

JUMP POINT

ISSUE: 09 6

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FROM THE COCKPIT

GREETINGS, CITIZENS!

It's certainly been an eventful month for *Star Citizen*, between the excitement of the annual Invictus Launch Week celebration and the fascinating revelations of Alien Week. And we're just getting started; as I write this, the countdown to Alpha 3.14 is in full swing... so even though some of us can start directly interacting with actual humans again, there are still some pretty compelling reasons to stay home aboard our favorite spaceships.

And speaking of spaceships (nice segue, me), we've got a special look at two of them this month: one of *Star Citizen's* newest ships alongside its very oldest! Taking that first honor, we've got an in-depth look at the Roberts Space Industries Scorpius. By now, you may well be familiar with the new heavy fighter that launched as part of the Invictus celebration. As a veteran of so many concept presentations, it always warms my heart to see a ship presented in such an interesting way... and what a fun ship it is! (And hey, it's also not the worst feeling in the world to finally prove there can be more than one four-winged space fighter out there, if you know what I mean.)

As for the oldest ship in the fleet, I'm speaking of course of the Bengal class carrier, the very first ship we saw in the original pitch trailer back in 2012! Everyone got their very first look at the Bengal in the current game engine during the Invictus event with that heart-stopping flyby... another long-ago promise delivered! The Bengal has a special place in my heart. I will never forget those early, pre-production days

when Chris Roberts proudly revealed what he'd been working on with Ryan Church. He sent those of us helping out with the project this huge side view render of the carrier; so large that it took me three computers to find one with enough memory to open the thing without exploding Photoshop. And it was like coming home to the Tiger's Claw again, but so much more. For this article, we're focusing on the history of carriers themselves starting in reality in the 1920s and running all the way to the Bengal in 2951! I'm hoping to do more articles like this in the future, covering other areas where real history has inspired parts of *Star Citizen*... so stay tuned!

And then not to make this entirely a Roberts Space Industries issue, we've got a new Whitley's Guide covering competitor Aegis Dynamics' storied Javelin-class destroyer. If there's anything more fun than thinking about the future of naval tactics evolving into space then I don't want to hear about it! Last-but-never-least, we throw some of these ships into battle with a lore article covering the Siege of Tiber. Not one to be missed!

(Engine noise, cool FX flash) **Jump Point** transit completed! Please enjoy the issue, let us know what you'd like to see in the future... and once we've crossed the system, we'll see you through the next **Jump Point!**

Ben

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SPACE CARRIER!

The first aircraft carrier was commissioned just under a century ago; in that short time, these powerful warships have proven themselves in combat, taken over the world's most powerful navies, and captured the imagination of millions around the world. *Star Citizen* and *Squadron 42* follow a grand tradition of working elements of modern naval combat into a future setting and nowhere is that more apparent than the mighty Bengal. In this feature, we'll cover both the real history behind the aircraft carrier and its nearly-as-long connection to science fiction leading directly to the UEE's incredible flagship.

AT SEA...

The First World War saw the dawn of military aviation, pitting elaborate wood-and-cloth flying machines against each other in history's very first aerial dogfights. While the earliest military aircraft were useful

primarily for reconnaissance, the technology evolved quickly: guns and bombs added offensive capabilities in the air and on the ground and an increased understanding of aerodynamics allowed better engines, ever-more-streamlined designs, and more protective metal bodies. The United Kingdom conducted early experiments with ship-launched seaplanes during the war, but the limited capabilities and ranges of early aircraft meant that they made little impact.

It was not until the early 1920s that the concept of the modern aircraft carrier began to form. As mid-war aircraft designs became ever more capable, the desire to use them for force projection increased. The fighter planes of the 1920s were still extremely limited in range, meaning that to operate them in an overseas conflict you would need either a remote airfield that would need to be protected or, war planners theorized, a mobile floating airstrip that would refuel and rearm aircraft and keep them

in fighting shape. In 1921, Japan premiered the world's first dedicated aircraft carrier, the *Hōshō*. From the very start, the general look of the modern carrier was established, with a full-length flight deck and an off-centered island for commanding the ship and overseeing operations.

Britain soon followed suit with the *HMS Hermes*, though other countries were slow to produce dedicated carriers of their own. In the United States, there was a strong feeling among those operating the Navy that the next war would be decided with the sheer firepower of the battleship and that it was unlikely that aircraft (and especially carrier-based aircraft) would ever play a role in ship-to-ship warfare. Following a spectacular war game in which Billy Mitchell, later known as the father of the Air Force, proved that dive bombers were fully capable of sinking target ships, the Navy began to rethink the need for carriers. Previously abandoned battlecruiser hulls that had been paused mid-construction were redirected to produce

the *Lexington* and the *Saratoga*, forming the bedrock for a growing carrier force.

Then, the Second World War's Pacific theater changed everything. If any doubts about the role of aircraft carriers in warfare remained, they were dashed on December 7, 1941, when the combined air groups of six aircraft carriers parked safely somewhere in the Pacific struck a massive blow to the United States' fleet at Pearl Harbor. Suddenly, no one could build aircraft carriers quickly enough, with their role expanding to cover everything from convoy escort missions in the Atlantic to serving as the main body of all the navies battling in the Pacific. A series of spectacular battles, Coral Sea and Midway, pitched American and Japanese carriers directly against one another for the first time, ultimately resulting in a crippling victory for the United States in which dive bombers and torpedo planes sank several Japanese carriers. 1942 also saw the introduction of the modern Combat

Information Center, a dedicated room aboard carriers in which entire engagements were tracked and commanded. It was claimed at the time that the new facility had its origins directly in science fiction, as a similar command room had appeared in E.E. Smith's 'Lensman' series, there used to organize the efforts of fifty thousand space warships at once.

The end of World War II was by no means the end of the aircraft carrier. The simultaneous development of nuclear fission was soon applied to these already massive warships, allowing the construction of the very first supercarriers, another order of magnitude more impressive than those that served in the war. These nuclear-powered carriers, still serving in modern form today, were veritable cities on the sea. Displacing over a hundred thousand tonnes each and clocking in at over 300 meters long, these ships carry the material needed to support crews of thousands for months-long deployments. Seen from above, they have evolved from the initial rectangular decks of the war-era diesel carriers to a unique angled design now recognizable the world around. The present-day fleet of supercarriers has allowed the United States to project power around the world and has taken part in dozens of regional conflicts. Each carrier, protected by a broad shield of frigates, destroyers, and guided missile cruisers, carries 80-plus jet aircraft that can be armed and launched at a moment's notice. Operations aboard these ships are a delicate ballet, with dozens of sailors working in synchrony to keep aircraft launching and landing.

