JUMP POINT

IN THIS ISSUE

GREETINGS, CITIZENS!

It's been a busy month. **Jump Point**, of course. It's noteworthy that this month we set a record of sorts. Today's issue has over 350 images in it (I just had my computer count it for me), which is more than double the number we've had in any previous issue. About 340 of those are packed into an incredibly dense WIP article on the creation of the Sabre. Paul Jones and Gavin Rothery go into great detail as they collaborate on this new ship.
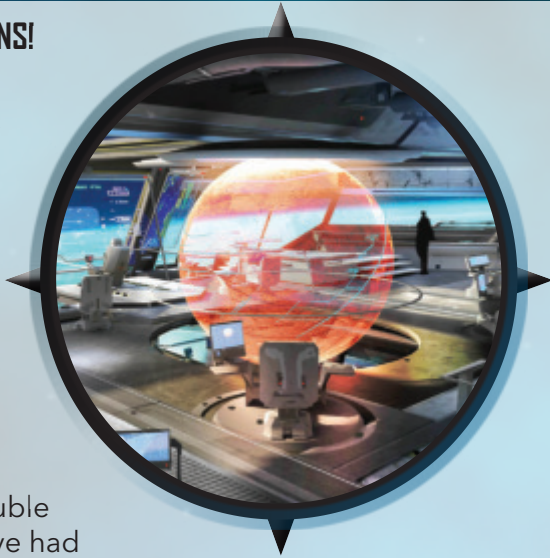
Also this month, we've been getting Volume 2 of **Jump Point** ready to be printed (not just downloaded). And I've had my own mountain to climb (for details, see the end of this editorial) and plenty of other excitement.

One high point of the month was getting together with some of the most enthusiastic Citizens, a couple of weeks ago here in Austin. It was really good to talk to y'all!

What do we have in addition to the Sabre WIP? Another slice of life in Portfolio, as we review the history of one of the most interesting units in the Empire. We go Behind the Scenes with the Customer Service and Game Support teams to discuss what they do and find out exactly what they think about supporting so many backers in the 'verse. Galactic Guide carries us to Chronos System and perhaps the most unusual world known to Humanity. And Chronicles continues the perils of Sorri as she pursues her second noteworthy run as a courier-at-large.

This month's term of the issue is **DOF**, which stands for depth of field: the distance between the nearest and farthest objects in a scene that appear acceptably sharp in an image. Paul and Gavin discussed it when deciding how much of the final beauty shot (on page 46) should be in focus.

Beauty shot might be another term, but it doesn't occur in this issue. Or I guess now it does. It's an image (either a drawn concept, a constructed shot, or an image taken from within the game) that is particularly sharp/attractive/impressive. (*Star Citizen* is especially noteworthy for the quality of its images taken from within the game. It's unusual for a game to be able to produce in-game beauty shots as *SC* does.) Neither Gavin nor Paul refer to them that way, but the final three images that Gavin creates are all beauty shots. I used them on the cover, and on the first and last pages of the WIP article.

Last and perhaps of least importance, I have been given permission to mention something that matters a lot to me; less so to the rest of the 'verse. I want to thank Chris, Sandi, Ben and all the others at CIG who have encouraged me and Ryan as we launched a Kickstarter campaign for my boardgame *Star Traders* (no relation to the Economy Game except that they both use neat little plastic rocket ships). If you want to know more, check out the link by March 27; I think you'd enjoy it: https://www.kickstarter.com/projects/239709734/star-traders/

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

David

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FROM THE BRIDGE

A Cloud Imperium Games production. A Star Citizen newsletter. Part of the Star Citizen/Squadron 42 universe.

2

Sabre

The Sabre, Aegis' newest fighter, was conceived and constructed with the Aegis pattern firmly in mind. Just as automobile manufacturers today develop "signature" looks for their entire product line, the Sabre was designed using elements already created for previous Aegis ships. This accomplishes two significant goals: it requires less time in development and it increases your immersion in *Star Citizen* by giving you familiar points of reference and recognition across a manufacturer's product line.

We'll start this month's article with the Sabre's concepted specs, and then continue with what is basically a conversation between **Art Director Paul Jones** and **freelance artist Gavin Rothery**.

Steve Turberfield, Technical Designer, F42: Hey everyone,

As discussed in the meeting, below are the dimension sizes for the weapons proposed for the new Aegis Fighter.

Weapon Dimensions

- Body: 2x S3 Fixed Laser Repeaters
  Depth : 3.41m
  Width/Height : 0.79m

  These are a modern design step for Aegis, and the gun body is built into the ship hull, yet still swappable with other S3 weapons and would also allow a swap out for a S3 Gimbal Mount with S2 Weapons.

- Wings: 2x S2 Gimbal Laser Cannons
  Depth : 2.58m
  Width/Height : 0.53m

- Missiles: 3x S2 Missiles (per rack)
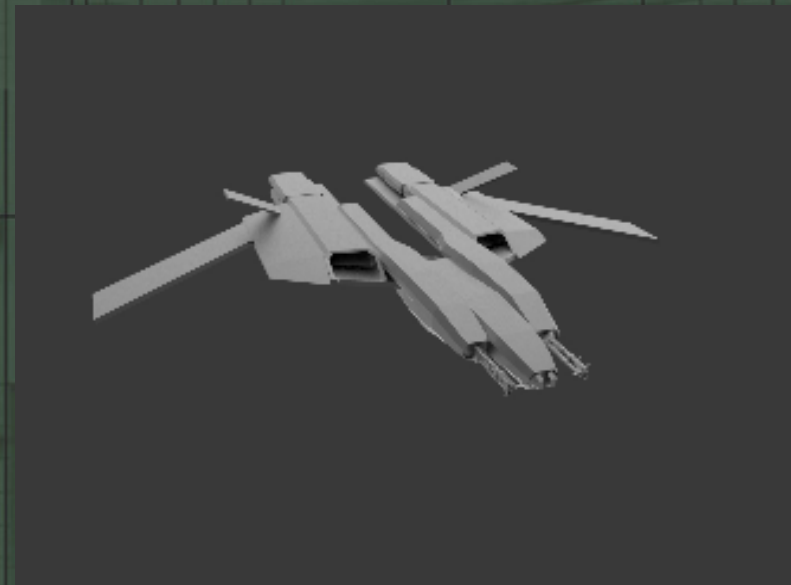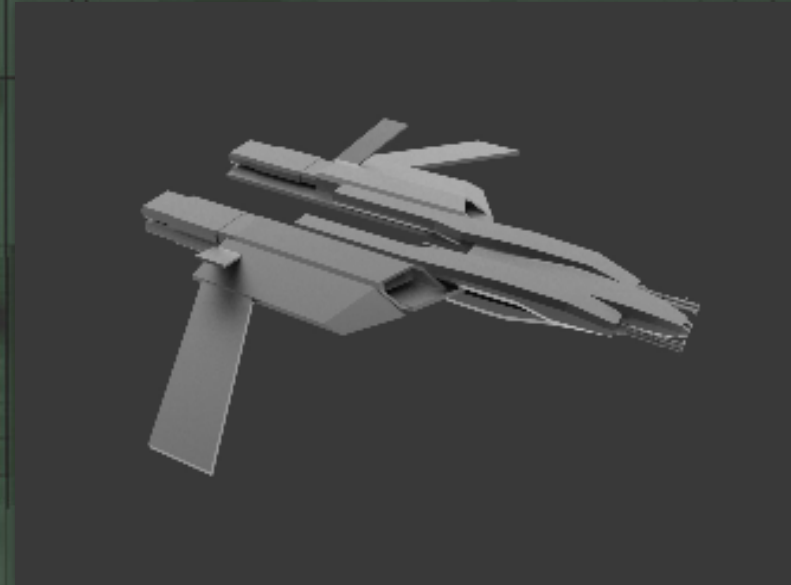 Depth : 2.175m
  Width/Height : 0.25m

  These would also be hidden within the ship body until a target is locked (similar to the drop down system on the F35).

At this stage, we are still waiting on official sizing guides for Engines (which currently just have a thruster rating). So if we are wishing to reuse rescaled ones from another ship, we can measure up from whatever is concepted and classify it from there once we have one.

Gavin Rothery, freelance concept artist: I know it's very early, but I wanted to get some quick renders over to you so you could see the kind of shapes I'm currently playing around with for the Aegis Sabre.

I've kept some of the Gladius lineage in there for family resemblance — let me know if you'd like me to try a new direction. It feels like a stealth ship should be pretty slinky, so the thin twin boom feels like it might be the right sort of feel.

Again — apologies for the rough, early images. Just thought it was worth firing them over as there's a core form starting to take shape and it'd be a good time to feed in any steers.
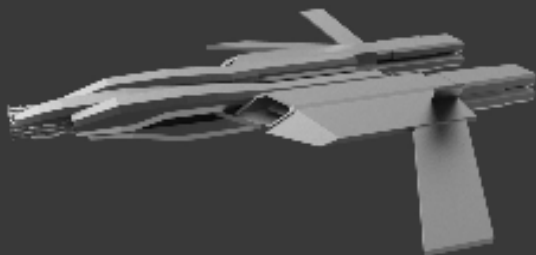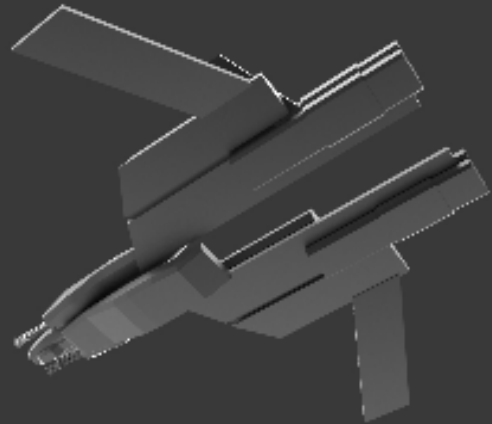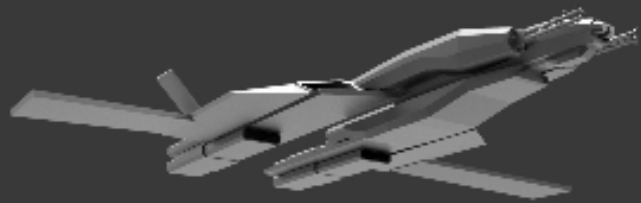
Paul Jones, Art Director, S42: My image is rough but try something like this, maybe some slightly spiky shapes at the front, and larger body (you'll need space for the payload and landing gear), plus some cool obvious radar tech that looks unconventional.

Yeah, Gav, keep bashing around some configurations while it's easy and low poly.

The ship feels structurally weak with the twin booms; try some other shapes along with a smoother version (a la the Avenger and front circular engines a la Vanguard).

See what you come up with.
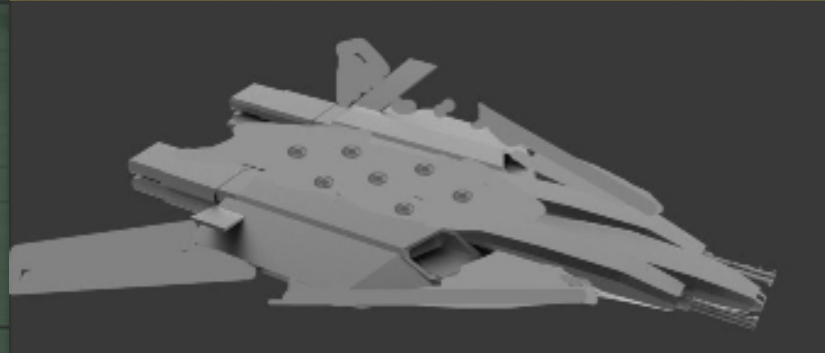
Gavin R: How's this kind of thing looking to you? There's some stealth/radar/shield generation type tech on the back of the ship, as if it utilises the big, flat area as a platform for its special capabilities.

I'm working with the cockpit view in mind too, and have enclosed a screen-grab showing a 90° FOV with the camera at the pilot's eyeline. Early days of course, but I thought it was worth including.

I haven't factored in getting in & out of the craft yet – I'm thinking a system similar to the Gladius perhaps, with the ladder coming out of bodywork just behind the cab. So the pilot climbs on top of the airframe and gets into the cockpit from behind/above? From what I've seen online, people really seemed to like the way that animation was set up.

I'm not sure how generic the animations for this stuff need to be, so if there's some entry/exit things I should be factoring into the design, just let me know.
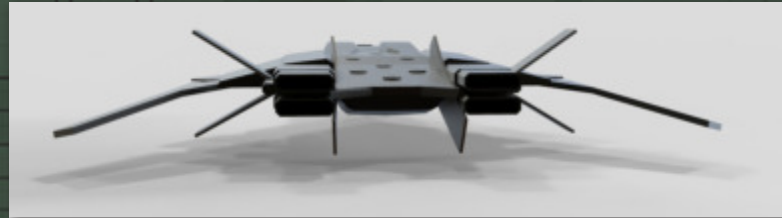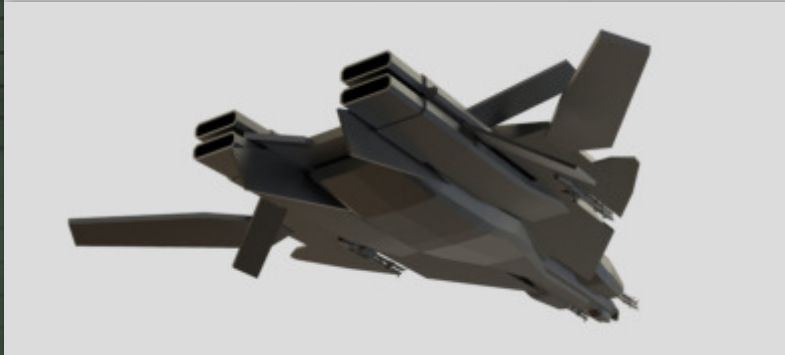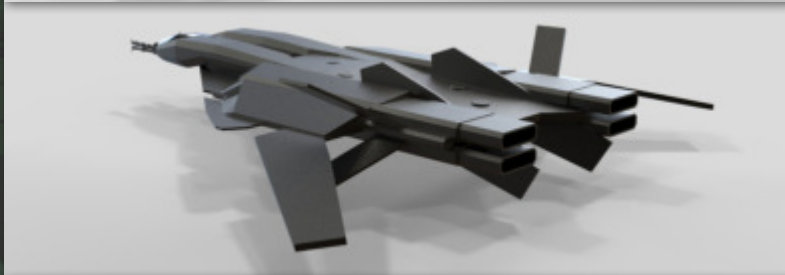
Paul J: It's getting there, but before first CR review I think it needs proportions solving.
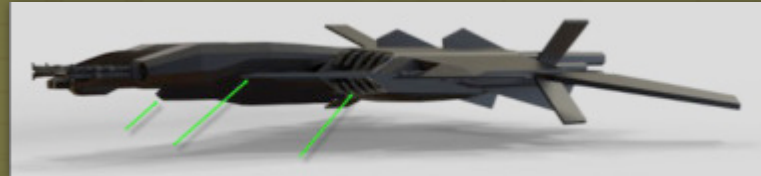
It feels too long and wafer thin, with lots of areas that look structurally weak.

Try mirroring the front intakes and have the wing bisect them, give more bulk to the ship, and something more to the belly. That's where the ordinance will be stored along with landing gear, and currently it doesn't look like it could hold anything.

Start to smooth off some of the areas and join them up; the shapes should flow.

Also the back will need some work as it's a bit too Gladius; we need to somehow make this look updated and stealthy, if you can give some options to that too. This is the Vanguard below (Aegis heavy fighter). It would be good to get some of this shape into the ship so it's less flat.

Gavin R: I thought it was worth getting some updated images over to you for feedback. I'm working on blending the shapes together more and have also worked in some more rounded intakes and engine shapes. I've fattened the belly out but kept the neck quite long and thin – I think it feels faster with the pilot right up front and the mass of ship splaying out behind.

There's some obvious "stealth" angles in there but it's always a trick to know how far to take it, especially with rounded shapes coming in, so let me know how it's sitting with you.

Paul J: Yeah not working for me in this iteration – I was thinking more like this.

Paul J: While you are at it, have a crack at this version. I've rolled back to the previous one rendered on the white background. I've kit bashed from the Vanguard (it'll need some jigging) to get:

- Bit more Lamborghini styling
- Long but thin flaps on the top
- Cool flappy things at the back
- Central spine
- Round engines
- Cockpit more integrated

See what happens.

Also, give me a version with a round engine. It could have an oval intake to make it more interesting.

Gavin R: Here's where I am with the Sabre at the moment. Obviously, still a work-in-progress, but I'm breaking off here to send you over some renders so you can have a look today and an opportunity to feed back, as it's changed quite a bit.

Still lots to do, but you can get a decent idea of how it's looking with the latest feedback pretty much implemented. If it's a path you'd like me to continue down, just let me know!
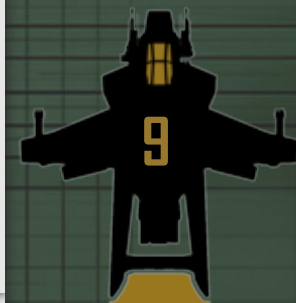
Paul J (to Chris): Chris, this is still pretty rough but it needs your eyes on it so that we can make sure we are going in the right direction. This is following rough Aegis guidelines, taking the round engines seen on the Vanguard, same for the flaps on the spine. Needs some of the soft bevels and flowing curves but we can shift that about no problem.

Chris Roberts: This is feeling a little heavy fighter / light bomber to me. Maybe it's the set-up of the two main engines on either side?

Do the wings fold forward?

Cockpit needs better side visibility. And maybe a bit more Aegis vs. Anvil? Right now it feels more angular Anvil …

It does look kind of cool, though …

Twin engines is fine for me – after all, a 350R has twin engines. It's just doing some shape tweaks to sell the fact this is a medium fighter.

Ben Lesnick, Director of Ship Development: Maybe we change the specs to match the bulkier ship? This feels like it could be a light attack plane – something like the A6 Intruder.

Phil Meller, Lead Designer, S42: This is looking sweet.

Paul J (back to Gavin): SAweet!

