JUMP◆POINT

FROM THE COCKPIT:

GREETINGS, CITIZENS!

Welcome to Issue #2 of the new, revised **Jump Point**. We've read all your comments (I've read every comment that I could find), we've considered every point made, and we've done some fine-tuning. It won't all be the way everyone wants it to be — sadly, "you can't please all the people all the time" is a principle that still applies — but along with your comments, we're applying several decades of experience and making the decisions that we think best serve **JP**. And I don't say that to diss those of you who also have significant experience in publishing — I know you're out there, from the depth and insight of your comments, and I most especially appreciate your thoughts, even if we choose to take a different direction.

But as much as I care about the look and feel of **JP**, I would much rather be talking about its content than its graphic design, so that's where I will be focussed, moving forward.

I've had a couple of monkeys on my back for the last couple of years. One of them you knew about: I promised a third Idris issue in early 2015, and we were finally able to deliver it in December. The other, I don't believe I ever mentioned here. Back toward the end of 2015, we collected an extensive set of images for the new asteroid base that we were constructing. And just before we went to press with them, the decision was made that . . . it wasn't yet time to release that material. Now, at the beginning of 2018, it's finally time, and I hope you enjoy the detailed WIP look at Levski we have for you, enhanced by the extended commentary that Ben Lesnick provides.

As a companion to that, we have a Behind the Screens discussion with the Environment Art team in Frankfurt that updated the asteroid base (both interior and exterior) and made it ready to release as part of 3.0.

I promised new, short features in this issue, and we've got those as well. The first actually isn't all that short — it's an excerpt from Whitley's Guide to Spacecraft detailing the service history of the Terrapin-class utility ship, also by Ben. Whitley's Guide excerpts, like those from Galactapedia, will be an occasional entry, rather than an every-issue feature.

"One Question" is a single question that we pose to everyone at Cloud Imperium. This issue, the question is: "What occupation will you start with in the PU, and why?" Next issue, the question will be . . . well, you tell me. What question would you like to ask everyone working on *Star Citizen* and *Squadron 42*? I'll be selecting the most interesting questions that you supply for each month's "One Question."

"Where in the 'Verse?" also invites our Subscribers' input, but this time in figuring out where in the 'verse each month's screenshot has been taken. If you think you know, send me a note with your own screenshot of your guess. We'll feature the best answers each month, along with another new (and hopefully obscure) screenshot. Until next month . . .

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

LEVSKI

Star Citizen Alpha 3.0 added more than procedural planets to the 'verse: it also introduced Daymar, a former mining planetoid that is now home to a community of outsiders and freethinkers called Levski. From creating asteroid surfaces to digging underground tunnels, learn how the development team worked to design and adapt a unique environment intended to give you a first look beyond life in the Stanton system.

WELCOME TO THE NYX SYSTEM

In 2015, the *Star Citizen* team began building a number of planetside locations that would serve as important building blocks. These environments would be larger than traditional FPS maps and instead function more as gameplay hubs, allowing developers to connect essential future pieces of the persistent universe together. With them in place, players could start to leave their hangars and begin slowly expanding into an entire universe. The plan was to release these locations as the game became larger and more advanced and, as such, they were intended to represent different types of environments. The first, Area18 from the planet ArcCorp, would be a baseline 'lawful good' environment, the sort of place where many players might opt to start the game and their starfaring careers.

For the second environment, designers took to heart a lesson learned early on in *Star Citizen*'s campaign, when the Cutlass was revealed: backers love space pirates! Environment number two, initially developed by the teams at Behaviour and in Austin, would be a lawless, dirty facility and a sort of moral opposite to Area18. The team initially considered building out an already-revealed pirate environment called Spider, a massive abandoned junkyard. Knowing the Spider environment would benefit more naturally as derelict spacecraft came online, the decision was instead made to imagine a more commonplace sort of outlaw base.

The solution was Levski, a four-hundred-year-old mining outpost that had fallen into disrepair. While its current proprietors are outlaws only in the sense that they live outside of UEE society, it would give the game a counterpoint to Area18, allow for more hotly anticipated gameplay and help flesh out *Star Citizen*'s "lawless building kit," providing art assets and gameplay prototyping that would help build other future outlaw environments. Levski, buried deep within an asteroid called Delamar in the Nyx system, would be host to a culture that could provide a launching point for countless adventures. It was the sort of location where someone could find the sorts of illicit goods frowned upon in ordinary society or where talented pilots could make a killing . . . provided they didn't ask too many questions.

I MEAN THE STANTON SYSTEM

As with many things, the success of procedural planet development shifted some plans! Instead of building out more limited locations in multiple systems, the team could now focus on developing out a single star system with an unparalleled level of detail. Instead of a UEE city in one module and an outlaw base in another, *Star Citizen* could now feature both in one massive environment ... and let you explore everything else that makes up a star system along the way. There was just one challenge to combining them: the game's lore had already established that Area18 (released as part of the first social module) was in the Stanton system, while Levski was in the Nyx system. Stanton was said to be a sort of interstellar corporate business park, seemingly an unlikely place for a major outlaw base, while Nyx was said to be far from the normal space lanes. Here, the answer was more practical than elegant: a temporary transplant operation for Levski, from Nyx to an asteroid field in Stanton. Levski could move home later, but for now it would be essential in observing and further developing outlaw gameplay as part of the public test process. The skilled environment team at Foundry 42 was brought in for the job, expertly transitioning the existing Levski work into the new, larger Stanton environment.

LEVSKI ROCKS!

Like a real mining facility, Levski was built from the ground up. Unlike its contemporary, Port Olisar, Levski is not a singular object; instead, it's an installation buried within Delamar, a much larger asteroid. And making such an installation meant first perfecting the bedrock itself! Artists began with a series of test asteroids which were used to develop the final look. While the shape and general appearance of the asteroid itself came together quickly, the team needed to do an additional pass to add scale cues that would allow the observer to tell the difference between this massive planetoid and the field of debris that would surround it. This was accomplished by adding smaller cracks to the landscape and additional sharper jagged edges to the design. These details helped distinguish the base from its surroundings and gave it a properly weathered appearance. The team knew that the final appearance of the rock itself mattered a great deal: because Levski would be lit both externally (from spaceborne sources like its sun and passing ships) and internally (by artificial lightning), the material for its asteroid base needed to hold up to several different tests. The same material would need to double as both the outside look of the base and as walls and other surfaces that the player would come into close contact with on the ground. A series of lighting comparisons were conducted to make sure the asteroid's texture was just right.
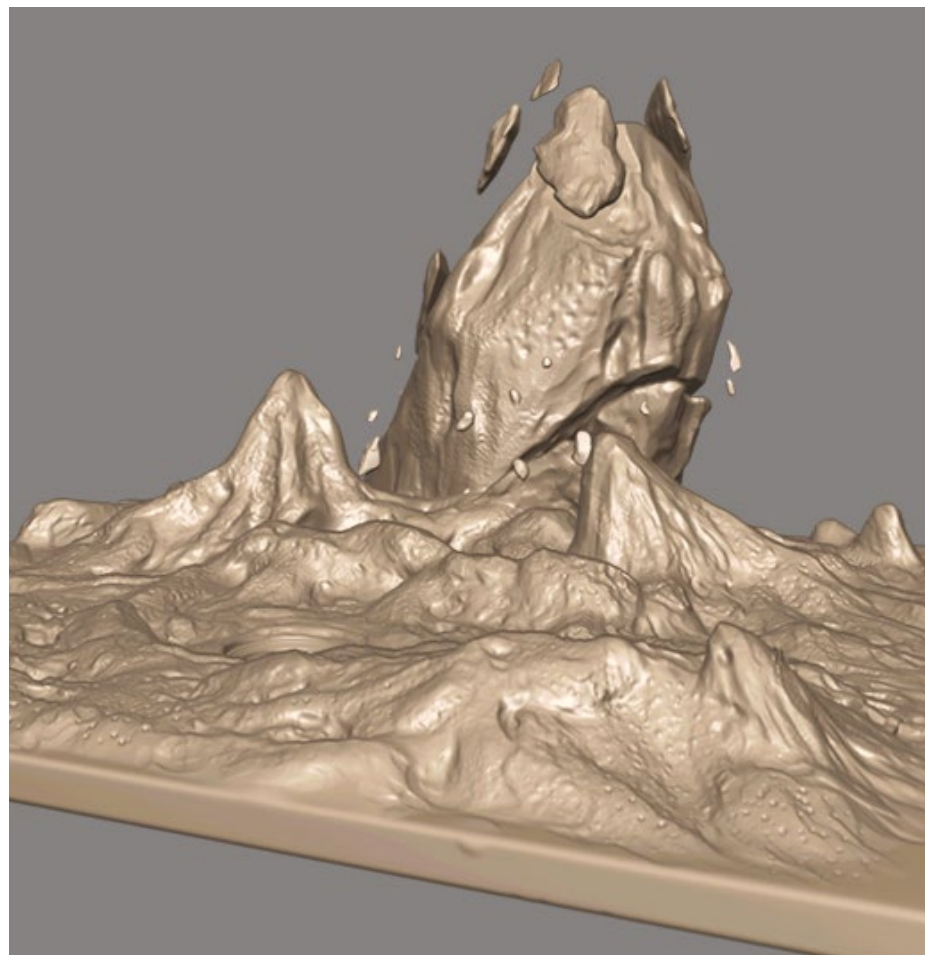

