

JUMP POINT

A ROBERTS SPACE INDUSTRIES PUBLICATION ISSUE 02.06



IN THIS ISSUE

- Work in Progress: Redeemer. 3
by the Four Horsemen
- Work in Progress: Freelancer variants . .30
by David Hobbins
- Portfolio: WillsOp Systems51
by Ben Lesnick
- Behind the Scenes: Making the
Freelancer Commercial. 53
by the production team
- Galactic Guide: Rihlah. 71
by Ben Lesnick
- Lost & Found (Part 2) 74
fiction by Charles Duncan

GREETINGS, CITIZENS!

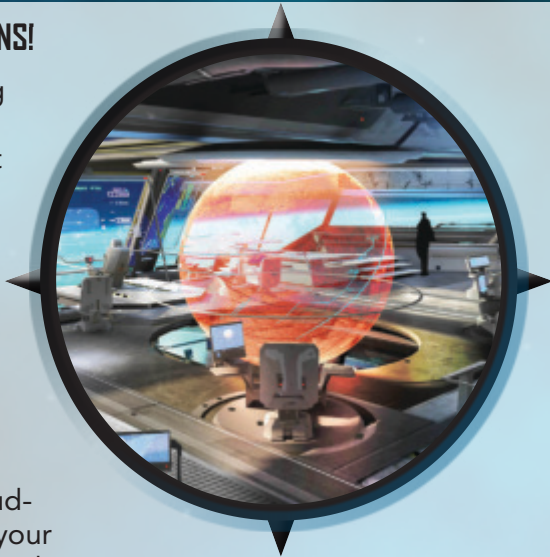
And the amazing no-Ildris streak continues for yet another month. At this point, I'd say stop looking for it, and just be surprised when it appears. Like you will be when any of a dozen other starcraft suddenly appear in your inbox, after you've been whining for them requesting them for months. Yes, I'm smiling when I say that. I understand your frustration, but we've gotta wait till they're ready.

Meanwhile, there were several who guessed they'd be seeing the Freelancer variants today, but I don't think anyone guessed that you might get an article on the Redeemer. I think you'll enjoy them both.

What else do we have ... a Galactic Guide to Rihlah, our first non-Human system, and a Portfolio on WillsOp, the scanner/tracker folks. We've also got an article on the making of the Freelancer commercial — it's not our standard fare; I hope you like it. Plus the second of four chapters of *Lost & Found*; it's good to have a purpose in life.

Now, an update and an announcement. First the update. We've caught up on writing submissions through March. If you emailed me a writing sample before the end of March and I haven't replied, please send me another email. (If you sent me a forum chat, that'll take a little longer, since I'm catching up on the emails first. Yes, I'd rather get emails. :))

As might be suspected, we're turning down a lot more samples than we're accepting, but there are a few gems in the mix, and you might be one. Please feel free to show us what you can do. With writing. I'm not sure I want to



see anything else you can do ...

And the announcement. San Diego Comic-Con is coming up at the end of July (24th – 27th), and Dave Haddock and I will be there, to review writing samples in person. If you show up with something for us to read (no more than about 2000 words, with both narrative and dialogue in it), we'd be happy to take a look and give you some feedback. We'll be in the portfolio review area, which I think is also where the main autograph signing area is. The plan is for me to be there Thursday, Friday and Saturday, 2:30 – 7:00. Dave will be there Friday, and maybe Saturday.

So if you're at the show, please stop by and say hi. If we've busy reading and feeding back (is that a thing?), please be patient, and I'll find time to say howdy! (Yes, I say howdy. I'm from Texas. I have the right.)

I understand George R.R. Martin will also be there. I hope you can tell us apart.

If you don't make Comic-Con, it's also looking like I'll be at Dragon-Con, in Atlanta, over the Labor Day weekend. Ben and Dave Haddock are confirmed, and David Hobbins and I are pending.

And if those are both too far from home, maybe you can get to Gamescom, in Cologne, on August 15. I don't expect to be there, but all your favorite CIG devs will be.

Hold on, it's gonna be a wild ride!

David

David.Ladyman@cloudimperiumgames.com

EDITOR: DAVID LADYMAN, INCAN MONKEY GOD STUDIOS
ROVING CORRESPONDENT: BEN LESNICK
© 2014 CLOUD IMPERIUM GAMES CORPORATION & ROBERTS SPACE INDUSTRIES CORP. STAR CITIZEN IS A TRADEMARK OF CLOUD IMPERIUM GAMES CORPORATION.

COVER:	FOUR HORSEMEN, WITH CHRIS OLIVIA
PAGE 24:	LOGO, DAVID SCOTT
PAGE 71:	DENNIS CHAN
PAGE 73:	BEHAVIOR
PAGE 74:	DENNIS CHAN



FROM THE HICKORY

The Next Great Starship: Redeemer



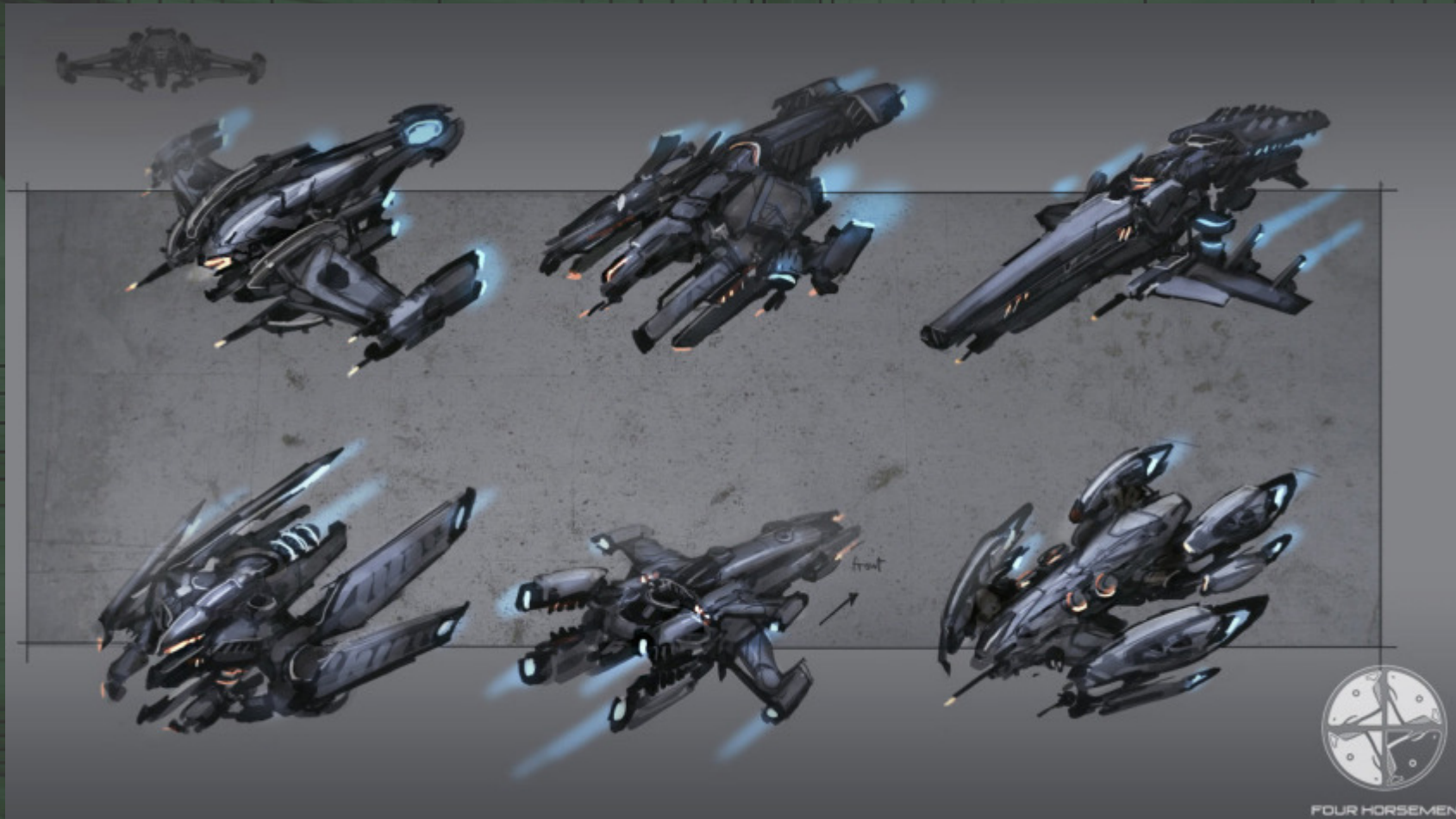
WORKING IN THE DARK

After months of competition and long hours of painstaking design on the part of everyone who entered, the Four Horsemen (Paul Dalessi, Tobias Frank and David Simon) prevailed with their Redeemer gunship. Today, we'll be taking a look at what they did, and how they did it. Most of the description is from Tobias, simply because he had

more time to give us this week than Paul or David. This article won't have feedback from the judges at CIG – you can get that from the recorded episodes – but instead will focus on what the Horsemen were working to accomplish. We also have some discussion with the team on how they got together and worked together.

The beauty shots (here, on the cover and at the end of the article) were created by Chris Olivia, Chief Visual Officer for CIG.

TF: In the beginning of the project I spent some time coming up with different shapes and rough ideas for the mercenary gunship. I scribbled a few thumbnail sheets [this page and the next page] and we discussed the results via Skype.



WORK IN PROGRESS



WORK IN PROGRESS



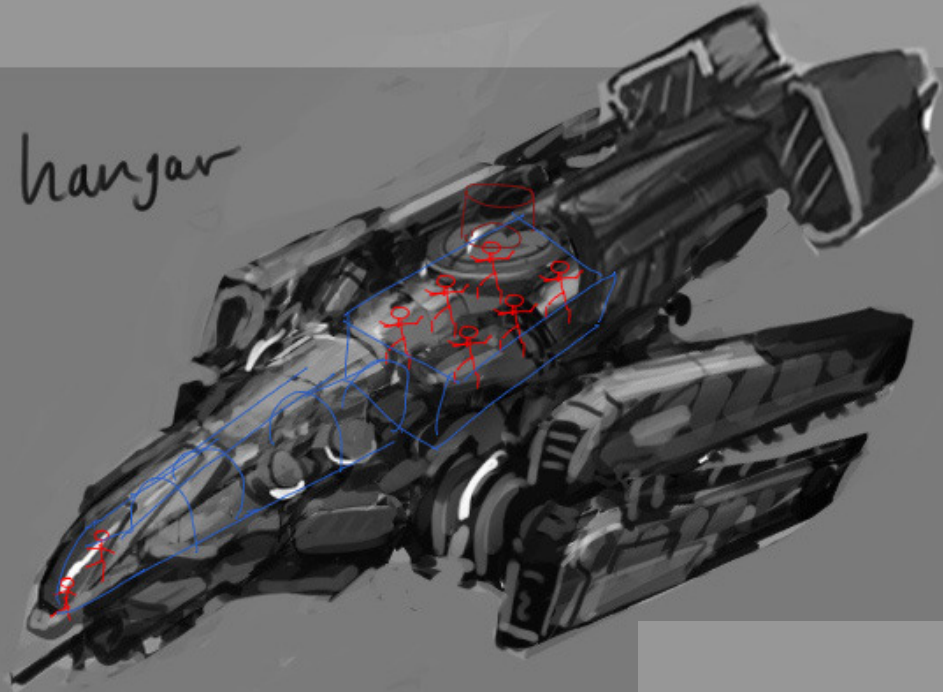
WORK IN PROGRESS

TF: In step two [this page and next] we talked about details and ideas we liked of the first bunch of thumbnails and made quick mockups consisting of different scribbles. After we had settled for a design I made

some adjustments and unified the different components in a rough scribble composite. Everybody was fine with the basic idea and we were ready for the next step.



hangar



Engines



WORK IN PROGRESS

we're not entirely happy with the tail,
but 'something like this' :)

FIGHT
MODE



SPEED/
LANDED
MODE



ARTICULATED FOLDY-WINGS

flight



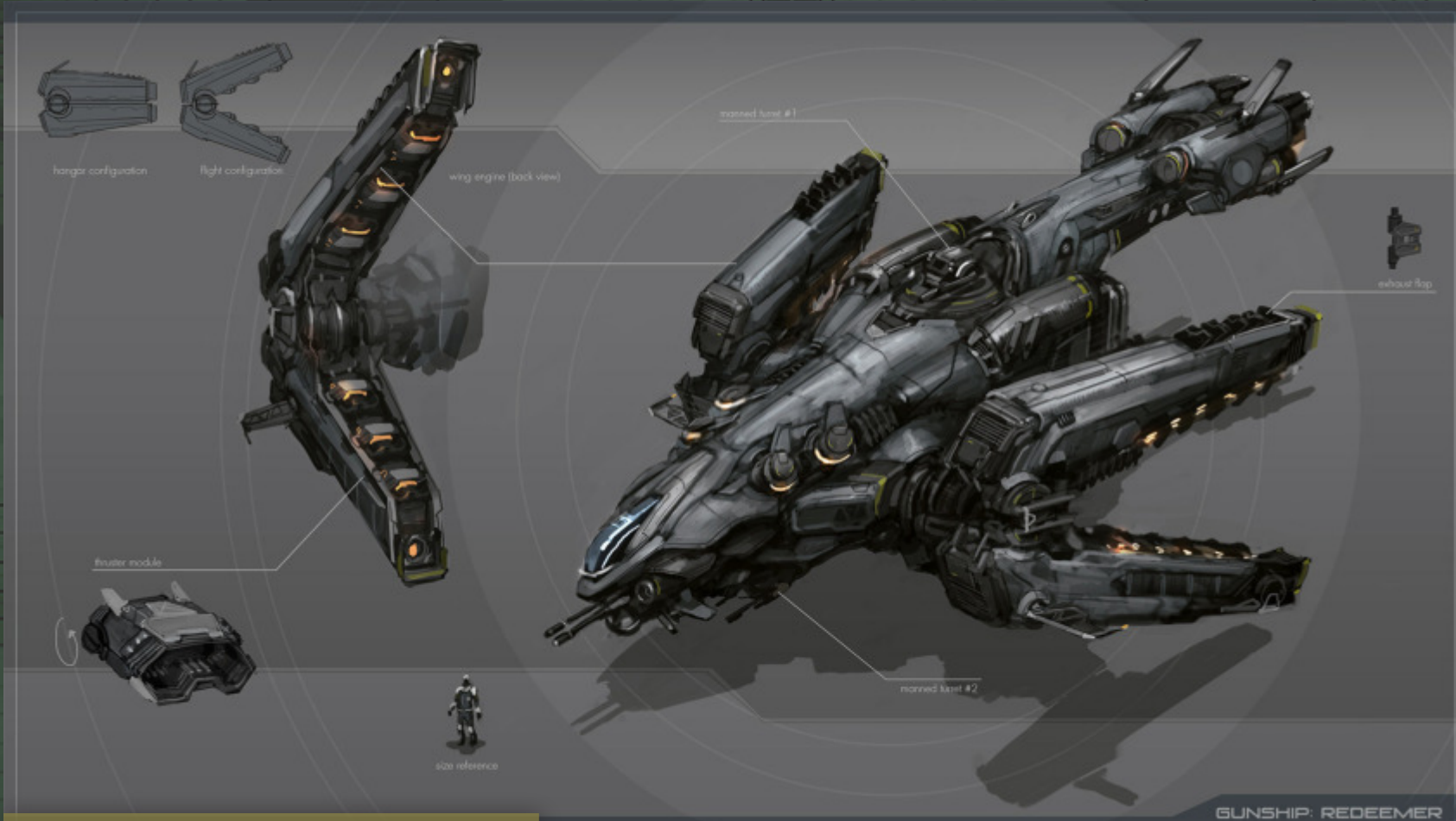
hangar



WORK IN PROGRESS

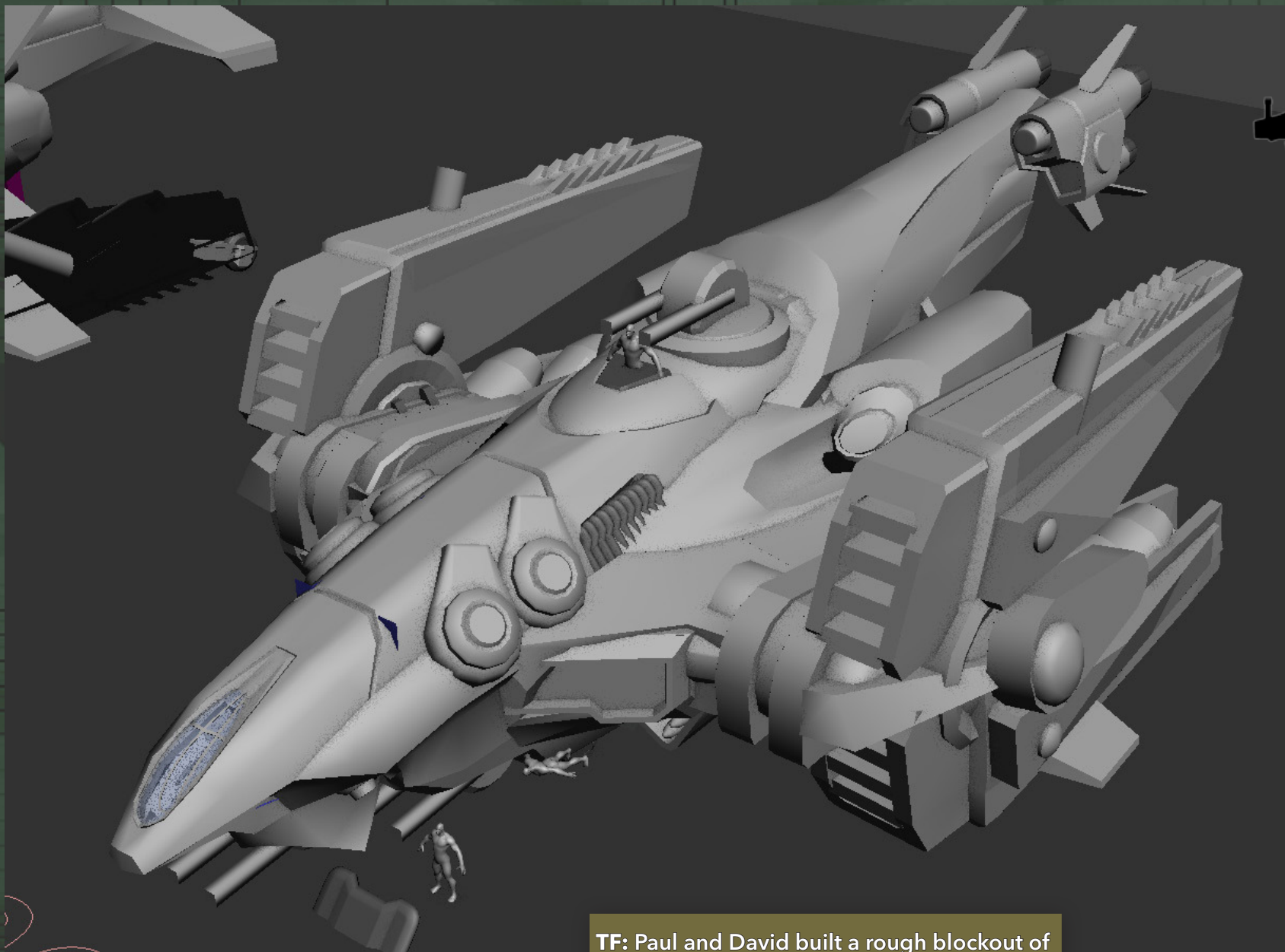


WORK IN PROGRESS



TF: In this step I detailed the concept a little more, added some basic colors to get a better impression of the ship, and defined some functional parts like the "popular" plier-engines. :) After everybody was ok with the basic concept, the whole process switched to 3D.

