

JUMP POINT

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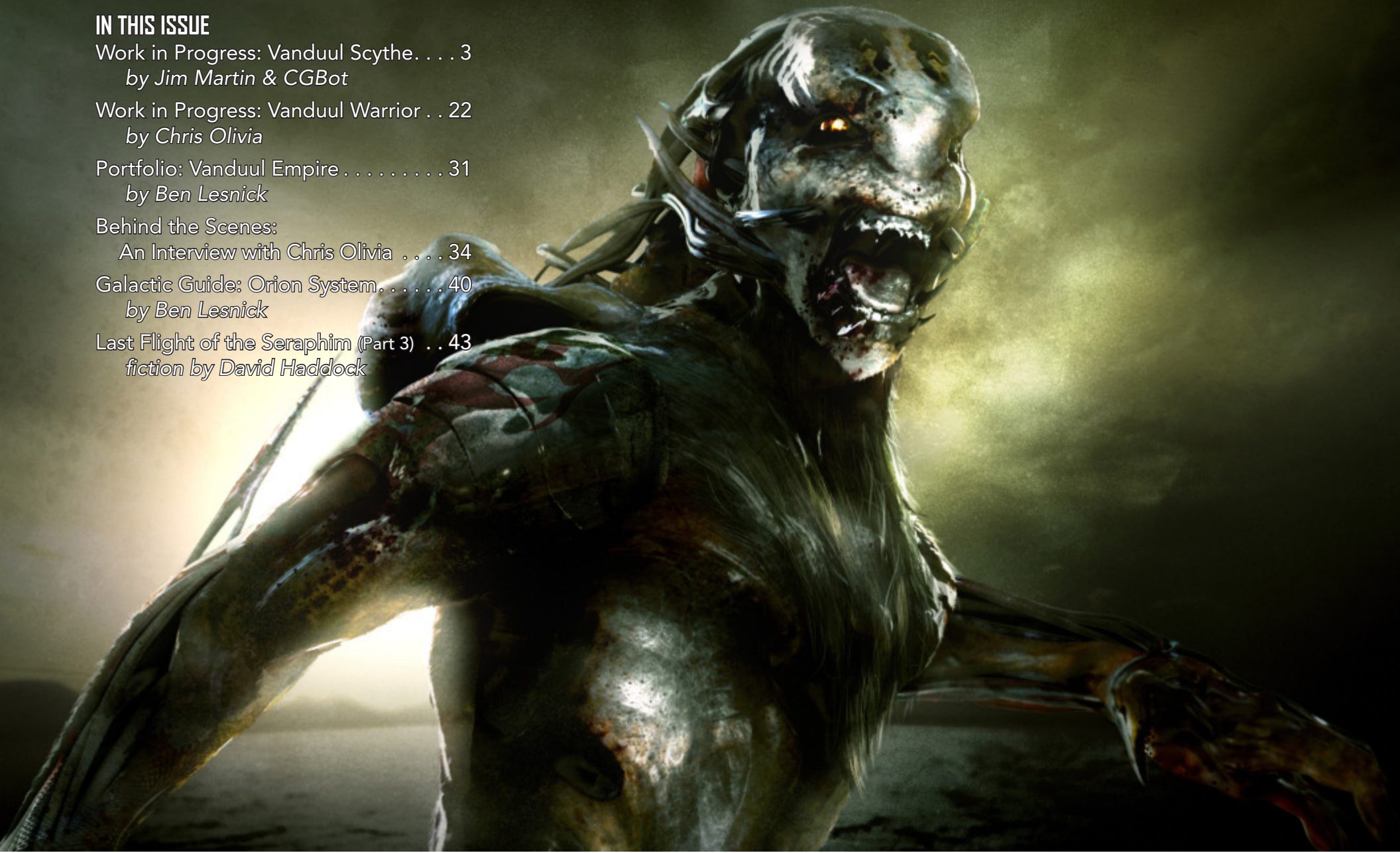
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GREETINGS, CITIZENS!

This month we have a Double Feature for your enjoyment and delight — the Vanduul Scythe and the Vanduul warrior who pilots it.



In keeping with our Vanduul WIP, we profile the Vanduul Empire (as much as is known about it) through a report on a captured Vanduul carrier. We've also got a behind-the-scenes interview with Chief Visual Officer Chris Olivia (who created the Vanduul warrior), the final episode of Dave Haddock's *Last Flight of the Seraphim*, and a Galactic Guide article on Orion system and its sole habitable (but uninhabited) planet, Armitage.

The overall look of **JUMP POINT** has been significantly improved by some attention from Clint Schultz, who is creating the logos and other insignia throughout the game. Thanks, Clint! And this is the longest **JP** yet; I suspect we'll need to keep them shorter than this from now on, especially with that bound volume lurking at the end of the year.

And now, that moment I'm sure you've all been waiting for — actual responses to actual **JP** emails! We'll start with a couple short ones, 'cause that's all the room we have:

Which Wing Commander is your quadrant? **KNARF**

It's on the far left, 4th from the top (in Hawkings Sector).

VANDUUL SCYTHER STATS

Builder: Unknown

Length: 28.5 meters

Crew (max): 1

Mass (empty): 19,000 Kg

Focus: Raid / Interception

STRUCTURE STATS

Upgrade Capacity: 4

Cargo Capacity: 3 tonnes

Engines: Classified

Modifiers: 3

Max. Class: Fusion

Main Thrusters: 2 x TR4

Maneuvering Thrusters: 12 x TR2

HARDPOINTS

2 x Class 1: Equipped 1 x Type IIG Vanduul Heavy Maser
1 x Type IM Vanduul Neutron

2 x Class 3: Equipped 4 x Chemical Reactive (IR) missiles

1 x Class 4: Scythe Ramming Blade

*Please, can you hire someone who translates **Jump Point** to German text? It's very hard for my friends to understand the technical descriptions in the text.* **Sven Hinze**

I'd love to, Sven, but at this point, we don't even have German translators for the in-game material. We'll have translators in future months, but I can't promise that I can drag them from game translations to help with **JP**.

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

David

David.Ladyman@cloudimperiumgames.com

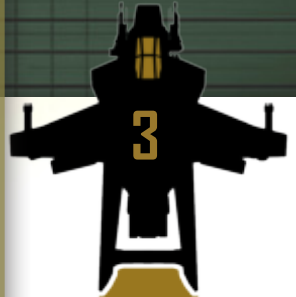


FROM THE HOCKEY!

Vanduul Scythe

This month's Work In Progress spotlights the development of the Vanduul Scythe and the Vanduul warrior. Scythe commentary is from Jim Martin (primary artist on the Scythe), with additional notes by CGBot (who developed the in-game Scythe model).

Chris Olivia created the Vanduul warrior and gives us his commentary on that process, as well.



WORK IN PROGRESS

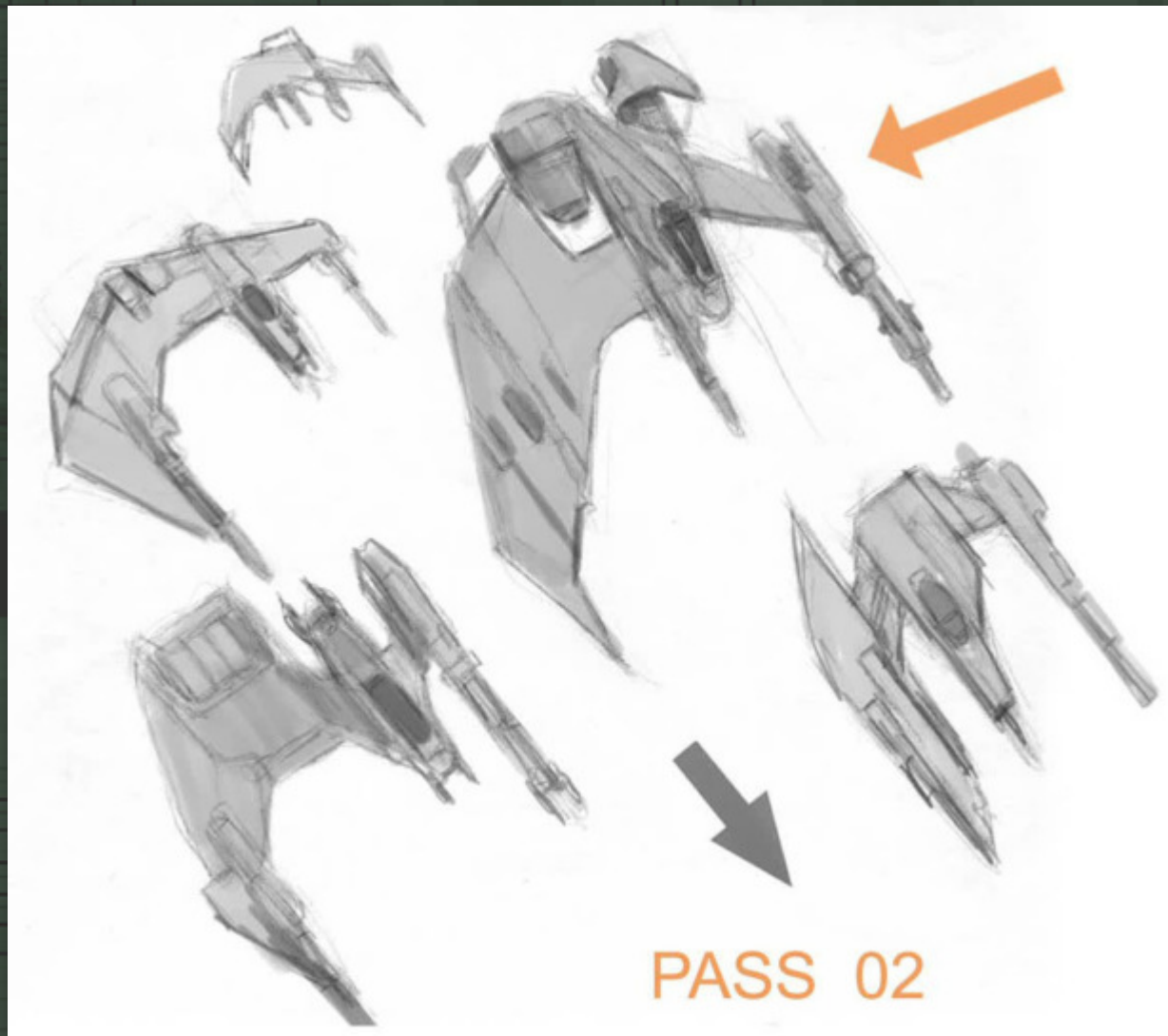


JM: When Chris asked me to sketch some designs for the Scythe, he described it as a single-seated fighter. We also had a conversation about the Vanduul and what types of ship designs would best suit them. They're armored predators, so Chris felt that perhaps the ship itself would feel like a "flying weapon."

I started with a silhouette pass, trying some different wing shapes. I also tried the idea of incorporating "talon" shapes. This pass didn't yield much — lots of bat wings but nothing that sparked any further exploration.



WORK IN PROGRESS



JM: For a second pass, Chris asked for something asymmetrical. He liked the “blade” look of the wings from the first pass, but wanted to see something more unique. We talked about the idea of it being very purposeful looking, like a flying gun. I did a rough second pass and we decided to pursue one of the designs. Chris asked for a gun to be added to the blade-wing and to add an engine, making it a double exhaust.

