galley, four fold-up bunks, and a fresher allow extended missions. On the bridge, the basic controls are computer enhanced to increase the efficency and safety of operation. EMS active and passive sensors, a neutrino sensor, and a densitometer give a full range of information to the surveyers on board. A Meson communicator allows near-instant contact with any other station within planetary range.

In addition to the crew (pilot and five operators or passengers) the grav carrier can carry 0.5 ton of cargo in the main cabin and 1.5 ton in the airlock. Unloaded, the craft weighs about 60 tons; with crew and maximum cargo it weighs about 95 tons. Top speed is at 240kph, cruise at 180kph and NOE at 190kph. The vehicle costs about 10.650.000 Cr amf displaces 11 tons. Length 15.25m, width: 8.30m, height: 7.50m.

The 50ton Modular Cutter



The Hurricane Air/Raft



The ship stats can be found here: http://www.ace-dog.co.uk/Traveller/Shipyard/DONOSEV.htm

A deckplan I found wandering through the web: http://tahspeck.wdfiles.com/local–files/ships%3Adonosev/mod-donosev.pdf

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Jesse DeGraff did one that can be seen here, here and here.

I use his progress report as reference material: http://visionforgestudios.com/jesse/traveller/donosev_progress.htm

Ian Steed did one that can be seen here: http://biomassart.files.wordpress.com/2011/02/donosev.jpg

Comments (0)

Starship – 400dton Donosev Class ISV (WIP)

Category: 3D-Model,Cutter,Deckplan,Grav Carrier,Scout,Starship,Traveller,Vehicle,WIP – admin @ 18:39 Jan 24 2013