

# JUMP POINT

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## GREETINGS, CITIZENS!

There is a story from ancient times of a man, in Baghdad, who suddenly met Death face to face in the street. Of course the man was startled, but so was Death. The man immediately fled the city, telling a friend that he was running away to Samara. Death, when asked why He was startled, replied that the meeting was unexpected, because he had an appointment with the man in Samara ...

I feel a bit the same way. We moved up **Jump Point** so that it wouldn't coincide with other events, and promptly found the Mustang brochure and the newest (v1.0) manual on the same date. But at least we're not trying to get this finished and approved on the day after Xmas!

And the best news is that we're about 5 minutes away from accomplishing the trifecta — getting all three done and posted on the same day. As always, it's because lots of people pitch in and help get these things done.

For your reading enjoyment this month, we have the story of the Gladiator development, along with a Portfolio article about the 214th Bravo Flight (Gladiators) and a Galactic Guide describing Virgil, where the 214th saw distinguished action. We've also got a Behind the Scenes interview with the team that makes all the awesome commercials and other cinematics that I've enjoyed so much, and the conclusion of Allen Russell's "The Knowledge of Good and Evil."

Illustrating the Galactic Guide is a view of Virgil by Ken Fairclough, a new concept artist just hired here in Austin.



I think you're gonna be happy with the visions that he brings to **JP** month by month.

Before I go, I want to mention a topic that drew more comments than I anticipated — the Cutlass brochure. Specifically, the comments were that we had slacked off on this brochure.

We knew it didn't have as much text as most other brochures, and that was intentional, but not in the way you might expect. What you might not realize is that every brochure we do starts with inspiration from a real-deal brochure or pamphlet of one sort or another. The Cutlass brochure was inspired by a real-world brochure that some marketing department spent tens of thousands of dollars to develop. They thought that was the best way to advertise and sell their product (yes, which is close in spirit to the Cutlass), and we had the same intent.

Now, knowing how much you want more text in brochures, we'll probably put more in subsequent brochures, even if our inspiration trusts more in photos than in blurbs.

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

David  
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<b>COVER:</b>	<b>PAUL JONES</b>
<b>PAGE 35:</b>	<b>RYAN ARCHER</b>
<b>PAGE 48, 50:</b>	<b>KEN FAIRCLOUGH</b>
<b>PAGE 51:</b>	<b>DENNIS CHAN</b>



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**FROM THE HIGHPOINT**

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# Gladiator

The Gladiator got its start over a year ago, in 2D concepts and a 3D concept mesh created by David Hobbins. When he was done, Andrew Ley, Concept Design Director at Foundry 42, took over to make sure it not only looked good, but that it also worked well, Andrew further refined the 3D concept mesh and the ship's appearance, as well as providing rough animations for the many mechanical elements. Matthew Johns, Senior 3D artist at F42, then remodelled the ship, adding detail as well as further refining the mechanical elements and rough animations.

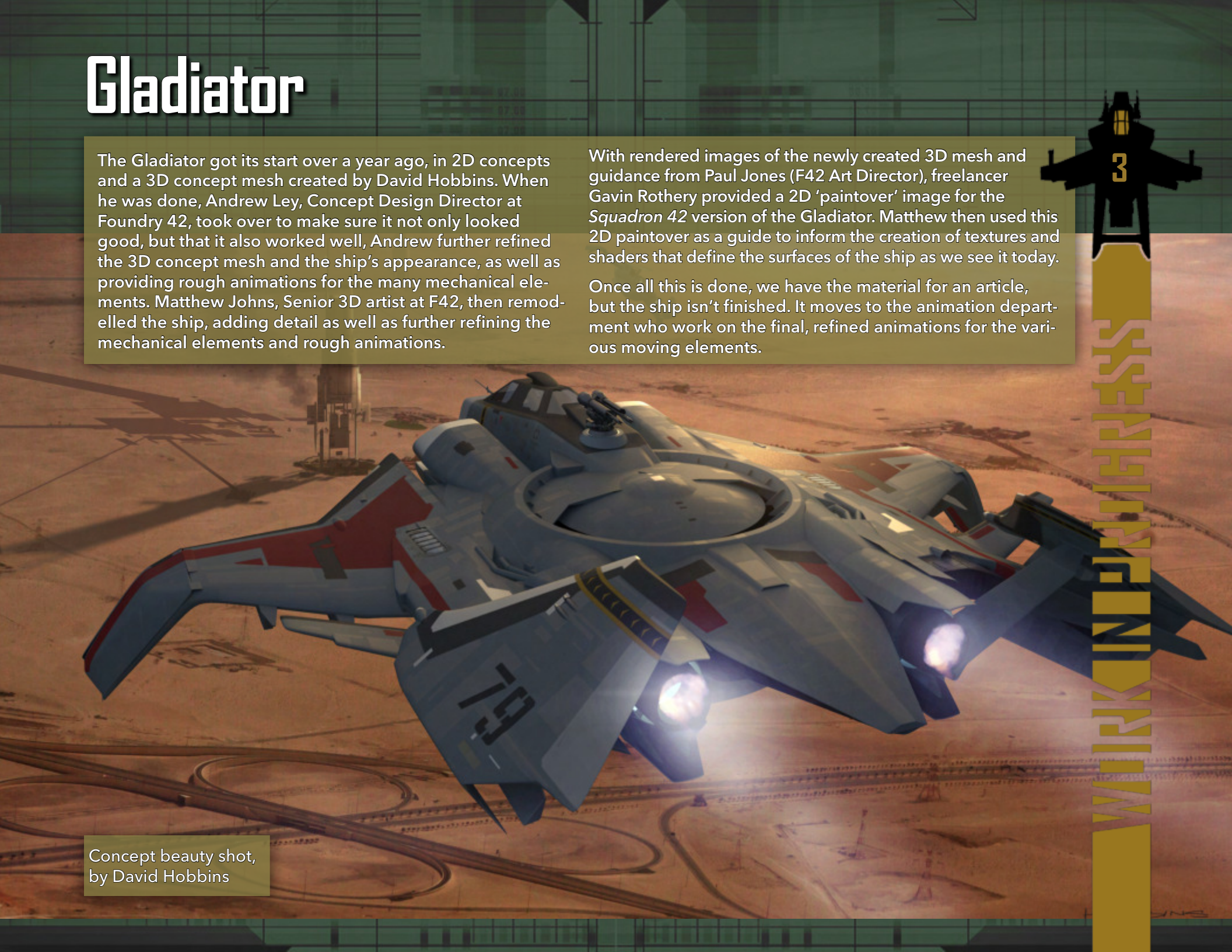
With rendered images of the newly created 3D mesh and guidance from Paul Jones (F42 Art Director), freelancer Gavin Rothery provided a 2D 'paintover' image for the *Squadron 42* version of the Gladiator. Matthew then used this 2D paintover as a guide to inform the creation of textures and shaders that define the surfaces of the ship as we see it today.

Once all this is done, we have the material for an article, but the ship isn't finished. It moves to the animation department who work on the final, refined animations for the various moving elements.

Concept beauty shot,  
by David Hobbins

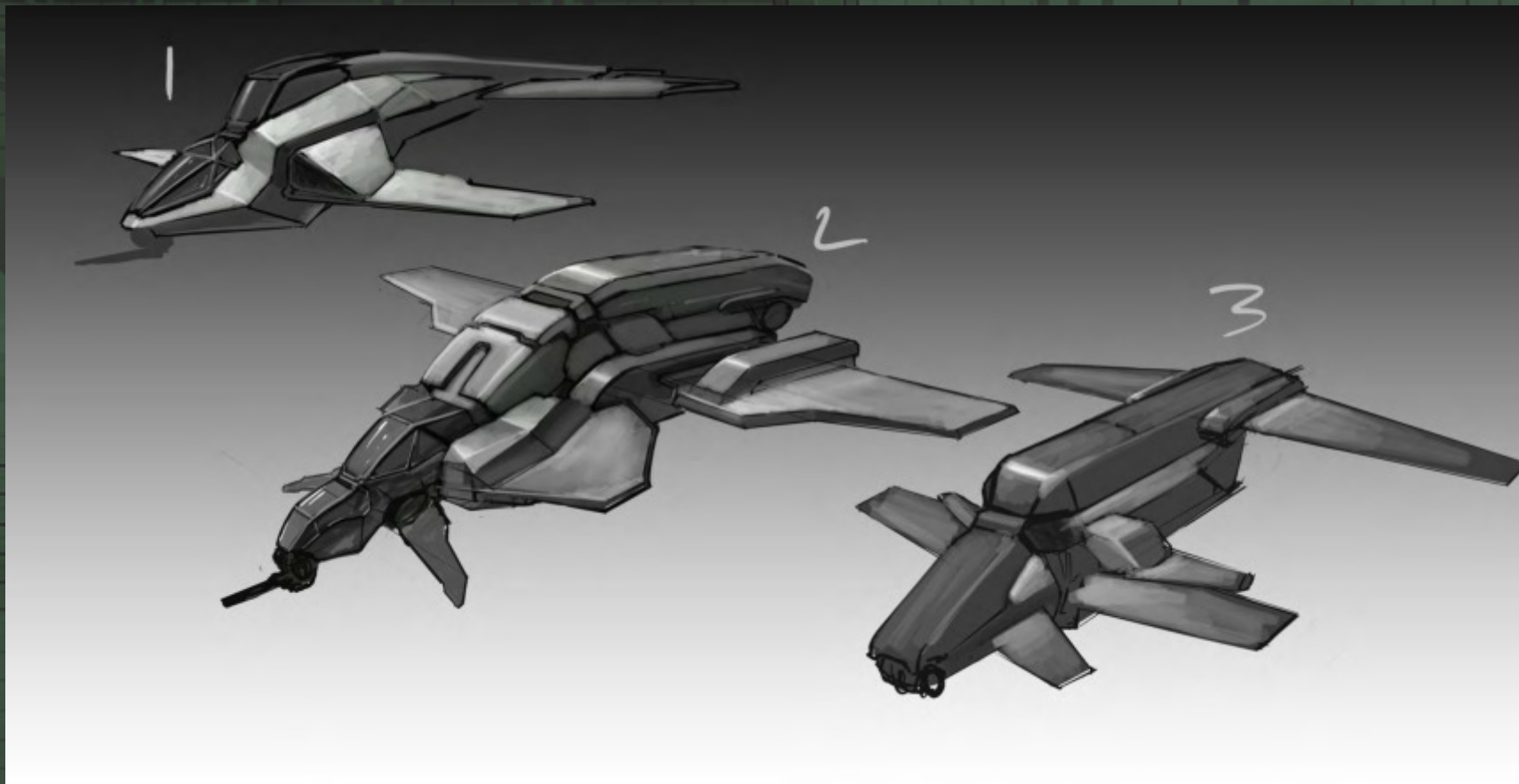


SYSTEMS  
WORKING





Gladiator Explorations



WORKING DRAFT



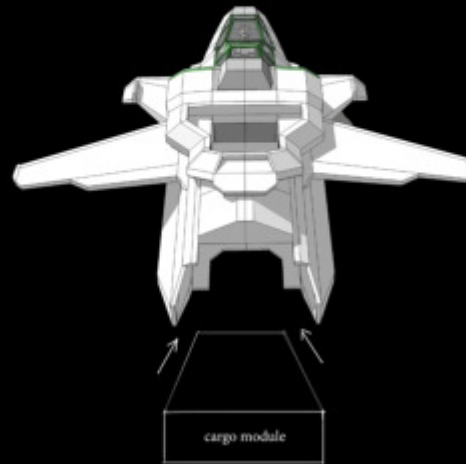
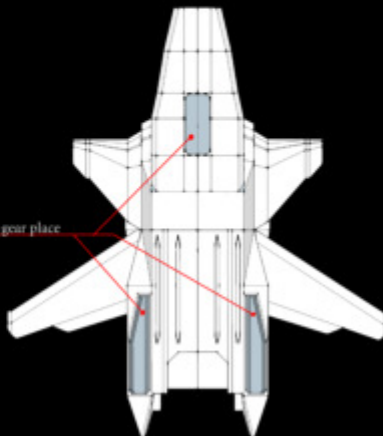
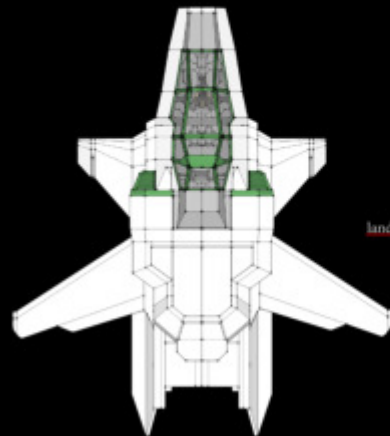
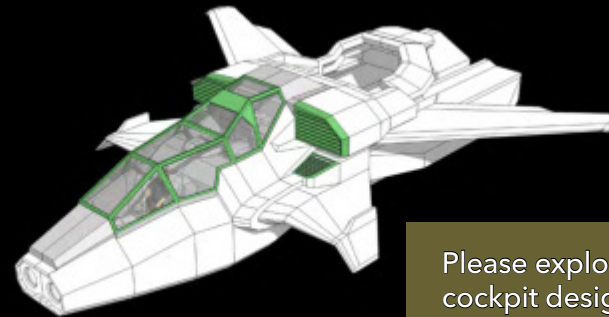
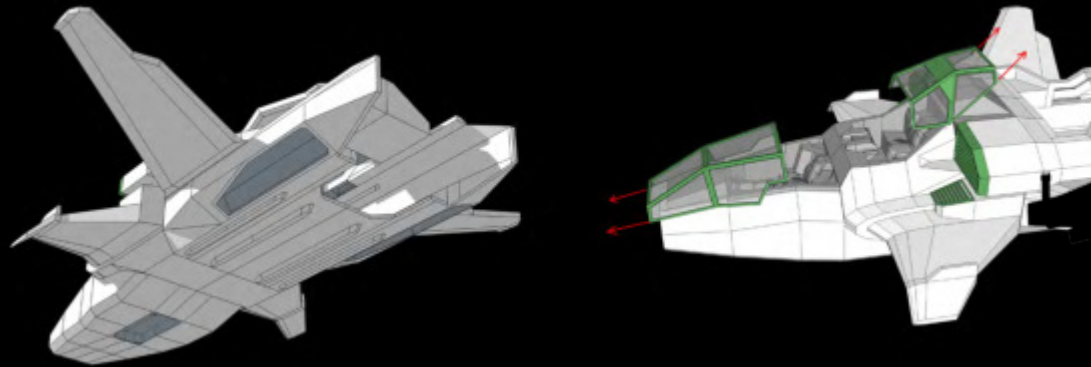
**David Hobbins, Freelance Artist:** I have some questions about the ship:

Which way should the co-pilot be facing?

The ship is supposed to have six pylons for torpedoes; can each pylon hang two torpedoes? What size of a torpedo?

**Harry Jarvis, Art Producer, ATX:** Thanks for sending the concepts! Overall, we like where it's going, and it does a really good job of capturing the feel of the Anvil manufacturer. There are a few revisions we would like to see made to help separate it from the Hornet just a bit more:

- Please continue to add detail and smooth out some of the forms.
- We want the co-pilot to have an elevated position that can swivel 360 degrees for torpedo spotting and rear gun defense.



Please explore a raised cockpit design for the co-pilot, at the rear of the main canopy, that can fully spin around / gimble, like a bubble turret on a World War 2 bomber.

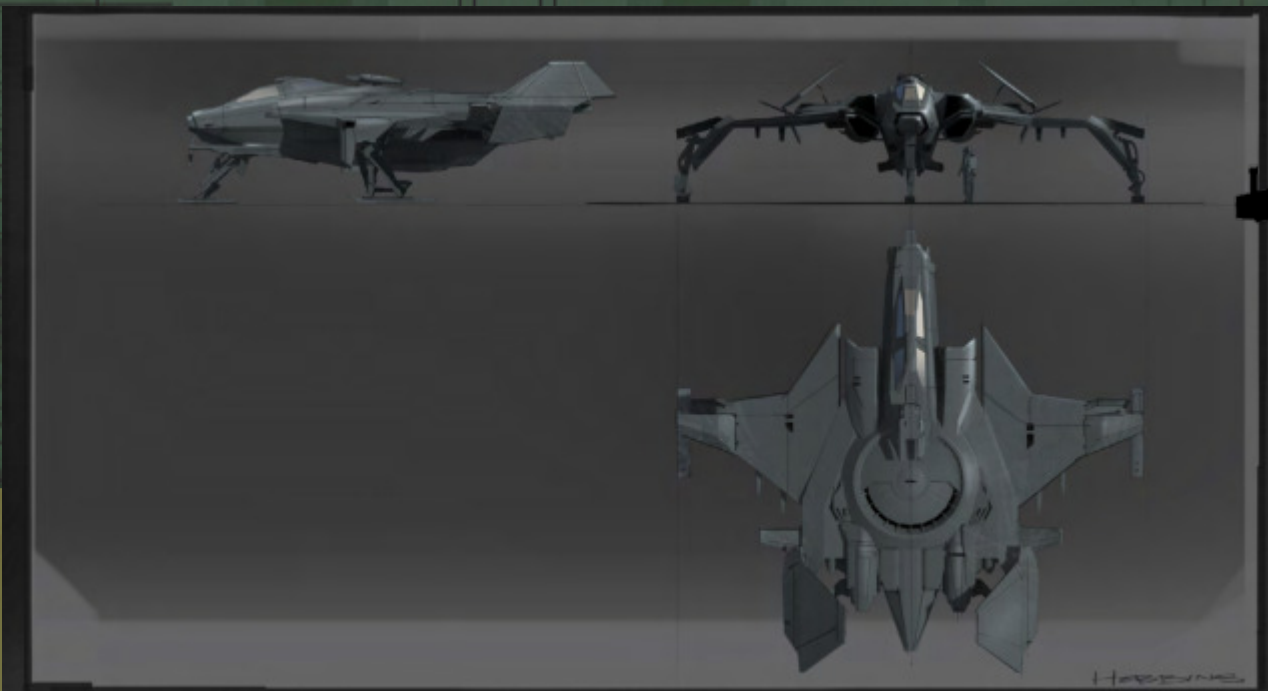
- Torpedoes would be about 2-3m. It would be cool if they were recessed and deploy down (kind of like the missile bays on the Hornet but bigger – think B1 / B2 deployment of a cruise missile).
- Hardpoint class 3 is for torpedoes. The Gladiator is spec'd out to have 6 Class 3 hard points, so 6 spots where torpedoes can be deployed from.



