

# JUMP POINT

ISSUE: 09 09



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## FROM THE COCKPIT

### GREETINGS, CITIZENS!

... or should I say Argonauts? Like the rest of the community (dare I say the world?) I've been transfixed by the results of this year's Ship Showdown. I'm as excited about Argo world domination as anyone... truly it has earned the title of MVMPUV (Most Valuable Multi-Purpose Utility Vehicle)... but the broader results are honestly even more fascinating. As we lock in the final four the story is the same again and again: support ships are beating badass fighting platforms. That should tell you there's something special about the game that allows such ships to thrive and the community that clearly appreciates it. In honor of the grand contest, the first of our features this month is a collection of mini-Whitley's Guide articles covering the ships that made it into the final four: the 600i Explorer, C2 Hercules, Argo MPUV, and Mercury Star Runner.

Of course, the other big thing happening this month was a second attack by the dastardly XenoThreat, which I'm sure many of you had a hand in repelling. I was lucky enough to sit down with two of the designers behind both the original XenoThreat event and this month's updated version and it was fascinating to find out the kind of thinking that goes on behind such an event. As seen with the rise of the Argo Cargo, *Star Citizen's* players are very, very good at taking things in totally unexpected directions, so our designers have to be in top form during the planning phase! Special thanks to Luke Pressley and Edward Fuller for taking the time to answer my

questions. They put a lot of thought into everything and I'm very pleased with how it all came together!

We also have two additional lore features that, taken together, really express the breadth of *Star Citizen's* lore building. Over on the Galactapedia side we take a close look at the jumping lime (or Yar fruit, after its origins)... and for this month's Portfolio we dive into the world of Nine Tails, the criminal gang that everyone's talking about right now. What a wide galaxy!

While we're at it, I'd like to include a special thank you to two members of the always-fantastic **Jump Point** team: Michael Alder, who is responsible for the design of **Jump Point's** layout, and Martin Driver, arguably the hardest working copy editor in the electronic spaceship magazine business. An issue of **Jump Point** typically locks its content at least ten days before it publishes... but this time around we wanted to include something on the final four of the competition and so like the spice miners on that sand planet we've all been hearing about, our team reworked their busy schedules to let us work all the way to the end on our Whitley's article.

That's it for this month! I hope you enjoy the issue and we'll see you in October... through the next **Jump Point!**

Ben

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## DEVELOPER INTERVIEW

# XENOTHREAT DESIGNERS



Earlier this month, *Star Citizen's* players faced off against a familiar foe, the XenoThreat, in an update of an earlier in-game event. We spoke to the designers responsible to learn how they went about creating an event that brought everyone in the 'verse together.

#### BEGIN TRANSMISSION →

**JUMP POINT:** Please start by letting us know what you've worked on for *Star Citizen*. Especially, did you work on the previous XenoThreat event?

**LUKE PRESSLEY, LEAD DESIGNER (LP):** I led the design of the original XenoThreat event and the improvements for the re-release and managed their development.

**EDWARD FULLER, PRINCIPLE LIVE DESIGNER (EF):** I am part of the Mission Feature team tasked with helping to develop the mission system, which itself has a myriad of use cases across the project and is not just for missions with objectives. My work most recently has been to architect and build mission logic using Subsumption to construct events like XenoThreat (and the additions to the re-release) and the last Invictus Launch Week.

**JP:** The first time players faced the XenoThreat it seemed to be very warmly received. What's new in this updated XenoThreat event?

**LP:** The first release of XenoThreat was received warmly, but it was far

from perfect as we had never before attempted an event of such scale or featuring a huge fleet battle. So as hard as we had tried, there was still plenty to improve on for the later release.

I'd say the three major criticisms of the first event were pacing issues due to the separation of the gameplay phases, the unfair CrimeStats players received due to an overly simplistic friendly-fire system, and the lack of support for PVP, which was due to both time constraints and a few critical features having not yet been developed. When we began planning the rerelease, addressing these issues was at the forefront of our minds.

The pacing issue was relatively quick to fix as we simply combined the gameplay sections. But, in doing so, we made sure to utilize two new features that had become available to us: docking and quantum traveling AI. In the initial release, the Javelin had not properly docked, it had merely floated near the station meaning it could be rammed some distance from the station. Docking locks the ship in place preventing this.

The addition of quantum traveling AI not only meant we could link the phases in a cinematic fashion, with the Javelin jumping from Jericho to the wreck site, but also that the ship carried the damage inflicted during the restock phase, giving players an extra incentive to defend it well.

The trickier thing to address was the unfair CrimeStats as, due to the sheer quantity, the feedback we received was extremely general and couldn't be used to track down specifics. Thankfully, there were obvious things to tackle first and time to add analytics to get to the bottom of the majority of suspected edge cases.



We added much more complexity to our friendly-fire system and added new logic for splash-damage arbitration as players were punished for using weapons like the EMPs even when their contribution was overall positive. Based on feedback and analytics, our improvements drastically cut down the number of unfair CrimeStats awarded and allowed us to more accurately identify the remaining edge cases, such as collisions.

Sadly, we were unable to address the lack of PVP with this release as this relies on important changes, such as reputation-based hostility and UI that clearly communicates who your allies are, who is hostile, and who is lawful to attack. These changes are planned.

As well as tackling the main offenders, we listened to the community's feedback and addressed several other sticking points by adding new dialogue to more clearly instruct the player in the mission's more confusing or ill-explained objectives, and named the wrecks for easier communication.

We also included a reputation ladder that unlocked physical rewards for progress.