JP: *What were your inspirations while designing the Vanduul Scythe?*

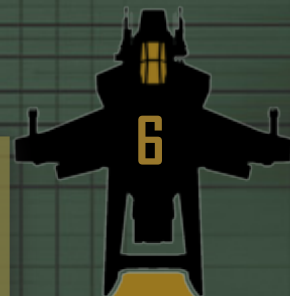
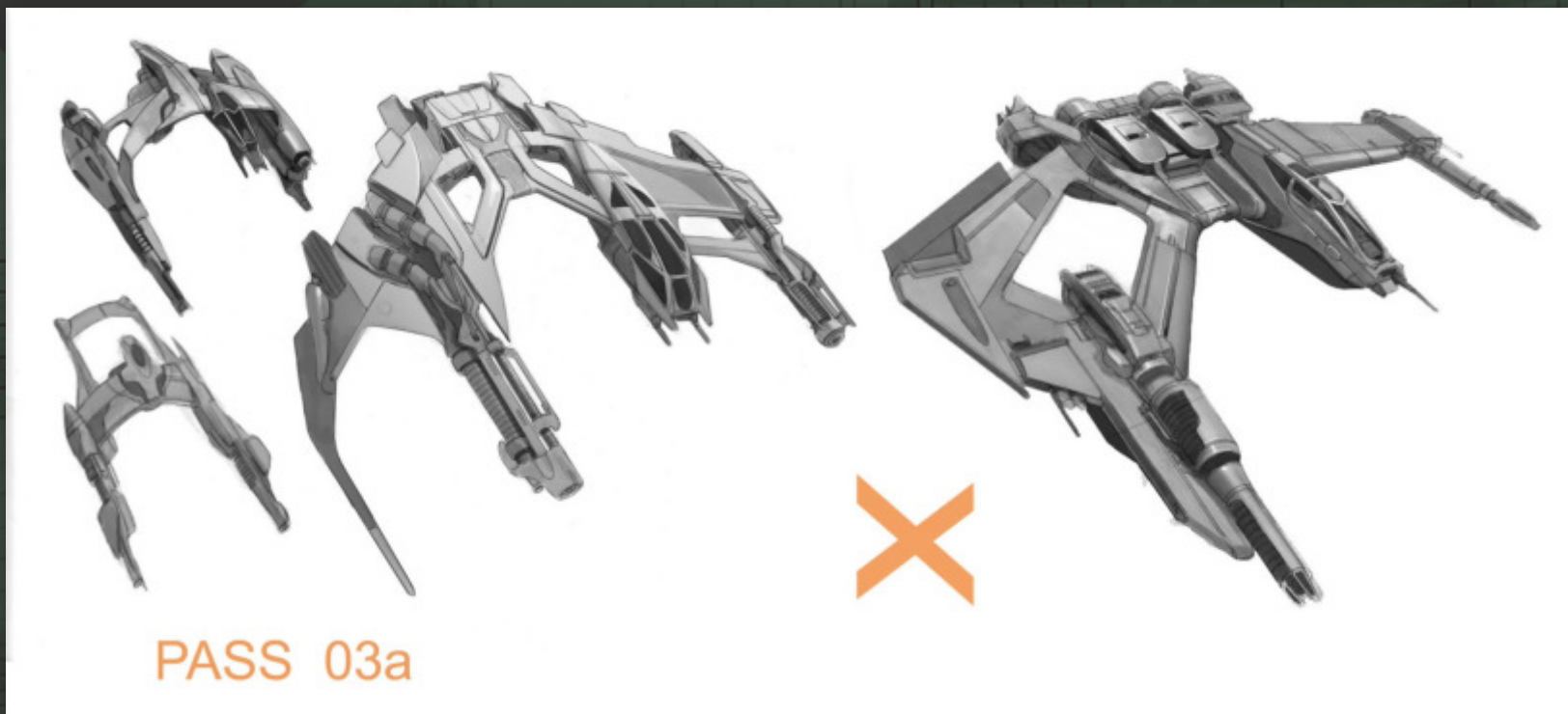
JM: The Vanduul Scythe design began with a discussion about the Vanduul pilot. Could the heavy armor-plated warrior concept be translated into the ship design? Could the ship feel like a weapon? Chris wanted a ship design that kept to the character of the Vanduul. That was the origin of the plating and knife wings, and the patina of the ship.



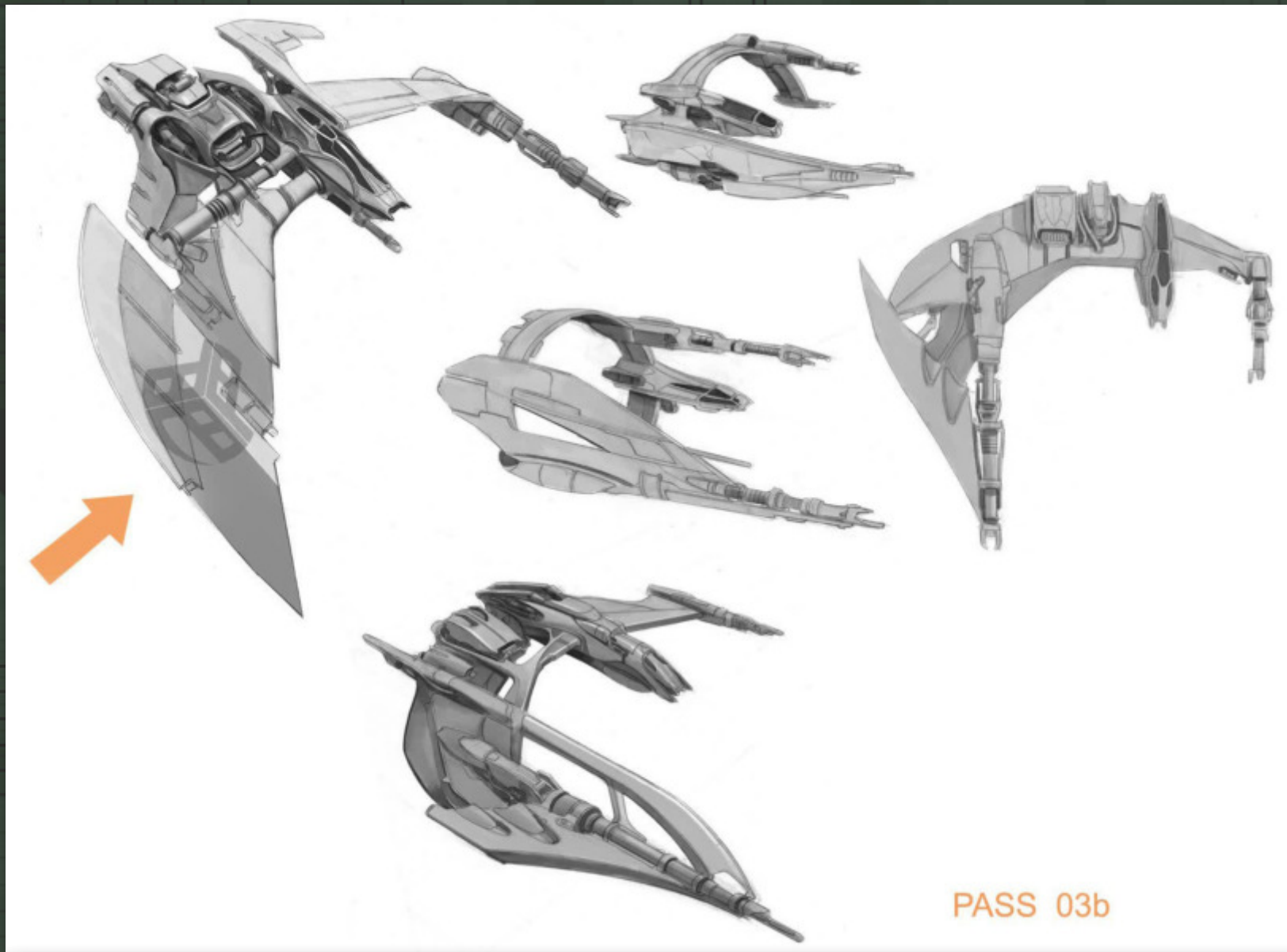
WORK IN PROGRESS

JM: For this pass I tried to offer a variety of choices within the context of the asymmetrical cockpit and the dominant gun-wing. Some of these are more successful than others, but I always like to try to “draw through” some lesser designs to try to get to something better. There are a couple here I’m not crazy about, but I’ll show them all so you can see the process.

As it turned out, there was a design in this pass that Chris wanted to develop further. It had a large “blade” wing and an organic feel to the engine design, and we decided to take this as a starting point and go for a refined pass. He did ask that I take the gun concept from another design and bring it into the main wing. He also asked that the secondary wing dip down a bit, so that we could have a more dynamic profile.



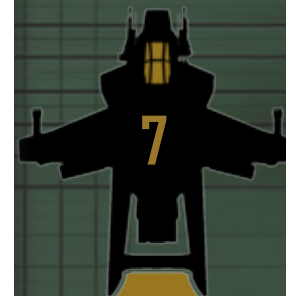
WORKING IN YELLOW



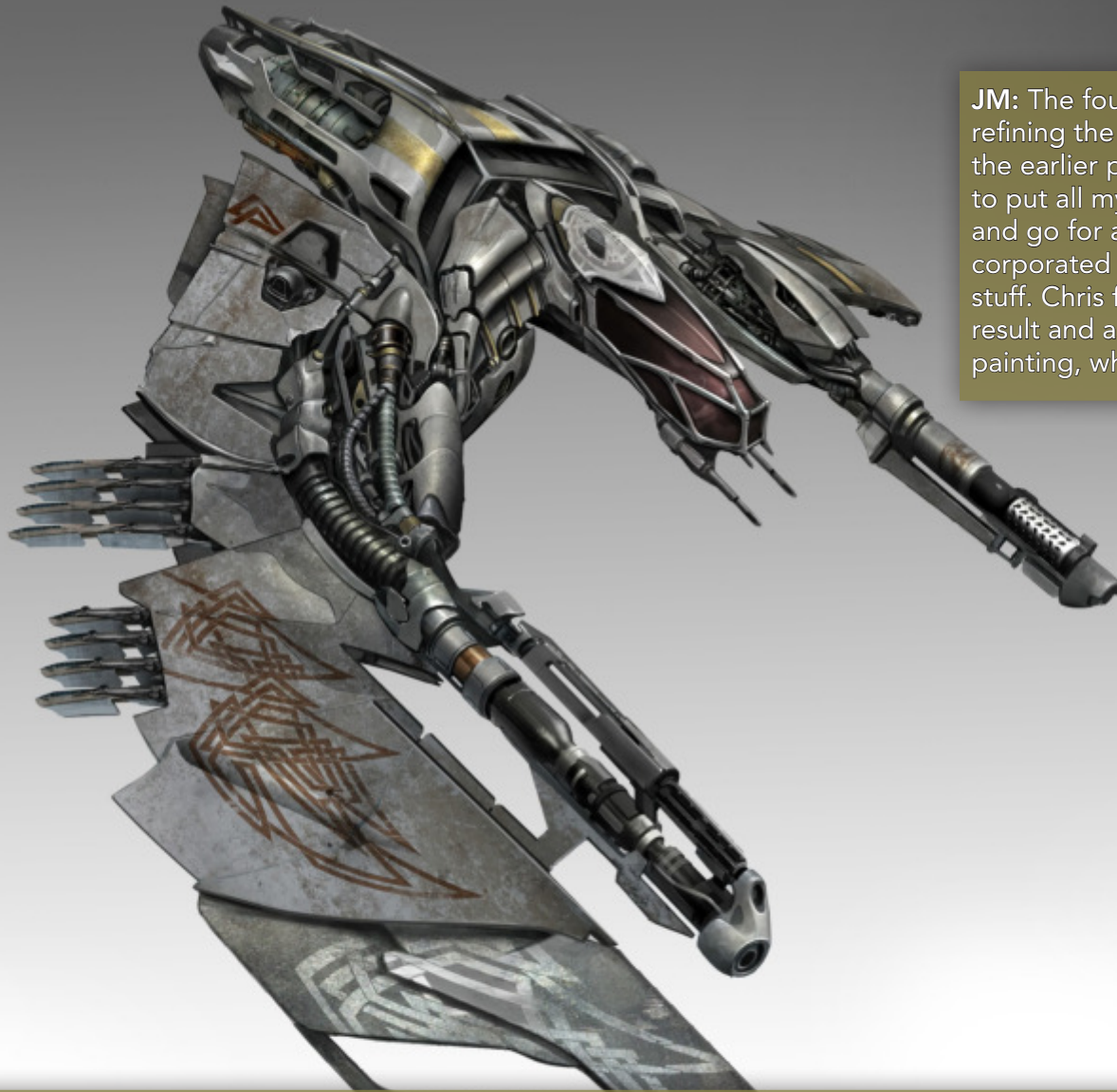
JP: The ship has a really interesting non-symmetrical design! How does it compare to other ships you've created, such as the Freelancer?

JM: Doing the Scythe was a unique design challenge. The "bad guy" needs his signature look, you have to show the

menace. I love the animation that was done for it, skulking in the shadows of the asteroid field, cool stuff! I think it's different from the ships I'm accustomed to designing, and that's a good thing. This isn't *Star Fleet* or *Aliens*. It's a new universe of designs to be explored, and I'm really enjoying it.



WORKING IN THE SHADOWS



JM: The fourth pass was about refining the approved direction in the earlier pass. Now it was time to put all my eggs in one basket and go for a single design that incorporated the best of the earlier stuff. Chris felt good about the result and asked me to do a final painting, which I gladly did.

JP: Was the Scythe's functionality planned in advanced? Did you know what weapons it would have, or what game-play role it would serve?

JM: Yes, most definitely. Chris has done a masterful job of creating the world of *Star Citizen*. The ship designs always

begin with the stats and what is needed from the ship. The working logic of the engines is figured out, along with the armament and the general layout. And that's before the styling is addressed. Chris wants to make sure that the designs adhere to the principles of the game engine.