Just what I'm after! I've gotten feedback from Chris:

1. Look to lose a few pounds; Chris says it's a bit heavy. I wouldn't go too far, just a nip 'n' tuck.

2. Can we get the front guns back in.

3. Cockpit needs more visibility.

4. Create a version to replace the rectangular planks with the fin shown here.

5. Start getting some of the elegance in as seen in the Retaliator.

I'm off on holiday and won't be on email – Stu will be taking over direction and feedback. This is an excellent place to leave it and by the time I'm back it should be wrapped up, right? :P

Phil M: On a roll with this ship, like it. Just want to add some notes concerning the cockpit. It's spec'd as a single fighter so it looks like there will be required revisions to the current Vanguard cockpit, which is a two-man layout by the look of it.

Next round of images could you give us some cockpit views?

Gavin R: Here's where I am currently with the concept work on the Sabre. I've been concentrating on working in the last round of feedback and am focusing mostly on getting the lines to flow nicely down the spine of the ship. *[this page and next page]*

I've enclosed some screengrabs of the cockpit as it currently sits to show you the visibility. The camera is at the pilot's eye level, with a 90° field of view. The images are from straight ahead and 45° to both port and starboard.

Let me know how you find these.

John Crewe, Senior Technical Designer: Really liking this, feels bad ass stealth fighter like now with an Aegis style.

Stuart Jennett, Senior Concept Artist: Looking good!

Some feedback for you:

1. Can we try moving the forward (cockpit) guns down a little, as it feels like a turret from the 1st-person view at the moment. (Also, swapping in different gun types may lead to even more loss of visibility.) Can we also play with pushing the guns forward as well?

2. Interior cockpit frame doesn't seem to align with the exterior at this point (I understand it's mock-up).

3. Can we see the cockpit canopy open so we can better understand the break in the canopy glass, as it looks as if it runs right through to the spine at the moment, although the 'latch' details suggest a break.

Gavin R: I'll get onto it. One quick thing – do you think you could fire over either FBX meshes or bounding boxes of the weapons that are going to be used? Be great to check the range between biggest and smallest.

Steve T: The front weapons for the Sabre will be Laser Repeaters, which are max S3, or S2 if gimballed.
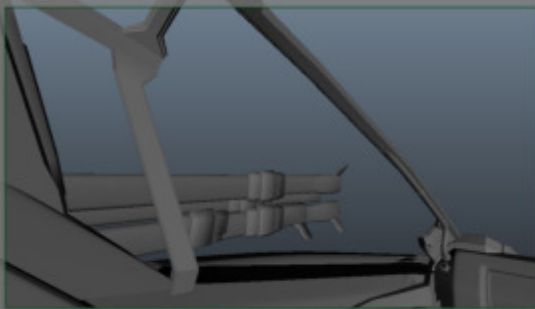
Cockpit View 45 degrees Port
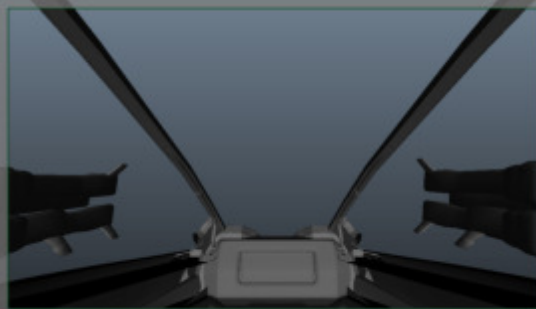
Cockpit View Frontal 90 Degree FOV
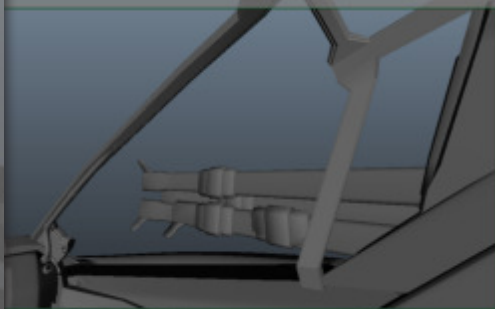
Cockpit View 45 degrees Starboard

WORK IN PROGRESS

Gavin R: Here's where I'm currently at with the Sabre cockpit. I've been concentrating on pilot and weapon positioning and there's also an initial pass at how the cockpit might open in here.

I haven't fully integrated the re-positioned guns yet, as I thought I'd best get the okay that they're in a good place first.

As far as entry and exit go, I'm not sure if we're able to pull the guns back underneath/into the ship when it reconfigures to park? I did this with the F8 design and so I'm not sure if it's something you'd like repeated. I can look at other options, but anything else is going to have added complexity, as the guns will need to be climbed over.

Let me know how you find this and if you have any steers. In the meantime I'm underway with the other parts of the ship.

Stuart J: Looking good!

Feedback action points:

1. We still need to lower the guns a little more, still a little intrusive in the cockpit view.

2. We think it might be nice if the guns could be stored internally or partially within the fuselage and slide forward to lock into firing position. Would make a nice animated feature, plus would move the guns out of the way when the pilot is disembarking. From chatting to John these are the biggest guns we're going to have, so we're in the clear in terms of additional scaling. We've some room under the rear cockpit section – perhaps you could utilize this ?

3. With the guns locked back out the way we could introduce a ladder system similar to the Gladius.

Doodles attached; hope they make sense.

Gavin R: I'm pretty sure I can see what you're after. I'll get onto this and have it worked into the next version.

Stuart J: If you can hold off on the visibility/cockpit interior feedback I sent earlier that would be great.

There is still some discussion about which components from other ships we want to re-use for this fighter. I'll try and get that pinned here first, otherwise you're just going to be chasing tails.

1

LADDERS (GLADIUS).

2

GUNS STORED IN BODY?

GUNS RETRACT AND SINK INTO BODY.

3

UTILIZE THIS SPACE?
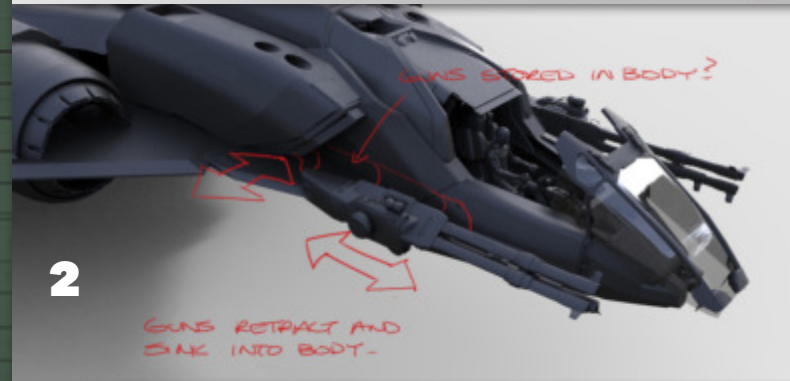
Gavin R: Here's a quick render of the current mechanism I have for retracting the front weapons into the Sabre's body. It's early days and the shapes aren't all there yet, but I thought I'd run this past you early on before I spend loads of time making it "all nice".

As you can see, once the guns are away, there's going to be loads of clear space to get a nice "Gladius" style ladder built into the ship's superstructure. Might have to do something with the leading edge of the wing, but I'll get round to that if and when it becomes a problem.

Comments from Gavin, responses from Stuart:

Gavin R: Do you want me to drop the whole cockpit in as it is? If it's going to be a mashup, I now have the complete Gladius, Retaliator and Vanguard cockpits. So if you want me to take bits and pieces, just let me know which and I can get right on that.

Stuart J: I think the consensus is to just use the Gladius cockpit with a touch of re-dressing, but not sure what exactly that entails at the moment. I'll dig out some more details from the guys here.

Gavin R: I have a few bits and pieces I'm working on around the ship at the moment – anything specific you'd like to see in the next deliverable? Like another pass at cockpit visibility perhaps?

Stuart J: Don't worry about the cockpit visibility for now either; your anim erased a few worries regarding this. Once we drop the Gladius cockpit in we can look at that again. Just bash on I guess , think perhaps looking at the undercarriage (use Vanguard for now) and internal missile bays would be a good move until I get more feedback on the guns.

Gavin R: I have the guns at the semi-reclined position, and I'm thinking they look pretty good just slung under the neck of the ship. The thing is, when I build in cowlings so they retract, the neck gets pretty chubby pretty fast. I can tweak the animation so they come up a bit more into the body but not any further back if you like. Let me know if you'd like to see this in the next version.

Stuart J: Okay sounds cool, kinda slung under is what I was thinking, keeps it still looking aggressive but sleek with everything folded away. I wouldn't worry about cowling, I was thinking of more a sunken cavity in the neck that they kind of sit in (see my doodle). See what works. If you can send us a few grabs of how it stands now anyway that would be great.
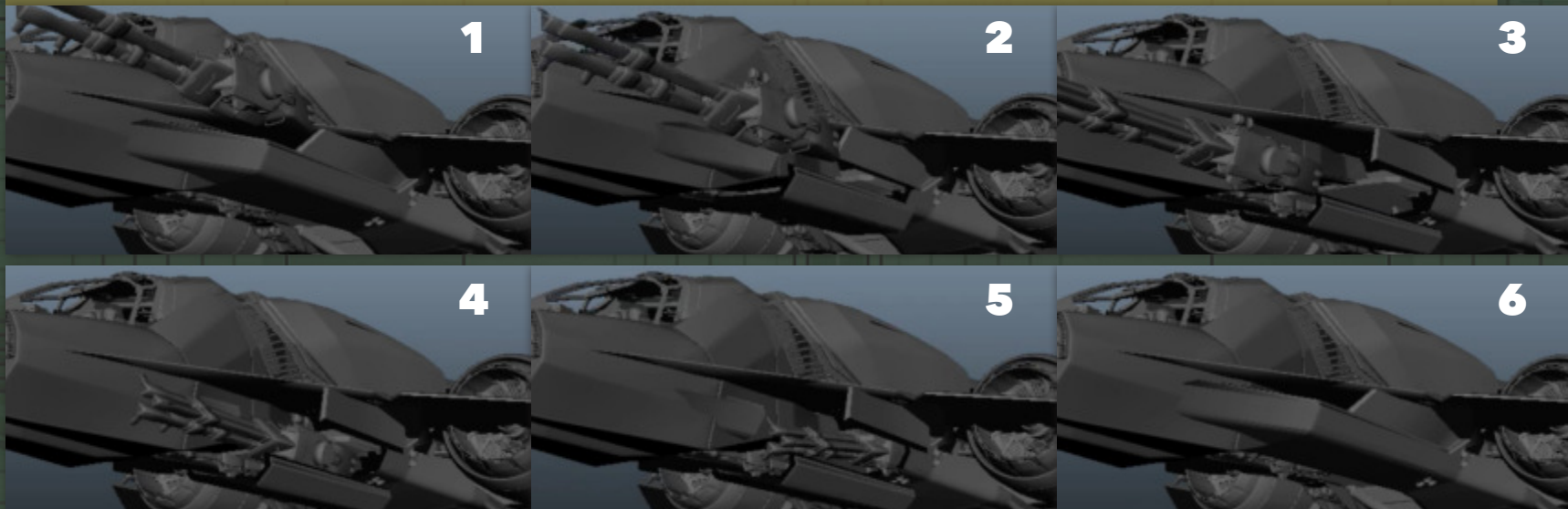
Gavin R: Here's a few renders showing where I am with the cockpit tweaks and guns at the moment [1-3]. I'll work in some kind of faring like your sketch; this is just for placement really. I've taken a chunk out of the leading edge of the wing to enable the guns to travel – are you okay with this? Otherwise it's a mechanism to change the shape of the wing. I can do it either way, just let me know.

Stuart J: Just looking into this and there appears to be some issues with the Gladius cockpit as is; guess it's best to just hang fire on that until I get some further info.

Gavin R: No worries – I've actually swapped it out already, but I can do whatever's needed once it's all worked out.

Stuart J: That's game development!

Gavin R: I've worked up a first pass at how cockpit access might deploy in the Gladius sort of fashion. Bit scrappy geometry-wise at the moment, but I wanted to get a quick anim run past you to see if you were into it or not. [A-E]

Stuart J: I'll send this around for feedback. I kinda like the ladder animation tbh.

On the gun retraction I think there's a bit of an odd angle on the slide back; my gut feeling is it just needs to be a straight drop and then retract in one plane, a very definite 'one, two' action if that makes sense? It could then have a 'soft' slide sideways to sit partially into the body (gun well) from its final retracted position.

16
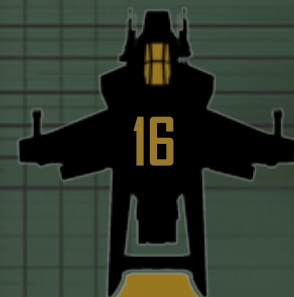
WORK IN PROGRESS

Gavin R: Here's a bunch of renders showing where I am at the moment with the Sabre. I've tweaked the front opening a tad. I've been mostly working across the body-work of the rest of the ship tidying it up. There were a lot of holes, gaps and strange little intersections. I've been going over the surfaces and doing all sorts of nips and tucks everywhere. There's still more to do, but the gaps are definitely closing up.

I'm going to move on to the underside now, so if you have any thoughts on where the weapon bay(s) need to be, just doodle over one of the renders to give me a steer. I'll be starting off with the landing gear and moving on from there. Current cockpit is the Gladius.

Stuart J: Looking good.

I think we need to address the mechanical movement of the guns as well, as they're floating around unattached to anything at the moment (I understand this is block in). When the guns have slid back, can we have a soft drawer shut partly into the body (or whatever looks most natural), I think it would finish off the animation nicely.

Just bounced the landing gear and missile bay off our designers. This is their best spec for now , hope this helps? [A]

Gavin R: You mentioned earlier to use the Vanguard legs as a starting point – can I tweak them or do you want them exactly the same?

In the meantime, I'm cleaning up the surfaces and working in the weapon bays. Am I correct in thinking there's two separate weapon bays underneath, or is it one big one? I think two separate ones would look better for symmetry if it fits the ship spec – the doc mentions 2 x pylons, with 3 missiles per rack. So I'm thinking this could be a rotating magazine with 3 missiles – one of these on each side of the underbelly of the ship?

Also, what sort of size are the weapons to be carried internally? I can make a placeholder easily enough, just need an idea of the length and width of the biggest torpedo/missile.

Paul J: Some answers and some alterations:

For landing gear – the suggestion Stu gave seems too far back. If possible I'd prefer we worked out a better underside that could incorporate the gear in these more traditional positions. It will need some working out. [B]

Also, can you try a version with some negative space in front of the engines. [C]

A

REAR LANDING

FRONT LANDING

MISSILE BAY.

B

C

WORK IN PROGRESS

18
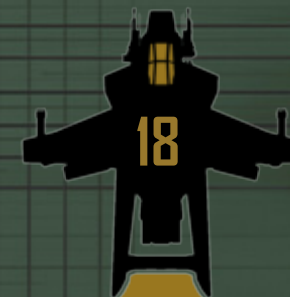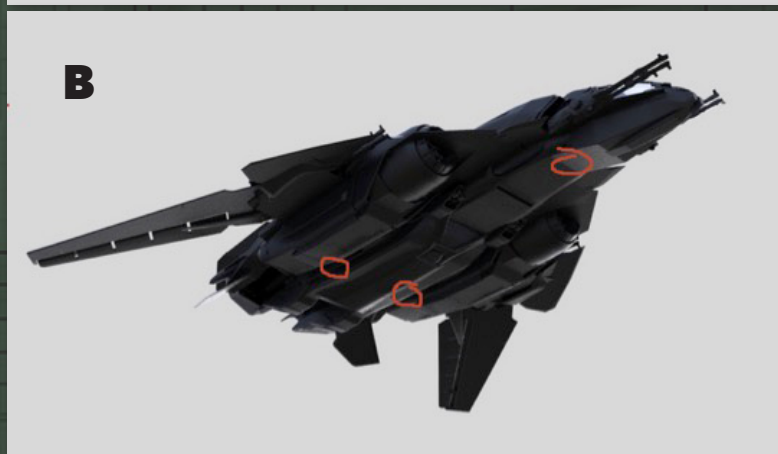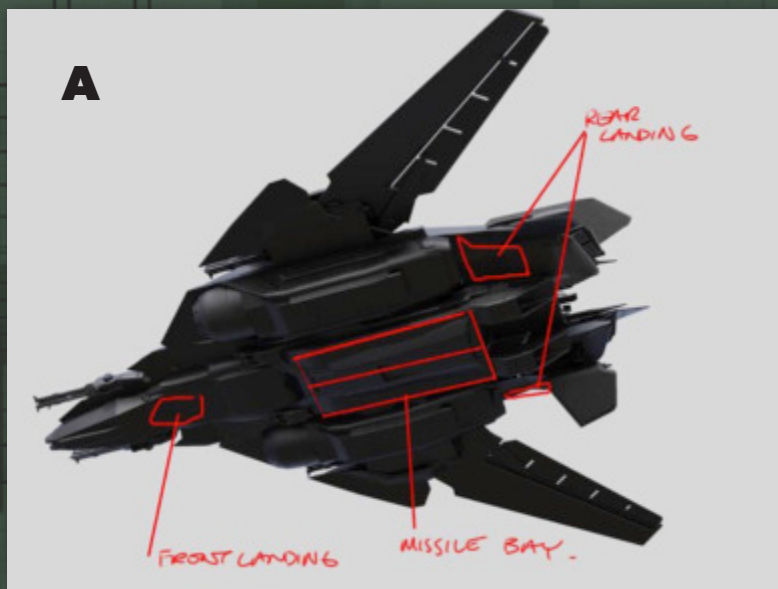
Gavin R: Here's where I am at the moment with the Sabre. I've worked in the engine intake void spaces and a pair of weapon bays on the underside with retractable pylons. The bay doors open and come together on the centre line of the underside. Let me know if this is the sort of thing you have in mind.

Paul J: Intake void space – looks good to go.

[A] Bomb bay: would like you to make it like this; it'll be more flexible for us in the long run I think.

The missile and pylons are attached to the doors and the doors butterfly open.

Gavin R: Will do – working this up now.

A

Gavin R: How's this sort of thing looking for the internal bay? Still work-in-progress, but you can see where I'm headed with it.

Paul J: Works for me – anything from Design Dept?

Nick Elms: Creative Director, S42: We love it. Fits the missiles and looks cool. :)

Chris R: Really liking how this is looking! Nice stuff from Gavin!