WORKING DRAFTS



**David:** Here's what I have so far [this page and next page]. I've tried to communicate a strong, shared aesthetic DNA with the Hornet. I hope that's coming through. I'm looking forward to hearing your thoughts. In the meantime, I'll continue to refine the surfaces and overall proportions. As well, I'll start considering a fitting livery.



WORKING DRAFT





**Travis Day, Associate Producer, LA:** This looks pretty cool – I'd fly it!

**Chris R:** People are going to be very happy!

**Chris Olivia, Chief Visual Artist, ATX:** Awesome!

**Pete Mackay, Designer, ATX:** I particularly like the tail design on this one. Gives it a very distinct look.

WORKING IN THE  
FUTURE



**David:** Here are the finals for the exterior of the Gladiator torpedo bomber. Let me know if you'd like to see any tweaks to these images. I also did an additional image of the Gladiator in action. I'll get started on the cockpit design next.



WORK IN PROGRESS

GLADIATOR  
TORPEDO BOMBER



GLADIATOR  
TORPEDO BOMBER



**Chris R:** Looks fantastic, David! Really nice work! I've no major notes other than we may want to shave down the front cockpit canopy strut (which can happen in the 3D modeling stage) for visibility reasons.

Looking forward to the cockpit designs!

**Pete:** Yeah, this is one of my favorites!

**Rob Irving, Lead Designer, ATX:** Holy crap! I'm pretty sure that the fans will decide it was worth the wait ... (now we'll have to sell it again ...).

**Harry:** Really nice work, David!



WORKING IN PROGRESS





WORK IN PROGRESS

**David:** Here's the final cockpit configuration of the Gladiator. I tried a color version, but it just seemed to read a lot better in a matte gray material. Let me know how it's working.

**Chris R:** I quite like it. Having said that, I feel like it could be slightly more sci-fi – not much, but look at the Hornet cockpit (which was modeled after a next-generation fighter cockpit) for inspiration. Maybe not have the chairs quite as clunky.

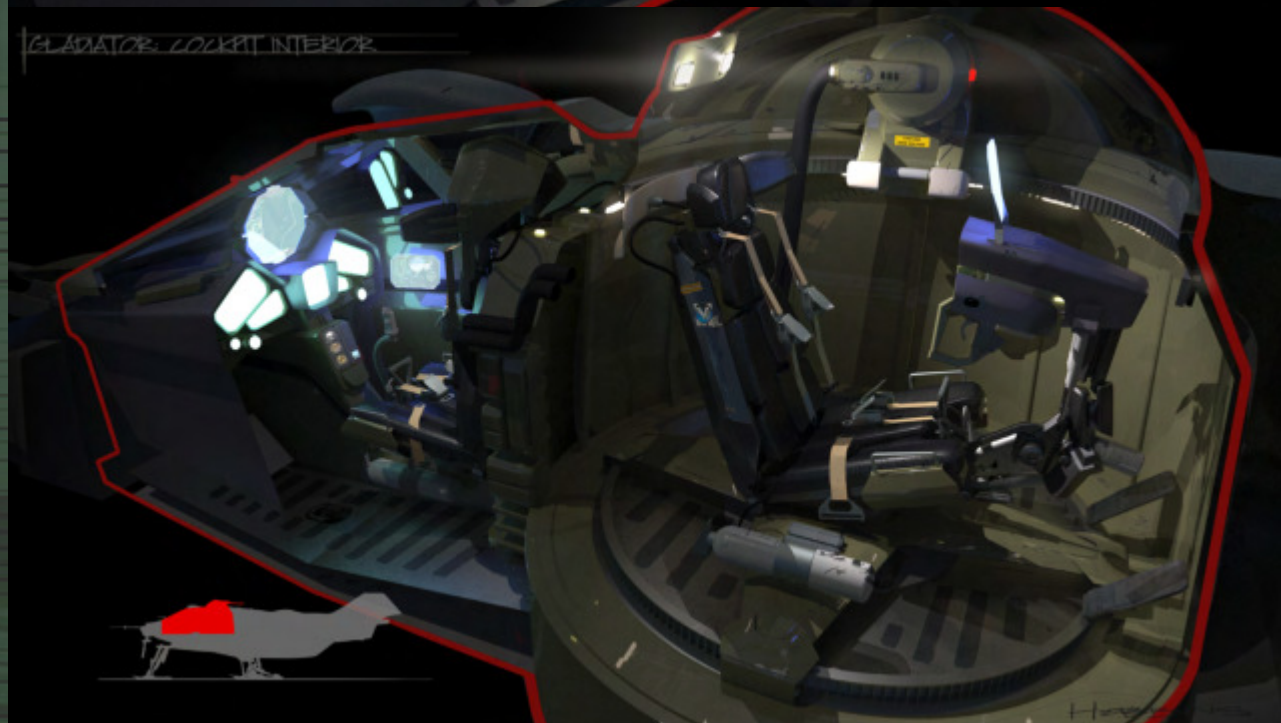
I also think it would be great if the rear seat could rotate 360 degrees so the gunner / bombardier can switch between lining up a torpedo run and shooting bandits off the Gladiator's tail.

Visibility for the rear gunner is also important. Can we have a few views to show that – maybe an internal POV from the pilot and one from the gunner for us to judge?



**David:** Gladiator Cockpit Front & Rear Views. Let me know how this is looking.

**Chris R:** Love 'em! Functional, feels part of the Anvil family and just enough sc-fi!



WORKING IN PROGRESS



GLADIATOR  
TORPEDO BOMBER



HARRIS

**David:** I just saw that the Gladiator was up for sale – that’s awesome! I’ve updated some of the concept pieces to include the two different rear cannon configurations.



HARRIS



WORKING DRAFTS





Original seat concept

**Andrew Ley, Concept Design Director, F42:** I was tasked with taking David Hobbins' high-level concept and working out some of the functional details to get it ready for the art team.

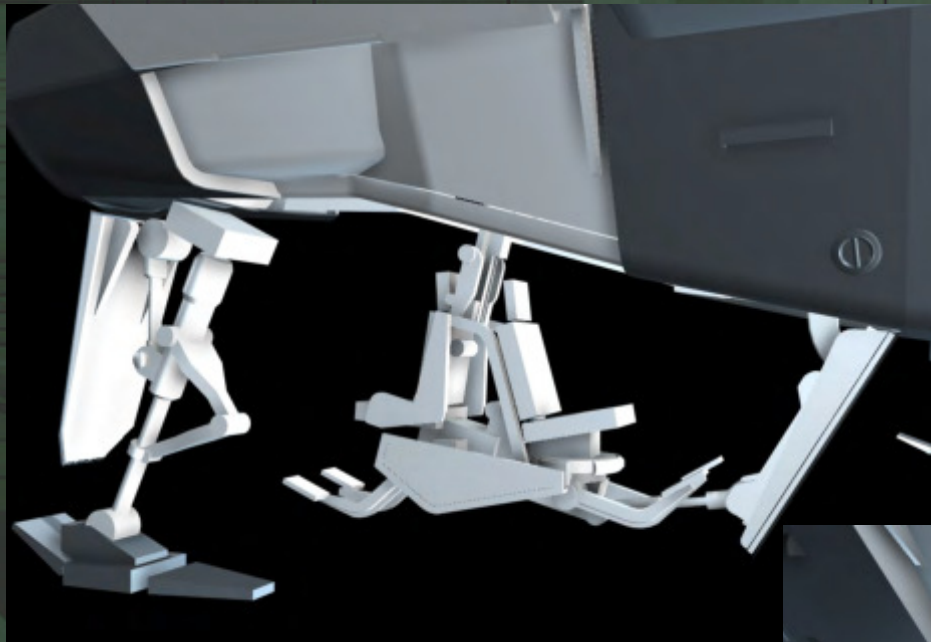
### Cockpit Entry

The first area I was asked to take a look at was how the pilot and gunner would enter the vehicle. David Hobbins had designed some cool looking cockpit interiors, but there was no obvious way to get in and out. I wanted to come up with a unique and elegant system that would allow two characters to simultaneously enter the craft without having to use ladders or climb over the hull.

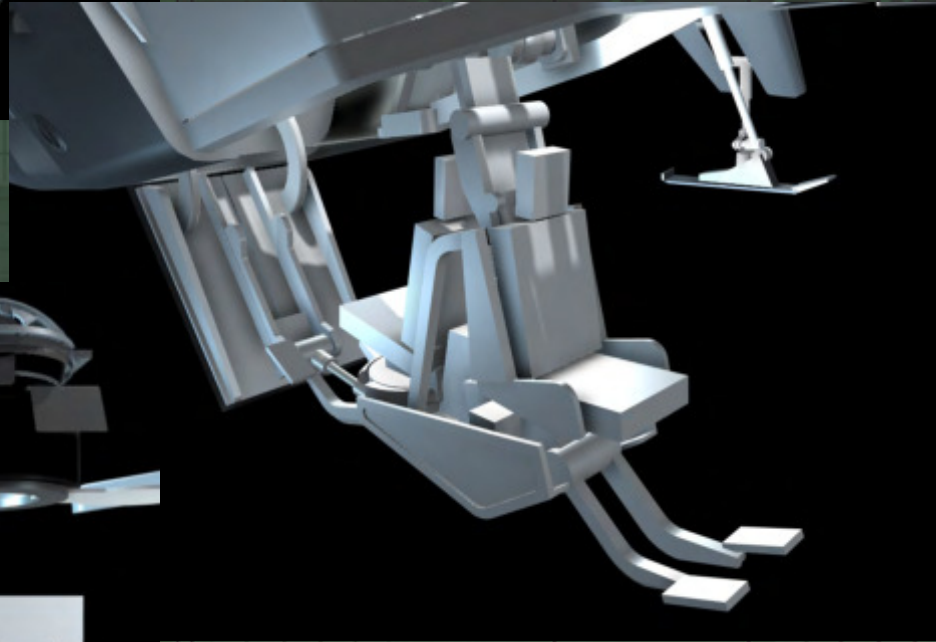
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WORK IN PROGRESS

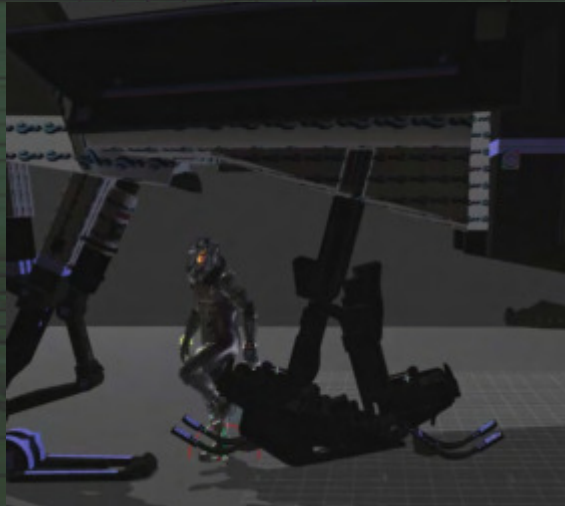




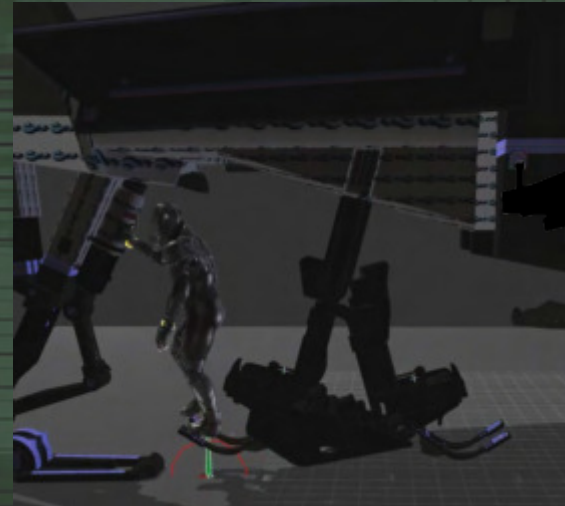
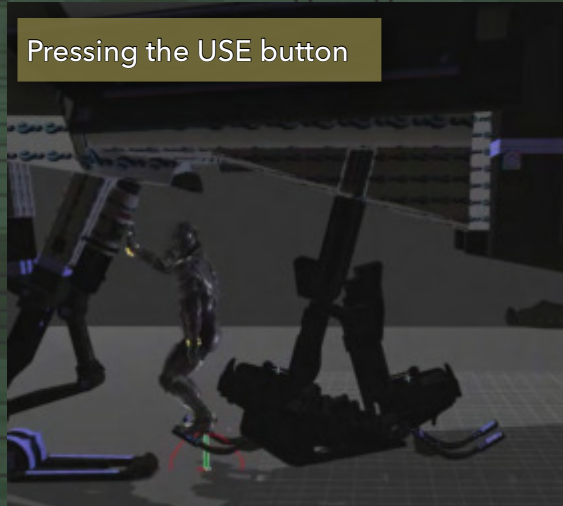
After considering a few options, I started to block out the chair lift system. The way I approach a design like this is to start with the most simple geometry possible to establish the gesture of the animation and figure out the basic mechanism.



WORKING IN PROGRESS



Pressing the USE button



Once I had a rough animation blocked in for the chair, I handed my Maya scene file over to our **Lead Animator, Uisdean**, so he could do a quick pre-vis animation of a character getting in and out of the seat. Uisdean did a great job with the animation, and seeing that the character could physically get into the seat without any problems gave me the confidence to start add-

ing more detail to the design.

On *Star Citizen*, more than any other game, it is crucial to have this back and forth between departments so we don't spend too much time going down a path that ultimately might not work. Luckily CR was over to visit the Manchester studio at the time I was conceiving this feature. I was able to

show him the animation at my desk and get his approval.

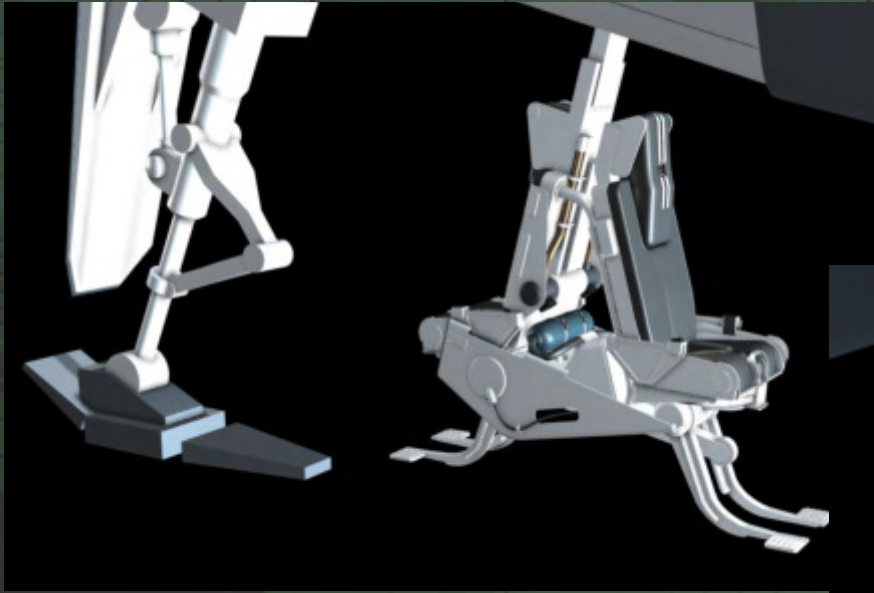
While I was working on the entry mechanism, I was imagining what players' reactions would be. Now the ship is in the hangar, it's fantastic to see the excitement from the fans as they press that USE button on the ship for the first time.