AMONG THE STARS...

As World War Two concluded, the American public remained fascinated with the new type of ships that had won so much glory in the Pacific. At the same time, many veterans returning from the conflict turned their interests towards the creative, forming the next generation of science fiction authors and television producers. Where those writers who began before the war would often imagine galactic empires and naval conflicts inspired by ancient Rome or the Age of Sail, the new breed of creators would adapt their own experiences. Star Trek, for instance, envisioned the Enterprise, named after one of the war's most celebrated carriers, as a sort of aircraft carrier in space complete with its own flight deck. (Though budgetary concerns would largely replace its intended functionality with 'handwavium' transporters.) Such carriers also became common in the short stories of the era, with the war's dashing fighter pilots transplanted into the booming culture of pulp science fiction aided by a new generation of space heroes in the first astronauts and cosmonauts.

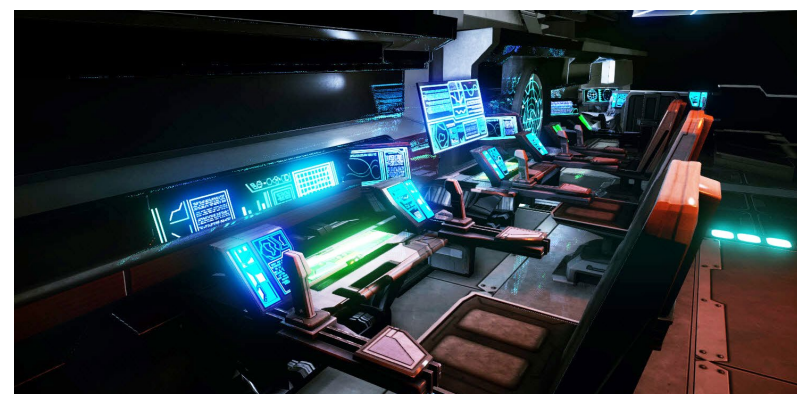
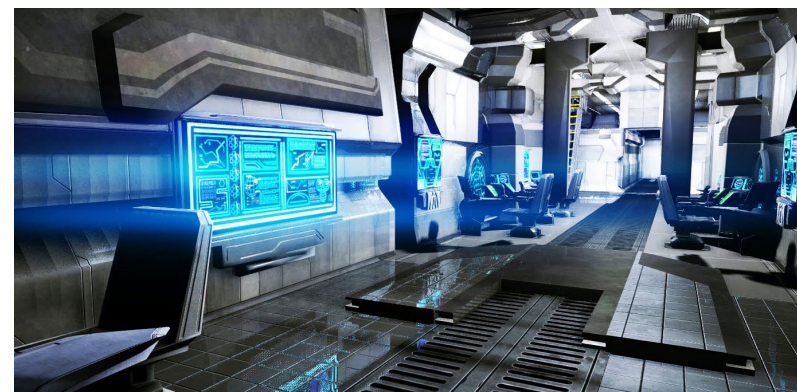
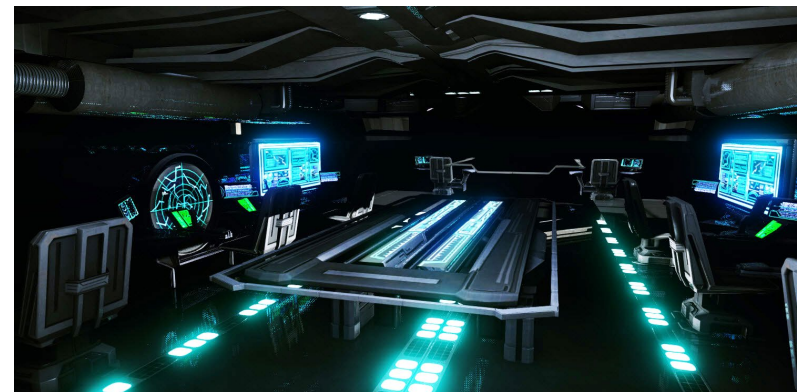
In the 1970s, big budget science fiction films took the aircraft-carrier-in-space concept to audiences like never before. George Lucas' Star Wars imagined an evil Empire whose distinctive slab-like Star Destroyers deployed complements of short-range fighters much like the supercarriers that had until recently been bombing targets in Vietnam.



Star Wars struck a chord with viewers and the concept quickly made its way to imitators, none more dedicated than Battlestar Galactica, which imagined its namesake as a very literal take on an aircraft carrier with stories focusing largely on its fighter crews and their missions. In the 1980s, the idea of space carriers would have widespread appeal in Japan, with franchises like Macross imagining interstellar aircraft carriers transporting shape-changing mechs heavily inspired by the US Navy's top contemporary jet aircraft. Another high-profile television series based directly on translating a water navy aircraft carrier into space was Space Above and Beyond in 1995, which briefly held the title of most expensive broadcast television show ever produced.

Of course, no review of aircraft carriers in space would be complete without Chris Roberts' own Wing Commander series beginning in 1990. Set initially aboard the Bengal-class carrier TCS Tiger's Claw, Wing Commander had the players pilot carriers taken directly from the Second World War. The games would ask the players to fly typical carrier missions: CAP, torpedo attacks, escort missions, reconnaissance,