GUNSHIP: REDEEMER



TF: Paul and David built a rough blockout of the ship in 3D and we spent days tweaking the details and proportions, until everybody was confident that we were on the right track. [more on following pages]

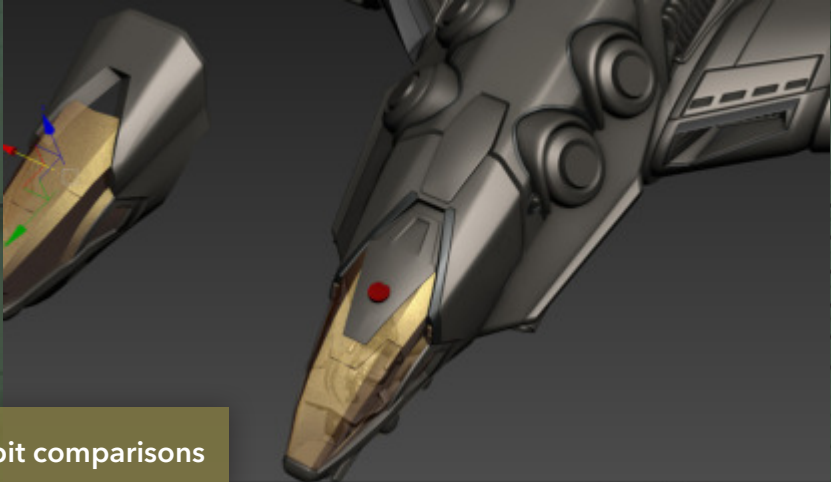


WORK IN PROGRESS

Cockpit interior

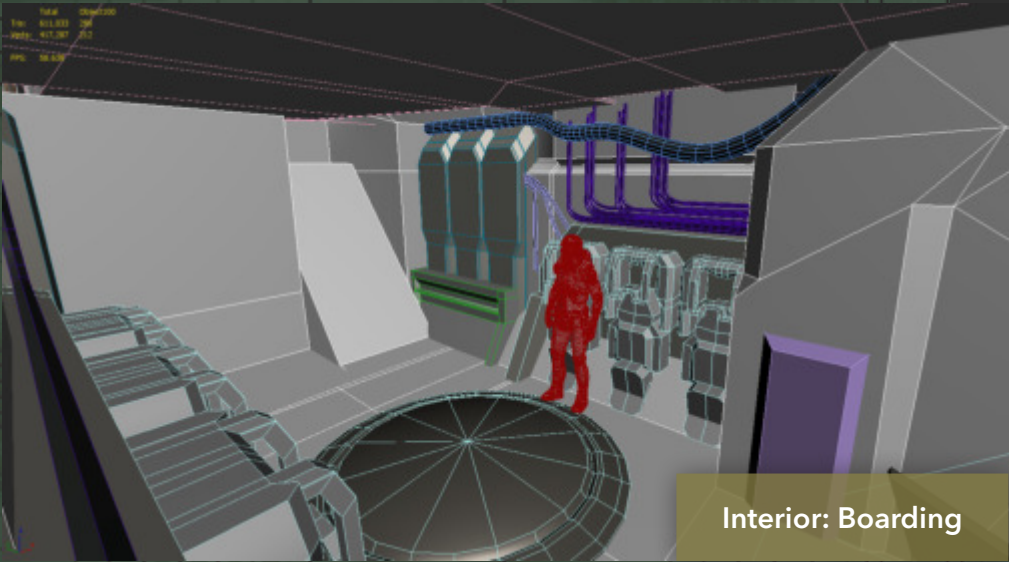


WORKING IN PROGRESS



Cockpit comparisons

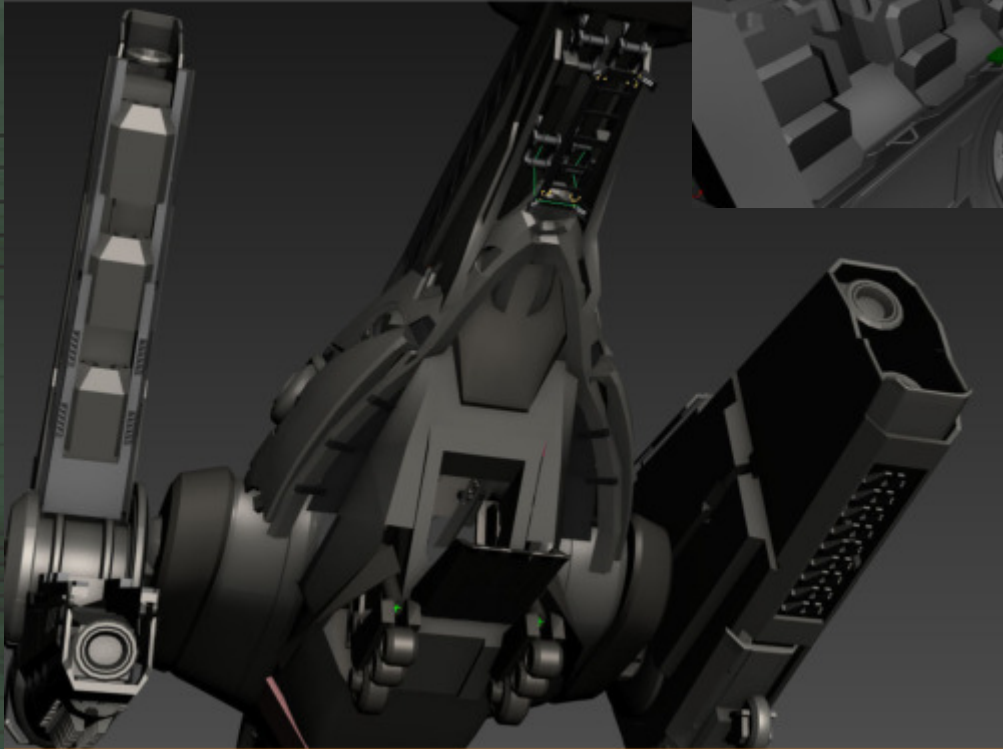
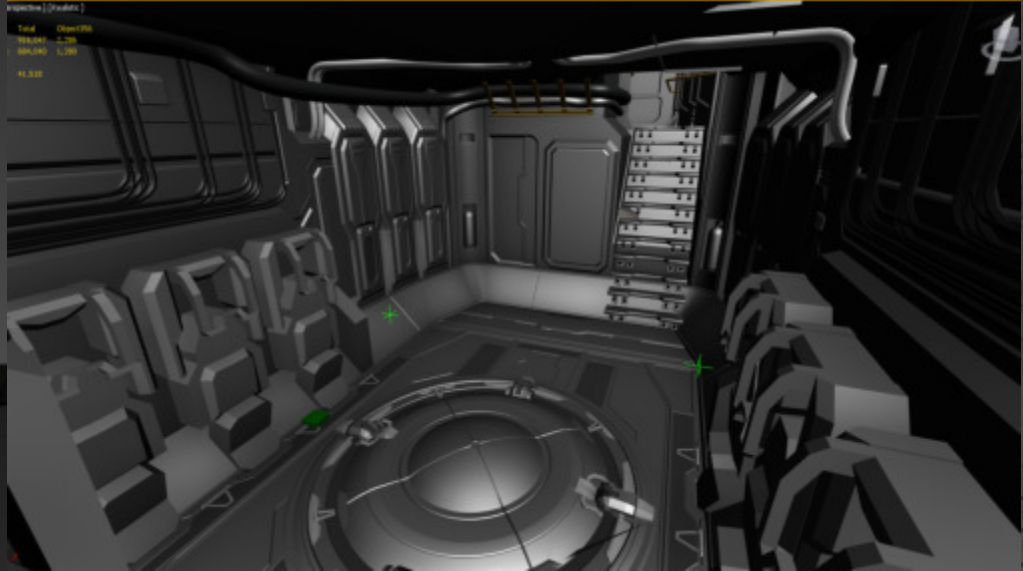
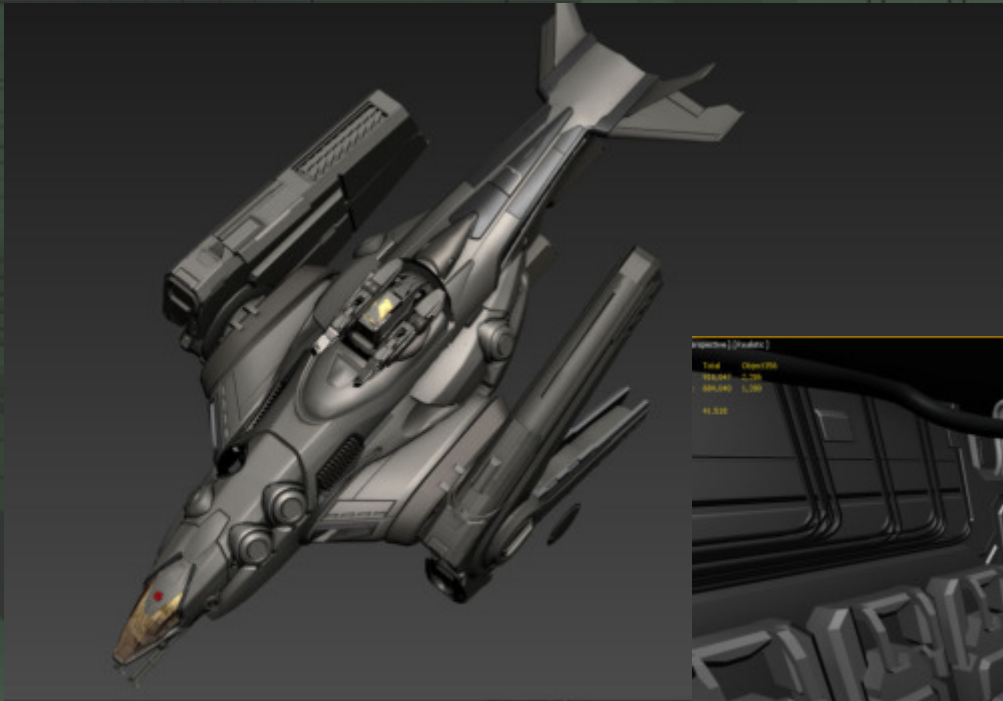




Interior: Boarding



WORK IN PROGRESS



WORK IN PROGRESS

TF: After we settled for a blockout, I started to do a more detailed paintover of the exterior to define the materials and the look of the ship. [this page and next]



AEGIS DYNAMICS
REDEEMER



WORK IN PROGRESS



AEGIS DYNAMICS
REDEEMER

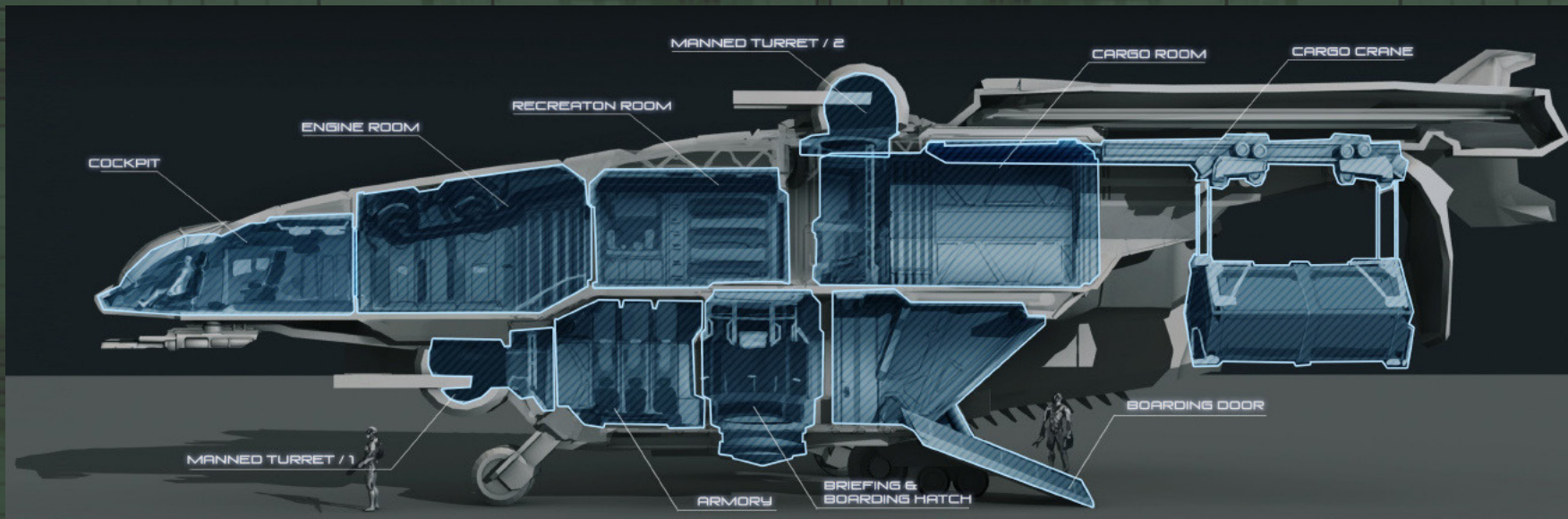


WORK IN PROGRESS

Interior: Cockpit



TF: Additionally we talked about the design of the interior and scribbled and modeled the rough layout. After we knew what we wanted to do, I worked on some more detailed paint-overs of the interior to establish a different look and feel for each room. The goal was to define the details for the modeling afterwards. [this page and next]



Interior: Briefing Room



Interior: Engine Room



Interior: Recreation Room



WORK IN PROGRESS



TF: After the detailed concepts were done, Paul and David started to clean up the mesh and remodel the exterior and interior of the ship as a highpoly mesh. [this page and next]

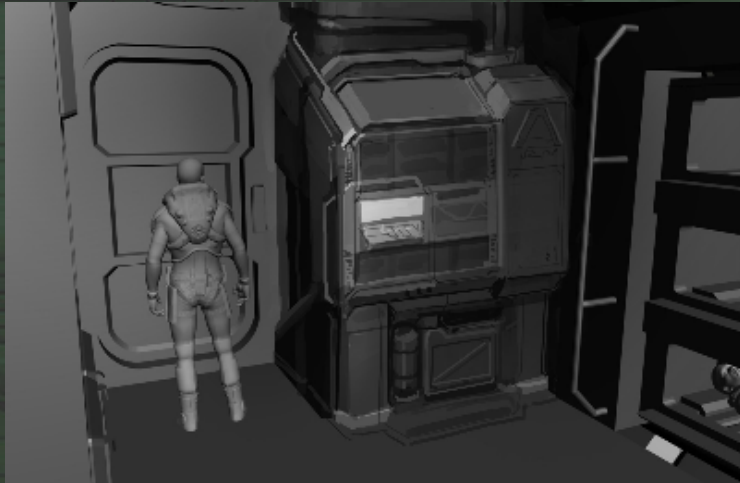


WORKING IN PROGRESS

Missiles



WORKING PROGRESS



TF: During the highpoly modeling process we had lots of discussions about functional parts, missing details, shapes that didn't work etc. This led to a lot of quick feedback-scribbles on top of existing geometry to experiment with different ideas. Quick mockups in 2D take only a few minutes. This way we could discuss different ideas without slowing down the modeling process.

After many weeks of modeling and texturing, the Redeemer approached its final stages of development. [this page and next two]



WORKING DRAFTS



Cockpit Variants



Briefing Seat



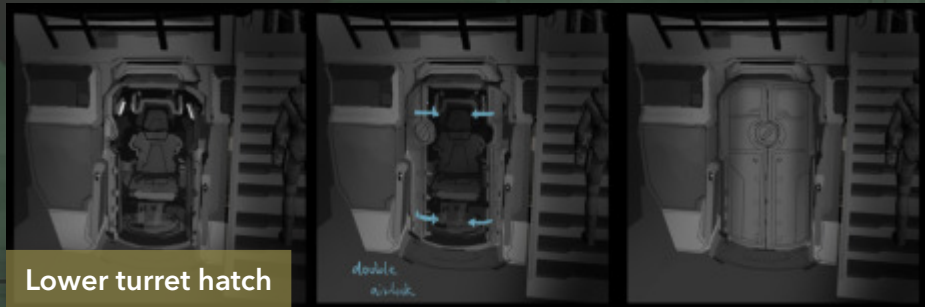
Cockpit WIP



Cockpit Seat



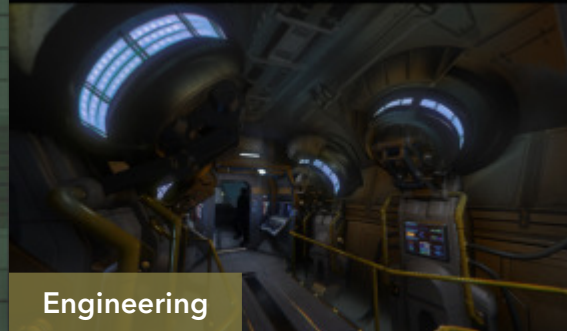
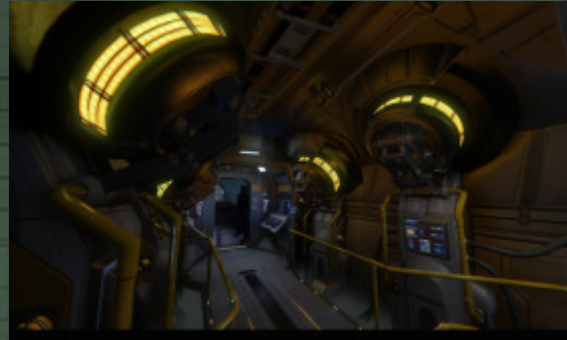
Kitchen



Lower turret hatch



Seat adjustments



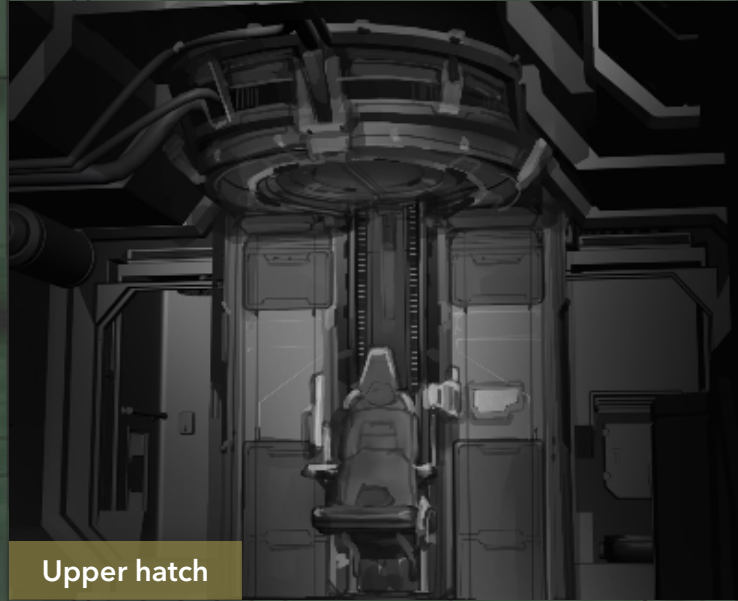
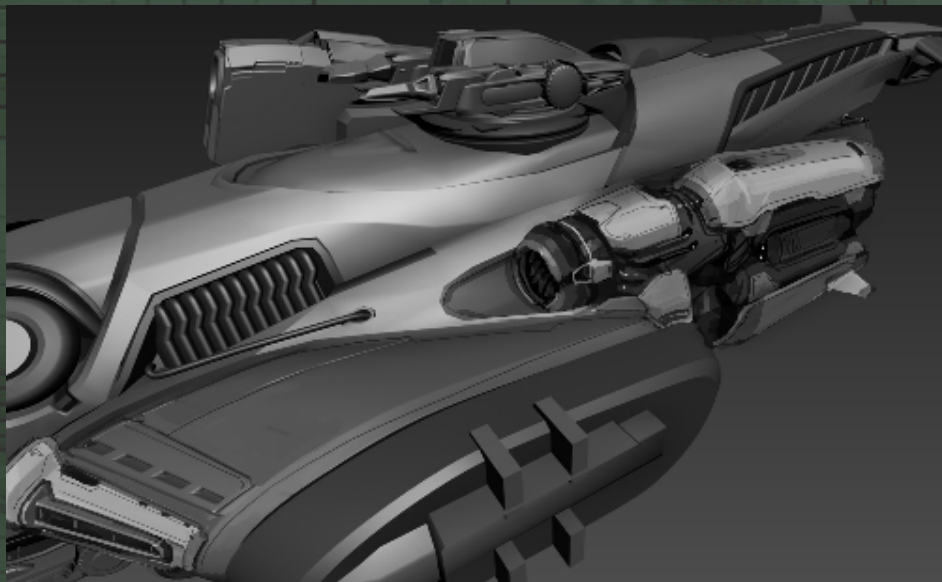
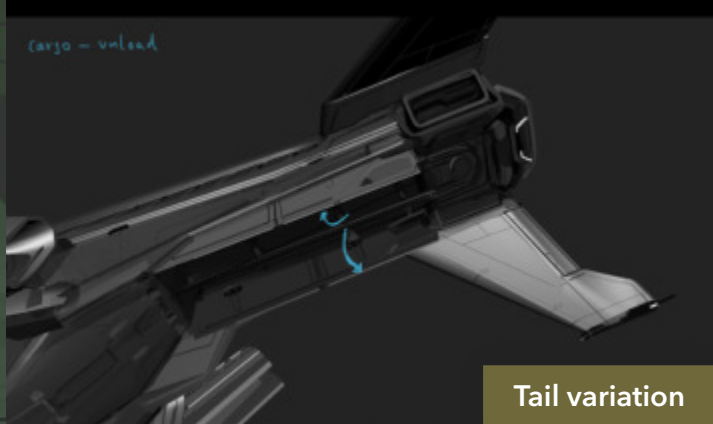
Engineering



Side thrusters



WORK IN PROGRESS



WORK IN PROGRESS

12.5 M ??

18.5 M

28.5 M

24 M

22.7 M

Approximation - Freelancer H

27.5 M

40 M ??

55 M

89M ??

Size reference

Connie in
Cruise Mode



WORK IN PROGRESS

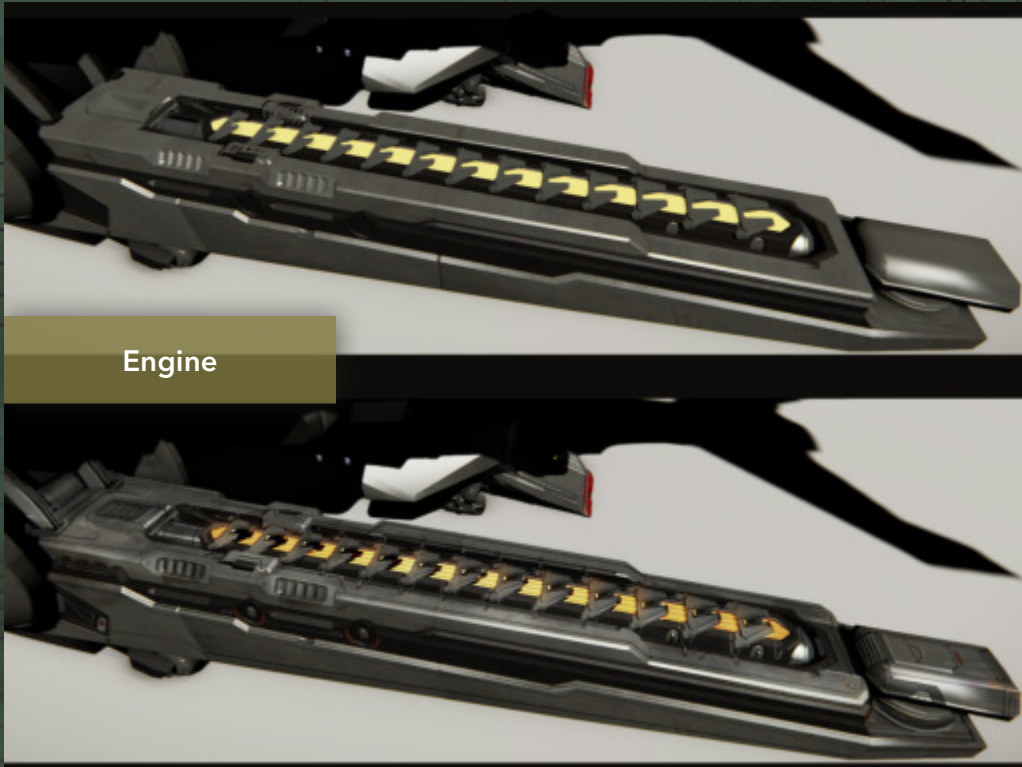
CONNIE (PROXY) YACHT



Hi-res lines



Engine

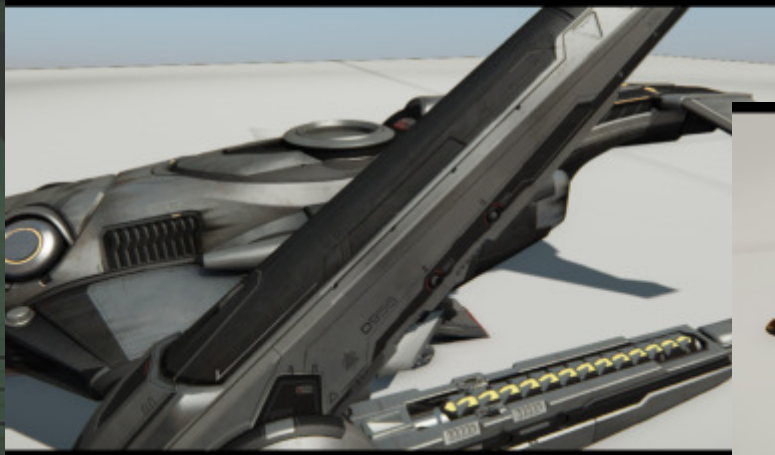


TF: At this stage the asset was 90% done. We discussed how to approach the finer detailing of the exterior. Creating cutlines on top of the exterior with additional geometry is a very time-consuming task. Therefore I did a concepts to define the look of the cutlines. This way Paul could dedicate most of his time on the modeling and was able to finish the exterior detailing right on time. [this page and next two]



Engine side

Position of these control panel gradients
is not optimal because of the engine



REGIS
DYNAMICS

Details



WORKING PRIORITIES

Upper turret



Turret paintover



WORK IN PROGRESS



JP: *Let's start with an easy question. Where are you all from? Where do you live?*

PD: Dutch, currently chilling out in a town near Rotterdam.