THE TOWER

Savvy space pilots can already tell you that precisely locating Levski's current position can be something of a chore; after all, secret, lawless outposts generally don't advertise or encourage visitors. Built as it is within an asteroid within an asteroid field means that those living outside the law must keep their eye peeled on approach. A rare visual cue? Levski's external traffic control tower which, by its nature, must be visible from space. The control tower began life as something like an "oil derrick" intended to represent general mining outposts. Mining installations on the surface would have a sort of tower with scaffolding that would indicate what type of work was going on below the surface. As development of the environment continued, the team realized the need for a space control area, not just for the sake of appearances but as a functional room accessible inside the game world. By building this superstructure for Levski, the team generated material that will be reused throughout the 'verse, both at other outlaw bases and in a cleaned up, working form at all sorts of mining stations. Building of the external tower environment also involved special spacecraft approach testing — it was essential to polish the player experience of approaching Levski and then landing in the sunken pad. A variety of lighting and effects passes were conducted to make sure that spacecraft look and feel correct descending into Delamar's depths.
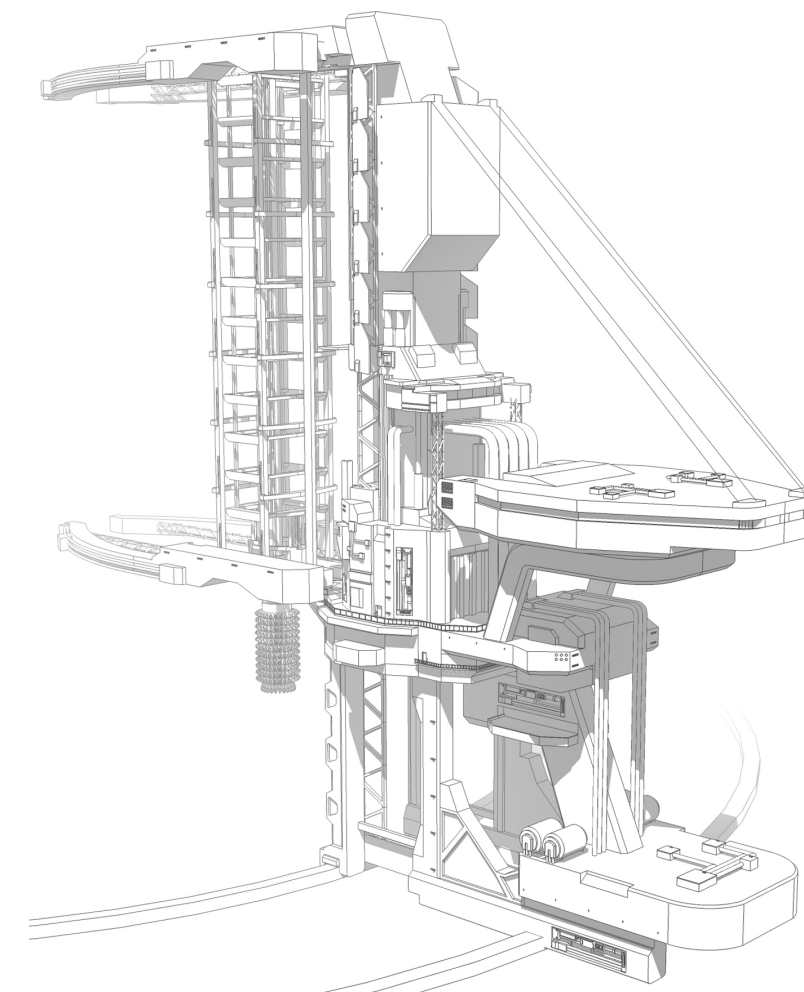
HUB A DUB DUB

The hub is the portion of the base that connects everything together, allowing players to move from their ship to any of the services available to them: mission givers, clothing and weapon shops, bars and clubs, storage facilities and anything else they might need to access. Visually, it is one of the first distinct locations players see after they arrive, shorthand for the entire base and its role … so it needs to persuade you right off! To create the look and feel of a signature environment, the team begins with a series of paintovers generated by dedicated concept artists. These are two-dimensional images intended to capture in a single frame the mood and the features of an environment. In the case of Levski, artists were quickly struck by an image for the map's hub area featuring a large circular entrance to the customs area that would visually imply space mining. This would impact much of the base's development, with individual corridors echoing the circle motif deep into the asteroid itself. Technical designers played a similarly important role in hub building, taking experiences learned from teaching players to navigate Port Olisar to this new environment, building movement flow and signage that is both clear and respects the 'run down' nature of the Levski environment. Determining the layout of the hub is an essential early step, as it defines a great deal of other work, such as how many other rooms need to be constructed, how many corridors must be mapped out, how the player will move from point to point and how much work must be done by the props team to further decorate the area.
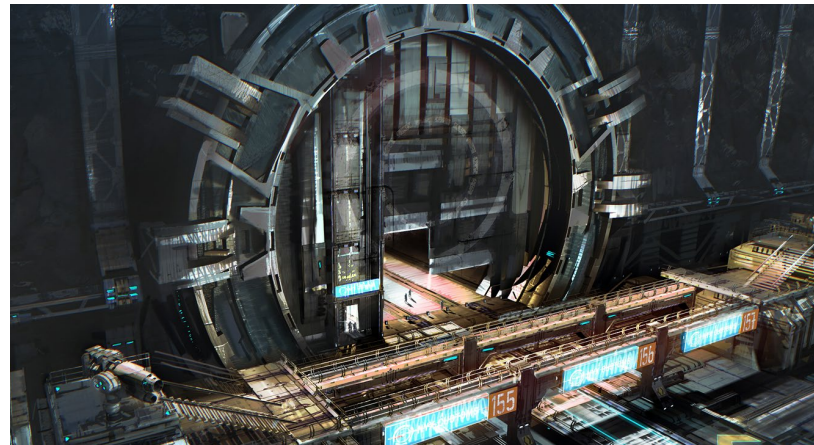
STATUE WITHOUT LIMITATIONS

Cue the props! When the design and lore teams work to build an environment, they view it in terms of construction and impact on production: what's needed to build this environment that we already have and what do we need to add to make it unique? While Levski was the first non-UEE environment created, it was still analyzed in this way: what parts would become standard for future outposts and what bespoke content should the team create that will make this place distinctly Levski? The first choice for a unique element was a statue. Long before the decision to build Levski was made, *Star Citizen*'s lore team had developed the historical figure of Anthony Tanaka. Tanaka was a child worker executed by an agent of the oppressive Messer regime for refusing to work in unsafe factory conditions in the mid-28th century. His horrible death became a symbol to and rallying cry for those opposing the government, ultimately helping the people depose the power-mad regime. While these events predated the current *Star Citizen* timeline by almost two centuries, they inform much of the world players will now be asked to inhabit. When determining something to make Levski immediately unique from other mining outposts, the idea of its anti-government culture specifically honoring Tanaka's murder was hit upon. As a result, players arriving at Levski are greeted by a hand-carved (from the rock of Levski itself) monument of the execution; the lore noting that there is now a similar statue in New York City on Earth but that "this one is darker, angrier, more defiant."

TUNNELS SNAKE

While the hub and statue are important to establishing the Levski environment itself, much of the seeming background work done in the area is even more important in the long term. Work done to establish the look and feel of individual corridors and smaller rooms will inform other, similar environments around the 'verse (and in this case, form the core of a pack of artwork that will be reused and adapted for other bases). As with the hub, artists began by painting a series of sample corners showing what individual rooms and walls might look like in the finished base. These were then constructed in 3D and grayboxed, with the art director providing feedback on how to make them more lived in. The review stage here required a keen eye, checking and implementing such features as making sure grates were properly recessed instead of being flush with the floors, and making minute changes to interior panels to give a different sense of depth. The watchword for this process was "functional": with each revision, artists were instructed to make sure the environment was part of a working mining station instead of simply catching a specific mood.

From here, artists and technical designers began creating some of the individual pieces of the outlaw toolkit, the physical structures that could be rearranged like construction bricks to form different bases and locations in the same style (think, for instance, of how many office buildings may look the same but with different interior configurations specific to their role, era and geography). In addition to corridors and small rooms, the team developed a set of standards for elevators, which were made to be as large as possible to speak to the transport of ore at a mining base. A great deal of work was done on individual walkways that would be layered over natural tunnels of the previously developed rock materials like a real mine. These walkways needed to support the game's character animations and also 'fit,' which meant several series of revisions on the metallic pillars which held them in place from above. And then there were walls! Artists generated a variety of interchangeable wall segments, all intended to feel utilitarian. Here, visuals were done on the makeshift cooling system, with exposed vents and visible fans that could be laid out to give the mining areas a ramshackle, function-over-style sensibility. The first pass at this work was determined to be too gray, mixing with the rock base of Delamar. A detail pass added more browns and yellows, giving the human portions of the facility a still-aged-but-distinct appearance. Symmetry was also struck down repeatedly, with a major effort to make it seem as though corridors had been constructed as the mine snaked organically downward into Delamar, rather than with a single advance floor plan; similarly, rooms of varying size were made to be slipped into the base where they could fit rather than in an obvious order.
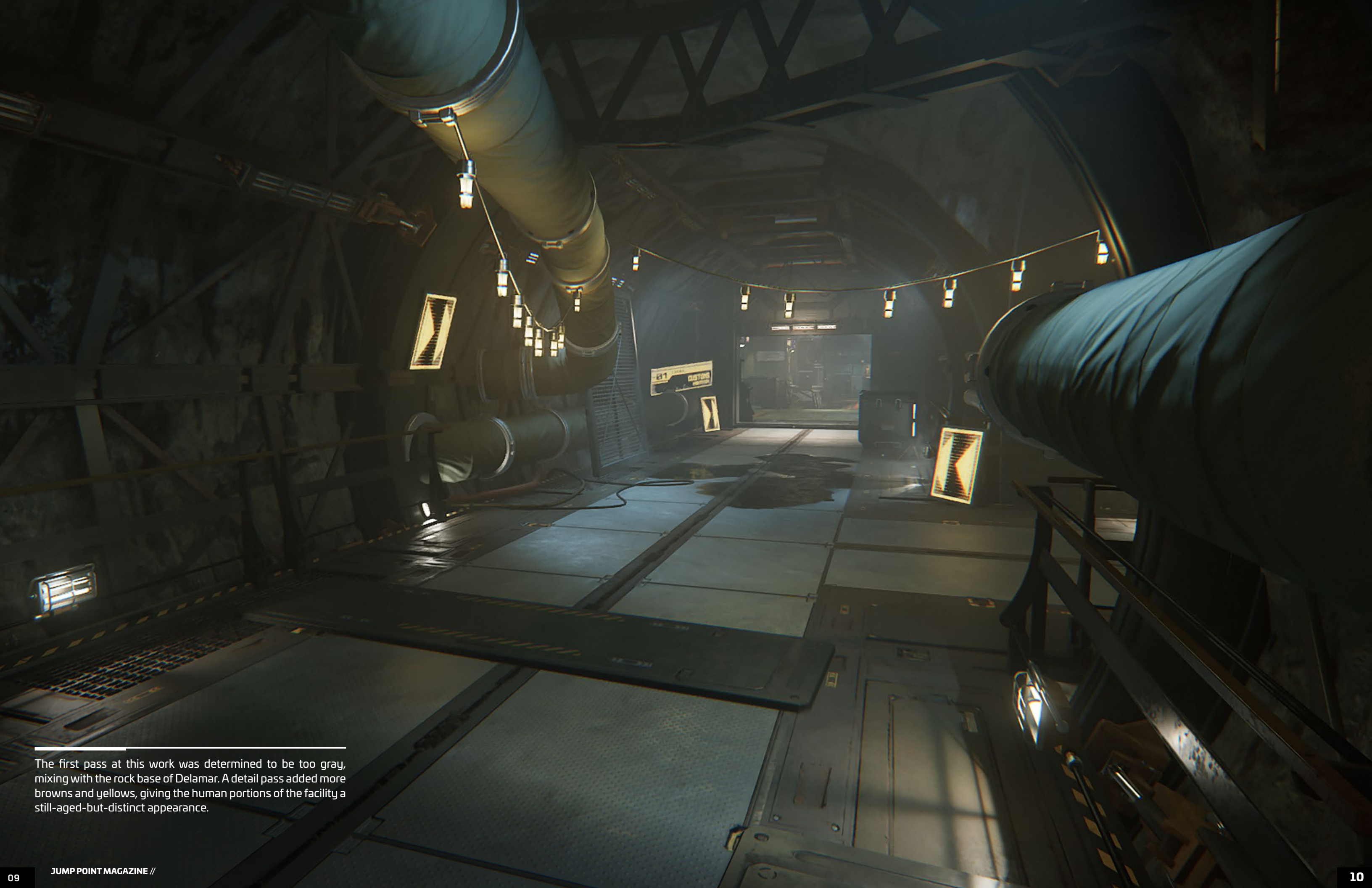
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WHERE THE STORES ARE