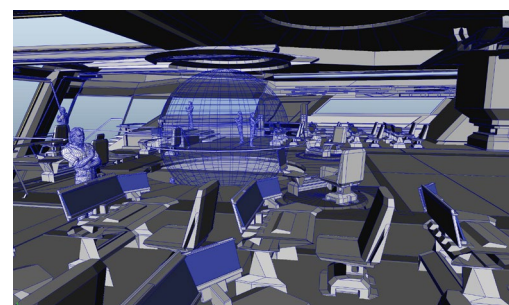
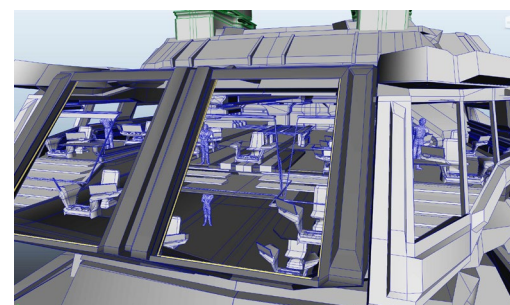
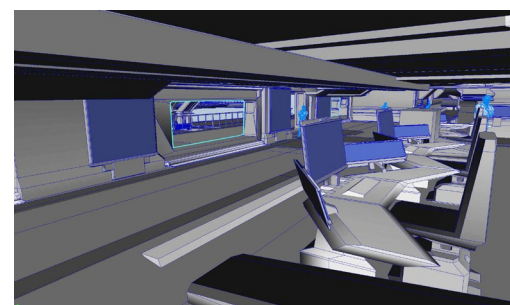
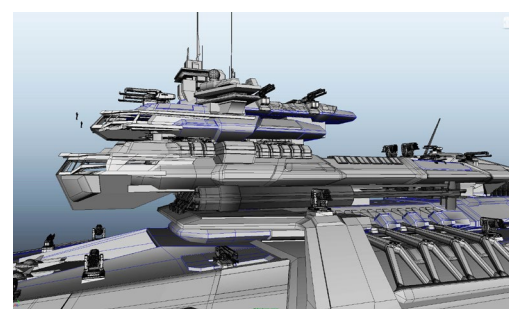
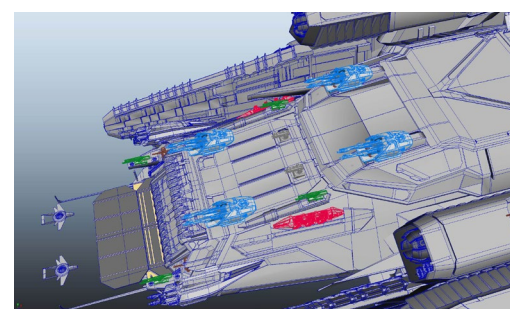
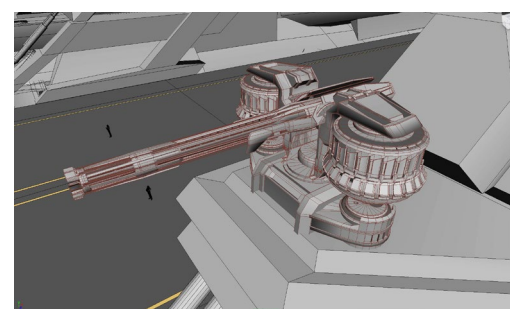
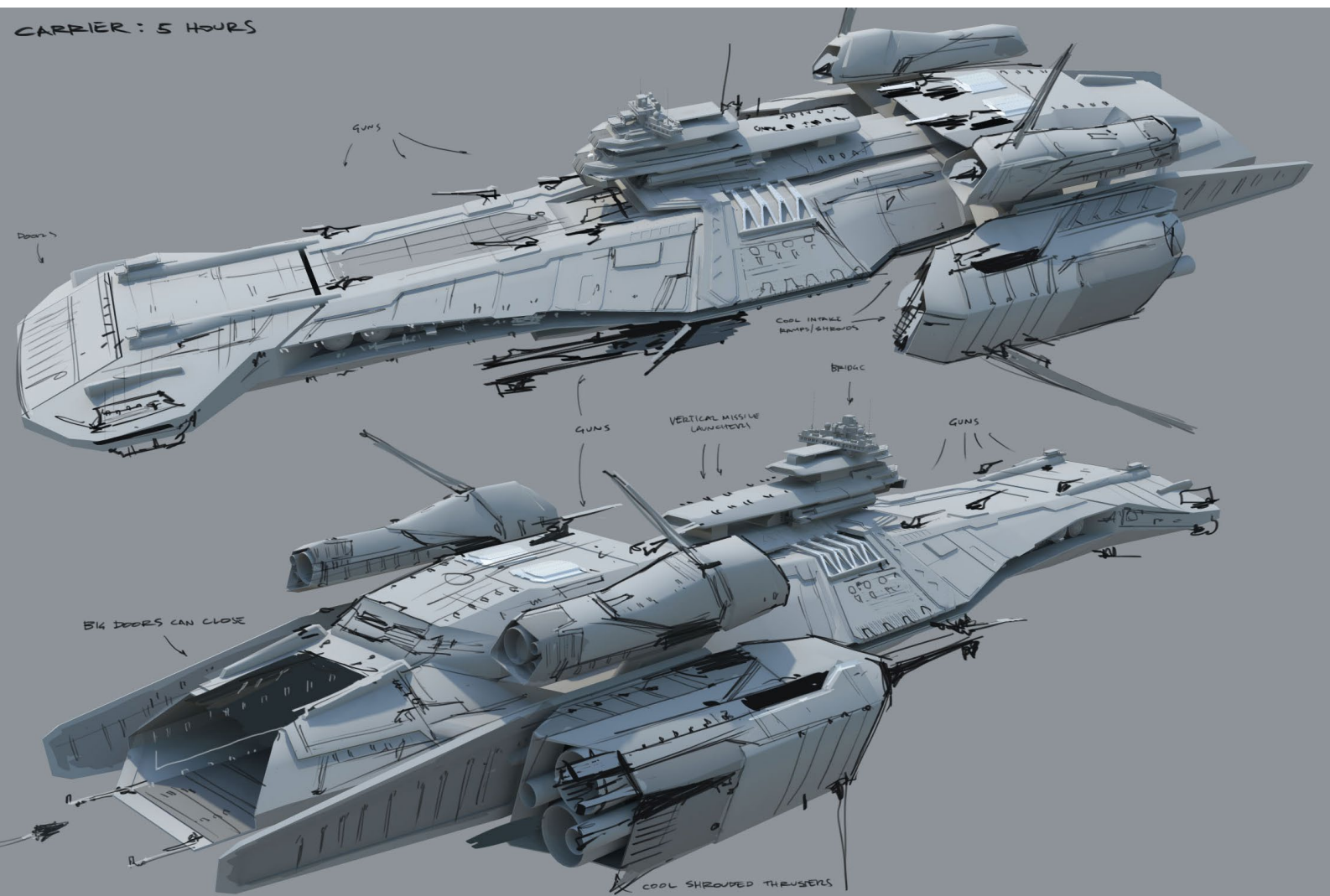
and the like, while between missions they would explore their home carriers as various stories unfolded around them. The internals of these carriers were technically just a series of menus through which players could access other portions of the game (videos to continue the story, in-engine missions to continue gameplay). In spite of this, Roberts' dedication to immersion and environmental storytelling meant that from the very beginning these spaces felt like home, with players sleeping in their quarters instead of saving the game and even exiting to DOS through an airlock instead of a key combination. Fans fondly recall the ship's dripping pipe collecting water in a bucket, a simple animation that on its own served to make the Tiger's Claw feel real. As the series continued, Roberts would move from hand-animated rooms to entire 3D-rendered environments and later physical sets constructed for film shoots, each time doubling down on the reality of the Terran Confederation's space carriers. The series culminated in a wide-release movie, which again dug into real world history for its space carrier aesthetics with a stunning collection of warship sets designed by Peter Lamont (who had just finished working on the same task for Titanic) taking shape in a warehouse in Luxembourg.