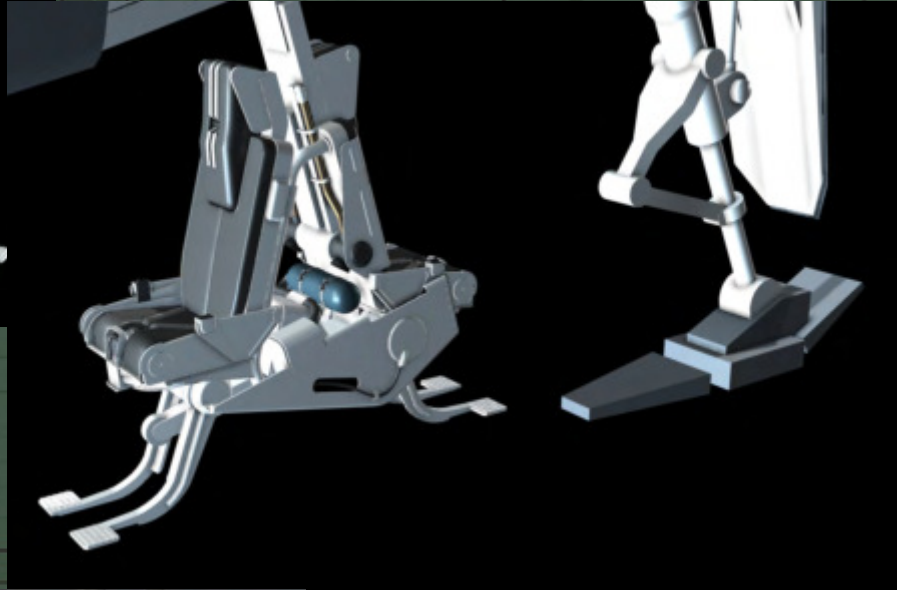
Ready to board (co-pilot seat also available)



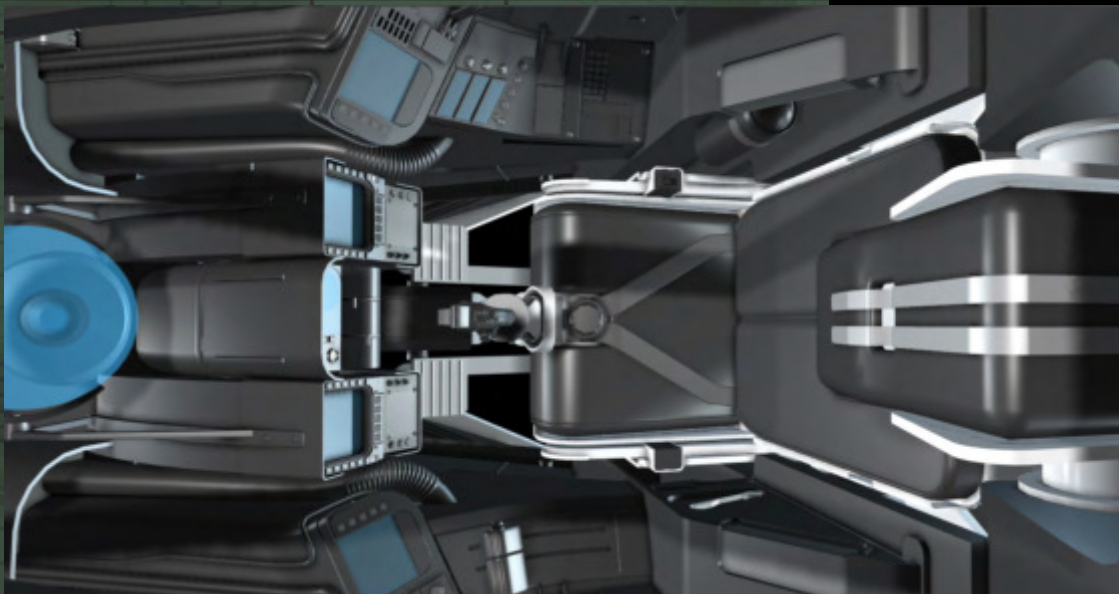




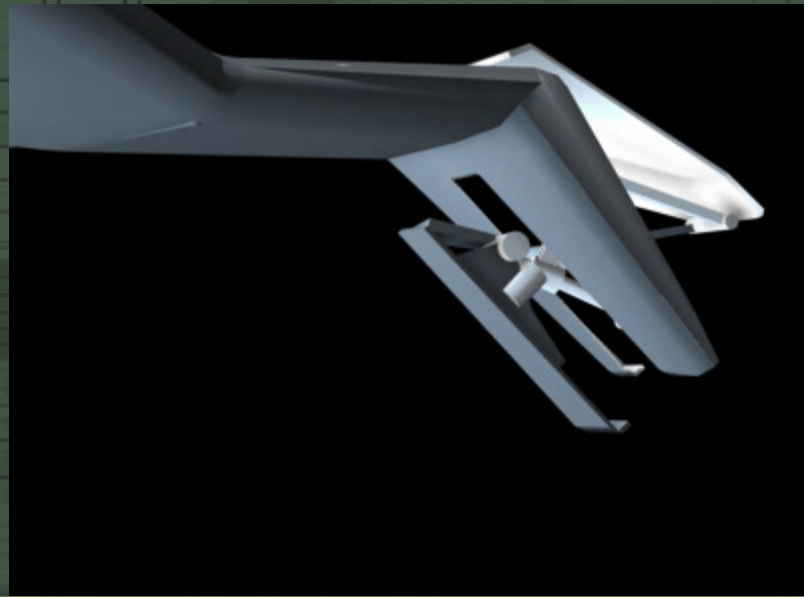
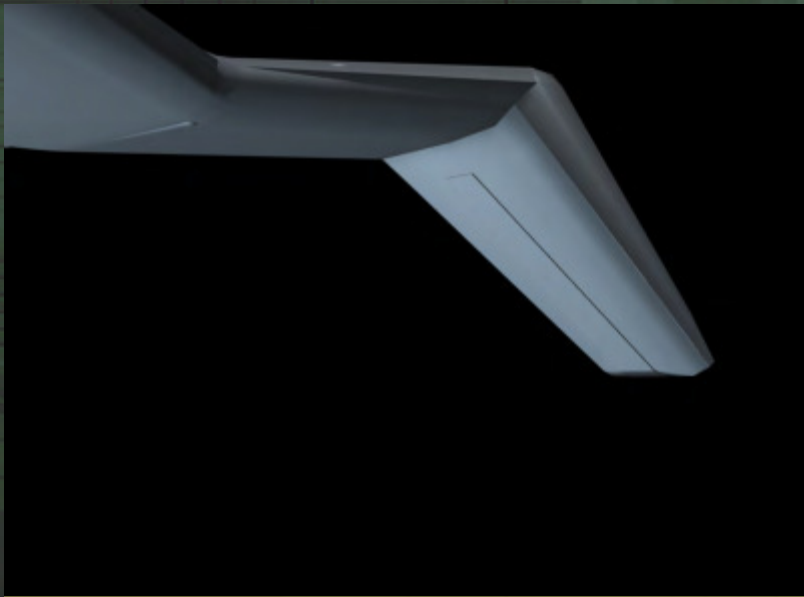
Adding seat details



Over the cockpit



WORKING IN PROGRESS



## Landing Gear

**Andrew:** David's concept mesh included some kitbashed landing gear, but it was going to have to be stripped back quite a bit if it was going to fit inside the Gladiator's wing. I used the same approach as the chair lift and began blocking in a rough animation with simple cubes and cylinders. One nice touch with the landing gear is that the landing skid actually forms part of the wing when it retracts.



WORKING IN PROGRESS

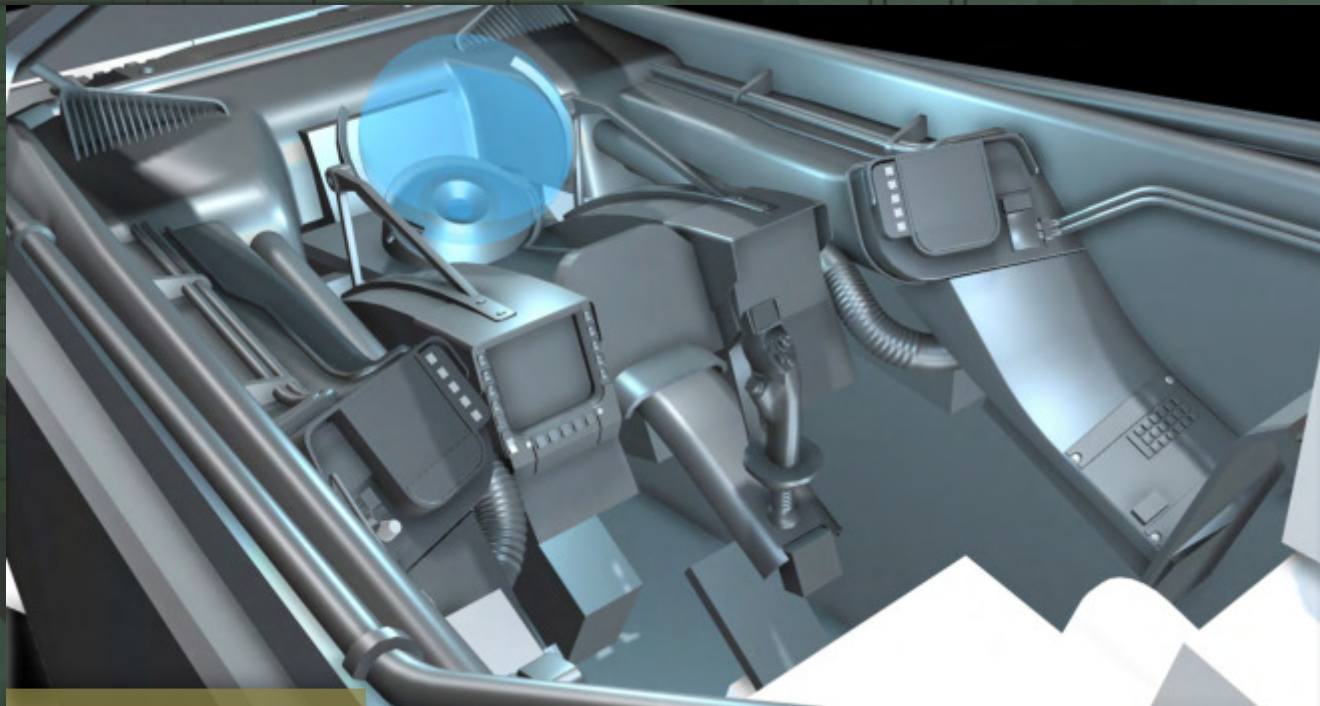


**Matthew Johns (Senior 3D Artist, F42)** took my simple landing gear design to a whole new level while building the final Gladiator. I can't wait for fans to see the whole thing animated, as he did an amazing job with it.



WORKING IN THE SHADOWS





Early cockpit block-in



WORKING IN PROGRESS

## Cockpit

**Andrew:** The cockpit is one of the most challenging parts of the ship to design. There are so many factors to take into consideration and we have found that it simply isn't sufficient to provide our production artists with a 2d concept image. The Gladiator was one of the first ships where we went as far as exporting the concept mesh into CryEngine so we could check the player's visibility with the in-game camera. The whole cockpit layout is conceived with a character model in situ so we can make sure the arms can reach all the buttons and controls. There is a lot of back and forth with the design department at this stage.

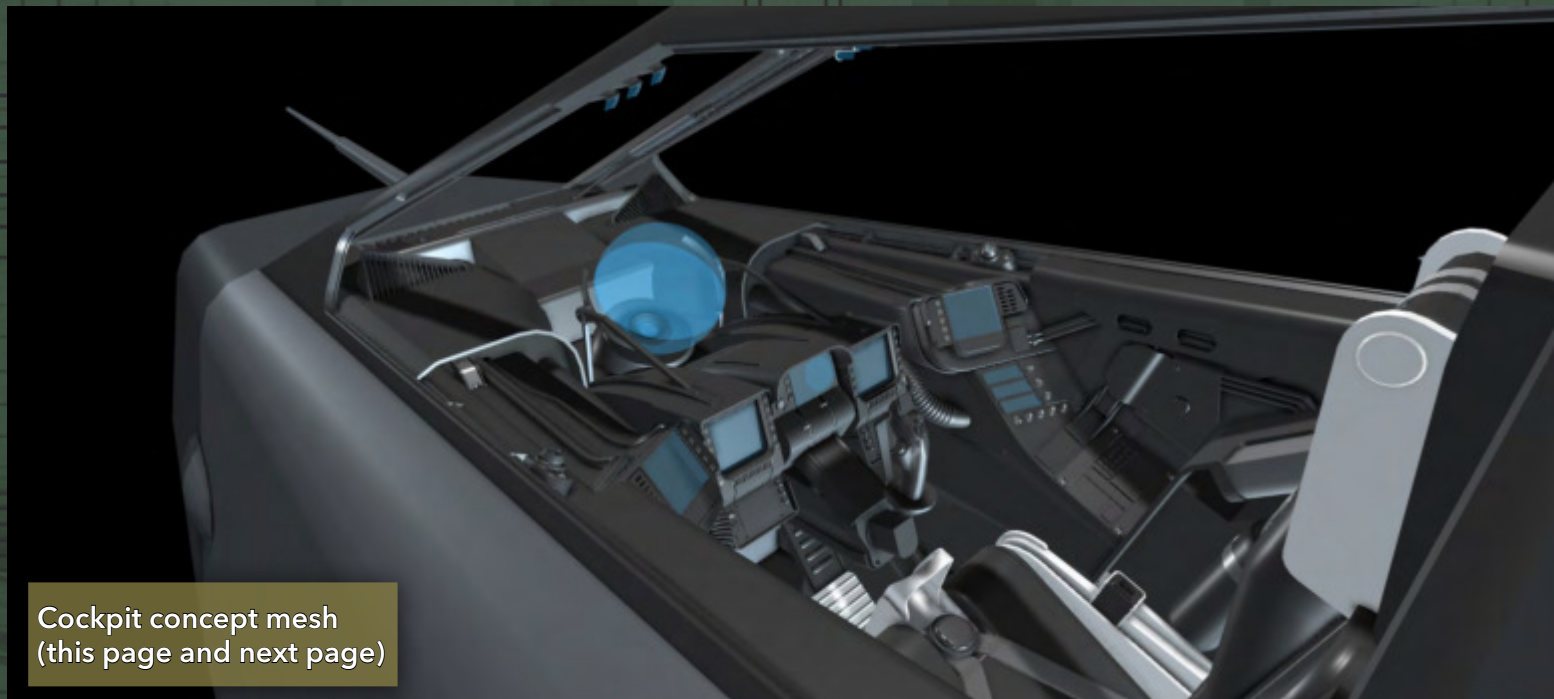


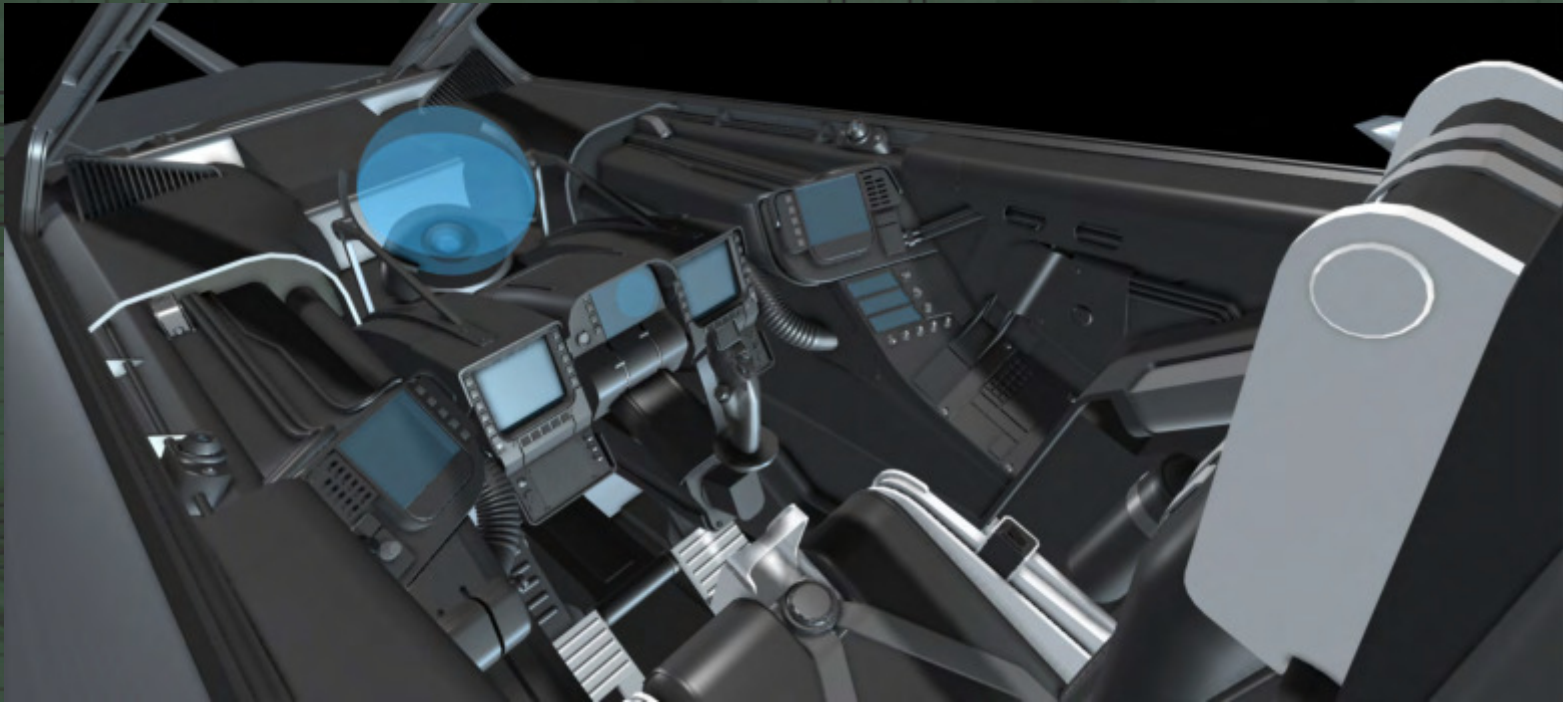
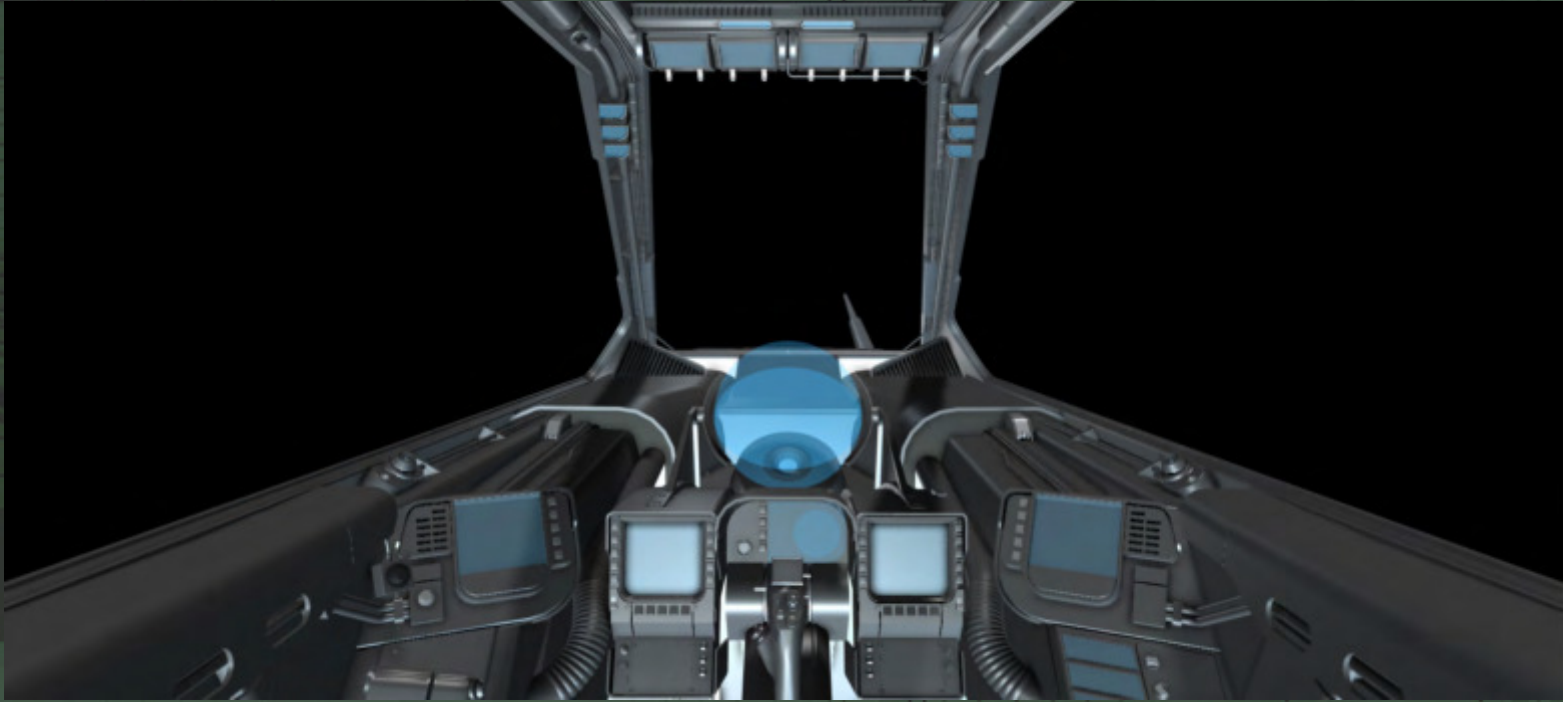
Checking cockpit visibility  
in the hangar



