

JUMP POINT

A ROBERTS SPACE INDUSTRIES PUBLICATION ISSUE 04.1.1

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GREETINGS, CITIZENS!

Rather than another ship, or a weapon, or a landing zone, or any of the other usual options, this month **Jump Point's** Work In Progress is a demo. The vehicles in it (a Constellation Aquila, a Rover, several Dragonflies, even a wrecked Javelin) were not significantly modified from the models that have already been featured in a previous issue, so there's not much work in progress about them to show you. It does give us a couple of new characters/creatures – the sand nomads and sand worm – but while they play key roles in the demo video, they're not its focus. The focus, as Chris expresses it, is the sense of location – the video isn't about sand worms, or nomads; it's about a place that has (among many other things) those desert inhabitants. I had no idea what Homestead was before I watched the video; now I would have trouble forgetting my introduction to this new world within a world.

So no highly detailed sequence of development this time; far too many different things went into the creation of Homestead and its video for us to be able to show it to you that way. Instead, we asked Director of Cinematics Hannes Appell to give us an overview, in images and captions, of what went into creating Homestead, and then we took a ride down a rapidly flowing river of chat from the devs who were putting it all together. That chat thread totaled more than 10,000 messages by the time I got access to it, with all sorts of discussion, occasional disagreement, updates (*lots* of updates), bug notifications (it



turns out that when you design software, there are many ways for things not to work), and new version after new version. Also, the occasional joke.

I read through those 10,000 messages (a few a paragraph or two long; most no more than a short sentence), and I pulled the ones that were the most interesting. Well, interesting to me; you'll have to let me know if you found any of it interesting yourself. Along with Hannes's overview, most of the rest of this month's WIP article are a series of excerpts from that thread, discussing Homestead video in all sorts of ways. If you like this type of format, we might revisit it again at some point – like *Star Citizen* itself, **JP** is a work in progress, and some things we try work, while others don't.

Meanwhile, we've got the other appetizing glimpses of *SC* that you expect each month – a Portfolio on the Intergalactic Aerospace Expo ("Intergalactic"? I'd suggest you ask Audrey Timmerman, except she is no longer available), a guide to the Kiel system where the expo takes place, and Act 3 of *Lost Squad*, in which people are starting not to survive. We hope you enjoy reading and discussing them as much as we enjoyed writing them.

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

David

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COVER: HOMESTEAD DEVELOPMENT TEAM

PAGE 36: ETHAN INGLE

PAGE 39: ERIC GREEN

PAGE 46: STUART JENNETT



FROM THE HICKORY



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Homestead Demo Video

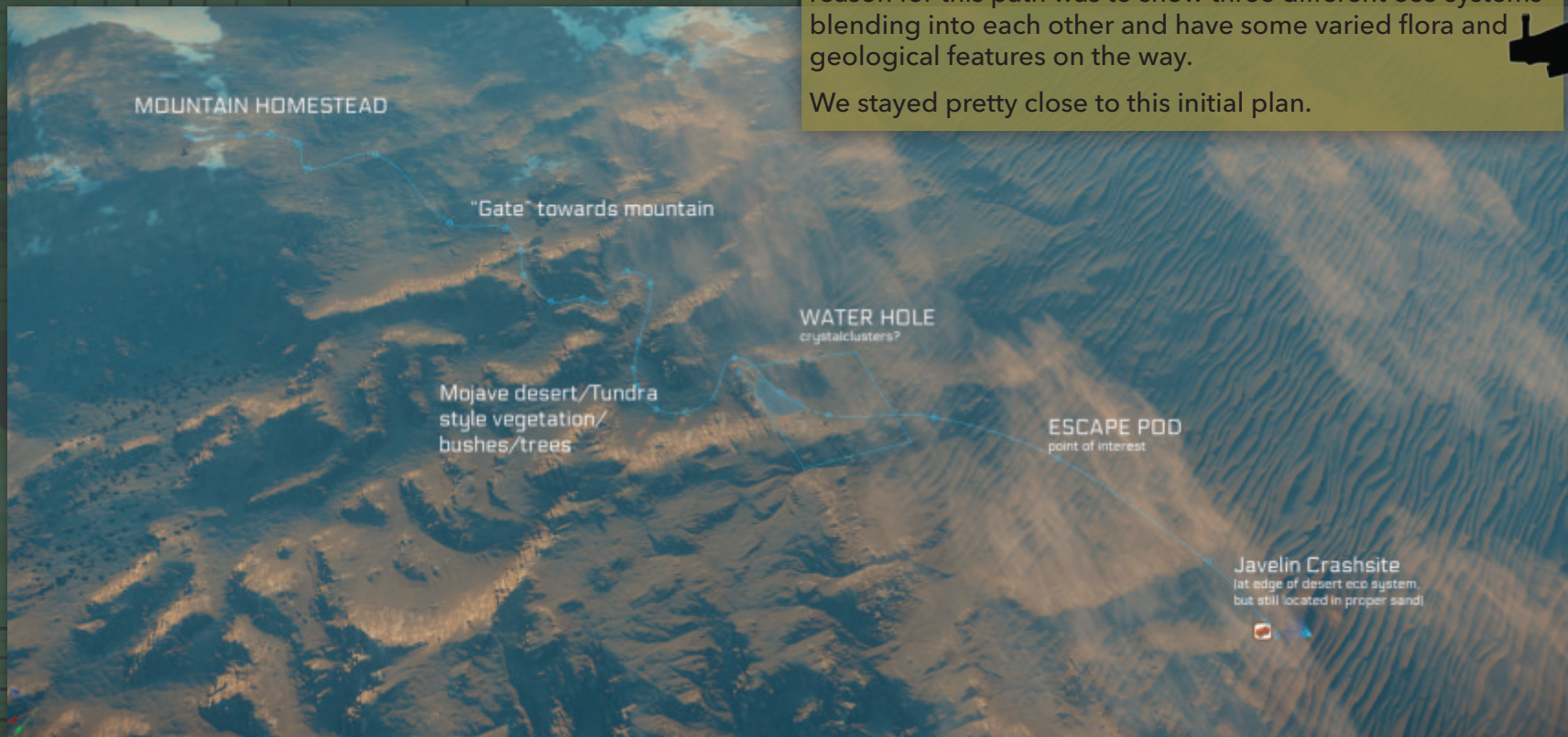


WIP
IN
PROGRESS

Along with a few extra pages highlighting the sand nomads and sandworms, the pages of this month's WIP article will include a screenshots and commentary from **Hannes Appell, Director of Cinematics** (in black), plus

selected comments from the Skype conversation that culminated in the Homestead video (in white).

>>> Breaks between sections are marked with three arrowheads.



Hannes A: This was my initial blockout of the gameflow path from landing site, through the rocky high plateau and finally through the desert to the Javelin wreck site. The main reason for this path was to show three different eco systems blending into each other and have some varied flora and geological features on the way.

We stayed pretty close to this initial plan.



WORK IN PROGRESS

Ricky Jutley, Senior Producer, F42: What Hannes was showing yesterday was promising, and we want to build on that for a kick-ass demo.

Hannes A: Do we know if CR was joking about the desert worm, btw? :)

Amit Boparai, Level Designer, F42: Worm was defo a joke.

Ricky J: Of course. :)

Hannes A: We have the technology, we can build it. Just need Kevin Bacon then as player character. :)

So this is for the ship team: need something big from the Javelin, like one of the four engines, so we can place it a bit farther from the wreck, to give that kind of trail of awe when it is revealed. I have a second escape pod (first you find) now close to the water hole.

Could we try to iron out the eco system issues? It's a total bottleneck right now – we need to get to a point where it works 100% identically on different machines.

Matthew Lightfoot, Associate Producer, F42:

The flow should be tested in reverse to give a greater feeling of it being like an in-game mission.

- It's undecided as to whether we want to use the Rover or the Dragonfly in the demo.
- The Rover is currently significantly slower than the Dragonfly.
- Tech design can mitigate this.
- The Rover also seems to have a FOV issue, as the FOV is significantly larger than it has been previously. Tech design to look into this.
- If we use the Dragonfly, then we will need the improved camera working, as currently it wobbles significantly.
- Production to check with Chris Raine to ensure that his Physics Terrain work will be checked in for the Homestead demo.
- Design should consider adding in hostile AI (Desert Nomads) that could damage the Rover, forcing the player to use a Dragonfly, halfway through the flow to increase excitement.

>>>

Josh Herman, Character Art Director, CIG LA: CR was not joking about the worm. He asked about it afterwards with me and Sean. I can get the model done and rigging said it wouldn't take too long. But I will leave it to you guys to say if you can make it look good in a short time.

Hannes A: Well there are some basic tentacle rigs for Maya where we can quickly rig something like a worm, but it would have to be an easter egg or something. I think with some sand splash you could make it look decent from a distance. I'd rather have the deserted bleached bones of one lying around; that suggests a lot without the actual work. :)

So we could do a skeleton – that would not require VFX.

Chris Roberts: Worm WAS NOT A JOKE.

Hannes A: Do you want one in the distance as a nod to Dune, or integrated into the flow?

Chris R: It would be a nod to Dune as the storm approaches and you take shelter in the Javelin. It's all about the emotion, the narrative & building a world.

Hannes A: Or we go full on Giant Sharknado and have the player board the Constellation (mission success), and then a giant worm jumps up from the ground and eats the Aquila. THE END ;)

Chris R: On this demo, as we aren't really showing gameplay as much as a sense of location, we want the world (and worlds in the game in general) to have their own sense of identity.

Todd Papy, Design Director, F42: I just don't want to be selling something that we might not have in the game ...

Chris R: Sure. We aren't selling something that won't be in the game. We are going to have creatures on our planets. We're going to have xenomorphs on wrecks, dangerous alien creatures on planets and so on, probably even a space whale / leviathan.

Worlds need life and danger.

Hannes A: If we have a nicely framed "cowering" inside the wreck when the storm hits, right before might be a nice moment. I would really keep it in the distance, though.

Chris R: I figured it would be Dune-like, a worm breaching in the distance (trackview, geocache, etc.), riled up because of the storm (or perhaps it is the cause, Dune style). It's all about giving the storm and planet some character. And yes we will have big worms on at least one of our desert planet in the long run.

... I also missed the bit where the sand nomads are RIDING the worm.

John Crewe, Lead Technical Designer, F42: How many missiles does the worm carry?



WORK IN PROGRESS



WORK IN PROGRESS

Hannes A: Initial brainstorming before the Homestead production kicked off had us spit balling a combat drop of an Ursa Rover from a Starfarer or Constellation Aquila in the middle of some action.

This was dropped in favor of a more exploratory mission, starting at an abandoned outpost where the player could take in the view before the action would kick off.

Hannes A: So just a heads-up, with the changes from yesterday, it seems we also have some horizontal shifting in some of the eco systems. Stuff will look tinted super dark, etc., so I will need some time to fix and adjust for that. No sense in trying to get the current level yet.

Nathan Dearsley, Vehicle Art Director, F42: I'll stay focussed on the ship stuff for now then. The guys are doing some mesh work separately on the Javelin atm, need to get stable cryfile and build asap though plox. :D

Hannes A: So I checked in a new version today. Terrain height + horizontal features change a bit from last version due to the new displacement and other code changes. I didn't manage to pull the path up again over the terrain yet, but you should get an idea of how it looks currently tomorrow. Found a nice dune pattern for the Javelin to rest in, one dune actually creeps up quite a bit on it, which looks nice. So in theory, the dune sea should look proper tomorrow – no more muddy colors or wrong textures.

>>>



Wai-Hung Wan, Artist, F42: Will the player enter the Javelin? If so, has a doorway been decided?