WORK IN PROGRESS

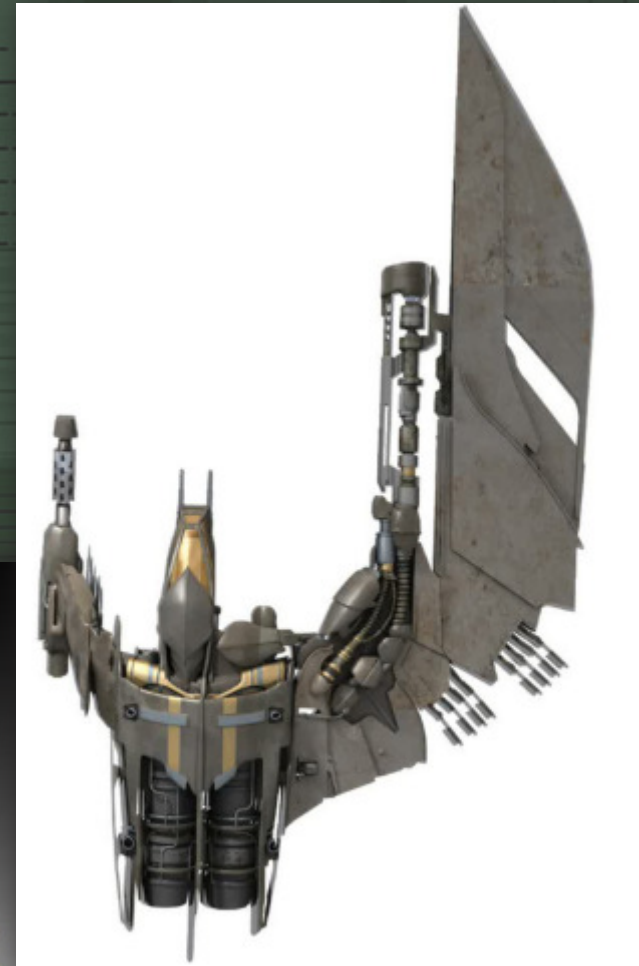
JM: After the final painting I started a 3D model pass that was refined with the help of Chris' notes until we reached a happy final version. Three weeks' work, start to finish and a really enjoyable design experience!



WORK IN PROGRESS

JP: To what degree do you take into account future game-play when building a ship like the Scythe? Do you think about how it might fly, or how the physics could affect the gameplay mechanics?

JM: An early discussion I had with Chris involved the "attitude" of the Scythe. He stressed articulation. We looked for ways to give the ship some movement. The knife wing needed to expand in attack mode, while the rear wing flaps needed to "bristle." I think it adds to the character of the design, makes it feel alive. I'm hoping we can see a Scythe attempt a kamikaze run and cut another ship to pieces.

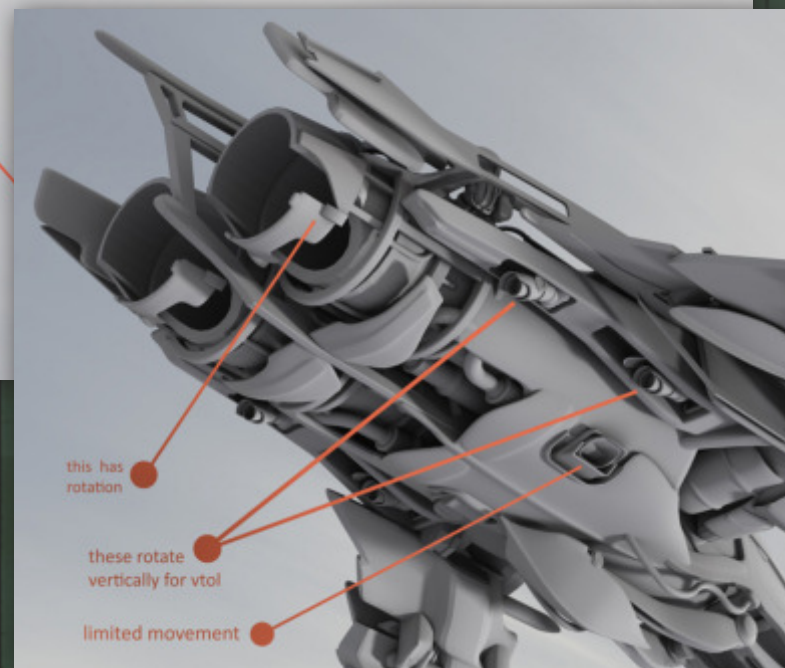
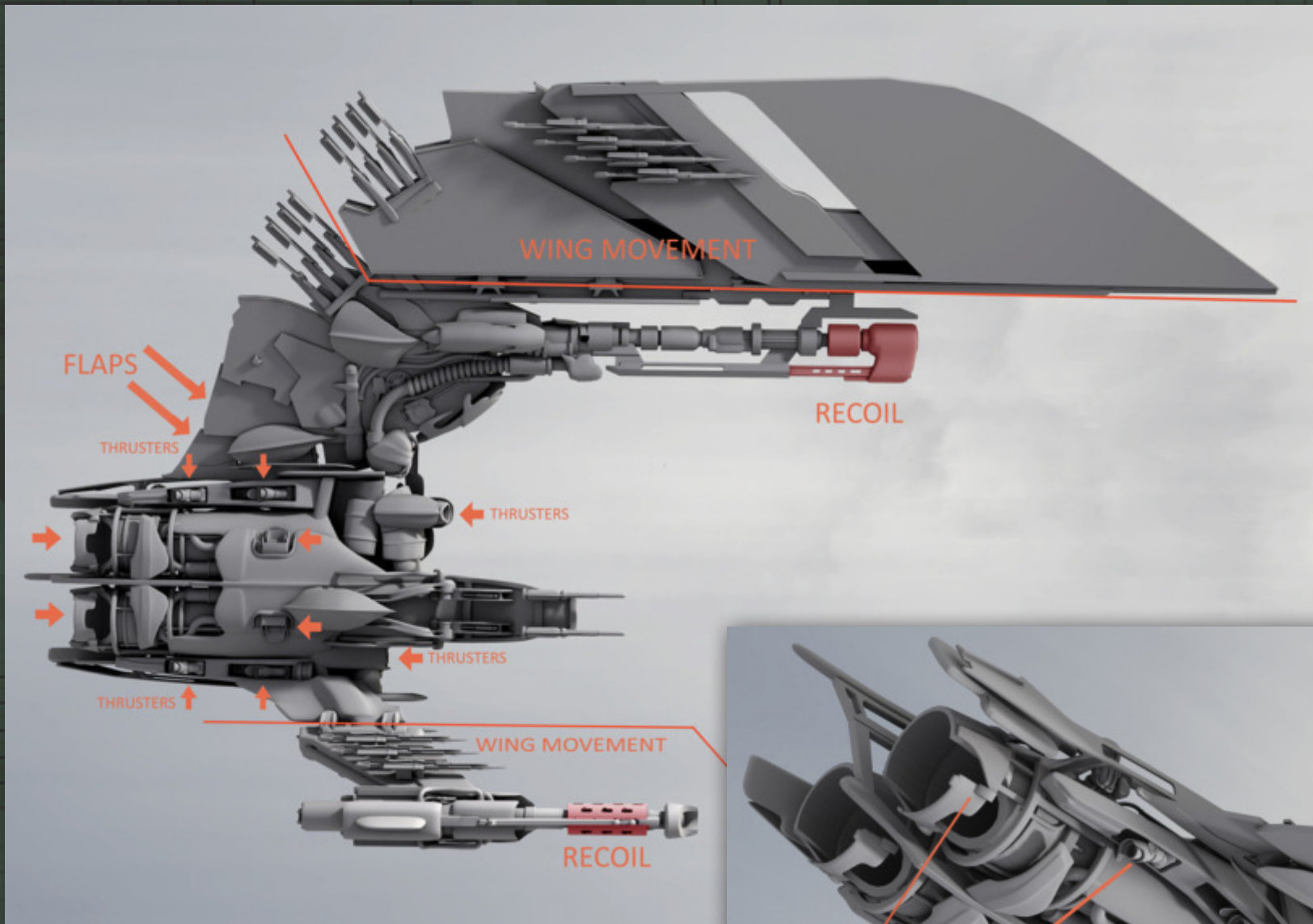


WORKING IN PROGRESS

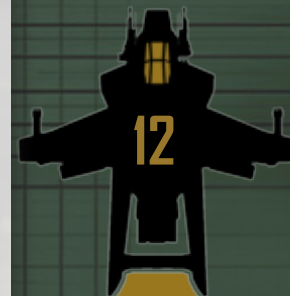
CGBot: Jim Martin created some cool concept art also starting from some sketch meshes And doing some paintover work on it. With Chris Roberts feedback this concept gets to a final stage.



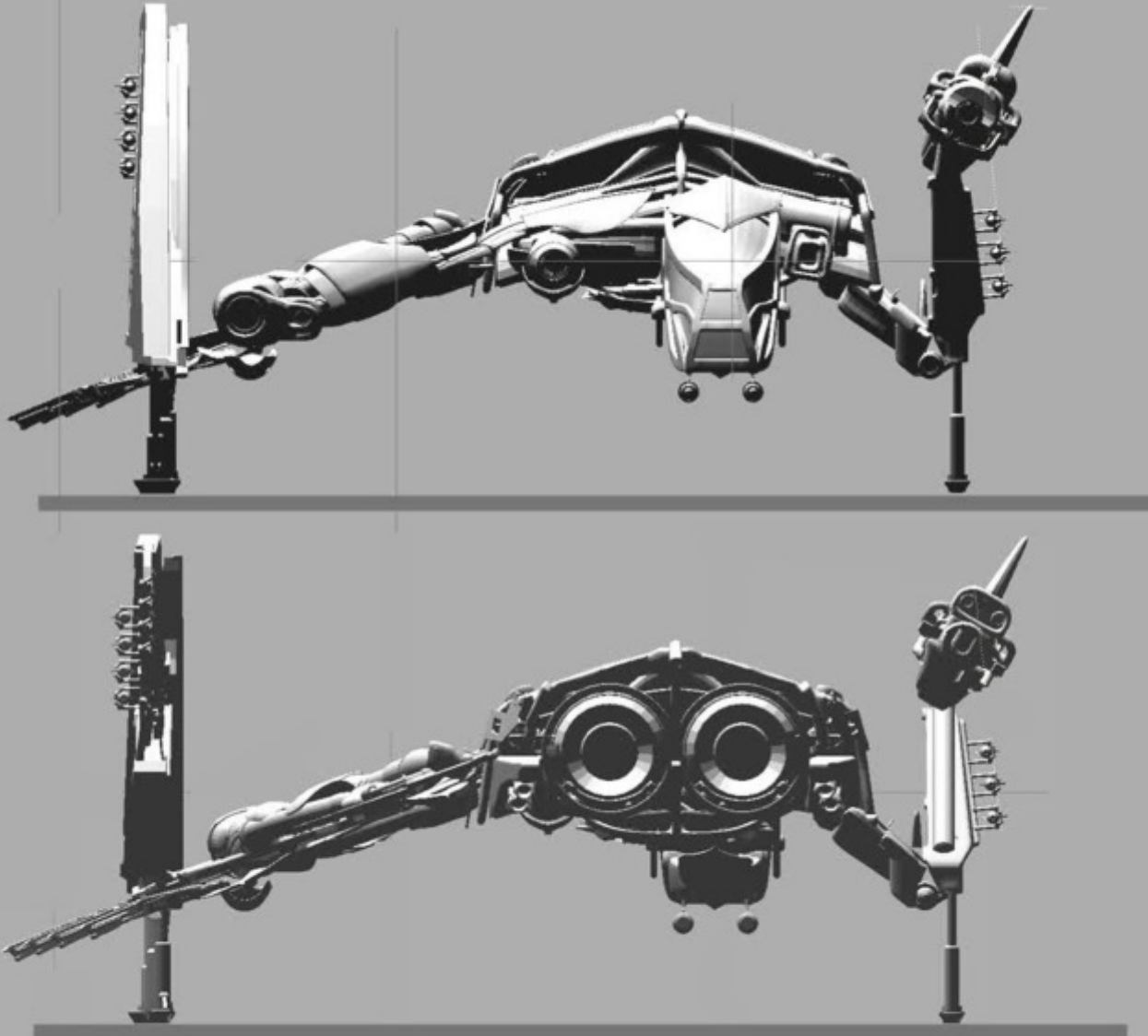
WORK IN PROGRESS



CGBot: Technical details and descriptions led to the concept mesh, which ensures that everything is going to work once the final model is built up.



WORKING PRINCIPLES



CGBot: Front and Back View in the on-deck position. Wings fold up.