**EF:** We did change the scoring of the Repel Xenothreat battle mission from individual rewards to community rewards so that all damage would

build the mission's meter. This was considered a lot fairer than how it was the first time, where one ship with torpedoes could fly in to do the majority of damage and take the majority of the bonus rewards.

**JP:** *Did you work with the Narrative team on this update? Is the idea that this is an updated version of the first event or is it a second attack on Stanton by the Xenothreat?*

**EF:** There were three main additions to the re-release that we worked on with the Narrative team. The first was we were adding the reputation system to the event, as you could earn reputation with the Civilian Defense Force (CDF). The second was to add additional dialogue that would help players understand some of the less obvious parts of the design that were always there but could have been signposted better (the main ones being introductions for each type of cargo upon first pick up and the warning to scan wrecks before entering them). The third was additional intro and conclusion cinematics to bookend the start and end of the event.

To expand on the point about reputation, we added reputation to this release for a couple of reasons: First it allowed us to award the CDF

armor at the end of the event and to streamline that item-gifting process. The second was to be used as a gating method so those who did not have enough rep with the CDF would not be able to accept the mission. By default, all players could accept the mission but, by doing things we considered not supportive of the event, they'd receive negative rep with the CDF and eventually be unable to accept the mission for a time. We decided that it would also be nice to dig further into the reputation system so we devised with Narrative additional sets of lines that agent Dulli (the players' handler throughout Xenothreat) would use to address players based on their reputation upon acceptance of any of the missions. For some level of simplicity, we had two ranges. In the resupply phase this was fine as it meant only two acceptance lines. This was made more complex in acceptance into the Repel the Xenothreat battle as the mission could start under two contexts - either the resupply was successful or the resupply had failed. This meant that we had two reputational acceptances for a resupply win and a resupply fail. In the end it's a subtle thing but we felt having Dulli change the way she addressed situations would be a nice touch and something players would appreciate. We intend to do more of this in the future. Unrelated to reputation but still related to Narrative and

Dulli's lines is that when the Javelin arrives at the wreck site at the start of the battle mission from a prior resupply win, Dulli will comment on the health of the ship; that's another subtle way to make the situation and dialogue feel more alive to the situation at hand.

On the second point regarding new lines to better communicate existing gameplay, when we do this the Design team first provide the framework of what needs communicating and Narrative then write those lines to be more natural. I then create the triggers in the mission logic to trigger them.

On the third point regarding cinematics, I think this helps answer the other question you had asked regarding whether this is a first or second attack on Stanton. These additional cinematics replace those used in the first release of Xenothreat - the original intro won't be shown again, you saw it and that's it. We did this so that when the event is re-triggered, whenever that may be, it still has an "Oh what's this going on" presence and doesn't just become "there goes that intro cinematic again."

**JP:** *What other disciplines were called in for this event? Did it need any special animations, graphics, sounds, or the like?*



**JP:** Could you walk us through (in as broad terms as you want) how you script a new mission specifically?

**EF:** From a Subsumption mission point of view, it depends on what is being asked for. In the case of XenoThreat, the design required it to have distinct phases that the event would transition between, consisting of Introduction, Resupply, Repel the XenoThreat, and then the Conclusion (fireworks at Jericho). The backend system requirements for triggering dictated it had to be one mission module. This module had to contain all the logic and listen to changes in variables in the backend to automatically handle transitions between phases so that no issues would arise and players were handled fairly. That there were actual missions that players accepted (with objectives) dictated that this mission's logic could not reside within the same mission module that houses the event and phase logic.

This required a specific method of mission creation more akin to a server/client setup analogy (except it all runs on the server). The event manager creates sub-managers on the "servers" for whichever phase is required to run. The missions accepted by players from the Contract Manager app in their mobiGlas generate the "client" missions. The clients register themselves and their players with the sub-manager server that can then send events like the state of the mission at that moment back to the client missions. The client missions then use this information to determine what the objective should show at any given moment, with the client just listening for events and showing objective changes.

The sub-manager in contrast is doing all of the logic for the phase in question, so in the case of the Resupply phase, it is handling all of the heavy lifting, the spawning of enemy ships, the spawning of

**EF:** There we definitely other disciplines involved in the re-release. For example, when we decided to have the resupply mission run straight into the Repel XenoThreat battle, it dictated that the Javelin in the first mission (if resupplied) would have to be the same ship. This meant we needed help from programmers working on the quantum travel feature, as we needed the Javelin to actually jump from Jericho to the wreck site. We had never done that before, as usually ships travel away and despawn, not actually fly and arrive tens of thousands of kilometers away. So, the ship arriving in whatever state it was in when it left was the first new change we needed.

We also had the involvement from every team that had a feature that had seen improvements or changes since the first XenoThreat event ran. We had capacitors, Missile Operator Mode, new pinging and scanning, and we had to make sure XenoThreat in its entirety still worked with these and that those features still worked with XenoThreat; lots of interconnectedness.

**JP:** On the design side, how do you build out an event? How are they planned out and what has to be considered?

**LP:** Thinking back, I believe we started with a simple set of options, each with their own implications on the type and number of resources required. The option chosen centered around the Javelin being fully destructible, which at the time was a daunting proposition.

From there, we knew the event needed a number of phases in order

to prove out the functionality of dynamically progressing the event from the backend.

The intro, battle, and outro were a given, but I wanted to ensure that players who didn't care for combat were served, which is where the restocking phase came from. I looked at what was available and designed the mission around that.

Once we had settled upon the retrieval and transport of cargo, it was important to me that it would not be a straightforward task. The addition of time-sensitive, quantum-sensitive, and damage-sensitive cargo was inspired by the fox, chicken, and corn riddle where not all items can be transported together.