Like Port Olisar and Area18, Levski is home to a series of stores and amenities that support *Star Citizen*'s expanding gameplay. From places to meet mission fixers to stores that let you rearm, reload or even redecorate your character, there's plenty of commerce in development on Delamar. Several 'anchor stores' define what is immediately possible at the station, ranging from a café for missions and social interaction to a repair area to personal equipment stores that offer different options than those in lawful space. Cordry's and Conscientious Objects are Levski's primary NPC-run personal item stores. Both serve the player by offering a variety of tools and customization options for *Star Citizen*'s FPS aspects. Conscientious Objects offers personal weapons and defensive gear (with an outlaw twist) such as combat armor. Cordry's, operated by Luthor Cordry, is for clothing and EVA equipment. And what would a distant human habitat be without a bar? Levski offers Cafe Musain, a "dark bar/cafe noted for its privacy." It's just the place to meet up with fellow players for a raiding party or to pick up a mission from an NPC. Liberty Maintenance, off the landing bay area, offers refueling and repair services for player ships.

Like the hub, each of these environments first received a concept paintover before being grayboxed. In the case of the base stores, this resulted in significant changes in scale. Each store was initially concepted as a smaller stall but ultimately made larger to support better player interaction. Much of this was a result of changes to inventory management, with players now being able to examine and buy goods in person rather than using some sort of computer ordering mechanism. Building these physical stores to slot into the base wasn't the end of the process: character artists and animators worked alongside the environment team to create shopkeepers who would interact with the player to buy and sell goods, with the lore team creating a short background for each, along with the original design brief for the environment (Cafe Musain, for instance, is owned by Clair Rios, while Liberty Maintenance is operated by Lora Macken).
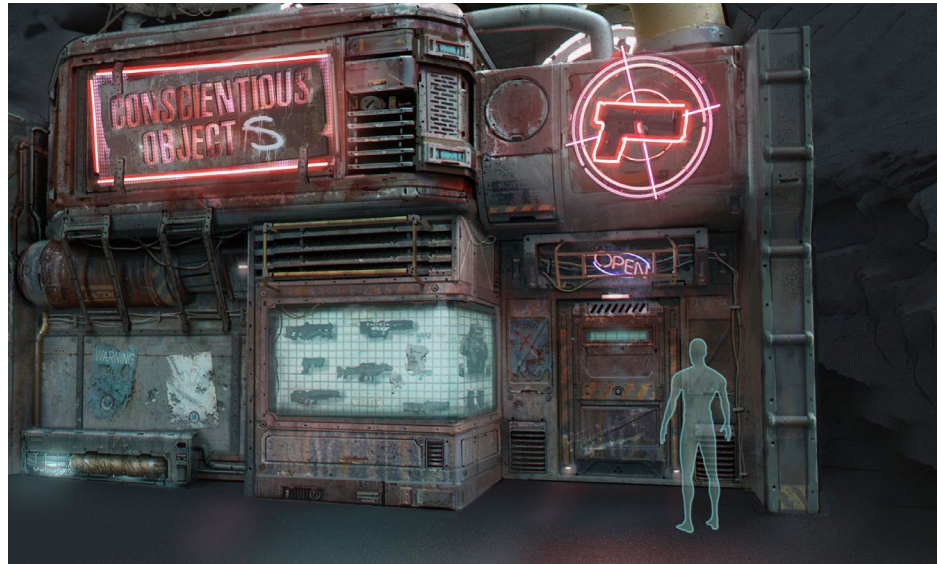
THE GRAND BARTER

In addition to the standard set of amenity-style stores, Levski was also designed with future stages of *Star Citizen*'s commerce system in mind. Levski was designed to play host to an area called the Grand Barter, described in the initial concept as an "open-air market for free exchange of goods." Why would we need such a location? The description continues: "there are no standardized booths so you have to stake your own claim. PC's can come here to trade." In short, the Grand Barter is preparing for a rotating set of NPC vendors and, as a longer term possibility, stores owned (or rented) and operated by players. It's another example of planning the base for future expansion rather than simply to encompass what we know the game will include today. While player-run stores will be a later addition, they will hopefully fit seamlessly over a framework developed much earlier with them in mind.

Artists concepted a series of small merchant stores, similar to 20th century mall kiosks that can be closed or rolled away when not in use. These would be a modular component that could be arranged by designers in the game itself as needed. No ammo for sale today? The ammo booth could go away, replaced by some other offering and the sense that the environment changes with the times in a new way. During graybox, the 'storelets' underwent several studies expanding on the original kiosk idea. The art team experimented with different layouts and ultimately went with a modular booth appearance instead of the rolling carts painted early on. The next major concern was their construction, with an eye towards going with a 'found parts' aesthetic that implied vendors were salvaging spacecraft components or even the base itself to present their wares. Untextured graybox screenshots from this phase look like nothing so much as a refugee city, with walls made of loose boards and rough cut slabs of sheet metal! A final pass with these materials (such as reducing the size of the aforementioned metal) was done to imply the proper scale of the stalls.

In addition to the carts, the location itself received a proper concept pass. The backstory for the Grand Barter was said to be that it was originally a central home to some of the station's key mining equipment. When the mining operation failed, the parts were removed or salvaged over the years, ultimately leading to a large open area that could become the station's bazaar. Rock walls were kept visible to imply that the room had been excavated for some other purpose, and parts of abandoned mining equipment were placed around the room and even hung from the ceiling to imply this backstory to visitors. The entire process is an example of how *Star Citizen* aims to build from the ground up, imagining a universe and then making sure the development that goes into it continues to speak to its greater depth.

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-04 LEVEL

GRAND BARTER
MARKET

TAKING CONTROL

One major takeaway from work on Port Olisar was that a central control room was very important to a *Star Citizen* location. Building a unified computer system for a location was especially important, as players would need ready access to a control room to contact their fleets, spawn spacecraft and make other pre-flight decisions. Additionally, takeoff and landing control rooms operated by NPCs would become an important feature. Levski was designed with two control rooms in mind, including the previously seen traffic control area that hangs over the entire base. The challenge in building out these control rooms was increased by the fact that they could not simply look like futuristic computer rooms such as those on Olisar. In *Star Citizen*'s lore, Levski is over four hundred years old, full of makeshift equipment that has been salvaged time and time again.

As noted, two distinct control rooms were concepted for Levski: the air traffic room visible from the exterior and a second, seemingly abandoned control area buried deeper in the station. The initial concepts for Levski's second control area were a real mess … literally! The line of thought went that the control room had been disassembled for parts so many times and had been used to store garbage so much that it looked like a real disaster area, more so than the rest of the base. Computer components were removed, reinstalled and upgraded haphazardly. The concept called for a number of props, from orange construction barrels to abandoned cinder blocks which could be pulled from other locations and also reused. This room was also envisioned as a jumping-off point to possible future areas, connecting at one point during concept to a potential monorail station that could expand the base's feature set in the future.

Artists also paid special attention to the 'top' control room early on, as it was one of the only areas of the base exposed to external lighting. One idea hit upon early in the process was that 'slats' in the tower and its superstructure could be used with great effect to impact the look and overall mood of the station. Instead of the starlight providing a bright, clean flow it would instead cast sharp shadows not unlike a set of window blinds. The result feels harsh and utilitarian, perfect for the bridge of Levski. A number of varieties were attempted, from an extreme wall of slats to a limited number of asymmetrical pipes, with the finished choice trending towards the latter. (Feedback noted at one point that too many slats would annoy the NPC flight controllers!) Finally, additional UI skinning work was done to make the computer terminals distinct from those seen at Olisar, with a darker red-and-yellow scheme used to further speak to the base's outlaw sensibilities.
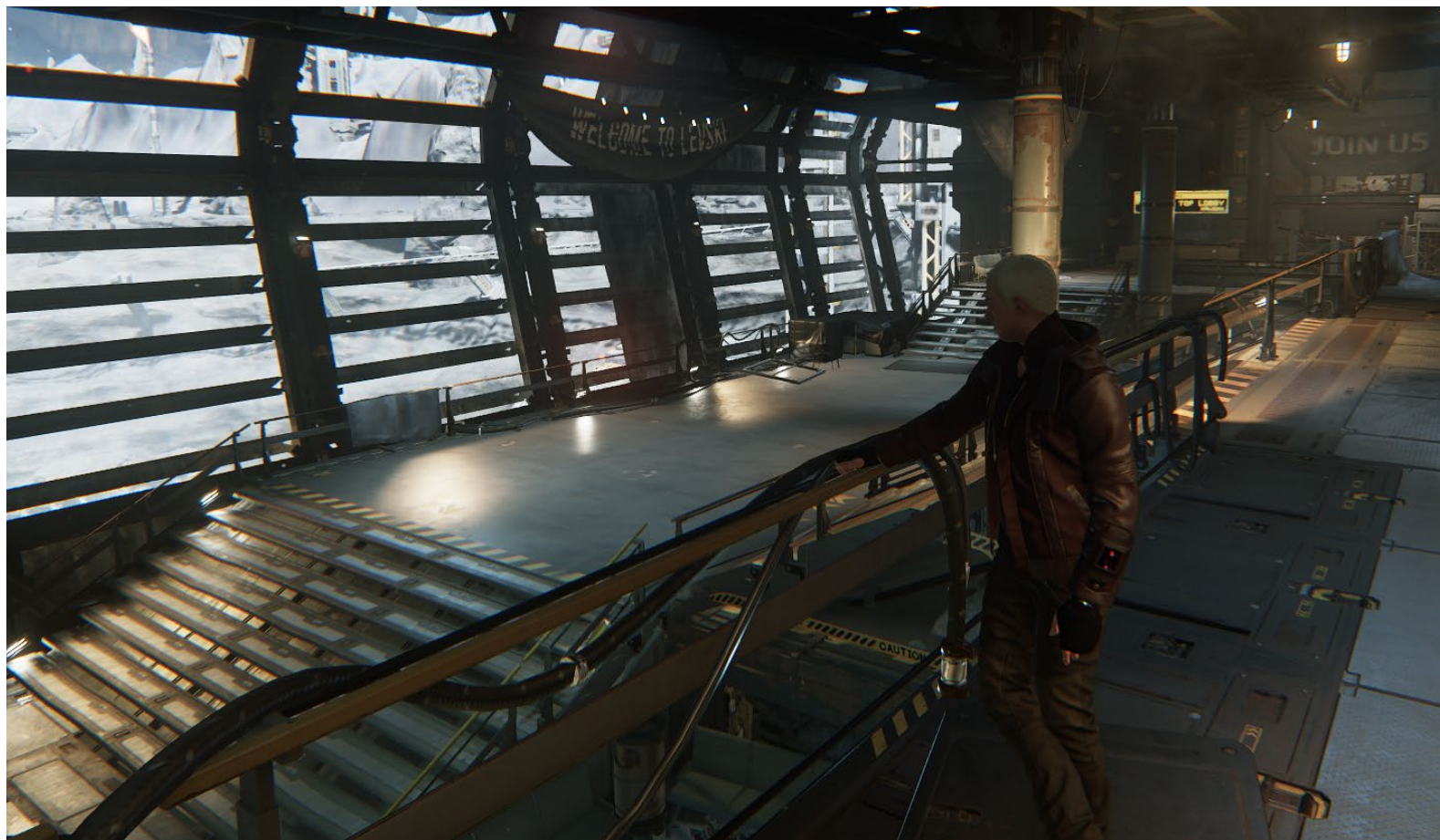
THERE'S MORE LORE