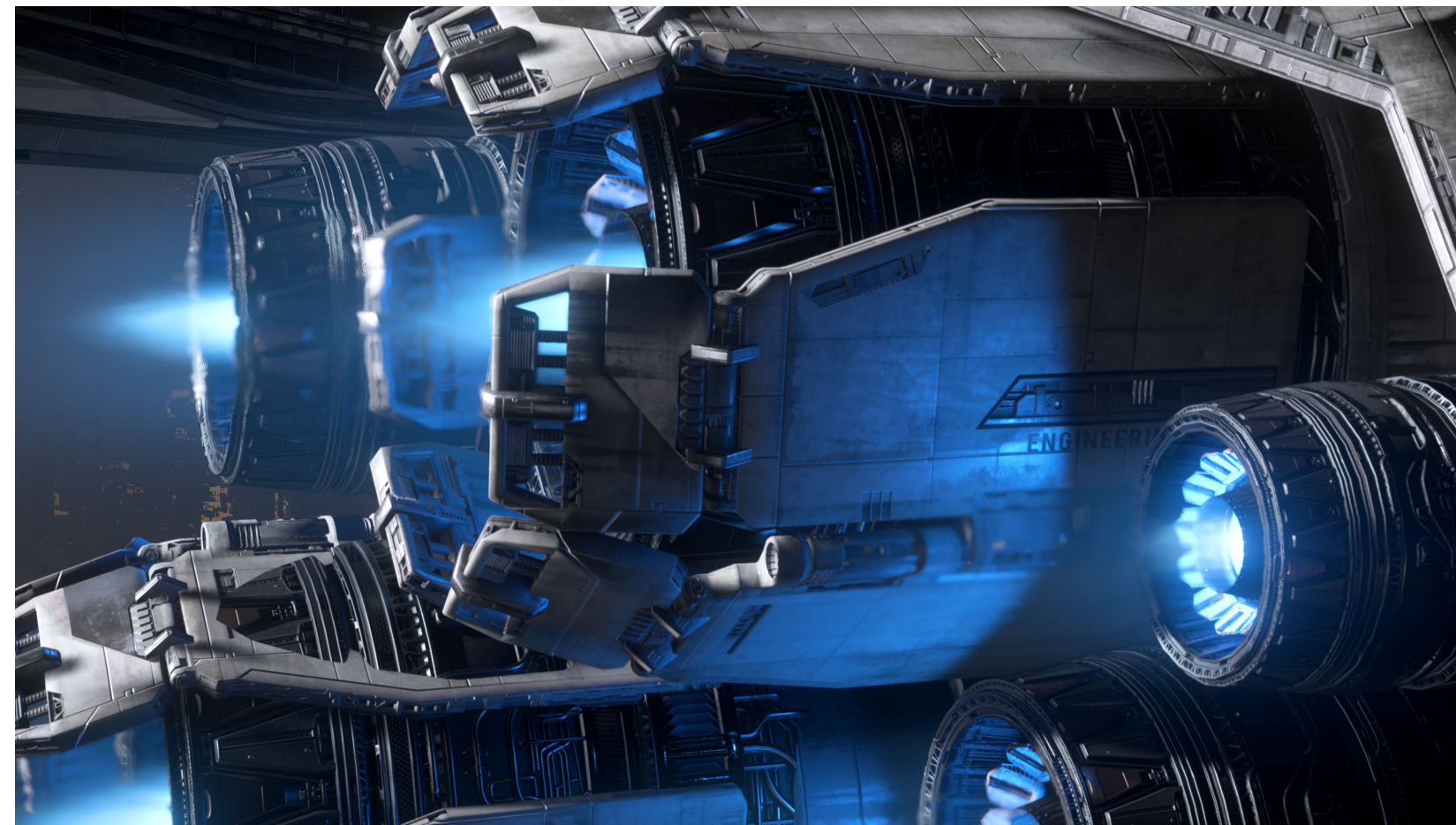
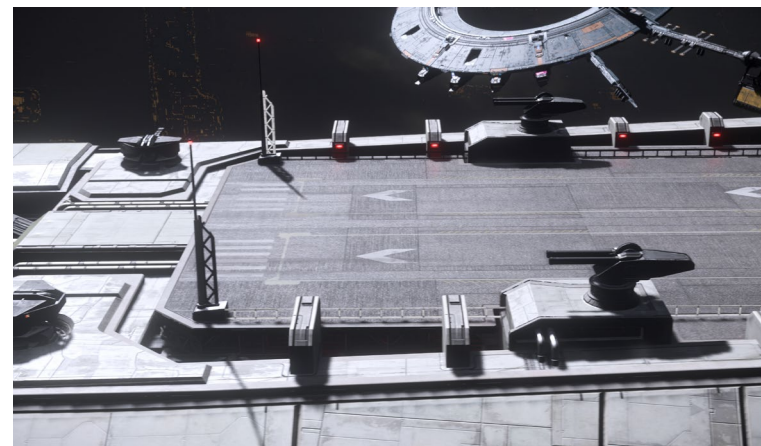
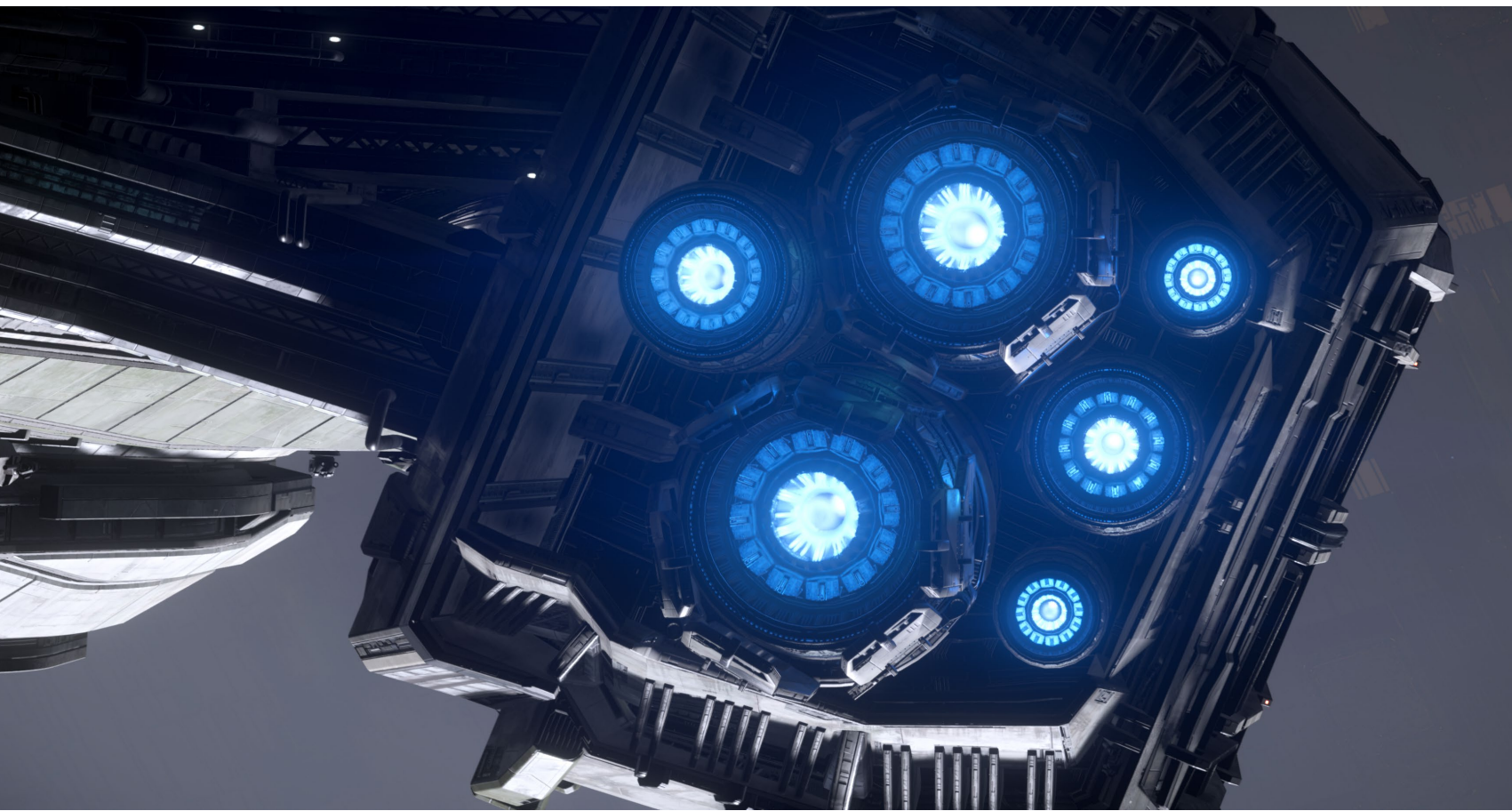