DS: Canadian, living in Ottawa.

TF: German, living in Munich.

JP: *How did you meet each other?*

TF: I met Paul several years ago, while working together for the Half Life 2 mod "Eternal Silence." Since then we've stayed in contact, but never had the time to work on something more complex together.

I didn't know David before. Paul introduced us when we decided to join this contest.

JP: *Paul, how did you and David meet?*

PD: Long ago, we were both modding/making maps for Halo: Custom Edition, for the PC. We met on some forums related to that topic, and continued playing games together for the next 10+ years, with me teaching David some modelling, etc. on the side.

JP: *How did Four Horsemen come into being?*

TF: Paul initiated it at the end of last year. He had already talked to David and they decided to join TNGS. He asked me if I had time and was interested in participating. At this point in time I was preparing to move to Munich and had all my stuff packed up in boxes. Not the best circumstances to work efficiently, but I decided to join anyway. The qualification round where we had to build a weapon was super chaotic. I had to move, Paul had some appointments in Russia and wasn't at home ... but somehow we managed to submit everything in time.



JP: *Why did you decide to work together?*

TF: Paul and I had planned to work on a complex project/asset together for some time, but we never had the time to do so. The main reason we joined was to create a kickass asset together and to have some fun.

I was stoked when he told me about the contest. The whole concept of "TNGS" with weekly episodes had never been done before and it sounded cool to experience something like that firsthand.

Star Citizen is an amazing game, especially because of its dedicated community. The combination of an ongoing contest with weekly updates and a strong community was what made this contest special.

JP: *How did you communicate – Skype? Tweets? Something else?*

TF: For basic communication we used Skype, and we used Dropbox to share our workfiles, scribbles, documents, etc.

JP: *What language did you use – English, or something else?*

TF: We are all from different countries. English was the only viable option.

JP: *What did each of you do on the Redeemer?*

PD: Modeling (lead), texturing, Cryengine implementation, PBR setup, animations

TF: Concept art, FX, Trackview setup, video editing

DS: Modeling, texturing



WORK IN PROGRESS

JP: *Why did you name your team the Four Horsemen (especially since there are only three of you)?*

PD: I'm pretty sure that a friend suggested something along the lines of 'awesome foursome' at first, because there were only three of us. It was hilarious at that point, so we might have been drunk. We eventually settled on that theme of 'four,' and ended up with Four Horsemen.

We went with it because it was a good name, and sounds kinda badass-ish.

JP: *What are your plans for the future? Has winning TNGS changed your plans at all?*

TF: I just recently moved to Munich and joined some friends in a studio to work as a freelance concept artist. Before that, I always worked as a regular employee at different game companies. I decided to try my luck as a freelancer to have more time for personal projects and

to work on a broader spectrum of projects. "The Next Great Starship" was only possible for me because of this decision ... and I am very happy that it turned out to be a huge success for our team. :)

My plans for the future are to continue working as a freelancer and to start a new personal project now that TNGS is over. At the moment I am planning to work on a small indie title. I always wanted to start a project on my own, and now is the best time to do so.

PD: Browsing around for a new job opportunity. Currently I've got a few things going on, so who knows where I might end up this time. It's always fun to see where life takes you next.

DS: I don't know; resting? All I can really say for sure is that making another internet spaceship is off the table for at least another 6 months.

Freelancer Variants



Freelancer MAX, pictured

Last October, we detailed the development of the Freelancer. Now that the variants are complete (and have been available in the store) it's time to show you the development of the DUR, MAX and MIS.

The original design was by Jim Martin. David Hobbins did the design work on

these variants, with Martin Gomez, Lead Artist at CGBot, handling the conversion into CryEngine.

In addition to David (DH) and Martin (MG), people contributing comments include:

Chris Roberts (CR)

Ted Bargeon (TB) Concept Artist

Eric 'Wingman' Peterson (EP) Studio Director

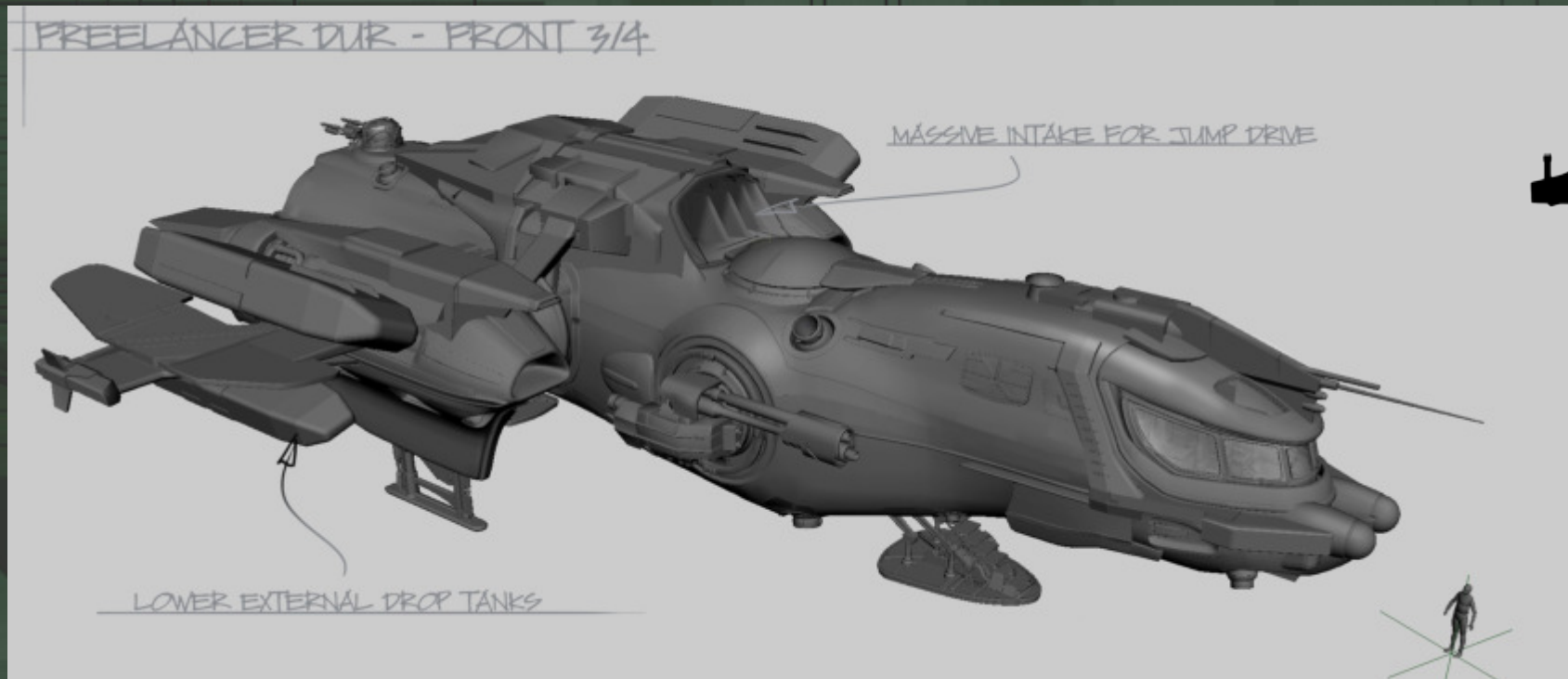
Mark Skelton (MS) Art Director

Harry Jarvis (HJ) Art Producer

Sean Murphy (SM) Art Outsource Manager



WORK IN PROGRESS



WORKING IN PROGRESS

DH: Here are 2 of the 3 Freelancer variants: Freelancer base model (added EVA hatch), Freelancer MAX (added EVA hatch and greatly increased cargo capacity) & Freelancer DUR (added EVA hatch, jump drive, sensors arrays & external drop tanks). I also added an EVA hatch to the base model. Let me know your thoughts. I'll be starting the military variant (MIS) of the Freelancer first thing in the morning. Should have something to share by the end of the day. Thanks!

CR: Maybe make the drop tanks a little more rounded?

DH: I can do that – thanks, Chris!

CR: I like it. I would maybe re-do the cockpit to be more surround glass without the big pillars on the DUR and the MIS.

DH: Okay, sounds good. I'll get going on that, too!

TB: Awesome. The MAX is dead on. The DUR has some elements that are a bit boxy and angular. The hope is

ultimately to give each manufacturer a distinct feel, shape language, corporate color palettes, etc. And so MISC will hopefully have a more rounded, vaguely organic theme. I'm thinking in terms of iconic tanks, for example: say a Tiger's boxy shape vs. a Sherman's rounded shapes; the Tiger's plate is rolled steel vs rounded cast steel on a Sherman. Attention to details like this adds immersion, suggests different manufacturers using different manufacturing techniques, etc. Not to mention MISC uses Xi'An tech in some TBD way as well. Hope this helps! And great work!

DH: Got it – that helps for sure! Thanks for the feedback.

CR: Love it! Nice stuff!

DH: Thanks, Chris!

CR: I especially like the bigger skids with more detail!

CR: Looks good! Please add a second turret and beef up the rear one to match the heft of the ship.

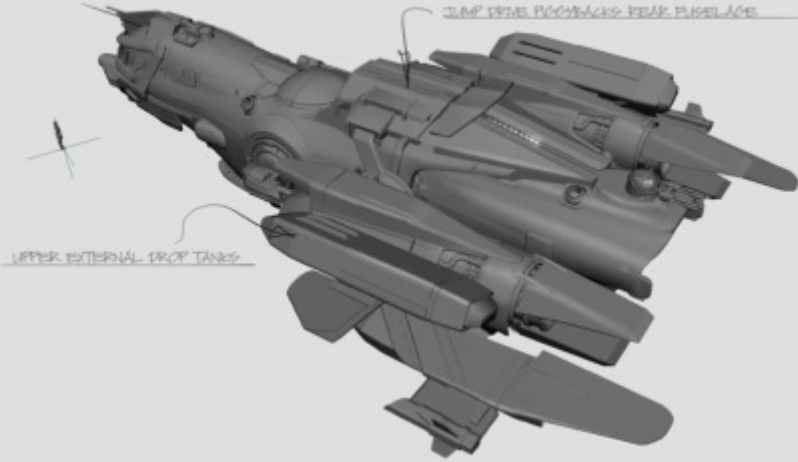
More views of the DUR

ORTHO

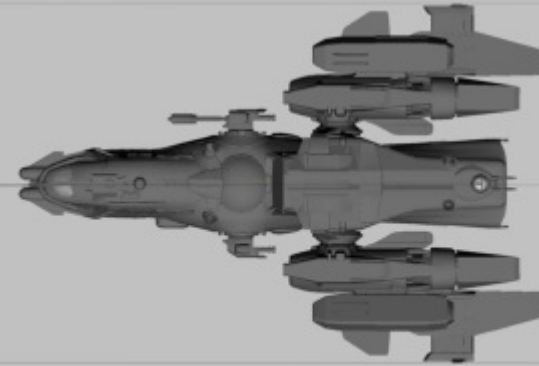


PREELANER DUR - REAR 3/4

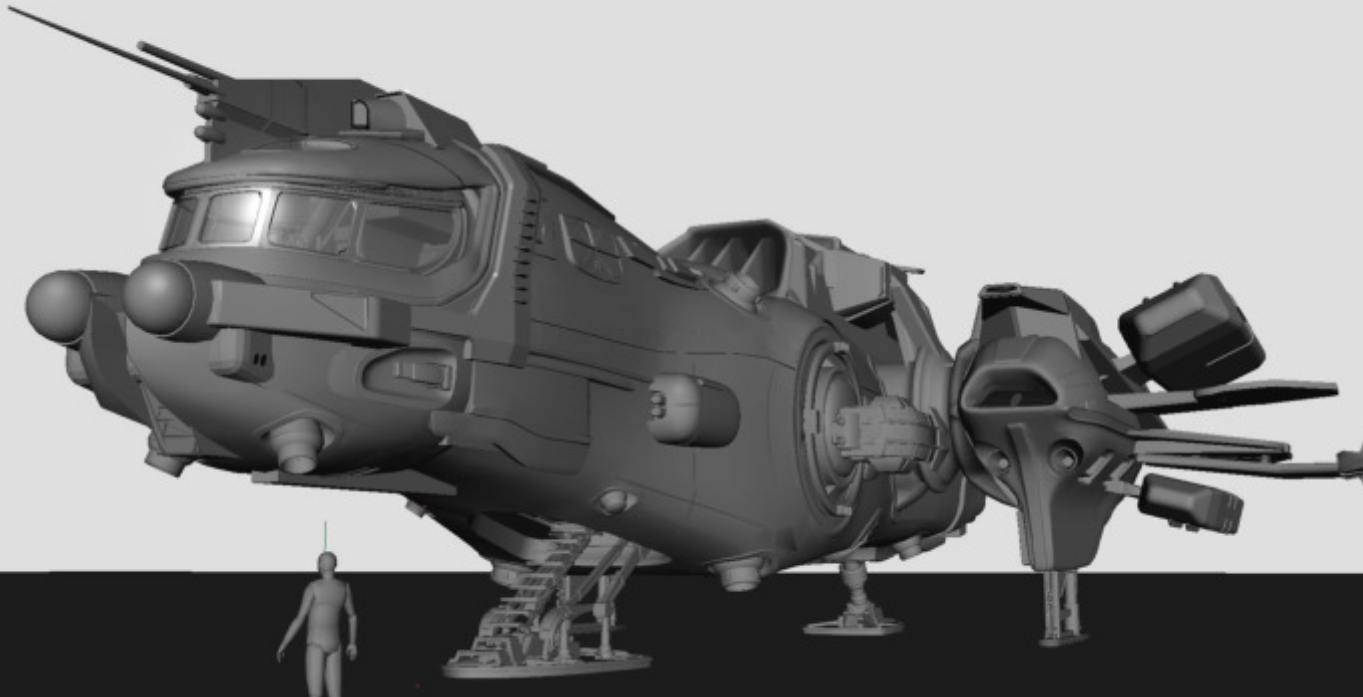
UPPER ENGINE COVERAGE REAR FUSELAGE



UPPER EXTERNAL PROP TANKS

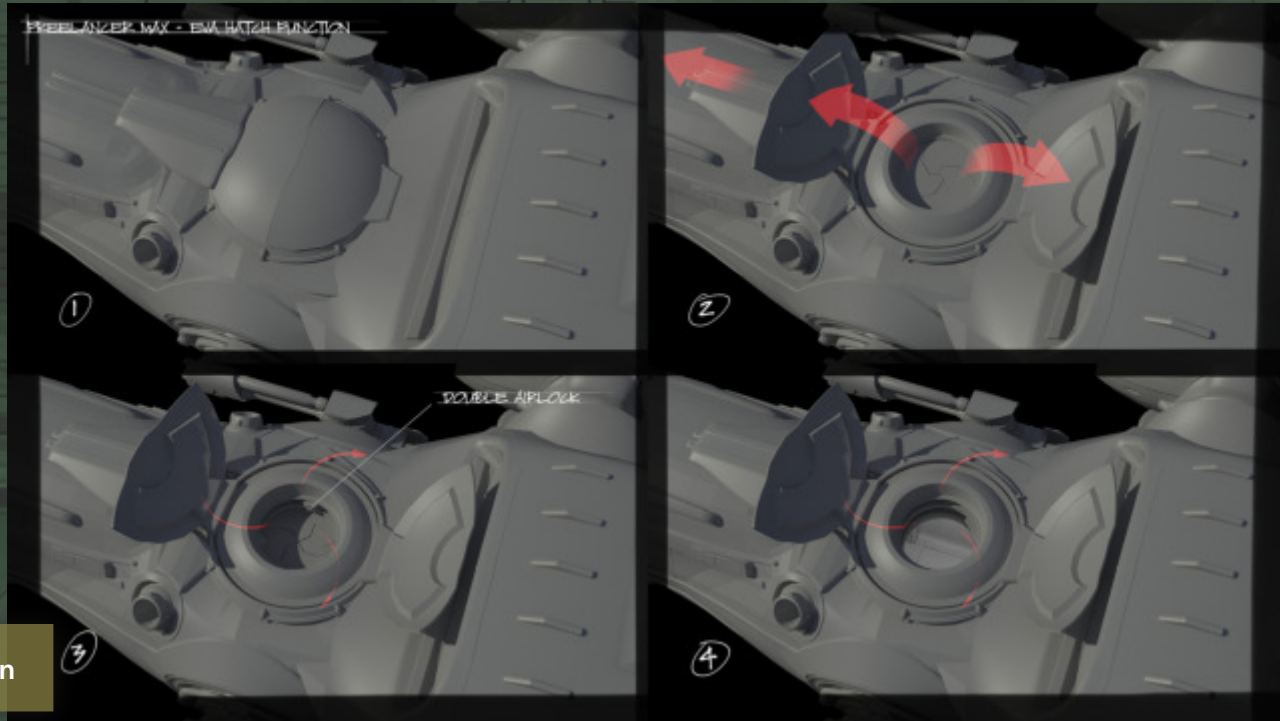


PREELANER DUR - GROUND VIEW



WORK IN PROGRESS

Freelancer MAX



EVA hatch function



WORKING IN PROGRESS

FREELANCER MAX - ORTHO



Freelancer MAX

FREELANCER MAX - REAR 3/4



WORKING IN PROGRESS

DH: Here's the final Freelancer variant: the Freelancer MIS. It includes extra armored panels protecting key components and a wider assortment of weapons. Two missile pod arrays can deploy from large housings on the upper rear fuselage. Advanced targeting sensors and instruments are stored up front. I've tried to keep the additional shapes more or less rounded to fit with the base Freelancer's aesthetic. Let me know how it's working. Thanks.

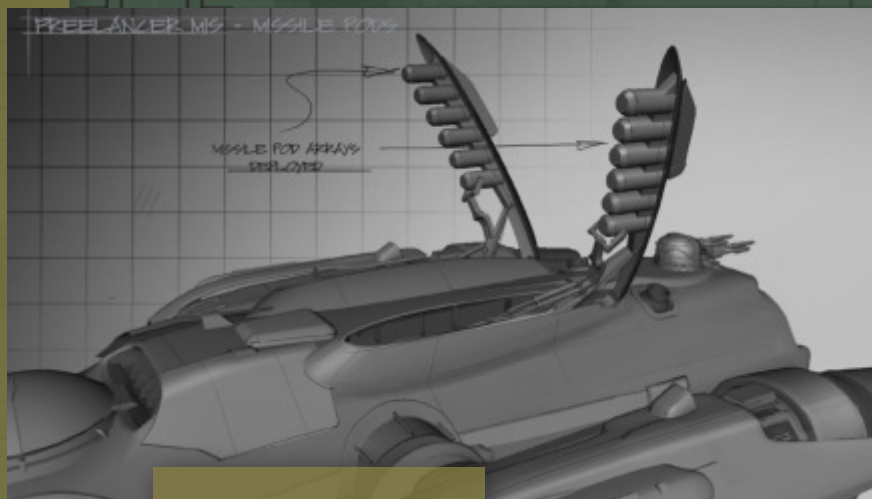
CR: This is cool. I wonder if we could have an internal reload mechanic for players (i.e., once the missiles are fired, the rack is retracted and the player reloads it from inside).

EP: That could be interesting, and add some gameplay as well.