**EF:** First comes the initial idea from directors and Luke. Then, this gets turned into a fully realized written design. It will have a kick-off process and all teams will read this design and work out what they need to do to deliver it, including myself or whichever designer gets to build it. Like the other teams, I go line by line breaking down the whole design to see if there's anything we need that we don't have, working out which are prerequisites for anything I need to do or I need to consider in how the mission logic is constructed. I'll take special notice of anything that would fall to another team but that will require any specific considerations in how it might need to interface or be implemented in any mission logic. In those cases, I'd make sure to reach out to them to make sure those considerations are covered before they start.



the wrecks and the enemies on board, all of the logic to count sold supplies, community reward scoring logic, and all the logic to trigger dialogue. When key events happen in the sub-manager, such as boxes being sold in resupply or a XenoThreat Idris spawning at Jericho to attack the Javelin, this information is sent as an event to all registered "client" missions and those missions interpret the events they receive and act accordingly, be that updating objectives or objective markers.

So, the take away is that, although it sounds big and complex, it's actually architected in such a way that makes logical sense, with 100% of the variables and logic that dictate the current state of the mission existing in the sub-manager. As it all happens in one place, we then have the client missions that receive updates from the sub-manager so they can all reflect the state of play of the missions at any one time - the result being all players see the same thing. This architecture is also clean and understandable for other designers to work on and it's an architecture we've proven in other events since the first XenoThreat, including the last Invictus Launch Week and the Ninetails Lockdown.

**JP:** *With a world as big as Star Citizen, how do you plan for every possible approach players might take towards the event?*

**LP:** As best we can, but it's not easy. To be a mission designer requires you to understand every single system and feature in the game that affects gameplay. Any blind spot in this knowledge can lead to an exploit, griefing opportunity, or undesirable gameplay outcome. Our role is made more difficult by the fact that features with major gameplay impacts can be being developed in the same quarter we are releasing an event or mission. This was the case with docking, capacitors, and scanning for the most recent release.

**EF:** We start with our design that includes the critical flow that players must complete to succeed at the mission. This is designed to make sure it spotlights whatever gameplay we are trying to focus on. In the case of the Resupply phase, that's having a mixture of ship combat, FPS combat, and hauling boxes from the wrecks while getting people to work together and use their own autonomy to determine their roles on the fly.



From there, it's a case of making sure the design accommodates how players actually play the game. For example, it informed the distance we would place Jericho from a rest stop (so players could respawn and get back into the fight) and determined the distance we put the wreck site from Jericho.

We also must call out parts of the design that players would expect to "just work" with other features, such as being able to use a tractor beam to take a supply crate from a cage or being able to scan the wrecks to see if there are any enemies onboard and how much cargo is still there.

We must also make sure the design handles different styles of play that may run contrary to our design's goals. We knew there would be players who wanted to side with XenoThreat, and though we didn't let them do that officially, we didn't make it so they couldn't be involved. We do have to consider what that might look like and the permutations it might take so we can think of reasonable means to dissuade or mitigate the negative results of certain behaviors without doing something that doesn't fit in our universe or design philosophies.

Ultimately, what I think was cool about the design (and probably is true of our game in general) is how we can layer different gameplay types and objectives on top of each other and players will always have room to creatively solve the problems we present. So, in some way it's nice not to try to second guess the player all the time, else they'll not have opportunities to come up with their own strategies and methods to complete or thwart the task at hand.

**JP:** Do you have an internal testing process for making sure an event like XenoThreat is ready to go before it launches to the Star Citizen community?

**LP:** We wanted to go to the source for this answer, so we asked some of the folks responsible for the testing process. This answer is from Deen Mugal, Alexander Fox, and Matthew Spiers:

## OUR INTERNAL TESTING PROCESS CAN BE BROKEN DOWN INTO THE FOLLOWING FOR XENOTHREAT 1.1:

### 1: PRE-PLANNING

This involved considering various things, including: the number of testers we could feasibly assign to XenoThreat, the start date for testing, the testing strategy, how we would handle daily testing with a small team, testing material and documentation, how we would establish a communication strategy with key stakeholders, and creating dedicated QA and leadership teams to own the initiative.

At the end of the pre-planning, a proposal mail was sent to the respective stakeholders outlining what our planned QA strategy was, the additional considerations (such as other ongoing initiatives), and the risks.

### 2: EARLY FAMILIARITY TESTING

Before going into full dedicated testing, one of the key considerations was the complexity of the event and the learning curve. XenoThreat is a prime example of an initiative that came with a steep learning curve that required time to learn the intricate nature of. The aim of this stage was to address the learning curve to maximize the productivity of testing when things began to ramp up. We took into consideration the limited amount of time from when all disciplines completed their work to the product releasing. This stage began while elements such as art were still being developed, with the key focus on functionality. During early familiarity, we began to create our communication strategy with the stakeholders, aiming to nail it down before the pressure ramps up.

For XenoThreat, familiarization was specifically focused on the resupply element to understand the intricate nature of the various moving parts. We felt this was the most at-risk and complicated area of the event.

### 3: DEDICATED DAILY TESTING

During dedicated testing, most of the work against the event was completed. Balancing and functionality was final, and QA had the freedom to begin bugging everything up that was ready for testing. During dedicated testing, QA established a strong communication strategy that ensured priorities were communicated out, major issues were raised in a timely manner, and any potential risks were identified. During this stage, regular playtests were organized and executed.