Hannes A: Not yet. The current direction of the Javelin wreck fits really nice with the dune direction and we get some nice steep sun angle on its hull surfaces. That means, ideally the player would find cover in one of its main engines so we can see the storm approaching. If he finds cover in a section that is away from the storm, you would only see the near PFX hitting.

Also worm could be nicely framed if we want to have it there, either fleeing from the storm, or possibly being the cause of the storm? Once the storm has run over the wreck, we could then have the sun even lower, more of a reddish magic hour, and see the rest of the storm dissipate in the direction the layer came from.

I wouldn't rule out hiding in the other direction though; waiting on Nate to actually build the wreck to decide.

Nathan D: Is this level ready to go now? Can I get the latest build and start to play?

Hannes A: I hope so. I raised all the WIP Dressing up to the new terrain height Level, but Marco said he did some further changes to midlayer displacement, so stuff could look off.

Give it a try and make a snapshot of the Javelin area.

>>>

Hannes A: Seems the wreck is under nomad occupation. Is that tricky to do? Flow states the player finds a trophy room.

Marco Corbetta, Senior Technical Designer: The changes are very small and should not affect the terrain placement. I got the latest level and everything looks ok.

>>>

Hannes A: Not to sound greedy, but what are the chances we can have a "sand nomad" paint job on the Dragonfly? Are the material colors set up so we can change it up to (e.g.) red?

John C: That's one for Art, but I believe they're doing one.

Amit B: Yeah, I already chased that, it's all good.

Hannes A: Okay.

>>>

Hannes A: My last check-in for today. I dressed up and built out the canyon area between the gate and the ambush.

Corentin Billemont, Technical Designer, F42: Great shots!
:O

Sean Tracy, Technical Director, CIG LA: NICE!!!

Hannes A: Next up is watering holes, and then once we have some assets FORESTY area. Water volumes need some love ... no interaction, no rings, no depth, no specular, no real-time reflection currently ...

Hannes A: The long distance through the desert (over 8 kilometers from landing site to the wreck site in a straight line) and the limited amount of playtime we had for the demo made the decision to use the speedy Dragonfly in the desert an easy one.



WORK IN PROGRESS

Josh H: CR saw the size ref for the worm and was happy. "It should be able to eat a Constellation for breakfast."

Caleb Essex, Senior VFX Artist: When does the worm make an appearance in the demo?

Justin Binford, Global QA Director, ATX: Very cool.

Josh H: It's roughly 20 meters across.

Forrest Stephan, CG Supervisor, CIG LA: <lol>

Ricky J: So cool.

Corentin B: Nice for both the video and the worm!

Ricky J: But I feel ill.

Forrest S: So big! Scary.

Ricky J: Colour?

Forrest S: The length won't matter. We can tile the center and make it modular, so it can be as long or short as we want. And its tail will still be in the ground.

Chris R: So, pretty intimidating!

Vachon Pugh, Associate Producer/Character Art, CIG LA: Nightmare fuel. I love it.

Josh H: Color will be dependent on the final, but I think we should go desert sandy colors, but enough different to make it stand out.

Ricky J: Can't wait to see it in game.

Josh H: I sent him three versions dependent on how close it gets. The lowest was about 150k tris. This is the whole length/teeth/mouths/etc. If it fills the screen, the poly count will have to be massive, so it's not faceted.

Sean T: For most things, 150k would seem high, except then you'd look at our ships/characters and realize that's actually about normal. :S

Let's get it in though; I'll just throw it on a layer for Hannes if we can export that white box today.

Josh H: It's also almost 60 feet tall. So 1 polygon is about 1 meter tall if the character is standing next to it ... So knowing how close we will be will be key.

Steve Bender, Animation Director, CIG LA: I am talking with Simon right now. Jake and Simon will talk with Sean about resourcing and speak with Hannes about the location of the character. If we can get the non-animated version into the level in its proper location ASAP, this will make animating the character in the shot much easier.

Sean T: Riggs has setup a spline-driven rig too, so basically in Maya you'll just tell it where you want it to go and it'll do wyrm stuff to get there ... though I suppose the animation we want is a bit more flamboyant and not just slithering around. (Do wyrms even slither?) :)

Hannes A: Any chance for a bleached bones version of his belly to tease him? I'd rather not have him break out of the sand dunes twice.

What about a bony skeleton? That would be a whole 'nother sculpt, wouldn't it?

Josh H: Worms don't have bones.

Hannes A: No! *Star Wars* ruined. Not even the teeth?

>>>

Hannes A: No, we are not there yet; the whole Javelin wreck and where you will be is not in there.

Sean T: You mean it's not final? Because I've seen something there. :)

Looks like a ship. ;0

Hannes A: That is just the normal Javelin; it will be broken up completely. And we don't know yet on which side the player will hide. It might be in an empty engine hull or on the sun-facing side, etc.

>>>

Nathan D: Do we have two suns now?

Forrest S: Apparently so. :D

Nathan D: Hmmmm

Hannes A: It is just two sun entities. The nearer one takes precedence, but I want to have the sun lower for the end, so I keep it as reference. If one sun is a red dwarf, we can get away with one set of shadows. :)

Nathan D: Who is lighting this level?

Hannes A: Me, I guess. Although tech guys have disallowed me to put sun too low because shadows cause problems. We can have it more reddish in the end though.

Nathan D: It would be cool to just know roughly the lighting isn't gonna change, as I will want a few local cubemaps for this area and its interiors.

Hannes A: Cool. Do you also have a single engine hull? Because I wanna dress that final ridge up – we might want to use it as tunnel towards the wreck.

The sun direction is not going to change, I think. Canyon looks pretty cool with that angle and the angle hits the wreck just right from the side and front, so it is not in shadows.

Nathan D: I'd also like to know the sun direction isn't going to change as the interior spaces. I'd like dappled lighting cutting in to interiors popping up volumetric lighting shafts from the sun (faked).

We'll get the engine hull today for you too.

Hannes A: The sun entities are great though, no lag when animating them.

Nathan D: Cool.

Hannes A: And you can give them textures, adjust glow, color, all pretty neat. Nice work from okka.



WORK IN PROGRESS

Hannes A: These mineral crystal clusters were actually created for the original Constellation commercial and now revived for actual gameplay and to start populating our minerals folder for planetary assets.



WORK IN PROGRESS

Ricky J: We are ready for QA to start testing the Homestead demo up until the following beat:

04:15 - 05:15: Player follows debris trail through ecosystems, discovers escape pod. (beat 6)

Hannes A: Please keep in mind, there is no real homestead mountain base yet; it is still the old one. There is no Javelin wreck, no worm yet, there is a lot still to be done.

Phil Webster, QA Director, F42: So we can test the distress beacon, dropping the Rover from the Connie, driving the Rover to the IED explosion, being attacked by scavengers, and grabbing the Dragonfly.

Ricky J: You can play up till that point. BUT many of the things are not done yet.

>>>

Amit B: Currently adding key beats: created canyon for the stone gate, added objective markers, trigger zones for cutscenes. Investigating object container for first combat section. End of the week you should be able to start see an objective and go to it, interact and update your HUD. Hopefully trigger some vehicles coming at you.

Hannes A: Checked in another pass on canyon; has a tumbled rock column now. Also placed the first escape pod down at the canyon exit.

Hannes A: Initial blockout placement of the Javelin wreck site.

This was done very early on to get the path and flow for the demo going.



Amit B: So spline movement for ground vehicles using the same nodes we use for ships sadly doesn't work – I've set a task for this to be looked into.

Hannes A: I was suspecting that issue to be there. So alternative would be sand nomads on foot?

For nomads on foot, we would need some custom "shake fists in the air, howling like wolves" animation anyway, and I doubt we have that. Having them stand there with stock default idles would look weird.

Nathan D: Can I get a "challenge accepted!!" ?

>>>

Hannes A: Amit, normal moving of objects aligns them on planet axis, CTRL moving aligns them to surface normal. AF-

AIK there is no planet local coordinate switch yet for gizmos. It would be helpful though.

Amit B: Yeah, would be super helpful.

>>>

Hannes A: Two ambushers from a high ground position, then two right after on flat ground behind some smaller rocks. Dunno about the end, though.

Matteo Cerquone, Junior Sound Designer, F42: That's good TA.

Amit B: Another three or four in the Jav that you fight. Then maybe five or so you never fight who come in at the end on Dragonflies.



WORK IN PROGRESS

Hannes A: We should also investigate the Dragonfly once you get off and on again. I can steer it somewhat when I get on the first time; the second time though, it is like being dragged through mud, or full-on spaceship mode.

Don Allen, QA: It looks like it drops down when you re-enter; I'll put a bug in for it.

>>>

Nathan D: That wrecked version looks like it has just touched down. Is that the story or ...?

Because if that is the case, how does it fit in with a derelict cap ship?

Hannes A: Nah, I was hoping you would have a look at the wrecked version as well and rust it up. If not, we need to put sand meshes and decals on top to dress it up more.

>>>

Nathan D: I saw Jack making some cool trees.

Hannes A: Yes, Frank is also doing some more alien-looking stuff.

Nathan D: Scope is to have dead tree sculpted around the engine we walk through. Tumbleweeds also. Could we impulse these past player route now and then? Pew pew pew, everyone loves a tumbleweed.

Hannes A: Going for Tanzania Highland Savanna style – Kili-manjaro.

>>>

Hannes A: What do we want to use for the player anyway: Any decisions yet?

Andy Tildsley, Associate Producer, F42: I believe the player is wearing the slaver outfit for Homestead.

Ricky J: Please confirm with Josh and the Character team, and then confirm with CR.

>>>

Nathan D: I like the heat refraction distance stuff.

Hannes A: Yeah, cool stuff.

Caleb E: Thx :)

>>>

Tom Solaru, Senior Producer, F42: Is there a rough WIP playthrough video of Homestead?

Hannes A: Only of one beat, I think. Flow is not in yet. Will be in this evening I think.

Tom S: Cool! Thanks for the heads up. Looking forward to seeing it; screengrabs looked awesome.

>>>

Hannes A: Wreck is a promising WIP! Looks awesome. Good job!



WORK IN PROGRESS

Hannes A: Shows the whole mission area from above. WIP shot.



WORKING PROGRESS

Amit B: Are we 100% set on worm size?

Hannes A: I think to be honest, if we do a camera controlled event, I would choose a tighter FOV anyway; we wouldn't need it THAT big.

Amit B: :D My worry is the current one is too small for the dramatic impact we want at the end of the demo. Since the whole environment is so vast it distorts your perspective.

Hannes A: Jason will do a 1,2,3 step animation so we will get sand being disturbed in 1, slithering back visible in 2, and then in 3 it breaks out.

Then he will stare at the player and the player will stare back at him and they will become friends. Player will then have him as a pet and be able to direct the worm to eat enemy ships.

Erin Roberts, Studio Director, F42: Like it ... Make it so.

Ricky, get that onto the schedule for next week ...

Hannes A: Also we need Black & White style slapping of your pet. :)

Erin R: <lol>

Hannes A: "Bad worm, don't eat Constellation, eat Vanduul Scythe!"

>>>

Matteo C: The new landscape surface material for Homestead seems to be dirt/rock. Are we not using sand anymore?

Hannes A: We are. But the mountain base has dirt soil and rocks from the beginning. Then we go to a plateau area which is sand and soil and some jagged cliffs. Then we go to desert, which is purely sand.

Nathan D: I think Amit is doing a paper design block-in of where we enter the ship. We think a derelict-looking gravity drive room would look cool for the trophy room. We'll also need some modular corridor sections dusted up before you get there, to contain the player in a small space, then open out into the grav drive.

Hannes A: Just be aware that ideally even in the trophy room, we could sense or see the storm approaching. Going too deep into the wreck might be counter to showing the threat build up.