Gavin R: I'll get the landing gear worked in and we should be pretty close. Might need a pass looking at manouvering thrusters too. Also, the current cockpit is from the Gladius, just in case that needs to change.

Paul J: I'm collating some new info for the position of the pilot in relation to the canopy and controls/seat – should have in a bit.
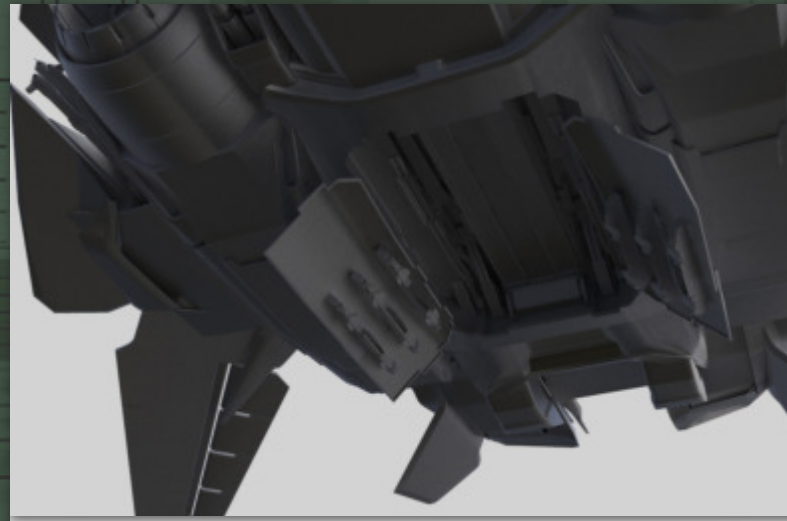
Gavin R: In the meantime, here's where I am with blocking in landing gear. Let me know how you find this and I can get on with working up how they retract into the fuselage.
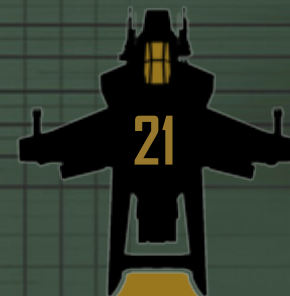
Paul J: Looking good. The front will need a bit of additional work to make it less spindly. Plus could you rotate the ship about .5/1 degree to bring the front slightly lower??

Gavin R: Will do!

Paul J: Can you get some shots of the cockpit so that our designers can start to work out the layout for the instrumentation? The Gladius is out of date and the Retaliator is a bomber so their placement doesn't work.

If the shots from the head camera are too close, then provide wider FOV as well, so that we can get a good look at the space and then we can draw all over it.

Gavin R: There isn't a camera in the cockpit, but I can align this geometry to the pilot's current position and fire over the current version of the ship for you to look over. Might be the easiest way to make small movements or add placeholder objects quickly into the scene that I can use to register the concept mesh to.

I've rotated the ship down by 1° already for the work on the landing gear, so it should be current.

Paul: Yep – do that, then fire over an FBX.

Gavin R: Looking at the pilot mesh, it seems like there might be some scale issues creeping in – shall I re-scale to the figure in the cockpit setup file you provided? It's not massive, but it feels like it needs attending to. I'm hesitant to just do it as I've been working to the meter scale, so perhaps the suit has just bulked him out a bit? (My figure is an old one with no suit). Hope these files are okay and minimal hassle for you to work with – let me know if I should re-scale anything!

Paul J: Don't scale the pilot! He is the one constant we have; the fighter will need to fit to him.

Gavin R: Understood, it was the rest of the ship I was on about. I've had another look and I think I'm just being paranoid – the ship dimensions are all the right size on the world meter grid and the weapons are the right size too.

Shall I wait for a file back from you with blocked-in geometry or shall I just keep moving forwards with the landing gear for now?

Steven T: Here are the proposed Thruster Placements for the 8 ball type thrusters. Any minor adjustments to this is fine. The underside ideally would have had the front ones placed further forward, but this seems the best position to avoid any issues with the gun animations. I have also positioned them where I can as close to 45° angles, allowing full horizontal and vertical positions.

Any problems, let me know.

Paul J: Here's a rough guide to thruster placement; plonk on the Gladius ones and see what issues arise.

Gavin R: Here's where I'm currently at with the Sabre. I've placed the thrusters on the hull and worked in the landing gear – still more detail to go inside the bays, but I've done some initial animation tests so you can see how I'm envisaging it all working.

If this is looking okay with you, it feels like we might be moving onto the cockpit next? Let me know if there's anything else outside you'd like me to attend to.
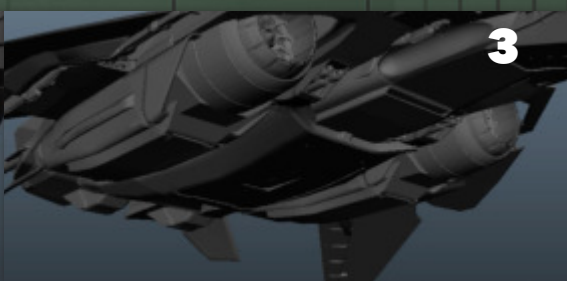
Paul J: Landing gear flaps look a tad convoluted, the simpler the better imo.

Let's move on to the cockpit for now. Go with a fighter cockpit interior but in the style of the Retaliator mesh we provided. (I think :D)

Design, can you comment on the thruster style and placement and if it's workable?
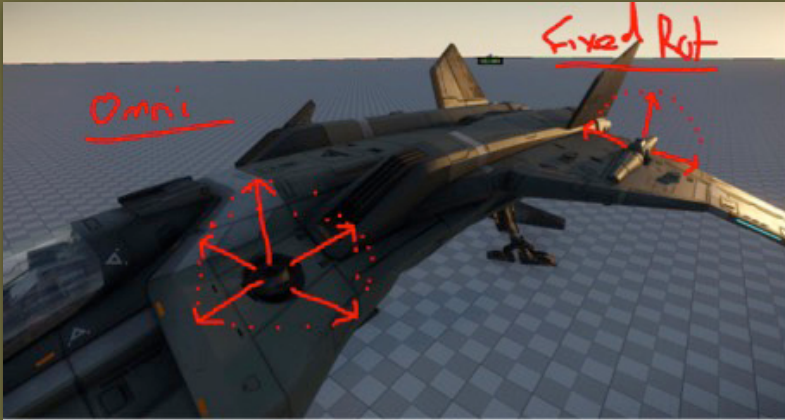
John C: Are all these thrusters of a fixed rotation style rather than any with the ability to point in any direction? The Gladius has 4 fixed rotational ones on the rear wings, which provide more roll than pitch, and 4 omni ones at the front to provide quicker direction changes in all 3 axes.

Is it possible to get a top/side image done with the current thruster positions highlighted (can be just red dots overlaid) as it's quite hard to see with it all grey.

Are we assuming the front of those intakes are also providing retro thrust? If so, are they somewhat aligned to the centre of the exits to the engines to balance them out nicely? Doesn't have to be millimetre precise as we can fudge it to a degree, but stuff like being 1m higher/wider or at a different angle presents problems.

Lastly from a setup point of view, keeping the thruster orientations grid aligned is much easier than having them angled down the bodywork like some of the upper rear ones are. Keeping them in 90° rotational offsets/increments is also very useful as that's how the game calculates it to start with.

If we're able to get a somewhat easy-to-use mesh (i.e., not 10 million polies, 50,000 separate meshes), we'd just want it baked down to one single mesh (doesn't need interior/cockpit) so we could get this ingame and properly validate it ingame as well within a day or so, using the Gladius thrusters as a base.

Gavin R: All the thrusters on the Sabre at the moment are fixed rotation. I was referencing the concept piece I worked up for the Gladius – I've just been looking at the final ship as it appears in-game and I see the thrusters on the front end of the ship are different as you describe. Shall I work these into the mesh?

John C: Personally, having a similar setup to the ingame Gladius would be no bad thing to me, but this is something for Paul to confirm from an art PoV. Having those omni-directional ball-shaped thrusters also allows them to be positioned on odd angled surfaces easily (they can be cut in and default to vertically up, solving code alignment issues).

As you can see in the Gladius, the fixed rotational ones stay aligned nicely along the Y axis (front to back in Cryengine, may be Z depending on your modelling program) and this also works very well for flight handling.

Gavin R: It's no problem for me to set them up like this. Over to you, Paul.

Paul J: Yep – we should match them up, save us some hassle further down the line.

Gavin R: Here's where I am with the thruster tweaks – thought I'd get some quick renders over to you so you can see where they're currently sitting on the fuselage.

As you outlined, I've taken cues from the Gladius and put a pair on the top just behind the cockpit canopy and a pair on the bottom right underneath.

I'm moving forwards with the cockpit interior now.

Paul J: It'll need 4 thrusters on the top and 4 on the bottom – the multidirectional thruster changes a bit to be a little more elegant.

Once you have something blocked in for the cockpit, run it by us.

Gavin R: That's no problem. There are currently 4 on top and 4 on bottom in the same configuration as the Gladius – the rear thrusters might have visually blended into the ship a bit as I haven't gotten into different materials and shaders yet. I've enclosed an image pointing them out in case you missed them – is this the sort of thing you're after? I can put in eight ball-mounted type thrusters if you prefer, just let me know.

For the rough pass on the cockpit: I guess you're mostly interested in the core components, so I'll put these together first. I'm thinking screens, seat and a visibility check – does that sound okay? Then I can dress the rest of it in and make it look pretty.

Paul J: Crack on then; I'll get updated thrusters to you soon.

Gavin R: Here's where I'm currently at with the Sabre cockpit. I've blocked in the screen layout; I had to move the top thin pair of screens in a tad as they were obstructing the view of the weapons. Apart from that I've tried to keep as close to the layout in the design doc as I could. Pilot's seat in there is currently from the Gladius.
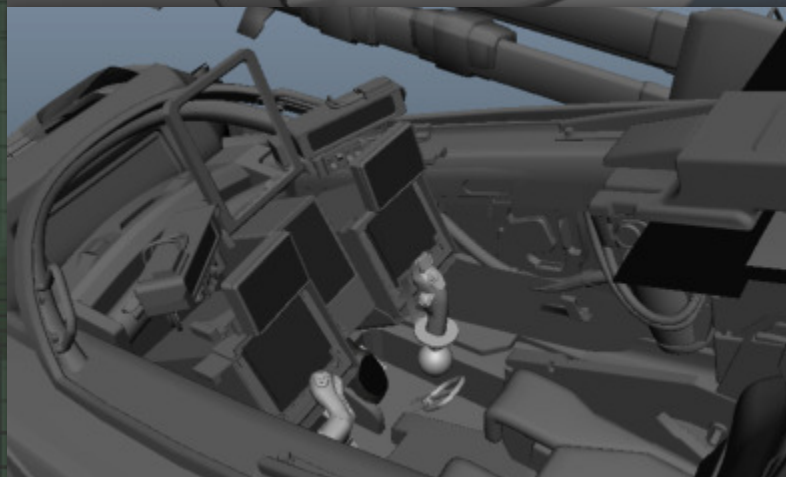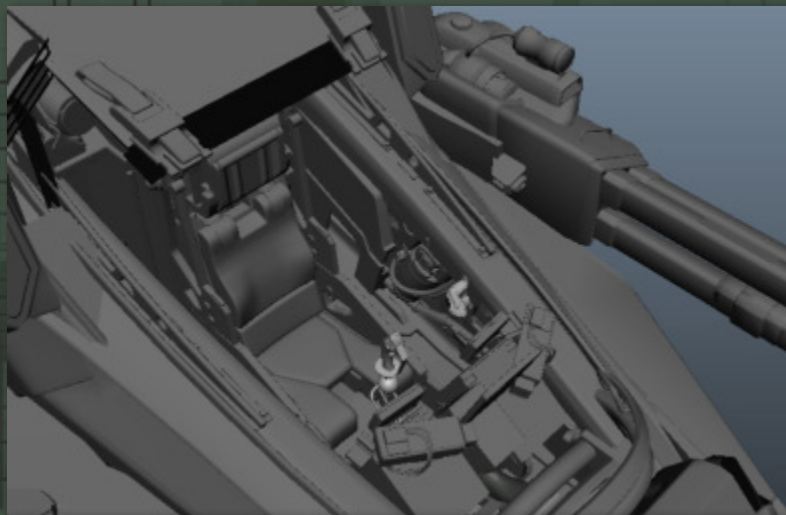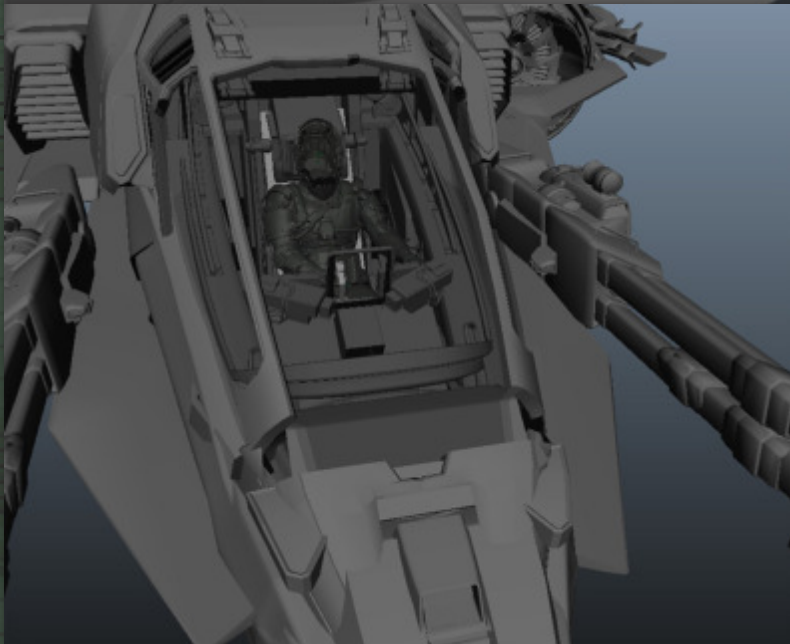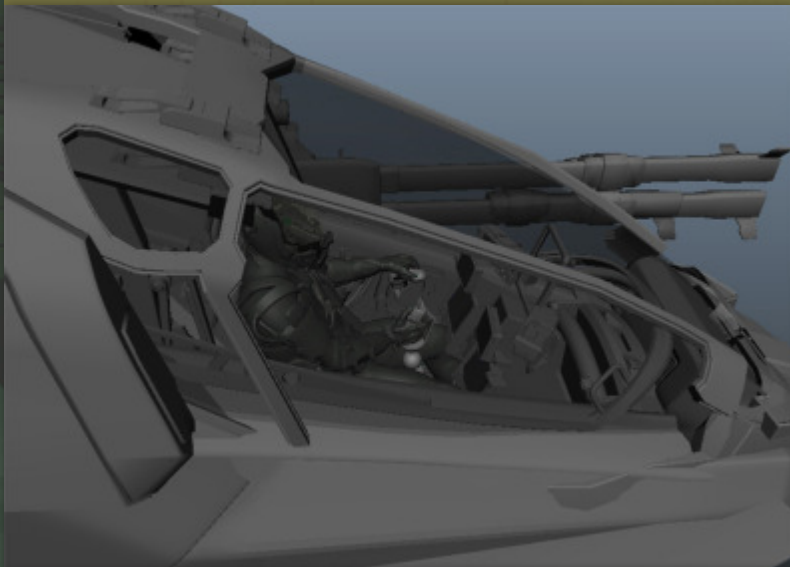
Paul J: See if you can integrate it all a bit more. This is a shot of the Retaliator and I like the design flourish (the side red bars sweeping to lead the eye to the front). [A]

Currently it feels all a bit low tech; this is the 'new' Aegis fighter so it should be an evolution from what the Gladius was.

I believe there should be a holo globe radar too.

Gavin R: I'll get onto it.

Paul J: I'd hold off the cockpit for the minute while we figure out some screen and layout issues.

In the meantime can you look to solve these areas so they are less mashed together. [B]

Daniel Joustra, Concept Artist: Here are sample surfaces for the Sabre. [C]

A

B

C

Gavin R: I've been working up the surfaces of the Sabre and it felt like time to send over some renders to run past you. There's still a few bits and pieces to nip and tuck and faces to smooth; let me know what you think when you've got a minute.

Paul J: Looks good to me; I'll get you the cockpit info you need.

Gavin R: I'm just working up the surfaces some more and making sure there's no issues with any of the smoothing groups in the renders. I'll get back to the cockpit when you give me the specs.

Paul J: Thrusters for you, Gav. [below]

Paul J: Doubled up on concept. While Gav is working out the cockpit Dan has taken a pass at colour and markings — any preference Chris? I'm leaning towards B.

Omar Aweidah, Associate Concept Artist: This is looking super sharp. Love it.

Chris R: B it is.

A

B

Paul J: For the cockpit — some further direction for you.

Palette

Keep to a similar palette as the Retaliator

Layout

A. This is the new layout we need. The radar is a holographic globe.

Design/Style Language

I want to keep it obviously a fighter but it'll be less exposed like the Gladius was, so the sides will be nicely filled in.

I think it would be good to feature some internal structure as part of the designed cockpit space (see red metal area).

B. I still have bolts showing but they shouldn't be there; I would expect a slicker designed fastener.

Sweet — go in this direction and continue to work up.

C-D. Also like this, so work up these two please, then go on to the underside after this.
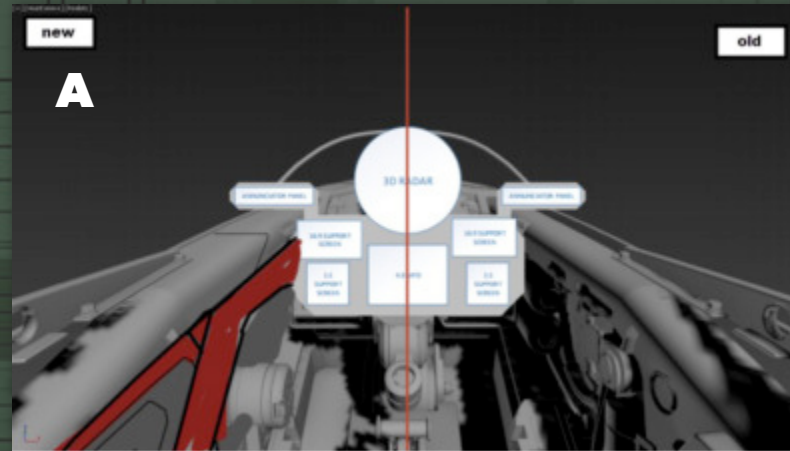
Gavin R: I'm pushing forwards with the cockpit and I thought I'd best send over a few work-in-progress renders to show you how things are coming on. Loads of detailing to do, but the broad strokes are pretty much in place. The plan is to detail the side struts with the red lining like the Retaliator cockpit. I'm taking most of my cues from the Retaliator images you sent over, and I'm going to detail buttons and switches in a similar manner. No holo-sphere in there yet either, but you can see where it's going to go in the middle of the center console.