When testing, we prioritized the Resupply and the Repel the XenoThreat battle daily, while the Introduction and Conclusion were checked a couple of times a week.

Resupply particularly posed the most complex and intricate challenge due to the multiple moving parts and we felt that this is where the most risk was. With only four testers available to test the event, debug CVARs were used to manipulate specific areas to allow it to progress.

Weekly playtests were used as a way to test the entire event in as a natural a way as possible.

### 4: PREPARATION FOR LIVE

Dedicated testing continued as the final preparations for the event's live release took place. Backer feedback from the PTU was investigated and the phases were checked over daily to confirm nothing had broken down.





**JP:** Along those lines, did you observe anyone take on the Xenothreat in a particularly interesting way? (Or maybe just completely break things!)

**LP:** Honestly, everything players did was interesting to us as it either validated our expectations or gave us more to think about. For instance, though we hoped for it, there was no knowing how well players would cooperate during the event. I think that's the biggest take away for me - not only is our community capable of working together in large numbers, it actually embraces the opportunity to do so.

**JP:** Speaking purely speculatively, of course, do you think this is the last we've seen of Xenothreat?

**LP:** As the opening up of Pyro approaches, I would expect to see more and more of Xenothreat. If not in this event, in other events or missions. Personally, I would love one more go at this event, but only once we can

do a counter mission. That is the next game-changing addition I can see.

**EF:** No, I don't think it's the last time Stanton or players will encounter Xenothreat. Given their headquarters are in Pyro it seems very likely players will encounter them again...

**JP:** Is there a particular aspect of the Xenothreat event that you're particularly proud of?

**LP:** Number one is the reaction from the community. There's no greater compliment than reading the overwhelmingly positive feedback we received for the re-release. It was confirmation that the areas we had chosen to address were the things that made the biggest impact.

Another source of pride is how well we stitched together so many different bits of gameplay in the restocking phase, to the point where players could choose and stick with one role throughout the phase or

constantly switch it up. For me, it shows the kind of complex missions that can be achieved with pre-existing features and mission modules.

On a personal note, we worked really hard identifying the best ways to prevent the majority of unfair CrimeStats and I'm proud we were successful in that endeavor as it benefits the whole game, not just this event.

**EF:** A few things. I am proud that we now have the means to trigger dialogue in a way that is super powerful to us. We didn't have that prior to the first Xenothreat, but that event's requirements pushed us to create that feature and it's now being used in other events like Ninetails Lockdown.

It's a small thing but I am glad we got the supply ship and wreck call sign naming in, so when you have a new set of wrecks spawn in they have phonetic alphabet names appended to them to aid players. When I played and watched playthrough videos I saw players calling the wrecks out using these call signs, it really made me smile that that little subtle thing I did had improved that gameplay experience.

Finally, that we managed to build the mission logic that, aside from some bugs, runs autonomously on a server once activated. It runs until it receives variables to either change phase or shut down, it can run and sort itself out if a server restarts, and will tidy itself up and vanish once its time is done. It's a pleasure to know something you've toiled over for months can run sufficiently stable like that and the results can entertain people too whilst you're off doing something unrelated like walking the dog or sleeping in bed.

**JP:** Was there anything you worked on for this event that didn't make it into the final release? Anything you might hope to see added later (no promises, of course!)?

**LP:** A PVP counter-mission. We set the wheels in motion, but it may be some time before we're able to do a counter mission. With that comes a real danger that we ruin the event as it is unlikely that at this point



**EF:** It was a great feeling to see players were looking forward to a new version of the XenoThreat event. That really adds another dimension to working on something like this because you know there are players out there who want it. I thank you all for that.

And please keep your feedback coming in on how you found the experience and what you'd like to see in the future, as it really does feed into our formulation of new ideas and future developments.

**JP:** Finally, please let us know who else was involved in this.

**LP:** The majority of the company had some hand in the XenoThreat event at some point!

END TRANSMISSION

in the development of the game that players have an allegiance to any side and they will likely join whichever side has new gameplay/rewards en masse, which could unbalance the mission. It will take a lot of finesse to strike the right balance, but it's a design challenge I look forward to.

**EF:** In the future I'd like us to be able to develop the tech a bit more so that we can make it so players actually see Agent Dulli's face when she comms players throughout the mission.

**JP:** Do you have any special messages for the players who just finished fighting off the XenoThreat again?

**LP:** Thanks to the Evocati and those in the PTU who tested the mission prior to its release. Your feedback and analytics were invaluable and hopefully you saw the difference between what you played then and after release. And to everyone who took the time to give praise, constructive criticism, or anything in between, thank you. You guys are the reason the next release will be better than the last.







# SHIP SHOWDOWN

**WHITLEY'S GUIDE SPECIAL**

It's official: the winner has been crowned and another Ship Showdown has entered the annals of history. In honor of the grand finale, the editors at Gallivan Publishing are pleased to present this collection of spacecraft entries from Whitley's, the

spacecraft reference resource of record. These digest-sized articles cover the histories of each ship that made it to the semi-final so you can celebrate their accomplishments and your part in the process.



**CRUSADER INDUSTRIES**  
**C2 HERCULES**



The initial version of the Hercules transport, now the most successful troopship in Human history, began in the mid-28th century following a lengthy UEE military-led effort to conduct an unbiased review of its performance during the Second Tevarin War. This study resulted in a new focus on the importance of planet-to-orbit support logistics and offered particularly harsh criticism of the small armored assault craft used for planetary attacks during the conflict. A larger armed transport, it reasoned, could more quickly deliver heavy weaponry and other war materiel if it could operate as part of the vanguard rather than needing a site softened by smaller raider groups first.