Nathan D: Hmmm. The problem we have with this is the storm approaches from the left of the site. I doubt we will have time to make all this too. We'll work something cool out, how about the bridge?

Hannes A: The storm is now approaching from the right and behind the site. Bridge could be cool yes, I also really like the view from behind the engine section looking up.

Nathan D: The left of the site, as in the left of the ship facing forward.

Hannes A: Ah, yes.

Todd P: Amit, can you look at the area with Nathan?

Nathan D: Ok, so maybe we retrofit some beaten metal paneling walkways up to the bridge. Have all the consoles taken away, etc.; the bridge is mostly glass so it's less work too.

>>>

Hannes A: Hey Nate, what Javelin part could we place to have a reason to get off the bike one more time before the tunnel? Because it could be nice to get off the bike one time in the desert before seeing the big thing.

>>>

Nathan D: I've made tweaks to Javelin area, bridge interior added and cubemaps placed, fog volume for interior space also (needs particle pass), exterior shaders changed to make it more dusty / less rusty. I'd advise getting latest on ship's AEGS files too, as lots of stuff has been submitted in other change lists, The bridge is on its own layer and may not come in when cryfile is opened, please import.

I'm going to review some work now, then plan out the retro-fitted walkways between the bridge and thrusters.

Nathan D: All obviously still early days, but want to be content complete by Wednesday at the latest.

If someone can show me what these trophies are supposed to be, that would be cool; I can get these in today too if we are re-using existing assets.

Amit B: I'm gonna be on that with the writers today, so should have some details for you later.

Hannes A: It is a chest full of shirts that say, "I survived an ambush, a sandstorm and a giant worm and all I got was this T-Shirt."

Amit B: Sold!

Also worm bobble heads.

>>>

Nathan D: Have power cables running through the ship.

Hannes A: Can you guys make sure the Javelin stays visible for a long time when the camera pulls out? We need some decent LODs there or up the vis-ratio. Because if I do the planetary zoom out, it disappears too soon.



WORK IN PROGRESS

Hannes A: First flora tests with Frank Meinel's tree assets. Those were heavily inspired by Kilimanjaro highland palm trees.



WORKING PROGRESS

Pascal Muller, Senior Environment Artist: About the trees: we're aiming for two materials and something below 10k tris for the mass rendering of trees. It's at 14 and 3 mtl and it looks really cool. If we use the new one we could make a variation and use LOD 1 as LOD 0 and remove one of the sub mtl. That would still look nice but is much, much cheaper.

Hannes A: Can we do this please? I really want to use this tree for the demo, or we do two variations with only two sub-materials. We need to communicate these hard limits to the whole team ASAP.

>>>

Ricky J: Please let us know when we can get the Rover into the Connie Aquila. The issue of the Rover hanging in the air when the cargo bay got lowered got addressed by Paul on Friday. Matt is going to check it today and let us know. (Artwise extending the space for both variants has been done.)

Matthew Intrieri, Senior Technical Artist, CIG LA: Yup, just getting the latest build right now to see where things are at. Rover physicalizes immediately in the cargo bay, but seems to collide and bounce upward. The collisions appear to be clear, so I'm going to try and find if there is a position that would work better.

Luke Davis, Producer, F42: Thanks, Matt!

Sean T: No helmet apparently for the player?

Chris R: We don't want a helmet for the player in Homestead – it's a breathable atmo and they will be flying a Connie, so I would think you would want maximum visibility.

John C: If we have no helmet, do we have a solution for any HUD (as it doesn't work without a helmet, despite our concept of contact lens HUD), or are we going fully HUDless?

Sean T: Fully HUDless. I mentioned that same thing to CR and he's all right with no HUD ... if there are glaring problems with that though, best to know sooner rather than later.

John C: So no cross hair, ammo indicator, health indicator or healing prompts. :)

Potentially even no objectives.

Todd P: Also, how do we get the ping to the next escape pod and know you are heading in the right direction?

Hannes A: No objectives is a pain; how do we get the story across? How do we steer towards the beacons?

Phil W: We could add real visible markers to the world to indicate points of interest – smoking debris, large flag poles set up as markers by the scavengers perhaps? That leads you piecemeal through the POIs.

Hannes A: We are talking 20km range; nothing will be visible. And we don't want giant boulders to stick out. We already have them "kind of" at certain points and they start to look ridiculous if you want to have them visible from afar.

This shouldn't be a debate really, we need some kind of HUD. If we can't get it with contact lenses, going with a non-intrusive helmet seems like an easy solution. In the Constellation commercial we are showing off "real" now, they had giant explorer life support backpacks and helmets, I think just because the planet has an atmosphere doesn't mean you would not leave your helmet on if the concentration of oxygen vs CO₂ is different than at home.

>>>

John C: We need to consider ammo. You only have 120 rounds in the ATT4 and 60 in the pistol to kill everyone, else you'll need to pick up their guns.

Todd P: There are four enemies in the demo.

Todd P: So I'm not worried about that, unless they shoot like Glenn. ;)



WORK IN PROGRESS





Hannes A: More flora & crystals placed at one of the watering holes.



WORKING IN PROGRESS

Hannes A: We really need those objective markers though. QA or whoever will be driving will have a hard time hitting the beats on the path otherwise, and I think the narrative suffers without them as well.

Phil W: Having the Dragonfly marker kind of detracts from its discovery; any chance that one could be removed if we get a HUD?

Hannes A: That functionality seems like a must anyway, same for the other Dragonflies later. They show up as a cluster from the beginning.

Ricky J: Zane, we are considering the possibility of having no helmet for the playable character in the Homestead demo. Our major concern is having no objective markers show up for the player. We are wondering what solutions would be possible in this scenario.

It may be that it will be a stretch too far, but we would like to see if it is possible / what it would take.

David Bone Gill, Lead Programmer: Objective markers don't require the helmet.

Todd P: If a player was playing it, I'm sure that they would choose to have a helmet on for the armor and HUD info.

Hannes A: Having to deal with oxygen supply draining would actually have been a cool thing now that I think of it. "Need to get to the Javelin to grab some sand nomad oxygen."

David G: Please don't feature creep the UI.

Hannes A: What does that mean?

John C: it means put the helmet on. :P

Todd P: Don't add more.

David G: Are you talking about adding an oxygen meter to the helmet?

Hannes A: Nah. Just thinking out loud.

Amit B: Do we take damage as the rover is crossing terrain? Mainly on the downhill run from the mountain top, you do jumps. I'm wondering if the landing impacts are gonna be an issue.

Mark White, Senior QA Tester, F42: We've been losing a wheel each time we go down the hill on today's build.

Corentin B: Yeah, sorry, fixed in next build.

>>>

Vincent Sinatra, QA Lead, CIG LA: Did somebody mention they were changing the landing pad a bit? My concern is that the current one is a tad small, and the proper position to land means that from the cockpit of the Connie, you cannot see the pad itself at all ... so it's a bit difficult to stick the landing right now, without a little bit of guess work.

I'll practice a bunch to nail it, but just wanted to throw that out there.

Amit B: How much larger are you thinkin'?

Vincent S: Dunno if it needs to be larger per se. Just some sort of landmark I can use from the Connie to know when to stop moving forward.

>>>

Marco C: I am going to check in a first iteration of massive ground distribution vegetation. This is just to get the feeling of how far we can push/what we can do. It has so many rocks that are aliasing at distance ...

There are still many issues to fix; this is a first version for me and Bolte to continue working on it and for Pascal to experiment with ground object creation.

Corentin B: That's a pretty nice first iteration!

>>>

Vincent S: So to confirm, I should be practicing with the gamepad?

Ricky J: Try out both and see the diff. Whichever you prefer.

>>>

Hannes A: Hey guys, we have a serious map height problem still with imprecision. Painting anywhere on the planet raises the whole Homestead terrain up like 10 to 20 meters. This is a serious issue, as we can't do the ecosystem painting.

Marco and Sascha are already on it. This is an absolute must fix, as any small change to terrain heightmap like painting an island on the coast of Spain is causing terrain to change in China. :)

>>>

Pascal M: Gentlemen, Frank made some lovely new veggies.

Hannes A: Yes, about to put some in. He will also do a dragon/quiver tree starved for water. Btw, let us keep the vegetation like this constrained in the middle plateau area, not on the Homestead mountain and not in the desert.

Wai-Hung W: Mountain and desert should only have the bush_retama vegetation.

Hannes A: Frank's stuff looks nice. Those normally are Kili-manjaro highland trees, so they could appear high up as well, but probably defeats our "multiple eco systems" narrative.

We could try to cloud the slope down to the canyon to create more of a foggy mood.

Marco C: The fix for global scale terrain painting precision is in.

Hannes A: YES. Awesome!



WORKING IN PROGRESS

Hannes A: Sand nomad on a brand new red Dragonfly. This was before the weather-bleached, old and dirty Dragonfly was ready.



WORK IN PROGRESS

Caleb E: When the IED goes off to disable the Rover, will it be in first or third person?

Hannes A: It will be shot from inside the Rover, but who knows why the demo player might do F4 then. We could also try a cinematic camera right after, but it's not done yet.

Caleb E: A strong camera jolt right at the moment of detonation will help a lot.

Hannes A: Sure, but that can be either FG shake or track-view shake.

>>>

Matteo C: Hey guys, I've just realized that my audio group linked to the sandstorm particle FX does not move with the

storm when in game. It all works fine in the editor when moving the sandstorm in trackview, but as I jump in game and the sandstorm starts moving towards the wreckage, all my audio for the storm will be left behind where the sandstorm was first positioned.

Would that be easy to fix? Otherwise I might need to add an audio trigger spots group to track view and move it from there. :/

Darren Lambourne, Senior Sound Designer, F42: Is it an object container thing, maybe?

Hannes A: No, there is no object container. But I remember MikeN having woes with Animobjects and loadouts.

Matteo C: No, it's nothing to do with that – the sandstorm is not an object container but just a particle, all I did wrong was grouping all my audio trigger spots and linking that group to the particle FX so that it moves with the storm.

Hannes A: Hey Josh, will you guys still do the materials and texture on the worm?

Josh H: Yeah. We're finishing the game mesh this morning.

Hannes A: It looks much better already and I did some basic tweaks, but UVs are stretched. Sweet.

Josh H: That's not the final mesh, so it will look much better. That's the proxy mesh. Rig is final though.

Hannes A: Aha! Cool.

>>>

Hannes A: CR really wants us to get out on foot first, look at the vista and then we lower the Rover down on the lift and enter that. Is that doable?

John C: Once you can move getting out the seat sure. :P You can get out, go down the pilot lift, look around, then lower the cargo bay from the exterior.

>>>

Matthew I: Did someone re-enable the dining area seats? Is there time for a snack during the demo?

Hannes A: Yes, we should eat some wormy noodles. So when the big worm comes up in the end ... it rhymes.

Matthew I: Noodles in spaaaaace!

>>>

Hannes A: Cool. Is there hope we can A) exchange that font for something more sci-fi? And B) reduce the wobbly/dreamy effect on it?

John C: That's a UI team thing.

Wai-Hung W: Isn't the wobbly effect your inner-self talking/ thinking?

John C: Yeah, it's your inner thoughts.

Hannes A: Yes, but it is so delayed that if you scan a room, you are already past an item when the font kicks in. I think CR also mentioned this.

Corentin B: I have a fix for the Rover driver seat prompt, making it easier to see what you're going to use.

>>>

Wai-Hung W: Looks like I duped the planet.

Amit B: Why isn't the planet frozen by default? Same with moons, etc. Seems like that's asking for trouble.

Wai-Hung W: Yep, mentioned it to Jake G just now and it should be locked, only editable from within PlanetEd.

Amit B: I've grabbed it by mistake as well.