An important point to distinguish about Levski moving forward is that it is not, specifically, a "pirate" outpost. While the base is frequented by pirates (and allows access to their side of the *Star Citizen* universe), it is actually 'controlled' by what is known as the People's Alliance of Nyx. The Alliance is a fringe group that aims to create an equal, self-sufficient society separate from the government of the Empire. It's a place to go for missions outside the law and for black market goods, but it's also home to radicals, rebels, free-thinkers and those who just don't want to be bothered with Earth's bureaucracy. In this future world, Humans on the frontier feel betrayed by the actions of the Messers and have adopted a once-bitten strategy when it comes to the UEE. And no one is going to tell you they're wrong: lore writers even developed a set of six altruistic community rules for its inhabitants that sound much more like an attempt to build a better world than smuggle narcotics!

The idea here is that *Star Citizen* is not simply a conflict between black and white, with heroic fighter pilots and evil pirates constantly clashing with one another. By its designers working to create a more elaborate backstory, Levski can feel like more than just a video game level; it's part of a world with its own history and nuance and one that doesn't necessarily encourage you to take sides. It's a flashpoint for conflict and somewhere where future storytelling can evolve alongside players.

RULES OF LIFE
Est. 2655

We, the People's Alliance of Levski, are dedicated to the creation and continual development of a truly egalitarian community, where all sentients may feel safe and free to express ideas while supporting each other towards the communal goal of enlightened self-sufficiency. Visitors are expected to respect our beliefs and are encouraged to adopt them into their own life after they've gone.

ALL VISITORS SHOULD:

> Never denigrate another's views or ideas. We are all entitled to our own beliefs.

> Not attempt to profit from, exploit or instigate plans to deprive anyone of their goods or health.

> Not pursue a UEE agenda while within our community.

> Agree to resolve conflicts in a nonviolent manner.

> Agree to spend time (no matter how little) thinking about what you have done today to make the universe a better place.

EVEN IF YOU DISAGREE WITH US, YOU WILL RESPECT OUR WAY OF LIFE.

WHAT'S NYXT?

The fact that Levski did not receive a major update from its launch to the ensuing release of *Star Citizen* Alpha 3.0 does not mean that this corner (however temporary) of the Stanton system could be forgotten. In the near term, updates will mostly take the form of continued development of the gameplay features available at Levski (things such as mission givers, black market goods … even outlaw-specific racing has been discussed). The workings of the Levski mine were also explored during the base's development. While the mining machinery is silent at Levski (Delamar having proved mineral-poor some centuries earlier in its history) the work already done that went into making sure it was 'right' will be seen again as functional, present-day mining bases are built. Careful observers will also note that there are some closed portions of Levski which have been concepted for potential future development, including a former shuttle terminal. And of course there's one major long-term plan for Levski: a return to the Nyx system as the game universe grows ever larger! When that happens, you'll need to jump to another star and locate the asteroid all over again. Until then, why not grab a Cutlass at Olisar and head out to revisit the asteroid. You'll find that Levski is a proud part of *Star Citizen*'s world-in-the-works, an environment players can now visit at any time to see how much progress has been made … or to start your own epic story on the fringe of Human society!

END TRANSMISSION ←

ENVIRONMENT ART TEAM, DE

This month we go behind the screens to talk with members of the Environment Art team in Germany. It's a relatively new team, but it's obvious they know what they're doing. Let's talk to them about the work they did to help get 3.0 ready, and what they are looking forward to next.

BEGIN TRANSMISSION →

JP: *Could each of you please give me a short description of what you do for CIG?*

CHRISTOPHER CAMPBELL, LEAD LIGHTING ARTIST: I'm responsible for translating concepts and art direction into in-engine lighting, maintaining consistency across all our locations, and supporting gameplay.

JUSSI BROX, ENVIRONMENT ARTIST: I work with creating and building the man-made locations across the PU.

STEPHAN DAMMRAU, ENVIRONMENT ARTIST AT FOUNDRY 42 DE: My job is to build 3D environments for the PU side of *Star Citizen*, mainly focusing on landing zones so far.

MICHEL KOOPER, LEAD ENVIRONMENT ARTIST IN FRANKFURT: I lead the team working on the moons/planets and the landing zones you'd find on these.

**JP:** *What did you do before you started with CIG? How do you train to be an Environment Artist?*

JUSSI B: Before joining CIG I worked at Crytek, and before that Splash Damage. I learned Environment Art partly through my studies, but mostly through countless hours of sitting up at night scouring through 3D art forums, watching tutorials, and trying and failing a lot. A lot. I'd like to shamelessly promote my first 3D model ever: https://imgur.com/ba33afg

CHRIS C: I worked for several years as a lighting artist at Crytek — on projects like *Ryse Son of Rome*, *The Climb*, *Hunt* and *Robinson The Journey* — before coming to CIG.
    I did study digital arts and 3D modelling at university, but never received training for lighting art specifically, as it's still a fairly new specialized position in gaming and not many educational institutions teach lighting-specific courses.

MICHEL K: I've have been working as an environment artist for around 9 years now. Before CIG I worked at Crytek for 5 years working on titles like *Crysis*, *Ryse*, *Homefront 2* and *Hunt*. Before working in games full time I finished my bachelors degree in Multimedia Design, with a specialization in 3D Art and Games for the last 2 years.
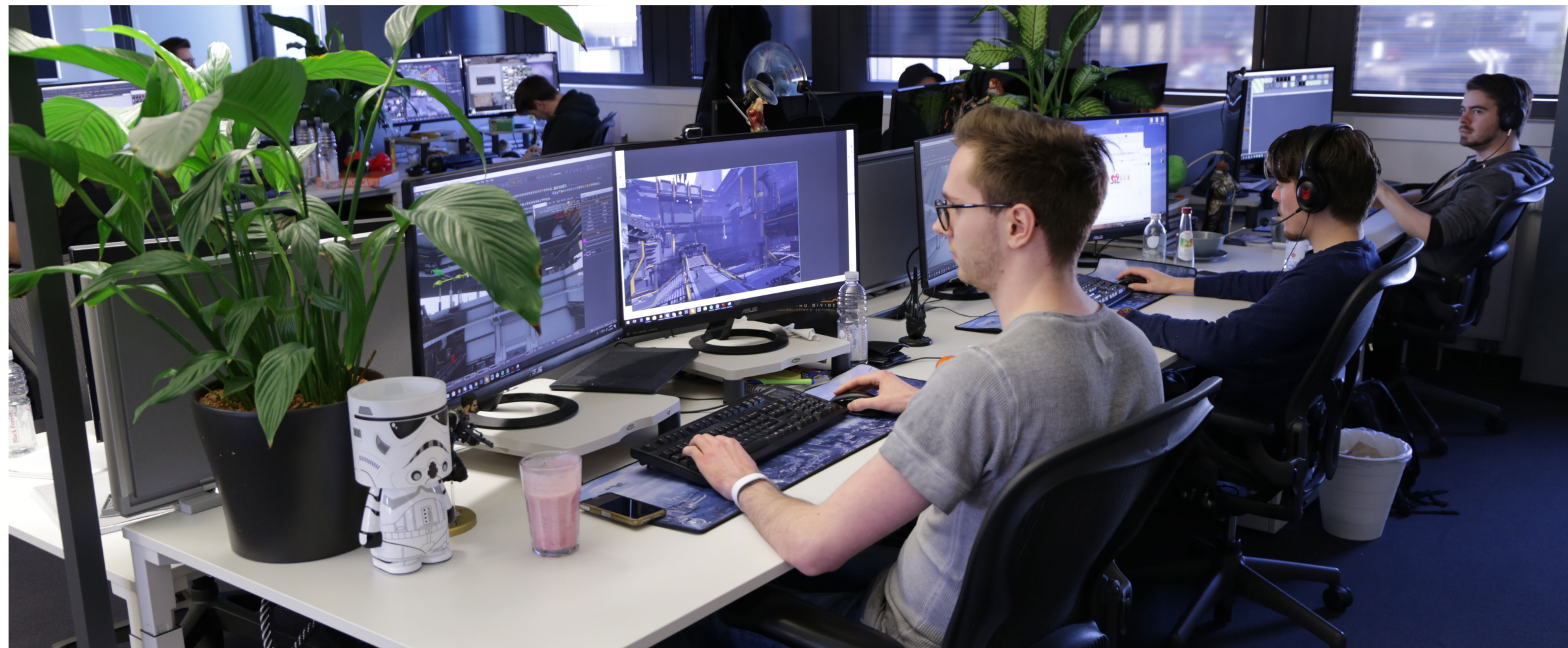
MICHEL KOOPER   JUSSI BROX   STEPHAN DAMMRAU   CHRIS CAMPBELL

STEPHAN D: I studied Computer Games Art at University in the UK and learned 3D modeling during the course, where I specialised in environments. I got my first job (internship) at Ubisoft Reflections, working on *The Division*. Shortly afterwards I joined Crytek and worked on *Hunt* and *Robinson*, before coming to CIG.