Let me know if I'm off base with anything!
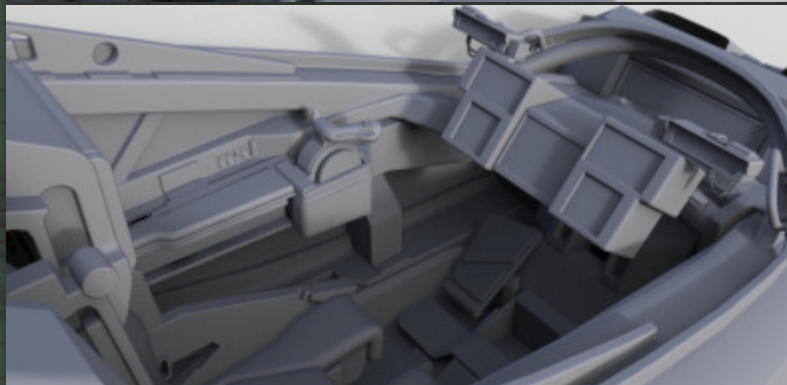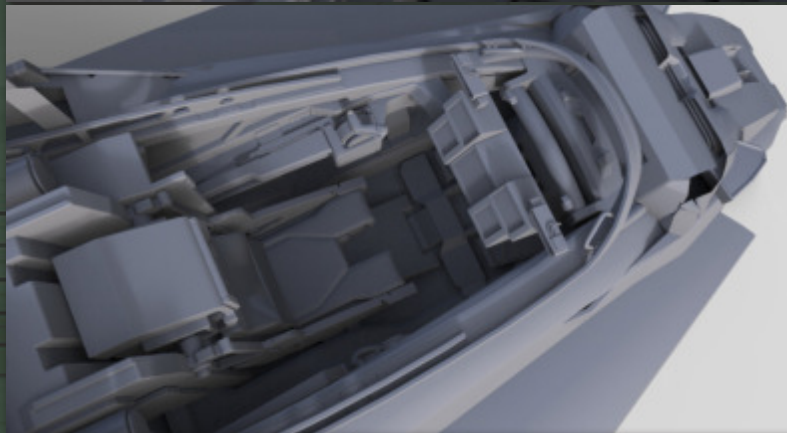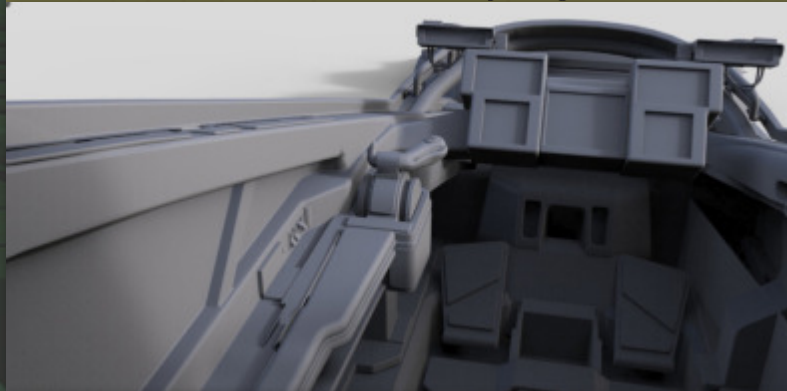
Paul J: See if you can integrate it more and add some of the shapes seen below – some of these buttons are just for show and I think we have space. [A]

Also thinking you could have some of the red structure come up into the instruments, it could give the opportunity to create a design feature rather than just screens (could be brushed metal too). [B]

A

B

Daniel J: It can land now.
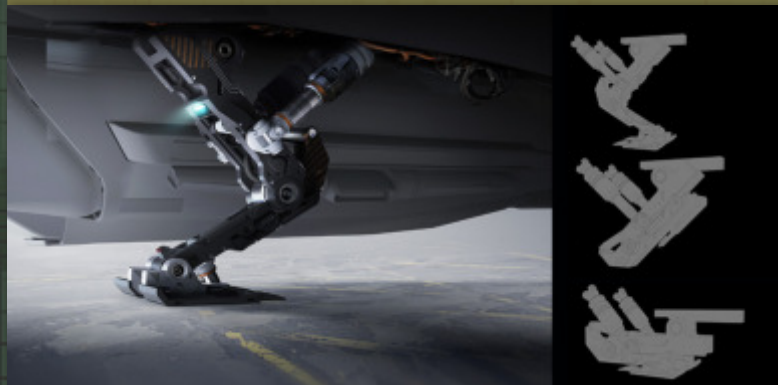
Gavin R: Here's where I'm currently at with the Sabre cockpit – is this heading in the right direction?

Paul J: Looking good, I'd make this part not red though. [A]

Paul J: I had Dan here work up areas that could chomp up time your end.

For the top, a few of the main shapes are altered, so please incorporate those alterations. [B]

For the bottom, I had the landing gear moved as I wasn't happy with it intersecting the intake and effectively making it unusable. [C]

I can also provide you with the decal sheet and markings so it should make it easier for you to make the promo renders.

Gavin R: Decals and markings would be really useful, cheers for getting those together for me.

I'll get the cockpit finished off whilst I'm waiting for the ship mesh.

A

B

C

landing gear now here
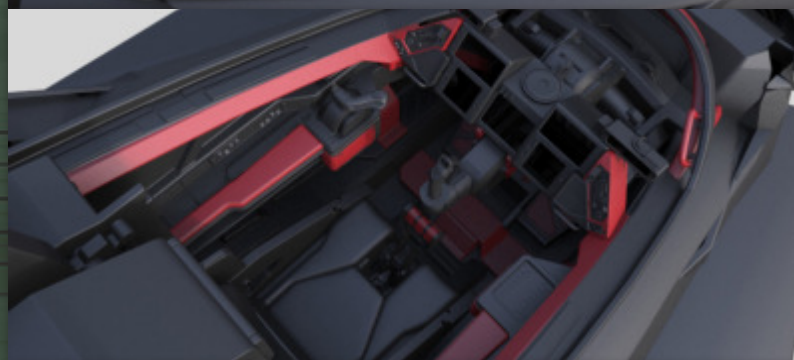
Gavin R: I'm just working towards getting my Keyshot render sorted for the Sabre cockpit. What do you think of these views? Any of them doing it for you?

I can always get into cutting away one of the sides of the ship if you'd prefer something different, just let me know.
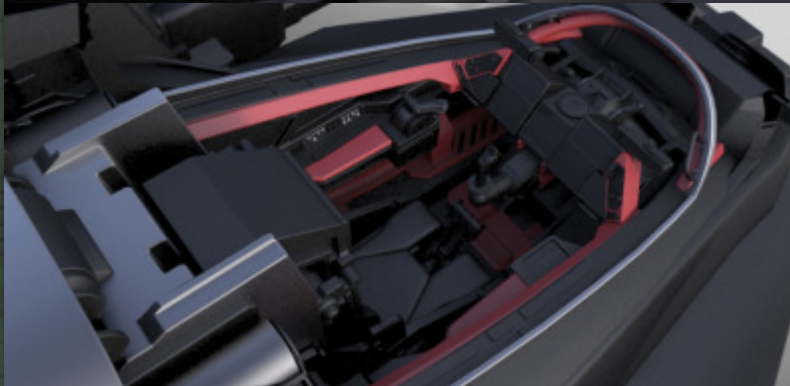
Gavin R: Here's where I'm currently at with the Sabre cockpit – how are you feeling about this version?

It feels like the best camera angle to cover the cockpit in a single render to me.

Paul J: Gav, can ^ you get me an updated version like this, I've reduced the red.

And this bar seems to be oddly placed; it's intersecting. >
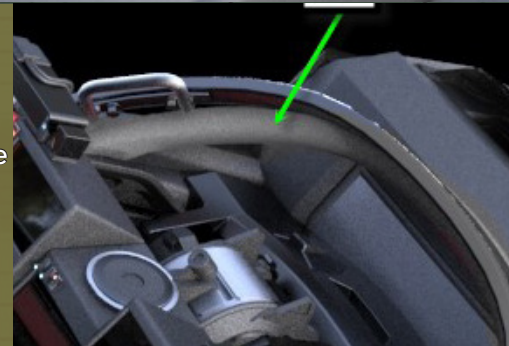
Gavin R: Here's a few options for views of the tweaked cockpit. Hope you've got what you need here – let me know if you need anything else!

The bar at the front isn't intersecting, it just looks that way from this view. It pushes ahead and below/in front of the other bar, which is actually a part of the inside of the canopy. I'll delete the canopy arch for the next renders so the shiny bar with the grab-handles will be gone.

Paul J: Ok, cool.

Gavin R: How's this?

Paul J: Sabre cockpit interior (low res). Still some work to be done in places but looks solid. Unless any major issues, we'll go ahead with final art for Citizen-Con.

Chris R: Looks good – let's just make sure it feels more hi-tech than the Gladius (as it's much newer). It feels like it will, but we could have perhaps some more flat button buttons versus physical ones?

Also perhaps a few touches of sleekness on the joystick?

Has UI gone over this to make sure the screens will work?

Paul J: UI – check, we've been back and forth.

1. Joystick sleekness – we'll try, time is running short.
2. Buttons, yep – I think we can slim them down/flatten them.
3. Get the shapes less chunky, more hi-tech.
4. I'd go for this shot for the render, but the curved bar at the front will need work.

Gavin R: I'll work in a new joystick and take the buttons/switches out of the 3D.

What needs to happen to the bar at the front?

Paul J: Just looks basic at the moment, needs another read of detail.
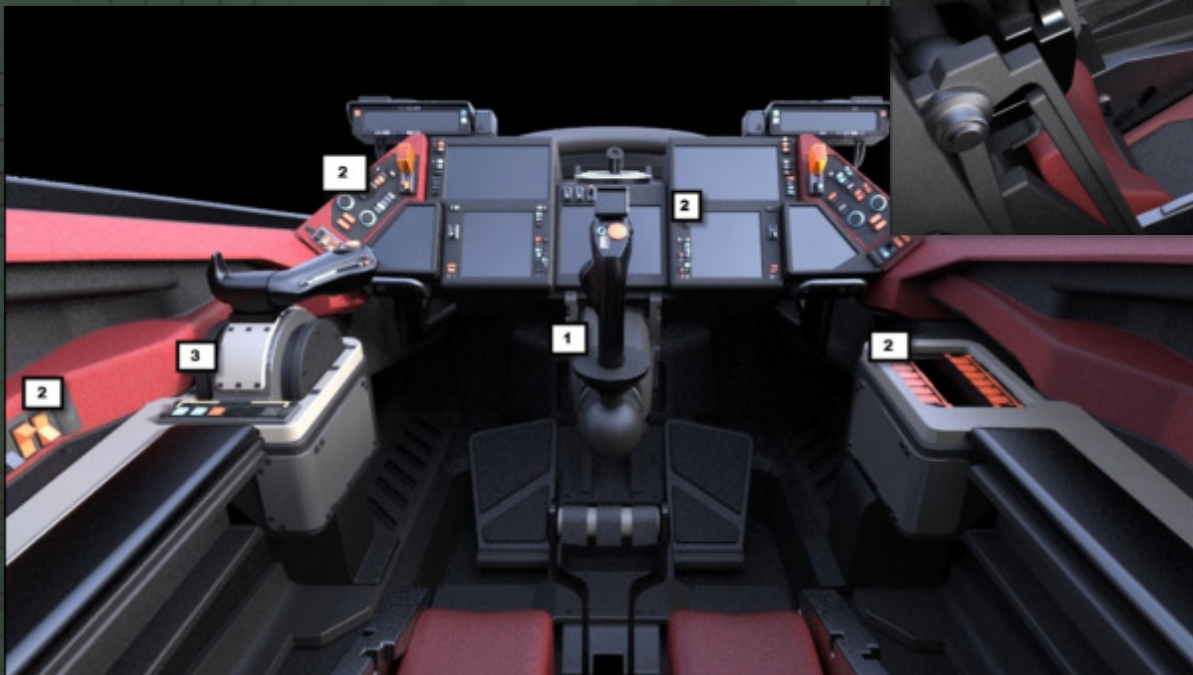
Gavin R: How's this looking to you? Let me know if I'm off-base with any of this!

Paul J: Needs a few more polygons as it looks a little fragile in places but could work!

Gavin R: How about this?

Paul J: I'd probably make it a rubber matte material and the 'wings' seem a little odd.

Gavin R: How's this?

Paul J: Not working for me.

Let's move the side guard and just make it more like this to a certain degree.

No green or red glowy bits, and move the guard to the front.
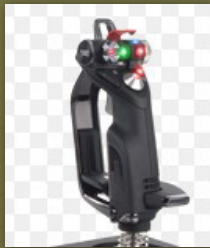
Gavin R: And this?

Paul J: Yep – crack on.

Gavin R: I'm going to be working this cockpit image up next, but I thought it might be worth firing over a WIP image so you can get an idea of how it's coming together.

Would you like me to have data on the screens and the holo-sphere activated in this concept image?

Paul J: Yes, please.

Gavin R: Here's where I'm currently at with the Sabre cockpit. It's feeling pretty close to me – let me know what you think when you get a minute.

Also, I'm keen to get the bits and pieces together for the external ship paintover work - if you could drop those over when you have time, I'd really appreciate it.

Paul J: Gav, looks good!

Nick or Phil, does anything stand out to you or all good?

Dan worked up a new landing gear and position for it to go; let's get that to Gavin.

Gavin R: Here's another updated WIP image.

Paul J: Looks good to me.

Gavin R: I've been working up the 3D tweaks to the Sabre and it feels like I'm ready to move on to the paintover work. Here's a pair of renders that I've matched to the reference images; let me know if you're happy for me to push on.

Paul J: Yep, looks good. Just a bit of tweakage here.

Once you have angles and promo shots ready for a first pass, send them on before you dial in.
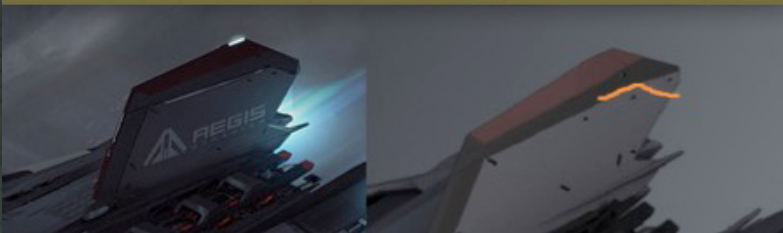
Gavin R: Here's a blockout of the first image; let me know if this is headed in the right direction. This is just a lit, raw model with a background plate, so still lots to do.

Paul J: Yep – cool stuff – crack on!

Gavin R: Got a bit of wind behind me and got a rough assembly together for the second piece. How's this looking?

Paul J: Looks cool, but can you try it with a different background, something more space-like, plus moon or something.

The first image, let's get some light in at the guns and have it firing, engine trails, wing tip trails, the works. :D

Also have the bomb doors open so we can see them! :D

Gavin R: Roger that – will do.

Gavin R: I've been pushing on with the Sabre pieces and I thought it might be worth running them past you to see what you think of the direction they're headed in. I really liked the way the colours were balanced in the image with the two ships, so I thought I'd try adding some more space-type elements in there and play it as a gas cloud around a planet/moon before I went for the more traditional space type scene. Let me know if it's not working for you.

John C: Just a random last-minute thought, but do the wings on the Sabre change position depending on flight mode? They look like they do but I imagine that's a lot of work at this point to have one with the wings extended out?

Paul J: Yeah, they do move, but for the image I don't think we need to worry, we'll point it out in a schematic image.

Paul J: Gavin, I spoke to CR and got some feedback plus some of my own.

1. Weapon muzzle flashes are too saturated and red.
2. Is the ship the correct colour? Seems like it should be a bit darker and with a little more blue
3. Trails – need work, presume they are WIP
4. Prefer the trails on the second image
5. CR wants a space background, feels the background in the second piece is too cloudy grey again

Also, CR would like another image, of a landed Sabre.

Gavin R: Answers below:

1/2. The colour tweaks are easy to sort out – they've just shifted a bit in the lighting.
3. Trails are indeed WIP – I was focusing on blocking things in so you could get a feel for them.
4. I'll match them up.
5. No problem, I'll get something worked up. Actually, since we're on this at the moment, do you have an example of what you mean when you say "space"? I know the cliché is black with perhaps some purple/blue nebula and a starfield – is this more the kind of thing I should be looking at? Should I be looking to match the way space is visualised in-game?

The image for the landed ship feels like it could take a bit of time to do nicely.

Gavin R: How's this sort of thing looking for a more spac-ey background? I'm not sure how complex you'd like me to get with things – should I be looking at starfields and things like that?

Paul J: It's more "make it cool" at this stage. :)

Gavin R: How are these two looking?

Paul J: Work up #1 to a finished state.

#2 seems to be going south; I think the composition isn't working for the ships and planet. Also need some nebula background to soften it (also less saturation overall).

Gavin R: Will do, I'll have number 1 ready for you first thing tomorrow morning.

As far as number 2 goes, I think what's happening is that we established the composition, lit it and got it to a nice balanced state. Then changed the background without re-lighting. Do you want me to have a go at another composition or do you have something in mind?

Whilst I was rendering out elements to work with on the paint-over, I got this image that I quite liked the look of as a more graphic piece. Not really relevant to what we're into at the moment, but I thought I'd share for fun.