IN THE DISTANCE FUTURE...

On October 12, 2012, space sim fans at GDC Online in Austin, Texas, and around the world via livestream were treated to their very first taste of *Star Citizen* via an in-game trailer that opened with a massive starship, the Bengal carrier Paul Steed. Named after the artist who convinced Chris Roberts to experiment with textured 3D objects on *Strike Commander* and the class of Roberts' original *Tiger's Claw*, the massive ship marked a massive jump in space combat game technology. Viewers were in awe as it was revealed that the huge ship wasn't simply an empty 3D object in space but was instead a fully realized warship. Instead of containing a series of static menus to access conversations and other mid-game information, the player impressively attended a briefing in the game engine and then ran to board their fighter without ever leaving the game instance. Instead of cutting to a takeoff cutscene and dumping the player into a separate space combat simulator, the entire ship and its contents would be simulated throughout the ensuing battle. It's technology that has since become second nature to *Star Citizen* regulars, but at the time it offered a promise of scope and scale hitherto unseen.

What's more, the massive in-game warship had been designed by top Hollywood talent. Concept Artist Ryan Church, best known for his work on the *Star Wars* prequels and the *Star Trek* reboot's *Enterprise* among many other familiar designs, had signed on to design the massive ship in the hopes of helping Roberts express his vision for *Star Citizen*. Church worked closely with Roberts to design a hero capital ship, basing the new design on the role (a space-based aircraft carrier) and around how it would contain all of the internal rooms it would need. These included a complex Combat Information Center, seen giving a briefing in the trailer, which would close a half-century-long circle; the science-fiction version of a facility once taken from science fiction in the first place. Church provided option after option to Roberts, eventually coalescing as a high-quality cinematic model of the new flagship with a hitherto impossible amount of detail. A huge orthographic of the ship passed around to *Star Citizen*'s early volunteers proved massively impressive to all (and readily capable of making memory-weaker instances of Photoshop cry). From there, a team of artists at CGBot completed the task by bringing the ship into *Star Citizen*'s engine, allowing its use in the GDC Online demo.