WORKING IN PROGRESS

Cockpit concept mesh  
(this page and next page)





WORKING IN PROGRESS



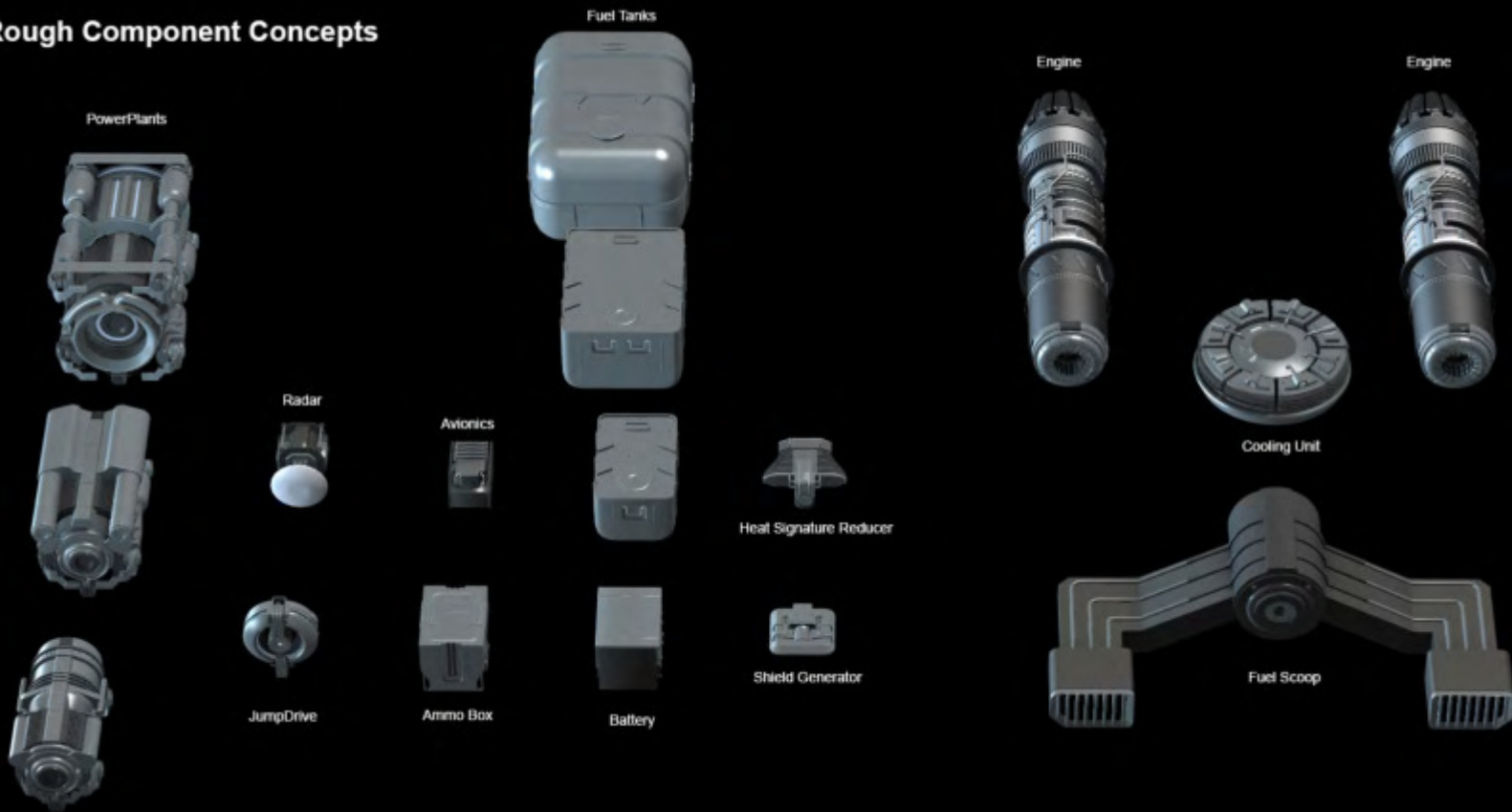
## Components

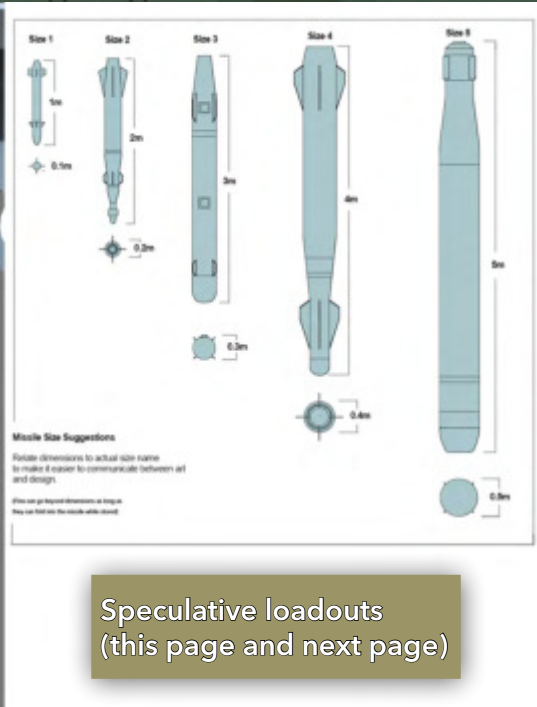
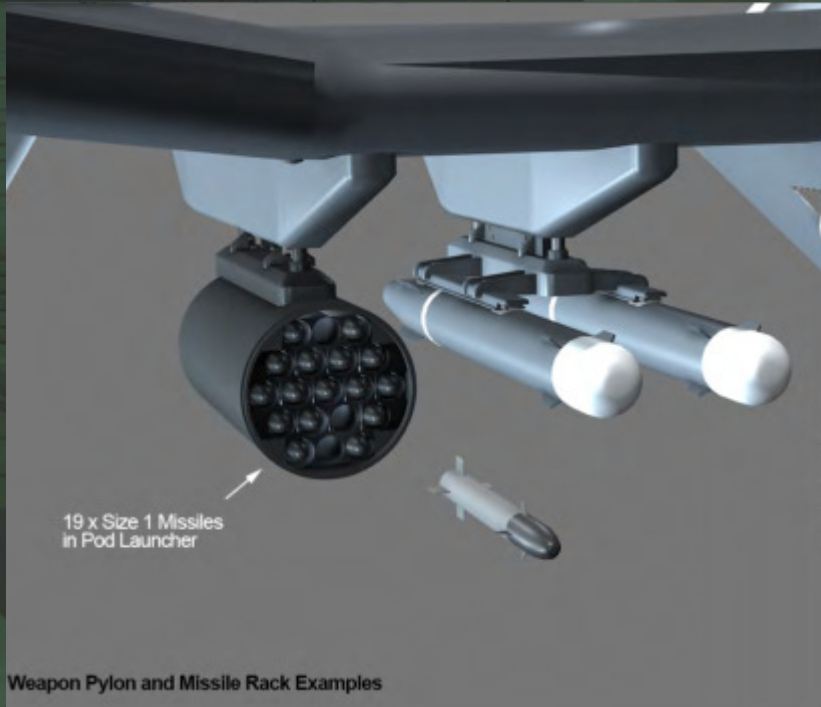
**Andrew:** Around the time I was starting to finalize the Gladiator concept design, we were getting more information from design on how the components system was going to work for the ships. We had some basic dimensions for things like power plants and shield generators, so I created some rough geometry to represent each component on the ship. I've always loved technical drawings of aircraft, and having all the components in place allowed me to do some lineart renders that showed all the inner workings of the craft.



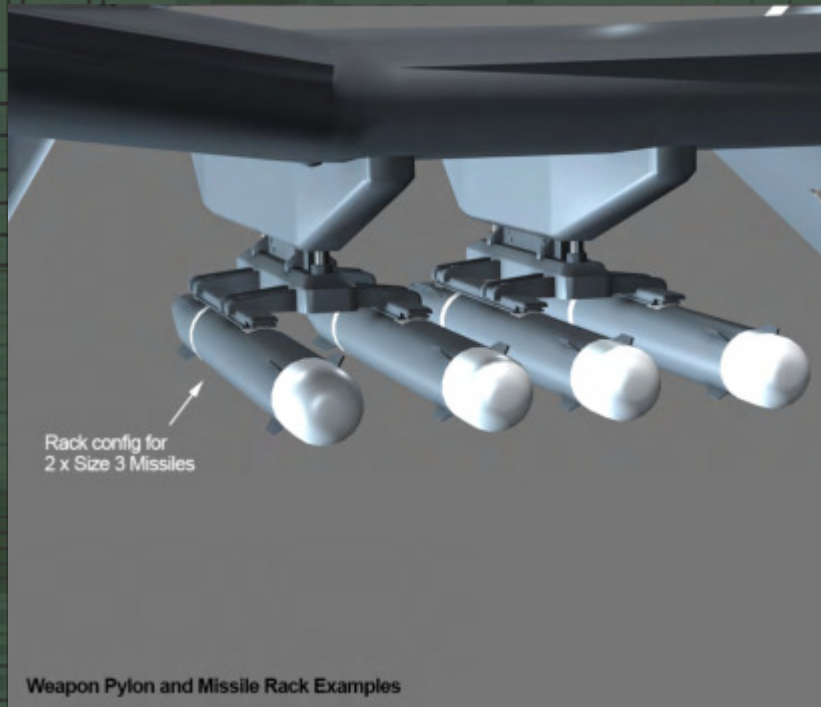
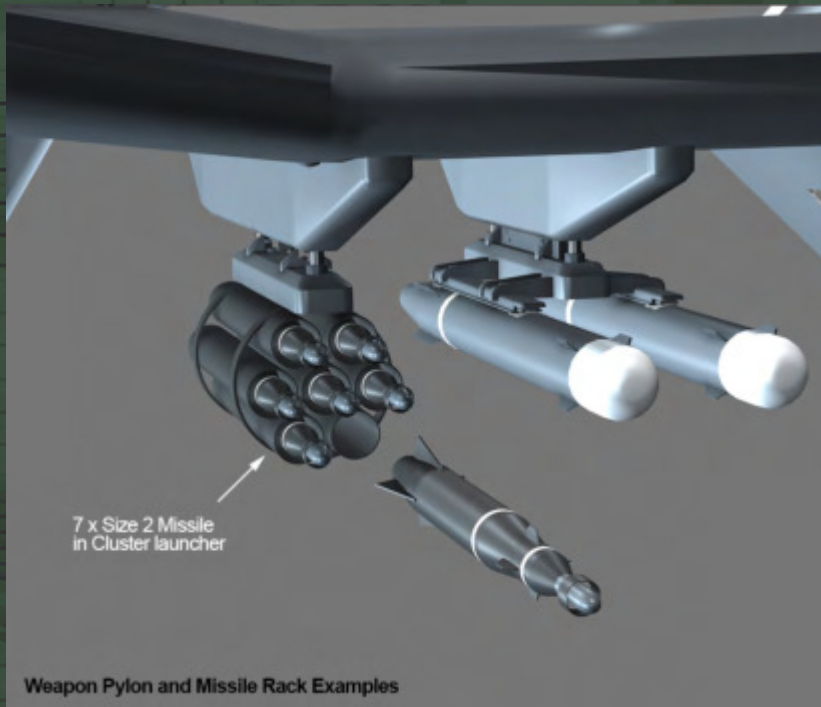
WORKING DRAFTS

### Rough Component Concepts



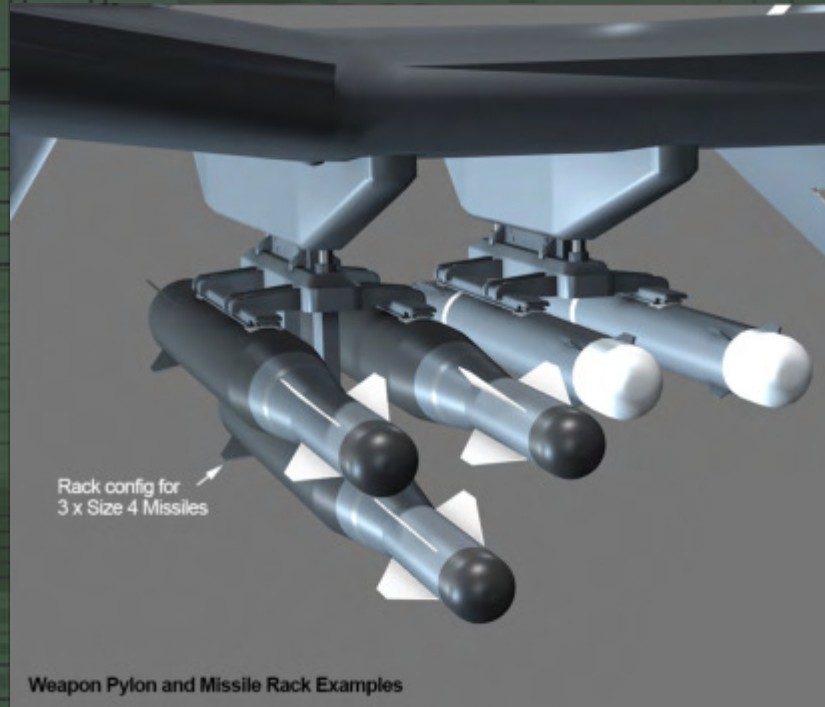
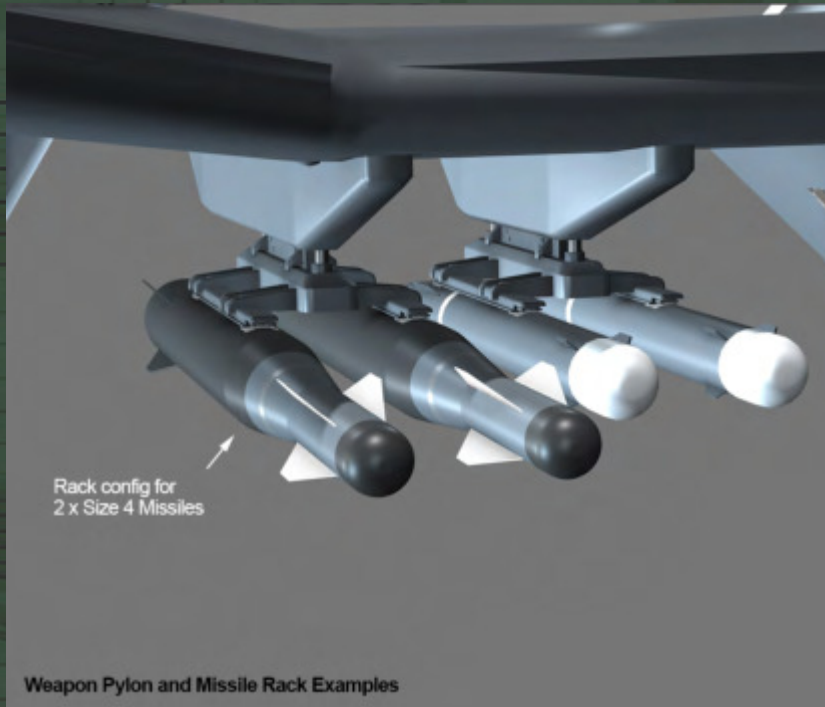
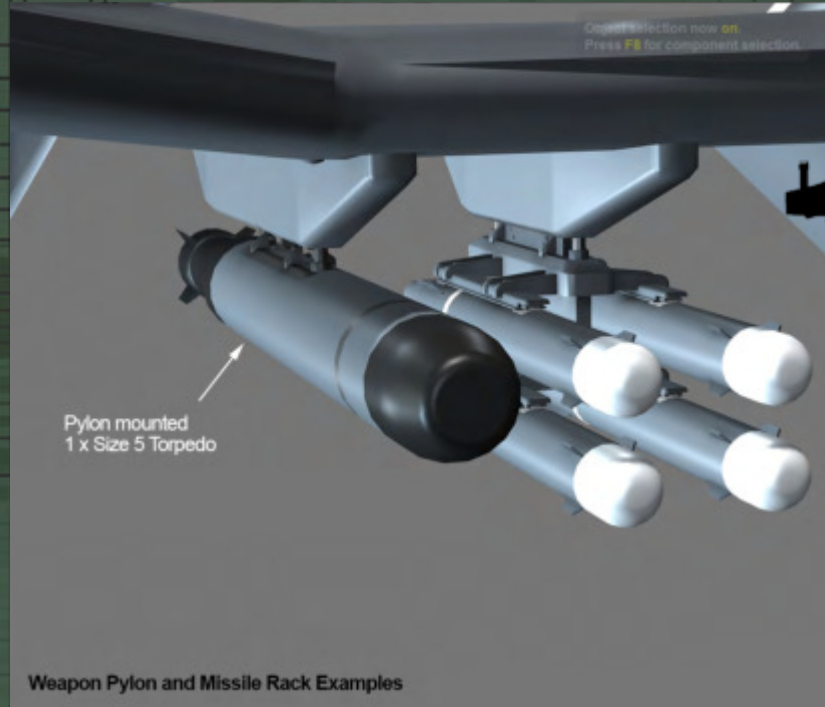
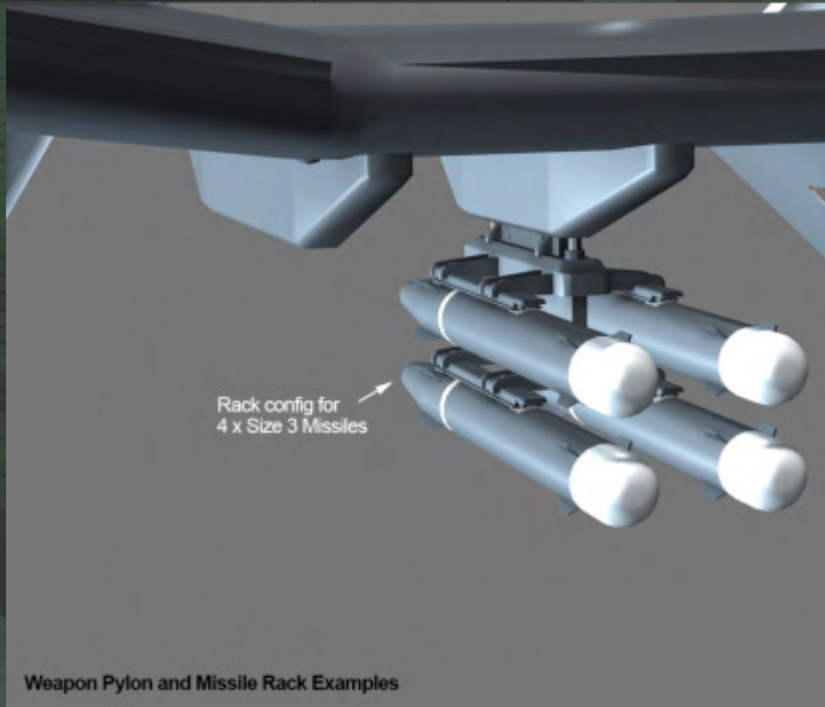