Paul J: Ok, I think let's drop back to the original as our base, and see if you can push it to more this direction – so more blues and lighting. It'll make the image less grey and closer to Sq42. :D

Gavin R: How are these looking? I'm not sure if number two has gone too "spacey," as the image you sent over yesterday looked very cloudy, which I thought we were moving away from. I can drop back the space and go more into a "turbulent clouds with lightning" sort of thing if you like, just let me know – drop out the starfield, etc.

Paul J: Yep – these are good. Spacey – it's all relative – so many direction you can actually go!

Hit a road bump on the landing gear – hoping to have it to you by the end of the day.

Gavin R: Great, I'll get number two worked up around these lines.

Gavin R: How are these two looking for a set?

Looks awesome :D

Just two things – this needs missiles attached. :)

And a bit more reflection on the window to hide the fact there is no pilot.

Also sending you the new landing gear mesh, which gives the ship a bit more height when it lands and also stops it from tipping over (I hope). You'll see when you add them, there is a nice side (looking from the frontish) and less pretty (side on). :P

Gavin R: Paul, can I get a screen grab of where the legs need to sit, please? They come in tiny and when I scale them up I'm not sure where they're supposed to sit on the model. They're all spaced relative to each other, so I just need an overall reference of where they're supposed to be attached. Did you model in any retraction wells at your end?

Paul J: Something like this; mine is approximate too.

Gavin R: I'll get those tweaks taken care of and back to you.

For the next piece, I'd like to get (at least) the keyshot layout/composition image to you tomorrow. Is there anything specific I need to know other than the images you sent over previously as reference? Feels like you're after a moody image of a pair of ships on the ground prepping for launch, with some nice sunset/sky action overhead and a bit of ground crew/tech on the landing area. Does this sound about right?

Paul J: Yep – sounds about right for your proposed idea, though if it's too much work you can scale it back to a single ship and less busyness going on around it.
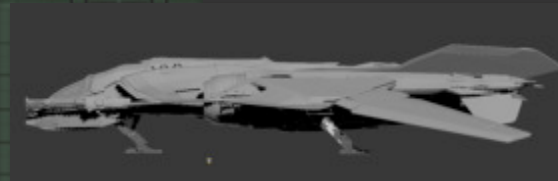
Gavin R: How are these two looking for a set?

Paul J: Looks awesome :D

Just two things – this needs missiles attached. :)

And a bit more reflection on the window to hide the fact there is no pilot.

Also sending you the new landing gear mesh, which gives the ship a bit more height when it lands and also stops it from tipping over (I hope). You'll see when you add them, there is a nice side (looking from the frontish) and less pretty (side on). :P

Gavin R: How are the first two pieces looking?

Paul J: Looks ace!

Gavin R: I just sent you over the high res final versions of the first two.

I've been working up a few images to start the conversation for the composition of the third piece. I like the idea of the "flightline" kind of look – anything here you'd like me to start vectoring in on?   *[this page and next page]*

Paul J: I like the flight line too – vector in on that one. :D

Gavin R: Do you like the look of the back end, or should I spin them around so we can see their noses? Just thinking the legs don't look great from this angle, but the rest of the ship does, plus we've already seen the front of the ship in the other images. Any thoughts?

Gavin R: Actually, looking at it now, the legs look much better – they had a residual dark texture on there from the import that's gone now.

How's this composition feeling for you? I think it'll look great with a techy looking flight-deck surface.

Paul J: Can you try a shot that's at head height with DOF?

Also are you able to fold the wings back on the parked ones?

Gavin R: Here's a few more viewpoints to have a look at. Anything catching your eye? No DOF in there yet. I can get the wings back too in future versions.

Paul J: Lets go with the original. Just pull the ship back a bit.

Paul J: Looking at this cockpit – can you make a tweak?

- Remove the rivets/bolts (they make it look less modern).

- Change the seat covering to be new, high tech; current colour scheme is good, though.

Gavin R: Here's where I am with things at the moment. I've worked up the flight line in more detail and swept the wings of the parked ships back – I really like the lighting on this one as it's got that sort of "dawn launch" type feel to it. I flipped the image just to give us a bit of variation on angles across the pieces. Let me know what you think – I reckon it's going to look great when it's worked up some more. I stayed away from the depth-of-field as the higher angle tends to make things look like toys without something very close to the camera to sell the lens effect.

I've also enclosed the re-worked cockpit with the new seat materials. *[on previous page]*

Paul J: Great stuff!

Crack on :D

The flight deck looks cool, just be aware of some of the elements read as things scaled up and make the fighter look slightly small.
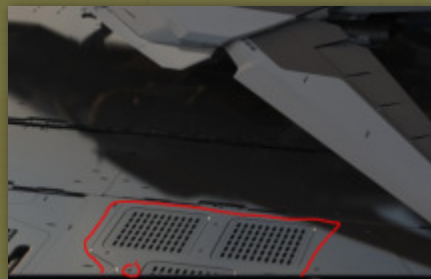
Gavin R: Here's an update so you can see how things are shaping up. It's feeling pretty close to me.

Paul J: Floor needs more to sell it. See my attached notes. You know me – always pushing!

Gavin R: No worries – had this stuff on my polishing list.

How's this looking for you? I haven't put the heat haze/exhaust in as there isn't that much behind it to sell what's actually going on, if you know what I mean. In a still image the distorted air needs something to get a clear read on (like a horizon), and I just wasn't getting that much going on, so I left it out in this version. I put a couple of deck crew type chaps in behind the main ship to bring it to life a bit and add a sense of scale – what do you think?

Paul J: Looks good – ship it! *[final on next page]*

WORK IN PROGRESS

999th Test Squadron

"My goal was to make a ship the 999 would be excited to fly."

So said Consolidated Outland CEO and spacecraft fanboy Silas Koerner during a press conference unveiling the Mustang. From nearly the beginning of inter-planetary travel, Squadron 999 has existed in some formal capacity.

Their testing of a ship's technological limits and fearless piloting of experimental spacecraft have helped shepherd Humanity out to the stars. While Squadron 42 is home to the UEE's best fighter pilots, Squadron 999 can lay claim to many of Humanity's most courageous.

Fearlessly Flying Forward

The origins of Squadron 999 go back over 800 years. During the mid-2130s, Roberts Space Industries began testing the Zeus prototype, a short-range explorer that would eventually make history as the first commercially available spaceship. RSI's drive to bring people safely to the stars was an expensive gamble.

A little over fifty years earlier, RSI had created the Quantum Core Engine, capable of achieving 1/100th the speed of light, for the military. As time went on, civilians and various industries began petitioning to have the technology made available to the private sector. Fast forward to the launch of the Zeus prototype. RSI had been listening and worked to streamline the Quantum Drive enough to make it commercially viable. There were concerns however with the potential risk that would be involved with putting such a powerful technology into the hands of non-military trained pilots. The early test flights RSI conducted didn't ease that concern.

The main issue RSI had with the Zeus during these test flights was its hull integrity. These problems culminated on 2136-6-23 when, during a live flight that was being broadcast across the world, the hull of an early Zeus ship ripped apart as it left Earth's atmosphere, completely destroying the ship and killing the test pilot. The disaster shook people and suddenly the horrifying dangers of space travel transcended the excitement of making it affordable and accessible.

Desperate, RSI turned to the Navy and renowned test pilot Michelle Saleno for help in keeping the Zeus program alive. Saleno, affectionately called Sal by her friends, had extensive experience with RSI's Quantum Core Engine and held the honor of being the first pilot to quantum past Jupiter. Saleno had been pushing for the training of new test pilots who would be dedicated to cutting-edge spaceships.

At the time, the people of Earth were very much alone in the universe, so while the Navy's spacefleet was expanding, there was only a small wing of active pilots. Saleno knew that as the civilian spaceflight market expanded to include quantum travel, the Navy would have to rapidly expand along with it to maintain its flight superiority.

The Navy accepted Saleno's plan and the first incarnation of the 999th Test Squadron was born. Since the Test Squadron was created outside of the normal structure, the 999 designation was just supposed to be temporary until the unit could be properly assigned, but the number wound up sticking. After the deal was struck for Navy resources to be used to help RSI develop the commercial ship, Saleno and her crew spent the first year demanding changes before she or any of her pilots would take a first test flight. She battled with RSI executives over the ship's hull and drove RSI to completely overhaul their design. Finally, on 2137-3-19, Saleno climbed inside the Zeus for her first test flight.

The new Zeus had been worth the wait. At 15:09 SET, Saleno safely touched down. It would require more testing, but thanks to 999's hard work, the release of the first commercial quantum drive enabled ship had become an inevitability.

RSI touted their success and overnight Saleno became a media sensation. She was painted as a risk-taker willing to sacrifice her life so all of Humanity could go to the stars. Privately, Saleno bristled at the portrayal and made it abundantly clear that she had all intentions of dying of old age and not during a test flight accident. As she famously said, "A test pilot's job isn't about taking risks; it's about achieving results. It's about safely landing again, just as much as it is about fearlessly flying forward."

The Wreckless

For two centuries, Saleno's squadron was used to test ships for the military. They were the ones to put new ships through their paces and to create training protocols for those ships to be introduced into regular use. Their work was so important that when the UNE came into existence, in 2380, the squadron was incorporated directly into the new Naval structure with their 999 designation intact, one of the few squadrons that can make that claim.

During the First Tevarin War, the 999 were the first to test variants of the Retaliator. Some in command demanded a rush on the needed ships going into active service immediately, but (thanks to his heroics at the Battle of Idris IV) a then Colonel Ivar Messer had enough clout to advise that the Retaliators' deployment be held until the 999 had signed off on them. Historians credit this move with saving hundreds of pilots' lives. A fatally flawed power transfer unit was discovered and fixed during the testing process.

Today, the 999th Squadron is part of the 18th Battle Fleet and calls the Chronos System home. The squadron uses the system's vast expanse to test the next generation of military fighters. They are reportedly putting the new Aegis Sabre through the gauntlet to see if it should become a staple of the Navy's fleet. Aegis executives and Navy pilots alike are eagerly waiting to hear the revered squadron's opinion of the cutting-edge fighter.

For centuries, the 999th Test Squadron had a reputation as home to some of the Navy's most courageous pilots, and the squadron's nickname, "The Wreckless," fed that repute. In Joyce Tuite's history of the squadron, Fearlessly Forward, the importance of their nickname was revealed.

According to former members, the first question asked when interviewing to join the squadron was "what does The Wreckless mean to you?" Most young pilots would talk about pushing ship speeds to the limit, or sacrificing their safety for the benefit of Humanity. These adrenaline junkies were weeded out and assigned elsewhere. Pilots who become part of the 999 usually understood something Saleno was fond of saying: "Details matter!" They looked at the squadron's nickname and noticed the "W". The 999 is dedicated to pushing the limit while being "wreck"-less, not reckless.

It is recognition of these distinctions and details that has made the 999th Test Squadron one of the UEE Navy's truly elite assignments, and a vital part of improving Human spaceflight for centuries.

Customer Service & Game Support

Left to right:
Amy, Ray, Henry, Chris, George, Amanda, Will

All the devs around the world are absolutely essential — we wouldn't have a game without them. But we also need players, and we wouldn't have players without player service and support. This month, we spend awhile with Customer Service and Game Support, exploring their responsibilities and experiences in service of Cloud Imperium.

JP: *To introduce everyone, please give us your title and what you do for Cloud Imperium Games.*

Henry Davis (aka Kraiklyn): I work at the Customer Service department and I am approaching my first year here and been a backer for a while now. :)

Amanda Mitchell: I am a Customer Service Representative and a long time backer.

Ray Roocroft: I am the Customer Support Manager. I organise the team, maintain/improve our service and look forward to the future of the department.

George Stabler: I am a Customer Service Rep, I have been here for just over 3 months already! I have been a backer since the Kickstarter campaign.

Amy Goldfinch: I am the new Billing Support Rep.

Chris Danks: I'm a Game Support Rep.

Will Leverett: And I'm Games Support Manager.

JP: *How did you get here? What have you done before arriving at CIG?*

Chris D: I was providing technical support to a few small companies around the UK before I was lucky enough to notice I actually had the experience to have a good chance when this role was advertised. I'm a kickstarter backer so I jumped on the opportunity!

Amanda M: I've done a lot in the past, from office assistant to kitchen staff in a Japanese restaurant, to freelance photography and event marshalling. Always wanted to get into the gaming industry, and when I heard about CIG, I knew it was where I wanted to be. So after many months of sending in CVs to every possible position, I got my shot. Best day ever.

Ray R: I have over 9 years Customer Service experience in a variety of positions ranging from international account management, front line support and production roles. As a backer of 2+ years, it was only natural for me to progress to CIG to help improve our support services and customer experience. I love my new role and love the backers we help!

Will Leverett: I've been working on MMOs since 1997, when in my early 20s I bumbled my way onto the staff of a little old game called *Ultima Online* at Origin Systems in Austin, Texas. Those were early days in online gaming, and we didn't really know what we had at the time.

UO is still going today almost 19 years later, and that kicked off my career in online game publishing. Since then, I've done a little of everything in online game operations, working on over 20 games.

I was actually a backer of *Star Citizen* before I joined Cloud Imperium Games. I'd worked with our terrific Austin Studio Manager John Erskine at two other companies, so I jumped at the chance to get to work for him again and to help build the BDSSE. :)

Henry D: Well, I first landed in the game industry when I got a lucky break with Blizzard, and served 4 years in the *World of Warcraft* Game Master trenches in south Ireland, which was pretty fun. After that I moved back to the UK and worked for Jagex Games Studio for 2 years as part of their billing team for *RuneScape*. I took a year hiatus after that and learned about *Star Citizen* shortly after leaving.

Within 5 minutes of being told, I pledged for the Rear Admiral Package and closely followed the project since. Never thought I would eventually end up working for CIG, but man … dream come true. :)

Amy G: Before I arrived here I spent over a year working as a CS Representative for a mobile games company in Wilmslow. Before that, I spent a few years working for the government both at a tribunal and the HMRC.

JP: *"HMRC"?*

Chris D: Her Majesty's Revenue and Customs.

Amy G: The tax office. :)

JP: *Ah … great preparation for dealing with billing issues.*

George S: I have done a bit of everything. Ex-Royal Navy, lots of CS experience. I also did Customer support at BioWare for *Star Wars the Old Republic* over in Ireland. I had a bit of a gap before I started here where I was working in Sales <shudder>, very happy to be here and back in gaming.

JP: *As you introduced yourselves, I was hearing that what the Customer Service Department does is Customer Service. :)*

What do you do for a typical customer / in a typical day / in the last hour or two?

Chris D: I've been answering everyone's technical support issues! I don't get to ask people to "Turn it off and on again" nearly as much as I'd like.

JP: *Does that mean you're on call whether it's a problem on our end or on their end?*

Chris D: A little bit of both, especially since some of the issues we come across can be difficult to put into either box.

JP: *Give me an example or two of what you are asked to deal with.*

George S: I do customer support which basically covers everything – from things like having an issue on your account or recovering it if it is lost, to more complex things such as setting up and dealing with Kickstarter pledges that were not migrated over, so we have to do the transition manually now. Basically if you have an issue, I am here to help.

Henry D: We interact with our community via the ticket system, which is pretty much the bread and butter of our daily tasking. To be honest, you see at least one unique item on a day to day basis.

It ranges from generic account administration, answering the questions we can about the game, and helping out with any issues like recovering lost accounts and assisting with pledges and account assets, all that jazz. :)

When time permits we try to go on the RSI chat and forums too. Most if not all the team are backers ourselves, so it is always nice to hang out with the community.

Chris D: One thing I see pretty often are issues with the general performance of the game. In Crusader, our "ba-

Amy Goldfinch

by-PU" environment (aka Port Olisar), this can be caused by our servers rather than the user's machine. By far and away, the biggest part of my job at the moment is helping with launcher and general installation issues, from people not being able to download the game to crashes on launch.

George S: We also deal with any basic questions people have regarding the game and helping new people choose the right package for them, get in game and playing.

JP: *Walk me through the life of a typical ticket. (Yeah, I know that "typical" is going to vary greatly.)*

Amanda M: Currently I'm helping out with Concierge tickets, as well as the main tickets we get. It can range from helping out with physical merchandise orders or answering any questions backers might have regarding pledges, tools on our site, events, all that fun stuff. I'll pop on chat and the forums and keep up to date with what's going on, or just chat about whatever comes up.

Amy G: An average day for me would be processing refunds for backers for various reasons, and handling any billing related queries. Backers request refunds for all kinds of issues, from technical problems to hardships.

George S: We don't really have typical tickets, so I will just grab one from today at random as an example. This one is for someone who was having an issue in game. They could not see some of the weapons they had purchased on Voyager Direct in game on the holo table.

So the first thing I do here is check that the player actually has access to the weapons they are asking about in their pledges and that it isn't a REC purchase that has run out.

Once we know they do have it, we give some basic support and fixes, as there are some issues with the holo table right now. In this case it is to delete your USER folder and the weapons appear again for you. We also ask the player to make a post on the Issue Council to make sure our QA team are aware of the issue and can get it fixed in a future build.

Henry D: Aye, there is nothing typical in Customer Service. Vanilla need not apply. And that isn't a bad thing. Some tickets can be outright heartwarming to read. We had a guy who was a veteran in the service of his country and wanted to explore, take his mind off things. His friends contacted us and wanted to all chip in and help offer him a Carrack so he could explore the universe with his wife. So we helped out with making that possible.

It was pretty special to help with a request like that, and know how much it means to that person. That is what really distinguishes this community and it is an absolute honor to be a part of it, more so to offer support to those guys and gals! :)

George S: I guess a fun one I did was an account recovery I actually just did. It was an old Kickstarter account that had never been migrated over from our old site.

The player unfortunately couldn't get his preferred handle when we moved the account over, so asked us for a few ideas. In this case we gave him a default name he could change when he wanted. But we had thought of a few silly ideas and he wanted to know what they were. We suggested a few things such as "BanuPrice" and "Handom-Randle," and we now have a "HandomRandle" out there in the 'verse!