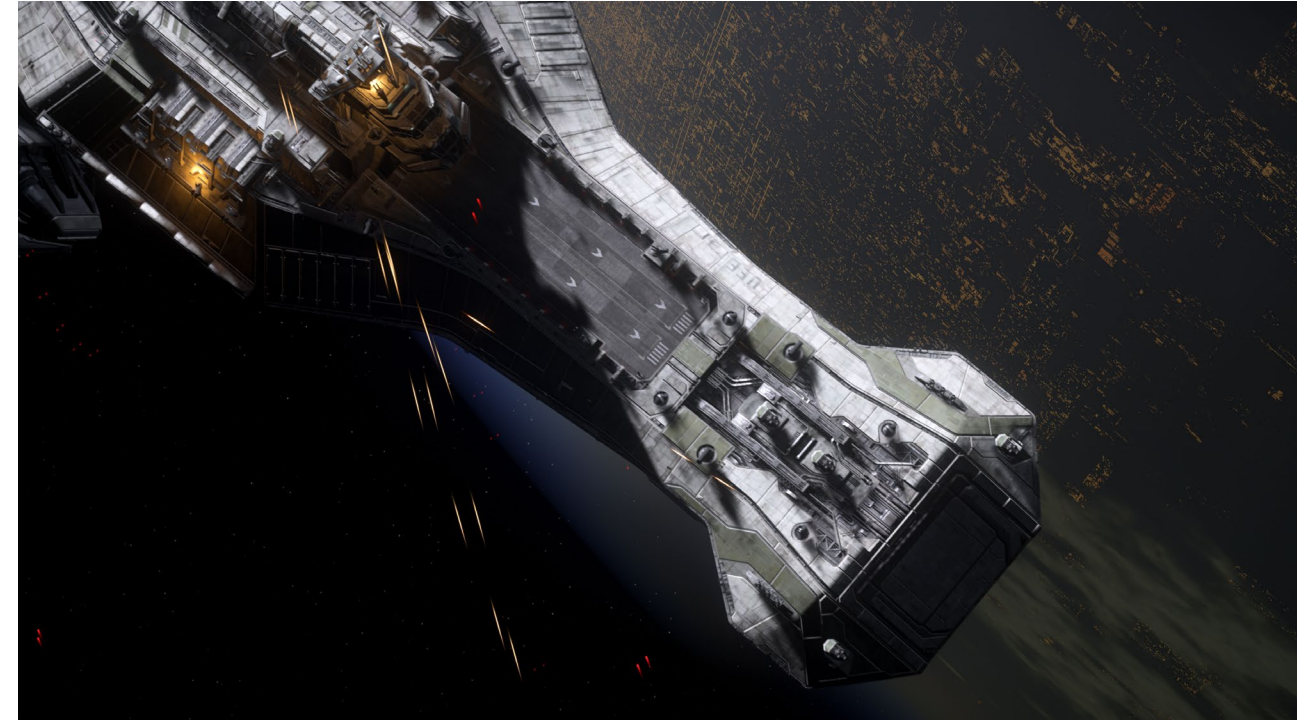


Star Citizen also worked to build a realistic set of lore behind the Bengal, establishing that, like the Aurora and Constellation, it was constructed by Roberts Space Industries and that they formed the center of UEEN battle fleets. Capable of carrying a variety of fighters and strike craft, the Bengal carriers are the current vanguard of the Empire and a plum assignment for anyone serving in the Navy (a fact likely to be important in *Squadron 42*!). On the design side, the massive carrier has served as a limiting reagent for all long-term spacecraft work: entire systems like those for guns or shield generations need to take into account not just the smaller player ships but sizes up to that of the Bengal.

The Bengal that appeared in the initial trailer was only the first step. It

would eventually become the job of the UK-based teams to expand the early work into the full ship needed for *Squadron 42* and *Star Citizen*. As their work has continued, the complexity and the possibilities for it have increased again and again. The simple bridge and flight deck that once seemed so impressive today seem simplistic compared to the modern ship's capabilities. Meanwhile, the ship had captured the imagination of *Star Citizen*'s supporters, who would go so far as to send the growing development team bagels in honor of what they jokingly called the "bagel carrier." Seeking to honor that interest in the Bengal, Roberts included enabling it for *Star Citizen* in addition to *Squadron 42* as an early stretch goal. Backers met the goal almost immediately, eager to get a look once the game went live.

In May 2021, *Star Citizen* players got their first in-game look at the huge ship as part of the annual Invictus event. Doubling down on the previous year's Javelin appearance, the 2951 event offered both Javelin tours and a stunning Bengal flyby. It was immediately apparent that the time spent in the shipyard had done well for the Bengal: the newly revealed model was even more detailed than the original and seemed even larger and more imposing. Seen in planetary orbit for the first time with the game's lighting and other effects applied, the new Bengal cut a dashing figure. Allowed to explore the area around the warship for the first time, many were impressed by massive weaponry slung under the hull. While not yet feature-complete, the new view of the ship's exterior astounded everyone... the Ship Team had truly been at work building an enormous flagship worthy of *Star Citizen*.



WORK IN PROGRESS...