Wai-Hung W: Two minutes and I'll submit a fix, including level.pak.

Ok, planet stuff fixed.

>>>

Wai-Hung W: Is there FX for small rocks dropping down the sides of the canyon?

Hannes A: Are these PFX rocks? What do you mean dropping down the side?

Wai-Hung W: Think Jawas and R2D2 in the canyon.

Hannes A: Are they too many? I haven't seen them in action. We definitely want them raining down after the IED shock-wave hits the walls. I think Caleb can easily fix that; I can tell him.

Wai-Hung W: Yeah, I just need something after the IED – as if the scavengers are scrambling around above the player getting into position.



WORK IN PROGRESS

Hannes A: Vegetation and rock placement tests.



WORKING PROGRESS

Vincent S: We plan to run the demo with god mode, correct?

Hannes A: I would think so.

Chris R: No! We do this LIVE style!

Chris R: God mode is for wimps. :-)

Hannes A: God mode is for people who don't want to end up like Boba Fett in a giant worm's mouth.

Vincent S: I'll start practicing not to get hit with blood loss then. ;)

Hannes A: Take enough water with you; the desert is unforgiving.

Chris R: Btw, the sand nomad looks awesome. We will need to have one jump you when you come around a rock outcropping or something, so you can appreciate him up close. Otherwise we'll miss all the beautiful character work. It may be the best one yet.

Hannes A: Do we know if the cloth works? Because Sean and Ivo said cloth currently takes the world-up axis. It might look like Marilyn Monroe in The Seven Year Itch. :P

Chris R: Cloth works. It's in the S42 VS right now.

Hannes A: But on a planet that is at an angle?

Chris R: I am pretty sure the slaver base is not at the north pole.

Hannes A: :)

Chris R: I believe it was fixed by Bolte as part of what he had to do for vegetation. Or at least that's what I understood, but it could be my usual fevered dream of exuberant optimism.

Any chance of a nice trackview fly over the planet? It was super cool just flying around it the other day. Just need some coastline transitions now. :-)

Hannes A: I want to render it tomorrow. I needed Carstens cloud PFX sort fix. It was all weird before. Then we hook it up real-time as well. It currently runs at above 30fps even traveling pretty fast, but I get some hitches when going into zones with massive object rendering. I want to show it to Bolte/Marco to see if they can do something about it. It is quite fast, but not that fast. Probably V mode ship fast.

Chris R: Looking at Google Earth, we are not that far off ...

As I said, with some coastline blending / eco system logic, and a bit more love on the forest / grassland side we'll be better than Google Earth.

Hannes A: Carsten also wants to give us some way to rotate the cloud ceiling around so we can find a nice placement.

Chris R: Yeah, imagine the community-made shots in the future of our universe? We definitely need a photographer / selfie option for players.

Hannes A: That would be awesome, from mobiGlas like in GTAV.

Vincent S: Selfie emote that also takes a screenshot!

Hannes A: We can bring the whole "me with famous People/Vistas in the Background" millennial thing to our universe!

>>>

Sean T: To my knowledge the character cloth wasn't fixed for planets, yet can verify though ...

Chris R: There's cloth blowing around in the FPS video that I linked to. Are you talking about Ivo's cloth? Or the environment cloth?

Hannes A: Cloth on the nomads is what might be tricky on planets. Because I think it was just the environment / physics cloth.

Sean T: Ivo's cloth – the environment cloth is now using merged mesh deform, which is awesome. :)

Chris R: Shouldn't be a problem – Ivo's code is much simpler than the CryPhysics stuff. He just needs to get the proper gravity vector.

Sean T: Yes precisely what we were seeing on the character cloth, in the meantime we try to get it nice in normal gravity (non-planet) and if that gets fixed great ... if not, it will have to come off or go static.

Chris R: It's the "assume gravity is just in the Z axis" issue that plagues old CryEngine code. If the attachment code just queries the gravity of the articulated / living entity of its parent and uses that vector, it will all work. Shouldn't be a lot of work, especially with a decent engineer like Ivo.



Hannes A: Test to see if the gold metal plaque from the crashed Javelin would light up when the sun hit it at the angle from which the player would most likely approach. The joys of PBR!



WORK IN PROGRESS

Marco C: There are 40K rocks when inside the canyon.

Hannes A: 40k? I doubt that.

Marco C: I mean rock meshes with 40K polys.

Wai-Hung W: Well, a lot of the rocks are only 50% visible above ground, some much less.

Marco C: Even if 50% of them are underground, we are paying the full cost. Actually it's even worse because 50% of them are not visible, yet we are still drawing them all.

Hannes A: I talked to Carsten about this and for hero quests, that might be tricky to go fully systemic on weather and lighting. You lose like 50% of what Art Direction can do there if it is totally random. Would be better if we could assure certain cloud cover/weather situations.

Exploring a creepy old outpost, you don't want sunny Sunday.

Marco C: I found a nice lake location on the other side of the planet ...

Corentin B: Wow, nice! Virtual vacations coming soon to SC.
:p

>>>

Kirk Tome, Lead Technical Designer, CIG LA: Updates:
Constellation Aquila:

- Interactable sniper rifle placed on floor next to exit elevator. Will investigate getting lockers for weapons and armor in the ship tomorrow.
- New interior material set up (Chris Smith is updating).
- Major fix for Rover. It should now spawn correctly and lower properly; all portals in ship are fixed, all automatic doors in ship are fixed.

>>>

Benjamin Parr, Production Assistant, F42: How will the box be opened?

Corentin B: Shoot it, I guess.

Jonny Jacevicius, Technical Designer, F42: With the power of inner thought?

Ricky J: It will be a fragmented cased box that the player can access.

Hannes A: shooting is lame though. "Hey, I really busted my ass, survived an ambush to find this distress signal so let's interact with the world by shooting at the beacon box." Then it would be better to just not have to shoot it open. I hate when the only interaction with such a beautiful world is shooting at it.

>>>

Caleb E: I just submitted some new layers. I added the effect for when the worm pops out of the ground.

Hannes A: We can do one more iteration, as we now have a better worm animation soon.

I don't want to discuss the old worm.

>>>

Amit B: Enjoy some great cinematic driving.

Hannes A: That is driving too fast, though. He is hauling ass.

Corentin B: We're getting Vin Diesel in episode 2. You need to improve your driving skillz, Amit! :p

Amit B: How can you improve perfection?

Randy Vazquez, Associate Producer, CIG LA: Oh man, I so wanna be the stunt double for Vin. ! ;)

Amit B: <cool> That wasn't a physics impulse. I kind of drove into a rock just when the explosion triggered.

All planned. Obviously.

The canyon doesn't really have any tight areas to stop you driving fast though.

Corentin B: Controlled demo; whoever is driving at that time should just act cautiously.

Amit B: Hmph. <cat>. **Corentin B:** (You know that in 3.0 everyone will just go too fast on planets) (as they should).

Amit B: hehe





WORK IN PROGRESS

Hannes A: In this WIP shot the sun position was lower than what was used in the final demo. The sun is an actual sun entity now with a physical radius. It can be moved around physically in a solar system and lights everything up like one would expect.

Hannes A: Do we know if the sand nomads have LODs? Cause if I animate 6-10 of them ...

Josh H: That is an excellent question, following up now.

Hannes A: I just don't want to unnecessarily cut performance, because those dudes will be tiny on screen.

Josh H: They don't have LODs yet. Tech is going to make them later.

So 6-10 of these dudes might really bring down perf?

Hannes A: Does later mean in time for the demo?

Josh H: Yeah, in time.

They are doing cloth sims, so I believe they are going to get that all in at once.

Hannes A: Ok, then we should be fine. It's cool though the cloth automatically floats when the parent entity Dragonfly moves.



WORK IN PROGRESS

Hannes A: Flying over the savanna flatlands, trees by Jack Walker.

Forrest S: Texture first pass implemented.

Ashram Kain, Producer, CIG LA: That is pretty cool.

Matthew I: That is an incredible image.

Chris R: Go big or go home!

I feel like we need to up the worm screen time at the end of the adventure now.

>>>

Ross Tregenza, Senior Sound Designer, F42: The camera shake by the crystal lagoon: is that intended as foreshadowing for the sandworm, and if so – is it staying? Cos if it is, we can use that as an audio cue.

Todd P: It will not be in that location. It will be adjusted today.

Ross T: Ok, cool. But it'll still be a little rumble as the worm passes nearby.

Todd P: but it is staying in the demo.

Ross T: Cool.

OK we'll build something and check where it occurs when it's ready.

Nathan D: Just did a review of the escape pods. They are coming on well, the second one will be more kitbashed in the editor from chunks, I want to pose as it came down on rock and fractured, some seats rotting in nearby water, etc. The opening for the black box will be an additional mesh over existing asset.

Black / yellow chevron design; also we'll sort cubemaps for the interiors to make the most of beacon lighting from the black boxes which i assume are set up on the prop?

Hannes A: Sounds good, very good indeed.

>>>

Erin R: Just been talking here, worm looks awesome. How possible would it be to knock up a quick 5 min boss fight with worm to close it off ... I think it should be pretty doable ...

Hannes A: Demo player can just shoot him and camera pulls back. It already looks like a boss in what we want to do with it.

Jonny J: Put a big glowy bit on it that you can shoot. Burst it. End!

Erin R: :-) I am trolling you by the way ...

Mike Dalston, Lead QA Tester, F42: Thank god! :P

Hannes A: Nah, it looks like a boss, I am telling you!

Corentin B: <whew>

Hannes A: He just doesn't react to the shot, but he is so big that is understandable. It is like ants throwing dollar bills at him, so he dances.

Ricky J: Erin ... you just saved me writing out a long reply. :)

Hannes A: I have 2 riders hauling ass now away from him and him scaring them.

Steve Turberfield, Technical Designer, F42: Brb, writing some fan fiction!

Amit B: Just been talking here, worm looks awesome. How possible would it be to knock up a quick 5 min boss fight with worm to close it off ... I think it should be pretty doable ...

Already done: I rigged a system where you can build your own vehicle to take him out as well, like A Team.

Geoff Birch, Graphics Programmer, F42: Due to the fact I wouldn't be doing any work in regards to the boss fight, I think it's totally doable!!! <bandit>

Chris R: Erin maybe trolling you, but I think the boss fight is a GREAT idea. :-)

Ricky J: Go away, Chris. :)

Chris R: 5 mins. We can have Todd bring his God Of War boss fight-balancing skills to it.

I'm pretty sure we could get that done in a day or so. :-) heh, heh

>>>

Ricky J: It's coming together, guys W we still need to get through some must fixes.

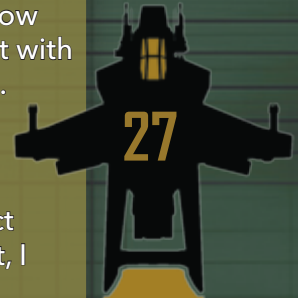
But it's looking so cool!

I just need to ensure we deliver the whole demo.

>>>

Nathan D: Sean, does the engine still calculate shadows even if the asset is already in full shadow? I.e., will disabling shadows on shadowed assets get us some ms back?

We used to optimise c2 levels by crashing a skyscraper shadow through half the level.



WORKING IN PROGRESS

Hannes A: Abandoned outpost WIP.



WORK IN PROGRESS

Kirk T: Constellation now has lockers in the neck. The center one has a change of outfits, and the sniper rifle has been moved to the gun rack to the right of the lockers. NOTE: If changing outfits, change first, otherwise you'll lose the rifle. We'll make the inside of the lockers look nicer tomorrow.

Matthew I: Excellent, Kirk. If you've parented the animated locker door to the exterior CGA, then it can effect the rate at which the ship will change LODs. The locker door LODs will need to be very aggressive.