Speculative loadouts  
(this page and next page)



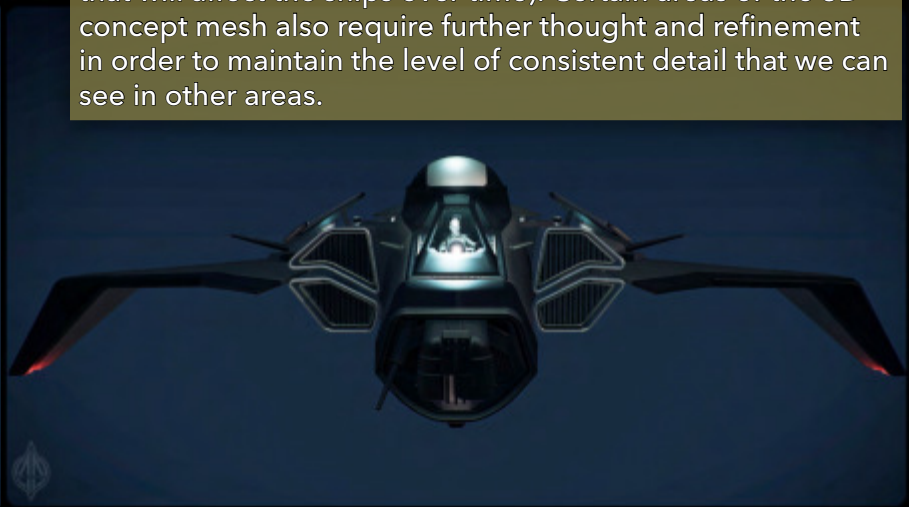
WORKING IN PROGRESS







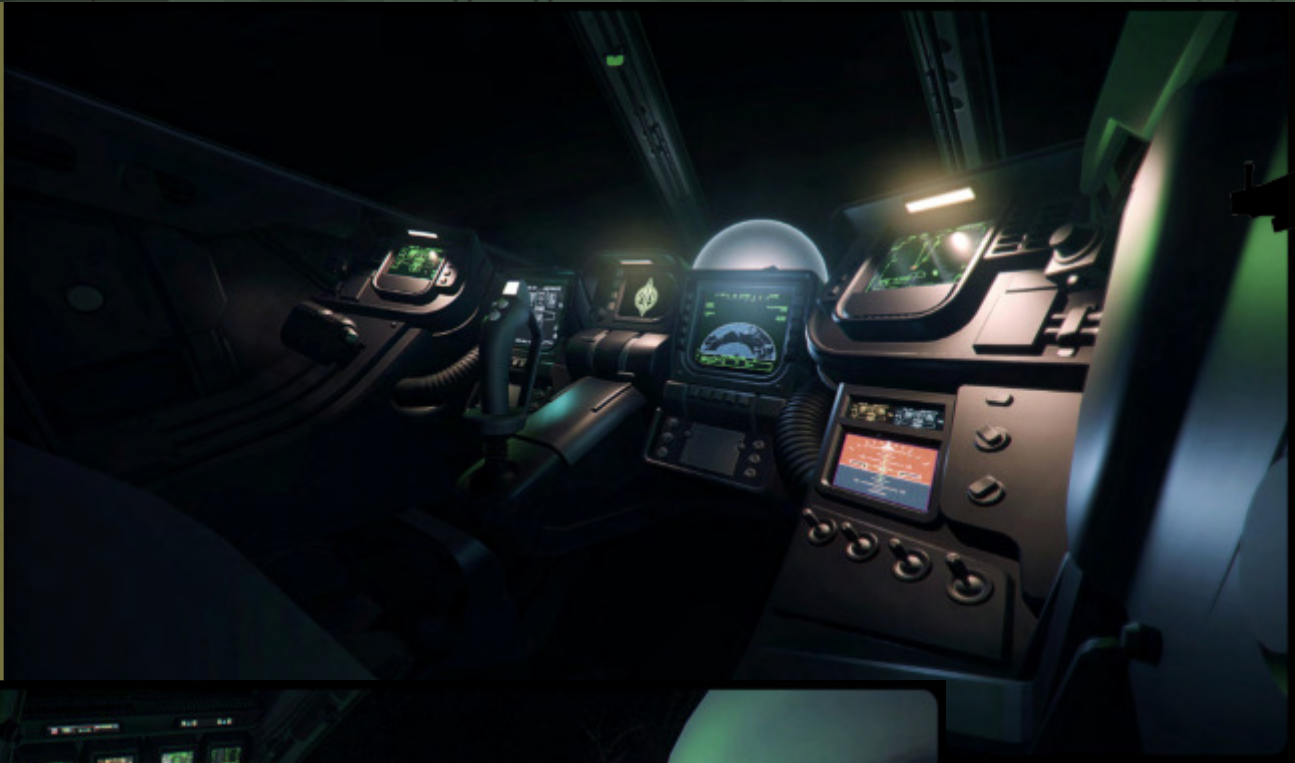
**Matthew:** These early greybox exterior shots show my progress on re-modelling Andy's original concept mesh. The reason the ship gets remodelled at this point is to ensure that the arrangement of polygons (topology) is dispersed in a suitable manner across the ship. Clean topology ensures that the ship reacts to CryEngine's dynamic lights correctly, as well as providing us with enough vertices with which to control our weathering shader effects (rust, wear and tear that will affect the ships over time). Certain areas of the 3D concept mesh also require further thought and refinement in order to maintain the level of consistent detail that we can see in other areas.



WORKING IN PROGRESS



**Matthew:** As with the exterior of the Gladiator, the interior meshes were remodelled once again, maintaining David and Andy's proportions and designs, but ensuring that the meshes were cleanly modelled and would light correctly in game. With direction and guidance from **Nathan Dearsley, F42 artist**, I then worked on a rough lighting pass for the cockpit, which helps identify areas that require further detail, as well as any surfaces that can be adjusted in order to catch the light more effectively.



WORKING IN PROGRESS

**Matthew:** These images show renders of my near final greybox mesh. They were provided to Gavin Rothery, who chose the best angle to work by and began his 2D paintover [next several pages].



WORKING IN PROGRESS







With the model in good shape, F42 turned to **freelance artist Gavin Rothery** to create a colour scheme and suggestions for surface types and to provide a 2D concept image.

**Paul Jones, Art Director, F42:** Here's a good jumping off point – a quick paint-over of the Gladiator.



WORKING DRAFTS

**Gavin:** How's this looking? I've been having a think and perhaps it might be best if I could get the proper textures and lighting all over.

**Paul:** This is getting there. It'd be good if we could hand the modeller the main image, and then you can be getting the underside done while the modeller is working on the topside.

I think if we add some kind of graphic like the red (but not that colour) then we are in good shape.





**Gavin:** How's this looking for the wing graphics? I'm not sure how bold it should be, as these sort of things aren't really that "military."

**Gavin:** I've started working in some surface details and panel-work – is this going in the direction you're thinking? How old is this craft; does it need worn edges and scuffed paintwork?

**Paul:** Yep - crack on. :D



WORKING IN OPEN XRAY





**Gavin:** Here's where I am at the moment; just thought it was worth checking in, in case you had any pointers or things you'd like me to tweak. ;)

**Paul:** It's shaping up. It needs some white on here or something to jazz it up.

And the usual decal and gubbins over the whole thing. I'd also desaturate the green by about 35-40%.



**Gavin:** Here's where I am with the Gladiator at the moment; is this in the right sort of space for you? Let me know if there are any tweaks and I'll get right on to it. ;)

**Paul:** It's looking good overall. A few points:

- The wear seems a bit forced in places though; I'd would prefer a slower wear rather than a chipping.
- The middle part of the dome on top should be glass.
- Make the cockpit section matte black.
- Maybe add a dash of yellow somewhere – on the tail or caution label by the cockpit?
- I'd also keep the intakes bare metal/mid grey, like the circular section at the rear.



WORKING IN PROGRESS



WORKING ON THE

**Gavin:** How does it look for you?

**Paul:** It's done – thank you very much!



**Matthew:** This is the early *Squadron 42* colour pass. It shows the ship's appearance as I first began to define a material file for the ship in the CryEngine.

I took Gavin's paintover image and broke it down into the main material types that I could see, and then assigned each surface type to the various parts of the ship, as the image shows. This process gives me a good idea of how many materials in total the ship will require in order to replicate the concept paintover.

The number of materials a ship uses is important, as it can be a determining factor in how well the ship will run in game. Too many materials can be too computationally demanding, but too few and the ship runs the risk of looking uninteresting and unrealistic. As an artist we do our best to come up with clever ways to ensure that a ship's material is optimized, while keeping the final result in game still visually appealing to the player.



WORKING IN THE SHADOWS



Current Gladiator work in progress



WORK IN PROGRESS

**Matthew:** These final two pages show early progress on some of the main hull shaders that define the material types on the surface of the ship. Here we can see examples of some variations of a green, painted metal, as well as the matte black metal underside, the inspiration for which comes from the insulation tile material used on the NASA *Discovery* shuttle. Other surface details, panel split lines, vents and *Squadron 42*'s livery can also be seen here.



work in progress





Current Gladiator work in progress



Current Gladiator work in progress



Current work in progress

WORK IN PROGRESS





Squadron 214 is a multi-spacecraft equipped unit (technically, a "multi-level force applicator") of the United Empire of Earth. The squadron was formally activated in 2675 as part of the military expansion that followed in the wake of Project Far Star. 214 has seen great success in their 270-year service history. The squadron is especially noted for the seven Medal of Imperial Valor winners on its roster, and for their success in short-range bombing missions, being proudly credited with the

destruction of a dreadnaught, four battleships, nine "flat tops" and countless lesser fighters in their lengthy history. The 214th has also occasionally been a propaganda darling. "Twelve Went In," a recruiting holo-vid, recounted the bombers' 2720 all-out assault on a Harvester Dropship.

The origin of the squadron's nom de guerre is shrouded in some confusion. Modern Black Crow pilots and their supporters claim that the name refers to the squadron's



cleverness and penchant for vengeance (Earth crows, now found on over a dozen worlds, are capable of remembering and attacking offending Human faces for years). Historians say that the truth is somewhat less valorous. The squadron was originally known as "Branton's Braggarts," a humorous reference to the unit's overly-vocal pride over achieving the first perfect score in a HARD+ rated simulated bombing run under their first commanding officer, Captain Charlotte Branton. Fed up with the squadron's braggadocio, ground crews began painting black birds on their spacecraft to show their distaste for 214's 'constant cawing.' By the time Squadron 214 went into action, they were the Black Crows.

Today, 214 is an exclusively carrier-based squadron assigned two flights of Hornets, one flight of Gladius interceptors and an elite flight of Gladiator light bombers, though it is worth noting that one of the Hornet flights is currently inactive as its flight crews undergo transition training for the upcoming F8 Lightning space superiority fighter. The Black Crow's bomber flights have flown every single-engine bomber in the UEEN arsenal, from the original Typhoon dive bombers to today's craft, where 214's illustrious Bravo Flight are using the Anvil Gladiator to further solidify their hard-earned reputation as one of the best bomber units actively operating.

## Bravo Flight

The recent exploits of Bravo Flight in the Virgil Raid have become so well known that references to the Black Crows now almost exclusively refer to this distinguished bomber unit. The star of Squadron 214's service record from the very beginning of training, Bravo Flight has been the exclusive designation of the unit's elite bomber ships since the squadron's inception. Bravo's ground crews and flight engineers claim a spotless record, and only confirmed ace pilots and gunners are assigned to the unit.

Bravo garnered attention during the Vanduul push after 2681. Battling the encroaching horde from Orion to Tiber, their Gladiators pulled double duty as S&R craft up to the last minutes of the Tiber pullout. Since that time, the 'bloodthirsty birds' have found themselves forward-deployed to counter suspected Vanduul clan movements time and time again.

## The Raid

Dateline: Vega System, just off the heavily guarded Virgil jump point. On the morning of August 9, 2932, a detached UEEN Battle Group went to action stations. After a tense twelve hours with guns ready, the force issued an all-clear stand down. Aboard the UEEN Typhon, temporary home of the 214's Bravo Flight, word quickly spread: Virgil's aging Early Warning satellite network had relayed a distress signal from somewhere in the system. Admiral Bonds requested permission to jump his force to Virgil to investigate, but was ordered by High Command to abandon any investigation. Remote sensing had identified a 55% probable Vanduul clan in the system's environs, and Command was not to risk personnel or materials investigating a system that had not been inhabited in a century.

The mood aboard ship was stricken. Here was a military rescue beacon deep in the heart of the site of one of the Empire's bloodiest defeats. At best, they reasoned, command was letting a fellow pilot die, and at worst they were ignoring an opportunity to settle a very specific age-old score with the Vanduul. "We won't forget," flight leader Tam Thackston wrote in a delay-send message to his commanding officer as his crews universally agreed to break ranks and risk court martial to come to the aid of those in need.

Running with low-emission gear, the six Gladiators of Bravo Flight launched with full comm silence (and the



WARRIOR



suspected collusion of the Typhon's flight deck officer). Three retained their standard torpedo loadout, while three others were configured with autodocs and other search and rescue equipment. Passing by UEE radar stations and tracking buoys, they were prepared to meet with resistance, but were only met with encouragement and wishes of luck from their fellow starmen. The unit made a low-flash jump to Virgil, and once across, Bravo triangulated the signal and determined it to be coming from the surface of the innermost planet.

Thackston opted to use a larger amount of fuel and proceed in a roundabout manner rather than heading directly to the planet and risking giving away the location of the jump point to the Vanduul. Unfortunately, his caution proved costly: the extended flight plan ran Bravo directly into an enemy patrol. A battle broke out, with the Gladiators attempting to eliminate a quartet of Scythe and a command-and-communications ship before they could call for reinforcements. The fight was over quickly, but with heavy losses: Bravo 3 sustained a direct blade collision during the fracas, killing gunner Paul Ransom and leaving his ship dead in space. The surviving pilot conducted a difficult combat EVA and boarded the S&R equipped Bravo 5.

Once past the Vanduul, the surviving Gladiators approached the planet's equatorial zone, the apparent location of the now-silent beacon. The flight leader's ship touched down near the source while the remain-

ing ships provided a makeshift combat air patrol. There, the charred fuselage of a long-lost Wildcat deep space fighter was located in a clearing where its impact had knocked down several of Virgil's giant trees. Investigating the wreck, Thackston discovered a pair of Human skeletons, one in a tattered flight suit, both wearing Black Crow patches. This ship must have been lost decades earlier in one of Squadron 214's prior battles with the Vanduul. With some searching, the source of the signal was discovered: the Wildcat's black box recorder, apparently re-activated in a recent lightning strike.

Thackston hurriedly buried the remains, first removing the dog tags so they could be returned to Kilian, and took off to rejoin his flight, the Wildcat's flight recorder securely stowed aboard his Gladiator. Believing they had permanently shamed their squadron's honorable history, they returned home fully expecting to be drummed out of the service for their disloyalty, but upon arrival they discovered that public opinion had come down harshly against Navy command once news of the beacon had spread. With the sack of Virgil still a sore point in Human memory, the pilots of Bravo Flight were feted as incredible heroes for having helped put a small part of that dark day in history to rest, along with revealing the incredible fate of their fallen comrades: the Wildcat and her crew had bravely perished when they opted to stay behind and cover the desperate evacuation in Virgil's final hours. Together, they are just two more reasons that the Black Crows of Squadron 214 deserves to crow.



WILDCAT



# CINEMATICS & COMMERCIALS: THE TEAM

**JOHN G:** I LIKE THIS SCENE FROM THE MUSTANG COMMERCIAL BECAUSE IT SORT OF ENCAPSULATES (FOR ME ANYWAY) WHAT THIS GAME IS ALL ABOUT. A PERSON WITH A PASSION AND VISION, AND THE ATTITUDE TO DELIVER IT.