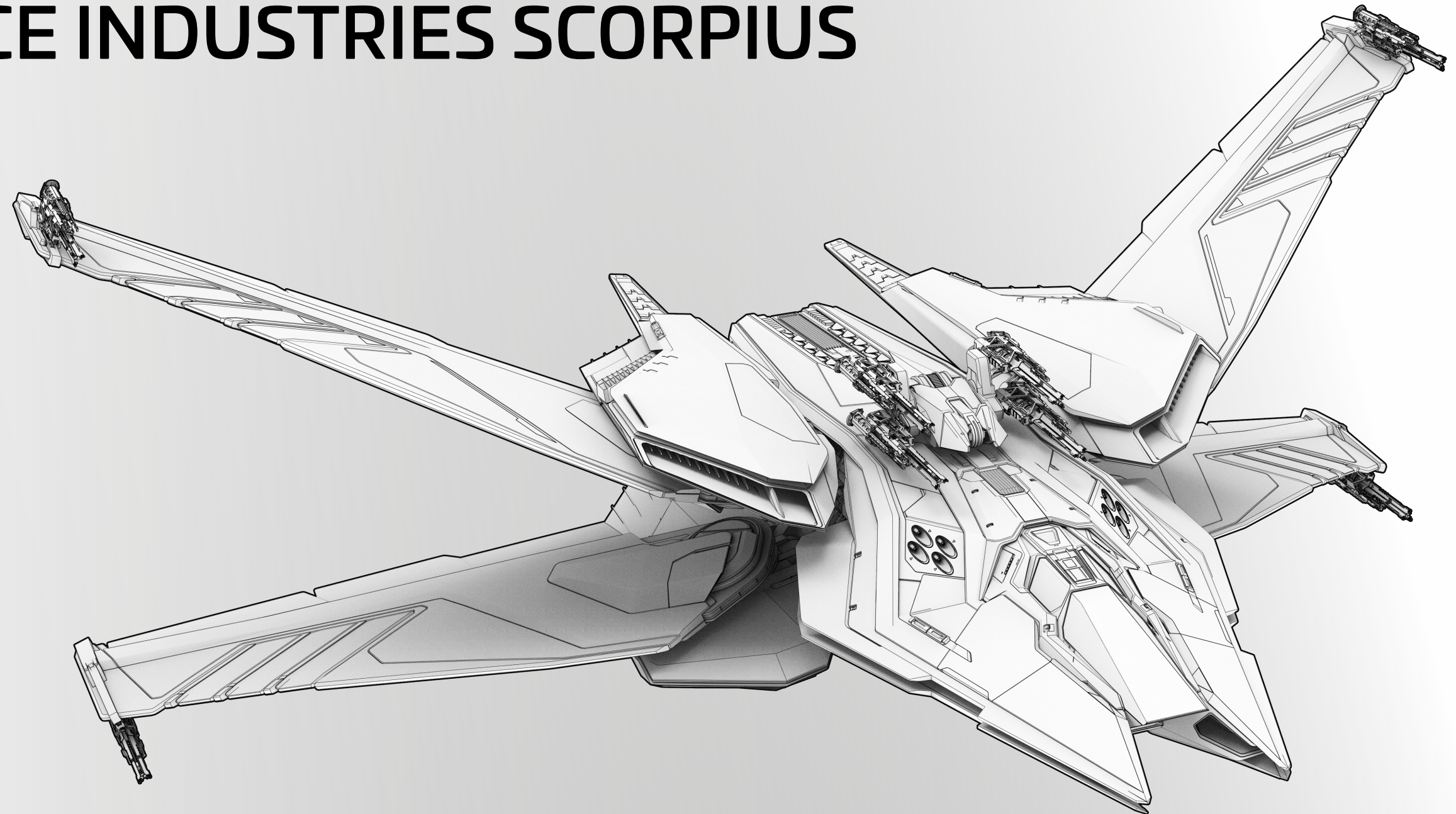
ROBERTS SPACE INDUSTRIES SCORPIUS

AIMS

- A small fighter designed for co-op combat gameplay

AESTHETIC

- Quad S3 remote turret at the top, rear of the ship. Able to rotate a full 360 degrees and have excellent rear coverage.
- Interior lacks bed/food space to make space for remote turret station and extra components to power the weaponry.
- 4 x S4 missile hardpoints, potentially located under wings.
- 4 x S3 weapon hardpoints near front of ship, can be either on wings or under nose.



Length	24.5m (in flight)
Width	33m (in flight)
Height	13m (in flight)
Maximim crew	2
Power Plant	2x Small
Quantum Drive	1x Small
Jump Drive	1x Small
Mav Thrusters	2x Retro 8x Mav
Shield Generator	2x Small
Coolers	2x Small
Shield Emitter	1x Small
Gravity Generator	1x Small
Fuel Intakes	2x Small
Battery	1x Small
Life Support	1x Small
Quantum Fuel Tank	1x Small
Fuel Tanks	2x Small
Pilot Controlled Weapons	4x S3 Gimbal Hardpoints (S2 Laser Repeater)
Turret	1x Remote Turret (4x S3 Laser Repeaters)
Missiles	8x S2

Specifications and appearance are subject to revision during development.

KEY CONTRIBUTORS :
 DESIGNERS - JOHN CREWE, ADAM PARKER
 CONCEPT ART - GREGORY CHRYSAPHES
 ART DIRECTOR - PAUL JONES

MAKING THE RSI SCORPIUS

As the legend goes, the mighty hunter Orion proved himself to be the most powerful of mortals by defeating animal after animal in single combat; lions, tigers, bears, and so on. He then boasted that he would prove himself further by killing every animal in the world. Artemis, the goddess of the hunt, heard Orion's claims and was furious. So, she created an enormous, poisonous scorpion and sent it to Earth to defeat him. The hunter and scorpion proved evenly matched, battling endlessly until their fight caught the attention of Zeus, king of the gods. Seeing the destruction caused by the battle, he threw both into the sky where they would continue to battle endlessly. Thus two constellations, Orion and Scorpius, were formed, forever visible to mortals in the night sky.

Of course, the story behind our Scorpius, itself a mighty battler, is just a little different...

DESIGNING THE SCORPIUS

The Scorpius' design began with a designation, RSI Two Man Heavy Fighter, and a simple description: 'A small fighter designed for co-op combat gameplay.' The job of detailing-out the new ship would fall to designers Geoffrey Coffin and Celeste Valentine. The general idea was to create what was known as a 'turret fighter.' Historically, turret fighters were a type of aircraft that existed for a short period around World War II - two-man aircraft that flew like a pursuit craft but with a rotating turret that would provide additional firepower and force vectors during dogfights. The Scorpius would not be *Star Citizen's* first turret fighter, the role already having been premiered with the Anvil Hurricane. However, it would stand out from the Anvil offering by being a heavier fighter with a Size 3 turret with full 360-degree coverage and by being a true rarity: a frontline combat ship built to Roberts Space Industries' exacting standards.



CONCEPTING THE SCORPIUS - PHASE ONE

A new type of ship for RSI called for a new concept artist, or so decided Vehicle Art Director Paul Jones. For the Scorpius, he chose to assign the ship to in-house artist Greg Chryssaphes. Chryssaphes had not yet been responsible for his own concept ship but is a veteran of countless components, with a recent assignment finishing the Origin G12 rover concept convincing Jones he had plenty of talent to imagine a ship of his own.