Kirk T: They're entities in the neck object container, so they're not parented onto the ship exterior, so no worries!

>>>

Nathan D: Is this light source in the worm's mouth intentional?

Phil W: There's a little hole there where the mouth attaches to the body.

Chris R: There should not be a light there – it looks very weird. It was a note on our playback we had a few hours ago.

Josh H: We'll get that hole fixed tonight. Should be good in the morning build.



Hannes A: More vegetation by Frank Meinel and Jack Walker. Mostly inspired by African savanna and high-land vegetation. [this page and next page]



WORK IN PROGRESS

Mike D: Rustling sound effects when trackview goes through forest biome: is this intentional?

Phil W: Yup, grass rustling and tree whooshing, if it's not intentional its pretty great coincidence.

>>>

Darren L: Lee, I've tested the particle at great distance and it works outside of that camera cut.

Matteo C: I've noticed today that the sandstorm spawns much closer to the Javelin and it seems like when it approaches the wreckage it's a bit slower, is it intentional? Right now, there is a lot of wind noise through most of the playthrough because of the new location of the sandstorm, if this is intentional I'll need to re-tweak it so that is less annoying :p just let me know.

Caleb E: Some of the sounds might need tweaking as the timings have changed a bit.

Todd P: I spoke to Clem about it spawning too early as well.

>>>

Hannes A: New stuff added to sandworm layer, animation is ready for sound work. There is also now a tiny nomad running away from the worm and stumbling.

A super tiny, tiny, tiny nomad.

>>>

Kirk T: Locker fix is in.

If he starts properly (ignoring this outfit), and opens the locker, the slaver armor can be seen inside. After a switch, the jumpsuit is left in the locker. There are also two guns in the new weapons rack.

Chris R: Cool!

Sean T: Perfect, we also have all the nomads. etc. ... Did a playthrough with Vince and it's coming together!



WORKING IN PROGRESS

Sand Nomad



WORK IN PROGRESS

by Jeremiah Lee

Hannes A: Talked with Ivo about the cloth, he mentioned that the ammo belt that is on top of the grey cloth will be a nightmare for rigging. Also the red cloth goes on top of the grey cloth which is also problematic to get right cause both cloth pieces will clip through each other.

One suggestion could be to raise the ammo belt so it is not lower than waist height?



by James Ku

High Poly Sculpt [this page and next page]

WORK IN PROGRESS



WORKING PRIORITIES



JAMES KU



WORKING PRIORITIES



Sand Worm

FIRST PASS TEXTURING for Worm. Info: Big team effort Corey (Texturing), Tyler (Modelling) and Josh (Sculpting) teaming up to do an awesome worm for the homestead demo. Also Jason Cole (Animation) and John Riggs (Rigging) and Mark McCall (Technical Animation) bringing it to life with movement.



WORK IN PROGRESS



Intergalactic Aerospace Expo

For spacecraft enthusiast Audrey Timmerman, Lo was the ideal place to grow up. Every day, a wide array of ships would make the trip into atmosphere from the bustling spacelanes above. Family members recalled Audrey spending her nights staring out the window of their flat in the Walden Towers housing development and identifying ships as they flew past solely on the configuration of their running lights. In an interview with the Terra Gazette, Timmerman couldn't recall what first got her interested in

aviation: "I don't remember one specific 'ah-ha' moment. That love was just always there."

Timmerman came from a family of modest means who couldn't afford to own a ship, but her parents indulged her passion by taking her to New Junction's bustling trade port to watch the ships take off and land. In 2656, Timmerman eagerly joined the Navy with dreams of becoming a pilot. Unfortunately, her piloting skill lagged behind those who already had years of flight experience.

TIMMERMAN

Still, her vast knowledge of ships and eye for detail did not go unnoticed. She became a mechanic and rose through the ranks to become a pit chief aboard the frigate UEEN Solis. Assigned to patrol the Perry Line, the Solis spent its time as a mobile support ship for UEE strike fighters that monitored the Xi'An jump points. She described it as 'long stretches of boredom punctuated by moments of terror,' but that changed one day when a flight of fighters brought back something from their patrol: wreckage of a Xi'An ship. While Timmerman was intimately familiar with Banu ships from her childhood in Corel, seeing the Xi'An's unique design approach was both fascinating and inspiring for her.

After ending her Naval service, Timmerman returned to New Junction and opened Intergalactic Aerospace Repairs in 2667. The shop quickly garnered a reputation for being able to fix just about anything. In her off hours, Timmerman devoted herself to her true passion, trying to reverse engineer the Xi'An tech she had seen in the Navy. Relations between the two species were antagonistic at the time, so it was impossible as a civilian to get her hands on Xi'An tech, leaving her nothing but memories and ingenuity to work with.

Humble Beginnings

In 2670, Timmerman finished installing Xi'An-inspired maneuverable thrusters on *Poby*, an old Aurora she named after her cat. Afraid to test fly the ship on a heavily populated planet, Timmerman and fellow aerospace enthusiasts loaded *Poby* and a number of other heavily modified ships onto a transporter and flew to the nearly desolate planet of Castor to test fly them. Though it was an informal gathering, historians now considered it to be the very first Intergalactic Aerospace Expo.

Poby's first flight was a disappointment, as a power surge fried a number of her experimental thrusters. Timmerman wasn't deterred by the failure – quite the opposite, she was energized by the process, and it wasn't long before this group of experimental spacecraft enthusiasts were meeting regularly to discuss and examine various mods they were building. The annual test flights on Castor became a tradition and grew in popularity over the years.

One of the members of the group was Steffon Dillard, owner of Steffon's Ship Emporium in New Junction. He recognized the popularity of the annual gathering and approached Timmerman about sponsoring the event. He would provide the latest ships for the enthusiasts to check out in person, and hopefully make some sales in the process. Timmerman agreed and, needing a name to put on the ads Dillard was creating, decided to borrow from her own company to get the name Intergalactic Aerospace Expo (IAE).

Over the next decade, the event became large enough that other retail outlets and parts manufacturers were eager to show off their own goods at the expo. Once that happened, it wasn't long before the major ship manufacturers took notice. In 2683, RSI became an official sponsor of the IAE and has been one ever since. Each year, more and more sponsors and booths appeared at the event.



TIMMERMAN

Purists decried its corporatization, but Timmerman vehemently justified the expansion. To her the Expo hadn't sold out; it had adapted and improved. Her final act was to create a nonprofit to officially manage the event, and

ensure a large percentage of the revenue went to a charity Timmerman created called Simpod Pals, whose mission was to give underprivileged children the opportunity to learn how to fly.

Spooling Up

In 2847, the board of directors made the decision to rotate the location of the IAE each year. The public explanation was that it would give more people the chance to experience the universe's premier aerospace event.

Numerous systems clamored to host the event and enjoy the economic windfall that came with it. The event hopped from planet to planet for the next few decades until the 2913 event in Ferron was almost canceled due to Asura's inability to meet the minimum hangar and power standards outlined by the IAE's contract. Shortly after this scare, the IAE board was contacted by Governor Joanna Tzur of Severus about bringing the event to the Kiel System. IAE officials were impressed with his presentation, but more so with the facilities his planet could offer. Severus contained numerous hangars (initially built and used by the military), plenty of available landing pads, and more than sufficient accommodations for visitors. After impress-

ing the IAE board with Kiel's facilities, Tzur went in for the kill. He offered to make vast upgrades and improvements to the existing facilities if the IAE agreed to make Severus the event's permanent home. Still reeling from the Ferron controversy, the board of directors took a vote and approved the proposal. The IAE has been based in Kiel ever since.

The Intergalactic Aerospace Expo has come a long way since its humble beginnings on Castor. Due to insurance and legal issues, it's no longer about amateurs test flying experimental ships. Instead, renowned pilots like Chelsea Yan and members of the Navy's famed 'Wreckless' Squadron 999 dazzle attendees with impressive flight maneuvers, while ship and component manufacturers unveil their latest wares. At its core though, the Intergalactic Aerospace Expo is made for those young dreamers who find themselves staring up at the sky to count running lights.



THE HISTORY

INTERNAL & EXTERNAL QA



BEHIND THE SCENES

We've talked about the QA process before, but it has changed and grown, so it's time to take another look behind the scenes at it. This time around we don't interview all our QA (we'll save that for another time); instead we look at how our "external QA" volunteers are interacting with our more traditional internal QA team.

JP: *To introduce everyone, please give me your title, how long you've worked for CIG, and what your most recent job was before that.*

Benjamin 'Mac' McMonnies: Game Support, ATX. 1 Month. Data Contractor USAA/Datamark.

Justin Binford: QA Director. I have been at the company for

about 3 1/2 years now. Prior to this I was QA at Portalarium and before that I was Customer Service at Blizzard Entertainment.

Andrew Hesse: ATX QA Manager. Over two years. QA/ Customer Support/Training for a company that specialized in automation software for the publishing industry.

Eric "Proxus" Green: Game Support (and Avocado Wrangler) in the ATX office. Been at CIG for four months. Before that I was a government contractor working as a software developer and I was a moderator on Twitch for multiple Star Citizen Twitch channels. Been a Citizen since Sept 10th 2012, and a First Wave PTU Tester and Evocati Tester prior to employment at CIG.

Will Leverett: Director of Player Relations. I've been here almost two years. My previous job was Sr. Manager of Operations at NCSoft. (I also moonlight as a sports photographer and storm chaser.)

Chris Danks: Game Support. I've been with CIG for a week shy of a year. Before that I was providing Technical support to a company in the Midlands.

JP: I'm guessing "Midlands" means you're a Brit? Or at least worked in Great Britain for a while?

Chris D: Absolutely – I'm our UK Game Support Agent working out of Foundry 42 UK.

JP: I was thinking you were all in the ATX office. Is everyone else in Austin?

Eric G: Yep.

Will L: As a side note, we are combining our support organizations. By the time this comes out, we will have Player Relations as a department, with Game Support, E-Commerce Support (think billing), and Community Support (forum moderation) as teams. The US and the UK support teams will report to me.

JP: Does this mean anyone is shifting offices, or even desks? Why the change – how will it help the game?

Will L: Previously, we had two offices providing different kinds of support. Our teams did a very good job, but in the eyes of players, we're one company!

So we saw an opportunity where we could align our teams and operations so that every member of the Player Relations team can help every player with virtually every issue in almost any hour of the day, whether that be a tech issue, a billing issue, a pledge issue, or a moderation issue.



JP: Let's begin at the beginning: how exactly does testing happen?

Justin B: Testing starts as an iterative process between internal QA and development. QA will provide feedback to the designers and they will make changes based on the feedback. Then QA will test the changes and provide additional feedback. For example, when we're working on ship balance, the feedback is given to Technical Designer Andrew Nicholson and Lead Technical Designer John Crewe. Eventually, when Andrew and John feel they have gotten things to a good enough state with their changes, the decision will be made to deploy an early version of the build to our Evocati testers.

This is where Will's team comes in.

JP: Who is Will's team?



BEHIND THE SCENES



JUSTIN BINFORD

Will L: Game Support is one of my teams, and one of Game Support's jobs is overseeing Evocati, our 800-member volunteer test group.

As Justin said, our devs make a build which gets tested by internal QA. At some point, we need to have external players start playing, but it's usually super broken and not-ready-for-primetime at that point.

So, we created a volunteer test group called the Evocati. My guys work with Justin and his QA team to make sure everything is tested and feedback is looped back to the design team.

JP: *And who is in Game Support?*

Chris D: That would be Mac, Eric and me!

Will L: Game Support comprises Chris Danks in the UK and Eric Green and Mac McMonnies in the US. Interest-

ingly enough, both Eric and Mac are former Evocati. Chris would have been Evocati as well, but he got hired too quickly!