*From the very beginning, the cinematics that are being created for Star Citizen have played a very large role in demonstrating to people that this game, and this world, are amazing. The commercials, from the first, for the 300i, to the most recent, for the Mustang, have caused more collective jaw-dropping (and ship-buying) than the promotions for any other game. This month, we sat down with the people most directly responsible for creating these five-minute marvels.*

**JP:** First, for formality's sake, who are you, what's your job title (and with whom, if you're not a CIG employee), and how have

*you been involved in the various cinematics that have been created for CIG?*

**Dave Haddock:** Lead Writer, since the early days.

**Will Weissbaum:** Writer, since May 2014.

**Hannes Appell:** Director of Cinematics at CIG and Foundry 42. I staged the initial reveal trailer for Chris's crowdfunding campaign back in 2012. Also did the commercials for the 300i, the Hornet and the Constellation and I'm now on Squadron 42, doing cinematics for that.



**John Griffith:** I am the Commercial Director for CIG. I work under my company CNCPT along with my partner Chris Wolak. We were brought in to handle all of the commercial needs for CIG. Since June 2014.

**JP:** *What does CNCPT stand for?*

**John G:** it's "concept" without the vowels ... clever, huh?

**JP:** *umm ... sure. :)*

**Dave:** I think it's clever.

**John G:** I like you, David.

**Chris Wolak:** I'm a cinematic artist. I work with John Griffith under his company CNCPT. Also working here at CIG since June 2014.

**JP:** *Writing, I get. I deal with words a lot. What does a cinematic artist do?*

**Chris:** It's kind of a blanket term. I do all the CryEngine work on the commercials.

**JP:** *You make the ships fly and the people walk and talk?*

**Chris:** No, my job is mainly taking the animation of the ships flying, and putting them into CryEngine. And then making them look good with materials, lighting, and effects.

**John G:** Chris takes the pre-animated shots I create and publishes them into the engine. And then makes them look purty.

**Will:** Really, really, pretty.

**John Schimmel:** I'm head of linear content. That means I have had my fingers in a lot of the cinematics and video content in general, from commercials to Inside CIG pieces to the MoCap shoot now taking place in London.

**JP:** *What is linear content?*

**John S:** The non-gameplay stuff. Commercials, video, motion capture and performance capture ....

**JP:** *So is it fair to call you a producer? Or maybe a director?*

**John S:** More a producer, I guess.

**Will:** I always feel produced after talking to him.

**John S:** I come at this as a long time studio executive, right? So I do some producing but some executiving as well. I think Chris is more comfortable with the "head of" title.

**Pedro Macedo Camacho:** I started working as composer in the classical side back in the '90s. In 2006 I scored my first game and my first film.

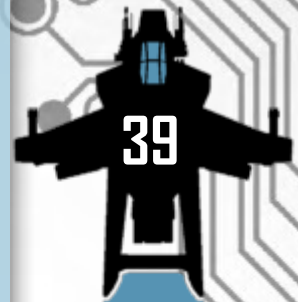
**JP:** *How did you get started on what you're doing, and how did you end up at CIG?*

**Pedro:** I got in touch with Chris in 2012. He enjoyed my work and decided to use me in the project.

**Hannes:** Long story: Studied animation & VFX at Filmakademie Baden-Württemberg. For my graduation film "MOTHERLAND" I used real-time renders to complement the live-action/CG and fell in love with the WYSIWYG capability of CryEngine. I started to work for Crytek in 2009 where I became Senior Cinematic Artist. Did lots of virtual production, MoCap direction and cine scene staging in-engine.

I saw a super-early prototype of what Chris wanted to do around April of 2012. As a guy who still has his *Wing Commander* and *Privateer* PC boxes in the attic (waiting for that man cave!) I was immediately excited. When I saw pictures of the Bengal carrier that Ryan Church was concepting at the time, I promised Chris I would do a trailer for him once that beast made it into engine. This is how the crowd-funding campaign reveal trailer came to be.

**John G:** I have been doing animation and previsualisation





for film for around 11 years. I worked at 20th Century Fox as their Previs Director for the last 7. I helped develop the use of Cryengine for previsualisation work and that organically led to doing finished cinematic work. A friend of mine (Chris Olivia) introduced us to CIG earlier this year.

**JP:** "Previs"?

**John G:** Previsualisation is a term that refers to creating animated storyboards in 3D to blueprint action sequences and VFX for feature films. It's a planning tool that film productions use to plan films. There are references on my site [www.cncptla.com](http://www.cncptla.com).

**John S:** I started in the film business by selling a screenplay, went on to do the studio exec/producing thing. I was Chris Roberts' president of production at Ascendant Pictures and he brought me on board here when it made sense, first as a story consultant and now in the linear content gig.

**JP:** Have y'all done anything we've heard of?

**Hannes:** Directed the intro for *Crysis 2* and did the story intro for *Crysis 3*. Did some work on *RYSE* too. Lots of trailers & Cinebox tech demos over the years. Other than that I did some *Monkey Island* CryEngine prototyping in 2009 that went viral (still working on that, lol).

**John G:** Chris and I both worked on *Dawn Of The Apes*, *Maze Runner*, *Wolverine*, *Fantastic Four*.

**JP:** So nothing really important?

**John G:** yea. :(

**Chris:** indie darlings.

**Will:** It was really nice of Chris R to give you guys a shot.

**Chris:** I came from from the CryEngine modding community. I started playing around with the editor when *Crysis 1* came

out in 2007. John G hired me work on previs with him at Fox in June 2012. I've been working with him since.

**Dave:** Worked in movies. Started interning at Chris' production company when I first moved to LA (met John S there too) and got to know them both while working on a movie called *Outlander*.

**Will:** I went to film school. First job in LA was working in TV commercials. Had always been a gamer, but never thought of working in games till I had an opportunity to work at the SCEA [Sony Entertainment] Santa Monica Studio. Fell in love with the possibilities that interactive storytelling allowed and have worked in games for 8 years. It has been really fun to be able to combine games and commercials because I still have a soft spot for them.

**JP:** I've been calling you the cinematics crew. What are the various sorts of projects that you've worked on in this context? Is this group involved in creating any of the material for *Star Citizen* or *Squadron 42*? (I'm not asking about any other tasks that you have that relate to the game, just the cinematics-type stuff.) Do you all always work on the same cinematic-type projects?

**John G:** For our part we are solely responsible for handling the commercials. We help out in other areas of the game from time to time, though. Everyone here is really good about helping each other out.

**Will:** This group as a whole has been more focused on the commercials and trailers.

**Hannes:** John G and Chris do a fantastic job with the commercials as their own little unit. We exchange knowledge and ideas, but we try to not let the commercial work interfere with the in-game cinematics. That is why I shifted from doing commercials to *Squadron 42* and in-game cinematics.



Currently I'm busy doing previs on various parts of *Squadron 42* did some P-Cap directing for that with Chris in London. I also do some occasional prototyping for cinematics-related new tech, like the conversation system.

**John S:** I'm not altogether sure — I think cinematics has a pretty broad definition in this context. Do scripts for the cinematic scenes in the game count? I think they do. I started off being much more involved in that than I am now, but I still try to give helicopter-view notes, try to help keep to the story Chris R wants. Commercials are part of the cinematic effort for sure. Mostly I help line produce there, getting the motion capture and voice recording and composing and sound design done. And then there is the MoCap/P-Cap stuff. I produced the first test shoot going on now. We have someone new coming in to line-produce that, so I'll step more into creative producing in the future.

**Dave:** Hannes would be the crossover point.

**JP:** *How so?*

**Dave:** We are doing a shoot for some MoCap pipeline tests for *S42* that he helped out on.

**JP:** *MoCap is motion capture. What is P-Cap?*

**John S:** Performance capture. It's when we add a head cam-

GALACTIC GEAR  
(350R)



era and capture facial performance as well as body motion.

**Hannes:** Games had been doing body and facial motions in separate stages pretty much until *Avatar* came along in 2009-2010. It is a quite recent tech trend to capture both body and facial performance in one go, but it is definitely better to keep actors' performance high. P-Cap requires more tech/crew on the side of the MoCap studio also.

**Pedro:** Back in early 2013 Chris decided to get Hannes to make a commercial for the 300i, using nothing but ingame graphics. A wild idea back then ... That commercial was written by Dave Haddock, directed by Chris Roberts, produced by Hannes Appell and scored by me. When Chris decided to ask me to score it, I was one week away from having my first son so I didn't had any second shot for revisions. With talent, a bit of luck and a genius mind controlling every detail (Chris), that commercial was extremely successful.

This enabled the *Star Citizen* dev team to grow a lot and make this game a lot bigger than previously anticipated — I





still remember being super happy about reaching 6 million USD to get the orchestral scoring possible! :)

Given the success it had, Chris decided to create more commercials and I believe this is when the cinematic team was born.

After scoring the Aurora commercial and Hornet commercial (the #1 *Star Citizen* video so far), with the same 300i team, John S came in as head of linear development.

With him I created the Freelancer commercial and the hugely popular Galactic Gear (M50) commercial.

**JP:** *What's the last commercial that y'all finished — the Mustang?*

**Will:** Yes.

**Hannes:** (For me it was the Constellation in August; that is when John G and Chris took over so I could concentrate on S42 cinematics.)

**JP:** *Step me through the process — how does a commercial get started, and so forth?*

**John G:** I defer to the schimmelman on this.

**Dave:** it starts with a glimmer in the eye of a baby.

**Chris:** When a man loves a spaceship very, very much ...

**Dave:** Haha

**Pedro:** Mustang was our latest team work. It was a very challenging commercial (poetic I may say?) but I think in the end, after some tears, we created something different but, in my opinion, very special.

**John S:** It starts with a decision from Marketing about which ship is ready to be sold next. Dave and Will come up with a concept for Chris to approve, then write a script. That gets handed off to either Hannes or John G, who go to work on

it. The studios come in for support — for MoCap, for some animation or rigging, sometimes for environment. And then we engage a composer, sometimes Pedro, sometimes a gentleman named Geoff Zanelli, and a sound designer/mixer. In the case of the Mustang commercial, Dave Haddock (I think) wrote the script, while John G and Chris W created the visuals from the ships and characters in production. We recorded the voice actor in Los Angeles and the MoCap in Austin and the music was done by Pedro in Portugal ...

**Dave:** Will did a first pass at the script. Then we talked to Chris and bounced it back and forth to its current state.

**Will:** When we started talking about what to do next for the commercial, the idea was floated of doing something that would push our character tech forward and mix it up from ships flying in space. Ben Lesnick had done a great write-up on Silas Koerner for Galactic Guide and Portfolio [**JP** July 2014, Issue 02-07] and we used that as an inspiration point.

**Dave:** The commercial is doing double-service, showcasing a ship and showcasing a performance.

**Pedro:** Both John Griffith and Hannes Appell are stupendous 3D magicians. The work they do with CryEngine and ingame graphics (making the ideas John S and Chris Roberts have come alive) really inspire me and the whole team.

**JP:** *How is what you're doing for CIG different (if it is) from what you've done before?*

**John G:** It is actually very much the same as the previsualisation we traditionally do, except we get to polish and finish our work and take it to a whole other level. It's really nice.

**Hannes:** I agree, that feeling of pushing it from zero to hero without handing it off to someone else to finish is really nice. For the in-game cinematics there will be the added challenge that we aim to have most of them running in real-



time. (Commercials also run in real-time, but you can afford to render a couple of times to weed out rendering glitches, and there is no added challenge of them happening in game levels full of scripting.)

**JP:** *I haven't seen the Mustang commercial yet. After this description, I'm gonna have to track it down and take a sneak peek.*

**Dave:** It's really great.

**John S:** Really great. By far the best animation we've produced.

**Pedro:** I don't think it's a commercial. It became a piece of art to me.

**Will:** That's like me with tootsie rolls.

**Hannes:** It's really cool that we try something new with each

one. The next one sounds like it will continue that legacy!

**JP:** *Which commercials have had motion capture?*

**Dave:** I believe there was motion capture for the Constellation.

**John S:** We did MoCap for the Constellation and for the Mustang as well.

**Hannes:** And before that, the 300i had MoCap done by Bryan Brewer in Austin.

**Will:** Isn't the Mustang the first spot to use a form of facial capture?


**JP:** *The character faces in previous commercials weren't facial capture?*

**Hannes:** The Constellation commercial used facial capture, but that was a very first test, not done by a professional

facility or anything. We had quite a few technical hurdles with that one, but it was good to test out tech, even when it was not ready for prime time.

**John G:** I hand-animated the M50 and Cutlass commercials.

**John S:** Actually, the Mustang commercial didn't use facial capture. It's sort of the miracle of it. We recorded the actor and ran a video camera in



**JOHN GRIFFITH:** I LIKE THIS ONE FROM THE CUTLASS BECAUSE I LOVE INJECTING THESE PIECES WITH CHARACTER, AND THIS GUY JUST LOOKS SO NASTY ESPECIALLY WHEN HE'S MAD.





the booth, but the footage was not useable. Cubic Motion did a whole elaborate process to get the facial animation right.

**John S:** It may be worth noting that these commercials have been enormously valuable test beds for our animation pipelines.

**Pedro:** What Chris Roberts and John S wanted to create with the Mustang commercial almost seemed like the story of *Star Citizen* itself — starting with a dream to do something that no one has ever done before. Capturing the building of a dream with piano and orchestra was, to me, the toughest challenge I have had so far.

**Will:** I love that all our commercials are in fiction. Not just showing off the game, but furthering the lore in a wonderful meta way.

**Hannes:** For *S42* and the PU we will create opportunities where the player will be able to watch a lot of the commercials (and other content) in-game. That will be fun.

**John G:** Being a game project instead of a film project allows us to draw upon some of the great assets created for the game as props and characters. It gives us a leg up and it's really not much different from our previs process with the big exception of getting to really polish and finalize our work.

**Pedro:** We are the first game to already have, in pre-alpha state, tracks performed by a full, live orchestra. And not just any orchestra, it was a huge orchestra!

**Dave:** It's on an incredibly larger scale than anything I've ever done before.

**JP:** *Even larger than the movies you've worked on? Outlander wasn't a small production.*

**Dave:** I meant as a writer. I had only really written (unproduced/unsold) movies in the past. Personally, this is such a massive endeavor combining screenplays, commercials, prose, technical writing, historical docs, item descriptions to architectural styles and it's in a discipline that I had only enjoyed as a consumer, so there's still a learning curve in understanding the language and artistry of interactive storytelling.

**John S:** Wow. Well, in some ways it's the same, working on stories, managing shoots, helping some with administration. But in other ways films are from Mars and games are from ... The storytelling is entirely different, the collaboration between the various teams — writers, design, character, ship, animation — is incredibly complex but also incredibly fertile, and very different from anything in film. Plus we have studios and partners all over the globe so the time zone issue is always a factor.

For me, scale is relative. I've worked on some huge films. But the scale of this enterprise and the scale of the groundbreaking aspects — and the scale of the coolness the game represents — is pretty intense.

**John G:** ... what John said ...

**Pedro:** In *Star Citizen* we are also creating groundbreaking methods for interactive/adaptative music using Wwise.

**Hannes:** I still remember being fascinated by LucasArts iMuse in *Monkey Island 2* and *Tie Fighter*. Can't wait, Pedro!

**Will:** I think these commercials, like a lot of our early lore, are really allowing the backers to begin to imagine what playing the game will be like. It is kind of nice how each of them has given a glimpse into a different way to play: Cutlass: Outlaws, M50: Racer, Constellation: Explorer, Freelancer: Hauler, etc



**JP:** *Some of you have touched on this already: What do you enjoy about helping to make these cinematics?*

**John G:** Directing. I have been graciously given a lot of creative control and trust on these commercials. We work from really great scripts written by Dave and Will. It is a lot of fun. And don't forget the absolutely breathtaking music that Pedro provides.

**Pedro:** I enjoy it because it is the result of a wonderful team-work. It makes me, and I think each of us, try to go higher than we ever did before.

**Will:** Being able to see something I've helped write come to life. A lot of the game scripts won't see the light of day for a while, so it is wonderful having these shorter pieces created.

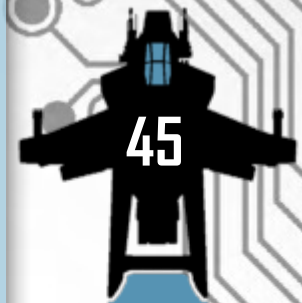
**Hannes:** Collaborating with amazing animators, artists and musicians, and the ability to create these mini stories inside a grander universe. I also enjoy the thrill of hiding easter

eggs here and there and the pressure you feel when the piece is about to be finished. The Hornet came in extra hot, if I remember correctly.

**John S:** The truth is, the entire enterprise is an amazing adventure and I feel lucky everytime I walk through the door. We are in an environment in which reaching for the stars is literally the mandate, which is pretty awesome. But I am a collaborator at heart — I started life as a musician playing in bands — and so for me the team is the greatest part of any of these cinematic projects. Chris Roberts has cast the company well, so our conversations about the work — and the process of getting the work done — is invariably enjoyable.

**Dave:** As Will said, it's always thrilling to see and hear these transform from the page, but I just enjoy watching artists work.

**Chris:** Being a space geek, I just love creating the space



BEHIND THE SCENES



scenery that serves as the backdrop for the action. The shattered moon in the M50 commercial and the asteroid field in the Cutlass commercial were a joy to create.

**Pedro:** We all have such high expectations of each other that we sometimes can speak with passion about what we believe it is the best choice — but in the end, with each new challenge we accomplish, we know we did it together.

**Will:** One of the greatest parts of my job is that my office is next to John G and Chris. It is amazing walking past their desks every day and seeing these cinematics emerge piece by piece.

**JP:** *What are the worst aspects about making these cinematics?*

**Dave:** The pit fights with Will.

**Will:** Sitting next to John G and Chris.

**Pedro:** Having to deal with a Portuguese dude ... in a UK time zone!

**John G:** I am not going to complain. My worst day is better than a lot of people's best days on their jobs.

I am incredibly blessed and lucky to get to do the kind of work I do.

**Will:** You don't like our pit fights, Dave?

**John G:** Sitting next to Will is a lot of fun.

**Chris:** Art is never finished, it is only taken away. Unfortunately we can't work on a commercial forever.

**Hannes:** There are no worst parts. Sometimes you regret having to paint a ship (e.g., the 300i) as weaker against the one that is the hero in the commercial (the Hornet, in this case), and you know owners will go bananas over how their baby got treated, but hey! That is competitive advertising

(aka trolling).