WORK IN PROGRESS

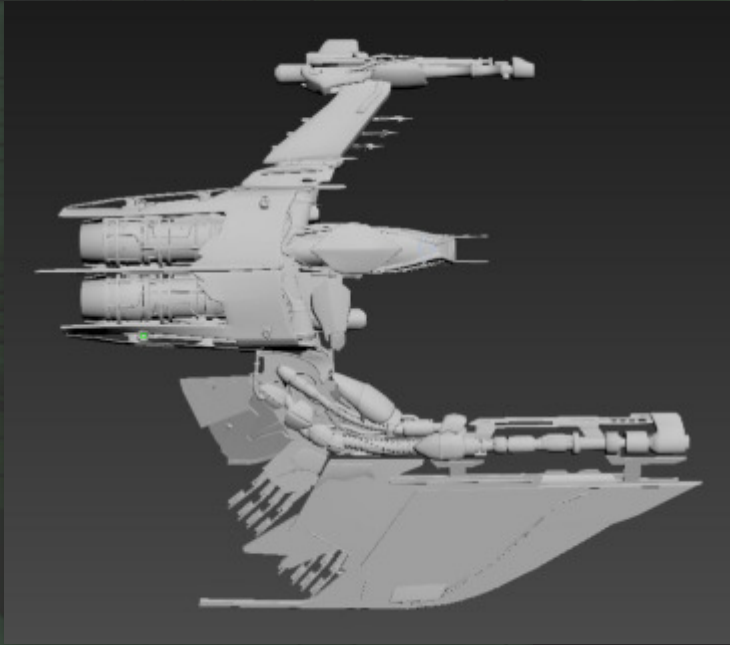


CGBot: The clean-up and re-building process for the low-poly model. Many parts on the concept sketch are set on the paint-over. Some parts need to have their scale and proportions adjusted to keep the feeling of the concepts.

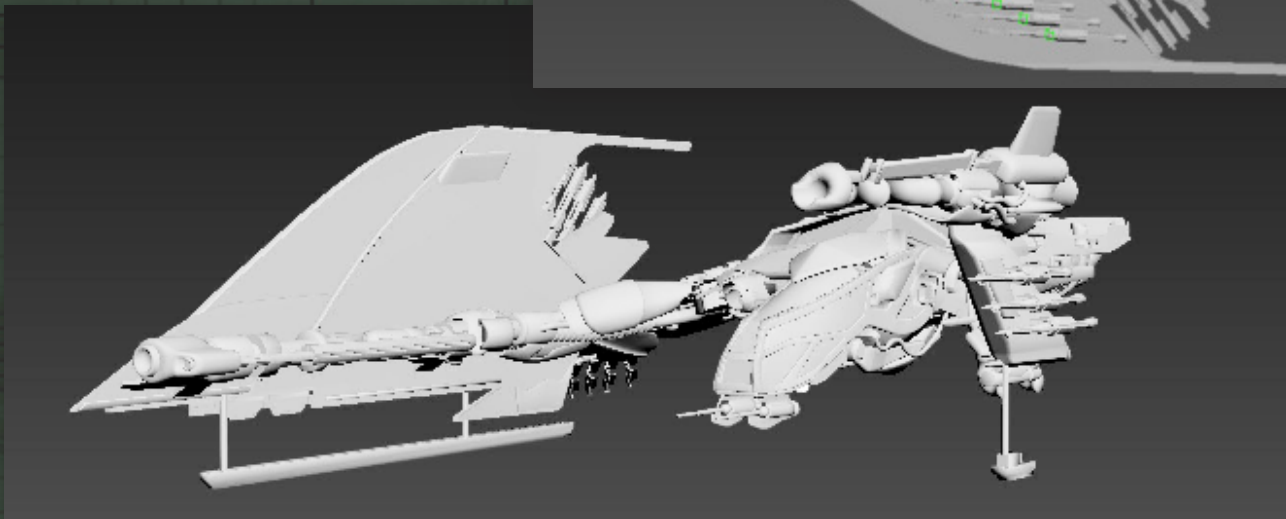
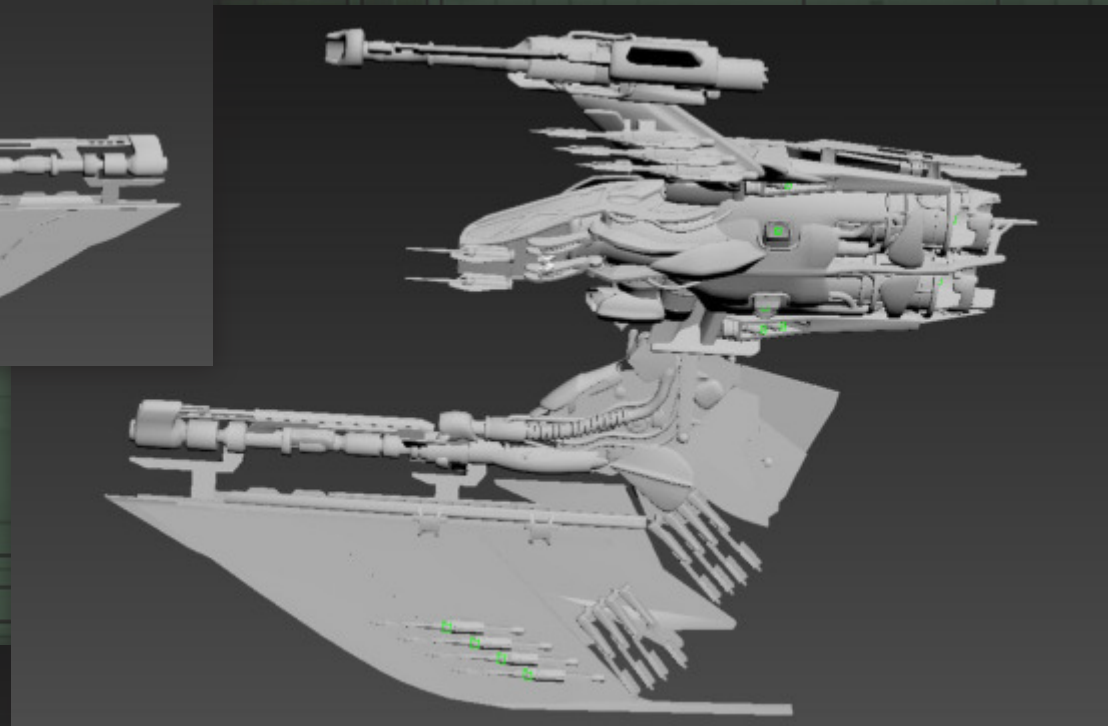
CR: A scale factor x6 looks approximately correct to my eye, although it's really going to depend on the character and what is correct scale-wise for him to be in the cockpit.

The idea is he lies almost prone — think of how the riders were on the light bikes in *Tron 2*. The cockpit hinges from the front; the pilot walks up and leans forward to “seat” himself and then the cockpit closes.

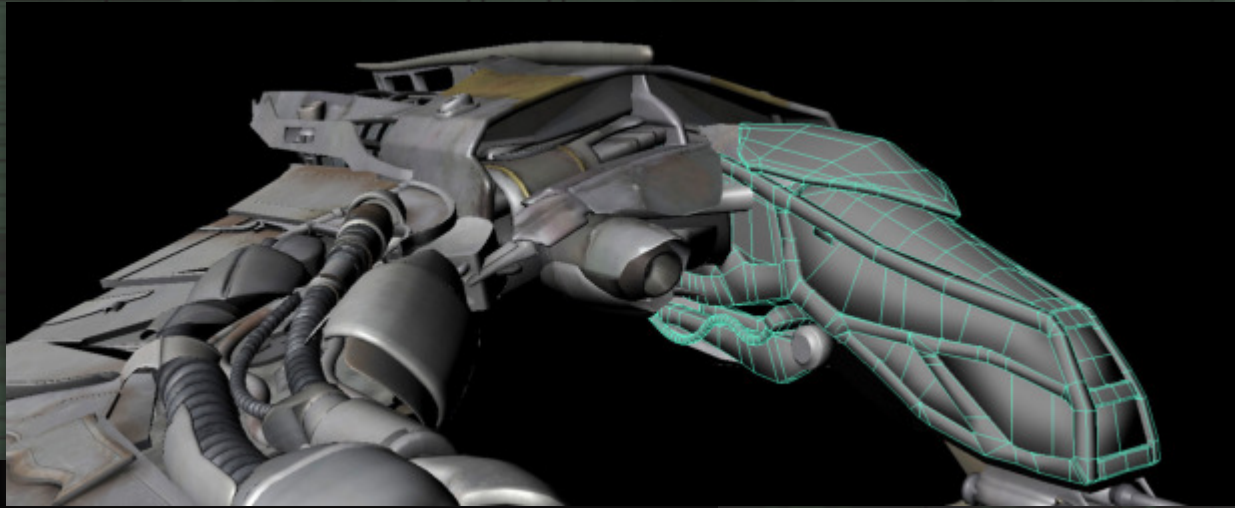




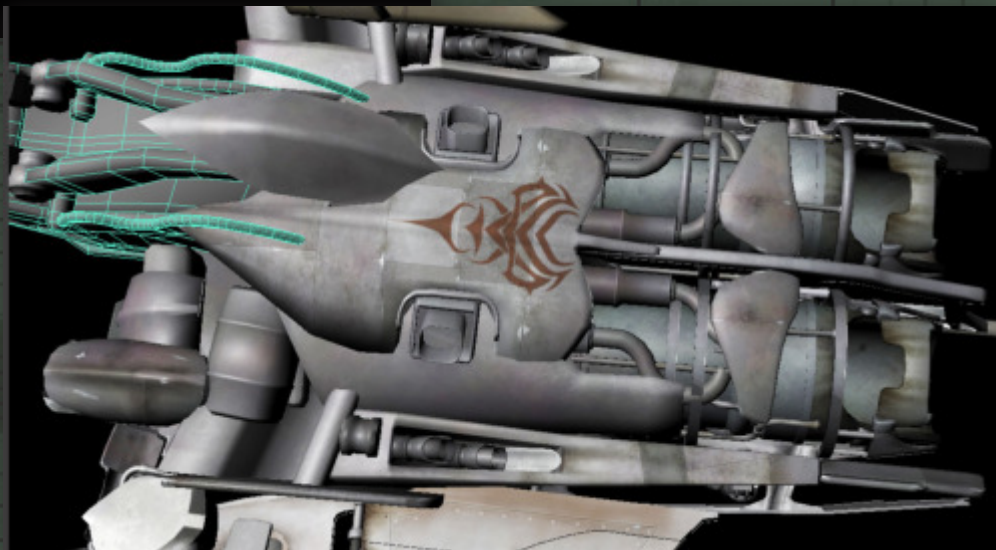
CGBot: With the low-poly mesh complete, there are lots of geometry and details to refine.



WORK IN PROGRESS



CGBot: Rough diffuse texturing work



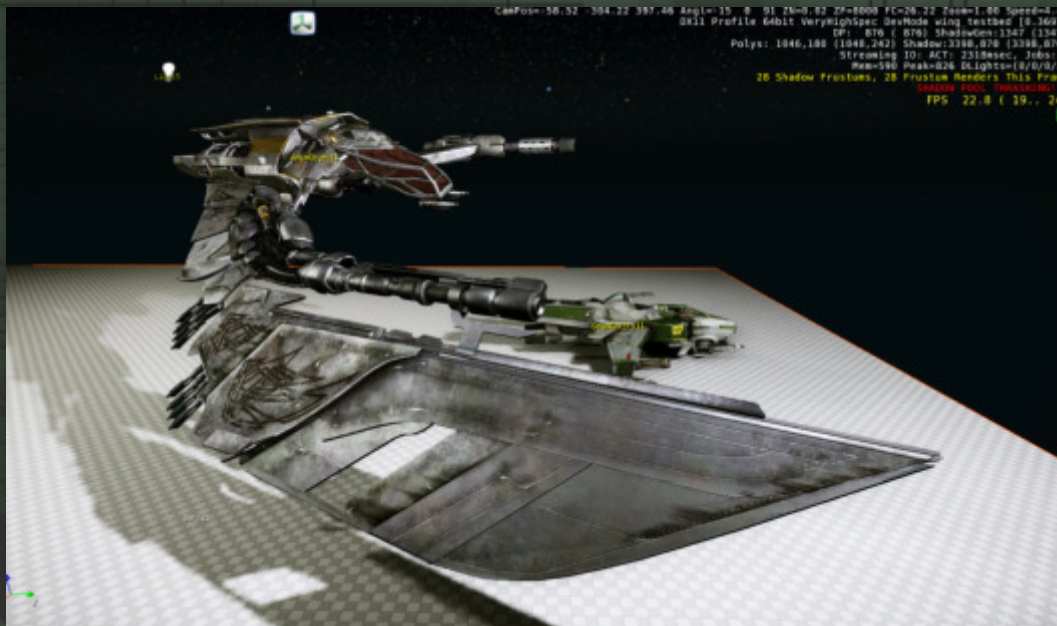
WORK IN PROGRESS



CGBot: Specular tests



WORK IN PROGRESS



CGBot: The next step is to combine materials and textures in-engine, and define a grunge look that testifies that this ship is a frequent fighter.