JP: *It looks like all of you got significant training while at school, which wouldn't have been possible in earlier days. What school(s) did each of you attend?*

JUSSI B: I originally got into traditional art through Media and Communication studies around 11 years ago, doing photography, illustration and fine art. I got into 3D art during my time at Teesside University.

CHRIS C: I did my bachelors at the Australian National University's School of Art, in a new digital art department that was only a few years old by the time I got there. I also took a diploma course at the Academy of Interactive Entertainment, which was much more focused on the gaming industry and commercial digital art.

JP: *Is the Academy also in Australia?*

CHRIS C: Yeah, both institutions are in Canberra, Australia, where I grew up.

STEPHAN D: I went to Teesside University. I hadn't done any 3D before and first learned it during the course. Learning was mostly independent and happened outside of the lessons, however. At least University gave the opportunity to focus on learning.

MICHEL K: That's absolutely true. After finishing the Dutch equivalent of high school, I actually got a degree in commercial economics, which was a very practical choice at that time. Web design and media weren't

even that common to get into. It was after a few internships and small jobs I decided to push further and pursue my creative side more and make this into an actual job. I managed to turn my hobby into my job. I also did a series of workshops organized by a outsourcing studio in the Netherlands. They used to do artwork for games like *Unreal Tournament* and *Gears of War*. It was a very small group, with almost one-on-one training from professionals. This had a massive impact on my skill level.

JP: *My son started university this past fall, studying programming and game design. Every school he applied to had some sort of game design coursework, even the most traditional ones. That certainly wasn't the case when I was in school.*

MICHEL K: For a long time, working on games or doing digital art wasn't really a thing you could go to school for.

JUSSI B: And it still sort of isn't – lol :)

JP: *And so you got to where you are today! What is the life of an environment artist like? What did you work on today (other than getting drawn into an interview)? What have you been doing in the last week?*

MICHEL K: For me these past weeks have been about working on the planet tech, updating the functionality with the programmers and at the same time updating the existing moons in the game using these tech updates to improve the visuals. As with any tech update, there is a lot of testing and iterating as well.

CHRIS C: As it's still early in the year, I've been caught up between training our new hire, finishing up polishing work on our volumetric fog conversion in some of the locations we weren't able to complete in time for the 3.0 release (namely our *Star Marine* maps Demien and Echo11, as well as Grim HEX and Covalex specifically). I've also been working

with Ian [Leyland], our Art Director, on the upcoming Character Creation tool, and improving readability of the Admin Office in Grim HEX, Olisar and Levski.

Outside of those tasks there's always an ever-growing number of bugs to sift through and tackle.

JUSSI B: The life of an Environment Artist is very fluctuant. It can go from taking a level from a "blockout" stage (created by the Level Designers) to being finished and looking beautiful, exploring visual ideas and directions, to deleting half of your work to make sure your level runs at the target framerate. You work with the various Design disciplines quite a lot, as they rely on you to take their designs and make them good looking. Lately I have been working on planning out and building Lorville, an upcoming Landing Zone for the PU on planet Hurston.

STEPHAN D: It's pretty fun most at the time, unless something isn't working. :D Today I am working on refining the blockout of a clothing shop in the commoners district in Lorville. We had an existing blockout that didn't fit our needs anymore, so during the last week I went in, changed the layout, added new elements and made a few other tweaks to made it into a believable space. Additionally, I integrated the shop into the landing zone, so everything is connected up and you can walk into the shop through a nice entrance and have a facade with shopping windows on the outside.

JP: *We want to show our subscribers what you're talking about, but some things aren't ready for release yet. How about the 3.0 release — what is the most visible thing you worked on for that?*
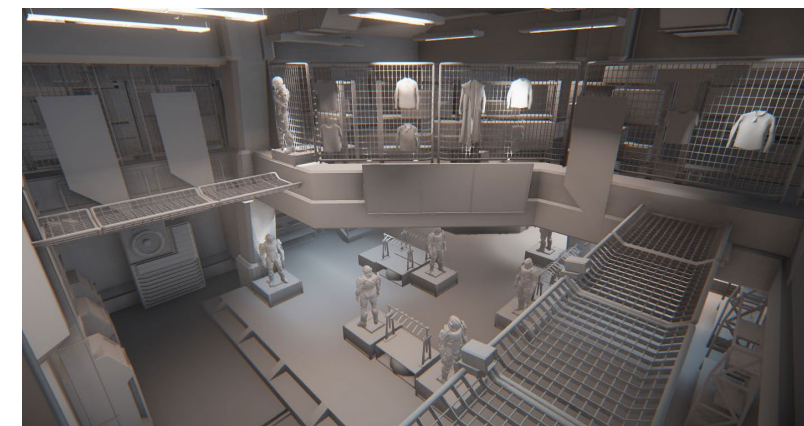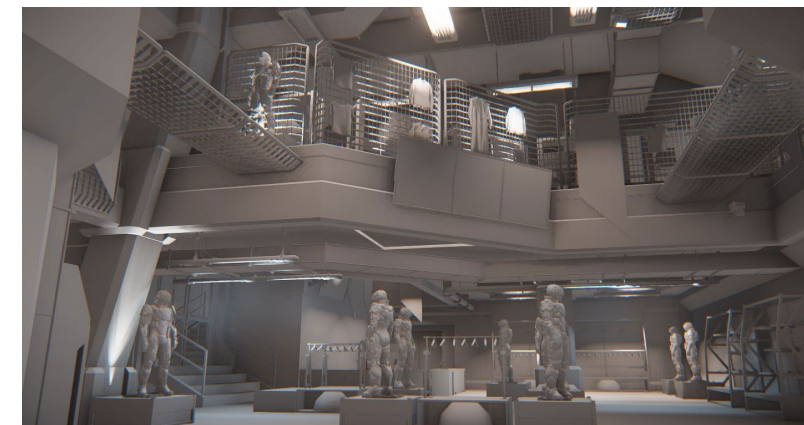
JUSSI B: The most visible thing would be Levski. Most parts of the landing zone's interior were already created when I started to work on it, so my work was mostly on the exterior part. I also worked on adding a few locations required for 3.0 to Levski's interior, such as Dumper's Depot, Customs and the Admin Office. And a lot of bugs! I fixed a lot of bugs.

CHRIS C: Yep, Levski is the big one, but just about every environment in the PU I had to look into as part of the conversion to volumetric fog. We also had to establish new baselines for environment lighting to improve character readability and optimization, which involved tweaking lighting everywhere — planets, surface outposts, shops, space stations, and landing zones! The only thing I didn't have much involvement in was the ships, as their lighting is mostly handled by the ship team.

STEPHAN D: ^ What Jussi said. I helped to build a lot of the exterior main base on the surface — buildings, garages, prop dressing, etc.

MICHEL K: I worked on the moons and Delamar in 3.0 from a bigger overview. I did a lot of the ground materials on those planets,

as well as color balancing and material distribution. The rest of my efforts have been going into making sure the DE team was moving in the same direction and that all the locations hit the quality bar we set with the Art Director.

JP: *It sounds like you are working very closely with Design. Is that the case?*

JUSSI B: One of our biggest priorities as a team is to support Design in any way we can in getting their work out into the PU. A beautiful looking game is great, but what's even better is a beautiful looking gameplay feature. Our designers are also very visually oriented people, and we usually bounce both design and art ideas back and forth between our departments. There is a lot of mutual trust and respect on all sides, and we all have the same goal: to do what is best for the game.

STEPHAN D: Yes, of course the stuff we build doesn't only need to look pretty, it must also make sense from a gameplay standpoint. So the designers build spaces first that offer a good experience for the player — they don't have to run miles in order to access a certain

feature, the levelflow makes sense, etc. Depending on the location, it might need to fulfill certain requirements, so (for example) in the case of a shop the player will buy stuff there, so there needs to be enough space to display what can be purchased, a counter he walks up to, etc. This usually gets placed in a very basic form by the designers, and then our job is to make it pretty.

CHRIS C: For lighting, we have to take a lot into consideration for the designers. Things like entrances/exits, points of interest and other gameplay features all have to be clearly highlighted, which can sometimes go against the desired mood or atmosphere outlined by Art Direction. There is usually a bit of give and take, and it can rarely be completely solved until the entire location has had a final polish pass from Art (materials and silhouettes) and Design (layout and flow), as lighting is heavily impacted by the environment it's placed in.

JP: *As with any job, some parts of it are more interesting than other parts. What are the parts you most look forward to? What are the parts that are … less enjoyable?*

Unlike a lot of the rest of the planet, the landing zones we are working on are actually hand built by us, rather than procedurally generated, so every asset is placed by hand.

Stephan Dammrau

MICHEL K: By far the most enjoyable part for me with environment art is the point where all the architecture and models are done for a space/room/area and you can sit down, put on some music and start building the scene. Place props to tell little stories, use materials and decals to add history to a space, and really start tying in all the elements. It is at this stage the space comes alive.

JUSSI B: For an artist, 50% of your time usually goes into getting a result you are pleased with, visually. The other 50% goes into making it work for the specific game you are working on. This could mean making sure it's not using too many materials (for drawcalls), that it's got a good range of LODs, that it's using the correct metrics (outlined by Design), that it's named logically and in the correct folder, or debugging why something didn't work/look the way you expected it to.

But for an artist, the most enjoyable part is obviously the former, but nothing is as enjoyable as seeing someone playing and enjoying a game you have spent countless hours working on.

MICHEL K: The less enjoyable part is doing LODs (multiple versions of the models, each with less details and complexity than the one before that). LODs are essential for performance though, as you still want the model to be visible from a distance but without simplifying it, it would be too expansive to render all at once. The trick is to remove details that would not be visible from that distance anyway. That way you reduce the performance hit without a noticeable visual difference.

STEPHAN D: It's always fun building an environment and making it feel like a real space. In a lot of cases we work with existing assets (wall and floor modules and so on) to do this. This obviously makes sense from a production standpoint and helps to keep consistency.