The newly formed UEE Starlift Command, charged with managing interstellar logistics as part of the fleet chain, issued a request for proposal in 2814 that specified the type of large, fighting transport desired. Crusader Industries and Aegis Dynamics both proposed designs, with Crusader winning with a more expensive but significantly more capable bespoke design that could be constructed in existing freighter factories. The design process itself was smooth and uneventful, with the first prototype flying in 2818 and the first example delivered to a military unit in 2821. The military found the ship able to deploy tanks and artillery in mere moments while taking enemy fire.



Over the course of the next several decades, the M2 Hercules integrated itself into all aspects of UEE military deployments, moving everything from elite shock troops to humanitarian supplies to all corners of the Empire and beyond. The design was sturdy and effective, earning a reputation as a so-called 'generation ship,' with individual examples continuing to serve in the military for up to fifty years at a time. In 2940, with the lengthy exclusivity period of its deal with the military finally expired, Crusader announced the development of a civilian-focused variant of the third-generation M2 Hercules, the C2 Hercules. The C2 removes some of the more specialized equipment of the M2, offering the design as ideal for frontier organizations that needed to move larger equipment, including mining tools and the increasing number of privately-owned armored fighting vehicles. The announcement was subdued at the time, although early sales were healthy enough to justify the cost of developing the conversion (though what impact the choice may have had on Crusader's relationship with the UEE military remains unknown).

In the ten-plus years that followed, the C2 Hercules was adopted widely throughout the Empire both on the frontier as intended and in the core worlds where it has become an increasingly common sight at more developed ports. With frontier worlds facing Vanduul raids purchasing an ever-increasing amount of military hardware and other larger-scale defensive equipment, the C2 Hercules has become the vehicle of choice for making deliveries to more dangerous areas of space. C2s have also found themselves serving private shipping concerns in increasing numbers as organizations balance the sheer capacity of the MISC Hull series against the need for better protection in a more dangerous galaxy.





## ARGO ASTRONAUTICS MPUV CARGO



Late in the 26th century, the company now known as Argo Astronautics conducted a comprehensive review of freight movement and discovered that the slowdown point for moving cargo was not rail systems but the still-disorganized process of moving goods from orbital ships to planetary depots. The company's next outlay was now clear: devise a way to improve the process beyond simply continuing to develop more advanced rail networks and processes. To enable this, Argo purchased the former Telluman Shipworks, a recreational shuttlecraft company, to produce their first spacecraft, the ground-to-orbit Orbital Utility Craft (OUC). The OUC was designed with the systemic limitations of star freight in mind, allowing it to transport goods of varying size standards directly from large transport ships onto train cars, completely eliminating the delays that had become rampant in the system.

The initial business plan was to produce the OUC internally only, allowing Argo to fully own the solution and to take as much of a stake in the general movement of goods as it possibly could. The sheer size of the endeavor, however, proved that this was not possible as Argo could not recruit enough pilots or establish enough support facilities to make this feasible around the Empire. As a result, they opted instead for a second, if less overall profitable effort: a focus on producing a version of the OUC for general use so that their solution could be applied by companies around the Empire.

The result of this effort was the Argo Multi-Purpose Utility Vehicle, or MPUV, an evolution of the OUC that was even more rugged and reliable than the proof-of-concept ship. Like the OUC, the MPUV was a single-seat, multi-engined craft capable of attaching to cargo pods or other exterior surfaces. Unlike the OUC, the MPUV was designed from the ground up to be fully modular so that the design could serve as the basis for other types of utility ships. Most importantly, the MPUV could transport a variety of cargo gauges without requiring a maintenance EVA. Within a decade, the MPUV had been adopted by every single spaceport in Human-controlled space, greatly improving the flow of goods and establishing Argo as a spacecraft manufacturer rather than a transit maintenance company. Adaptations of the MPUV design quickly came online, allowing them to transport significantly different types of cargo or even act as a practical shuttlecraft, something greatly appreciated by the growing interstellar mining industry. In 2665, the company was renamed Argo Astronautics in honor of its new primary focus.

In the nearly 300 years since the MPUV's rollout, the design has become one of the most common ships in explored space. The ship's exterior remains largely unchanged, though its material components have changed with the times, as have its control surfaces and modular components. While the design lacks the range to travel significant interstellar distances, they have been deployed 24/7 in every spaceyard, waystation, and orbital cargo facility in the galaxy. While the design is commonly referred to as the "Argo" today, it is in fact simply the most common spacecraft produced by Argo Astronautics. Like the rest of Argo's offerings, the MPUV is marketed only by its acronym (a brief campaign attempted to name it the Stevedore but this was entirely ignored and quickly forgotten by consumers).



## WHITLEY'S GUIDE



## ORIGIN JUMPWORKS 600I EXPLORER



In 2943, Origin Jumpworks made a long-prophesied move to invest revenues from the massively successful 300i series relaunch into the development of a new, larger spacecraft intended to compete directly with Roberts Space Industries' Constellation. The move was spurred by the recent launch of the RSI Constellation Phoenix, an act that some on Origin's board considered an aggressive and unexpected attempt to lay claim to their more upscale base of private spacecraft customers.

Origin's initial hope was to develop a cost-conscious spacecraft as a return volley across RSI's bow, but development of the ship ultimately

came to envision the craft as a high-end luxury product first. It was, however, the first Origin ship to embrace modularity, a feature found in many more industrial spacecraft types that tends to lower the bottom line for a healthy percentage of users. All extant models of the 600 series (currently the 600i Explorer and the 600i Touring) are built on the same modular hull, which allows customers to install and operate different role-focused cores.