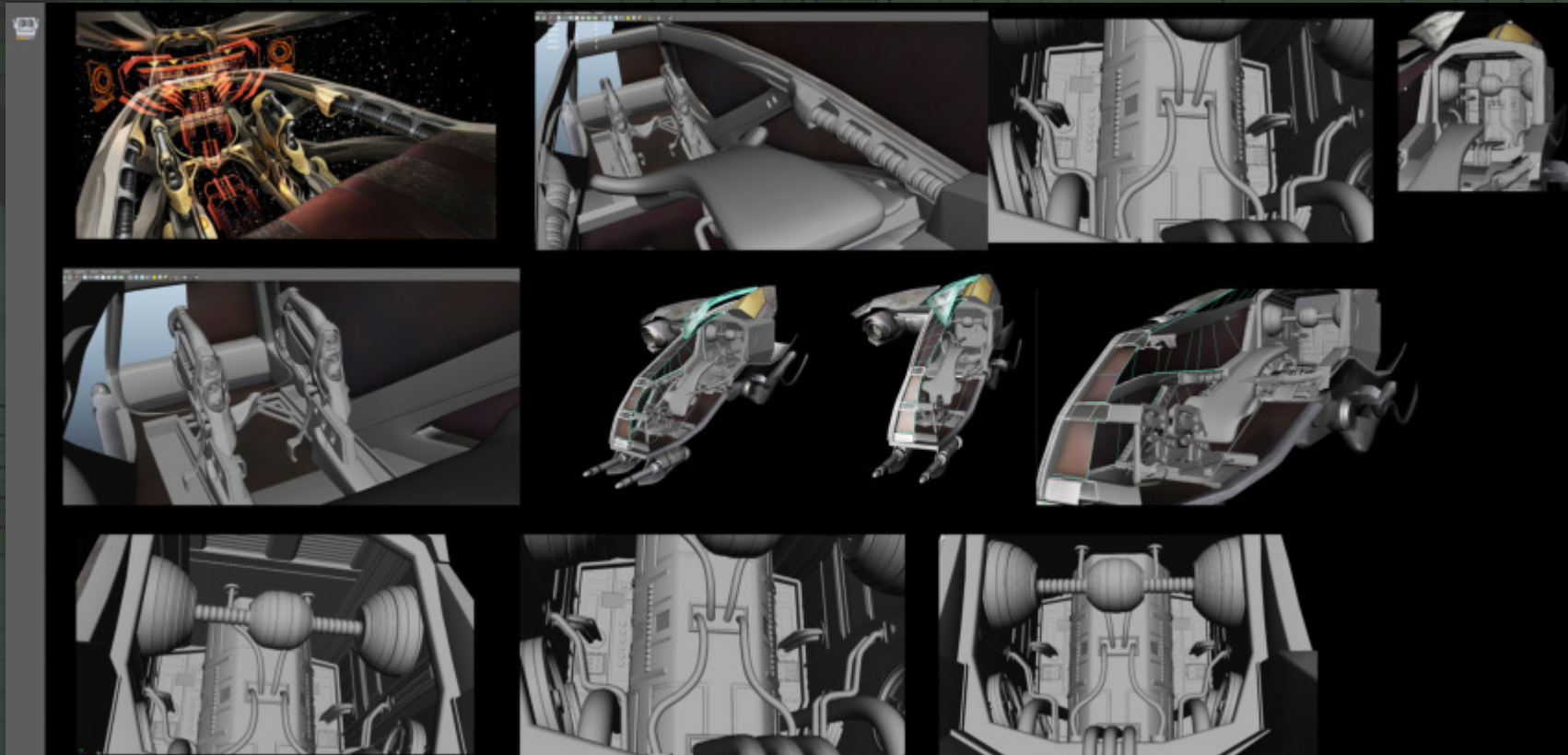


WORK IN PROGRESS



STAR WARS
WORKSHOP

CGBot: The cockpit in a low-poly mesh. This cockpit provides a really wide view angle for the pilot.



CR: It's looking promising. I like the ribbed black piping with gold metal parts in Jim's cockpit painting, so bringing those similar elements (and color scheme) to the back part of the cockpit would be great.

CGBot: The final three screens show textures and materials in-engine.



WORKING PRIORITIES



WORKING PRIORITIES



Vanduul Warrior

CO: These were the first quick-sculpt exploratory passes of the Vanduul, just to start seeing what works and what doesn't work.

The two on the right were feeling too demonic.

Chris's comment on the bottom left was "... hmm, brain too small maybe."



WORKING IN PROGRESS



CO: So this is taking the top left that Chris R. responded best to and taking it further. I like horns, as you can see. Just trying some interesting shapes and silhouettes out.



WORKING PRIORITIES

CO: This image explored moving the bifurcation of the upper arm down to the lower arm.

It began to feel a bit "creature from the black lagoon" with the catfish whiskers, protruding spine and knife (flipper) finger.



WORK IN PROGRESS



CO: Here we started to explore human scale reference for size. He / she is big. Yes, it could be a HE/SHE.

Still holding on to those whiskers. Altered spine and shoulder bone protrusion. Added ears for more feline look.



WORK IN PROGRESS

CO: First full body naked exploration. Made legs and overall body much thinner ... wanted to avoid the "man in a suit" feel. Swept the ears back and increased the non-human feel to the body. Whiskers gone.



WORKING DRAFT



CO: First rough Photoshop color and texture study. Starting to explore fur. Was feeling a bit too animalistic in these.



CO: Roughing out some quick poses to work out movement and deforming issues.



WORKING IN PROGRESS

CO: First full posed Mudbox paint pass. Close to final design ... but wanted to tone back "alienesque" look.



WORK IN PROGRESS



CO: The end ... for now.



WORKING PREDATORS

Vanduul Warship Analysis

From: UEEHICOM, Office of Naval Intelligence

Classification: TOP SECRET

Six months ago, a United Empire of Earth picket lucked into a true prize: a Vanduul carrier-ship, henceforth referred to as X12, dead in space off Garron. Later analysis suggests that the warship suffered a disastrous engine failure which flooded much of the crew quarters with deadly anti-matter radiation and left the survivors unable to follow the standard Vanduul protocol of self-destruct when threatened with capture. A detachment from the 8th UEE Marine Division boarded the ship and was able to subdue the remaining crew with relative ease. Although no Vanduul survived for interrogation, the ship has provided a wealth of potential information about their culture and habits. What follows is an initial report.

Social Organization

The ship in question seems to belong to the Goran horde. We now hesitate to use the term clan to refer to Vanduul warrior-hordes because an extensive mitochondrial DNA analysis of material recovered from X12 suggests a wide range of genetic diversity. This raises a host of interesting questions about the unseen center of Vanduul society. We have known almost since their initial discovery by Earth forces that Vanduul are as likely to engage in warfare between hordes as they are with other species, but it is now an open question by what method these hordes are formed. Military anthropologists suggest that there may be a convocation of sorts in which war parties vie to recruit the best and strongest members for their banners, though this is largely speculation at this time. It is also possible that Vanduul spread out of a homeworld and form their hordes naturally. Notably, all bodies studied from X12 are male, further suggesting that there must be some central convergence of Vanduul groups where mating and other cooperative activities take place.



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Language

Vanduul script seems to be both infrequent and crude. There is a unified system of quasi-pictographic writing located in brief segments throughout the ship, although the exolinguistic team at the University of Moscow tasked with its study has made absolutely no progress in discerning it. They have found no correspondence between it and spoken Vanduul language, and it resembles nothing so much as a cross between Egyptian hieroglyphics and written braille. The ship does carry an excessive amount of video-based media, 95% of which is a single Vanduul speaking directly into a camera. Translation work is underway, although it is estimated to take several years with the available data; we have yet to unearth any kind of Rosetta stone for the Vanduul script.

Vanduul video technology is interestingly primitive: simple low-resolution 2D screens with video that appears 'overly green.' It is jarring compared to the modern high resolution holography recordings used by all other known species. Since the general level of Vanduul technology is high and since they have raided more advanced species for generations, it is speculated that this is intentional and possibly a necessity coming from their uniquely structured eyes.

Artifacts

X12 carried a crew of approximately 1,400 Vanduul. The vast majority of these were housed in a series of tightly packed racks clustered around the ship's engine, and little from this area of the ship is exploitable. There are six apparent state-rooms located in the bow of the ship, from which a variety of interesting artifacts have been recovered. Exploration of these personal quarters, believed to belong to the captain, first officer and top pilots, has first and foremost confirmed the Vanduul interest in trophies. Prizes seemed to be grouped culturally: one pilot (?) had dozens of Banu vases, another a small collection of Xi'An rings. The captain, chillingly, displayed dozens of bleached human arm bones on his walls. The culture significance is unknown, but as any privateer can tell you, the Vanduul are not traders.

Onboard décor is unexpectedly varied. A major portion of the ship's interior surface is exposed armor: Vanduul metals tend to have a tan hue, a result of iron impurities apparently present on their manufacturing worlds. Specific rooms, however, are painted with elaborate designs or artificial environments. One, colored with murals of pink-blossomed trees, appears to be a Vanduul recreational room, complete with gym equipment and a swimming area.

PROPORTIONAL SCALE



Analysis of personal effects does confirm the importance of the knife to Vanduul culture. A large portion of the crew died grasping their elaborate yet functional knives. Metallurgical study suggests that all knives have a common point of origin, but that they have widely disparate manufacturers. There is some suggestion that individual Vanduuls construct their own knives (handedness musculature in autopsies match irregularities in knife construction in every instance). Knife imagery also appears throughout their media, with printed images of knives being common on the walls of personal quarters. One compartment, termed the "chapel," feature elaborate stained glass images of knives (imagery which seemed to match the specific knife found in the quarters of the captain or chieftain).

Spacecraft

The warship itself was towed to Centauri Roads Naval Testing Station for further study. Naval engineers report that the damage suffered in the reactor explosion is too great to ever consider returning it to service. Externally, X12 is roughly equivalent to the UEE's Indefatigable-class in tonnage. She is heavily armored, with that armor likely amplifying the damage suffered: the same layered system capable of protecting against an estimated three to four torpedo strikes also forced the internal explosion inward to the ship's lower decks. Internally, she carries an air wing more impressive than even a Bengal-class carrier: roughly three hundred of what have become known on the frontier as "Scythe" fighters (their UEE reporting name, Frank, has not caught on beyond the military services).

Note that barely one hundred of these were combat ready; the rest were kept below decks as spares. During a full scramble, only a third of the total complement could be used. Per Senate request, the majority of these fighters have since been sold off to private enterprise to finance an important public works project, although Naval Intelligence continues to maintain a squadron for maneuver testing and potential covert operations.



ILLUMINATI



AN INTERVIEW WITH CHRIS OLIVIA

34

BEHIND THE SCENES

JP: How did you become involved with game development, especially the *Wing Commander* series?

CO: I was doing graphic design and advertising at ABC Radio Networks at the time, and decided to go back to school to learn computer animation.

This was the early '90s, during the first big computer vfx boom, mostly using high end Silicon Graphics workstations. It was before any of this type of hardware or software was available to everyday consumers just because of the huge expense. I figured it would be a great opportunity have access to this type of equipment, to get in on something

relatively new and exciting. Add in the fact that I grew up loving movies and was really into makeup and special effects, so it just seemed a natural course to take.

My school demo reel was sent to Origin and Chris Roberts offered me a job, but I decided to take a job as Alias's demo artist for their Power Animator software at a Silicon Graphics reseller ... which turned out to be great experience because I had to dig deep into every aspect of the software to be able to demo it convincingly. After about six months of that, I figured it was about time to go do something fun, so I called up Chris Douglas (Origin Art director)

and they were kind enough to bring me on the *Wing Commander III* team as a cinematic artist. I honestly had never heard of Origin prior to any of this, or heard of or seen any of their games, but soon discovered why the *Wing Commander* franchise was so successful. Also, the fact that they were shooting live action footage for the narrative was appealing.

JP: *You've worked with Robert Rodriguez on many high profile films. How did you make the transition from game development to film production?*

CO: Working for Robert came about in a serendipitous and roundabout way. It began with getting big-movie visual effects experience out on the West Coast.

Toward the end of *Wing Commander IV*, I knew Chris Roberts was close to transitioning out of Origin. I wasn't really interested in working for anyone else there, so I decided it would be a good time to see if I could get in on high-end movie vfx. There were a few of the big companies in California that I was interested in, and I was lucky enough to snag a job at Rhythm & Hues as a Technical Director. At that time, a Technical Director artist did everything but animation or modeling. It was such an amazing learning experience and that is where I really cut my teeth on high-end visual effects not only for movies, but motion-based rides and commercials, too. All their software was proprietary, so it was quite intimidating at first.



On top of that, initially back in the day, their compositing and lighting and prelighting (texturing) process was all script-driven. Working in that software meant you were just editing text files to set up lights, camera position, textures, etc. ... no pretty picture or buttons to push (other than the keyboard), no graphical interface. However, once I got the hang of it, it was very powerful, and I learned why sometimes it's more efficient to change a few numbers in a text file without having all the layers of interface menus and graphics and buggy interpretation.

One of the most significant things I learned at R&H was compositing — those dozens of slices of elements and layers that are mixed and mashed together to create a single image. It opened up a whole new world of image creation and manipulation for me.