But for me, by far the most enjoyable part is when we can build something entirely from scratch, so we get a fresh concept art and start transforming the 2D image into a 3D environment we build. It's incredibly satisfying going through the process of building something out of nothing and at the end of it having a visually pleasing space in which you can run around in. Getting some lighting magic on top of that is the icing on the cake. :)

CHRIS C: There's nothing quite as satisfying as bringing a new location from concept art into a final beautiful 3D environment. I particularly enjoy the challenge in converting concept art, which due to the nature of 2D art may not have lighting that's even possible in 3D, into a space that brings across the same atmosphere and mood.

Unfortunately a large part of the job also involves tweaking or even re-lighting legacy locations. Not because these environments are badly set up, or ugly (the original lighting artist has usually done a fantastic job with what there was to work with) but as tools or render features change, there's a cost involved with maintaining old locations.

And of course, no one likes fixing bugs!

STEPHAN D: The less enjoyable part of the job is fixing old stuff, for example when assets are not using the correct metrics. LODs are also usually not so much fun either. Another not-so-pleasant part is when something you worked on gets canned and doesn't make it into the game.

JP: *I don't think we've talked much about procedurally generated spaces so far. To my simplistic mind, you get a procedurally generated space by entering a few parameters and then pushing the big green button so that a new, finished space appears. Is creating the art for a procedurally generated space different from creating a specific space like Levski or Stanton?*

CHRIS C: What you're suggesting is that you whip up an algorithm, press a button, and voila! infinite content! The procedural generation system we're building still involves creating hundreds of individual building blocks like walls, floors, props, lighting fixtures, etc., which are all hand-crafted to a set of metrics, and then these are fed into a layout generation tool which with the help of a large number of rules, spits out potentially viable environments. Each one of these still needs to be validated by Design and Art to ensure that they feel believable and enjoyable to play. For example, you don't want a long corridor that just ends with a wall and a chair in front of it.

Where lighting is concerned, we have to build light fixtures that can be called into the layout generator and hopefully provide enough illumination to a space without looking weird or totally destroying our performance budget. We're still trying to figure out a lot of these rules and methods to achieve a highly polished environment, but the basic tool and building blocks are there and very promising so far!

JP: *I don't know … if I ran across a long corridor that just ends with a wall and a chair in front of it, I would find it extremely interesting/ ominous/freaky. But not the twentieth time I found one.*

MICHEL K: I suppose that case would create quite a mystery. :D

CHRIS C: What works for Silent Hills/PT survival horror might not work so great for us. :D

STEPHAN D: Unlike a lot of the rest of the planet, the landing zones we are working on are actually hand built by us, rather than procedurally generated, so every asset is placed by hand. As for the procedurally generated spaces, these still require 3D models, which are fed into the system. In the case of the planets, they require assets likes rocks, vegetation, etc., which is then procedurally scattered across the planet.

Over on UK side, the team is also working on procedural interiors.

As far as I understand, the procedural system only handles the generation of different layouts of how rooms are arranged and connecting to each other. The individual rooms are handbuilt by artists. So in general, using the procedural systems we have the distribution of building blocks created by artists.

JP: *[We checked with Alex Remotti, Lead Technical Artist, who notes that we won't have any long, pointless corridors using the procedural tools. "The layout will define a specific connected element at the end of the corridor — the layout will require a closed door, or a large window. The point of a layout is that it lets you create spaces that will always follow a logic and a feng shui." And that reminds us that it would be good to talk to the procedural designers sometime soon.]*

Elsewhere in this issue, we look at some of the environments that were first created for Nyx. How involved were any of you in transferring some of that to Stanton? What did you have to do to reconfigure it for a new location?

CHRIS C: We were pretty limited by the tech to create Delamar/Levski as it looked in the original concepts. In part because the planet tech currently only allows us to make spheres rather than more detailed asteroid shapes, and since we had to use the Stanton sun as the main light source, there wasn't a lot we could do to bring the same atmosphere and mood from earlier concepts into the 3.0 Delamar/ Levski currently in game. Jake [Gainey, in the UK] did integrate additional asteroids and space dust around the planetoid though, to try and bring back some of that atmosphere.

MICHEL K: Delamar and the landing zone Levski were originally located in the Nyx system, but we moved them to Stanton early last year. The biggest part of it was the fact that Delamar is now a planet using planet tech v2. So it is now using the same tech as the moons in 3.0. This meant the terrain and the surface of Delamar had to be redone to get the benefits of the procedural tech. The cool part was that we had
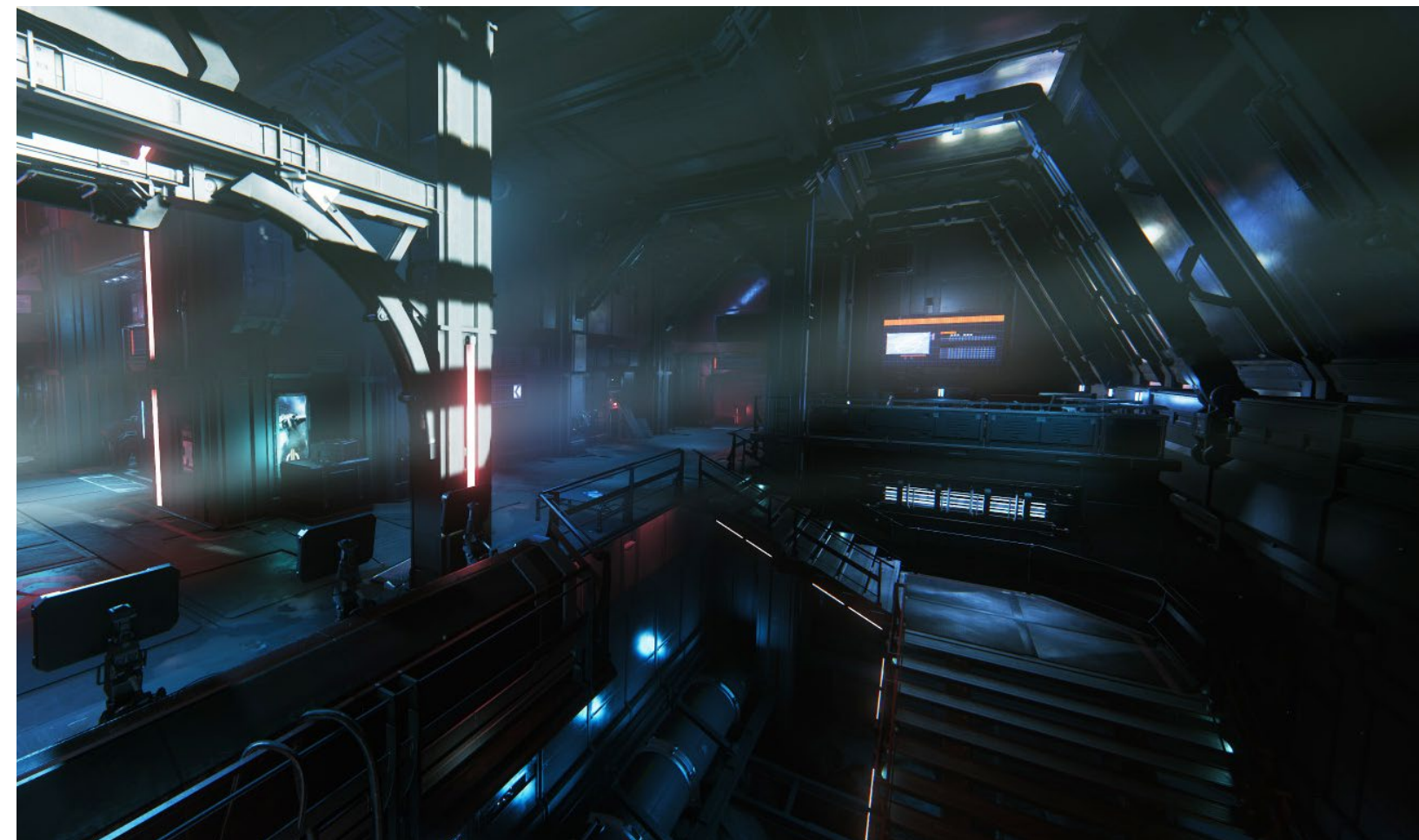
the opportunity to get back to the drawing board and refine what the surface of Delamar looked like.

CHRIS C: Additionally, our atmosphere system for the planets wasn't built for extremely small planetoids and asteroids, so we had to strike a balance between adding layers of depth while on the Delamar surface, while trying to not make it look like a planet with a full atmosphere.

As for interiors (lighting) in Levski, there wasn't really any special considerations we had to make regarding the switch from Nyx to Stanton, since we have full control over how the interior looks.

JP: *Can each of you tell us what you did to make Levski ready for 3.0?*

JUSSI B: For 3.0 we decided to completely redo the planetoid Delamar, and create an exterior for the landing zone suitable for the new gameplay beats that are part of 3.0. The entire exterior and mining pit was created, as well as several elements inside of the location, such as the Admin office, the Customs area, the surface entrance atrium, and Dumper's Depot. Other than this, a lot of important tweaks and adjustments were done across the whole level, to take it from a playable demo, to an actually shippable level.

MICHEL K: I did a few dressing passes in and around Levski, working with the artists and designers to add the new areas and provide direction and feedback. Updated a large amount of assets with new versions throughout the level. Did some material balancing.

JP: *And this was basically modifying it and improving the look using the most current tech?*

MICHEL K: The elements Jussi mentioned have all been added new, as these facilitate the available gameplay in 3.0.

CHRIS C: Maria Yue (our other lighting artist) and I were responsible for converting the whole location to support volumetric fog and improve character readability. This meant hiding/removing random floating light sources, or adding others to make sure a character wasn't pitch black standing in the middle of a room. It's a huge location, so this was already a big task, and on top of that we had to create new lighting for additional Habs spaces, and new spaces like the Admin office, Customs, Dumper's Depot, etc.

STEPHAN D: I worked on building additional space on the surface of Levski, making it feel like an actual place on the exterior, with buildings, prop dressing, etc. In addition to that, I added garages and helped fix bugs and performance.

JP: *We talked a bit about what you're working on right now. Let's extend that into the future. What's the next thing you anticipate telling family and friends, "Look at this! Look what we've done now!"*

MICHEL K: The biggest thing for us in the future, e.g. this year, will be Hurston and the landing zone Lorville. We showed a first glimpse of this during Citcon this year. This will be the main focus for the entire team in Germany. It's a large planet, a new iteration of the planet tech, a large city for the players to explore and it is going to look awesome!

CHRIS C: Once we're done with our bugs and legacy location tasks, I'm looking forward to the upcoming truckstops, and Lorville. We're also

building out our set of what we're calling Stanton Common Elements, like ship hangars of various sizes, transit systems, habitation units, and others.