Justin B: The QA and Game Support teams work very closely together during this process.

JP: *We've discussed this before in JP, but just to quickly catch everyone up – what else does Game Support do, besides work with Evocati?*

Will L: Game Support handles various support issues for backers, ranging from troubleshooting tech problems on individual backers' machines to reporting bugs to Justin's QA team to publicly communicating issues with the Live Service to players.

JP: *So let's say something new is being developed and tested to add to the game, or modify it in some way. I know ship combat maneuvering (SCM) is always a primary concern; let's use that as our example.*

Andrew H: The current version of 2.5 has higher ship speeds while in SCM mode, with the ability to use the Afterburner to give you a bit more speed, and then Cruise Mode if you want to go substantially faster at the expense of maneuverability.

In our current test environment, we're experimenting with changes to ship flight balance. To test this, once John Crewe and Andrew Nicholson have made their design changes, as well as new code support for IFCS from John Pritchett, a custom build is sent to QA to test the changes to determine if they're functioning as intended (in their current Work In Progress state), but also to provide feedback on how the functionality feels, how long it takes to adjust to the changes, and even if there's some unforeseen side-effects to the changes that need to be dealt with.



BEHIND THE SCENES

Will L: As Andrew says, one of the current features being tested is a full balance pass of ship handling. We've gotten a ton of excellent feedback on this, and Evocati has been testing this for several weeks. We actively work with internal QA to provide that feedback to the design team, who then make iterative changes which then get re-tested. The feedback loop continues until we feel we've reached the vision that the design team wants for the game.

JP: *In general, how many loops of design and feedback are there until everyone's ready to pass it on to external testing?*

Andrew H: With design changes, since you're dealing with the general feel of something, it can take several passes before you feel like you're at a point for wider feedback. It certainly doesn't mean that we think we've "nailed it", and we're done at that point.

With situations such as engine-level code changes that can affect the game visuals, it's usually a little more straightforward. Things either work or they don't. Elements either look right or they don't. Though sometimes you have to look VERY closely, as the tiniest change in the way a shadow is rendering can be a symptom of a much larger issue. But usually those test cases only require one major pass from QA, then a possible follow-up pass later to recheck for any issues that were discovered during the first pass.

Will L: One of the things that's also important to remember is that a major system may be implemented late into the external testing cycle that will change the dynamic of the build. As Andrew said, we deal with the feel and the aesthetics of a design, but that might change significantly as we progress through a build. The Port Modification System is a good example of a feature that didn't get introduced until late into the external testing cycle.



JP: *How did adding the Port Modification System affect the testing process?*

Will L: The Port Modification System was designed as an immersive, in-world replacement of the holotable. When we started testing 2.4.0, it was probably only about 20% done and missing virtually all of the features that it would ultimately have. For our volunteer testers, it initially was a very frustrating experience to the point that many actually lobbied for the return of the old holotable. However, with just a few builds, the Port Modification System turned from being broken dots on the screen to a fully immersive ship loadout management tool!

This was hugely educational for our testers as they were able to observe firsthand how a major feature could be introduced in its earliest stage to completion within a single testing cycle.



BEHIND THE SCENES



CHRIS DANKS

JP: So then it is made available to external testing – the Evocati? Have they changed in the last few months?

Chris D: There's a few more of them now! We've gone from a base of around 400 to around 800 active members.

JP: I've wondered how we could handle input from 400 players. How can we handle input from 800? How exactly do we do that?

Eric G: So we've tried a number of methods, actually. Initially we collected feedback direct from the Evocati Discord channels. However, we quickly noticed that even with software tools to collect the chat data, it wasn't quite as structured as we'd like. Since then we've moved on to using Comm-Link posts on the PTU website that people can link to and leave their feedback as a comment on the post. This also gives us the advantage of allowing Evocati members to upvote the comments they all agree on so

we can collect more accurate feedback. In addition to this we've also been using Google Forms to collect data on more specific changes so we can present feedback to the producers and designers with visualized metrics included.

JP: And "visualized metrics" are what, exactly?

Eric G: Various forms of graphs and/or charts to make the numerical data easier to understand.

Mac M: Telling people that our test group doesn't like something is fine, but showing with a graph or some other display that 70% liked something or 30% didn't like something else gives a better understanding.

JP: So the numerical data is basically "like/don't like" feedback, or are we able to get anything more detailed than that?

Eric G: It can also be used by the Evocati to suggest how much faster or slower they feel a ship should be or how to adjust a particular weapon that's being worked on at the time.

Will L: Our goal is to serve the design team with as much information as they need. Sometimes it's a binary question, sometimes it's multiple choice, sometimes it's free form. Every build and every test is unique, so we actively work with stakeholders to make sure we're asking questions that will allow us to successfully catalog the qualitative feedback and quantitative data that best represents the players' testing experience.

JP: With 800 members, how do you get feedback from everyone?

Eric G: With Comm-Link discussions we leave them open for awhile to ensure that people who have anything to say about the topic have the opportunity to deliver their feedback before we collect it.



BEHIND THE SCENES

With the Forms, we can easily see how many have replied to the form and we remind the group when we need more replies.

Eric G: Historically, we have had no shortage of feedback, though. The members of the ETF are extremely passionate about the game and always deliver an enormous amount of data for us to sift through.

Andrew H: We don't send out every change to Evocati, usually just the earliest builds from our Release stream prior to going to a wider PTU. These builds are generally much more unstable than anything we'd normally push out, and one of the main things we gather from these early builds is server and client crash data which helps us to further stabilize the release before we go wider with it. It doesn't do anyone any good to push out a build to thousands of players if the majority can't stay in it for more than five minutes.

That said, for 2.6, we have been experimenting with a hybrid 2.5 build that only includes the flight changes from 2.6 to send to Evocati for early feedback while we continue testing everything else internally until it's far enough along to go to Evocati and beyond.

JP: If I want to be the 801st member of the Evocati, what should I do?

Mac M: Maintain participation on the Issue Council. We pulled almost all of our second wave from the metrics of IC alone.

JP: Did you ask for volunteers to apply, or do you simply ask specific active members of the IC to join the Evocati?

Mac M: There wasn't any global message or anything like that; it was almost purely metrics for the new wave of Evocati. We pulled data from the IC: how many contributions, how many acknowledged by CIG reports, how many new



reports that get above a certain number of contributions.

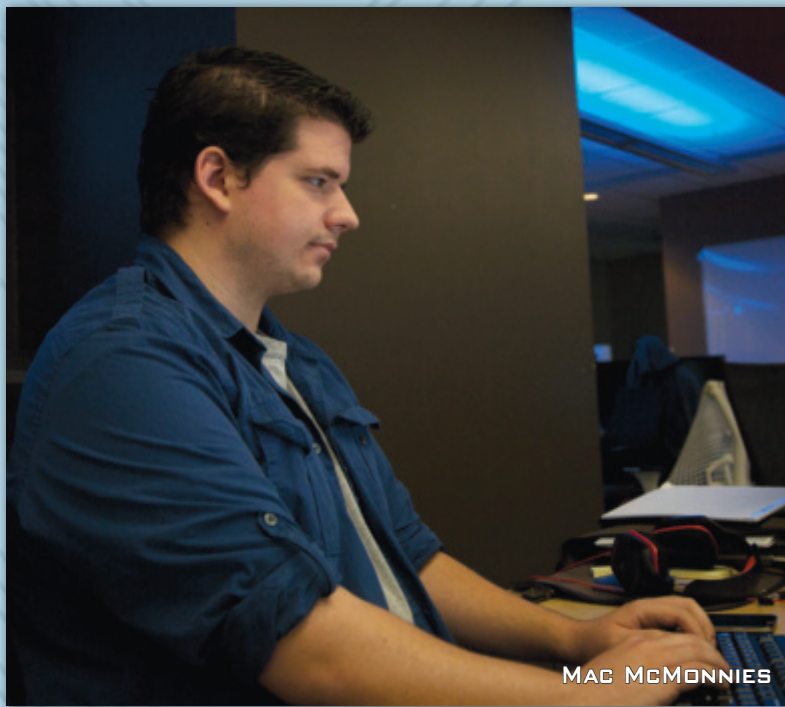
Each of those were assigned points (a bug that was acknowledged and fixed by CIG was worth quite a sum) and from there we added everything up and chose from the top. We worked our way down I think to ... the 502nd person on the list.

Even then we went through and double-checked that people weren't problems on the Forums, didn't have past difficulties with CIG, etc.

JP: While Game Support is polling and collecting Evocati data, what all is internal QA doing? I doubt it's as simple as "3 out of 10 of us think this ship should have more armor."

Andrew H: QA will review the feedback that has been compiled, and look at it from several points of view. One of the most important questions: do the players not like





something because they don't like the actual implementation, or are they encountering a bug that's causing the data to be skewed?

We also try to determine whether the feedback stems from the players' lacking some context in regards to the aspects of that ship's wider long-term role within the game, as well as what we know about future gameplay systems that are in development that will directly impact the points the players may be raising, but simply aren't implemented.

That's not meant to imply that we look for reasons to throw out feedback. A lot of the feedback we feel is valid, and even things we may not agree with will still get passed up the chain for review. But we will generally leave a comment adding QA's perspective with additional context to what could be contributing to the feedback: bugs, unimplemented systems, etc.

JP: *And meanwhile, you're also submitting your own feedback, aren't you?*

Andrew H: Correct. And QA's feedback can be just as varied as player feedback. Just like the players, we don't all agree and disagree on the same things.

JP: So after all the dev work, QA review, Evocati metrics, lather, rinse and repeat, we arrive at a design we feel comfortable releasing. Will anyone give me a hint at what we'll be seeing in 2.6, or am I just going to have to wait along with everyone else?

Andrew H: Assuming nothing changes before this goes out, we might be seeing *Arena Commander* changes such as missile persistence/pick ups, the ship flight rebalancing we've mentioned here, and uhhh ... something something *Star Marine*.

JP: *What are missile pick ups?*

Andrew H: Right now, when a player ship spawns in *Arena Commander*, the ship always spawn with its full missile loadout. This allows a player to target another player, fire all missiles, self-destruct their own ship and then respawn with a full loadout of missiles again. Wash, rinse, repeat.

So we're testing various ways of preventing this tactic. Ideally, this will make missiles a more valuable resource, and prevent players from just spamming them, which will also allow us to gather more accurate longer-term feedback on missile balance.

Will L: We don't want to spoil anything bigger just yet. We'll be rolling out a lot more 2.6.0 details in the upcoming newsletter and livestream this month!

JP: *I think I've found out all I'm going to this time around – thanks to all of you for your input!*



BEHIND THE SCENES

KIEL SYSTEM SEVERUS



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The Kiel System was a major hub of military activity during the cold war, but since relations with the Xi'An have improved, the system has worked hard to redefine itself. The Senate's recent official recognition of the system's third planet, Severus, is considered proof to many that some of that hard work has started to pay off.

The system was discovered by a Merchant Marine fuel collection vessel operating in the Hadrian System. The ship's captain, Adhama Schnauss, made it a point to take a different route on each collection trip to keep the crew on their toes. One day in 2514, Schnauss noticed a strange anomaly on their scans and redirected their course to investigate it. What they found was a large jump point connected to a new system with a white, F-type main sequence star surrounded by six planets and an asteroid belt. Schnauss

named the system Kiel after a longtime friend who adamantly refused to leave his home planet of Mars. Schnauss hoped the gesture would motivate his friend to finally venture into the stars to see the system that bore his name.

Military pathfinders scanned the system to discover that none of the planets were naturally habitable and only the third one, Severus, was deemed suitable for terraforming. As the terraforming process was under way, jumps to two new systems (Baker and Horus) were discovered, igniting massive public and private interest in the system. Even though it hadn't been officially inhabited, it was already well connected to the expanding Eastern edge of the Empire. It had a mineral rich asteroid belt, gas giants to be used for refueling and soon, a terraformed world to serve as the system's nerve center.