Soon after, Chris Roberts called me back to come work for his brand spanking new company, Digital Anvil. It was best of many worlds — not only were there four or five games in production, but we were able to green light the *Wing Commander* movie and go on to subsequently complete 95% of the film's visual effects in-house in Austin, Texas.

Robert Rodriguez at one point was interested in developing a game, and since he had run in some of the same circles as the top Digital Anvil brass, they gave him a very nice office there. Soon after, things started to ramp back up again and he signed a multi-picture deal with Miramax.



BEHIND THE SCENES

Right after we finished the *Wing Commander* movie, I started doing animatics and 3D previsualization for him on a script he wrote called *Spy Kids*, which was based on his segment in *Four Rooms*. This was all contracted through Digital Anvil. From a film production standpoint, this was an amazing experience because we had a nice long development and preproduction period and I was able to work directly with Robert — no middlemen. We ended up with enough time to previz out pretty much all of the vfx sequences for *Spy Kids*. That turned out to be a good thing, as it was Robert and most of his crew's first really big CG fx movie ... and the blocking and planning that the animatics provided helped keep things efficient and clear when production and post-production rolled around. Doing true 3D animatics for the first time really helped me understand basic action, camera blocking, and pacing in a scene, as well as the proper editing of all those shots together. So my film knowledge spiked in a big way.

After *Spy Kids*, I got back into a few of the games already full steam ahead at DA. I touched several things here and there, but mainly cinematic intros and in-game character animation. From there, it wasn't long before I was hired on at Troublemaker studios full time to work for Robert for his next 10+ films.

JP: How did you decide to return to games? What appeals to you about *Star Citizen* versus working on another film?



CO: I've kept in touch with Chris Roberts over the years while he was producing films in Los Angeles, and I tried to keep up online to see what projects he was working on. Cut to 13 years later and I was getting that itch — I needed a new challenge! Or it might have just been an itch ... I really don't remember.

Chris started to tell me about this project he we working on to push the CryEngine further than it's been pushed before and bring a new level to PC gaming. After doing a bit of freelance work for the project and hearing a bit about the universe and the immense scope of it all, I was hooked. The fiction coming out of the *Star Citizen* story department is incredible, and I wanted to help visually flesh it out any way I could!

To be able to help create and design a living, breathing world with living, breathing characters with whom you can interact was such a different creative challenge from what I had experienced in film over the past decade.

The look of games is becoming so incredible. It's slowly starting to hit areas of the brain that are along the same lines as what we perceive as reality ... as long as the frame rate can stay high!

JP: You worked on several of *Origin's* "interactive movies" before going into film. How did the two compare? And how is developing *Star Citizen* different from each of these?



BEHIND THE SCENES

CO: The work I did at Origin and Digital Anvil was mostly cinematics and rendered cut scenes — only a bit of in-game stuff. So in a way, it was very similar to what I was doing in film, just much lower resolution in every aspect. So my job was non-interactive storytelling and visuals. At Origin, for a rendered scene, after obtaining the in-game art assets, I worked on all the other disciplines myself — animation, lighting, effects, etc. At Rhythm and Hues, it was more departmentalized so I did strictly lighting and effects animation. To a different extent, with Troublemaker studios, I wore a lot more hats (like everyone did there) in regards to complete film production. In addition to the standard previsualization and all the typical things in visual effects creation, I was able to gain experience on set vfx supervision, concept design and visual development, color correction, editing and print and video marketing materials. That all stemmed from Robert not being happy with this company or that company in Hollywood, and dropping it in our laps instead.

I guess in the end, when all the smoke clears, it's really about the art. It's about designing an immersive finished look and believable aesthetic ... albeit with added flare and style. So with *Star Citizen*, I'm just extending that by taking everything I've learned in my career and overseeing the finished look of the game and filling in the gaps in any way I can.

JP: What project are you proudest of?



CO: Is this a Sophie's Choice question? Not fair. I love and hate them all equally.

Coming in at a close second would be the 2010 *Predators*, for the simple fact that I was able to design a few creatures and one of the masks for a freaking *Predator* movie! That was a franchise that was hugely influential to me as a kid. So that was definitely special. But overall, I would have to say the very first *Spy Kids* movie was the one project I was most proud of for many reasons. Working closely with a famous director I admired and respected was thrilling of course. I was there from the beginning, doing previz and helping research and develop the way some of the visual effects were going to be accomplished. I was able to be there on set, watching and learning Robert's directing style and making sure that all

the animatics were followed frame by frame. It was shot in and around the lovely city of Austin. I was able to meet and chat with most of the movie's big stars. It was on this project that my film and game careers really overlapped nicely and I was able to work for both Chris Roberts and Robert Rodriguez at the same time. That was really having my cake and eating it too. I was very proud of my small vfx team at Digital Anvil. We were just three or four guys and were able to finish almost 100 relatively complicated shots ourselves. It was also exciting to be interviewed by "Dateline" for their State of the Art segment on prime-time national TV about the process of designing the visual effects shots for the film. *Spy Kids* was a



BEHIND THE SCENES

good story and ended up being a really entertaining movie. So, there were many firsts for me working on that film. Throw in an amazing red carpet world premiere at the Paramount Theater in Austin, a 35-million opening weekend, and a 93% freshness rating on Rotten Tomatoes ... I was just bursting with gooey pride.

JP: *What exactly is a Chief Visual Officer? What are you responsible for; where will we see your touch in Star Citizen and Squadron 42?*

CO: It's a title mainly designed to prompt looks of confusion and elicit questions like "What exactly is a Chief Visual Officer?" or "Are you my boss? ... seriously?" "Chief Visual Officer" is like one of those ambiguous bloated silly titles which, at first, I refused ... but then they forced it on me, so I reluctantly accepted it. And I really do have to keep it now because I had it tattooed across my chest.

Simply put, I'm responsible for the look of *Star Citizen* and *Squadron 42*. The team of artists we have (in-house and freelancers) are experienced and very talented, with a variety of different specialties so there is no need for much looking over the shoulder. I'm more of a big-picture Art Director, with overall creative and art quality and cohesive



control. Everybody in the company can add their input on art and it's always valued and appreciated, but if something is not looking good, ultimately Mr. Roberts will shoot me in the head.

The goal is to achieve, as much as humanly possible, the artistic vision of Chris Roberts.

JP: *You've worked with Chris Roberts for a lot longer than most of the team. What's your advice to the new hires?*

CO: Do good work and never stop learning. He demands the best out of everyone.

JP: *Tell us a little about the technology you use to create Star Citizen visuals.*

CO: We use the usual suspects on the software side, including the Autodesk products, Photoshop, ZBrush and Mudbox, prior to getting stuff into the CryEngine. They all talk to each other pretty well for the most part, but there will always be the need for custom tools — written in-house to perform specific actions as well as to automate certain things. The CryEngine itself is a beast, and luckily we have a solid team of experienced guys who know it inside and out. Other hardware is a building full of high-end workstations (don't ask me exact specs), a few stereoscopic monitors and some impressive



BEHIND THE SCENES



24HD Cintiq Graphic monitors. And of course, our president himself, Eric "Wingman" Peterson is the latest in advanced FFAA (fully functional annoyance android) technology.... he (it) is very efficient and only requires a weekly lube job.

JP: *You were responsible for both the Xi'An and the Vanduul alien races. What goes into creating an entire species?*

CO: It starts with the fiction from the story department. Starting with the species, we try to visually convey any backstory and history as much as possible across the entire identity, which spans everything from clothing to weapons, as well as environments and vehicles. From there, if needed, it will get more focused and specific as we get into individual races or factions and finally main individual characters.

Usually there will be separate artists designing different things within one alien race, so we collaborate closely to

mesh looks and ideas as they are created, and generate new ones that aren't necessarily outlined in the fiction but inspired by the art as it evolves and goes through iterations. At some point, the visual identity of that alien's world will take on a life of its own as it becomes more real to everyone.

We've barely scratched the surface so far on everything we need to flesh out visually for the aliens. Creating the look of a unique and believable species, plus whatever cultures or races that go along with it, takes time and input from many departments, and it's a very iterative process. Once we've designed the initial base character or creature,

we plan to let other artists concept out variations on that character, including the other gender, so we can develop a nice diverse population and not a bunch of clones running around. Each variation would have some sort of backstory to go with it ... at the very least to properly serve its concept design.

JP: *Can you give us a hint about what you're working on now?*

CO: Exploring some looks for the Retaliator ship and the Banu race myself, and also searching for new talent to help with the concept design and asset creation load.

JP: *What games do you play when you're not working on Star Citizen?*

CO: What does "not working on *Star Citizen*" mean?



BEHIND THE SCENES

ORION SYSTEM ARMITAGE



HISTORY

The Orion System was first charted by a long-range UEE destroyer squadron in 2650. Low on fuel, the squadron made the transit to Orion in the hopes of collecting spaceborne hydrogen off the shoals of the system's gas giant, Orion VII. The unit ended up spending three weeks in-system and producing in-depth star maps of the region. The system was found to contain a single habitable planet (Orion III, named Armitage by the explorers), few exploitable natural resources, and no additional strategic jump points. Locating nothing out of the ordinary, the UEE gave little thought to the system for the next two decades.

Following the upheavals of the 2660s, a strong colonial movement surged through the human homeworlds as

politicians began to extol the virtues of once again "reaching out for the galaxy." Despite lacking a strong selling point, Orion was chosen for one of the dozen-odd colony programs established during that period. Ostensibly a corporate project, the UEE-backed "Project FarStar" aimed to build the most distant human colony ever established; a record for the history books rather than any sort of practical settlement. Within five years, Armitage was a bustling, if unnecessary colony. However, colonists discovered a profitable lode of precious metals (chiefly gold and platinum) in the system's asteroid belt and began to exploit that with some success. Modular farm construction began in earnest with the goal of someday providing food for nearby systems as FarStar expanded coreward.

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Orion III consists of bleak, windswept plains pockmarked with the after-effects of Vanduul antimatter bombardment weaponry: blast craters and radioactive zones. Ironically, the ferocity of their attacks completely eliminated the new-gnu herds they once hunted on the planet ... which, in turn, reduced the frequency of subsequent Vanduul visits to the system. A few abandoned farm modules still stand and the skeletons of several human cities still exist in the form of wreckage overtaken by natural vegetation. Occasional Vanduul settlement sites can also be found, although there is little of interest beyond the curiosity implicit in standing where one of mankind's deadliest enemies once cooked dinner.

Why visit Orion? The simplest answer is that there is absolutely no practical reason to visit the Orion system or land on Armitage itself. The planet is home to a small settlement of humans. Living underground, they are the descendants of colonists who refused to leave when the UEE vacated. A hardy people, they are extremely insular and self-sufficient; they have little regard for the Empire and almost no interest in trading. It is possible to sell basic substance items, but without a great deal of markup. Luxury goods are worthless here and nothing is available for sale. Deposits of gold and platinum can still be located

in the asteroid belt, but prospecting them is time consuming and transporting goods so far from the core worlds is a daunting logistical task.

Vanduul hordes do make transit on occasion to pick up food from Armitage and ore from the asteroids, and a pilot foolhardy enough to want to test his mettle against them could reasonably do so here. As the ecosphere on Armitages dies, Vanduul forays are becoming increasingly uncommon. The best tip for those seeking to engage the Vanduul here is that you should attack when they arrive in the system rather than as they are leaving; Vanduul only visit feeder worlds when they are low on supplies and are of reduced combat efficiency. But even a starving Vanduul is the greatest challenge a fighter pilot can face, and remember that the UEE will not pay bounties for kills scored in a red restricted system such as Orion.

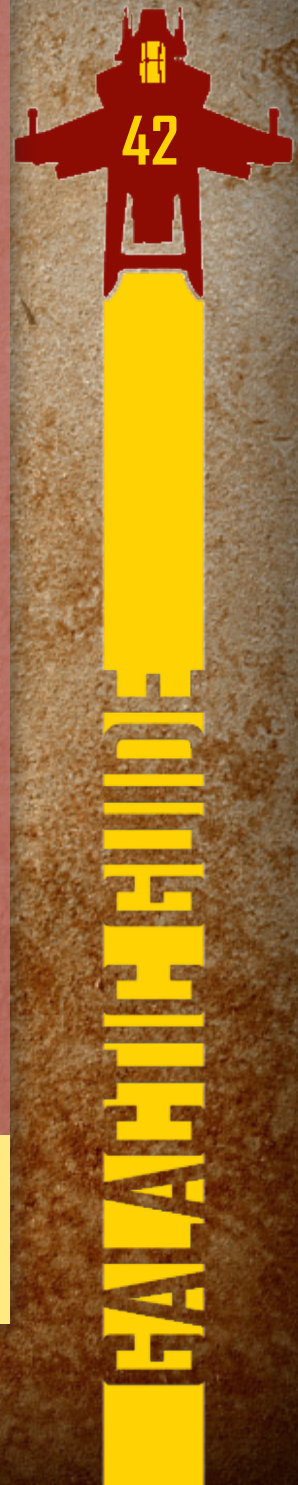
Often forgotten is the fact that Orion is also the abandoned doorstep to the galaxy beyond known space. Astrophysicists predict that there are at least two unexplored jump points in the system and they believe that these in turn snake core-ward to regions now abandoned as human expansion has waned. As it is impossible to qualify the unknown, there is no way to promise that lucrative jump points or interesting galactic features lie beyond Orion ... but if they're anywhere, it is certainly one of the best places to start. With the proviso, that is, that a jump point on the far side of the Orion System is just as likely to lead you to more Vanduul forces as it is to unearth untold treasures.