Ray R: My responsibilities lie halfway between a traditional CSR role and CS Manager – I answer questions and queries through our support channels (tickets, chat, in-game, forum, etc.) with the team, but in addition I was recruited in January 2016 to reform protocols and workflows to ensure our backlog of 6,000+ tickets was brought down to a reasonable level, and to review the service operation as a whole. Since then, we have brought down first-response times and full resolution times, increased our customer satisfaction ratings, and seen a decrease in ticket turnover as a bi-product. The future holds bright and wonderful things for Customer Support to give our backers something more than a traditional service, so watch this space. :)

JP: *What is "ticket turnover"?*

Ray R: Ticket turnover is the number of tickets we receive in a day compared to the number that we service and ultimately solve. In December of 2015 we had in the region of 6,000 tickets in the system with up to 1-month response times due to the sheer number of requests and team size. Now with the new work flows we have a 12-hour first reply time with a full resolution expected within 24-48 hours – all with the same team size! Our service is now up there with the best, but we strive for better, and so we will be expanding to be far more backer-facing with more in-game and website support than ever before.

Henry Davis
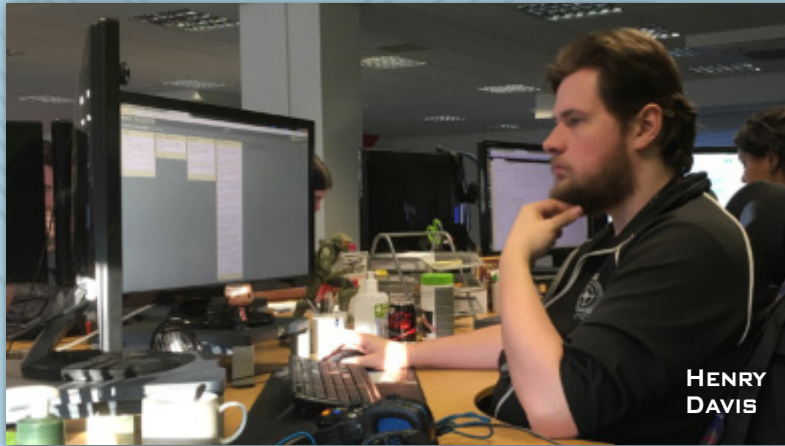
JP: *Ray mentions tickets, chat, in-game, forum, etc. Does that mean you are able to take care of some problems before they become official tickets?*

Ray R: For sure – we are actively pushing towards a live-oriented support service to address issues before they become support tickets. Whether this is via the website, chat, forum, in-game … we are happy to help in any way possible. We are also looking to broaden self-service support opportunities – this is where users will have the tools and knowledgebase available to them to assist themselves rather than have an intermediary CSR, therefore solving the issue quickly and removing the need for a CSR. This is particularly handy for the tech-savvy among the community, but with the availability of our support team at all times we are always here to help.

JP: *"CSR" = ticket?*

Ray R: CSR = Customer Service Representative.

JP: *To what extent do you each have specific responsibilities? For example, Amy mentioned billing support. When you get something that needs to be taken care of, how do you determine who deals with it?*

Amanda M: Mostly we have parking lot brawls and the winner gets the ticket.

JP: *I want pictures!*

Amanda M: We'll be sure to record the next Ticket Rumble. =P

Henry D: The CS team is pretty diverse in terms of specialty. I've been here almost a year and dabbled in pretty much everything, but we are focusing more on specialised roles to streamline processes. For example, Amy primarily handles billing-related queries, but might handle general queries if her bandwidth allowed it. :)

I tend to be all over the shop, but primarily I handle generic queries and general stuff.

Ray R: I create tickets and other prizes on paper, and then throw them out to the team. Some of the bits of paper have free ships, others have free items, some have ticket numbers …

JP: *So in general, Ray is ticket gatekeeper? Or are you as likely to deal with something without it ever going through him?*

Ray R: The systems that I have set up since my arrival allow for the tickets to be directed to the best person/team to answer that query. Accounts and Billing to Amy, Concierge to Amanda, etc. This allows for much better accountability and overall support quality. I do have manual intervention ability, but I believe that the system is working a treat, as there is no delay re-assigning the request – it's as simple as submit / response / solve!

Henry D: If there is a complex situation that demands or requires a special exception to be made, we usually run it past Ray for a final yes or no. :)

George S: We do kind of cover everything, but I guess we do kind of specialise a bit. As well as general support, I guess I know how to handle any old Kickstarter setups. But we all do a bit of everything. If it's a simple tech question or billing question we will still do it if we can.

JP: *I think we've touched on this, but I don't recall specifically asking it: What's the difference between Game Support and Customer Service? They both involve addressing backer problems, don't they?*

Chris D: Game Support has a few additional responsibilities attached, mostly interacting with backers during testing and helping organise the PTU tests themselves.

JP: *What's the quickest problem you've resolved recently?*

Henry D: Let's see … quickest resolved issue for me: "Where is my UEC!?"

George S: Yup

JP: *And how did you resolve it?*

Henry D: When you pledge for a game package, it usually includes a predetermined sum of UEC, which is the game's virtual currency. This is not awarded immediately; it will be granted when the persistent universe officially launches. The credits are designed to help you find your feet when you are out there and give you a head start in making those all-important first purchases. Fuel for your ship, weapons and ammo, supplies … paying that parking fine for illegally parking your ship. :)

JP: *I can understand that clarification answers are often going to be dealt with pretty quickly.*

George S: "Can I have an Idris, plx?"

JP: *Someone seriously asked for an Idris as a gift? Or wanted to buy one?*

Ray R: For me it would be providing guides on how to apply upgrades – many don't realise you need to apply it after purchase!

Chris D: Every now and again I get a ticket where there is an actual "solution" that I can offer, some version of .NET that needs to be installed or a change to a configuration file. Those are my favourites, as being able to provide a solution rather than having to troubleshoot is awesome.

George S: "Does my package come with Squadron 42?"

That's quite a simple one as we can check. If they have a package from before the split they will have it and we can tell them they have. If they don't we explain how they can get it on a new package.

Amanda M: Quickest resolution … I don't think I've had one of those in some time.

JP: *Do your Concierge tasks tend to be a bit more complicated?*

Amanda M: They do indeed. There might be multiple pledges that we're working with, or a request that might take time to sort out. Or I just won't shut up. It's one of those two.

Henry D: Resolutions and how quick they can be really are case by case, but typically it might just be someone who needs pointing to the right area of the website to find what they need, whereas others might need a full education. As you say, clarifications offer a quick turn around.

Another quick example would be if someone missed a ship sale by a day or two. We usually make an exception for them if the reasons are justified. It simply involves a modification to their account that allows them to pick up the pledge they might have missed.

JP: *At the risk of getting into murky waters, what sort of reason for missing a sale is justified?*

Chris D: Being turned into a Newt.

Amanda M: That happens surprisingly a lot.

JP: *Newt. Ok, that one I can understand.*

Henry D: Murky indeed. Again it really is case by case. I couldn't really offer any specific examples at risk of it being abused.

JP: *Let's go to the other extreme. Give me examples of the most complicated task you've had to handle.*

Henry D: Again this is murky and on case by case basis, but suffice it to say some cases can take a few minutes to resolve where others may take up to an hour. Generally speaking, I would say recovering a lost account can be complex in that we have to verify a lot of details surrounding the account with the person attempting to recover it. Security is something we take pretty seriously. :)

George S: Account Recovery issues will be some of the simplest, but can also be the most complex.

Sometimes they're as simple as pointing a player in the right direction to recover an account. Sometimes the player does not know where the account is or what email it is on, in which case we have to start digging into any information they have in order to try to track down the account, and then verify the account is theirs.

It's quite hard when all you have to go on is an order ID and you have to try and get security on an account that was set up with a couple of typos in the important information we use for security … and very satisfying when you get the account back for them.

CHRIS DANKS

Amanda M: Mine would be trying to help out a backer who only spoke Korean. It's probably the longest ticket I've ever had, spanning over two weeks with Google Translate making it into a secret code I had to crack.

The day I finally was able to assist him and get him back into the game was a victory that will stay with me for life.

Henry D: Language barriers can make things very complex, I agree. Having to use translation tools can make an issue that could be relatively simple much more complex in trying to establish what the customer needs. :)

Chris D: I get the odd ticket that can take a very long back and forth before we come across what the problem actually is. In one case I'd been troubleshooting an issue loading into multiplayer with a guy for most of a day until I received a very apologetic response explaining he'd accidentally been using his "backup install" which didn't have permission to get through his firewall.

JP: *Here's your chance to help backers out in general: let's say that I have a problem. What are the top three things you wish I would do to help resolve it as quickly as possible?*

Amanda M: Read.

Chris D: Read the FAQ.

Henry D: Read the Hot Issues.

Chris D: Re-read the Hot Issues.

JP: *Where are each of those?*

Chris D: Both are here:
https://robertsspaceindustries.com/help

Henry D: I know there is a huge temptation and preference to speak to someone directly, but you can really save yourself having to wait for a reply and also check out a huge wealth of information that is readily offered via the FAQ and Hot Issue section.

Amanda M: Include as much information in tickets as possible. Order numbers, screen shots, dates. More information is never a bad thing.

Henry D: Yes indeed, #2 on this list would have to be: include as much detail about the issue in your ticket as possible. It helps us give a quicker resolution.

George S: It helps when they recognise the difference between Login ID and Handle. Your Login ID is private just to you and you use it to log in with. Your Handle is public and unique and is not used to log in.

JP: *It's not uncommon for people to try logging in with their Handle?*

George S: People try to log in with their Handle all the time, myself included ….

The big issue is that your Handle and Login ID can not be the same, unlike some other games.

Ray R: The Power of Three: Use the documentation on the website (FAQ, Hot Issues, etc.), ask the community (who

are a great hub of knowledge), and finally ask the Customer Support dept.

JP: *Go to community first, because there are thousands of them and only a handful of you?*

Ray R: Our community is very much a hub of knowledge and across several time zones. Backers want to help backers and it is the key to our fantastic community.

Henry D: I'd probably go as far as saying if you have game design questions, bug reports and ideas for game development, take it to the forums rather than us. We don't have any say in design aspects of the game, or the ability to influence that area. When we say head to the forum, we say it because that is genuinely the best place to go. :)

George S: There are a couple of forums for newbies which are very good to ask questions in.

https://forums.robertsspaceindustries.com/categories/recruiting-station

https://forums.robertsspaceindustries.com/categories/new-recruits

Players there can be really helpful and provide some good guides on how to do stuff.

JP: *And devs do pay attention to game development forum discussions, don't they?*

Henry D: Absolutely. I know our Audio Lead, Lee Banyard, is very prolific on the forums and regularly replies to the Ask a Dev audio section of the forum. We have had the ship team answer questions from the community too on various threads. :)

George S: The real benefit of the forums here is that they get lots of opinions as well, just not one, and so there can be a discussion which will bring out even more good ideas.

George Stabler

JP: *We've partly covered this already, but let's look at the flip side – what do you wish backers would not do when trying to get something resolved? Is there anything to add?*

Henry D: Spamming tickets is a big no no. :)

Amanda M: Multiple tickets aren't a great idea. You can update your current ticket with any new details, but sending in more than one about the same issue could cause problems, especially if two different agents pick up the same one.

Ray R: Multiple ticket submissions really hamper the team. It does not simply add to your old ticket, it creates a new one. So for example, five submissions could be covered by five team members at once on the same subject. Multiply this by the number of backers and you can imagine it can really clog up the workflow. When a ticket is submitted you can be sure we have received it, and you receive confirmation that we have done so, so I would implore that they be patient and await for our response. :)

Chris D: RAGE CAPS

Henry D: I would say that while there are some problems out there that can cause a great deal of frustration, just remember that ultimately the Customer Services team are here to help you in whatever capacity they can. Please don't take out that frustration on the team.

As mentioned earlier, we are backers ourselves, we totally get where you are coming from, but getting abusive toward the team isn't going to create any solutions. :(

George S: Don't ask about one thing when you're really intent on something else.

JP: *Please give an example of what you're talking about.*

George S: Putting in a ticket for one thing when they really want something else but don't want to ask it directly – such as asking for information on ships when they really want to persuade us to make one available to them. It just means it takes longer to answer the actual question.

Ray R: Getting to the root of the problem when you file a ticket helps address the issue far quicker than (for example) shrouding the request with a backstory or something else.

JP: *Will and Chris, how is what you do in Game Support different from Customer Service?*

Will L: Game Support includes the Public Test Universe, which makes for a little different than standard support. That's become a major component of what we do in Game Support. We are involved with the planning, deployment, and publication of PTU tests, then help arrange getting testers into PTU so that we have player feedback before a build goes to Live.

Chris D: The biggest difference is that we work with the players in a testing environment. The PTU (Public Test Universe) is where we can stage our patches before going to a full live release, in order to get feedback and perform more number-intensive tests.

Chris D: Thanks to the PTU, we've been able to fix a multitude of bugs that might have made the live service a worse place to play than it is.

Aside from that, it's mostly down to our technical focus.

JP: *So in general, you handle things that happen during play, while CS handles everything outside of actually playing?*

Chris D: Kind of; there's still a lot we deal with outside of the game.

George S: And stuff we deal with in game.

JP: *Do I submit a ticket the same way to get either sort of problem resolved, or are there two separate paths?*

George S: There are a few paths. When you submit a ticket you get a selection of options.

JP: *But I start at the same place either way?*

George S: Yes, all tickets are submitted from the same place.

JP: *Can you give an example of Game Support outside of the game, and Customer Service in game?*

George S: Say you want to know how to equip a weapon on your ship. I would deal with that. Whereas if you were having an issue equipping the weapon, that would be Chris, but there is some overlap.

Chris D: Outside of the game I'm dealing with the issues of getting it to actually run. We also talk with the players about their experiences, gather feedback, that sort of thing.

JP: *That might be why we call it Game Support ... :)*

George S: It's quite hard to put a line between the two, as there is lots of overlap.

Amanda Mitchell
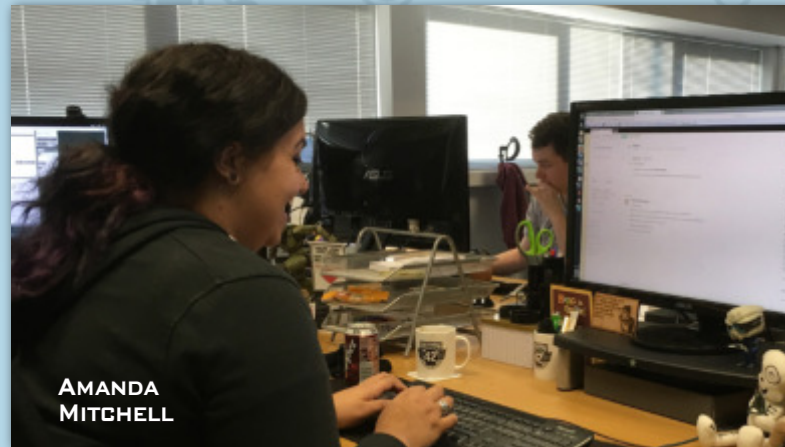
Henry D: Strictly speaking, CS's realm is more in the aspect of account and pledge administration, but as we are backers we can apply our own knowledge of the game. :)

So like George said, if we happen to know an answer about the holotable and equipping weapons, we can answer that, whereas if an actual technical issue or bug were to be the problem, we would advise them to contact Game Support or refer to the Issue Council (Issue Council being where bugs are reported and followed up)

JP: *It sounds like deciding who will handle an issue is a lot based on common sense — you grab it if you can handle it, and you leave it for someone more appropriate if you can't (with oversight from Ray and Will).*

Henry D: Right.

George S: Yes, definitely. Even within what are our main areas, if there is something I don't know how to fix, I will ask someone who does, especially as the newbie on the team.

Amanda M: We also like to discuss ticket issues amongst the team to make sure we're all in agreement with the decision, or just to clarify what we're doing is the best option. We work as a team at all times.

Henry D: We call this our Sanity Check. :)

JP: *What's the Issue Council? Is that what you were just talking about, Amanda?*

Amanda M: Oh this is more of a CS team thing. We talk to each other about tickets and help each other out as much as we can. There's no I in team, and all that.

Henry D: The Issue Council is a feature that was brought in not too long ago. Essentially it is a place where the community can report bugs in detail for our QA team and dev team to follow up on. Not only that, but it also allows the community to upvote the issue based on how urgent they feel it is to be prioritised and fixed.

George S: https://robertsspaceindustries.com/community/issue-council

JP: *So there's no official "membership" on the Issue Council – backers can participate, or not, as they choose?*

Henry D: Correct, although if they are on the PTU (Private Test Universe) it is encouraged. :)

George S: Same with if we have a complicated ticket, we will get someone to check it to make sure we are actually answering the question in a way someone other than us can understand.

Henry D: It benefits everyone to use the Issue Council for bug reports. The faster a bug can be detected, isolated and patched, the quicker things can progress. We (CIG and the teams) are always deeply appreciative of all the time and effort the community injects into the Issue Council, and it has been immensely effective. Maybe that can be an interview for QA later. :P

George S: It again also means that others can reproduce the bug and give feedback if they had the same bug, saying how they got this, which makes it easier for QA to work out exactly what causes it.

JP: *Talk to me about Community Events – I understand that's in your bailiwick, as well?*

Henry D: Community events are a thing I have been trialling and is in no shape or form official at the moment. But when time permits, I log in to the live servers and set up scenarios to engage the community with. :)

So far the feedback has been very positive, and I hope to continue running these events on a trial basis and see how we go.

JP: *What sort of events are we talking about?*

Henry D: A typical example of this would be setting up a scenario where I would spawn a Retaliator Bomber, and set it adrift in the YELA district of the Crusader system (a planetoid with an asteroid belt ring). Here, I set the ship adrift and set up a mock mission objective which is briefed via the chat window. Players are then tasked to recover the Retaliator and return it to Olisar in one piece.