Yet, all that changed when in 2542 Marie Sante discovered a jump into Xi'An space from the Horus System. Being connected to the Perry Line, Kiel was now only one system away from Xi'An territory, so the UPE quickly re-designated the system. Much to the dismay of the companies that had begun prospecting as the terraforming process was completed, rather than opening the system for economic development, the government drafted plans to make Severus a massive military hub, a decision that would define the system for centuries.

MILITARY MACHINE

Once Severus was habitable, the military moved into the system en masse. Ivar Messer had recently risen to power partially by cultivating fears over the Xi'An, so pouring government funds into Kiel was considered an impressive show of force against our new alien enemies.

Over the decades, the military's strong presence in Kiel also proved beneficial for domestic pacification purposes. Its proximity to Terra was a noted concern amongst the growing anti-Messer activists, who saw it as a potential staging point for invasion. There were even rumors that Terran Senator Assan Kieren, who mysteriously disappeared in 2638 after drafting a bill that would grant Terra sovereignty apart from the UEE, had been abducted and taken to a military installation on Kiel II.

Kiel's military footprint was greatly reduced in the early 29th century after tensions with the Xi'An de-escalated and the Perry Line was dismantled. However, as the military moved out, attracting private sector companies to replace them in the system proved difficult. With large swaths of resources removed by the military, an aging infrastructure in need of repair, and without a significant population, it just didn't make economic sense for many businesses to expand into Kiel.

That started to change under the guidance of Joona Tzur, who was elected Severus' Governor in 2903. Tzur

TRAVEL WARNING Miners have long coveted a chance to pull resources from Kiel II, and over the years, numerous unauthorized attempts have been made. Yet, even though the military no longer dominates the system, it still maintains a strong presence, and is quick to go after those who disobey the mining prohibition on Kiel II.

was one of only a few hundred people whose Kiel roots extended further than two generations, beginning with his great-grandmother who chose to remain in the system upon retiring from the Army. He knew Severus' strengths better than anyone else and specifically recruited industries to the planet that could capitalize on the military's infrastructure and abandoned bases. The strategy worked and numerous giants of the space industry set up factories in the system. In addition, Tzur knew that he needed more than businesses to grow his homeworld, and so he invested heavily in public leisure and green spaces, claiming that a happy population is one that grows.

One of Tzur's most notable victories came when he convinced the Intergalactic Aerospace Expo to host the event on Severus. Tzur's main selling point were the numerous decommissioned spacecraft hangars that could house the massive event. After a rapid series of upgrades were made to the facilities, the IAE was held on Severus for the first time in 2916 and has been one of the system's main economic drivers ever since, creating additional hotels, restaurants and attractions in its wake. Today, in addition to the Aerospace Expo, many other conferences use the facilities throughout the year, making tourism one of the largest growth sectors for the planet.

The economic turnaround and rebranding of Kiel has been considered a success by many, including the Senate who officially recognized Severus in 2937. The system's population has continued to swell ever since. With plenty of jobs and considerably less congestion than other systems, like Terra, Kiel was recently voted one of the "Top Ten Most Livable Systems" by the editors of New United.



KIEL I

This small mesoplanet is sun-scarred on one side thanks to it being tidally locked.

KIEL II

Kiel II is a rocky planet that features a thin atmosphere and a good deal of mystery. Scans of the planet reveal the presence of resources, yet the UEE has strictly prohibited any mining operations. This has led some to believe the planet may continue to house classified underground military installations.

KIEL III (SEVERUS)

Severus is a rocky planet that was quickly terraformed after the system's discovery. Named after a famous Navy admiral who distinguished himself during the Second Tevarin War, it served as a key military hub during the cold war with the Xi'An. Once relations thawed, the planet's permanent residents worked hard to help it find a new identity.

Things started to turn around after RSI agreed to open a large factory to manufacture their improved line of thrusters. RSI brought a fresh flow of people and creds into the system, which encouraged other companies to follow suit. Soon word spread that the planet had plenty of work and an affordable cost of living. Blue collar workers arrived in droves, and the planet saw its populace consistently rise for decades. It wasn't long before the Governors' Council applied for and received representation status, with Tzur's daughter Janna Thurville elected as Severus' first senator.

The influx of people and business allowed the government to redesign parts of the planet for civic use. The planet's capital, Eri City, received the most attention. A number of old, drab military structures were demolished and beautiful public parks built in their place. Though the planet still lacks a unique cultural identity, its fine dining scene is surprisingly strong. There have been great strides

in making the planet's soil arable again, and with housing expenses being relatively low, many people are more than willing to splurge on gourmet meals.

KIEL IV

A picturesque gas dwarf that's a striking deep blue color. The planet's rapid spin means it only takes 16 standard Earth hours to make one complete rotation.

KIEL V

This massive gas giant has a planetary radius of over 57,000 kilometers and an impressive set of planetary rings that extend well beyond that.

KIEL VI

It takes this protoplanet 44,512 standard Earth days (about 122 standard years) to make one trip around the system's sun. A festival is currently being planned for the next time it reaches its perihelion.

HEARD IN THE WIND

"The true potential of the Kiel System is still untapped and unmolded. I don't see its lack of an identity as a hindrance, but rather as the ultimate opportunity to create something new."

- Governor Joona Tzur, inauguration ceremony, 2903

"The boring, nondescript building was originally constructed and used by the military when they controlled the planet. For centuries, it housed stodgy military bureaucrats, but now it's home to Nocturne, one of the most exciting new restaurants in the UEE. Like much of the Kiel System, what looks dull and unimpressive at first blush becomes much more fascinating upon closer examination."

- Gloria. Budd, New United "Top Ten Most Livable Systems," 2945



ERIKS

LOST

S Q U A D



CHRONICLES

Act 3

Attached is the actual production 'shooting script' used to film "Before the Fall," the first episode of the spectrum vid series *Lost Squad*. As you are reading through, you may notice differences between this script and the episode that was eventually broadcast. This is due to adjustments made by the director and actors on set while filming, and from the choices made afterwards by the editing team. We have purposely left these discrepancies in and hope you enjoy the light they shed on the creative process.

LOST SQUAD
Episode 1.1: Pilot
"BEFORE THE FALL"

Written By

Jenna Tatman
Hadrian Weir

Based on real historical events

Registered with ICWA #233.451234
Draft 3.2
Shooting Script
Devil May Care Productions

ACT THREE

EXT. SPACE - QUANTUM TRAVEL

The Terrapin leads the way through quantum with the Maverick close behind as the two pilots race away from their stranded squad-mate to answer the distress comm of a civilian in need.

INT. MAVERICK COCKPIT - QUANTUM TRAVEL

The streaking lights of quantum travel reflect off the helmet of Blair.

TYRESE 'FADER' JACKSON
(over comms)

You think this is the wrong call.

BLAIR COBALT
Doesn't exactly seem like a great decision.

TYRESE 'FADER' JACKSON
(over comms)
Neither did waiting around 'til a bunch of civilians died.

BLAIR COBALT
We left a man floating in space.

TYRESE 'FADER' JACKSON
Hey, Snuff volunteered to put his life on the line, so this is the hand we get. You in or not?

BLAIR COBALT
Wait, you're actually asking me this time?

INT. TERRAPIN COCKPIT

Tyrese grins at Blair on the comm screen.

TYRESE 'FADER' JACKSON
Figured it'd be a nice change of pace.

BLAIR COBALT
(over comms)
Yeah, I'm in.

Tyrese looks down to his nav MFD.

TYRESE 'FADER' JACKSON
Good. We're nearing the distress coordinates. Get ready.

Tyrese flips the toggle to bring his weapon system online.

TYRESE 'FADER' JACKSON
Weapons hot.

BLAIR COBALT
(over comms)
Copy.

EXT. B.E.R. SWALLOP

Blair and Tyrese drop out of quantum just out of range of a dozen small fighters swarming the B.E.R. SWALLOP, a crippled MISC Sun-lancer freighter.

Before the pilots have a chance to orientate themselves, a missile hurtles directly towards Blair.



CHRONICLES

INT. MAVERICK COCKPIT

The Maverick's HUD flashes red with "INCOMING" warnings.

TYRESE 'FADER' JACKSON
(over comms)
Incoming! Blair! Move!

But rather than moving, Blair simply stares transfixed as the missile grows closer. All other sounds start to fade out.

TYRESE 'FADER' JACKSON
(over comms)
Blair? Blair!

EXT. OUTPOST TC3 - CALIBAN III

The door to the outpost slides open, and Reese is immediately buffeted by hail and winds. She struggles against the gale force winds to step out, but is shoved back into the doorway.

DORA REESE
(into comms)
Doc, the wind is too strong. I'll never make it to my ship. Any ideas?

DR. TATE
(over comms)
Do you think you can get to the rover?

Reese peeks out to where the rover lays a few meters away. Scrape marks show that the wind has continued to push it along.

DORA REESE
(into comms)
It's flipped over. Can't drive it anywhere.

DR. TATE
(over comms)
Not to drive. It has a power winch.

DORA REESE
You're a genius, doc.

DR. TATE
Don't thank me yet. Still no guarantee that correcting the malfunctioning ionizer will stop the storm.

DORA REESE
You just make sure to take care of that plant sample for me till I get back.

DR. TATE
It'll be waiting for you.

Reese charges out the doorway against the wind. As the force grinds her to a halt, she bursts the thrusters on her EVA suit to give her a push to the rover. She grabs hold of the frame and locks on with her mag boots.

The rover suddenly lurches forward as a big gust blows. Reese nearly loses her grip, but hangs on.

She pries open a hatch on the back and reveals a power winch. Pressing a few buttons on the terminal she activates the tracking on the launcher and lines it up to where her Avenger sits on the landing strip adjusting



CHRONICLES

for wind. She presses a button and the winch hook launches.

It sails towards her ship, but the wind is too much and knocks it off course. Dora reels the hook back. She goes to line up a second shot, but hesitates before she launches it.

Looking down at where her magboots grip the rover's metal frame, she has an idea. Reese pulls off one of her boots and fastens it onto the hook. She adjust the targeting again, and fires.

The hook sails towards the ship, but this time, thanks to the help of the boot's magnet, successfully latches on.

Reese begins to pull herself along the length of the winch cable towards her ship.

Almost lost in the wind, the comm on the rover flares briefly to life, with STATIC.

MALORY FISHER (O.S.)
(over comm)
... Reese ... there?

INT. HERSERON STATION - HANGAR CONTROL

Malory Fisher works at her terminal when there's a knock on the bulkhead.

MALORY FISHER
(into comm)
Come back, Lieutenant Reese. This is Herseron. Do you copy?

CAPTAIN HERST (O.S.)
Any luck?

She turns to see Captain Herst.

MALORY FISHER
No, sir. We haven't been able to contact her since that freak storm moved in over the outpost. It's causing a lot of electrical interference. You want me to send a comm-probe down?

CAPTAIN HERST
Let's hold off for now, we got precious few of those as is. Keep trying and tell me if you hear from her.

MALORY FISHER
Aye, sir.

CAPTAIN HERST
Now correct me if I'm wrong, but I remembered you saying you needed a new pair of lenses. Thought I could grab them for you while I was planetside.

MALORY FISHER
Really? That'd be great.

A thought dawns on her and she checks her screen.

MALORY FISHER
When were you going? I don't have a flight plan registered.

Herst gives Malroy a smile.



CHRONICLES

CAPTAIN HERST

Well, that's the second thing I wanted to talk to you about. Was hoping you could do me a favor.