ORION SYSTEM

<i>Ownership:</i>	Abandoned
<i>Planets:</i>	8
<i>Planetary Rotation (Orion III):</i>	466 Standard Earth Days
<i>Imports:</i>	None
<i>Exports:</i>	None
<i>UEE Strategic Value Rank:</i>	Red

MARKET DEALS — ORION III

We can not recommend any lucrative trading paths in the Orion System.





Last Flight of the Seraphim

by David Haddock



CHRONICLES

PART THREE (Conclusion)

The Seraphim Wing answered Dr. Harroway's desperate plea to help the metal refining station on Garron III against the Scourge pirate pack. But when the three mercenaries sortied against the Scourge, Shen abruptly destroyed his leader's Hornet. Lott is now faced with a difficult decision . . .

UEES Leviathan Bengal-Class Carrier

Elysium System

2934.3.15 SET

"Fresh meat, huh." The Deck Commander gave a patronizing grin and pointed past a pair of dismantled Hornets to an open grate in the floor of the flight deck.

Seraphim Wing usually gathered underneath the engineer-

ing pits. Even in the bizarre collection of Squadron 42's ragtag pilots, atmo-skippers, and lunatic burnouts, they considered themselves 'below-deck' people and liked to keep it that way. They had also clocked more Vanduul kills collectively than any other wing.

The new pilot wove between the gruff mechanics, all reeking of burnt hydro and ship fluids. He could feel his clenched palm start to sweat and switched the printed copy of his transfer orders to his other hand.

A small ladder down through the open grate led to a narrow passageway between the massive bundles of wires and pipes. After minutes of navigating the labyrinthine intestines of the carrier, he started to hear the echoes of voices between the sporadic whine of tools and the whoosh of an engine above.

Eventually, the passage opened into a small intersection. Crates were appropriated to act as chairs while others sat

on relay boxes or power couplings. There were fifteen men and women crammed in the room, drinking, talking. Shadows passed overhead as mechanics stepped through the light shining down on them.

It took a few moments for the Seraphim to see their new transfer standing on the edge of shadow. Silence spread like a plague as the pilots all turned.

He found himself suddenly lost for words. Instead, his hand mechanically held up his transfer orders. The nearest pilot snatched the thin sheet and glanced at it. She chuckled and passed it along. The paper travelled through the wing, drawing laughter and snorts, until it finally landed with Comm Armitage.

Old even back then, he was a legend among the Seraphim, the survivor of countless scraps with the Vanduul and grumbling sage to all.

“Everyone, this is Shen.” Armitage read off the transfer then passed it to Aaron Lott, his XO, who immediately crumpled and threw it in the corner.

Shen stepped forward and nodded. No one moved or spoke. An errant screw clattered through the grate from the flight deck above. It landed in a pilot’s drink. The pilot never took his gaze off Shen and drank without taking it out.

“And it appears Lt. Shen here wants to do some damage.”

The Seraphim cheered. Someone shoved a cup of whatever alcoholic concoction they were drinking into Shen’s hand.

Shen smiled.

* * *

Garron System

Present

Fragments of Armitage’s ship tumbled silently through space. Lott watched the smoldering remains crash into a nearby asteroid.

“What did you do?” He kept repeating. The Scourge pirates had him covered but he barely noticed. Shen’s Hornet, however, was front and center ahead.

“He lied to us,” Shen said over the comm. “You were right all along. There wasn’t any money in this for us.”

“But the sixty thousand . . .”

“That was for you. I was supposed to get nothing and like it . . .” Shen’s voice trailed off into silence for a few moments. “I’ll tell you, man, the thing that really burns me? He didn’t ask. He just assumed I’d go along with it.” Another long pause. “You know what that metal’s worth on the open market? 600,000Cr. More than enough to —”

“Stop! Shen, what have you done?”

“I’m looking out for us,” Shen snapped. “All we gotta do is go back when it’s done and just take it.”

“Have you lost your mind?” Lott whispered. “We’re Forty-Two’s, not pirates.”

“We’re weapons for hire. You said so yourself.” Shen’s voice sounded almost alien to Lott. “And right now, the pirates are paying better.”

Lott sank back in the cockpit. He glared at Shen’s ship, then at the pirates on either side.

“Are you in?” Shen finally asked.

Sure, Lott had complained about the mission, how Armitage ran things, all of it. But now, faced with his own words, with the reality of being a true mercenary, where it’s all about the money and nothing else, he only knew one answer.



SHENINORHS

"No." Lott quickfired his engines and dove. The Scourge charged up to go after him.

"Stop!" Shen shouted over their channel. "Let him go."

The pirates obeyed and let Lott burn off toward Garron III.

"You'll come around," was the last thing Lott heard before dropping into atmo.

* * *

Lott hit the ground running. The engines cycled down as he marched across the warehouse to their pile of gear and supplies and started packing.

"Did it work?" a voice came out of the dark behind him. It was Dr. Harroway with Shelly Cates, the town's de-facto mayor, in tow.

"No." Lott kept packing. "It definitely did not work."

"What happened? Where are the others?" Shelly stepped further into the warehouse, her curiosity piqued.

"You want my advice? Get everybody together. Tell them to grab whatever they can't live without and vacate."

"But . . ." Dr. Harroway stammered, looking at Shelly for support. "We can't."

"Trust me, you can." Lott loaded his first bag into a storage pod on his ship. "And you should."

"This is my home." Harroway insisted.

"Find another one."

"Hey!" She grabbed his arm. "What happened out there?"

"Shen killed Armitage. He's with them now." Lott wrenched himself free, grabbed another crate and strapped it into the transport hold of his Cutlass. "So get your stuff and go, because the Scourge will want to make an example out of you, and I don't think you want to be a part of that."

"I don't understand," Dr. Harroway whispered, becoming more flustered by the second.

"Just trust —"

"No! I paid you to do a job and now you will explain yourself." Dr. Harroway finally yelled. From the look of surprise on his face, it was probably the first time in years. That stopped Lott.

"These guys are big on perception. Part of the reason they are so successful is that civilians believe that they are capable of violence, that they need to do everything in their power to keep the pirates from killing everyone. So if they come out alive, they survived the experience by accommodating them."

Lott leaned against his ship. He seemed to be talking on autopilot. His mind was still trying to wrap itself around what happened.

"You tried to defend yourselves against them. It failed, sure, but you still tried. They'll punish you for that, specifically so when word gets around, everyone else will know that any attempt at noncompliance will result in murder, massacre and the rest. So, like I said before, it's time to pack up and run."

"I spent my whole life working to build this place. I . . . I can't just leave it."

"Then you'll die here." Lott stared him dead in the eye.

"Then I guess I die here." Dr. Harroway looked down. He turned and headed for the door. "If you aren't going to do the job, you can transfer the money back to my account. Thank you for your time."

Lott watched them go. He went back to packing his ship and his mind began racing. He was right. Harroway and the others were idiots to think that the Scourge were going to just forget about what they tried to do. Even



CHRONICLES

stupider if they thought that the Scourge would somehow respect their decision to stay and grant them leniency. It was a waste, a stupid waste of lives. For what? Money. So some Corporate slug could meet his manufacturing quota for the year.

Lott slammed a bag into the cargo hold. He knew all this and knew he was right.

So why was he not convinced?

* * *

Shen emerged from the jump point into Grinder System. His Scourge 'escort' popped out behind him. They pushed him toward the formerly abandoned docking platform now occupied by the rest of the Scourge. As they got closer, one of the pirates on his six directed him around booby-traps, sentry lasers and motion-scanners rigged to old proximity mines. Four more Scourge ships flew out to meet them.

It looked like the Scourge had finished whatever repairs they were working on when Shen first passed it. Power had been restored to the platform but he could see pirates boarding up any windows to hide the light inside.

They directed Shen to a side landing pad. He set his Hornet down on the deck and waited for the outer doors to seal. In the meantime, he checked the ammo count on his side-arm. This was new territory for him and he wasn't going to be caught out.

The deck pressurized. The other Scourge jumped down from their ships and aimed their shoddy rifles at Shen.

He climbed down. Both the Scourge saw the holstered sidearm. They glanced at each other nervously, neither wanting to attempt to disarm the pilot. Footfalls echoed on the metal grating.

"Less 'em be. Kers esh gon' need un blaster."

Shen turned back to see the mountainous Oren Vik enter the hangar, a mohawked pirate and a couple others in tow. Vik had a sinister grin on his face. When he stepped into the light, Shen could see his teeth had been filed down.

Vik gave Shen a once-over before passing to admire his ship. He ran tattooed fingers along the contours of the Hornet.

"So's sa gowan to da dark side, hah?"

* * *

Lott was ready to go. More than ready, he was desperate to put all this behind him. He didn't know why, but he felt compelled to tell Harroway and the others that he was leaving. He hoped that the people had come to their senses and were vacating this place.

He stepped outside to see life as usual. The supply stores were open. Kids walked in a line toward the building that doubled as a town hall and school. The new shift headed toward the refinery.

Lott looked around and saw Shelly checking her Glas. He crossed over to her and grabbed her arm.

"What's going on? Did you tell these people what's happened?"

She glared at him and then looked at his hand on her arm. Lott removed it.

"I don't see how it concerns you, but yeah, we told them."

"So . . ." Lott looked at her expectantly.

"A few left but the rest want to take their chances."

Lott lost his patience and stepped in Shelly's face.

"I don't think you get what's happening here. These thugs will gut you for kicks. They will kill all of you."



CHRONICLES

"No, I don't think you get it," "You think this is the first time any of us got raided? Harroway doesn't get it and neither do you. Everyone, every single person here, we all were born on fringe worlds. This has been our life for as long as we can remember. We grew up with Vanduul attacks, slaver raids, and common thugs. Things here were great for a while. We actually had some peace, but all of us knew it couldn't last. But that's fine, they can kill us, steal our children while they sleep . . ." The resolve in her voice cracked. Lott knew instantly she wasn't talking about someone else's experience. "But this is our home . . . and we aren't going to run from that."

Shelly's resolve reformed in the moments of silence that hung between them.

"So go. We don't want you here." She pushed past him and walked into the town hall.

Lott stood there, stewing in burning indecision. Finally, he sighed.

"Dammit."

If he was gonna do something dumb, he might as well do it right. He turned and headed back to the warehouse. There was one thing he had to do first and, after that, he had to be focused on the task ahead, no more distractions or worries or questions.

Lott climbed into his ship and booted his Comm-system. He cycled through the contacts and selected all of Armitage's old buddies from his years in the UEE; Archer Barnes, Templar Teddy, the Black Skull and a half-dozen other names. They were the closest things to family the old man had. He started recording the message.

"This is Aaron Lott, ex-Lieutenant, Squadron 42, Seraphim Wing of the UEES Leviathan. Some of you guys know me. Some don't. I was Commander Armitage's XO for three years." Lott paused, that felt so long ago. "I just wanted to

inform you that Armitage is dead. We're working a job in Garron system and . . ." He debated even mentioning Shen. Too much time was passing. "The uh . . . old man's luck just wore out I guess. But he went down brawling with six pirates. The man was so stubborn, he wouldn't even make dying easy." Another pause, this was getting tougher. "So, I just thought you should know. Lott out."

He sent the message and climbed out of his ship.

Time to focus.

* * *

Shen kept to himself. He wasn't entirely certain that the other Scourge would honor his arrangement with Vik. The pirates always seemed to be circling him like predators, waiting for their chance to strike.

He let them circle. If they wanted to spend their time looking for a weakness to exploit, Shen wasn't going to stop them. He kept his weapons within reach and his ship within sight and if they wanted a scrap, he was more than happy to oblige.

As days passed, he studied the way the Scourge moved, the way they organized themselves. Shen quickly realized that there were so many divisions and alliances among the rank and file, they probably spent as much time in battle dodging attacks from other Scourge as they did from the enemy.

A week into his stay, one of the pirates challenged Oren Vik to Alpha the pack. They staged the combat in one of the old storage areas. The rest of the Scourge watched from perches in the ceiling as the two men circled each other with knives.

Shen watched from the door. Everything he saw cemented his belief that the Scourge was horribly inefficient. When Vik sliced his opponent's throat, Shen just shook his head. At this rate, they'd kill each other before they even hit the refinery on Garron III.



CHRONICLES

* * *

Everyone but fighting men and women were going to be evacuated into the hills with a company shuttle until the fighting was over, one way or the other. That was the agreement Lott struck with Harroway and Shelly.