JP: *That sounds like fun. I hope it works out.*

Henry D: It kind of harks back to the old school GMing you would see in *Everquest* or *Neverwinter Nights*, but yes. I hope it evolves into something awesome. :)

JP: *Did people cooperate in getting the Retaliator back, or did they fight over the right to recover it?*

Henry D: In the verse, it really depends on the characters profile. We have law-abiding citizens, and others who are outlaws. In a majority of cases though, it is pretty cool to see a majority of these scenarios end with cooperative gameplay. YELA is a big area, and search and rescue is always more effective as a team. Part of the challenge is actually finding the ship drifting out in the asteroid belt, with a minimum ECM and IR signature. In short, it is hard to detect. :)

But yeah, we see pirates come along either actively using the derelict as bait to lure in would-be salvagers for an ambush, or seeking to recover the ship for their own profit. :)

JP: *That's not a trivial scenario – about how long did it take for the players to resolve it? And did the Retaliator make it back safely?*

Henry D: Well, a resolution of the mission really depends. The longest run was about 30 minutes while several people scoured the asteroid ring searching for the wreck. Depending how smoothly recovery goes, it can be done inside of an hour. Outlaws might extend that mission time … or dramatically shorten it. It depends if the outlaw is trying to recover the Retaliator or outright destroy it. But in most cases, yes, it makes it back. :)

It might not be completely intact though … might want to talk to the insurance guy about that.

The amazing thing about it is it is entirely unscripted and the outcome is determined by players. The same scenario can play out in so many different ways. And that is what keeps things interesting and people on their toes!

JP: *I'm gonna be interested in hearing about more events as y'all develop them.*

This has been fun, but we probably ought to wrap it up … any last words?

Chris D: See you all in the 'verse!

George S: I just want to say thank you to all our backers – they are what makes this a great game and a the best place I have ever worked. Good hunting out there!

Henry D: Absolutely love this community and proud to be a part of it. Thank you everyone for your support in making this entire venture possible and I look forward to seeing what is over the horizon.

Ray R: We are doing our dream job and helping others (as well as ourselves) enjoy the production of the BDSSE. We all look forward to helping and enjoying the *Star Citizen* journey with you!

Amanda M: My last words: Keep being awesome!

Amy G: I hope to continue to work with the rest of the Foundry team, they're a fun bunch to be around and I'm really enjoying my time here. :)

Will L: One of the real pleasures of working on *Star Citizen* is the chance to challenge myself on a very unique project by developing new ways of bringing this universe to life.

I'm absolutely thrilled about what we're doing, working with our playtesting backers on PTU and on Issue Council to turn player feedback and bug reports into tangible fixes and improvements that make each build better, which brings us one step closer to fulfilling our vision.

Now … I don't want to give out all of our secrets, but we've got more improvements on the way! I'm very proud to be working with a great team and our backers to make the BDSSE a reality. :)

JP: *I'm guessing we're gonna have to wait to get more on that, so we'll end with a cliffhanger. Thanks to everyone!*

WHAT IS YOUR NAME?
Alexis Lesnick

WHAT IS YOUR QUEST?
Cloud Imperium is my first job in the industry! I came with Ben to Austin when he moved for work on *Star Citizen*, and after the previous customer support agent quit days before a ship launch I was in the right place at the right time. (I remember our Zendesk inbox having over 1,000 tickets the day I started!) After a year and a half on the front lines (and another move, to Los Angeles to join the team there) Sandi put me in charge of subscriptions and physical merchandise. Today, I don't have as many opportunities to interact directly with backers on Zendesk, but if there's a problem with your merchandise order, I'm on it. One of the most exciting things I get to do today is work with BHVR on subscriber flair for the hangars. It's really cool helping brainstorm ideas!

WHAT IS YOUR FAVOURITE COLOUR?
Salmon pink — someone once told me it was my aura color! I also like photography, art, video games, music and cooking! I'd like to thank all the backers who have made me feel like a real celebrity over the years. You're a wonderful bunch of people, and I'm proud of the fact that I get to help represent you at Cloud Imperium. Finally, I would like to send my love to my parents, Jeanne and Scott, who are back home in Pennsylvania. Here's hoping your names will be in a printed Jump Point volume someday soon!

CHRONOS SYSTEM

SYNTHWORLD

In the outer reaches of the UEE sits the Chronos System, which, since its discovery in 2863, has been shrouded in government secrecy and political controversy. Official government documentation list the Navy's 18th Battle Fleet, then stationed in the Kellog System, as the first to make the journey into Chronos upon discovery of the jump point during a routine scan patrol. However, it is worth noting that a recent court case, Contraly vs the UEE, lays a counter claim that it was Contraly's great-grandfather who discovered the system and reported it to the 18th, but was denied proper credit due to complications involving an outstanding warrant for poaching Orms on Xis. Expert historians have chimed in on both sides of the debate, and it as yet remains in the court's hands to decide.

Either way, at the time of discovery, the system consisted of a G-type main sequence star, two uninhabitable planets huddled near the sun and nothing else. With its remote location and lack of resources and habitable locations, few thought the UEE would have any interest in the system, so observers were shocked when the UEE quickly claimed Chronos to be restricted for government use and development. When military ships started to frequently enter an empty system, curious members of the public questioned what was really going on in Chronos.

For years, theories ranged from the unimaginative (doomsday device) to the inspired (invisible space station). One dedicated conspiracy theorist supposedly even went so far as to stow away on a military vessel bound

for the system. When she later claimed that there was nothing hidden there, her inability to uncover anything scandalous infuriated her fellow theorists and only fueled the fire of speculation. The claim was that the only way she would have found absolutely nothing is if there was something to hide and the government had again silenced the truth. Those who believed in the cover-up were even more certain that there had to be a reason the UEE wanted Chronos to themselves.

It wasn't until 2872 that Imperator Corbyn Salehi stepped forward to formally announce what the government had been working on. Chronos would become the home of Project Archangel, commonly called "Synthworld," a massive UEE initiative to build a planet. After centuries of rewriting planets with terraforming technology, Humanity now set its sights on creating one.

Project Archangel

Many things about the Chronos System made it an ideal location for this ambitious project. The star's similarity to Sol's sun made it optimal for human habitation. Its two planets were desolate rocks, meaning that the massive undertaking would not inconvenience any inhabitants, nor would the decades of construction and experiments endanger anyone not associated with the project. The lack of planets outside of Bruder and Schwester allowed the Synthworld to be placed at the ideal orbital distance from the star. It had the added benefit of being a relatively remote system, which minimized the chances of unwanted visitors and prying eyes.

When the project was announced, it symbolized a future where Humanity could create habitable worlds without the risk of harming other species. Haulers made the long trek to take resources into the system even if profits margins were higher elsewhere. Scholars expounded at length what the success of Archangel could mean to the Empire's future. And civilians in every system excitedly waited for a new world to be born.

Yet as the decades passed, the promise of the Synthworld seemed to wane along with the public's interest. Despite billions of hours and credits spent, the planet seemed no closer to completion. The project became tainted with corruption scandals and cost overruns, leading some progressive Transitionalist to call it a "financial vampire" that was draining money and resources from more important projects. The Synthworld no longer symbolized the future; it was putting it in jeopardy.

Today, Chronos sees a minimal amount of traffic. Haulers still offload supplies at Archangel Station and some traverse the system along the designated travel lanes to access the Branaugh System. Past that, there are few other reason for people to find themselves in the Chronos System.

TRAVEL WARNING Though the Synthworld is in unrestricted space, all Synthworld business must go through Archangel Station. Anyone attempting to access the Synthworld directly will be met by members of 18th Battle Group and asked to divert course or face dire consequences.

Chronos I (Bruder)

Sitting in a tight orbit around Chrono's sun, Bruder experiences scalding surface temperatures. Metallic ores are present in the planet's crust, but the intense heat has kept the UEE from mining the minerals for use in the Synthworld.

Heard in the Wind

"At least I was doing something useful with the credits."

– Ellie Kanis, as quoted in The Synthworld Scam, 2931

Chronos II (Schwester)

Schwester is known for its role in one of the most infamous political scandals in UEE history. In 2925, a Senate attache was tasked with creating a progress report for an independent auditing committee. She discovered that the harvesting and refining facilities that were supposed to have been built to collect the greenhouse gasses trapped by Schwester's dense atmosphere had in fact never been constructed. It seemed a senior foreman on the project, Ellie Kanis, had been skimming from the vast project fund undetected for years.

Public outrage over the Kanis Caper only intensified as publications, like the Terra Gazette, quantified the amount taken in graphs splashed across the front page. For the first time, many in the public grasped exactly how much money the Synthworld construction cost the Empire. The Synthworld's sluggish construction pace and the ballooning government deficit drove many within the Empire to question whether the project was still worth it.

Chronos III (Synthworld)

The defining feature of the Chronos System, Synthworld, also known as Project Archangel, is Humanity's attempt to construct a planet from scratch. This ambitious idea originated with the Clarke Committee, a government task force assigned to envision a "more perfect future for Humanity" in light of the massacre of Garron II. If the Empire could build its own worlds, there would no longer be a need for the risk of destroying fledgling life that terraforming presented.

In the second half of the 29th century, the UEE was looking to redefine its status in the universe. The Messer regime had been overthrown almost a century earlier, but greed and corruption still festered within the government. Amidst this uncertainty, Corbyn Salehi rode a wave of reform into the Imperator's office, campaigning on a platform of open, honest and ambitious government. Proving himself to be a man of action, not just words, Salehi latched onto the Clarke Committee's most fantastic

proposal – a man-made planet. He believed if Humanity rallied around an ambitious goal it could progress past the petty differences holding it back.

Salehi's optimism was infectious, allowing him to garner the necessary public and political support. For decades, even after he no longer held the office of Imperator, Salehi and his vision sustained people's faith in the project. Unfortunately, Salehi died in 2922 from unexpected complications with his artificial pancreas. Without his guiding force, the Synthworld effort has fallen on hard times.

Today, construction on the Synthworld continues. Updates on the project have become less frequently, but government scientists and engineers claim to be making progress. Many still hold hope that the bold face of Humanity's future will yet emerge from Chronos. Whether Synthworld becomes one of Humanity's greatest successes or failures is still to be decided.

Archangel Station

This orbital station is the nerve center for Synthworld construction. Home to the project's scientists and engineers, it is also the port of entry for supplies and resources needed to build the planet and keep the crew content.

With a steady amount of cargo moving through this sector, added to the sensitive nature of the project, the Navy's 18th Battle Fleet calls Archangel Station home when not on patrol. Included in the 18th Battle Fleet is the 999th Test Squadron. Known as "The Wreckless," this elite squadron is famous for testing experimental ships and components. The vast expanse beyond Archangel Station, with limited engagements there, has proven to be an ideal testing ground for potential tech the Navy hopes to incorporate into its arsenal. It seems fitting that the Navy's most forward looking squadron calls the Empire's most forward looking system home.

Heard in the Wind

"For too long Humanity has lacked a cohesive goal to inspire us to achieve the impossible. Centuries ago, the idea of anyone visiting Earth's moon, let alone leaving the system, seemed like only a dream. Though Humanity has gone far, our goals have stayed grounded. It's time to change that."

– Corbin Salehi, Synthworld announcement press conference, 2872
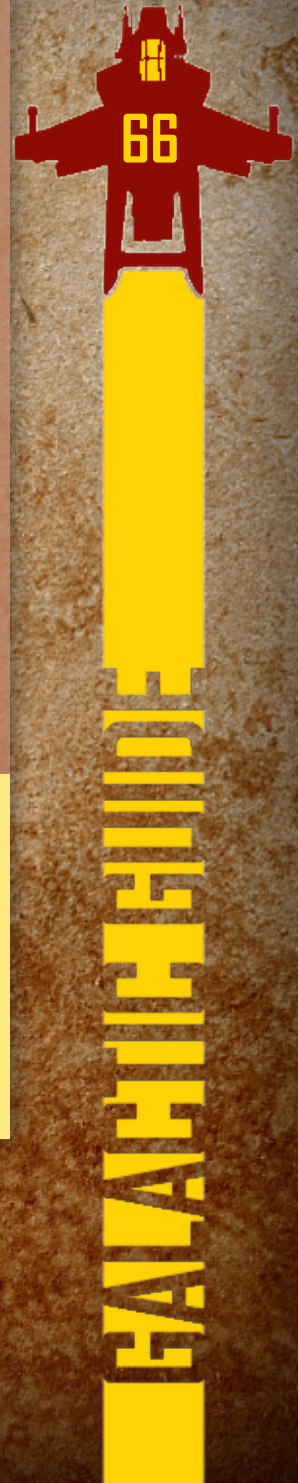
Second Run
A SORRI LYRAX STORY

by Thomas K. Carpenter

Part 3: Act Like You Know

[48:57:22]

The *Dodecahedron* had already passed through the Kilian system, and was well on its way through Ellis towards the Magnus jump where it would then continue on its way to Stanton. The complete opposite direction of where I wanted to go. Under normal circumstances, the pilot of the ship would have honored his agreement and have already dropped me off at a starport so I could continue my journey to Tyrol IV and finish my delivery on time. Normal circumstances might also indicate a place to sit that didn't involve slightly-above-freezing ship flooring and a less than insane number of wooden games and puzzles in my general vicinity.

But nothing about the *Dodecahedron* had been normal thus far. Now I was going to miss the timetable and I was out more funds that I couldn't recover. At the rate I was going, I'd use up my ship savings and be back at zero year soon.

I hadn't given up, but I didn't have any more ideas about how to convince him to take me to an Ellis station. I'd threatened to destroy his puzzles, but he calmly replied that he would cut the oxygen supply off and throw my body out the airlock. I thought it was a bad joke at first. But since I hadn't registered my trip on the *Vita Perry*, nor the transfer to the *Dodecahedron*, no one would ever know that he'd killed me. I was at his mercy.

Based on the twisted games on the shelves, I should count myself lucky that he hadn't knocked me out and cut me into tiny pieces.

I didn't even really know how to read him. Men like him never came into my father's bar. Occasionally, we'd see 'proper

folk' — that's what my father called anyone who could speak for more than ten minutes about a subject not involving making, fixing, or operating something — wander in when the sky chose to drench them, looking for a dry place to hunker down. They'd ask for a menu and when my father would point to the list of eight items we cooked on the wall, they would wrinkle their noses like mice sniffing a trap. To be fair, "cooked" was a liberal use of the term. We had a vat of semi-regularly changed synthetic oil that served to flash-fry the various food-like items we carried. My father only had the food because the late night drunks wanted something to soak up the alcohol before they tried to take a hover back to their apartments. I imagine many of those meals were hurled out the window at vomit-speed to rain down on unfortunate pedestrians.

So I only had my brief interactions with Senet Mehen and his museum of puzzles to judge him by. Mostly, I was at a loss. In my mind, I could replace him with a sorting robot and a programmed auto-pilot, and the ship would go on doing business without a hitch.

And maybe that was the problem. He didn't understand, nor care, about people. We were a blank wall to him. Heck, my initial message to him was a spam comm. I should have been more suspicious when it got a reply. Normal people knew enough about Human nature to ignore messages like that. Instead, all he cared about was his puzzles and nothing else, which, honestly, seemed a little sad to me. I wondered about the kind of childhood that would drive him away from Humanity, to hide in a box flying through space.

It might seem hypocritical for me to think that, given my plan to do something vaguely similar, but it wasn't the travel between the star systems that interested me. I wanted to know the people at each destination, learn about their customs, be grossed out by their meals, dance awkwardly at their parties, laugh at their jokes.

Frustrated and chilled, with no way to influence Senet

Mehen at my disposal, I stared at the puzzle tower on the table. The jagged, fractal-like pieces were meant to scissor together in three dimensions, creating a wooden sculpture.

On their own, the pieces seemed impossible to decipher. I'd put together jigsaw puzzles on my mobi when I was a young girl, but with those there was always a picture to give a clue to the final result. With this one there seemed to be no target shape to shoot for. The maddening interlocking pieces had to be fitted together in ways that seemed random to create the final shape, and the only clues the creator had given were in the form of wispy lines on the individual pieces.

I wasn't a puzzle expert by any means, but I was surprised by Senet Mehen's inability to solve it, if, as he said, it was only supposed to be of a moderate difficulty.

Which got me thinking: what if didn't require raw problem solving skills but something else which Senet Mehen lacked?

I didn't know how long I had until we reached the Magnus jump point, but if I could figure the puzzle out before then, I had a chance.

I quickly started organizing the pieces, trying to understand how they fit together. At first, I tried to match the geometric shapes, but decided that Senet Mehen had probably tried that, so I shouldn't bother. That line of thinking eliminated a few other strategies. Basically anything involving geometry, physics, or mathematics.

Each piece had wispy ink-drawn lines that made me think of map contours. They tickled my memory, but I couldn't pick out what they were trying to represent. Each section was thin enough not to give enough information.

Rather than look at the pieces, I thought about what they could represent that Senet Mehen wouldn't be able to figure out given a significant amount of time. When I caught my reflection on the highly polished table I knew the answer: faces.
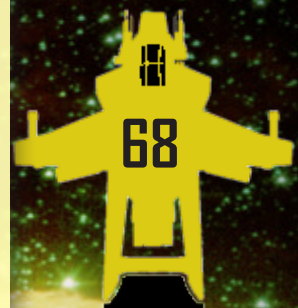
CHRONICLES

Senet Mehen knew nothing about people, therefore he wouldn't know how to interpret faces. I'd heard that sociopaths saw others as interchangeable and disposable in their self-mythologized universe.

It didn't take me long to construct a partial face given a dozen pieces. A woman's wind-swept hair and forehead with arched eyebrows formed on the curved wooden section.

In case Senet Mehen was watching me on a video feed, I stopped solving the puzzle and quickly mixed up the pieces. Then I started taking pictures and used my mobi to study them further. In doing so, I figured out that the goal of the puzzle was to make interlocking sheets. The faces helped you put the sheets together and then the sheets had to be fit together to form a larger picture. The shapes of the outside pieces would create a wooden head.

After organizing the pictures I took and writing a few instructions, I went to the intercom at the front of the cargo bay.

"Hello, Senet Mehen. I need to speak about the puzzle you have on your table," I said.

"I've already explained that I will not be intimidated, and destroying anything will only put your life at risk," he said.

"What if I told you I know how to solve it?" I asked, as my lips curled into a grin.

After a few moments, he replied, "I'd say you are a liar. I checked my feeds and the puzzle looks exactly as it was when I left it."

"Oh, I haven't put it together," I said, "but I figured out how to do so. The rest is a formality. It was quite simple really. I'm surprised you didn't figure it out months ago. How long ago did you say you started working on it?"

The comm crackled with static and then I heard a muffled rage-scream through the metal wall.

I had his attention, but was a little worried I'd pushed him too far. I listened for the recyclers to stop their humming.

After a few minutes, he replied, "What do you want?"