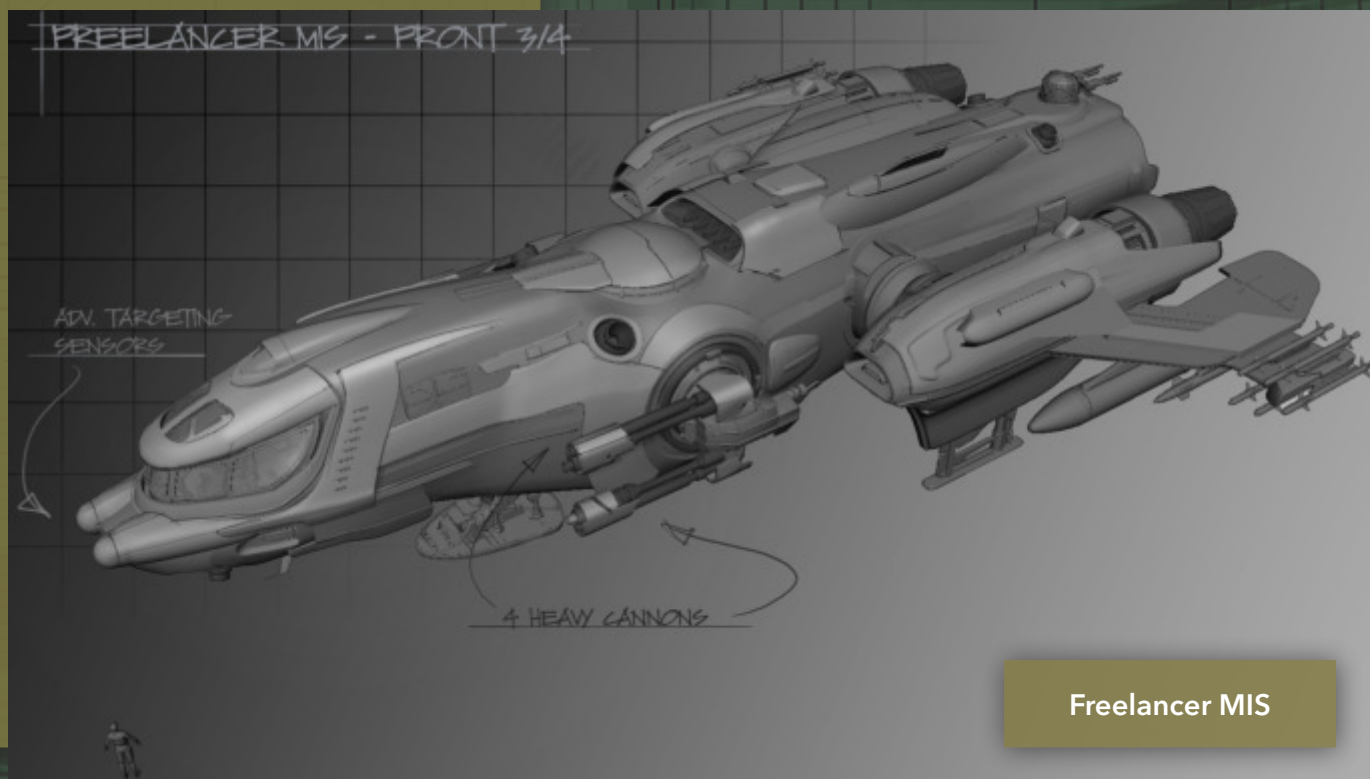
CR: Looks good. I do feel like the rear turret would be different / beefier / more military grade (as this is a gunship / missile platform). Maybe the same kind of firepower / size that the side cones are.

One other thing (which is a general note on the Freelancer), I feel like we could make the side landing skids more than just a simple rectangle.

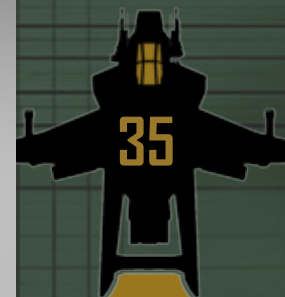
DH: Got it! I'll start making these updates.



Missile pods



Freelancer MIS

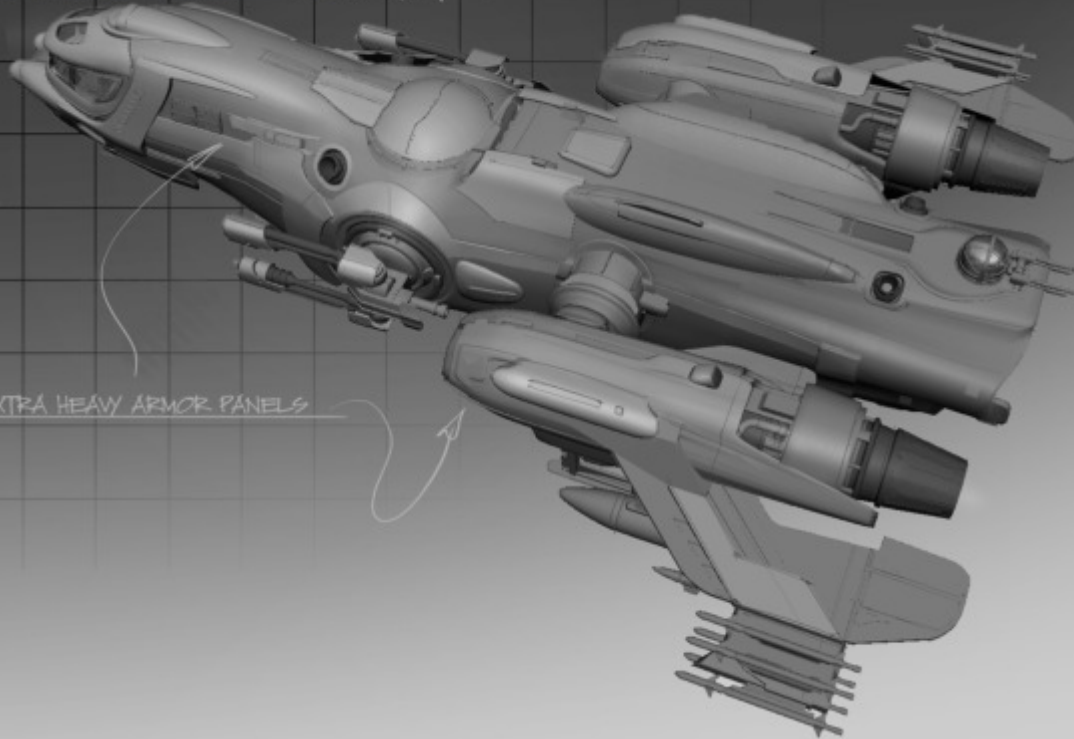


FREELANCER MIS - ORTHO



Freelancer MIS

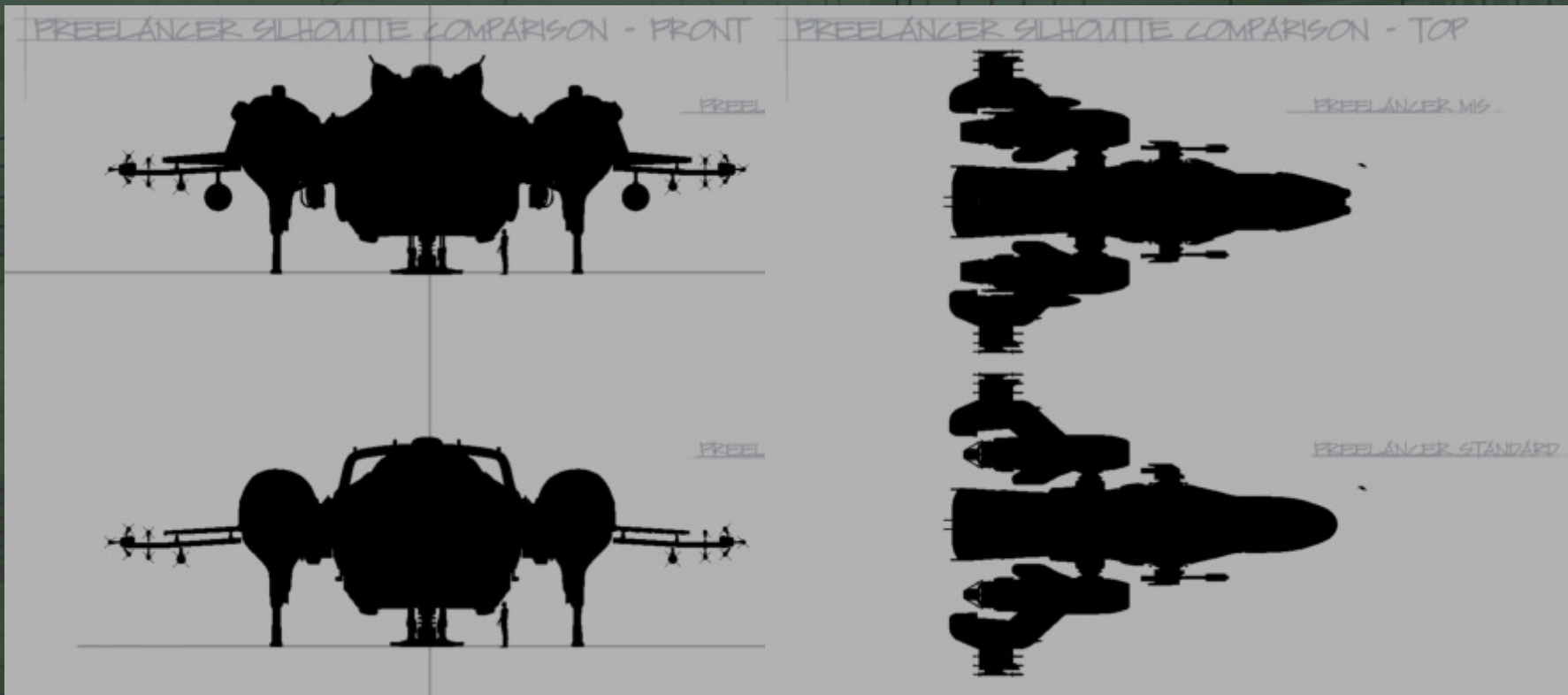
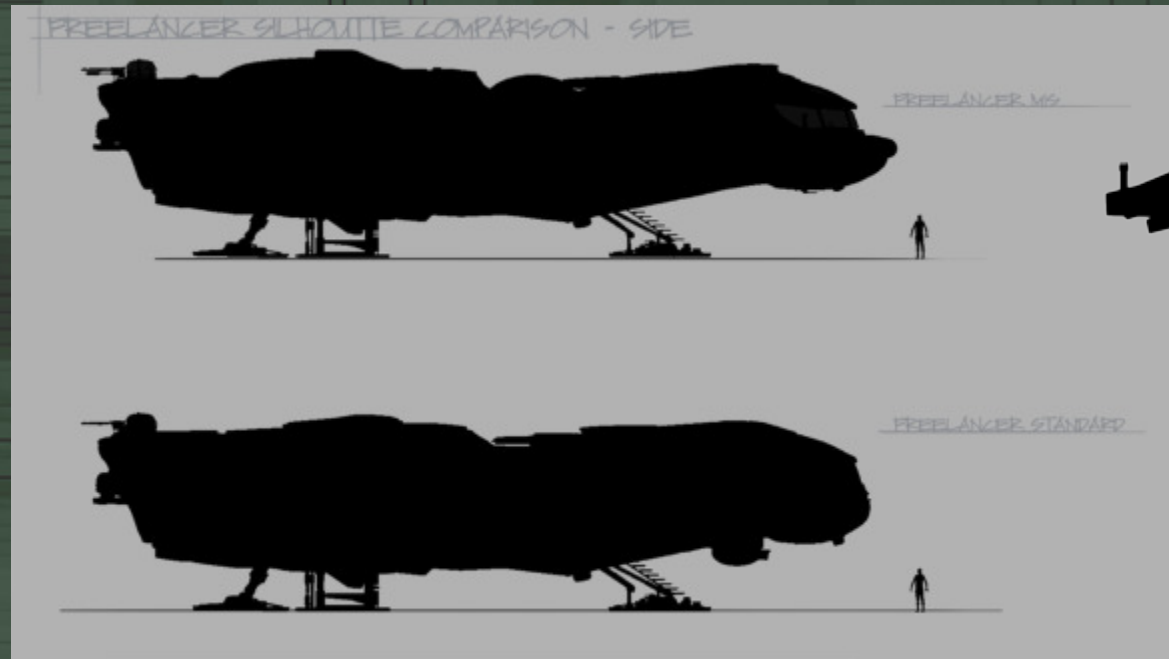
FREELANCER MIS - REAR 3/4



WORKING PRINCIPLES

CO: Looks cool to me. Could you post a silhouette comparison of this one and the original one? Also, maybe try some quick paint job studies. Rob and CR need to sign off before going to modeling.

DH: Here's the silhouette comparisons requested, comparing the Freelancer MIS with the standard Freelancer. I'll get going on the graphics next. Thanks.



WORK IN PROGRESS

FREELANCER MIS LIVERY - Option A



EXPOSED METAL PANELS w/ RED, WHITE & BLACK GRAPHIC ACCENTS

FREELANCER MIS LIVERY - Option B



SEM WHITE COOL GREY w/ ORANGE GRAPHIC ACCENTS

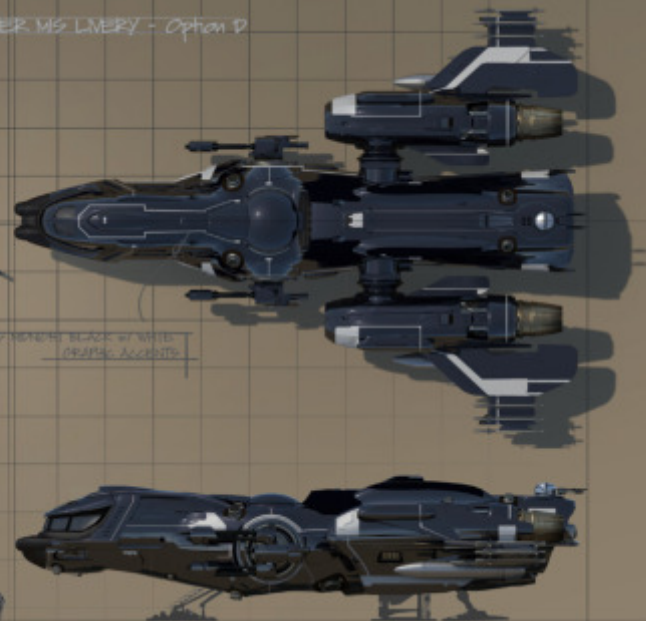
DH: Freelancer MIS livery options: A,B,C & D. Let me know which ones are working. Thanks.
 CR: I think option B for me.

FREELANCER MIS LIVERY - Option C

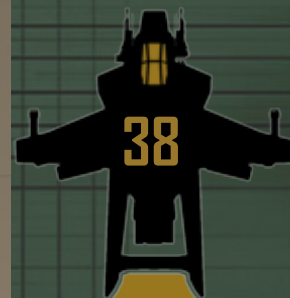


MATTE BLACK w/ RED GRAPHIC ACCENTS (THINK M47 BLACKBIRD)

FREELANCER MIS LIVERY - Option D



SEM GLOSS MEDIUM BLACK w/ WHITE GRAPHIC ACCENTS



WORKING IN PROGRESS



DH: Freelancer MAX livery options A & B. Let me know your thoughts. Thanks.

CR: Option A for me. I feel like the "MAX" variant would maybe have more and/or larger turrets – perhaps the rear top one is bigger / beefier? And there is an underside / rear one?

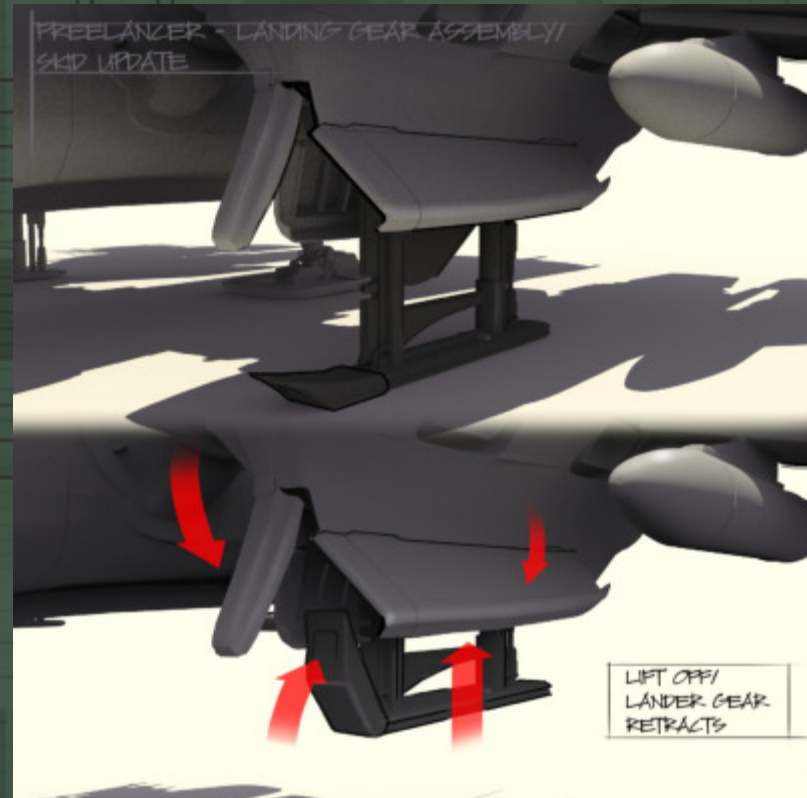
DH: Great, I'll start working on beefing up the rear cannon w/ an underside option.



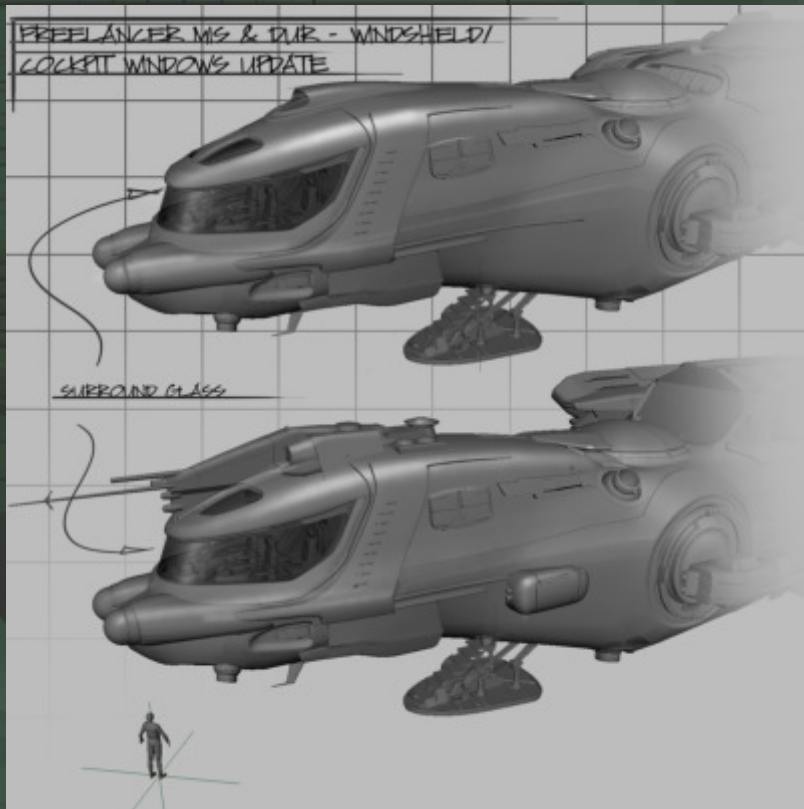
WORKING IN PROGRESS

DH: Here are the Freelancer variant updates. Still working on the lower rear turret; not completely sure there's enough room on the underside to accommodate this addition (especially if you also have to be able to access it from the interior compartments). Let me know your thoughts. Thanks!

CR: I like the new landing gear detail!



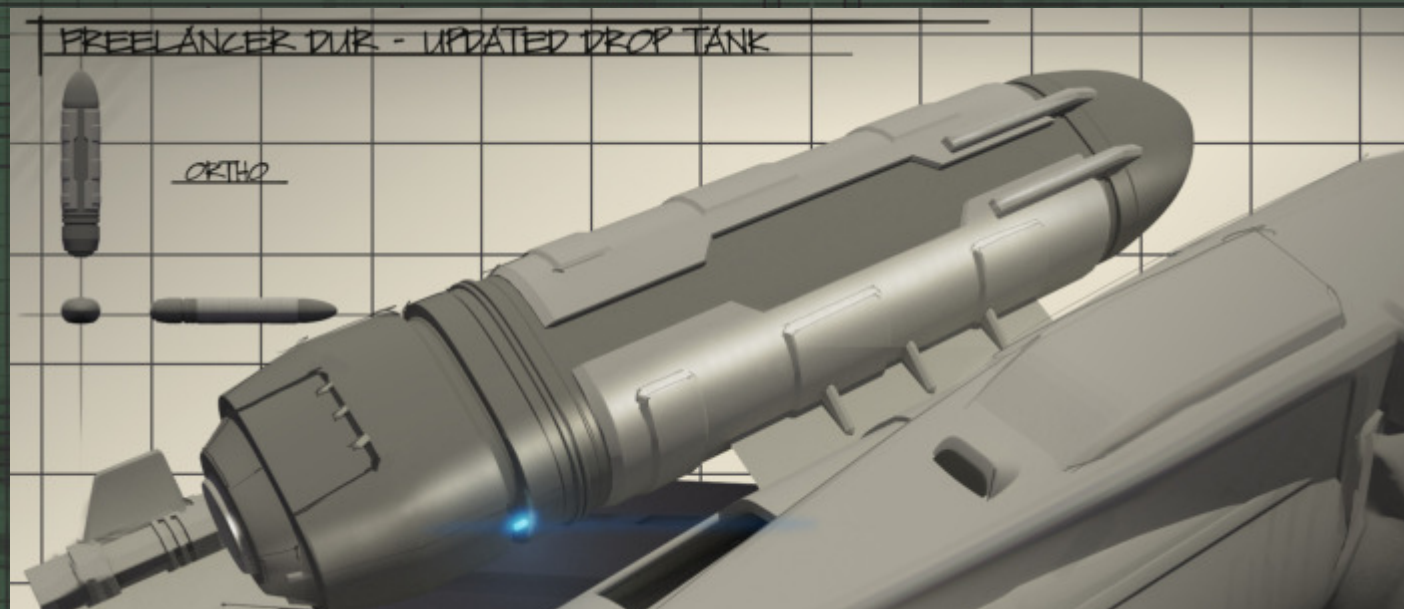
WORK IN PROGRESS



CR: Drop tanks work much better for me now; they feel like part of the MISC look.