**John S:** Sometimes the deadlines come upon us too quickly. Sometimes last-minute issues make crossing the finish line tough. But as John G said, there's really not much to complain about.

**John G:** Is Schimmel a lunatic?... no, a GENIUS!

**John S:** I'm the invisible guy in that third chair.

**JP:** *What have you learned so far that you can apply to future commercials and the game itself?*

**Dave:** If I can get past round 4 of the pit fight, Will tires himself out.

**Will:** I have a tight short game.

**John G:** Work faster.

**John G:** Each project is a learning experience. We are definitely getting more efficient at what we do.

**John S:** We've learned a lot about how to make the animation work. We've learned some ways to be more efficient. We've learned there is a rhythm to these things. But mostly I feel like we should just keep raising the bar ...

**Pedro:** I agree, I have nothing to complain about, I don't even feel I am working when I work with this team — they are all genius minds that do wonderful work!

**John G:** I love you guys ... especially you, Pedro.

**JP:** *What is the most interesting or funniest experience you've had while working on the cinematics?*

**John S:** When the eyeballs detached from the face in the Freelancer commercial.

**JP:** *I'm guessing the eyeballs weren't intended to detach from the face?*





**John S:** Well, no. They were intended to remain as eyeballs. It was sort of a good thing, in a way, because it showed us some tech issues we needed to address.

**Hannes:** Some issues can indeed be funny on top of being annoying. During the Hornet commercial, the player model had a habit of duplicating and then floating through space. During rendering one of these player clones would drift into camera to say hi with alarming regularity.

**John G:** For me, it's getting out of the office and working with motion capture and doing stage work. It is always fun to collaborate with other artists.

**Chris:** Creeping out the writers with disturbing imagery of disembodied heads talking.

**Dave:** Yes, that.

**Pedro:** The M50 / Galactic Gear commercial!

**Will:** My favorite thing is the "Sig Low" voice-over line from the Freelancer commercial. I could listen to that man say "Sig Low" all day.

**John G:** I would have to say the Mustang spot has been my favorite.

**Dave:** I had a lot of fun being ridiculously tired for the M50 VO recording.

**Pedro:** Yeah, John, the Mustang spot is a work of art!

**John G:** I am really proud of it.

**JP:** *Sadly, several of you have to run now, so we're done. Thanks a lot for all your time. I think readers are gonna enjoy it.*







# VIRGIL SYSTEM



The Virgil System was discovered entirely by chance in 2412. Famed astrophotographer Alaine Viktus was conducting a deep field survey roughly half an astronomical unit past the Vega system's cometary cloud. Viktus had powered down his survey runabout's thrusters and 'gone dark' to capture a maximum scan resolution. Upon attempting to activate his highly specialized stellar camera, he found it unable to star-lock because of an imperceptible level of spacecraft movement. Further investigation revealed the movement, mere microns from what his IFCS had calculated as standstill, was the result of extreme proximity — within 400 meters — of an uncharted jump point.

General amazement over Viktus' incredible luck quickly turned to an unequalled passion for expanded space exploration. The K-type main sequence star, quickly named Virgil by Earth spin doctors seeking to instill a sense of regal manifest destiny, was located in a region of space previously thought naturally inaccessible. What's more, its first planet was the single strongest candidate for terraformation yet discovered. Within ten years, Virgil was a verdant, thriving Human colony and inside of a century it was considered a surefire choice for formal UPE representation. The rapid colonization of Virgil led to Project: Far Star, the government-funded march 'outward' into the area of space now unlocked with Virgil's discovery.



Then, as rapidly as it began, the situation reversed. The discovery of the Vanduul in 2681 and the onslaught of their increasingly devastating raids brought Far Star and westward galactic expansion to a full stop. Humanity was shocked by the complete fall (and subsequent UEE abandonment) of Orion. Virgil changed into a military outpost overnight, with entire fleets now operating out of the formerly quiet colony. A single jump away from Tiber, where the Empire now hoped to hold the line, Virgil's fields were adapted to support a massive military buildup.

When Tiber fell, the Navy collapsed in full retreat and was unable to organize a secondary line as the Vanduul pushed relentlessly forward. The Vanduul showed no mercy to the system, slaughtering military personnel and civilians wholesale. Virgil I's idyllic biosphere was reduced to permanent clouds of ash, and some two hundred years of Human expansion were erased from history. Several transports escaped the carnage, protected by interceptors from the famed Squadron 214. Given the chance to escape the system with the transports they had saved, every member of the squadron chose to return to Virgil I and attempt rescue of more civilians.

In the ensuing years, Virgil had been visited by a number of Reconnaissance in Force missions until a network of surveillance buoys were covertly established by the Empire in 2790 to provide early warning of Vanduul clans entering the system.

**TRAVEL WARNING** The Virgil system is on the United Empire of Earth's official no-fly list. Visiting or transiting the system is illegal and anyone recorded doing so can face significant fines or jail time.

## VIRGIL I

There is a famous photograph taken on Virgil I. It shows the charred remnants of an Imperial customs house, wrecked white pillars framing a smoking, coal-black sky. A cracked signboard lies to the right of the image, its original proclamation of "EXPORTS" having had the word DEATH crudely scrawled under it. This image, along with various artists' interpretations thereof, has appeared on UEE recruiting posters decrying the Vanduul threat for over a century.

Years earlier, the first planet in the Virgil system was the United Planets of Earth's poster child for terraformation. If ever a world seemed custom-designed to support any easy transition to Human habitation, it was Virgil. The planet's soil was found to contain super nutrients that would allow imported Human vegetation to thrive quickly. In a matter of years, the planet's atmosphere had been equalized to Earth standards. Initially covered in swaths of lush tropical forest and seemingly endless plains, Virgil I quickly became both a high-productive ag-world and an exotic tourist destination. With the military buildup, the tenor of Virgil I's society changed but the natural beauty remained. Antimatter stockpiles and spacecraft repair facilities stood naturally beside the massive trees that largely encircled the planet's tropical and temperate regions.

Apparently viewing the target as a reward for their hard-fought victory in the Tiber system, the Vanduul ransacked Virgil I with a ferocity previously unseen. Despite the lack of fortifications (few of the Empire's units had dug in, expecting the fleet at Tiber would be enough to keep the enemy away), the Vanduul pulverized the planet with catastrophic bombing raids that seemed intended more to establish their cruelty than to accomplish any particular strategic goal. Hundreds of thousands of Humans died in the attack, either killed in the bombing raids or churned apart by Harvesters launched onto the still-populated planet.





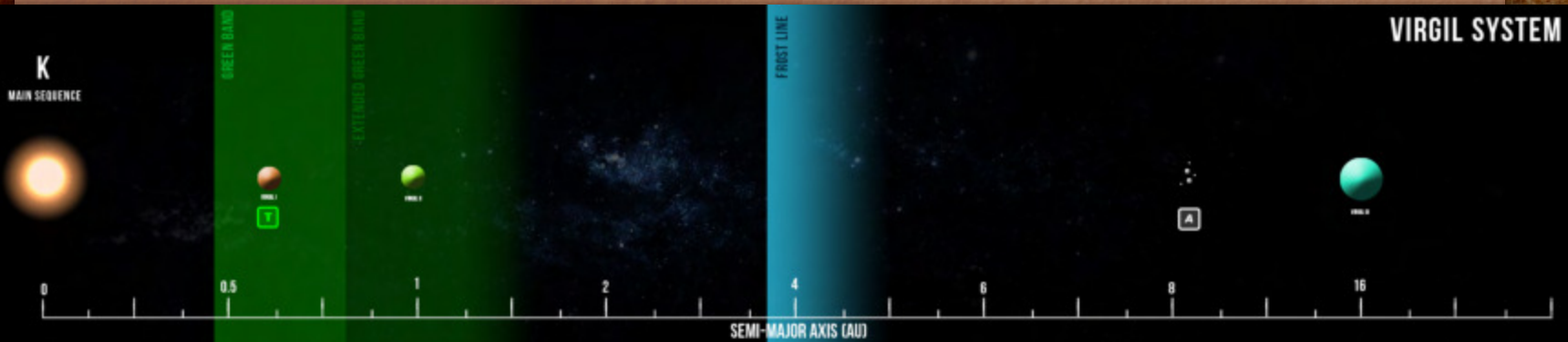
Today, Virgil is visited rarely. The atmosphere is poisonous, with enough ash kicked up in the bombings to leave the world in a state of permanent nuclear winter. Published reports of UEE spy expeditions have detailed the state of the planet: a harvested wasteland occasionally interspersed with the haunted skeletons of the titanic trees that once inspired awe and wonder. Those who have observed this unique hellscape are forced to ask themselves whether the Vanduul intentionally left them as reminders of the planet's past.

## VIRGIL II & III

The Virgil System contains two other worlds and an asteroid field, none of which has been significantly ex-

ploited. **Virgil II** is an uninhabitable smog planet with few worthwhile natural resources. Like Virgil I today, Virgil II's surface is completely blocked by the natural layer of smog. Military reports have noted that the Vanduul pay Virgil II an especially wide berth, although the reasoning for this is unknown.

A moderate resolution asteroid field separates the second and third planet. Deposits of iron and titanium have been identified here, but never in sufficient quantities to establish mining operations during the system's Human habitation. The final planet in the system, Virgil III, is an ice giant. Largely unremarkable, Virgil III is a churning ball of water, ammonia and methane (and would have ultimately been used as a source of all three should the system have been further developed).



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# The Knowledge of Good and Evil

by Allen Russell

## Part 4

“Forgive me.” I feel cold though I know it’s not the library’s air. My finger just about to press the button on Dirk’s small, black, featureless cube. My muttered prayer ringing in my own ears. Someone else responds as I feel a hand close around my wrist.

“Forgive you for what?”

I wheel around and come to face the speaker as I pull hard to wrench my wrist free, falling to the ground. Mom Super is standing over me like a dark tower.

“For what are you asking forgiveness, young one? What is that device?” Her words are soft but with an edge of steel.

No. Anyone but her. Let me be delayed or shamed or caught, but not by her. Not Mom Super. I can’t . . .

I break down at the realization that I will either have to lie to

Mom Super just so I can betray her more, or admit I’ve already lied and am about to try and destroy the Holy Vault for Dirk.

“Young one, what’s wrong?” Mom Super starts to come to my aid.

“No!” I shout it. I can barely speak through my sobs. “No, don’t help me. You can’t. Because of what Dirk . . .”

“Dirk? The man you used to work for in the Bazaar? Is that who’s been attacking you? What did he do?”

I don’t know what else to do. “He didn’t . . . he hasn’t yet. But . . . if I don’t wipe out the Vault he’s going to kill the children.” I’m panting for breath.

I point at the dormant cube. “If I don’t use that thing to fry the Vault, Dirk’s going to kill them all.”

She looks at me with a rage I’ve never seen, but eventually breaks the stare that has me paralyzed. She steps to



the desk and picks up the cube and studies it. I've never felt this dirty or guilty in my life. The nights I slept in trash were cleaner than this.

"You will explain this, young one. Now."

"I . . . I." Gulping down a breath, I closed my eyes and clenched my fist. I already lied to her. I can't do it again.

"I had an old debt to Dirk. He found me. Said I was finally going to pay him back. Knew I was with the Sisters. Threatened to hurt the school children if I didn't do what he said. I brought it," I point to the cube, "back with me."

I look for some sign of sympathy but I don't see any. Shoulder to me, she is only looking at the thing in her hands.

"I didn't do it! I studied it, the cube, and I found out what it did. I couldn't do that. I couldn't let it attack the Vault. So I took it back and told him I wouldn't do it. And then he stunned me and the others, and now he's kidnapped the children, and now if I don't do it he's going to kill them!"

I haven't felt like it, but by the end I am almost yelling, my helplessness finally coming out as tired anger.

The silence is hot and heavy. My ears thunder with each heartbeat.

"You lied to us about what was happening to you and it has put the children we befriended in mortal danger. If you had told us earlier we could have had the authorities looking into the matter all the sooner. Now, their efforts may already be too late. And this?" She thrust the cube towards me, "Did you know what this would do then, if you turned it on? Did you lie to me about what you knew?"

"Yes."

"Then you have attacked us all. There is nothing I can do for you." Mom Super pulls out her MobiGlas and enters some commands.

I stay where I fell, unable to motivate myself to move. Soon

four Sisters arrive and pick me up. Mom Super turns her back without another look at me. The Sisters escort me out of the library, but I notice they are not leading me back to the rooms.

We get to the door that leads out into the world and another Sister, the Returned, meets us with a large bag. Her hood is up on her habit. I suddenly realize all of them have their hoods up. The way the Sister do around outsiders.

"Oh god, no!" I say it out loud when I only mean to think it.

She thrusts the bag into my arms.

I don't have the energy for more tears.

"You must go, now."

The massive door opens to the first hints of light across the sky. The other Sisters back away from me.

I turn to go, not wanting to. Each step feeling like a new punishment.

As I step across the doorway, a sudden memory flashes across my mind of the abused and beaten child being held by Dirk. Then my mind conjures worse of what might happen to them now. Does Mom Super think that the Blues care about a bunch of street rats going missing? They'll call every shelter in the city but they won't step one foot onto the dirty streets of Bazaar to actually find them.

My back stiffens and I turn around about to say something.

The Sisters have left and only the closing door remains where my former life among them had been.

No good watching a door close when I have to find the kids. I don't even know how long I have. Dirk might not be patient enough to wait a week to do something to them. If he hasn't already, just to make his life easier. I pull my MobiGlas from my bag and ignore the pang of guilt remembering where it came from and why. I'm no good to the kids if I'm not strong enough to take care of myself.



CHRONICLES



Just standing there, the weight from the bag is starting to drag on me and I remember I haven't slept in . . . I don't know how long.

But it's time to hunt Dirk and get my kids back.

I have to get back on the street. I've been using a lot of old information, and what I know about Dirk doesn't match what's been happening. Attacking the Sisters makes no sense for a Bazaar Boss. And since when does a Boss kidnap kids and make death threats?

His old shop is a noodle stand now. I'd checked into that when I'd first started teaching school with the Sisters. Barely anyone remembered that it had been a tech shop at all.

I feel two steps behind. I've been playing this to Dirk's tune the whole way and it's only gotten me into worse trouble. I was and still am a street rat and I can use that. The streets are hard and you don't get ahead without making some enemies. If I can nose out Dirk's reputation, I might get a better idea where he's operating from. That's my top priority. Find the kids.

A plan starts coming together in my head. Dirk is like me. He came from the street. No matter how far he's gone up in the world, he probably has loose ends around Bazaar, and I if I can find them they might just lead me to where he's holding the kids.

"I'm coming. Hold on."

\* \* \*

I'm on the rail at first light, headed towards Bazaar Street. I get off two stops early and as I walk I see some street children, but most bolt when they notice my looking at them. They seem used to being chased off, since they are close to places the Blues and shop owners actually care about. I spend a few hours avoiding main drags and looking down alleys for the right kid to approach.

I finally pick out an older kid, maybe thirteen or so, loitering at the entrance of an alley like she has a purpose to be there. She has a tool pouch too, bingo. I walk up to her. I'm far enough away from Bazaar still that I hope she won't recognize me if she ever came to school. Street kids all try to look the same and they tend to do a good enough job. The kid sees me coming and sets her feet, ready to talk or run.

"Eh rat. Need lock some info. Got a name, need a place."

"Ha. Creds talk Lady. Null comm free. Creds up front."

The kid points to the ledge on the wall next to her. Her slang is different than I'm used to, almost Bazaar, but I catch the meaning well enough. I've got to pay her up front and place it out in the clear for others to see if I want information. Making sure I'm not a Blue and making me a target if I flash too much money. Smart move. I don't have much money, just one ten credit. I take it out and put it on the ledge. The kid eyes me and then snatches the chit.

"Wha' handle got tha' need indexed, Up?"

"Boss Dirk." The kid does a good song and dance. Even stroking her chin as she 'thinks.'

"Yeah . . . Oldie name tha'. Wrong eve'. Dirk ain' null Boss. Dirk's a Big. Been 'round long time. Tech stuff most . . ."

Dirk as a Big Boss? That means lots of credits and a crew of people working for him. There were only two Bigs in all of Bazaar when I was a rat. Did Dirk off one and take his place, or stake his own territory? Too complicated, I just need the basics right now.

"I need a place, got business with him. Hard kind."

"Res' 's fuzz, Up. Hard ta scanner."

The kid points to the ledge again. I already overpaid and she knows it.

"Listen, you give me where and you'll get fifty more cred when I'm done with Dirk. Deal?"



CHRONICLES



This time she actually does think about it for awhile. Even if she has a boss that takes a cut, this would make her week. Maybe her month.

“Yeah . . . Some got say he got place at tha towers. Some got say a place down in Black Street. Lock is tha’ him got both. Tower stuff is legit front for wha’ he got at Black. Chop an’ Break shop makin’ parts out a black salvage. Gang stuff maybe.”

I know the place by name and the fear that was put in me as a street rat. No one goes to Black Street. I pull up the map on my MobiGlass. “Where in Black Street?”

“Dun know Lady, got some fuzz ’bout . . .”

Dodging again to try and get more cred. I’ve already promised what I don’t have. I can’t shake this with another empty bribe. I need to offer her something else. Her tool belt is welder style, but without a torch in the holster. She has some tech tools, but most are heavier, like for vehicle or ship work. She’s old enough she might be able to get work at the welding depot at the commercial spaceport. Working there gets you certifications. Certs means fees and a steady job. They take walk-ins and train them up, but don’t advertise it. That had been my backup plan for a few years now. Maybe it’ll be enough.

“Lock tha’ you got ship tools. Wha’ some rat doin’ with them? Got think tha’ ships is can get you out from here? How you going to get work on ships? I know some welders that work ships. Got ta be good at welding. You torch some?”

The sudden shift in conversation puts the kid on her heels. She looks away, trying to come up with one answer to all of my question.

“I torch some! Had ta trade ta meds when ’m got sick las’ freez.” The anger in her voice is a thin disguise for pain. Having to trade a prize possession for medicine. That depression didn’t kill her afterwards says a lot.