JUSSI B: I'm looking forward to saying "We've shipped the craziest and most complicated level I have ever worked on!" Releasing Lorville will be a big milestone for this team, and it's going to be a location with a lot to add to the PU.

STEPHAN D: I'm looking forward to how our team here will bring the landing zone and planet into a complete experience, where the player can seamlessly move from one place to another and check out everything we have put so much work into. :)

JP: *Any last words?*

JUSSI B: Levski was a tricky location to ship. Shoutout to everyone who ever set their foot inside, especially to Senior Level Designers Ben Dare and Scott Fitzgerald, who both took extremely good and respectful care of the level, each with their own half throughout production. Levski is better because of them. And to you, the backers, who have made this crazy game possible. Thank you for investing your wallets and hearts into something that hasn't been done before, and for sticking with it through good and bad times. You're the best. Seriously.

MICHEL K: 2017 has been the first year for the DE environment team. Getting the three moons and Delamar/Levski into the players' hands with 3.0 has been a lot of hard work but also very rewarding work. Seeing the reactions, gameplay videos and screenshots from the

community has been a very special experience. As a first test of strength for the team, we are very happy with the result, but now that we are maturing as a team the players can expect even bigger and better things from us moving forward! Thanks for the continued support and enthusiasm everyone!

STEPHAN D: I think Jussi and Michel said it perfectly. Thanks to all the supporters out there that make this project possible :) and a shoutout to the whole team here putting in so much work to make this dream become reality.

CHRIS C: Last year was my first year on the project, and after pouring hours of hard work into the 3.0 release, as well as our demos at the end of the year, it's been extremely rewarding to have it so well received by the community, so a huge thanks to everyone who's taken all the great screenshots and videos of our environments. I'm super excited to see the reaction to what we deliver this year, which I personally think will be even more awesome than last year!

JP: *Thank you very much, guys! I appreciate the time you gave us; I think the subscribers will enjoy it.*

END TRANSMISSION ←

THE
ANVIL
TERRAPIN-CLASS PATHFINDER

SERVICE HISTORY

INITIAL ORDER

Initial deliveries of production model U4A-3 Block I Terrapin-class ships began on September 19, 2796 with the first units forming the core of the newly-established 198th Utility and Support Wing (motto: "we've got u covered") in a formal handover at MacArthur. As part of the United Empire of Earth's intended phased military reorganization, elements of the 198th Wing were detached to active fleets as they became available, ensuring that the newly minted Terrapins saw action quickly. Indeed, the design's first blooding occurred only two months after its introduction, when a single Terrapin downed a mercenary fighter as part of a combined forces narcotics interdiction operation off Castra. The Terrapin very easily settled into its fleet operations role, proving itself an effective support craft, armored personnel carrier and, when called, fighting platform. Military planners were extremely pleased with the ease of adoption and frequently cited the Terrapin as proof of the success behind the 'new model Navy' initiative of the immediate post-Messer era.

MARINE ADOPTION

The original Naval order for Terrapins was quickly followed by a second, similarly-sized request from the UEE Marines. Although the Terrapin lacks the heavy guns used by dedicated dropships, its protective armor and enhanced scanning capabilities mean that it is ideal as an armored personnel carrier. Terrapin APCs quickly became a frequent sight on convoy duty and in smaller-scale interdiction missions; it was a UEEM

Terrapin which located and then boarded the liner Astoria during the 2820 hijacking disaster. (The boarding Terrapin itself was destroyed during the ensuing explosion, but its crew survived, along with the crew and passengers they helped lead to safety.) Marines are said to prefer travel aboard the smaller Terrapins when possible, their more advanced systems offering a far smoother (if more cramped) ride than traditional troopships. Terrapins have also become popular for 'safe' landing operations: generally, any landing where it will face no more than small arms fire. A rumor persists that the UEEM operates an advanced technology 'improved stealth' Terrapin for covert boarding operations; there has been no proper sighting of this spacecraft and its existence has been roundly denied by both Anvil and the military.

SUBSEQUENT VERSIONS

Reconnaissance and scouting units began transitioning to the Terrapin five years after its introduction as an armored utility ship, though this adoption was rockier than the initial launch. Recon pilots, used to incredibly fast, light spacecraft that rely on speed over armor to escape trouble, were turned off by the Terrapin's opposite nature. This changed in a single incident: the ship was said to have "paid for itself" in 2814 when a reconnaissance ship flown by Commander Bruce Dunbar successfully tracked a Vanduul raiding party across four systems without being identified. The tactical information gathered from the mission helped form important elements of the modern strategic understanding of the

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Vanduul; the ensuing interdiction and destruction of the raiding party by elements of the Ninth Fleet was also a major public relations victory for the UEE. In the three years following the incident, every single front line reconnaissance unit received at least one Terrapin (and crew assignment).

The largest downside to the early Terrapin was the difficulty of power management, which required that a pilot become particularly familiar with the design in order to use it most effectively. With multiple flight configurations, some of which significantly alter the design's on-orbit geometry, the difficulty in 'mastering' the Terrapin became apparent. Later models would ease this, adapting from the tricks developed by the early pilots for managing such an unusual set of abilities. Anvil Aerospace began rolling out the modified U4A-3 Block II version in July 2845, with battlefield upgrade kits converting extant Block I models to parity over the course of the following 24 months. The U4A-3 Block II transition was the result of a massive review of pilot experiences from the previous half-century; thousands of current and former Terrapin-drivers were interviewed and countless hours of combat and flight footage were reviewed as part of the improvement process. The biggest takeaway from the process was that the ship's durability would make it ideal for exploratory roles it had not yet filled. As a result, Block I models dropped a largely unused remote chin turret and were given extended batteries, improved shielding and a sensor suite capable of gathering and storing more data than would ordinarily be required for a fire support spacecraft. Though the changes were not the result of a formal request for proposal,

the Navy quickly saw the value and began purchasing Terrapins specifically for exploratory services assignments.

VERSATILITY IN ACTION

Although the Terrapin's active service includes lengthy periods of peacetime, it is a design that is considered in-demand under any circumstances; Admiral Vos Kant famously claimed that the Terrapin's multirole capabilities meant that there was no single spacecraft he would rather have in ready five position. Indeed, Terrapin pilots quickly adapted to keeping track of more than a 'kill score': auxiliary and support squadrons typically treat with equal importance the number of missions flown, the number of rescues performed, or the number of boarding operations conducted. Exploratory squadrons compete in terms of raw data uploaded. In all these areas, the Terrapin has become a record-setter; a Terrapin currently holds the record for 'live rescues'; pickups of humans who have been exposed to pure vacuum.

Terrapin were among the first spacecraft dispatched as part of the Synthworld project. The massive construction project was such a drain on Navy resources that by the early 30th century it was estimated that three in five Terrapin had been assigned to the effort at some point in their service. In addition to APC and S&R duties, multiple attempts were made to modify them for small-scale ore transport and mineral analysis. These modification efforts were not notably successful, although a well-

known Synthworld project patch displays an anthropomorphic Terrapin toting a shovel and bucket. Construction-oriented Terrapins received a distinct yellow-and-black paint scheme during this era, which is still commonly associated with the effort.

In 2910, the Terrapin became an unexpected household name following a "starring" role in a popular holofilm. *To the Stars*, partially financed by the Empire's office of civilian outreach, featured a ragtag band of Humans aboard a garishly painted purple-and-orange Terrapin affectionately named Maxwell. The Terrapin was 'played' by an active duty U4A-3 Block II model on loan from the Navy, nominally assigned to the UEEN *Declan Smith*. Referred to early on as an "ugly lump," the spacecraft ultimately saves the day and becomes a home for its crew of explorers. The ubiquity of the film and the popularity of the personified spacecraft led to a brief craze, with a number of companies producing Terrapin-themed merchandise for an eager civilian population. Maxwell itself returned to active duty after filming, but was ultimately donated to the Garber Aerospace Museum where it was restored to its on-camera appearance and is now on permanent display.

U4A-3 BLOCK III & CURRENT DEPLOYMENT

The "modern" U4A-3 Block III model premiered in 2899, featuring (among other things) upgrades to weapons hardpoints and a number of control surfaces. The Block III model also formalizes a longtime 'trick' used by Terrapin pilots, the ability to release energy by toggling flight modes. While no battlefield upgrade option was created, Block III spaceframes have now fully replaced the Block II model. Recent years

have seen the Terrapin fill out its combat history, as battles with the Vanduul have become larger and more commonplace. In a noteworthy 2944 engagement, a flight of six Scythe fighters happened into a quartet of Terrapins operating with systems low in stealth mode as part of a training observation. With their emissions low, the Terrapin crews spent a terrifying eight minutes avoiding detection before ultimately being in a position to turn the table and get the jump on the Vanduul. The UEEN flight suffered damage but lost no spacecraft, while five of the six Scythes were destroyed. Gun camera footage was not able to determine the fate of the sixth, but it is considered to be a probable kill.

It was also around the turn of the century that civilians began more widespread operation of Terrapins; the Navy surplused thousands of Block IIs as part of the transition and then began rotating out Block IIIs on a fifteen year cycle. The civilian refurbishment program, operated by Anvil out of a dedicated decommissioning facility at Nova Kiev, makes veteran Terrapins available to corporations and individual users. ArkJen was the first large corporation to adopt Terrapins en masse, adapting the ships' reconnaissance capabilities for their traditional survey work. Noteworthy civilian operators today include Meridian Transport, where Terrapins are used for higher security planetary hops, and GRUT, where they have become instrumental in search and rescue missions.