Lott surveyed the construction on the main drag of the settlement. He was building covers and defenses against the air, specifically covering the gaps between buildings so the town looked like an enclosed shell, so once the Scourge got the planet surface . . . which was inevitable . . . he wanted to force them out of their ships and onto the ground.

The last stand would start at the perimeter of the town, the townspeople would hold out as long as they could then fall back to the next barricade. Repeat. Things go bad enough; they can seal themselves inside the refinery.

Shelly approached. One of the P4AR assault rifles Armitage brought was slung across her shoulder.

“Just finished running the second team through drills,” she reported. Turns out Shelly had logged some time with the Expeditionary Force 302 so Lott had her training the other townspeople.

“Great. How’d they do?”

She hesitated, then shrugged.

“That good?”

“Some of them are retaining it, others . . . not so much.” Shelly looked over the defenses under construction. “Are we going to be ready?”

“In four days? I doubt it, but we’ll make do.” Lott paused for a moment as he assessed their progress. “You all could still run, you know.”

“Funny, I was going to tell you the same thing,” she replied with a smile.

* * *

It was time.

The Scourge pounded homemade rotgut booze and fired up their engines. Shen wove through the pirates to find Vik, a jagged scar from the last challenge now running down the length of his face.

“Any word from your scout?”

Vik chuckled and looked at Mohawk, who took a swig from a jug, obviously amused at Shen’s interest in their strategy.

“Said wah quiet.”

“Yeah, when was that?” Shen met Mohawk’s glare without flinching.

“Lass check waddan in the early.” Vik’s demeanor got more serious. He was finding this interrogation less amusing by the second.

“He’s dead then. We should assume that —“

Vik stepped up to Shen, his sheer bulk casting a shadow over him.

“These my outfit, bucho.” Vik poked Shen in the shoulder. Shen was unfazed. He waited patiently as Vik kept poking him for punctuation. “I’s beanna makin’ killin’ call.”

With the final poke, Shen jammed a syringe into Vik’s arm. It was a custom poison cocktail to be used if the Vanduul captured you. All the pilots under Armitage got them. Shen had decided he didn’t need it anymore.

Vik stumbled back in shock, staring wide-eyed at Shen. His face flushed with rage and he lurched forward, but the toxins were already at work.

He sank to his knees as his muscles began to seize up. Shen never took his eyes off him. Vik went into convulsions as a dirty red foam bubbled from his mouth. Finally he was still.



CHRONICLES

Shen looked up to see the rest of the Scourge staring slack-jawed.

“Here’s the plan.”

* * *

The famous commander and strategist Aria Reilly was quoted as saying, “No one designates a battlefield. It’s simply a place where violence had to happen.”

The jump point from Garron to Grinder was an approximation. Since the system was on the fringe, the UEE hadn’t bothered to build any kind of waystation or Customs offices. Aside from a position and angle of approach on a NavDrive, the only indication of its presence was a faint shimmer in the void of space. Travellers just had to know where it was . . .

Until the Scourge flooded through. Three ships jumped into Garron one after another, their shields raised and weapons humming. They were counting on contact. They didn’t see it, but that didn’t mean it wasn’t there.

Proximity mines flashed and exploded, immediately disabling the pirates’ shields. Lott was waiting, all his systems dark. He quickbooted his ship and opened fire. His targeting computer tracked the Scourge ships, still trying to recover from the proximity mines. His guns burned shots through space, punching through cockpits and engines alike.

More Scourge began to bounce through the jump point. Lott managed to take down two out of the first three before he had to max out. The third limped behind his cohorts, leaking fluids and recharging shields.

Lott kept an eye on his scanner as he fell back toward Garron III. Eight ships were lighting up his wake. One of them was Shen.

He cut his main thrusters and flipped his ship with the maneuvering thrusters to keep his momentum. Lott unleashed another salvo of rounds at his pursuers as he hurtled back

toward the planet.

The Scourge struggled to maintain their pursuit and return fire. Shen and two pirates broke formation, cut wide, and burned for Garron III. That didn’t surprise him; he had figured Shen would recognize this move and not fly directly at him.

That left him with five, four untouched and one wounded.

Let’s get it over with, he thought, kicked his thrusters full and sped to meet them.

* * *

Shen watched Lott’s Cutlass clash with the other Scourge pilots. Flashes from missile explosions and streaks of laser fire dotted the space around them.

He was surprised Lott had stuck around, especially knowing how one-sided this fight was going to be. It was a waste of a good friend and pilot.

As Shen’s ship dove through Garron III’s atmo, he focused on the task at hand, fostering the slight hope that he could take the minerals and finish this before Lott was killed.

The landscape raced by as he dropped low. The Scourge took up flanking positions roughly like he had told them. Turns out they could be trained.

They reached the settlement. Shen circled a few times to get a good look. Most of the gaps between the buildings and over streets had been covered. He couldn’t tell where people were massing or if they were even massing at all.

“Nice one,” Shen murmured to himself. He took another pass, firing a burst from his main guns. The shots punched through the sheeting but nothing happened.

He swept out and descended, hovering a few meters off the ground as he approached the main street into town. Under the canopy of cover, he could see a barricade of crates and old vehicles. His shield flared up suddenly.



CHRONICLES

Someone had taken a shot at him. Shen armed his guns and returned the favor.

* * *

Lott tumbled and twisted, taking fire and giving it. The Scourge weren't elegant, but they were effective, keeping him off balance and forcing him to break off sustained attacks, allowing them to recharge.

In short, he hadn't taken out any more of the pirates but was taking a beating in return.

* * *

On Garron III, screams echoed through the dark streets of the settlement. Shelly crouched behind her cover, coordinating the townspeople to change their positions the second they finished shooting at the strafing pirates.

The latest volley of gunfire punched through buildings. A round caught Milson through the midsection, nearly blowing him in half. He was bleeding out on the street not three meters away. She couldn't hear what he was mumbling to himself as he stared wide-eyed at the shafts of light pouring through the canopy above.

The Scourge took turns strafing the town from above and from the sides. The town had planned for this. They knew the pirates would try to soften them up before landing.

The reality was bleaker though. It was tough to not engage, especially after the screams started, but there was no way small arms could penetrate the shields, so they needed to wait until they were on foot.

Shelly hoped there would still be some townspeople alive to resist them when they finally did.

She could hear a ship approaching for another pass and braced herself for the gunfire.

* * *

After some serious hits to his hull and a couple more close calls, Lott was nearly out of options. He knew it was only a matter of time until they overwhelmed him.

He quickly went into his systems and primed Last Stand, a dual charged explosive he had custom-designed. First it would access a back-up battery and the power plant to launch an EMP wave, quickly followed by an anti-matter detonation. The EMP would knock out all the shields in a ten-click diameter; the anti-matter would sweep up the vulnerable ships.

Looking around, he was amazed that this was all he'd known for the past ten years. Fighting. Angling for shots. Silent explosions in space. Friends disappearing into the black. He was surprised at his calm. The end was coming. He accepted that.

Lott did his best to sweep the Scourge fighters close together, wanting to take out as many as he could. His Cutlass was taking hits on all shields. Warning lights began to flash, indicating the obvious.

"Just a little longer," Lott whispered as he fought to keep control. His finger hovered over the detonator.

Suddenly, he was surrounded by explosions. It took him a moment to realize that they weren't directed at him. The Scourge were under fire. They broke off their attack on him to reform on the interlopers.

Lott checked his scanner. Names began to appear on his screen: Archer Barnes, Templar Teddy, the Black Skull. It was Armitage's buddies. Here to save the day.

"Easy there, kid," the Black Skull said over comms. "Ya ain't dead."

"Hell no, not when you got honest-to-god heroes on your six," Templar Teddy retorted.

"Man, there's a ton of things I would call you, but hero is real low on that list," another pilot countered.



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They bickered and sniped at each other while they tangled with the Scourge fighters. Lott smiled and exhaled, relieved beyond words, as his battered Cutlass recharged.

His shields pinged back at full strength. Lott got his head back in the game and cued his comm. They weren't out of the woods yet.

"We got more on the planet," he said, doing his best to bury the emotion behind stoicism.

"I'm with you. Bishop and Koll, you're coming too." The Black Skull and two other pilots peeled off and followed Lott.

They left behind the brawl and dropped toward the settlement. As they fell into an attack formation, Lott felt the ominous weight of the past few weeks transform into something else . . . a desire to hit back, to do some damage.

Smoke rose from scattered fires in the settlement. Shen and the other two pirates were taking turns strafing it with guns and rockets. As soon as Lott and the others hit their sensors, Shen and the Scourge broke off from the town.

Lott glanced down at the columns of smoke coming from the town as he screamed past. They followed Shen and the Scourge off the planet and back out into space.

Lott knew what Shen was up to. This was Armitage 101: whenever possible, you dictate the time and place of combat. Shen was trying to escape, but if he couldn't he was going to hunt for a place where he felt confident to engage.

The asteroid belt. He figured his modified Hornet had the edge in agility over Lott's Cutlass. That's where he was headed. When Shen and the Scourge finally pushed into the outer fringes of the asteroid belt, they separated.

Black Skull and Bishop took the pirates. Lott and Shen set their sights on each other.

Lott marked his target. A warning popped up on his screen, indicating he'd just been tagged. They both unleashed

rockets and gunfire as they clashed. Missiles crashed with countermeasures as shields flashed.

They twisted through the tumbling masses of rock, fighting for dominance, each knowing the other's strategies. Missed shots perforated the cosmic rocks.

The two ships separated and circled. Lott could see ship markers disappear from his scanner. The comm chatter told him it was Scourge craft getting punched out. The battle had turned.

Shen cut his ship at a sharp angle and sliced across the distance toward Lott. He turned to meet him. Shen unleashed a burst and Lott rolled out of the way, but Shen snapped off an FF missile. It acquired Lott and went hot the second the thruster fired. Lott knew he couldn't evade it and closed the distance instead. It exploded, catching Shen in the blast too.

Shields flickered and died on both ships. Lott's Cutlass had lost a handful of maneuvering thrusters and was leaking fluids. Shen's power plant sparked. They limped away from each other, both ships struggling to maintain maneuvering thrust. Lott was able to turn first, his weapons locked on Shen.

Black Skull and the rest of Armitage's friends closed from Garron III, rushing to support him. Lott turned back to Shen. He had him dead to rights. Shen wasn't doing anything to provoke him, just hovered there.

Maybe it was guilt, or their history, but he couldn't fire.

"Just go," Lott said over general comms. He hoped Shen was listening. After a few moments, Shen flew off.

Black Skull arrived a few minutes later, streaking past Lott to pursue Shen.

"Don't." Lott watched Shen weave through the scattered asteroids until he broke free. "Let him go."

Then he was gone.



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The settlement on Garron III had lost fourteen people and ten more wounded in the battle against the Scourge. Shelly had done her part and held the defenses together.

Most of Armitage's buddies had taken off, but a few remained to catch up with each other and commemorate their fallen friend. Lott listened to their stories and their constant barrage of insults.

Finally, they were sick of each other and decided to depart. Lott approached them as they prepped their ships for flight.

"Guys, I want to thank you again."

"Enough with the thanking, we get it," Black Skull said with a roll of his eyes. Bishop chuckled.

"So, I can try and sort out some kind of payment. I don't know how much —"

"Whoa, you think we came here for money?" Templar Teddy stepped away from his ship. The rest of the guys turned dead serious.

"Well, no . . . but it's only fair."

"You know how many times Armitage bailed my ass out of a scrap?" Archer Barnes spoke from the ladder of his 300i. He stepped down and crossed toward Lott. "I can't even count. Hell, none of us can. He was one of those guys who was always there. If you were in a jam, and he could help? It was a done deal."

"It wasn't ever about money, kid," Black Skull added. "That's what friends do. They back each other. No matter what." The other pilots nodded. "Armitage was our friend . . . and we were his."

One by one, the pilots said their goodbyes and left.

Lott still had a few more days of repairs before he could take off. A hauling ship arrived the next day with a fighter

escort to transport the refined minerals.

He was trying to fix the power on the maneuvering thruster when Dr. Harroway approached.

"Everything go smoothly?" Lott asked as he replaced a coupling cable.

"It did, thank you." Dr. Harroway walked along the Cutlass. "You still haven't given me the account for your payment."

Lott stopped working and thought for a minute.

"You know, doc," he said with a smile. "Keep it. This one was on me."

Dr. Harroway nodded to him. He spent another moment admiring the design of the craft before walking off.

Lott sat quietly for a few minutes. If Armitage wasn't dead, he'd probably have had a heart attack hearing that. But damn if it didn't feel good to say it.

Now there were just two Seraphim left. They stood on two very different sides of that line, the line that cuts through every single person, whether human, Xi'An, Banu or Tevarin. Are you out here to do good or evil?

It took all this for Lott to find his answer to that question. He couldn't help but wonder what it would take for Shen to find the same answer.

THE END

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