INT. MAVERICK COCKPIT

The missile continues on its path directly for Blair's Maverick, but at the last second, the Terrapin cuts in and releases a wave of chaff in front of Blair.

The missile diverts for the countermeasure and detonates. The cockpit shakes from the shockwave.

INT. TERRAPIN COCKPIT

Tyrese swings his ship around.

TYRESE 'FADER' JACKSON
What the hell happened?

O'BANNON
(over comms)
You just can't stay out of the damn way can you, Fader?

Three Anvil Ospreys with Crion Security Legion livery soar past Tyrese's cockpit.

TYRESE 'FADER' JACKSON
You nearly killed us, O'Bannon.

O'BANNON
(over comms)
Accident. Hopefully teaches you not to jump into the middle of a CSL-controlled engagement. Any further action taken by you or your little wingman will be deemed as hostile, clear?

TYRESE 'FADER' JACKSON
Enough, we're both here to help. If we work together we can -

O'Bannon cuts off the comm before Tyrese can finish.

TYRESE 'FADER' JACKSON
Damn it.

BLAIR COBALT
(over comms)
We're not seriously going to stand down are we?

EXT. B.E.R. SWALLOP

The CSL Ospreys engage the outlaws, hunting the ships around the Sunlancer.

TYRESE 'FADER' JACKSON
(O.S.)
(over comms)
I know O'Bannon. We engage the outlaws and she'll target us without a second thought.

O'Bannon's ship makes a sharp spin and fires a missile, easily destroying her target.

BLAIR COBALT (O.S.)
(over comms)
So if we can't attack, then what the hell can we do?

TYRESE 'FADER' JACKSON
(O.S.)
(over comms)
What we came here to do, protect the civilians. And we need to do it fast. Look.



CHRONICLES

An Outlaw is chasing close behind one of the CSL ship's, but the CSL pilot skirts around the Sunlancer using the large ship as a shield. The Outlaw unloads several rounds into the Swallow's already damaged hull.

INT. MAVERICK COCKPIT

Blair stares in disbelief at the ongoing dogfight.

BLAIR COBALT
They're using the civilian ship as cover?

TYRESE 'FADER' JACKSON
(over comms)
That's Crion Security Legion for you. More concerned with stopping criminals than saving lives.

BLAIR COBALT
We need to move the fight away from the Swallow.

TYRESE 'FADER' JACKSON
(over comms)
Agreed, but if we try to do it with shooting, we get ourselves killed or arrested. It's too bad we can't just ask them to move.

BLAIR COBALT
Maybe we can ...

TYRESE 'FADER' JACKSON
What do you mean?

BLAIR COBALT
Permission to come aboard the Terrapin, sir?

EXT. EARLY WARNING BEACON

Harness clip hooked into the skin of the beacon, Len dangles loosely finishing a weld. Despite his large size he is surprisingly graceful in zero-G.

He gives the board he's working on a quick scan and when it comes in green, he slides it back into place.

Grabbing the large handle on the side of panel, he pumps it three times to prime the system, before pressing the power button. He holds his breath for a second waiting, but the beacon chirps back to life. Success!

However, his celebration is cut short when the terminal inside the panel flashes a "PROXIMITY ALERT" warning.

Len turns to look as a long shadow passes overhead.

EXT. OUTPOST TC3 - STORM

Lightning dances through the clouds highlighting the Avenger as it tries to navigate the dense red storm, all of its thrusters firing to keep it airborne.

INT. AVENGER COCKPIT

Reese struggles to maintain control of the stick as every warning system screams at her.

Straining, she taps her display and attempts to connect to the ionizer but it's still out of range.



CHRONICLES

A lightning blast hits the ship.

EXT. OUTPOST TC3 - STORM

The Avenger's right wing is flaming and barely hanging on.

INT. AVENGER COCKPIT

The cockpit shakes even worse now. The whole ship is coming apart.

Reese taps a screen and brings up her boost. With a flick she diverts all the power going to her shields into her thrusters. The change is immediately noticeable as hail stones patter against her hull and cockpit.

She pulls hard on the stick with all her remaining strength till the ship is pointing straight up.

DORA REESE
Here goes nothing.

Reese engages the boost.

EXT. B.E.R. SWALLOW

The fight between the outlaws and the CSL rages on. At the edge of the conflict the Maverick floats lifeless as small figure enters the hatch on the Terrapin.

INT. TERRAPIN

Blair pulls off his helmet and quickly sits down in the scanner chair.

TYRESE 'FADER' JACKSON

You sure this is going to work?

BLAIR COBALT
I took a seminar on signal spoofing at the Academy.

TYRESE 'FADER' JACKSON
That's not very comforting.

BLAIR COBALT
If we can trick the outlaw's nav computer into accepting instructions for a QT hitch, they should all spool up, no problem.

TYRESE 'FADER' JACKSON
Adding 'no problem' to the end of a plan doesn't fool anyone, you know.

BLAIR COBALT
Just chart the quantum path for me.

TYRESE 'FADER' JACKSON
Fine. Got the perfect place. CSL outpost 127. One of the most heavily manned in the area.

BLAIR COBALT
Perfect. Now we just need to get one of the outlaws to comm us.

Tyrese hangs his head.

TYRESE 'FADER' JACKSON
All right. Hang on.

He spins up the Terrapin and heads towards the closest outlaw.

INT. OUTLAW COCKPIT



CHRONICLES

An OUTLAW is targeting one of the CSL. They are about to line up their shot, when their comm channel chirps to life.

TYRESE 'FADER' JACKSON
(over comms)
You interested in earning a million free credits?

The Outlaw dismisses the comm.

CHIRP.

TYRESE 'FADER' JACKSON
I have a bet with my wingman here. Would you say you were more stupid, or more ugly?

The Outlaw slams his fist down on the comm.

CHIRP.

TYRESE 'FADER' JACKSON
You know this is a priority Navy comm right? You can't dismiss it.

Dismissed again.

CHIRP.

TYRESE 'FADER' JACKSON
Seriously. I can do this all day.

INT. TERRAPIN COCKPIT

Tyrese goes to comm again but the Outlaw caves first.

OUTLAW
(over comms)

You listen here, you stupid rutter. I'm gonna come over there and rip your faces off and throw them into the sun.

Tyrese talks over the Outlaw's threat.

TYRESE 'FADER' JACKSON
(to Blair)
You get it?

BLAIR COBALT
Got it.

Tyrese disconnects the comm.

BLAIR COBALT
Sending the spoof now.

EXT. B.E.R. SWALLOW

The Terrapin's dish rises out of its hull, and lights up as it sends a signal.

A second later, all the outlaw ships begin to spool. BOOF. They phase into quantum travel and vanish.

Before long, the three CSL ships spool up to give chase.

INT. TERRAPIN

Tyrese turns dumbfounded.

TYRESE 'FADER' JACKSON
It actually worked.

BLAIR COBALT
See. No problem.



CHRONICLES

EXT. OUTPOST TC3 - STORM

The Avenger's boosters kick in and force the ship upwards. The right wing rips off within moments. The ship begins to corkscrew. The uneven force soon sheers off the second wing.

With both wings gone, the Avenger's flight evens out, but before it can crest the storm, the boost dies out and all the thrusters with it. She's not going to make it.

It begins to topple and fall when the canopy flies off and Reese rockets out of the ship on the ejection seat.

She hangs on tight as her chair hurtles upwards till it final punches through the top of the red storm cloud. She made it.

The seat gently floats in low orbit, the storm churning below her. She taps her wrist and this time manages to connect to the ionizer and successfully upload the patch.

Mission accomplished, she collapses back into her seat panting. The panting grows heavier. Something's wrong.

A pressure and oxygen warning pops up onto her helmet's HUD. Reese looks down to where her EVA suit is missing a boot.

INT. TERRAPIN COCKPIT

Tyrese talks to the no longer Distressed Captain.

DISTRESSED CAPTAIN
(over comms)

Thank you. I don't know what we would've done if you and the Legion hadn't shown up when you did.

Tyrese flinches at the mention of the CSL but puts on a smile.

TYRESE 'FADER' JACKSON
Don't mention it. You sure you can make it back to port?

DISTRESSED CAPTAIN
(over comms)
Yeah. My engineer's almost got us up and running again. Thankfully our hold was full of a shipment of spare ship parts.

TYRESE 'FADER' JACKSON
Let me guess. To be delivered to Herseron.

DISTRESSED CAPTAIN
(over comms)
Ain't that funny. Guess they're technically your spare parts. Don't worry. I'll make good on anything we had to use.

TYRESE 'FADER' JACKSON
Well, better you use them than those thugs. Safe journeys, Captain.

DISTRESSED CAPTAIN
(over comms)
Same to you.

Tyrese clicks off the comm, and pings Blair.



CHRONICLES

TYRESE 'FADER' JACKSON
You ready to go check in on Scuff?

Blair answers from the Maverick's cockpit.

BLAIR COBALT
(over comms)
Ready when you are.

TYRESE 'FADER' JACKSON
Then let's go.

Tyrese spools up his quantum drive.

INT. CRASH'S BAR

The place is a little more crowded during this part of the day with people catching a drink in between shifts. Crash is still behind the bar, but this time wearing a MACARTHUR NAVAL ACADEMY sweatshirt that is awkwardly stretched out over his chest ridge.

A man in low riding cap and a nondescript halter jacket steps up. Crash eyeball's him. We see on closer inspection that it is Captain Herst wearing civilian clothes.

CRASH
You need something?

CAPTAIN HERST
One Shore Leave.

Crash turns to make the drink, leaving Herst to scan the bar. He's clearly looking for someone.

Crash sets an ornate, fizzing drink in front of Herst.

Herst slides a credit chit towards the Tevarin, but leaves a finger on it.

CAPTAIN HERST
Out of curiosity, you didn't happen to find a young starman's bag did you? Said he left it here.

CRASH
I ain't seen it.

Herst eyes Crash's suspiciously ill-fitting Navy sweatshirt, but the Tevarin doesn't flinch. Herst shrugs.

CAPTAIN HERST
Oh well. Worth a try.

He lifts his finger off the chit. Crash snatches it up. Herst takes a sip of his drink.

GAIGE LIMAN (O.S.)
Good looking drink. What is it?

Herst turns to see that standing next to him at the bar is Liman, his tattooed hands covered by thick black gloves.

CAPTAIN HERST
Called a Shore leave.

GAIGE LIMAN
Crash, I'll have what the gentleman's having.

CRASH
Right away, sir.



CHRONICLES

Herst can't help but smile at the bartender's improved manners.

GAIGE LIMAN
Always love trying new things.
Helps keep life interesting.

Crash sets another drink down on the bar. Liman reaches for it, exposing a bit of glowing blue on his wrist as he does.

He takes a try.

GAIGE LIMAN
Not bad at all. Thanks for the tip.

CAPTAIN HERST
Anytime.

Herst throws back the last of his drink and leaves.

Liman looks down to a datafob now resting on the bar where Herst just was. He casually pockets the fob, and takes another sip of his drink.

INT. TERRAPIN COCKPIT

Tyrese drops out of quantum travel as he arrives at the Early Warning Beacon.

TYRESE 'FADER' JACKSON
(into comms)
Scuff, you're not going to believe what happened to us.

A beat passes.

TYRESE 'FADER' JACKSON
Len? You there? Blair, you got anything?

BLAIR COBALT
(over comms)
I'm not picking him up.

TYRESE 'FADER' JACKSON
Keep looking. I'll use the terra's scanner.

Tyrese climbs out of the cockpit and heads to the scanner seat.

EXT. EARLY WARNING BEACON

The Maverick's headlights light up the beacon, revealing a cloud of debris.

Near the repair hatch, Len's harness dangles free, no one connected to it.

END ACT THREE



CHRONICLES