Individual Terrapin owners have also become extremely common in recent years, with thousands of the ships on the official registry. Owner/operators consider them to be a sound investment, even used: a solid spacecraft capable of meeting many essential, common roles while still being rough-and-tumble enough to adapt to a constantly changing galaxy.
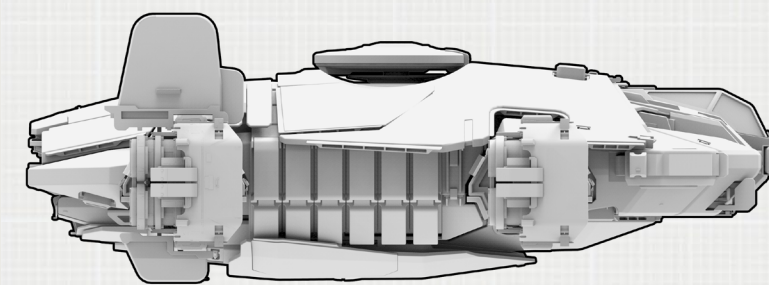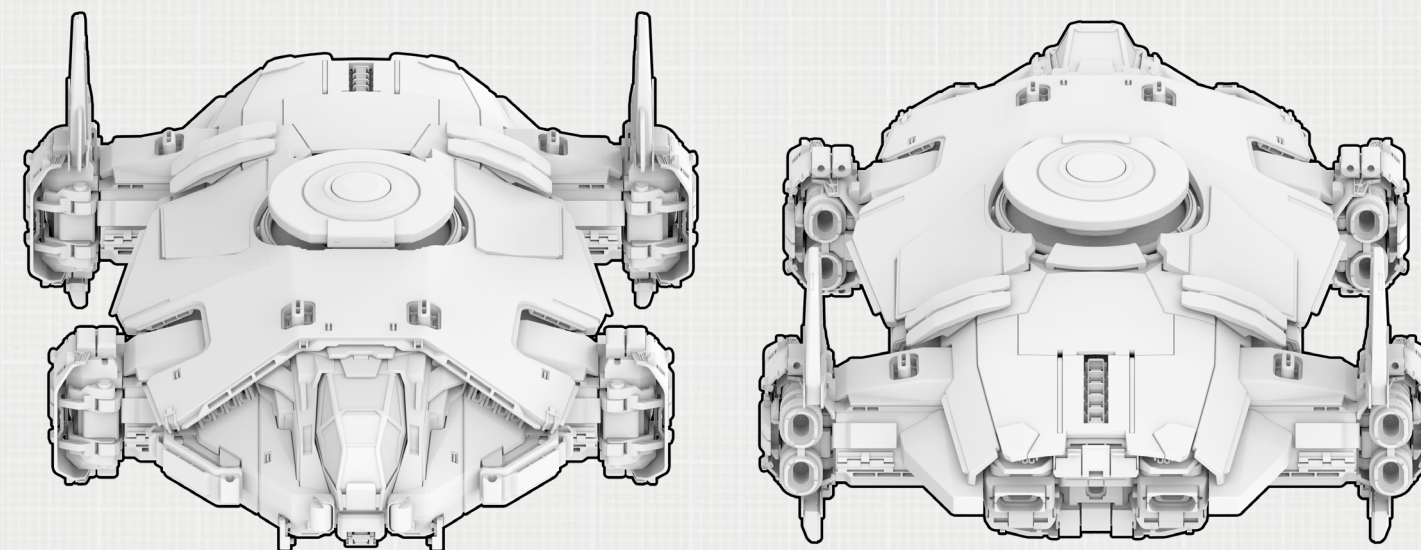
U4A-3 BLOCK III TERRAPIN

MANUFACTURER	ANVIL AEROSPACE
MAXIMUM CREW	2
MASS	148K KG
LENGTH	20.5 M
WIDTH	15 M (FLIGHT)
	17 M (LANDED)
HEIGHT	7 M
ROLE	PATHFINDER
EJECTION SEATS	NONE
CARGO CAPACITY	0 SCU
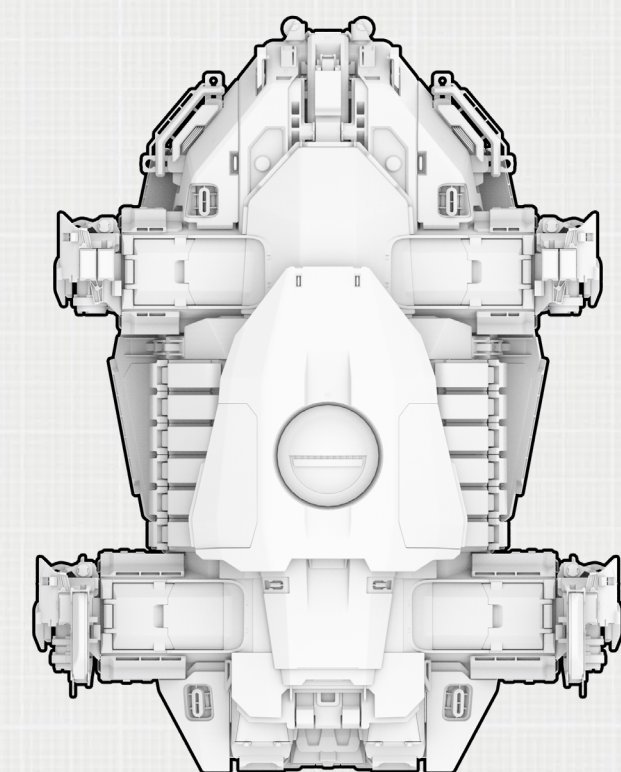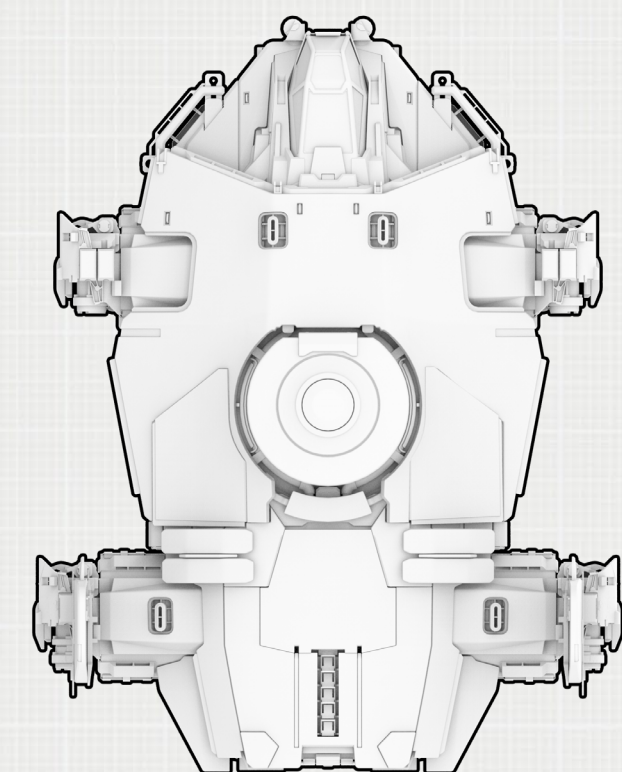
WHERE IN THE 'VERSE?

Each month, we'll post a close-up image of some point in the universe.
Each month, tell me where you think the image was taken:

David.Ladyman@cloudimperiumgames.com

Then next month, we'll reveal the image's location, and post the best replies we got.
This month's image is courtesy of Dave Haddock. Where in the 'Verse did he find it?

ONE QUESTION

We asked the CIG staff to answer one question for us this month. Here's what they had to say.

WHAT OCCUPATION WILL YOU START WITH IN THE PU, AND WHY?

SHANE JOHNSON, RSI CONCIERGE SPECIALIST

I'm really looking forward to exploration. There's something incredible about simply searching that really draws me. The PU is looking to not only be large, but picturesque as well. I can't wait to take a small crew of friends with me to experience it.

STEVEN KAM, JUNIOR COUNSEL

Not really out to amass a fortune. First I'm going to sort out a custom control mapping. Then, basically, I'm going to walk the universe. You know, like Caine in *Kung Fu*.

DANIEL BAKER, SQUADRON 42 DESIGNER

After being a seasoned veteran of the UEE in *Squadron 42*, I'll be re-joining civilian life as a Bounty Hunter. I just won't be able to shake the need to bring justice to those pesky criminals.

JEFFREY PEASE, DEVOPS ENGINEER

Data runner in a Herald. In space, the ship with the most speed gets to decide, where, when and if a fight is going to happen, provided it doesn't get caught in a trap. In tandem with that, information is the power to influence those around us.

JIMMY PEREIRA VON DOELLINGER, ENVIRONMENT ARTIST

It will definitely be mining and bounty hunter. Depending on the mood.

JULIA WILLSON, GAMEPLAY FEATURES 1 SCRUM MASTER & AGILE TESTER

Engineer and then data broker asap. Why? I know my lack of FPS and dogfighting skills will not be in demand, unless any of you guys are looking for jester or mascot for your squad! I can always be the person who bites it first in our excursions together.

MICHAEL DILLON, GAMEPLAY ENGINEER

I'll be starting with hauling stuff in my Connie. Been looking forward to it since I backed the project myself, back when the project was first announced.

MATT LIGHTFOOT, ASSOCIATE PRODUCER FOR PU DESIGN

My favourite career would be fleet commander in a large organisation, running large battles with capital ships. However I'd start with a Cutlass Red and try being a firefighter. Tempelman, a great buddy I met through *Star Citizen*, has just been accepted to a fire department and he wants to be a firefighter in the 'verse as well, so I'd join him!

PHIL WEBSTER, QA MANAGER, F42

Well, before I joined the company over 2 years ago, I backed at Avenger level as I want to be a bounty hunter — because as we all know, Boba Fett is the best *Star Wars* character there is! However, since the release of 3.0 I've been making a good chunk of money by trading, so I think I'm going to start out as a cargo hauler to make a nice pile of UEC so I can kit myself out with the best components and weapons before I start my trade as a feared bounty hunter. :'J

MAX SPURLOCK, PROP ARTIST

Probably refueling. I've never really been too much of a combat person, but I enjoy being helpful and making a profit at the same time can't hurt.

YOGI KLATT, SENIOR AUDIO PROGRAMMER

When I first started playing another space game online almost a decade ago, I encountered several experienced players with A graded ships helping out newbies with useful voice chats, money or even escorts against pirate players … very kind and nice people who brought out the best of an online community. Given that I own a Super Hornet in my private account, I will probably go for something similar; helping new players along their first steps into that amazing universe we're creating.

JARED HUCKABY, COMMUNITY CONTENT MANAGER

Wedding Officiant. When it comes time for you and your loved one to get married under the waterfalls on Goss, or in view of Pyro's maelstrom, I'll be there to say the words and eat the cake.

MAX HUNG, ASSOCIATE GAMEPLAY ENGINEER

Pioneer, because it's fun to be the first to discover something new and let other people know about what you found. It'll be even more fun if you're on your own and have to find a way to get out of a bad situation.

BENJAMIN 'MAC' MCMONNIES, PRODUCTION ASSISTANT

I want to be an Engineer/Mechanic on a Capital Ship. I'm Scottish.

ANDREAS JOHANSSON, LEAD LEVEL DESIGNER, PU

Exploration and Resource Extraction. As soon as mining and/or farming comes online I'm probably going to set up a small surface outpost somewhere on a remote planet. I will use it as a forward base (ideally hidden) for my exploration ventures. Moving forward I'd like to expand it with a landing areas, storage, defenses, garages. Basically everything I need to create a small self-sufficient outpost.