“Trade you straight info for info. Spaceport always needs welders. They’ll train you and get you basic certs. You use their gear and get paid daily. No lie. I plan on doing it but got business with Dirk first. You got your info now. So, you for info for me or not?”

That’s my last chip in a game I’m losing. I probably won’t get a second shot with someone else without more credits to start things off. The kid looks at me hard for awhile. Trying to weigh the worth of what I told her, whether it’s a lie.

“Rats an’ works know ’bout Big Dirk. Put out ’cast ta whole local ta work for him. Dirk double scans ’em for Gov or Blues an’ take ’em ta eight hundred wes’ sixteen thousand south.”

She taps my map to set the point.

“Got info out a rat tha’ run. Place got hangars ’round an’ one tower some. Only place like i’ ’round. Lot some folk head tha’ way. Null come back. Some ships come an’ get chopped. Some come an’ go. Rat tha’ ran say ’em work dead hard an’ then got sold ta slavers.”

The information almost sounds first hand. Maybe this kid could help me.

“You the rat that got out? Might need a guide around the place.”

No answer for that and the kid looks like she wants to bolt now.

“’m null go there. Craz that. Go at i’ from tha wes’ an you’ll get pas’ tha cams easy. Tha’s all ’m got tell. Ain’ eve’ glint zap on ya. You craz Up goin’ there. Ain’ none Up got business there.”

The kid give me one last look and walks away down the alley to places I shouldn’t follow. It’s a bad idea to push someone that just did you a favor on the street. My old street habits are starting to come back more as I check my surroundings and catch at least one person’s eyes lingering on me longer than they should have. I take in the



CHRONICLES



rest of the passing crowd and don't see anything that looks like a setup. I'm feeling paranoid. If Dirk really is a Big he could have people anywhere.

I get chills thinking that, and the kid's comment about not having a weapon repeats in my head. I put up my hood and check that the map saved the location of Dirk's chop shop. I make sure to avoid the area near the lingering eyes as I leave and don't look back. I've got a lead, even if it's a trap. I'm still the only hope my kids have.

I only hope I'm not too late.

\* \* \*

The place I'm watching has to be Dirk's. It fits the description and it's in the most dangerous area of Bazaar, where even rats never go. Blues don't come here, not like they care about Bazaar or rats. I saw three bodies on the ground on the way here. No way to check if they're alive or dead without the chance of getting stabbed for interrupting someone's high. My perch in the abandoned organics storehouse across from the compound is cold and the smell makes the sandwich I stole taste terrible. I only manage to force down a few bites, and my stomach is rebelling against even those.

From here I've been able to pick up some transmissions from the four-story office tower and the hangar's fire suppression and alarm systems. My directional antenna found a dead spot in the office building, though. Second floor, northwest corner. Everywhere else has at least some sort of signal coming out. I even got the model number and command access of the robot vacuum next to it, but that area is dead. Like someone's trying to hide something there. It's my best shot.

While I'm planning out my approach I see armed people going between the hangars and the office. They've got about twice as many much-worse-off-looking adults surrounded. I see one of the group being herded turn and make a run

for the fence. He doesn't make it ten steps before a shot catches him in the back.

He falls to the ground, spun by the force of the shot hitting him. I'm thankful I can't hear the sounds he makes thrashing on the ground. At least he's still alive, I think blackly. The guards pick the runner up by the arms and drag him back to the hangar they had come from. It doesn't look like they're taking him to a medic. Dirk's thugs mean business.

After watching all that I decide to make some modifications to my recently acquired stunner to give it more kick. I had lifted the cheap stun pistol from a rich Up kid I saw taking vid of Bazaar folks like it's some sort of zoo here. It might fry the first time I use it, but I'll have to take that risk.

It's only taken me a few hours to get here, set up, and find all this out. I put in a call to Mom Super but she didn't answer. I don't blame her. The Sisters have locked me out of the systems at the convent, but I had a direct tunnel to my education program that I never turned off. Like a private connection. It only lets me get to that room's equipment, but it's a way for me to get a message into the convent where someone might see it.

I've turned up the volume on the speakers and recorded a message. That message includes the video of what I saw earlier and explains what I'm doing so that someone will know even if I don't get out. Now I'm just waiting here in this stink, second-guessing myself.

\* \* \*

The sun has started to go down finally and my nerves are starting to buzz again. I've got thirty minutes before the next guard patrol will check this side of the grounds. If the kid I got this information from decided to sell me out, I'll know soon enough. I double check my connection to my jury-rigged life-line and start towards the fence. At the fence I check it for a charge or alarms and don't find any. My snips make quick work of the wire and I slip through.



CHRONICLES



A quick optic and radio scan shows cameras in the area, but none I can't dodge. Thank god for small miracles. There's still about fifteen meters of open pavement between the hangar I'm using for cover and the door to the service stairwell I picked out. I peek around the corner of the hanger and see that the main door is closed. I take a deep breath and start towards the office building.

About halfway there I hear the sound of ship engines and look up. Landing lights trace the ground a little ways away. I dash to the door and watch the ships appear and then travel out of sight from where I am. The hangar I had come from opens and a truck full of armed people drives out and off in the same direction. My heart is pounding and I know I didn't run hard. I've got to pull it together. I turn my attention to the door.

A standard lock that's not networked. No risk of external hack like that. Too bad for them, I'm right here. I pop the front panel off and start working. I almost have the bypass ready when I notice the inconspicuous block with two wires in it. Explosives.

I break out into a sweat as I realize how close I am to setting it off with what I'm about to do. How could I have been so stupid? This is craz. A bomb in a door? I was about to actually blow this and the kids would still be in danger. How can I do this if I can't even get through the first door?

My hands are frozen as I look at what's in front of me. It takes everything I have not to turn and run. My mind starts to latch on to things about the door to replace my run-away emotions. This is a prefab, like the ones on rail cars. Doors like this are cheap but not cheaply made. They cut corners on features, not substance. Like only having one power source.

That's it. If I can cut the power to the lock, it will come free just like on a rail car. Hopefully no power will also mean no boom. It takes me just a second to find the thick connec-

tor that is the power plug and grab a hold. I take a deep breath and hold it, then I pull hard. I hear a hollow pop and the status lights inside the door panel all fade out. No boom and I'm still here. I let out the breath I'm holding long and slow. I have to keep moving.

After a few more seconds of frantic work in the dark I've got it rigged to stay open for when I come back. I hear the sounds of the truck coming just before I slip into the dim stairwell. About half the lights are missing and the unpainted walls show water spots and neglect. Not a camera in sight.

The second floor door is high tech but still not networked. The indicator shows locked. The access panel is on the other side. I rack my brain for something to get past it. After a few painful minutes of nothing I lean against it in despair. It moves. The latch must not have been caught.

I can't believe it. I open it just enough to roll a camera sphere out as I pull up the feed on my MobiGlas.

The picture shows a bright white hallway with an elevator at one end and only a few other doors. I see one camera but it is pointed at the elevator. Two big men with pistols on their hips come out from the farthest room and get in the elevator. I freeze even though they can't see me. The indicator shows it going down. I say a silent prayer hoping they are going out to meet the new arrivals. I find the door that looks like it should lead to where I'm going. I wait a few seconds more, and then walk into the hall and head for my target.

It has an old manual handle and is unlocked. My heart skips a beat at the thought of a trap. I take the stun pistol from its holster and open the door.

I look around but find myself alone in a big room. I close the door quickly and quietly, finding myself surrounded by computer panels and the lights of monitors. My MobiGlas beeps. I've lost connection to the outside. My eyes take a moment to adjust to dim lighting once more, as I put the stunner away.



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I head to the station that looks most important. It's a system monitoring terminal that has stats on dozens of sub-systems, all of them seemingly run from this room. I sit down and dig in. The setup is incredible. Star charts, financial information, shipping schedules, even payroll information for dozens of companies. All of them must be fake and controlled from here. This is how Dirk is laundering his salvage. The kid had said one side of Dirk's operation is legit. Not for long. There is another set of information here that's being kept separate. Ship manifests with destinations in Banu space. Pictures of people chained together and prices per shipment labeled only as 'cargo.' I skim through them quickly but I don't see any of my children in the pictures. I start to copy as much as I can to my MobiGlas's storage. This is all good, but it's not why I'm here.

After some digging I find access to the cameras and pull up all the local feeds.

I get one of each floor's elevator door, the main entrance, the front gate, a small room with a single chair in the middle, and a few showing parts of the fence. The last feed I check is an entirely black picture. It seems out of place in such a spartan set of things to record. I check it again. It's a live feed. Then I see something. Black moving in the black. Something small. Someone.

My heart jumps. That has to be them. The label on the feed is Hangar 4 Storage. I'd seen that each hangar has a number painted on the side and know that 4 is on the north side of the building. It's away from all the action outside right now, but the only way in from the outside is a huge cargo door. I pull up the controls for the door and try to open the cargo door remotely. As I do, I see a red warning flag pop up and the system locks. I must have triggered something!

I need to get out of this room.

They may already know I'm here, and if they don't they will soon. I jog out the door and make a mental note as my MobiGlas beeps its reconnection to the network.

I head around the side of the building to the north and get within sight of the number 4 hangar. Lights are flashing on each of the buildings and a siren goes off. I hear shouts behind me and the sound of ship engines revving to launch prep. I head straight to the hangar door's access panel. This one is standard, like the one to the stairwell, but this time no explosives. I get it to open after just a few tries and I scramble underneath and into the safety lighting.

A door just inside has 'Storage' on it stenciled in white. I run to it. It's another manual door but it's been chained shut.

My wire cutters can't get through something this thick. I didn't bring a torch. A chain? That's stopping me? I got past explosives and around guards and into computers and now I can't get past a chain? I kick the lock in frustration.

Flakes of rust float from the chain to the floor.

The rundown hangar has rusting bits and pieces all around. On the ground I see a pipe about two meters long. Jackpot!

I grab the pipe and examine the chain. It's got some links that have been repaired before. I remember the materials book I studied. The chain is more likely to break than the pipe because of the welded links. I struggle a bit to wedge it between the door and chain. Once it's securely set, I put my whole weight into pulling. The pole starts to bend but I keep the pressure on.

I hear a pop. Then a clang and the pipe goes slack, almost tumbling me to the floor. At the same time the chain and lock fall to the floor loudly. I recover, grabbing the door handle and pulling.

Light from the hangar lights flows into the small room as seven sets of eyes all stare back at me. The smell of human waste hits me like a wall. One child is lying on the floor. All the others are standing, backs against the wall. I can see the bruises. The ripped clothes. The gauntness. The fear. But they are still alive. Thank god, they are still alive.



CHRONICLES



One speaks in a whisper, "Sister?"

I almost say yes, but Mom Super's betrayed face flashes in my mind.

"I'm here to get you out." I hold out my hand to encourage them. "We have to go before the guards come."

That seems to get through to them. One, then two more start to come out of the filthy prison they'd been kept in.

Another one is standing at the back of the room next to the child who hasn't moved from the floor.

"em can' null walk none." The standing one says, looking at his companion on the floor. I rush in and scoop up the child in one hand, trying not to gag on the smell.

"Out, everyone, and then through the door, then left keep going till the fence."

Seeing me take their weakest as a burden sets the rest of them in motion, but as I come out of the filthy closet I see a pair of trucks loaded with vicious looking people heading straight for us.

All the children have stopped with me just inside the door. They're looking at me. I can feel the one I'm holding barely breathing.

I will not let them take you.

I slam my fist into the door release and the door comes rattling down.

I pull the stunner from its holster, aim at the door's control panel and pull the trigger. Nothing. I pull it again. Nothing.

"Got a hold tha trig down ta shot." One of the children said it so softly I almost didn't hear it. It was the one in my arm.

I do as she tells me and hold down the trigger. Seconds tick by and I hear the trucks stopping. The door is starting to move again. Suddenly my stunner fires and fries the

controls. Someone on the other side doesn't like that and points a weapon through the three centimeter opening and starts to fire.

The children duck behind what larger scrap pieces are around. Someone shouts and the shooting stops. The alarm sirens are still wailing but I can hear more commotion on the other side of the door.

"Rat! 'm know you there!" It's Dirk. "Give up, rat! You null comin' out a there 'less 'm let you out!"

The children start moving to better cover. If there is one thing a street kid knows, it's how to find a place to hide. I look down at the one in my arms, passed out and filthy. Helpless.

"I'm not going to let them take you." I say softly. Then I turn my face to the door and let out all the rage and anger I can call on. "You're not my boss any more, Dirk. You're nothing to me now. You're bigger than us, and you've got guns, so you think you can do whatever you want. And maybe you can, but I'm not gonna make it easy. I'm gonna fight for these kids. I'm stronger and smarter than you think, Dirk. All us rats are."

A shot rings out and I duck back behind the beam I've crouched next to. The bullet punched a hole in the door. Someone sticks a hook through the hole and I hear an engine rev outside. The whole door starts to creak and strain.

Another shot, hole and hook. A second truck revs up and I start to see the panels of the door flexing under the pull. I have to find a way out of here. I remember specs of old hangars sometimes having ventilation at the ceiling. My eyes shoot up, looking for some sign of that and I find it almost immediately.

"You all have to climb. Get into the vents. It's a way out. Come on."



CHRONICLES



These children have been through hell and still they amaze me as they start to climb, helping each other. I nearly cry as they break every rule of the street by doing that. The first of them gets to the opening. One after the other they disappear into the closest thing to safety I can get them to. It's little comfort but a better chance than they had locked up.

The last one through turns around to me, "Get heading, Sister. Got get out."

I'm still holding the child in my arms and I realize I can't climb and take her with me.

"Go, I can't make it, I'm too big. I have to stay and take care of them."

I get an intense look from more than one set of eyes.

"Go!"

The walls start to shake, the eyes disappear from the vent and dust falls from every angle as one side of the massive front door comes crashing down. It's still obstructing the way but once the other side pulls free . . .

I move as far back among the scrap metal and tools as possible. I can barely see through the dust. There is yelling and flashlights shining into the newly opened gap. The trucks rev their engines again and then suddenly – they stop.

Gun and laser fire pop off and I can hear a new siren. No, sirens. They're growing louder and closer. The trucks rev up again but this time I can hear them heading away.

The new sirens get louder still and then I see flashing blue lights streak past. Then again. And Again. The Blues? How?

As the dust clears some vehicles pull to a stop outside the wrecked hangar door and several large men in plain clothes get out, guns drawn.

I shrink down, still keeping an eye on them, hoping they'll leave if they don't find anything.

Another vehicle stops and, like a ghost in a dream, I see Mom Super get out with a uniformed Blue next to her.

My lungs burn as I take in a dust-filled breath trying to shout to her, but I only cough. I start to get up and all eyes move to me and the child I'm carrying. I stumble out of from behind my hiding place. I have to get to Mom Super.

That thought drives me forward. I stumble and fall. One of the Blues catches me, taking the child gently from my hands and laying me down against a wall.

"Are you hurt?" the Blue asks, "are there others?"

"The vents," I cough, "in the vents."

The Blue shines a light to the vent opening where six children are looking back at her. I motion them down with my arm and after a long pause they start to climb out. More Blues are coming in and helping the children. Blues helping street rats. This time the tears do come.

Mom Super is here now, next to me.

"Are you all right? Are you injured?"

The concern in her eyes and voice shame me. I don't deserve her caring about me.

I take off my MobiGlas and hold it out to her. I clear my throat with a cough.

"I got as much information about Dirk's operation as I could. Financials, dummy corps, contacts. It's more than enough to shut him down if you give it to the Blues. This can keep the rest of the children safe." I'm so exhausted my arm starts to shake with the effort of holding up the weight of the MobiGlas.

Mom Super takes it and moves past my hand towards me. Her arms surround me in an embrace. I don't even know what to do. I let my hands fall to my side, feeling unworthy to hold the only Mother I've known.

"Well done, young one."



CHRONICLES



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A week later, the Blues have all the information I collected and I have my MobiGlas back. The children have been put in protective custody. Dirk's operations have been shut down, though he is nowhere to be found. The news is talking about fixing poverty in the city. Street School has started again, with kids coming from all over. This week they had over a hundred come. They call us the Big Sisters now, like the Sisters took Dirk's title. All of this and I'm getting ready to leave.

Mom Super has said that I can stay at the convent but I know I can't. I put the children we were trying to help in danger and I almost attacked the core of the Sisters' religion. I'm going to go to space and see all the things I've read about. I've always been just a guest here. I've never been one of them. I'm packing the last of my things when she comes to see me.

"Hello, young one," she says. My back's to the door.

"I'm not so young anymore," I answer. "I've grown a bit since you gave me that name."

Mom Super has a grin in her voice. "Gave you a name, did I? You refused to tell me what to call you. So I choose a description by which to call you. Hardly a name I think."

There's an unspoken ending to that sentence. I can feel it.

I turn around to see Mom Super standing in the doorway wearing her best habit. I guess it makes sense she would wear it on the day that I leave.

"We have something for you."

"We?" I ask.

"Come, young one. It is time I do what you claim I have done already."

There's no way to refuse Mom Super when she has a plan.

She motions with her hand and I follow her out of the living area, past the meal hall and into the library.

Where rows of Sisters stand waiting in front of the book cases.

Three stories full. Rows about twenty feet long of sisters in their ceremonial best. One sister stands in the middle of the assembly on the main floor with a camera. Mom Super walks to stand next to her. I'm frozen just inside the door trying not to panic.

Turning in place Mom Super looks at me and then up to the gathered Sisters. She speaks loudly, "One has come among us whom we now know. One has been our guest who has had no name. One among us is leaving, following the call of her heart. These are all the same person. She had meant to do us harm but only in the cause of saving others, which she then did of her own accord. It would be right to record her name and good deeds in the histories of our Hall, but it would not be right to do so without using her name. What say you?"

A figure from the left of me steps forward, "We propose that she be given a name."

Another figure steps forward, this time from my right. "We have come to consensus in this."

"Step forward," Mom Super says as she motions me toward her. I walk in a daze and stop when she signals.

Mom Super lays a hand on my shoulder. Her gaze drills into my eyes as she speaks. "This one has been found worthy and good among us. An inspiration to the study of knowledge and an example of courage. A changed person, remade by the force of her own will. What will you name her?"

A chorus replies as one.

"Luther, the reformer."

*The End*



CHRONICLES