Origin employed two development teams for the project, one focused on the initial lineup of cores while the second built the exterior hull.





The first module approved for release was the Explorer, an ultra-chic take on the same role then monopolized by the Constellation Aquila. The Touring core, fundamentally a simplification and reworking of the Explorer, was developed second. The project quickly became the most expensive personal spacecraft project ever, stretching Origin's already lavish R&D budget to near-breaking point. The heavy initial investment paid dividends, as second and third-party vendors were brought into the project earlier than they otherwise might have been, allowing the initial article to make its first orbital flight just eighteen months after the blueprints phase.

Origin's team essentially hit it out of the park on the first try - the 600i prototype ended up being extremely spaceworthy and very few alterations were needed before the first run of production prototypes were constructed. Both models were available upon launch in 2947, with the Touring model handily outselling the Explorer (though both performed above initial estimates). Origin has continued to issue largely identical

models in the ensuing years, with the most major changes being an update to the internal life system that tended to experience gremlins in early vehicles.

In the three years since the '600i series' launch, the spacecraft has been adopted by a number of different organizations in addition to a healthy number of individual owners. The UEE government purchased a number of 600i hulls that are largely used as armored VIP transports for government officials and diplomats. The design has been adopted by almost every high-end private personal transport company in the Empire. The first major accomplishment by a privately owned 600i Explorer was a highly publicized comet intercept that demonstrated the ship's advanced shielding and the excellent performance of its sensor suite. Origin itself has invested in several exploratory ventures in an attempt to publicize the ship's future accomplishments. At time of press, no 600i Explorer has yet charted a new jump point.



CRUSADER INDUSTRIES

# MERCURY STAR RUNNER



In 2884, Crusader Industries' CEO Kelly Caplan, who had helped oversee development of the corporation's gas giant property in the Stanton system, began an effort to expand the corporation away from the large freighters that had made it a success. Her goal was to pivot the brand to supporting military contracts and a resulting broader array of spinoff offerings for the civilian market. Project Quicksilver, the development process that would result in the Mercury Star Runner, was the flagship of this effort. While Crusader was uniquely prepared to adapt its major industrial base to the second half of ship development, early progress was slow as the company converted from its culture of slow, iterative updates to freighters and starliners and into the riskier world of new-role spacecraft development.

This changed in 2885. With Quicksilver's development in jeopardy (some accounts claim design efforts had stopped completely), Caplan made another bold choice: the purchase of Trent Systems, an aging also-ran spacecraft designer that had survived on support contracts for an ancient (and now defunct) UEEN reconnaissance craft. Unlike Crusader, Trent had a team of expert engineers who could be transplanted to Stanton to jumpstart development of the first star runner. The resulting ship, which would premiere several years later, was a genuinely unique design. Intending to create as much internal space as possible, the team had developed a unique, asymmetrical design that didn't quite look like anything else flying at the time.



WHITLEY'S GUIDE

When the prototype, now named the Mercury, premiered to the galaxy in 2892 it was promoted as a blockade runner, armed with special sensors, chaff and flares, and, for the first time for a Crusader Industries design, offensive weapons. The first production models were presented at the 2894 Intergalactic Aerospace Expo and in the process managed to set a speed-in-class record and generally prove that all of the promised capabilities had been ably delivered.

The new blockade runner was an immediate financial success, locking down three and a half years of pre-orders before the IAE had concluded. And yet, inside the company the Mercury was already considered a failure: in the short term, the ship had failed its overarching objective to alter Crusader's reputation for stodgy, purpose-built spacecraft designs. The problem? Mercury buyers were overwhelmingly existing Crusader buyers seeking to outfit their fleets with fast, armored couriers in advance of the expected increase in Vanduul activity. The Mercury would not, as hoped, be helping supply distant colonists cut off by war so much as it would be protecting key corporate assets.

In 2914, the most significant iteration of the Mercury was launched in response to the launch of competitor Drake Interplanetary's Herald information runner. Crusader's management had long considered themselves diametrically opposed to Drake given the company's respective social views. Seeing Drake's attempt to corner the market on fast, light data ships, Caplan authorized a quadrupling of the Mercury development budget and the initiation of a crash program to add the same functionality to the blockade runner. In just eight months, the standard model of the Mercury had been adapted to include protected data storage, encryption, and kill-switches as standard. Further twisting the knife, Crusader authorized dealerships to produce at-cost conversions for existing companies wishing to operate their earlier model Mercurys as data runners.





# GALACTAPEDIA

## JUMPING LIME (YAR FRUIT)

The jumping lime, also called the Yar lime or the Yar fruit, is a sweet, sour, astringent fruit that grows from a cactus that naturally mutated on Yar (Centauri II) some time after the planet's terraformation. Discovered in 2450, the fruit was named for the ease with which it falls off its parent plant and clings to clothing and skin. It was domesticated as a crop plant in the early 26th Century. Wild specimens can still be found in Yar's Red Desert, but they are not as sweet as the domesticated variety.

## CULTIVATION

The jumping cactus (*Cylindropuntia acerbis*), the plant from which the jumping lime grows, is a mutation of the Earth-native plant jumping cholla (*Cylindropuntia fulgida*). A tree-like plant, it has branches that grow near the base of the trunk, each one covered in small, hair-like spines with tiny hooks on the end. It grows to heights of roughly three meters. The branches are susceptible to overgrowth during especially wet years, and will prematurely die unless pruned or supported. Rows of jumping cacti with their branches tied to stakes are a common sight in Yar's former mining towns.