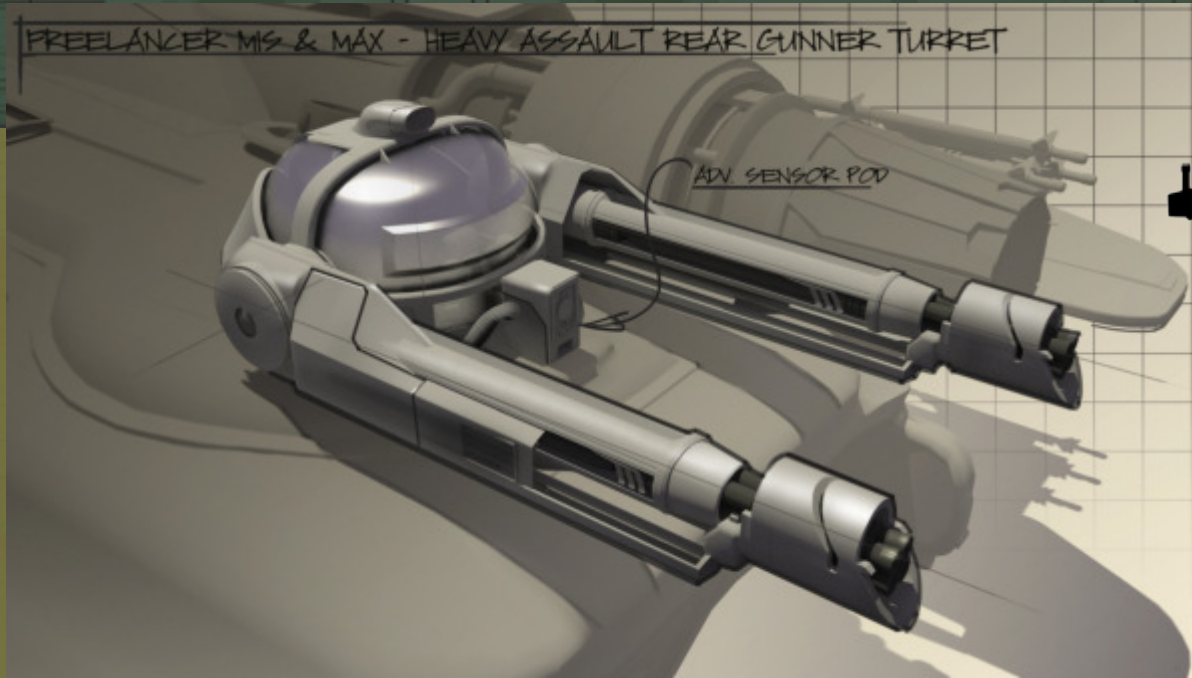
CR: Maybe create one strut on each side of the DUR?

DH: Got it – on it now!



WORK IN PROGRESS

FREELANCER MIS & MAX - HEAVY ASSAULT REAR GUNNER TURRET



WORKING DRAFTS

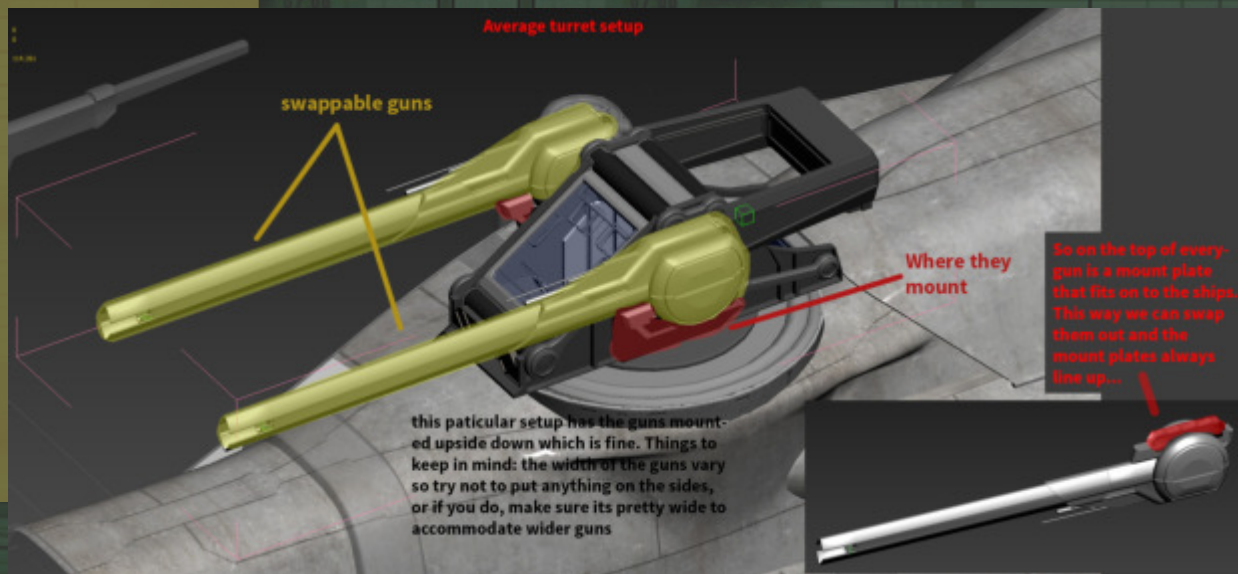
CR: I like this, although I'm not sure about the rectangular detail on the front of the turret glass. I assume this is see-through too (as otherwise it would obstruct the gunner's view) but it doesn't seem needed.

We have to think how the guns attach with our universal size & mount system. This looks like it will fit better than the old turret did with that system; maybe we should do a pass to make sure both the old and new turrets work with it?

MS: All of our guns are swappable, so we need to keep that in mind when designing these turrets. A turret is basically a mount for two guns side by side, like this.

DH: Okay, got it – that makes things a lot clearer. I'll add the two gun side mount plates now. Thanks, Mark!

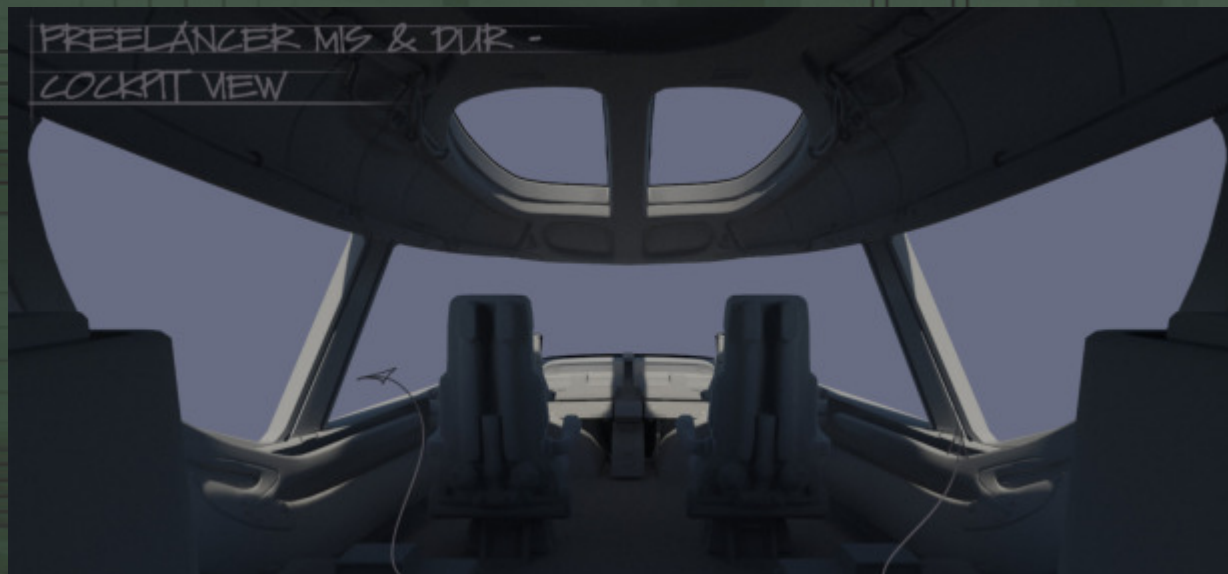
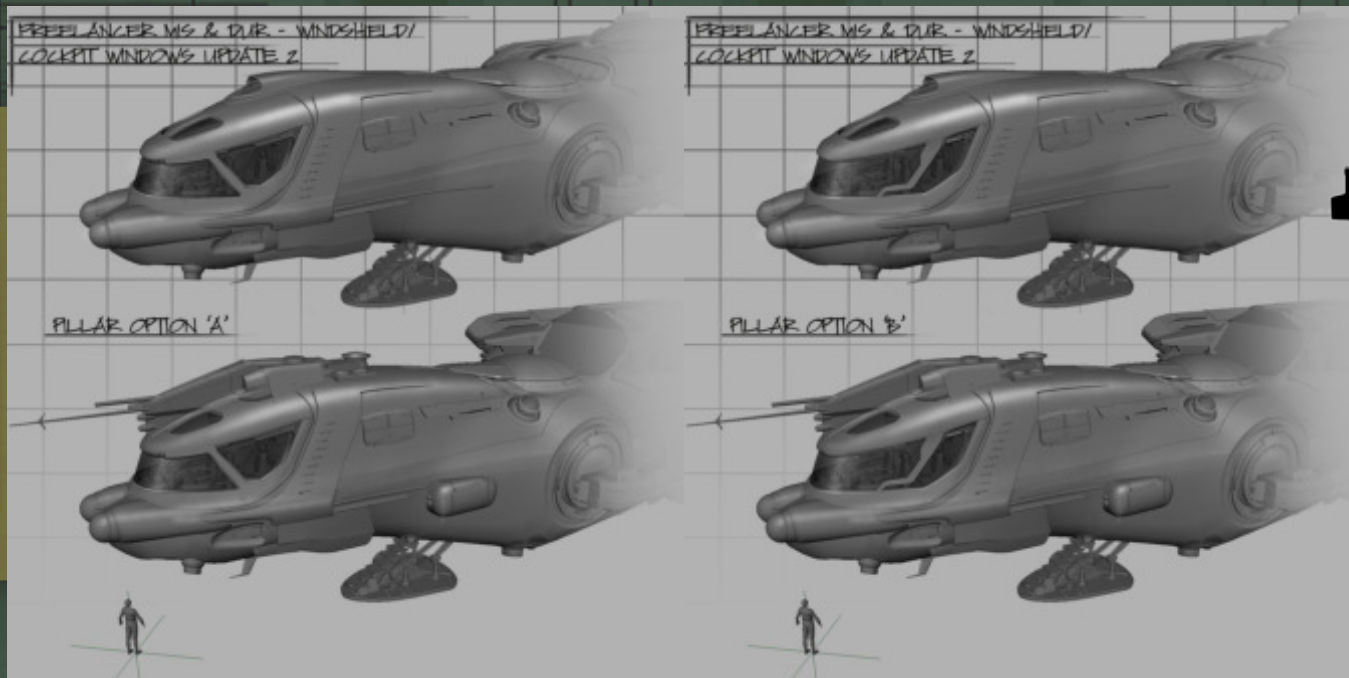
DH: I based this design to fit the same mount/ hardpoint as the original; it should work. I'll double check with Chris O to make sure it does. I can get rid of the rectangular section, no problem. You're right – it would likely cause some unwanted distortion. Thanks!



DH: Here are the updates for the added windshield pillar – are either of these options working?

CR: Option A works the best for me; can you do an interior view?

DH: On the interior view for 'A' now!



DH: Here's the cockpit view requested with the new option 'A' pillar configuration.

CR: That works well! The new Freelancer cockpit view: people will be HAPPY!

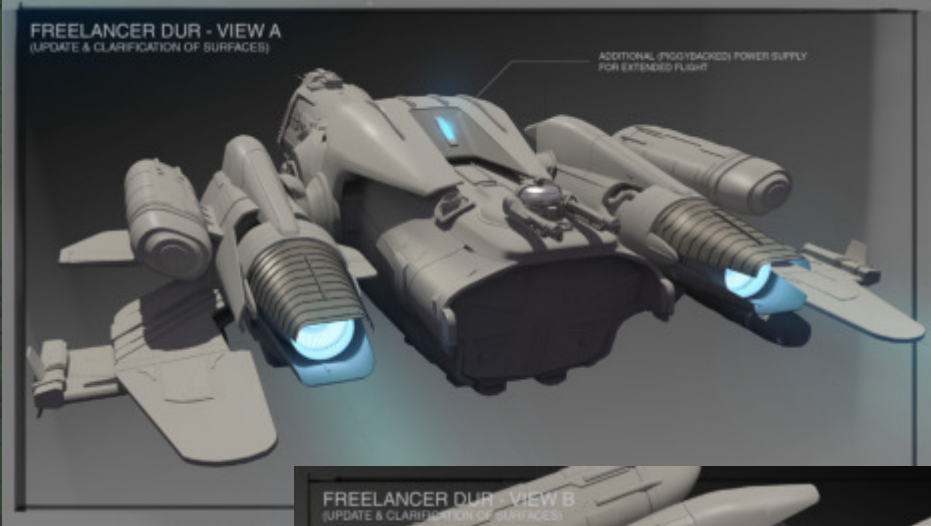
DH: Great – thanks, Chris!

CR: Sean / Harry, who is implementing this in-engine, CGBot? If so, make sure they retrofit the Freelancer cockpits to this.

HJ: It will be CGBot – they are aware of this change coming, were just waiting on your signoff to get started. Sean will launch them now.

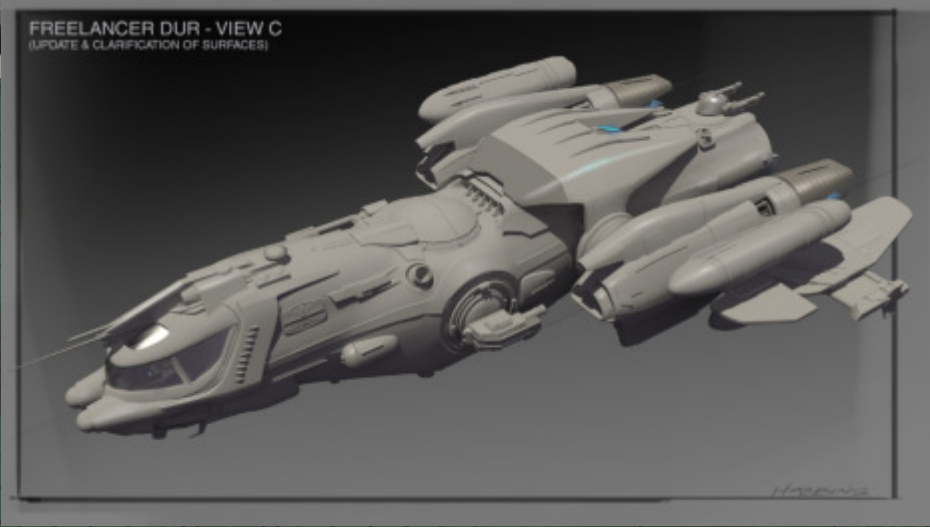


WORK IN PROGRESS



DH: Here's the update and surfacing clarification for the Freelancer DUR as promised. Let me know how it's looking. Also, please let me know where I should upload the geometry for reference.

CR: I like it!



WORK IN PROGRESS



WIP Concept



3Dsketch



LP



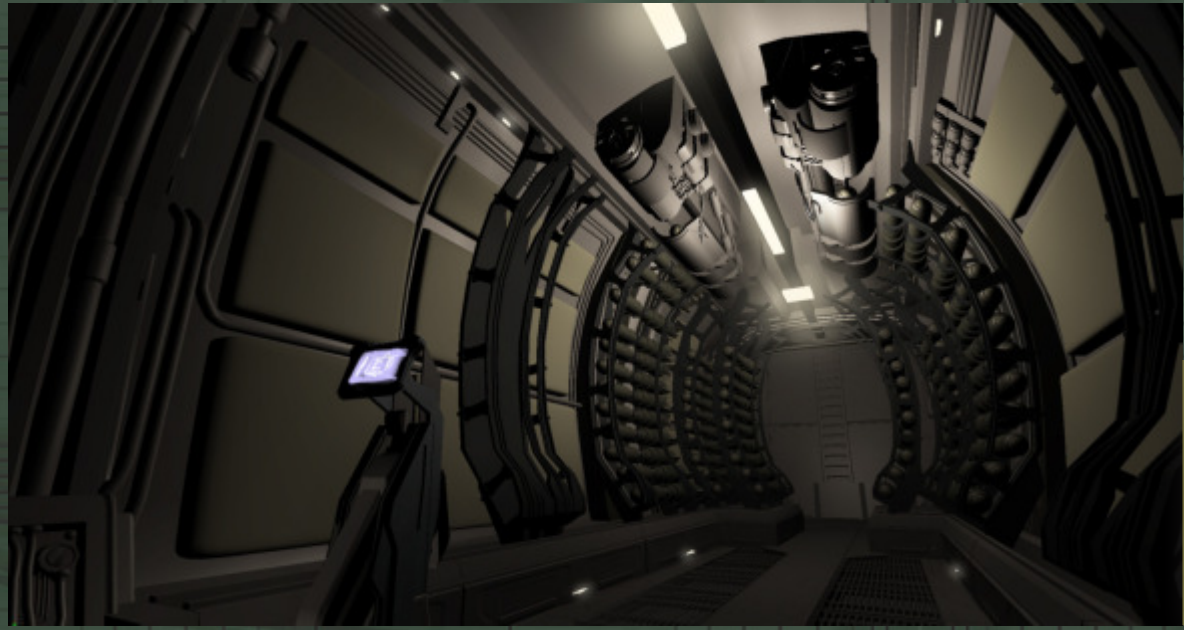
proposal



CG | MS | MSC Freelancer Fam | LP | CGE1



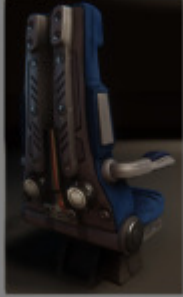
WORK IN PROGRESS



SM: CGBot had a question regarding the thrusters on the Freelancer DUR. As conceived, they appear to be tapered tubes with ribbing; they wanted to know if we want to do that, or if we would prefer they do a lobster-tail approach as in the image.
CR: Taper them.

MS: This is the missile loader for the MIS version of the Freelancer. There are obviously way too many missiles in there, but when we build it out we can converse with design on the max number that should go in there.

Interior Lighting



Interior Lighting



Interior Lighting



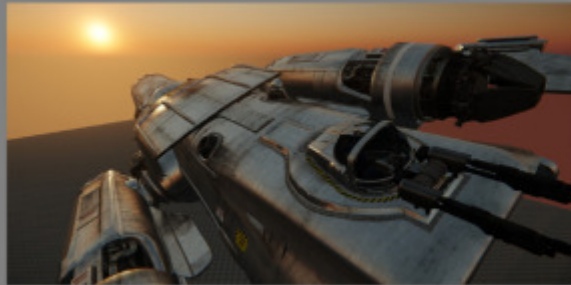
MG: Here are the latest changes on the Freelancer base and PBR materials. We will continue working on the variants.

CR: Looking very promising; PBR helps a lot.

Interior Lighting



Interior Lighting



WORK IN PROGRESS



WORK IN PROGRESS

MISC_freelancer_Base



MISC_freelancer_DUR



MISC_freelancer_MAX



MISC_freelancer_MIS



MG: Updated screenshots for the current state of the Freelancer and variants [exterior this page; interior next page].

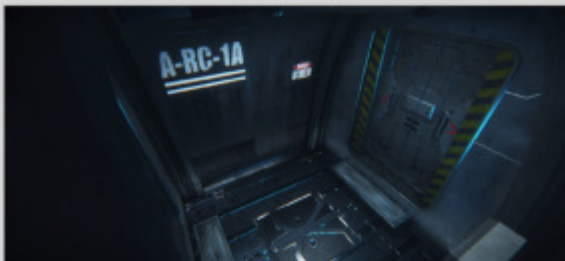
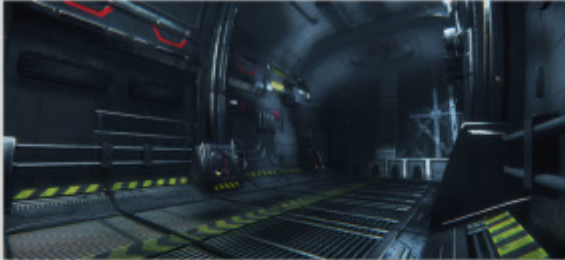
CR: Looks great in PBR! Looking forward to seeing it in the hangar and eventually space (when multi crew is working).

Nice work!

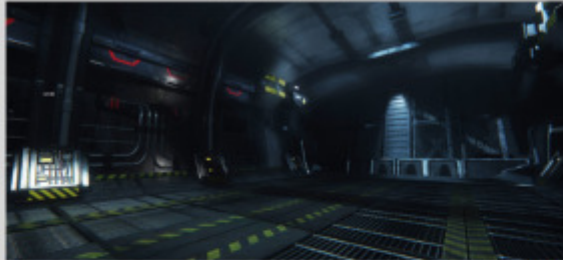


WORK IN PROGRESS

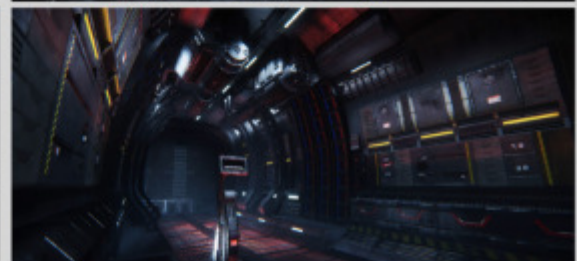
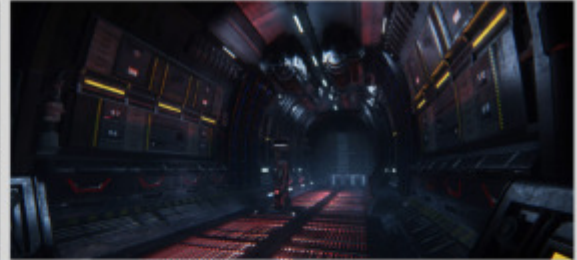
MISC_Freelancer Base & DUR



MISC_Freelancer MAX



MISC_Freelancer MIS





Freelancer DUR



WORKING IN PROGRESS



Freelancer M1S



WORKING ON THE M1S



WILLSOP
S Y S T E M S



WillsOp is a Croshaw-based limited liability corporation established in 2902 for the express purpose of developing starship targeting system software. WillsOp's critical feature was a unique, if unappreciated, one: they adhered to a strict 'made here' philosophy. Unlike every other sensor company on the market at the time, WillsOp used absolutely no shared source code. The result was a more stable platform, but also a closed one which could not easily integrate outside enhancements.