"Drop me off at Green. The planet's not far from the Magnus jump point, so it wouldn't be out of your way," I said, taking a deep breath. "And in return, I'll tell you how to solve the puzzle."

"No, it's a trick. There's no way someone like you—"

Heat rose in my chest. "Someone like me?! Yeah, maybe I grew up slinging drinks to gristle-faced workers, listening to their complaints — not all unwarranted! — about how they've spent their lives getting screwed. But at least I tried to get out. To be better. I may be common to someone like you, but I figured out your damn puzzle, in a few short hours, I might add, and if you want to know how to put it together, I'll send you a file explaining the missing link that's kept you from solving it. But I won't send it to you until I'm safely off at Green, no earlier, no later. Do we have a deal?"

The outburst felt entirely too good, but I worried I'd gone too far. The silence was oppressive.

When the comm crackled to life, I closed my eyes and crossed my fingers.

"I will reroute my journey for Green in exchange for the solution," he said. "Prepare for disembarking in five point two hours."

Relief flooded my limbs. I sunk to the floor and put my head in my hands. I was back on track. In fact, since Ellis was a jump closer to Tyrol, by the end of this whole mess on the *Dodecahedron*, I'd wind up saving some time.

When we neared a small transfer hub on a far orbit around Green, I took off the EVA suit that I'd been keeping on for warmth, and started searching for a ship headed to Taranis system once my mobiGlas linked up.

There were no wet-eyed goodbyes when I left the *Do-decahedron*, but I stayed long enough for him to check the solution. His eyes widened when he saw why the puzzle had resisted his efforts to solve it.

"That was quite remarkable. Do you have time to look at another puzzle that's been plaguing me?" he asked.

I was so incredulous at his offer that I almost forgot to respond. "No, sorry. I have another ship to catch."

"Ah," he said. "Farewell and good luck."

I'd landed in time to catch a low-rent transport to Bethor on the surface of Taranis III and didn't want to miss it. I made the *Filigree Angel* with time to spare.

The ship was wonderfully boring with my newfound love for beige carpets and comfortable seating. The journey was uneventful, but despite the lack of stimulus, I couldn't sleep. Landing at Bethor would put me over halfway to my destination. In fact, I found two more trips that lined up perfectly, getting me to Tyrol IV with a half a day to spare. I could practically taste the credits rolling into my account. One year closer to my dream ship, the Aurora LX. I hadn't dared name her yet, feeling that was too presumptuous, but when that day came, it would be glorious.

[31:05:05]

The approach to Taranis III was spectacular. The storm-covered planet crackled with electricity. The northern hemisphere was cast in darkness, which highlighted trails of glowing gas that weaved through the upper atmosphere. It was like giant luminescent constrictors, a thousand kilometers long, were snaking through the sky.

The only blemish I could see on the planet was a blue domed station hovering high above the equator. Bethor was home to a large settlement of Tevarin and Human refugees and expatriates; basically, anyone looking to escape the reach of the Empire for one reason or another. The cloud city was one of the more civilized parts of uncivilized space.

No time to fully appreciate it, though. I'd have to come back one day when I didn't have a countdown hanging over my head. It was only a brief stopover before I managed to book another ship to Tangaroa in the Helios system.

[22:13:56]

Other than the pilot who liked to sing a little bit too much for my taste, the flight to Helios was as smooth as could be. It was the traffic outside of the Tangaroa transfer junction that was the problem. Ships were backed up in a long queue waiting for clearance to land at the busy station. About half of them were starliners filled to bursting with tourists who had come to vacation along the ocean planet's temporary beaches or subsurf beneath its massive waves. Another place to add to my running "come back and visit" list.

It was about another hour before we were able to land and by that point I really was regretting not having the EVA suit with me. Jumping out of the ship would have been preferable to hearing another verse of the pilot's favorite song, "No Room for Love."

After moving through the security, I made my way across the station towards my next flight. The press of people was a little overwhelming and with the exhaustion of the trip settling on my bones, I almost didn't see her before it was too late.

Betrix LaGrange was coming out of another tunnel, blonde hair bobbing to a beat as she was listening to her mobiGlas. She stopped momentarily to adjust her right shoe.

I used her distraction to turn and walk right through the nearest door. A male voice cleared his throat. I looked around and realized that the door I had chosen blindly was the men's bathroom.
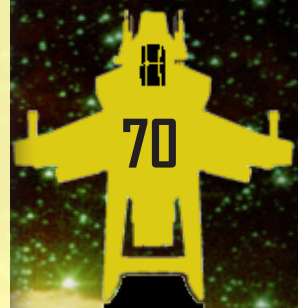
I moved into a stall before anyone else came in, sat down, and contemplated my next move.

What was Betrix doing here? Did she have a plan to steal the case from me or was this pure coincidence? Suddenly, the way to Tyrol IV seemed laden with danger.

I checked my messages from FTL, finding a list of deliveries due in the next two days. Somehow, I'd been signed up without my consent and the normal protocols about such things overridden.

"What the—?"

It clicked into place. Betrix must have had her boyfriend overload my schedule to force me to make a decision between keeping my job at FTL and making it to Tyrol IV. The due dates were manageable, assuming I left right now and headed back towards Sol. There were enough deliveries that if I missed them, I'd be put on probation, which in company terms was just a formality before firing. Canceling jobs once you accepted them was nearly as bad.

I punched the plastic wall as hard as I could. It hurt.

"Is there a problem?" came a deep voice from the other side.

"No TP," I said, lowering my voice.

A roll wrapped in white cellophane was shoved under the wall. The quick response caught my notice, so I leaned down. On the other side of the wall was a stack of toilet paper, neatly placed into rows or stacked into towers and pyramids. The gentleman in the next stall seemed to be hoarding them.

"No thanks," I said. "I have some napkins."

Turning back to my current dilemma, Betrix had me cornered. I knew she was counting on me to abandon the delivery and save my job, so she could swoop in and take the case from me when I did. I bit my lower lip. I'd survived a life-support malfunction and a space-faring lunatic. I wasn't

going to be stopped by little-miss-hagfish.

The toilet on the other side of the TP-hoarding gentleman flushed, which reminded me where I was hiding. While squeezing my nose closed because of the smell wafting under the wall, I studied the list. If I made the freelance delivery, and then prioritized two of the other six deliveries using non-commercial ships while ignoring the rest, I would barely stay above probation. The gambit would cost me more credits against my expected returns, and I wouldn't be able to make a mistake for another two years, but it could work.

Of course, all that was counting on Betrix not having some other backup strategy in place, like knocking me over the head with a hammer or something equally desperate. To be safe, I should make sure to get to my flight without encountering her.

Exiting the stall, I was greeted by a janitor in a blue-green jumpsuit and company hat, with a spray bottle in one hand and a rag in the other. His cart was loaded down with cleaning supplies. He acknowledged my gender with a heavy blink, before moving on with wiping down the sink.

I wrinkled my forehead and nose, not because of the awful smell still lingering in the men's room, but due to an idea that came to me like a supernova.

"Excuse me," I said. "Would you like to make a few credits?"

[20:58:44]

* * *

The janitor's clothes weren't as baggy as the EVA suit, but they did the trick. I wasn't as worried about my outfit as I was the silvery case. Which was why I'd bribed the janitor to borrow his cart, too. The silvery case was buried beneath the cleaning supplies.

Betrix had positioned herself near a tunnel to the other section where my departing ship was waiting. She was scanning the people as they went past her.

I kept my head down, so the hat covered my face, and kept moving. The station was busy enough that Betrix would have to focus on looking for the silvery case. It was quite distinctive. I had to hope that was enough to get me past her.

As I neared her position, I held my breath. Betrix was standing on her tippy-toes trying to see over the crowd. As I approached, I was certain she'd notice my baggy jumpsuit and realize it was me beneath the hat.

But as quickly as I approached, I was past her and headed down the tube. Another fifty meters further, I took off the jumpsuit and liberated the case, leaving the cart where the janitor told me to. Then I hurried towards my destination, hoping they'd let me board early in case Betrix came looking for me.

The departure gate was in sight when I saw the security detail close the door. My mobi indicated that I wasn't late. I was confused until I noticed the displays on the wall listing all commercial flights cancelled.

Was Betrix more powerful and desperate than I had given her credit for?

A few irate customers had already lined up at the commercial counter. I knew I wouldn't learn anything there, but I spied a knot of security guards talking by a vending machine. As discreetly as I could, I feigned fixing my boot laces, while I listened to their conversation.

". . . don't know why, just that we're on lockdown . . ."

". . . it's a medical quarantine. A code yellow, so not deadly, but they don't want it to get out. Makes people act loopy. Heard that the first guy who was sick had pulled out his hair one by one . . ."

". . . dammit, this means I'll miss my son's sataball game . . ."

". . . at least we'll get hazard overtime . . ."

". . . they say how it's transmitted?"

". . . a contact virus, so unless it got picked up by the food-ies, it shouldn't spread too quickly . . ."

Crite. Quarantine. Who knows how long that might last?

With the commercial ships shut down, there'd be no way off the station, unless I could find a captain willing to break quarantine. As I started walking back towards the main terminal, I dug through the ship list, looking for small ships with newer ID numbers. Those would give me the best chance, since they probably needed the credits most. The likelihood that they would take me was small, but I had to try.

I'd identified three ships that might take me when I heard my name spoken with well-worn disdain.

"Sorri Lyrax," said Betrix, standing with her arms crossed. "It doesn't look like you'll be making your delivery."

"If you haven't noticed, nobody's leaving the station, which means you too," I said. "Neither of us is going to deliver the job right now."

When the self-satisfied smug smile appeared on her lips, I knew she had a ship waiting that would take her and the case directly to Tyrol IV. Betrix wasn't above using unorthodox methods either, it seemed.

"Hand over the case. You had a good run, but it ends here. I'll give you five percent, as a token gesture of good faith," she said, holding out her hand.

"Why do you even want this job so bad?" I asked.

"I'm saving up to buy a ship, you ninny," she said. "An Aurora LX. Best long-range hauler for a freelance courier. Comfortable as sin. I have a replica patent leather captain's chair in my apartment on Saisei, just waiting to be installed in it."

The fire in her eyes practically glowed. Though I didn't agree with her methods, I knew exactly what drove her. It was what was pushing me to take chances with every delivery. Knowing this made me realize, as much as I loathed to admit it, that we might actually have something in common.

"Why?" I persisted.

"What's with all the questions?" asked Betrix, glancing around as if she thought it might be a trick.

"Humor me, and I might hand over the case," I said.

Betrix visibly recoiled, as if that act seemed ridiculous under the circumstances. She almost ignored my question, but then her lower lip tightened, as if memories came bubbling up unwarranted.

"I never want to be stuck on any planet. Ever. Space is the only place you can be safe and free," she said.

Whatever fire was burning in her eyes became eclipsed by darkness. I didn't even want to know what had caused her that amount of pain. And as much as I hated every slimy inch of her guts, I wanted to give her a hug.

While I mulled the insane idea that I was about to offer, I noticed something odd going on with the nearby fruit vendor. He'd taken his wares and dumped them onto the floor and was sorting them into groups by shape and color. The passengers in the area were giving him a wide berth.

It wasn't the only oddity in the vicinity. A businessman had dumped his suitcase on the ground and was putting his clothes into piles. In the distance, I saw a group of people in yellow hazard suits marching in our direction.

Crite.

"Look, we shouldn't be fighting," I said in a hurried breath. "We both want the same thing. We're both smart, savvy

and driven. But our competition is costing us credits, when we could be working as a team. What if we made the delivery together, and then pooled our credits to purchase an Aurora and had it modified for a crew of two? Yes, I know, we'd probably still hate each other, but it'd only be for a year or so, and after that, I'm sure we could earn enough to purchase a second ship and take our separate ways. Before you say no, think about it. It'll knock years off our plans to be on our own. If we're willing to put up with each other, I'm sure we could have a ship by the end of this year and be on our own within two."

For a brief and wonderful moment, she was a totally different person. There wasn't a shred of the self-absorbed, manipulative, hateful . . . sorry, went on a roll there. I gathered that no one had ever made an offer to work with her before. Suddenly, her stand-offish and often vicious behavior made sense, despite not knowing what original pain had caused it.

Then her features slowly started to harden, as if the frost in her soul was freezing its way up. By the time the words, "No, not ever," reached her lips, I'd already formulated a new plan.

Fine. But don't ever say I didn't try.

I tried to move past Betrix, but she grabbed my arm. I swear she was an android in disguise by that grip.

"Let me go, Betrix," I said.

"You're not making that delivery," she said, as she reached for the case.

I tried to pull my arm free, but she wouldn't let me. The people around us began moving away, sensing the conflict. The people in hazard suits were approaching, and they were starting to notice us.

"Not now, Betrix, or you'll get us both thrown in a private quarantine," I said.

Either Betrix didn't hear me or didn't care, but she kept tugging on the case, trying to yank it from my grip. The yellow-suited authorities had shifted their path and were coming directly for us.

When I realized she wasn't going to let go, I yelled, "She's got it! She's got it! She's got the virus!"

Rule number six: *Act like you know.*

In moments of panic or confusion, be the person who takes charge so you can ensure the chaos forms around your needs.

It was another lesson that I'd learned from my father. On the occasions that the corrupt local police would come into the Golden Horde to solicit bribes, my father would ensure that an "incident" would occur down the street at the moment they arrived. In truth, he had a friend in the department who usually warned him when they were coming. My father would always be outside during the incident — usually a small fire, or reported purse-snatching — and he would start yelling at the police to go put out the fire or stop the thief, who was never caught. Despite their intentions in collecting monies rather than doing their job, they hated to be seen not doing simple police work when someone was highlighting a problem.

Thus, the hazard-suited folk, despite having multiple obvious virus outbreaks within visual distance, would tackle Betrix LaGrange when she tried to run away, or the other people in the terminal might see that they "weren't doing their job." Societal peer pressure is a bitch.

In the ensuing chaos, I slipped away then took off in a full sprint down the passage. At this point, it was total bedlam as a panic gripped the people in the station. I ran, not in the direction of those three ships, but in search of the ship that Betrix had hired. I just had to figure out which one it was first.

I thought it might be difficult until I pulled up the destinations of all the ships at Tangaroa. Two ships were headed to Tyrol IV, but one of them was commercial, which meant the other was Betrix's ride: the aptly named *Vengeance Valkyrie*.

After a five-minute sprint across the station, my arm was shaking from carrying the silvery case. I had to hurry as more yellow-suits were arriving by the minute. Announcements went over the PA, asking everyone for cooperation. Uneasy fear hovered over the people like a dark cloud.

Signs of the virus could be seen everywhere. One woman in a white research jacket was disassembling the seats in a lounge using a screwdriver. She had the posts sitting in one pile, the seat backs in another, and was busy trying to rip the fabric loose to make a third. Another man was smearing condiments from the food area on the wall by color, while a third had pushed over a vending machine and was ripping out the guts to sort.

The *Vengeance Valkyrie* was in a private bay. I ran towards the ship, waving the silvery case. The lift came down but when I pressed the button to send it up, a disembodied voice spoke through the comms.

"You're not Betrix," he said, in an accent I wasn't familiar with. It sounded like he was trying to hide a formal education.

"I'm her partner. I got the case here, but she got detained. She said to make the delivery without her," I said.

"That still doesn't change the fact that you're not Betrix. She hired me, so I'm waiting for her," he said.

"How else would I have known to come for your ship if she hadn't told me? Hurry up and let me on. If we don't leave soon, they might bring in gunships to ensure a tight quarantine and you won't get your bonus," I said, guessing Betrix had offered one.

When static was my answer, I pressed the button again and said, "I'll up your fee twenty percent."

"How do I know you don't have this virus that's in the station?" he asked.

"I haven't touched anyone," I said, but realizing he wouldn't understand that context, I elaborated, "the virus is transmitted by contact. I overheard the security talking."

After a moment of silence, he said, "Twenty-five."

"Deal," I said, hoping that wasn't too much.

When the platform started lifting into the ship, I wanted to breathe a sigh of relief, but until we were back in space, I didn't dare.

The room behind the cabin wasn't large, but it had a take-off chair. I strapped myself in after shoving the case beneath it.

"Ready!" I yelled, hoping he could hear me through the door.

I worried he wasn't going to light his engines, especially when the internal lights switched off, leaving me in near-darkness, but then I felt a sudden wash of vertigo and realized we were moving. He'd untethered us from station gravity and we drifted away, spinning. The momentum dragged us towards the planet. Through the whirling viewport, I watched UEE emergency response vessels descend on the station.

The ship began to pick up speed as we hurled towards the planet. Sparks flashed across the viewport. I began to worry that the pilot had died, when at what felt like the last moment, he switched on the engines and propelled us through the atmosphere, coming out on the other side of the planet, away from the station and the incoming UEE ships.

After successfully escaping the quarantine, the ship headed towards the Tyrol jump point. The captain invited me into the forward cabin.

He was a ruggedly handsome man in his late thirties with olive skin and dark messy hair that went to his shoulders. He looked more at home in the wilderness on a wind-swept hilltop surrounded by alien trees than in a ship cabin. His teeth were a little crooked but that made his smile more endearing.

"Satchel," he said, offering his hand.

We shook and I felt a warm tingle travel up my arm. Maybe this final leg of the journey wouldn't be so bad after all.

"Care for an orange?" he asked, offering the fruit after plucking it from a bag. "Helios has some of the best oranges. They taste like sunshine and beaches."

"Sure," I said, brushing his hand lightly when I accepted the orange.

He gave me a smile that made my face tingle.

Feeling a little worn out from my sprint through the station and general lack of sleep, I peeled my orange in quiet as we sped through the great emptiness. Using my fingernail, I broke the skin and started ripping back the peel. I put the orange against my nose. He was right. It smelled like sunshine. Sweet sugary sunshine, but sunshine none-the-less. I inhaled deeply. The smell took the edge off my exhaustion. Before I could rip off a wedge and plop it in my waiting mouth, I noticed Captain Satchel doing something strange in his lap.

He had his orange already peeled, but instead of eating it, he was piling up the identically sized pieces and arranging them on his leg. As soon as we shared a glance, I saw the fear in his eyes. He had the virus, which meant that I had it too, and we were too far away to get help.

[18:15:25]

To be continued

CHRONICLES