At the end of the wet season, a vivid purple and green flower sprouts from the end of each branch of the cactus. If a flower is pollinated by hand or by night-flying insects, the petals will wither and it will develop into a spiny, round, purplish fruit. Branches that don't produce fruit tend to drop off the plant and dry in the desert sun. After four weeks of growth, farmers remove the branches with stunted fruit to concentrate the plant's resources on the branches growing big, healthy fruit. At eight weeks, the barbed, leathery skin of the fruit turns green and is ready to be harvested. Workers traditionally wear protective gear as

the spines can pierce skin. The fruit must be de-spined and peeled in order to access the sweet, very tart, astringent flesh.

## DISTRIBUTION

*Cylindropuntia acerbis* is endemic to Yar and takes easily to any planet with deserts or dry forests. The Red Desert is home to a number of thick forests of the plant that may range over many hectares. It is common to see local fauna with the fruit attached to their hides, which is the main way the plant's seeds are spread in the wild. Some desert animals have adapted to be able to cope with the plant's spines and will break open the unripe fruit to consume it during the dry season. Although the fruit does have hydrating properties, its juice is astringent enough that it often causes a feeling of false dehydration. Yar locals warn against eating the fruit unless another source of water is nearby.

## USES

Jumping limes are appreciated for their intense flavor and aroma, though many prefer to eat them cooked rather than raw. When they are roasted, some of the astringency decreases and the sugars caramelize, transforming the flesh from very tannic and sour to bright and acidic. Yar locals will peel, chop, and stew the fruit with sweetener until it's completely broken down into pulp, and then strain it and use the liquid to make jelly. The resulting product is very sour and sweet, slightly bitter, and leaves a dry feeling in the mouth after it's consumed. While Humans who don't live on Yar largely consider the jumping lime jelly an acquired taste, it is popular among Banu for its complex flavor profile. Formerly economically depressed towns on Yar have experienced positive growth in recent years thanks to exports to the Protectorate or sales to passing Soulis.



# NINE TAILS

*Editor's Note: This portfolio is not intended to glorify or condone the Nine Tails. Instead, it's meant to educate readers on their actions and areas of influence. Only by fully understanding the operations and motivations of criminal organizations like the Nine Tails can we stop them from spreading their influence further across the UEE.*

"Organized and absolutely ruthless." Detective Alsup used those words in 2938 to summarize the first Nine Tails attack, an incident that left 28 Terra police officers dead. Despite the heavy toll on law enforcement, only one of the assailants was found dead on the scene, wearing gear marked with a snake entwined with the number nine. The then-unknown symbol circulated widely before an informant identified it as belonging to a mysterious new gang calling themselves the Nine Tails.

Since then, numerous reported heists and attacks have been linked back to the group with increasing scope and frequency over time. Despite their growing reputation, little is known publicly about the gang or its inner workings; making the group's meteoric rise to power only more worrisome to organized crime experts. Today, the Nine Tails gang operates almost exclusively within the Stanton system, using the infamous derelict space station known among locals as 'Grim HEX' as its headquarters.

A former Green Imperial Housing Exchange used by miners working the asteroid belt encircling Yela (Stanton 2c), Grim HEX is technically owned by Crusader Industries. They acknowledge the Nine Tails presence but claim the gang isn't their issue alone, and refuse to wrestle control of Grim HEX away from the gang unless aided by the Advocacy or the system's other governing mega-corps. According to a 2950 Crusader statement, "piracy within the Stanton system needs to be addressed as a whole when other jurisdictions sit only a quick QT away."