The corporation's first project was a multi-million UEC bid to develop sensor rigging for the UEE Navy's Carrier-Based Strike contract, the spacecraft design proposal which ultimately resulted in the Gladiator bomber. Lacking name recognition and any sort of technological pedigree, WillsOp's bid failed in favor of the DiSys D-33 MultiSuite (long since replaced on active duty Gladiators). The company's founders briefly considered disbanding, but ultimately decided that they believed in the product too much to let their first loss define them.

With that defeat, WillsOp settled in for the long haul, competing on the civilian market as a 'higher end' third-party upgrade option. For two decades, the company went largely unnoticed. It signed no first-party contracts and was viewed (by that small portion of the public which considers starship sensor manufacturers at all) as a reliable but generally unspectacular option. That all suddenly changed in 2922.

On August 9, 2922, a digital plague began to spread from spacecraft to spacecraft. Broadcast from an unmarked sensor buoy parked in geostationary orbit within sublight broadcasting distance of Terra's second-largest trade lane, a signal began to move across the system. Within hours, hundreds of ships were carrying an unnoticed software slot-in; within a week, this package had unknowingly spread to a dozen star systems.

And then, DeathGrrrr struck, with a virus designed to infiltrate the shared code found in most sensor systems and timed to strike simultaneously around the galaxy. DeathGrrrr's trick didn't disable spacecraft (something which would have been extremely difficult given inherent safety backups unrelated to sensor suites), but it did lock every infected sensor suite to grayscale mode. Traffic ground to a halt until a fix could be reached; billions of UEC in shipping were lost.

DeathGrrrr was never captured or even identified, and it remains unknown whether the attack was intended as a prank or something more sinister; an analysis of the software and the drone turned up nothing. But the method of infection was clear: a small worm script delivered directly to common-core code. And unquestionably, the winner in the situation was WillsOp.

With their unique code, WillsOp's sensors were unaffected by the attack. Overnight, the company became a household

MEMORIAL

name and sales skyrocketed. Some newscasters went so far as to suggest that the company might even be behind the attack. Whatever the truth, by the end of the fiscal year, WillsOp had captured a 35% market share in the private spacecraft sensor market (up from under 1%.) With the additional revenue, the company diversified, building robust physical radars and scanners in addition to continued development of their proprietary software.

Now a market leader in all aspects of sensor technology, WillsOp is routinely pursued by top level spacecraft designs, and certain top-of-the-line designs ship with their technology as a default install. The military, too, has come courting; WillsOp packages are standard in several advanced UEE starcraft.

Targeting

Today, WillsOp's prime seller is the P3 Autocompensator, an aftermarket software installation capable of being configured for almost any current-year civilian spacecraft. In essence, anything from a Drake Herald to a MISC Hull D can be equipped with P3 software. The P3 is one of the best target tracking systems on the market, capable of direct tracking of up to three spacecraft and (with an attached WillsOp device, required) passive tracking of up to 512 ships in a standard interaction sphere. Videogame designer Original Systems has licensed the P3 interface design for their *Arena Commander* game. It currently comes standard with all trainer ships.

Origin Jumpworks GmbH has also signed an agreement with WillsOp, making them the exclusive supplier of custom-designed targeting systems for the Origin 325a spacecraft variant. The WillsOp-designed system will premiere with the 2944 model of the 325a, and is hotly anticipated by spacecraft enthusiasts.

Tracking

In addition to direct targeting systems, WillsOp is responsible for passive tracking systems that have become an

industry-defining standard. Where a targeting suite typically focuses on extracting as much information as possible about one target, tracking systems are necessary for keeping tabs on everything else in a given area. WillsOp's trackers are capable of making dozens of identifiers (limited only by range) available for instant targeting.

While any WillsOp targeting suite requires proprietary WillsOp tracking software to function, the tracker is actually manufacturer-neutral. WillsOp trackers are produced in OEM models and are made available at cost to spacecraft manufacturers. The company's objective is simple: introduce users to their ecosystem, then trap them when they opt to choose an aftermarket targeting system.

Deep-Space Radar

It was a moment of redemptive glory for WillsOp when, after nearly four decades, they finally secured a valuable long-term UEE military contract. WillsOp has partnered with Anvil Aerospace and the UEE Navy to manufacture both the structure and the software for the LongLook Radar system installed in every F7A-R Hornet Tracker. The dome-like enclosure installs in the Hornet's upper turret slot, replacing the moveable guns with an incredibly powerful radar. The LongLook offers the fullest battlefield view possible in a single-seat fighter, with the processing power to track fleet movements and coordinate squadron-level engagements. A civilian model of the LongLook is also available and can be installed in any Hornet model in place of the standard cargo container (with some impact on stats).

The company's future continues to look bright, although safety mechanisms put in place since the DeathGrrrr attack have allowed other software systems to once again flourish. Observers frequently cite WillsOp's lack of specialty or boutique sensor options (such as metal-penetrative mining scanners) as a source of lost revenue. For their part, WillsOp seems content to be responsible for standard sensor equipment and to leave anything more specific to the also-rans.





MAKING THE FREELANCER COMMERCIAL

What does it take to make a Star Citizen commercial? A lot, actually; they don't fall together in a couple of days. Let's go Behind the Scenes to follow as a commercial is created.

It takes at least two months to put together a *Star Citizen* commercial, and it involves a lot of steps, and people. It starts with a concept, and then a script (this one by David Haddock) ... but as you will see, the initial script differs from the final commercial in lots of ways.

We'll follow the discussion as the team puts the commercial together, but before you start here, if you haven't seen the Freelancer commercial in the last week or so, take a look at it; this will all make a lot more sense if you have a point of reference. The commercial is at:

<https://robertsspaceindustries.com/comm-link/transmission/13934-Freelancer-Commercial-Live>

Once you've done that, we'll start with the list of shots in the commercial (next page) and David's initial script (the page after that). Looking through the shot list, you can see that a shot will be anything from a couple of seconds to half a minute or longer — it's however long that the "camera" is focused on one subject, without cutting away to another subject or another angle on the same subject. And reading through the script, you can see that its overall central concept remains in the final commercial, but much of the dialogue and other details have changed.

Just as the initial script changes a lot over the course of the commercial's production, the shot list changes a lot as well.

For example, Shot 7 (a hand pushing the throttle) originally ran before Shot 8 (flight and then acceleration). In the final commercial, Shot 7 is embedded between two halves of Shot 8, so that the pilot flies, then pushes the throttle, then accelerates while flying into the next shot. And Shot 16 was cut entirely.

Once the script was approved, Chris Olivia put together a rough cut of the commercial, including all the shots in the right order. This gave everyone a starting point, both for work and for review. After that, the appropriate creator (designer, sound engineer, voice-over handler, etc.) took care of his or her tasks to get the commercial done.

Since we don't maintain a permanent crew of commercial makers, the team was composed of about half staff and half contractors. They included:

Chris Roberts (CR)

Chris Olivia (CO) Chief Visual Officer

Sean Murphy (SM) Art Outsource Manager

Mark Skelton (MS) Art Director

Joel Modelo (JM) Producer, The Ether

Michael Beaumont (MB) Freelance Editor

Metric Minds (MM) Cristoph Schulte, Cutscene Director, and Philip Weiss, Managing Partner

Travis Day (TD) Associate Producer

David Peng (DP) Animation Artist

Ted Bergeon (TB) Concept Artist

Pedro Camacho (PC) Freelance Composer

Shots

- 01 Initial FL pass
- 02 Following the FL, with focus on thrusters
- 03 Sitting in cockpit

- 04 Focus on cockpit panel (and pop-up message display)
- 05 Face-on view of pilot
- 06 Back to cockpit panel as message retracts
- 08 Side view of FL; it flies toward sun
- 07 Focus on hand pushing throttle (then return to 08)
- 09 FL passes ringed planet, goes transparent to show cargo, turns solid again
- 10 FL flies past from opposite direction, shows thrusters, then solidifies again and goes into jump
- 11 FL emerges from jump, flies away toward sun occluded by asteroids
- 13 Cut to side view of FL, until Cutlasses arrive
- 14a Cutlass scans FL
- 12 Focus on pilot's reaction to the scan
- 14 Two Cutlasses fly alongside FL, demand cargo. Weapons are described, then FL reappears and flies off-screen to the left
- 15 Waist guns activate
- (16) Additional combat, from a different perspective (deleted)
- 17 FL destroys both Cutlasses
- 18 FL approaches Stanton past space station
- 19 FL approaches landing pad
- 20 Side view of final landing
- 21 Cargo ramp lowers
- 22 Pilot drinks (from back)
- 22a Pilot drinks (from front)
- 23 Pan around FL
- (24) MISC logo



BEHIND THE SCENES

Initial Script

BY DAVID HADDOCK

TONE: Think Denis Leary Ford F-150 ads. Aggressively blue collar.

EXT. HANGAR - NIGHT

A PILOT stands in his hangar, STARING AT CAMERA. There's the dark silhouette of a massive ship behind him. CAMERA SLOWLY PUSHES IN.

NARRATOR

So you're the (man/woman) they comm when they need the job done right.

EXT. SPACE

A FREELANCER burns through a beautiful cosmic panorama.

NARRATOR

The Arc Duo 400 engine helps you deliver on schedule...

The PICTURE freezes. The FREELANCER turns into a WIREFRAME/SCHEMATIC to showcase the engine, which pops out and spins (showing off the cool modeling).

NARRATOR

Capable of handling speed and payloads generally saved for the big boys, the 400 was named by Whitley's as one of the best Commercial Grade Thrusters.

The ENGINE flies back into the FREELANCER which transitions back from the WIREFRAME/SCHEMATIC and flies past the camera.

EXT. ASTEROID FIELD - DAY

The FREELANCER bobs and weaves around incoming fire, dodging asteroids along the way.

The PILOT yells orders into his comms. The CO-PILOT swings the turret around and opens up on some Cutlasses in pursuit. The ship FREEZES, shifting again into the WIREFRAME/SCHEMATIC view.

NARRATOR

You don't go looking for a fight, but if you gotta throw down, you've got a factory-standard weapons package from Behring and a defensive system capable of trading body blows with anyone who'd rather steal than work for a living.

EXT. SHIP

All the weapons POP OUT and separate, spinning in air for a moment before flying back into the model and the WIREFRAME/SCHEMATIC fades back to reality. The Cutlass pirate explodes.

INT. FREELANCER - COCKPIT - LATER

The CO-PILOT sits hunched over a scanner screen. The PILOT's crashing in the bunk.

NARRATOR

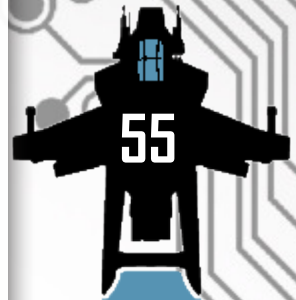
You aren't satisfied with the words "explored."

EXT. SPACE

The FREELANCER drifts against the backdrop of a churning gas giant. The WIREFRAME/SCHEMATIC of the FREELANCER scans and pulls out the Jump Drive.

NARRATOR

The Tarsus Leaper Jump Engine will take you further than we've ever been.



BEHIND THE SCENES

INT. FREELANCER - COCKPIT

The CO-PILOT still sits at the screen. Something on the screen BEEPS, attracting the CO-PILOT's attention. The PILOT sits up in the bunk and looks over.

EXT. LANDING PLATFORM - DUSK

A FREELANCER sits on the landing platform. Its back cargo door is open. A PILOT stands, arms crossed, looking at the hold. Pleased. We see that it's packed full of crates.

NARRATOR

Your word is your bond, but you know how to be adaptable. With twenty tonnes of cargo space in your hold ...

ZOOM into the WIREFRAME/SCHEMATIC of the FREELANCER, graphics measure out the cargo space.

NARRATOR

... it's a helluva lot easier to take on that extra job.

MIRROR the first shot of the PILOT from the beginning. CAMERA SLOWLY PUSHES IN.

NARRATOR

You're the (man/woman) they comm when they need the job done right.

The Pilot hears something and turns. Another stack of crates is waiting. He grins and motions toward the hold.

NARRATOR

And this is the ship you trust.

Final glamour shot of the FREELANCER on the landing pad as the new cargo rolls toward the hold.

The CO-PILOT walks up with a couple bottles of beer.

NARRATOR

MISC's Freelancer. Built for life.

FADE OUT

CO: WIP assembled with scratch audio and music.

CR: This was a Denis Leary soundalike? Has he ever heard Denis Leary?! :-)) I think we may want to record some new VO! [joking; this voice-over is just a placeholder]

In general I like it — I would like to use one of the new 3Lateral faces & rig for this.

Is there a better way to get into the commercial? Maybe close on the main thruster blasting / flaring out the screen, then we boom out to reveal the rear of the Freelancer?

I also would like to breathe on a few more of the shots — on the equipment breakdowns there should be stats like on the Aurora. And the Cutlass battle should take a little longer (let's enjoy some action / pyro). I would like to see a glory touchdown shot at the end.

OPENING SHOT, ALREADY DIFFERENT FROM THE SCRIPT



Also the flying shots all seem a little fast / zippy for me — the Freelancer is blasting around faster than the Hornet!



BEHIND THE SCENES

MAKE CUTLASS BATTLE LONGER



I believe this commercial is around 1 minute in length; I would focus on 2 minutes for the final commercial.

SM: When I read the script for this commercial I totally heard Sam Elliot as the narrator.

CO: updated previz ... temp graphics ... no audio. There are a couple of continuity and screen direction things I need to fix ... or just provide notes/ direction to vendor.

MORE THRUSTER FLARE



CR: Cool! Can Martin do a temp audio track for you?

CO: I'll talk to him.

MS: Man, this is looking very cool!

CALLOUTS ADDED TO EARLY FLYBY



CO: This has new shots ... a new opening ... some temp music and sound.

JM: Hey, Chris! Are we proceeding with a graphics exploration for this commercial? Your email didn't come with any notes.

CO: Joel, that is probably a Travis question. I'll CC him on this note. Also, I'll post clean versions of those shots without the temp graphics.

JM: Thanks!

A NEW OPENING





BEHIND THE SCENES

MB: Here is my first pass for the Freelancer spot. As you can all tell, I am no Denis Leary!! But I needed to get some VO in for pacing and so shots line up with narration. There seem to be a couple of shots that were in Chris's assembly that were not in the SHOTS list in Shotgun?? Also, the engine shot I used is shot 21 v3, and Chris had shot 20 v2 ... is the one I have in there not the newer shot?

I have this near a minute and a half, which seems correct for the pacing of the spot. I sped up some of our shots so the ship seems faster. It seemed to be traveling very slowly and I wanted to give it some testosterone! Looking forward to thoughts ... I know, I know ... the voiceover guy sucks!

CO: Maybe a cool bumper sticker.

Smoother move.

Afterburner trails.



Should already be full of cargo ... just each one highlighted.

Might be cool here to go into jump point ... to carry over to the next shot.

CR: When the call comes over the com, remove speed-up of the pull-away barrel roll; adjust it slower.

Michael B is going to cut into the turnaround shot later.
Chris O is going to update the shot to reduce the turn

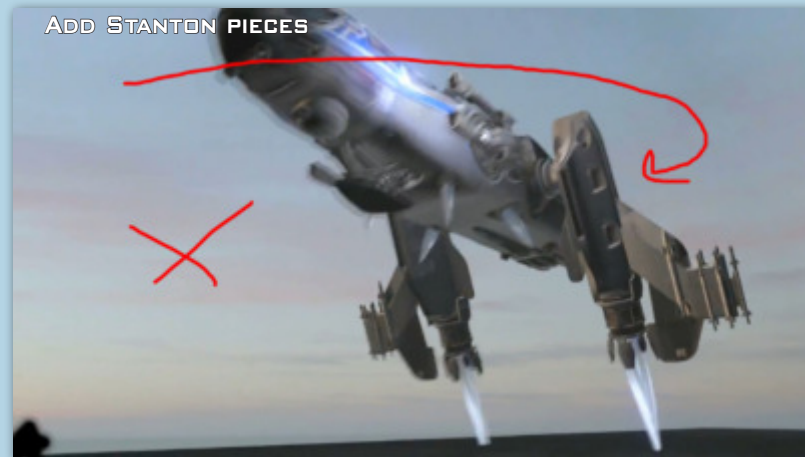
duration and tighten up the camera.

Travis will approach Charles to cast and record some voice actors.

Travis will talk to Ether [Joel Modelo] and get some ideas rolling.

Chris O:

- * Look into jump point opening on the tail of the loop-about shot, following the engine close up. We should look at a couple variations for the opening and for emerging from a jump point.
- * Slow down the pacing when the weapons are floating, and match the speed of the silhouette.
- * Add Stanton pieces to the landing shots.



- * Tone down the agility of the Freelancer in the Cutlass encounter. He boosts up and pirouettes at the same time.

Michael B:

- * Cut in the double engine shot rather than the single engine close up.
- * Add radio chatter from the pirates at the point that they are scanning the Freelancer.
- * Move the weapon dialogue up a few seconds.



BEHIND THE SCENES

- * Hold the silhouette shot longer to emphasize the weight and size of the Freelancer.
- * Try a cut moving "the call comes over the comms" to the front end on dead space before the Freelancer shows up.
- * Let the end shot of unloading the cargo play a little longer.

* * *

MB: Here is V2A and V2B. V2B has the narration adjustment at the top of the cut.

MM: Hey guys, glad to see the progress of the Freelancer commercial. :) I'm just wondering about the overall line of action regarding consecutive shots. Sometimes the action is from left to right and then the opposite. Should we take care of this when creating the shots by incorporating/hiding the crossing with camera movement?

Michael, is there a quick way for you to add shot numbers on each cut? Or do you wait for the final approval to add them?

CO: There will be specific direction for each shot when the cut is locked. I'll be setting up the final naming convention for each shot and we can do a slate over the edit. Each shot will also be clearly broken down in Shotgun for you guys to post to.

MM: That sounds excellent. I already updated my internal list about each shot, what's important, which kind of assets we'll need, etc. Would you mind telling me more about it? Travis mentioned all the shots were done by you in XSI, is that right? It really looks like CryEngine already. If so, I was wondering if you could send us the engine files.

Regarding the assets: I'd like to know if we stick with the character or switch him. For some shots we will simply do keyframe animation, but if you have any animations already captured with mocap we could use, it'd be nice to get them too or simply point at them. I suppose they will all be in P4 anyway, right? ;) Especially for the last shots with the loading crew, it'd be nice to have some kind of mocap-animations. We could also do a quick shoot here on our stage. Does the planetside already exist (extended

WHEN DO WE CHANGE THE PILOT?



whiteboxed rather than in the animatic or even fleshed out already?) or do we have to create the whole foreground and backdrop-vista as we did for the Aurora trailer? Will there be some changes on the Freelancer thrusters or do we stick to the particle-mesh-jet effect? Do you already have an idea about the lightspeed effect? We'll need an entrance and exit effect.

Sorry for bombarding you with questions, but they are pretty essential to understanding what we need to deliver and even more, how. ;)

* * *

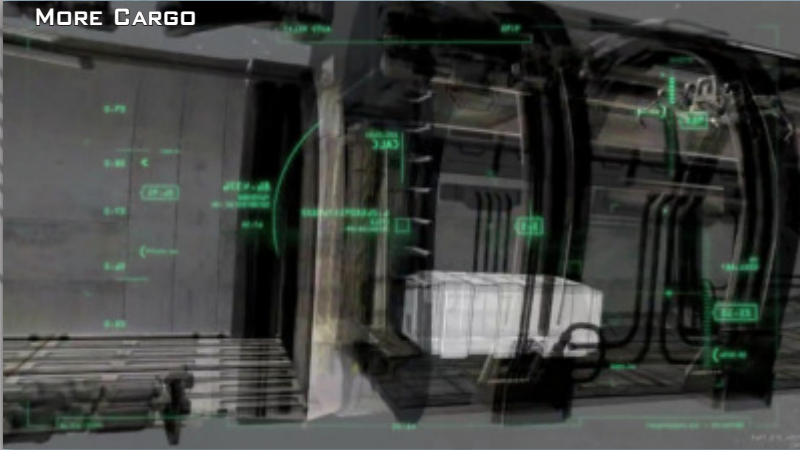
CO: In the approach to planet surface shot, no asteroids; use an orbiting space station and buoys to show activity.

NO ASTEROIDS



BEHIND THE SCENES

MORE CARGO



Add a bumper sticker to rear of Freelancer in early shot (also when the cargo ramp drops at the end of the commercial).

Can we get some screen graphics for the pilot console?

Make the passage past the ringed world smoother.

Add more cargo to the transparent ship.

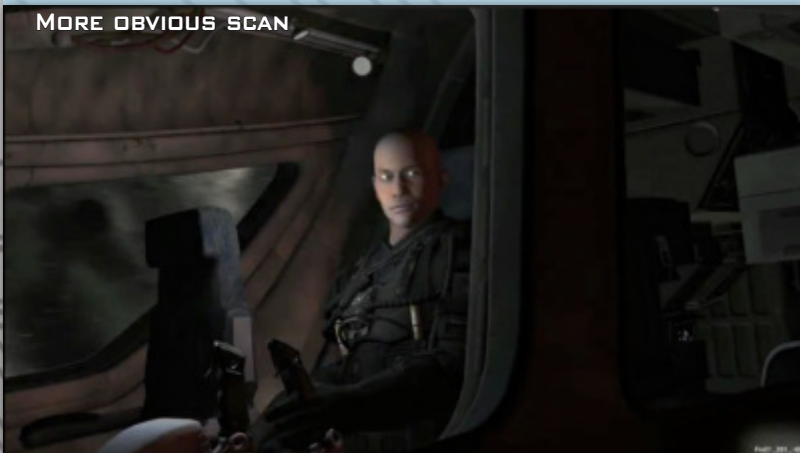
Give the ship a little more time to travel before exposing the engines.

The ship shouldn't come out of jump so close to the right edge; there needs to be some space to the right.

Smooth the animation as it flies away from the jump.

Make the initial Cutlass scanning light more obvious.

MORE OBVIOUS SCAN



Are the waist-mounted guns single or paired?

Add a little muzzle flash when firing at the Cutlasses.

Approach the rear cargo ramp head-on; add smoke and steam as the ramp opens.

* * *

JM: Freelancer Commercial graphics styleframes for review.



BEHIND THE SCENES

MM: Here's the latest edit of the Freelancer commercial, with shot numbers.

SHOT NUMBERS ADDED



MM: This is the first keyframe animation pass of the pilot for the Freelancer commercial. We've started this already instead of waiting for the mocap. All the shots are rendered from Motionbuilder and edited into the sequence. We still need a polishing pass and the reaction of the pilot to the Cutlass scanning the Freelancer still needs to be blocked again. Right now the reaction seems far too harsh and snappy. He should be more like realizing the light scan and then glance up and look to his left.

PILOT'S REACTION



MM: This is our first approach to the scan effect used in the Freelancer commercial. It's an animated texture on a mesh combined with projecting light. It's currently built in the SDK but will be copied over to the CIG build.

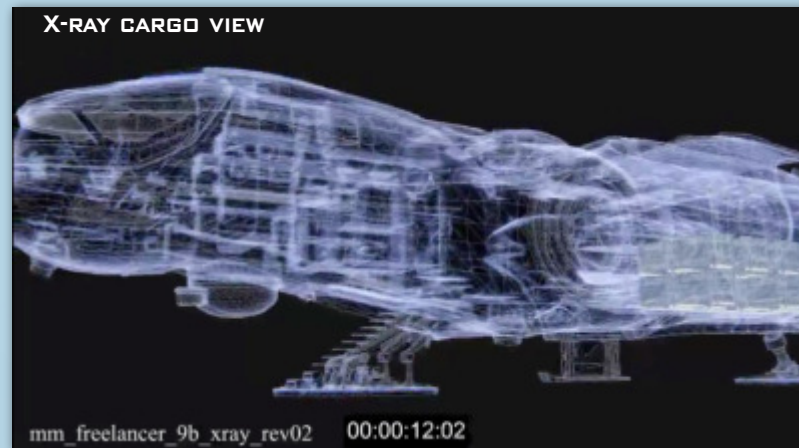
SCAN EFFECT



TD: Looking good. Needs to be more vertical though, to match the animatic. I.e., the topmost portion should hit the top of the 'Lancer while the bottom extends to the bottom. This looks like it's being scanned by a pencil, whereas the animatic looks more like a wide, flat brush. Does that make sense?

MM: This is the style test of the Freelancer's x-ray cargo view shot. This is not the shot itself, but a simple test with camera animation. ;)

X-RAY CARGO VIEW



BEHIND THE SCENES

CR: You should use our new HOLO shader. It's much better (and has some cool rez in / dissolve features). It should be in your build. Travis, can you coordinate with Metric Minds, Forrest & Okka to make sure they know about the shader? I think Metric Minds should be able to manipulate the material settings via Flowgraph.

MM: Chris, thanks for the heads-up. We'll check the new holo shader out.

* * *

MM: This is one of our first tests of the Freelancer's light-jump. You have a nice couple of fans in the forum talking about their favorite light-jumps/warps, etc.

<https://forums.robertspaceindustries.com/discussion/37835/your-favourite-warp-jump-effect/p5>

JUMP SPECIAL EFFECTS



We had the idea of a big flash revealing some kind of hole in which the Freelancer disappears. Probably the ship needs to distort into a one dimensional point and will be brightly lit by the created blue hole. Lightning will indicate the energy coming from the hole. In addition to the wip-particle-effect, we'll need something more to indicate the direction of the Freelancer. Therefore I'd like to test something like a line of blueish vapor extending from the far end of the hole that will show the trajectory of the Freelancer's jump. Something like the "Back to the Future" burning tracks after the DeLorean went back in time. This will be a good guide for the camera to follow a slight pan into space.

* * *

MM: This is our style approach for the weaponry shot 10b. It's still not 100% there, but it would be good to get some feedback on this already. :) I've used the holographic (wireframe) and also the monitor and standard holographic shader in the engine to render out different passes. The passes were composed and adjusted in AFX. The Freelancer's position is work in progress, and side cannons and rockets are missing. The camera will also change when the prior shot is locked. The animation of the weaponry will be changed to some floaty/hovering items so there will be more space for the overlaid information boxes. Probably we can rotate the weapons on some kind of plate, always showing the prominent one close up. What do you think about that? We'd definitely like to show you an example of this. :)

CR: Is this using our new holo-shader? You can turn down the

WEAPON HIGHLIGHTS



edge line highlight to not show the wireframe (which I think I prefer). Forrest can fill you in on how to use the shader.

I like the idea of rotating the weapons to show which one the graphics are highlighting close up.

MM: This wasn't using your holo-shader but a combination of different shaders. I probably found the shader you meant. Should we use this without the wireframe effect now? Do you prefer the simple blue one?

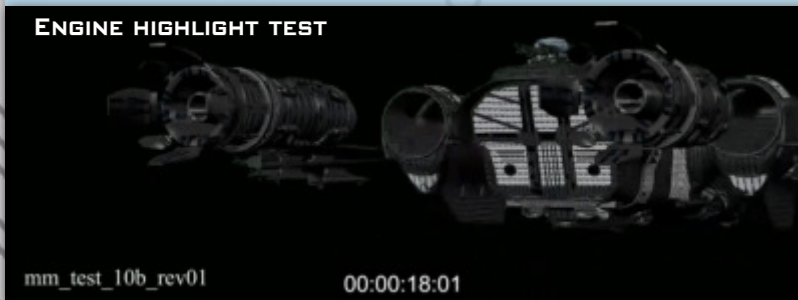
* * *



BEHIND THE SCENES

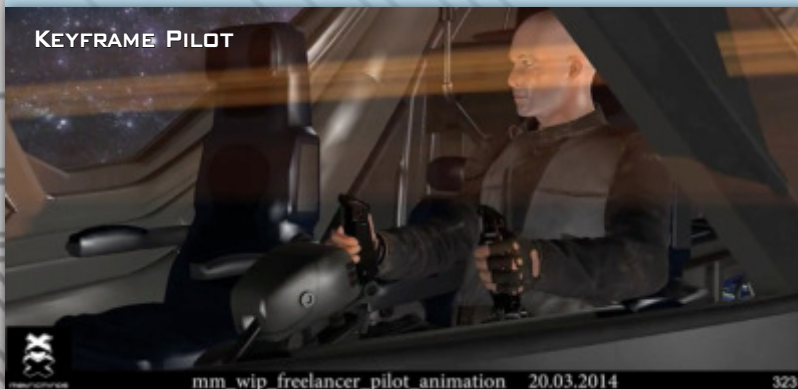
MM: This is the test for the main-engine-tech-view-shot 10b. The beginning of the FL coming at the camera is 10a and rendered from the engine. 10b was all done in Motionbuilder for prototyping the camera and overall look of the shot. We'd like to use the same shader effect for the weaponry shot and add some details like fluids (yellow) going through the outer pipes of the thruster's hull. In beginning, the Freelancer will disappear when the thrusters are getting out of their case. In the end we won't see the FL driving backwards, it should simply appear around the thrusters. This way we can avoid sexual allusions. ;) Right after 10b the Freelancer goes into the light-jump.

ENGINE HIGHLIGHT TEST

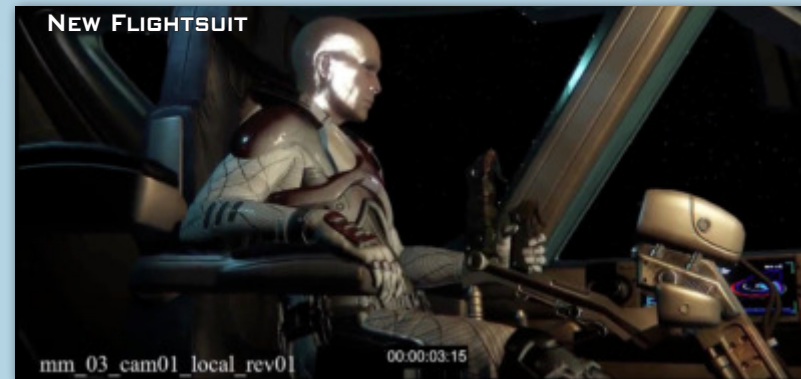


MM: This is our last keyframe pass on the Freelancer pilot shots [above-right screenshot]. We used the Privateer character from the All_MaleCharacters.fbx. I guess the head will change in the end, but the body will stay the same. All of this is rendered in Motionbuilder and will be brought into the engine for shot assembly in the next few days.

KEYFRAME PILOT



MB: Here is V5 with all shots from MM.



MB: Here is the next version with all updated shots from MM.

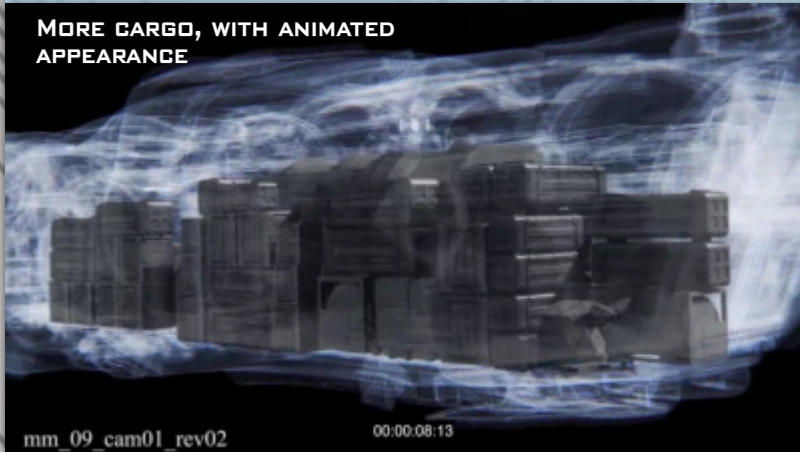


MB: Shots 8, 19, 21 and 22a are new.



BEHIND THE SCENES

MB: All latest shots are incorporated.



MM: I just created a quick edit of the shots we've created so far. The VO and sound FX are fairly off and only used from the previous cut to lay out as good as possible. The edit shows our current shot length and duration/speed we've created by now. Shot 17a is missing, as are a couple of changes mentioned from the last call. I guess this helps to point out certain lengths of the shots, adding some beats and only showing the shots in full length.



CO: Can we get an additional shot/coverage here that basically punches in to the frame indicated on the annotation ... and cam follows along with it ... so everything is the same ... but let's just add an additional shot that we can cut into, that is closer to the ship when it jumps. Probably just increase the focal length to get in tighter without having to reposition the camera body.

MM: I've uploaded the changed shot; is this what you are looking for? :)

MM: This is the latest light jump shot with the little pause to see what's happening on the ship preparing for light-speed. I've added the zoom so we get closer and have a better view on what's happening.

MM: This is the current status of the shots for the space 02 environment. Due to the time lapse between shot 11 and 13 I used an asteroid to keep this visually separated. :) Shot 17 still needs be more graceful on the Freelancer's animation and agility. I'm working on this now. And there will also be the 17a shot tomorrow.

CO: This is looking great!





BEHIND THE SCENES

MB: Latest MM shots, timed for pacing.

CO: Thanks, Mike. I'm working on the temp graphic call-outs today.



MB: Here are all the latest shots. The latest version has been tightened and sped up in places to get us to 1:55 TRT. Shot 20 needs to be fixed by MM, as there are not enough tails to the new shot to time the engine movement and see the Freelancer touchdown.



MM: This is a quick draft for the space02 set sequence, with Shot 13 edited in a bit longer, having visual flow for the Cutlass coming down for the scan. I didn't cut in the audio, so this might be too long or short in the end. What do you think about this?



DP: First pass on facial animation. Waiting for body animation to do second pass.





BEHIND THE SCENES

ASTEROID MASKIN FROM SH

MB: Here are all the latest MM shots. New VO; my apologies to all actual voice-over artists for the previous version. Added reverse moment of pirate ships entering frame.



* * *

MB: Pirate sequence shortened. Shot 11 has an extra beat.



* * *

CO: Rough look dev for graphics.

TB: Sweet!

CR: Looks great! Is this The Ether's work? Or yours, Mr. Olivia?

PC: Nice! This changes the music a lot, in a good way!! Probably I will have to make different music for these parts? Let's see how MB cuts this.



BEHIND THE SCENES



MM: Wow. I like the camera shaking “bam” effect when going into the detail shot. It really makes it stand out from the rest of the material. I’m looking forward to the other shots. :) Is there anything that we need to change on the source material, or can we call it locked down for now? :)

CO: I sent an email about just sending an isolation pass/ matte ... or with no BG or ship. Thanks!

MB: Added 16 frames to tail of Shot 20. This version is for Mix and Score.



MB: Updated Shots 19 and 21. Shot 20 flopped and some length added to landing shot and beauty shot at the end.



MB: Pedro Cue#1 test [music added]

MB: Newest music from Pedro, with Lance H and Chris Cox narration cut in.

MM: Lance Henriksen, you got Bishop on board? Nice! [Narrator voice has undergone notable improvement.]



BEHIND THE SCENES

CO: Various trucker and bumper sticker combination ideas for commercial. Any ideas welcome.



MM: Will these stickers be on the Freelancer's texture map in the end? That would make it easier for us to simply re-render these shots. ;)

CR: I think they should be decals (not part of the base texture).

CO: So which one do you like, Chris?

CR: I like them all! Can't we give them to Metric Minds to place as decals on the rear of the ship (or I guess CGBot could do it too as an optional layer in the new Freelancer MAX files).

Also, does MM have the new PBR Freelancers?

MM: So is there one particular decal you'd like to have on the ship? We have a PBR version of the Freelancer already, from a couple of weeks ago. We are having the version from changelist 32834 in P4. Sean Murphy suggested we use our own version for the commercial, or otherwise we might get into trouble with later shelved versions. But we always update to the latest textures and materials.

MB: Pedro Cue#4

CR: Starting to feel good to me.

How are we doing on the jump effect, bringing in the new head & PBR?

Bumper stickers will be cool, too.

MB: Female VO cut in for landing zone operator.



MB: This has all of the latest shots from MM. This version has Pedro's Cue#4 attached, but he has this version without music so he can upload his newest score to this picture when he is ready. The female narration in the end of the commercial (in my opinion) is a bit too quick of a read and the male voice we had in the previous version fills the moment better.

DP: Second pass on face animations ... body and face assembled into scenes.



BEHIND THE SCENES

MB: Newest MM shots. Shot 4 has been fixed, moving the camera up. Also, we have the right weapons shot cut in and I have gone back to the male narration in the landing sequence, as it fills the moment much better.

DP: Final face and body pass in Freelancer character.

FINAL PILOT FOR REVIEW



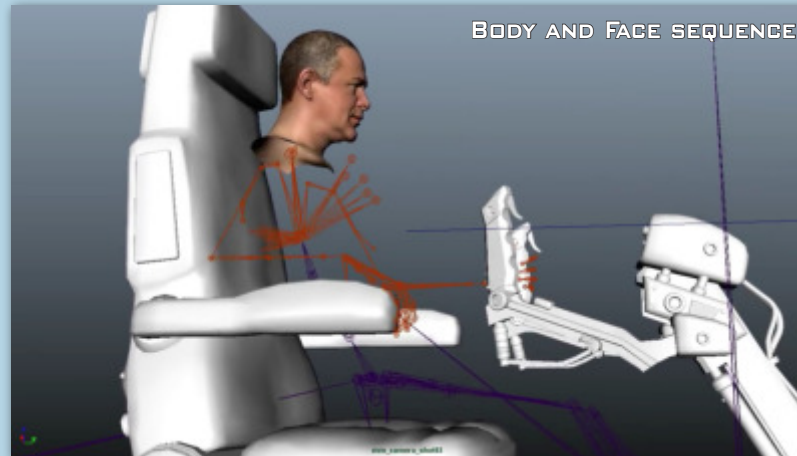
TRANSPARENCY EFFECT MODIFIED



MB: Newest MM shots: 9, 10,14 and 17.

DP: End face animation adjusted. Body and face sequence extended a few frames to pad the edit on the end.

BODY AND FACE SEQUENCE



MB: ALL SHOTS ARE FINAL DELIVERY FROM MM. Charles' latest mix (done before text and jump point were cut in) attached. Still waiting for any final color correction that Chris Olivia is doing, as well as his final text cards.

[See next page for final screens.]



BEHIND THE SCENES



BEHIND THE SCENES



RIHLAH SYSTEM SHORVU



E
O
I
H
H
H
H
V
V
H

Rihlah, a Xi'An word meaning "source of strength," is a former military bastion located one jump beyond the Perry Line. The Xi'An establish their solar presences with singular goals, and Rihlah's initial industrial focus is no exception. With the rise of the Human threat, Rihlah was converted into a major staging area for Xi'An military forces, and the system's two worlds were initially terraformed with only this purpose in mind. Massive barracks facilities, training yards and munitions plants initially populated the system. If the Xi'An Empire had ever gone into all-out war with Earth, Rihlah would have been a key strategic launch point.

Today, however, Rihlah is a star example of the thawing of relations between the Xi'An and Human Empires. With the increase in trade and other relations between the powers, the ready-made invasion force has been withdrawn

and Rihlah has been formally redistricted into its original purpose as an industrial zone. The conversion, and the integration of Humans on the system's planets, have had an interesting effect and resulted in a particularly unique place for Human visitors to explore (within some very specific limits).

Cosmologically, Rihlah is an A4 main sequence star with a thick green band capable of supporting a pair of large ecosystems. Jump points lead to both Human and Xi'An worlds, although the latter are kept uncharted on all of-

TRAVEL WARNING Do not attempt to land outside of designated Human zones. While this order is not always rigidly enforced, the Xi'An military has a standing shoot-on-site order for Humans found in unauthorized areas of the system.

ficial maps. While the bulk of the fighting force has been withdrawn from Rihlah, a well-trained border defense force remains, making it an inopportune point for smugglers hoping to break into Xi'An space.

INNER PLANETS (I, II & III)

The first three planets in the system are largely unremarkable. Rihlah I is a rocky, star-swept protoplanet incapable of supporting any known form of life. Rihlah II is a "puffy planet": an unusually close-in gas giant with a large radius but a very low density. Due to this and its proximity to the star, Rihlah II is not an effective refueling station. Rihlah III is an Earth-sized world with a rapid daily orbit. With a very thin atmosphere and a surface of dense, jagged rock, Rihlah III is an unlikely candidate for terraformation.

RIHLAH IV (SHORVU)

The fourth planet in the Rihlah System, called Shorvu ("sure-vu") was terraformed by the Xi'An Empire as a barracks world, dotted with facilities to train and house military ground forces as well as mid-range weapons factories capable of equipping them. With the drawdown of the last century, the military factories of Shorvu have been methodically dismantled and replaced with corporate industrial zones (the very sight of which is a fascinating process, as massive Xi'An-driven mechanical ants strip structures and other objects back into their component materials).

MARKET DEALS — SHORVU

BUY: OUTSOURCE WEAPONS	+2
SELL: HEAVY METALS	+2
SELL: INDUSTRIAL MACHINERY	+2
SELL: ELECTRONICS	+1

Today, the conversion into an industrial world is nearly complete, although there remain scars of the former military occupation everywhere. Xi'An corporations have moved to Shorvu in force. Unlike most (In fact, close to all) Xi'An worlds, Humans are encouraged to visit Shorvu, via a landout in the industrial complex at Yahti, a former troop-training megapolis. This was a calculated decision on the part of the Xi'An governance: corporations needing to interact with Humans are given tax breaks to establish offices in Yahti, keeping Human intrusion into Xi'An space to an absolute minimum. The result is a corporate "office park" with outlets occupied by the big players, from shipbuilders like MISC-Xi'An and Aopoa all the way to food processing companies and simple import/export bar-risters. The culture is an interesting mash; many of these outlets hire mostly Human staff, but insist on traditional Xi'An customs and methods of interaction.

The industrial regions surrounding Yahti are also largely Human-centric. Any Khartu-al purchased will travel through a line near Yahti, and several MISC-overseen factories pump out Xi'An-acclimatized models of the Hull D. Shorvu also buys outside goods to fuel their industrial development. Heavy metals as well as a variety of electronics are in demand here, and the population has become acclimatized to purchasing these from Human transports where necessary.

RIHLAH V (XI)

Called Xi ("zee") by the natives, Rihlah V is technically classified as a Xi'An Habitation World. A natural super-earth, Xi is a temperate planet roughly 3.5 times the size of mankind's home world. Like any Xi'An focus planet, Xi's dedication to a single task has produced ultra-ordered results unlike anything you might find orbiting a Human star. Estimates suggest that between fifty and one hundred billion Xi'An inhabit the stacked lifespheres that form the basis for the world's dozens of massive cityscapes.



The exception is Corilla, a smaller city surrounded by dense tropical rainforests. Open to outsiders, Corilla has become a de-facto trading post where interested Xi'An can interact with Human, Banu and Tevarin shipmasters. Over the years, Corilla has become home to a distinct community of UEE ex-patriots and political refugees, who have begun to subtly merge their distinct Human culture amidst the city's standard Xi'An hab-world architecture. UEE law enforcement has no jurisdiction in Xi'An space, and so it has become a popular place to 'hide in plain sight.' (However, note that the Xi'An typically do not prosecute Human-on-Human crimes, making it an open port for more ruthless bounty hunters.)

Visitors are warned not to try and explore other regions of the planet, for both sociological and practical reasons. In the case of the former, Xi'An culture remains extremely xenophobic, and Humans are absolutely not welcome in settlements beyond Corilla. Anyone caught in another settlement will be treated as an infiltrator, and the UEE government has shown little interest in expending clout to save the lives of wayward tourists taken in such instances. Additionally, it is generally impossible to simply walk out of Corilla: the settlement's surrounding rainforests are impassible and are stocked with a variety of toxic plants and deadly animals (chief among them, the fearsome all-tongued Rihlah jumpbeast).