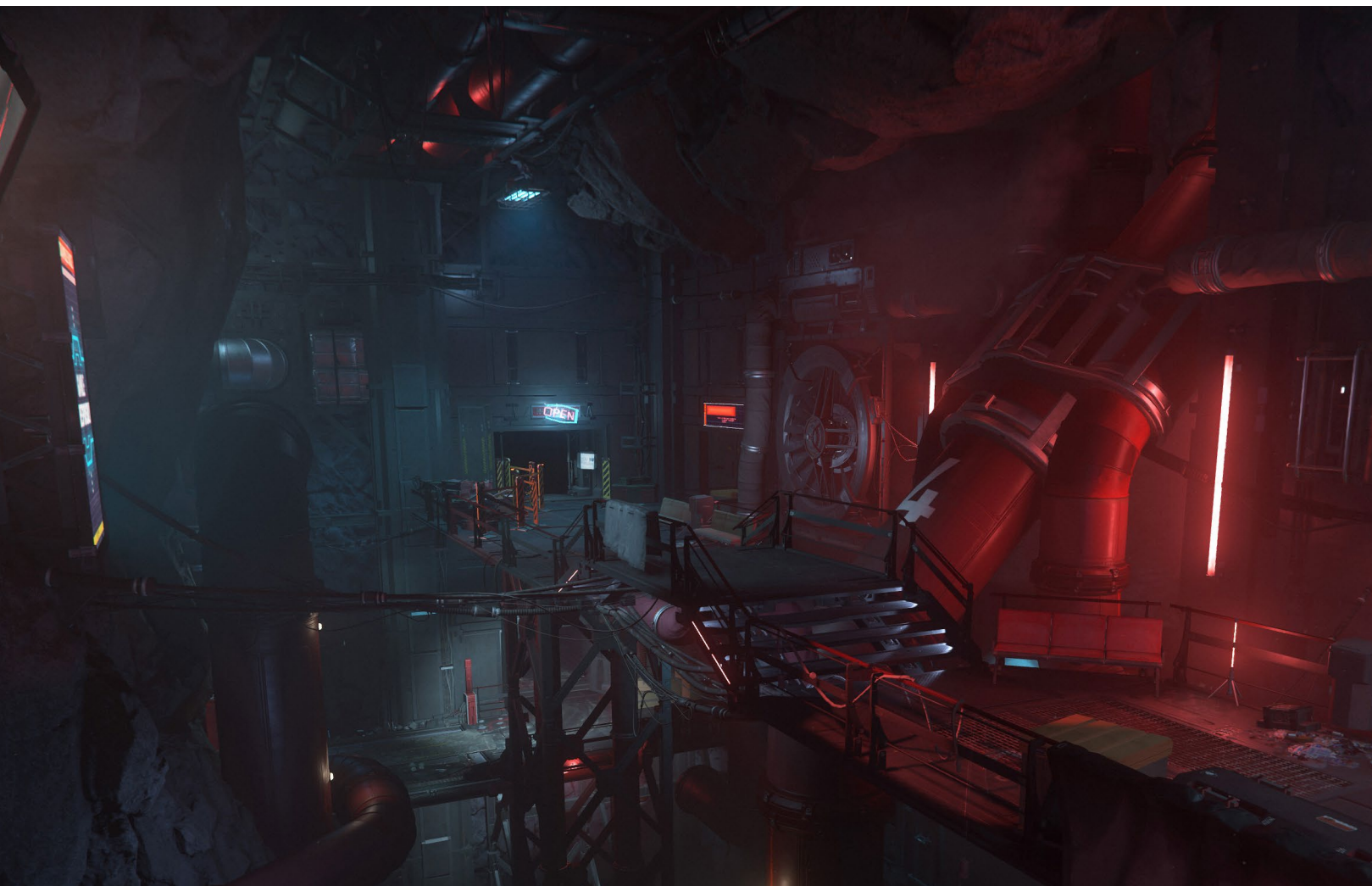
As the influence of the Nine Tails criminal organization expands, investigators continue to try to understand the gang's inner workings. While money appears to be the gang's main motivator, the logic behind some of the Nine Tails' operations remain anomalous, leading one organized crime expert to describe the group as "credit-craving professional anarchists."

## FIRST STRIKE

The Nine Tails have come to specialize in savage attacks with enigmatic motivations, a deadly and unnerving mixture that goes all the way back to their first attack. Racketeering and piracy were just two of the many corruption charges Albert 'Sinkhole' Holden faced for leading Prime's Rangda syndicate for over a decade. This notoriety earned him a sentence of solitary confinement in an off-world detention center, but he wouldn't ever make it there. Nine Tails ships swarmed the transport once it was ripped out of QT above Terra. A coordinated attack quickly destroyed all Terra PD ships except the prison transport, which was disabled and boarded. Utilizing expert precision, well-practiced tactics, and the element of surprise, the Nine Tails stormed the transport and killed all police officers aboard. They then freed Holden from the stasis pod and fled.

Considering the professional behavior of the attackers, investigators were surprised that the gang left one of their own, who had been killed in the exchange with the guards. Police initially assumed the unknown snake symbol on their gear was a red herring, as investigators believed the Rangda syndicate carried out the attack to spring their boss. Yet a day after the attack, the case took an unexpected turn when Holden was found shot in the head and floating in space. Why the Nine Tails sprung Holden only to execute him later remains a mystery.

Weeks passed before the first solid lead came when the same snake



symbol was spotted by cameras during the hijacking of a Caterpillar loaded with valuable resources in Magnus. Over the next several years, the gang became more and more prolific and were linked to incidents in over a dozen systems that involved abductions, murders, robberies, and destruction of personal and private property. Predicting when and where it would strike proved nearly impossible. Then, in early 2942, incidents involving the Nine Tails suddenly stopped. Law enforcement officials secretly hoped internal divisions might have finally ripped the gang apart, but it was only planning its next move.

**SAFE HAVEN**

Reports of renewed Nine Tails activity began coming out of Stanton in 2943. Accompanied by rumors within the outlaw community that the gang now controlled a defunct housing exchange nestled in Yela's asteroid belt. Before their arrival, squatters and small-time criminals called the ominously nicknamed Grim HEX home. They put up little resistance to the Nine Tails takeover. According to sources, anyone who opposed the gang got tossed out an airlock, while those offering no objection were allowed to stay and potentially prosper.

Under Nine Tails control, Grim HEX has become a hub for illegal activity in the Stanton system, with black market trading and gambling

flourishing aboard the station. The gang is also believed to be behind the general rise in crime throughout the sector. It's gotten so egregious that Crusader CEO Kelly Caplan was called before the Senate to explain the company's security failings. Outside observers have accused Crusader Security of avoiding direct confrontation with Nine Tails out of fear over how the gang would respond. If true, this reinforces just how powerful the gang has become.

Why Nine Tails transitioned from a highly effective and elusive strike team into a Stanton-based force remains a mystery. Steady credits is the easy answer but some experts have wondered if the gang might have bigger plans in the works. Recently, the gang proved those experts right by blockading a rest stop with a powerful dampener that made quantum travel impossible near the station, grinding commerce to a halt in the sector. The Nine Tails were so effective that the lockdown was only broken after Crusader Security Director Sasha Rust instituted an emergency recruitment drive to bring security contractors to the station's aid. The Nine Tails motives for this attack remain unknown.

Nine Tails may now primarily operate in the Stanton system, but it is emblematic of this age of crime. Its quick and calculated rise to power, alongside its ability to keep the gang's inner workings a secret from investigators, only proves how truly dangerous it is.



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