MARKET DEALS — XI

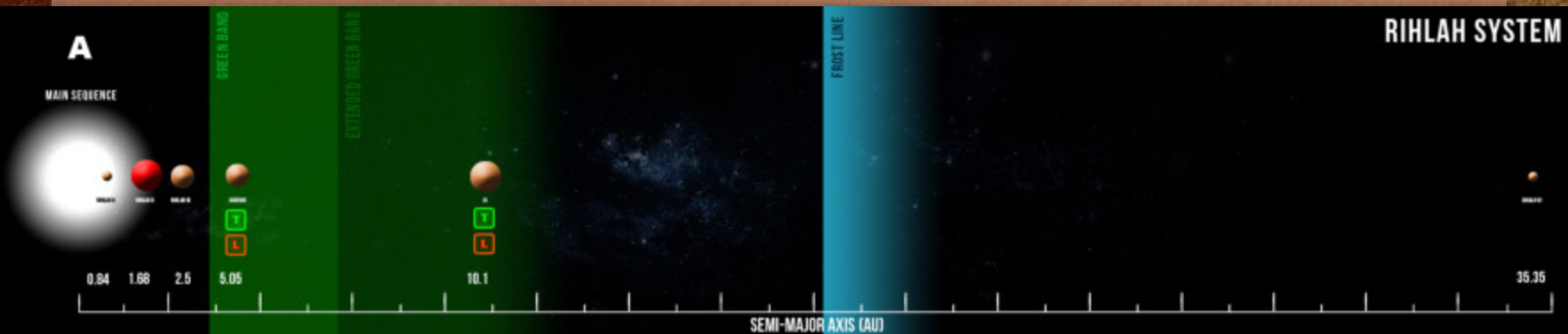
BUY: SURPLUS WEAPONS (ILLEGAL)	+1
SELL: LUXURY GOODS	+2
SELL: FOOD (HUMAN)	+2

RIHLAH VI

From the surface of Rihlah VI, the system's distant dwarf worldlet, the light from Rihlah's star is barely visible. This is not, of course, something the typical traveler would ever experience. Rihlah VI is a lonely world void of atmosphere, resources, landing zones or any interest whatsoever. It is wholly un-noteworthy, safe for the persistent spacer rumor that the planet is home to a Xi'An "tripwire" capable of autonomously placing the Empire on a war fitting. The claim, wholly unsubstantiated, goes that the technology is left over from Rihlah's days as a fortified border system and that the technology remains active, buried in Rihlah VI's core to this day. No rumor clearly identifies what the tripwire is, with claims ranging from the central computer that controls a massive space network of scanners to some sort of doomsday device capable of destroying the planet and anyone caught investigating it.



RIHLAH VI





Lost & Found

by Charles Duncan

Part 2

Oskar Gruber wouldn't be deterred from his course of action. Serge Michaels had done his best to convince Gruber that continuing his investigation was futile, but he refused to let go of the idea of finding out the history of the salvaged Cutlass. And so Gruber found himself above Lorona, at the Imperial Corrections and Rehabilitation Center, more commonly known as the Orbital Super Max. It had a nice name, but it was a prison, no mistake. Gruber was surprised at the ease with which he made an appointment to see one of the prisoners. The officials there didn't seem very interested that he had requested to see James Quister. The questions he was asked seemed cursory at best, and soon Gruber found himself seated in a small meeting room. One guard waited with him, while a second went to fetch Quister.

When Quister was finally brought into the room, he wasn't what Gruber had been expecting. He was a short man, gray haired; clearly he was older than Gruber, and it looked as though prison life hadn't cause him to miss any meals. Even with going a bit towards fat, Quister still had the look of a brawler; his arms were brawny, his nose flattened. But when he examined his visitor, Gruber thought he saw shrewd intelligence in Quister's bright green eyes. The former pirate walked to the chair opposite Gruber, put his arms on the back of it, and stared at Gruber.

"What the bloody blazes? I don't know you. Who are you?"

Oskar started to reply, but was immediately cut off by the pirate. "You're not my lawyer; you're not pale enough," Quister said. "You're certainly not stiff enough to be one of the Advocacy, and you're not well dressed enough to be a reporter."

Quister's accent was new to Gruber, but he didn't think he would have trouble following the man's speech. He sat calmly as the pirate squinted at him. Quister stared intently back at Gruber. "I don't recall you; are you someone I threatened at some point, eh? Come to gawk at the caged lion, is that it?"

Gruber shook his head. "My name is Oskar Gruber, Mr. Quister. I've come here to ask you some questions about a ship."

Quister's laughter rang through the room. "A ship? Oh why certainly, gov'ner, step into my show room and I'll tell the latest and best about what we have for sale. Last time I was aware though, this was a prison and not a shipyard."

Gruber didn't let Quister's laughing get to him. "I'm here about a specific ship. A Cutlass called the *Outbound Light*."

"Never 'eard of it."

Gruber smiled. "I didn't think you would have. But nonetheless, I think you know the ship. My investigations indicate that at one time, you were the owner. I've been retained to trace back the ownership. That's why I want to ask you about it." Gruber was very proud of himself for putting that last bit in; let the pirate think he had someone important behind him.

A shrewd look came over the pirate's face as he considered Gruber. "Retained, eh? Now I do wonder who would be so interested in the past of such a humble businessman as myself."

Gruber straightened his shoulders and looked back at Quister. "The question is the ship; a derelict exploration vessel was found. Tracing its history has it in your hands at one point. I'd like more information. And so I'm here."

"Well, looks as though you're off your stabilizer, boyo. First you said a Cutlass, then you said an explorer. So which ship is it you wanted to ask me about?"

Gruber hesitated. "A Cutlass. One with a round hull. One I believe you got captured in."

Quister moved the chair and sat down opposite Gruber. "Well, well. Now that is an interesting question then, isn't it?" He looked over at the two guards in the room. "Might I trouble you two gentlemen to give me and Mr. Gruber here a bit of privacy?"

Without a word, the two guards left the room. Gruber had a sinking feeling in his stomach when he heard the locking mechanism on the door engage. Quister looked at him and smiled.

"Afore we get started, let me explain a bit about the situation you're finding yourself in, Mr. Gruber." Quister gestured around the room, "Now this as may be His Own Imperial facility, in name." The smile faded from Quister's face. "But trust in me, I'm the one in charge of this block, in fact."

Gruber suddenly felt very afraid.

Quister continued on, "So now I'm wondering why a lone man comes into 'ere, asking me questions. 'Specially knowing as I do, that I'm not the first person to who you've been asking those questions. Why not so long ago, there was a member of the Advocacy coming round, interrupting my day with questions. As stupid as they are, I wouldn't put it past those dogs to send in a new man to try."

Gruber look straight back at Quister. "That's not the case. I'm not a member of the Advocacy. I have nothing to do with them. I'm trying to trace a ship. A ship I know that you owned. I'm not here to accuse you of anything, or get evidence, or anything like that. I'm just here about the ship. I want to find out where it came from and I think you could tell me. That's all."

Quister squinted at Gruber. "Aye, it's not just the Advocacy that gets me teeth on edge. How do I know who's backing ya, eh? It would take a damn fool to walk in here just to ask me about an old ship."



CHRONICLES

Gruber's fear vanished; he had heard that same tone from the salvage crew, from Stark, and from Michaels. "I'm not a damned fool. I just want to know about the ship! You owned the ship, so you know something about where it came from, so I came to this lousy station to ask you about it!" Gruber suddenly realized what he had said, and he had a bad feeling that he had just stepped over a line. Quister was a pirate; from all accounts a rather ruthless one. And Gruber was reminded that clearly the guards weren't here to protect him.

Quister leaned back in chair and laughed. "Well, then, timid as a kitten, and suddenly the kitten has claws!" He chuckled merrily and looked at Gruber. "No stopping you from asking about the ship. No, I daresay you don't work for the Advocacy at that. Too direct to be one of those blighters. Directly reminds me of my younger days, that does." He chuckled once more and asked, "So you've no idea who Zara Vencia is?"

Gruber felt profoundly confused and his expression showed it when he replied. "Who?"

"Never gamble, boyo. You'd be terrible at it; couldn't lie to save your own skin, I bet." Quister shook his head. "I'll tell you about that later. But for now," he leaned back in his chair and shouted towards the door. "Oy! Be some good lads and fetch a bit o' that caffee for me and my guest. I daresay Mr. Gruber could use a cup or two."

Gruber was flustered. "Yes, that would be nice."

* * *

"Takes a bit of pluck to walk in here and beard the lion in its den, boyo," Quister said as he sipped a steaming cup of caffee. "But what is this talk of an exploration vessel? What did they do to my ship?"

Gruber explained the salvage of the *Outbound Light* and the circumstances he found onboard. Quister set his cup

down and nodded slowly.

"Well, if that right bastard wasn't dead already, I'd space him myself for ruining that ship."

Gruber looked at the old pirate quizzically. "I don't follow you."

Quister laughed loud again, "Cutlass is a warship, boyo. Regular ship-o-the-line she is. Oh, maybe there's not the flair the fighter jockeys want, and she's not meant to slug out a battle like a Bengal, but a warship nonetheless. Fast, maneuverable, armed to the teeth. Born to fight; they made the Cutlass, designed her like, to be the best light raider ever to take to space." He chuckled, "Though I'm sure those Advocacy sonsawhores clipped her claws when they took her from me."

Gruber nodded. "The ship was gutted when it was sold from impound. I think that's why Zharkov rebuilt her as an explorer. But I couldn't trace any registry before it came to the Advocacy."

Quister snorted. "Of course you couldn't. Don't you be insultin' me now, boyo, not after we've had such a nice introduction. Trace my ship, please. Off your bleeding rocker if you think you could run down Redjack Quister's ship that easy." Quister got a far-off look in his eyes. "Aye, registries and names came and went. Switched 'em out regular. Couldn't have them Advocacy blokes running us down. But when I was running the Dragoons, that ship was always the *Dancing Girl*. You would have run like the wind if you saw her dancing after you."

Gruber leaned in, fascinated. "Tell me about her."

Quister laughed. "Well, back in those days, Guv'ner Smotts ran things in our system. Appointed direct by the UEE, but good enough for all that. True friend of the common man he was. He understood the workings of things out in our part of the fringe. Bah, took everything a man had just to



keep body and soul together. Guv'ner Smotts didn't have the military there to back things up. Depended on help from enterprising good citizens such as myself. We were done up right proper, legal and all above board. So long as Smotts got his share of course. Privateers, we was called. Had ourselves a nice little base of operations, and our very own little fleet."

He chuckled to himself. "No Advocacy around there in those days. It was up to us to maintain law 'n order. Policing our own system, as it were. And if some cargo happened to fall into our hold, well, no different from the UEE and their bloody taxes anyway. That *Dancing Girl*, one look at her was enough in most cases that we'd hear nary a whisper of complaint. And for those that did complain, well, she had ways to quiet that too." He smiled. "Having a pack of Cutlasses coming at you is a sight you don't want to see, boyo, but if you do, harken to old Redjack's words: cut your thrust, and give 'em what they want."

Gruber blanched. "Well . . . I hope I don't ever get into that situation. But rest assured, I'll definitely take your advice. But, do you mean you had a whole squad of ships like yours?"

Quister gave him a shrewd look. "Oh, we had a flight of Cutlasses all right. As I say, best light raider ever made. But to reply to your exact words, no. No, *Dancing Girl*, she was one of a kind. A Cutlass to be sure, but just a wee bit different. Replacement parts were quite the difficulty to locate. Lucky for me, we had ourselves a top rate mechanic. True genius, she was. You see, boyo, most times them as came in the system regular knew how things worked. You answer your hail, you turn to, we take our share, everyone walks away safe and sound.

"But there were them as didn't show much fondness for how business was conducted. Those blighters thought to run, or if they was truly stupid, stand and fight. Then it was rush in, breach and board. Quite the sight, seeing a Cutlass latch on and burn through a hull. Man-to-man in the ship, it

was then. And believe me when I speak, we weren't called Redjack's Dragoons just 'cause it sounds so pretty. Best thing about that ship: she'd dance through whatever fire they'd throw at her, hold full with a crew of the best mates you could ask for. But even the best dancer in the 'verse can't dodge everything. Patching her up afterwards was a right pain to go through. Nothing seemed to fit right. But Cassie, that mechanic you may recall I mentioned, she could make it work for us." For a brief moment, a look of longing came over Quister, but then his face hardened. "Least ways until those bastards wrecked her right proper."

"What do you mean? What happened?"

Quister scoffed. "Times change, lad; nothing stops that. Guv'ner Smotts found himself appointed to a new system. And that damn gov'ment put in a new man. Ferrer was a bloody devil, he was. A right enemy of free enterprise. He didn't quite care for the business old Smotts had set up. Told us to lay down arms, let the real men take over. His men, what knew how we should live our lives better'n we did. Well, us as were true men of spirit, we had none of that nonsense. So Ferrer calls in the Advocacy and sics the dogs on us. Found ourselves in quite the position, as what had been proper and legal the day before was now 'piracy.' Bloody hypocrites." He took another drink of coffee and continued on.

"Made ourselves a bit more mobile. A year 'n three quarters they was after us, with nothing to show for it but some shot-up Advocates and a red-faced Guv'ner. Quite put out he was, as I understand it. Word of our little endeavors spread outside our system, from what I heard tell. We became quite the embarrassment for the good and honorable Guv'ner Ferrer. It mayhap have not been so easy as it was when Smotts was still in charge, but we had enough practice at our stations now to make it easy enough. Always a danger, of course," he smiled at Gruber, "but then danger's what makes a man feel alive, isn't it?"



CHRONICLES

Gruber was unsure how to answer that. He just nodded and hoped it was the right thing. Apparently it was.

“Aye, thrill and danger. Out for fortune and glory. ’Tis what all the boys harped on about. Me, I says, keep your glory; I’ll just take the fortune. Aye, fortune we made all right. But a lot went back into the *Dancing Girl*. Fine ship to start, she was, but not quite as suited my tastes when first I clapped eyes on her. With the help of some ready coin, salvaged parts, and Cassie’s expertise, we made her better.” Quister shook his head in memory. “Damned fools had slapped some massive engines on her. Acceleration’s all well and good, but we wasn’t in a race to a finish line. Quick enough to run down the cargo, quick enough to out-manuever the Advocacy. ’Twas what I needed out of her. But not before, nor since, have I ever seen a ship that could twist and turn like that. Cassie did a right proper job modifying the old girl.”

Quister got a wicked gleam in his eye. “And it may have been we put a few wee guns on her as well. ’Tis human nature after all, man’s need to fight. Someone sees you, they want to puff right up.” He grinned at Gruber. “You’d be shocked, boyo, to see how quick they deflate when they have a battery of mass drivers pointed at their engines.” He reached out and spun the coffee mug on the desk in front of him. “Aye, by the end of that, *Dancing Girl* was dressed up so as to make the Grand Admiral himself proud to own that ship. Quick, sleek, graceful as the fabled tiger and twice as deadly. I daresay without that ship, we wouldn’t have been able to tweak the gov’ner’s nose as hard we did.”

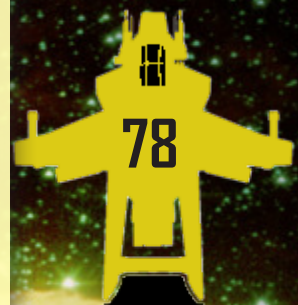
He looked down into his empty mug. “And then Cassie gets sick. Melroon’s Disease, which you’ve probably never heard of, and a damned better life you’ll have if you never do again. Poor lass; terrible way to go. But as she was the only one we had to keep *Dancing Girl* dancing, we put out the word for a new mechanic. Eight months that bastard

was with us, working the ships, taking the spoils like he was one of the boys. And then one day, we go out to help a convoy redistribute some of its cargo, as it were. We weren’t there more’n twenty minutes when an Advocacy patrol just happens to jump in. Well, so far as we were concerned, our business was done, so we go to hot-foot it out.” Quister’s face became red with anger at the memory of it. “And that’s when the charges went off. Quantum drive was slagged, thrusters dead. Shields went down and I sat there watching those Advocacy bastards come in like they was the proper Navy. All prim and seemly later on, but when they came that time, they cracked open the cockpit door and gassed the ship.”

“The mechanic was an Advocacy spy?”

Quister laughed at Gruber. “Course not. That we would have found out right away. So squared away those boys are; couldn’t get one to sit relaxed if you ordered him. That mechanic, sneaky one he was. Worked for a bounty hunter named Zara Vencia. Hence my asking you about that earlier. That bounty hunter is cold hearted and stone faced, with nary a drop of compassion to be found. Not one you’d be wanting to get on the wrong side of; she’s a dog, that one, but she doesn’t forget a single slight and she never turns down a bounty. Perhaps you’d be thinking ’tis just old talk,” he said, “but by the time those dogs got their hands on me, the bounty was quite a tidy sum.” He smiled at Gruber. “Surely, such an investigator as yerself could find that out. But she wasn’t after the money, not that one. She even showed up at my trial, a friend of the State they said, testifying against me. Argued quite a bit that I deserved to be thrown out of an airlock, sans suit, and save the good taxpayers the cost of my incarceration. Queen bitch she was, but she’s a bounty hunter and had her reasons.”

“But you wound up here. This isn’t even the system you lived in.”



CHRONICLES

Quister held up his arms magnanimously. "In all my glory. Funny thing, life is. Spacing is a young man's game. Here I sit, cock o' the walk of my little fiefdom, mayor and gov'ner all in one. 'Course, at times, I do have to entertain some certain diversions of my private time," he said as he glanced knowingly at Gruber, "but then, what politician of any repute doesn't have a committee meeting or two to chair over? 'Tis always good to have friends, Mr. Gruber. Life has a way of coming 'round in circles. One hand reaches out to help another, as it were. Why, would you believe that the Imperial oversight for that planet down there is none other than my old friend Jerediah Smotts?" Quister smiled to himself. "Funny how it all works out."

"You do seem to have fared well for yourself, sir." Gruber looked around, trying to think of something. "The caffe is excellent."

"Aye, and it does my heart good to see such manners in the youth of today. But you still want to know more about my ship, don't you? Or should I call it your ship?"

"Um, well that is, yes. I mean," Gruber stammered, "I want to know more about it, and, well, technically, I did buy it, so legally, well, that is, technically, I . . ."

Quister laughed at Gruber's obvious discomfort. "Rest easy, boyo. Ships change hands, just as children grow up. My *Dancing Girl* died the day the Advocacy took her from me. And I'll be damned if I set foot in some unarmed parody of what she was."

"Ah, yes, well. Thank you. I think." Gruber looked at the old pirate sitting in front him. "When you were onboard, did you ever find anything, well, unusual in it?"

"I'm not sure I follow as to what you mean by unusual. She was a custom ship, I'm sure of that, but as far as her components went, nothing as would stand out."

"Custom ship? You mean you had her built?"

Quister looked stunned for a moment, and then broke into laughter again. "Me, a penniless pauper when I started, have a custom ship built? Lord love the young, but you have some strange ideas, boyo. No, just going over her, she had to be custom built. But 'twasn't I the one what did it. Cassie, smart as paint she was, she didn't know as to where it could have been made. Hells, even the traitor bastard that Vencia snuck in never mentioned it. And he knew his ships too; probably was better at working on the *Dancing Girl* even than Cassie was, God rest her soul."

Gruber perked up at that bit of information. "Knew the ship? Like he had worked on it before?"

Quister nodded. "Quite the possibility. I would say you could ask him yourself, but seems he took his money and invested it in drug smuggling. He got himself caught by the Advocacy, sentenced to ten years in an Imperial prison. Wasn't there a day before he fell down a flight of stairs, onto a knife." Quister's expression became hard. "Six times."

Gruber went pale. "So, he won't be able to tell me anything about the ship."

Quister's face broke into a smile. "Tenacious one you are. No matter how scared you get. Could have made you into a right proper privateer."

"Well, could you tell me where you got it from, then? Who you bought it from, or maybe at least the name of the ship?"

"Bought it? Aye, boyo, you think I bought a ship? I told you, back then was hard enough to get sustenance to eat. Poor bastards like me, we couldn't afford the luxury of real food, just protein, and you think I bought a ship?"

"Well, then you must have stol . . . liberated it. So, there would be records of that. Advocacy reports, maybe insurance claims. Docking reports, something. If you could give me the name of the ship, and the system. Was it the same system you operated out of? I could trace that."



“Like a dog with a bone, you are. I can respect that, lad. Oh to be sure, I can give you the name of the ship. When first I took her, she was called the *Glorious Reach*. Damned stupid name I thought to myself then, and I daresay the passage of time hasn’t changed that thought. I knew it as soon as I saw her that she was wasted potential. Just like your man what made her an explorer; took a fine weapon and dulled the edge, they did.”

Gruber became excited. “*Glorious Reach*? Out of what system?”

“Well, at the time when first I fancied her, I was a bit far from home berth, as it were. The ship was home ported on Borea, in the Magnus system.”

Gruber’s face fell. “That’s where Drake’s home office is. Trying to trace a single Cutlass . . . out of all them there . . .”

Quister’s face was somber, but there was a mischievous gleam in his eye. “Aye, quite the daunting task you face there, boyo. And all I can tell you is the name of the ship; registration numbers weren’t what could be called high on my list of priorities at the time. Trying to find a single Cut-

lass in all that mess, why that’d be no easier than finding a star by sight in the middle of a nebula.”

Gruber shook his head. “Easy or not, I can do it. It might take some time, but I’ve got a name. I can go from there.”

“Oh that you could, lad, that you could. But you’ve got a name of the ship. Mayhap it might be a bit easier on you if I told you the name of the owner?”

“The owner? You know who owned it?”

“Course I do. I’ll tell ya, lad, you don’t want to steal without knowing who you’re going to be robbing. Bad idea that. It could come back at you later on.”

Gruber looked at the pirate anxiously, “Well, who was it?”

The old pirate laughed. “That damned bounty hunter, Zara Vencia. I killed her partner and stole her ship.” Redjack Quister winked at Gruber. “Why else do you think she was so full of hellfire to see me caught?”

To be continued



CHRONICLES