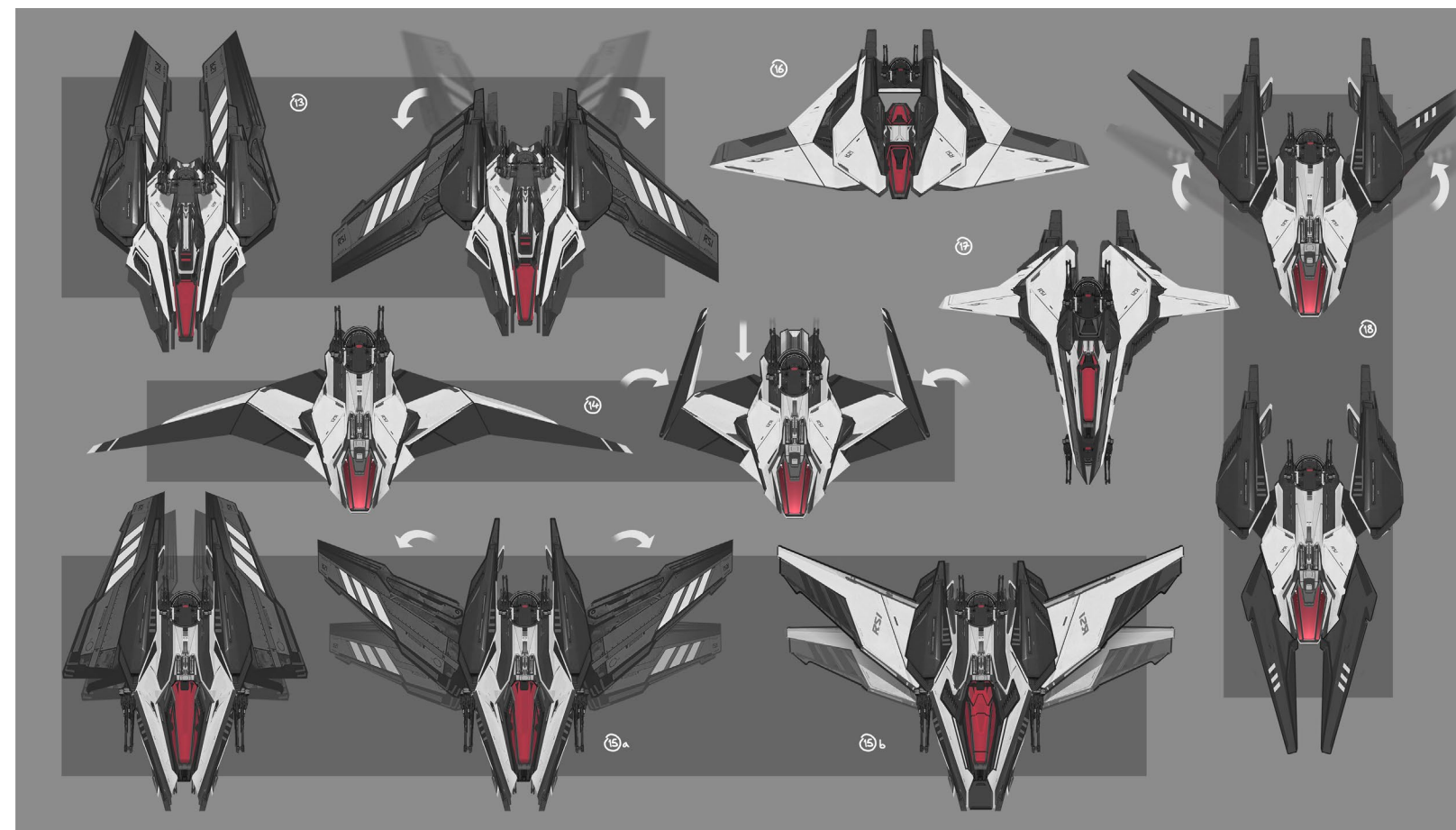
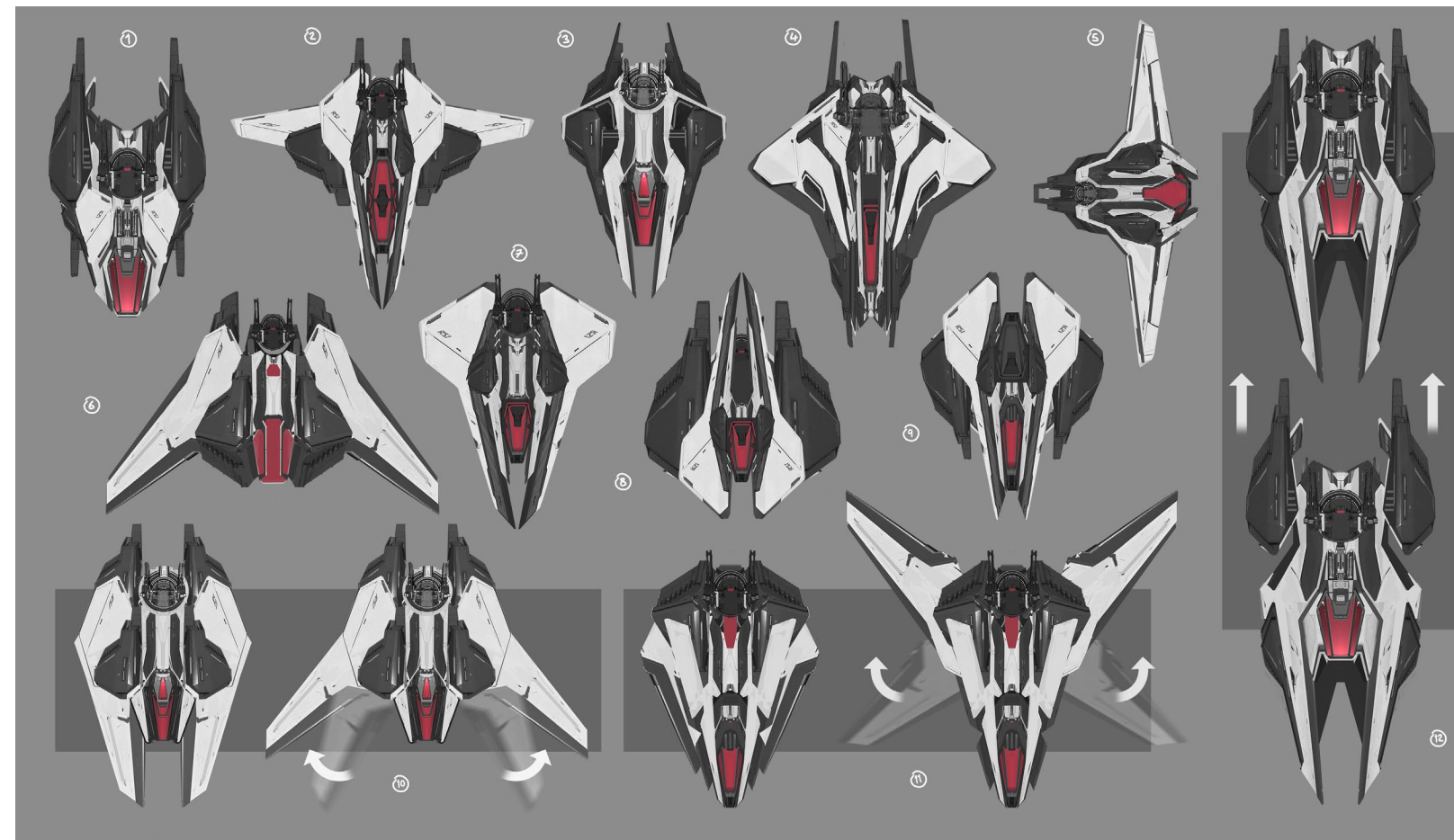
Jones described the first steps towards the Scorpius as being an easy

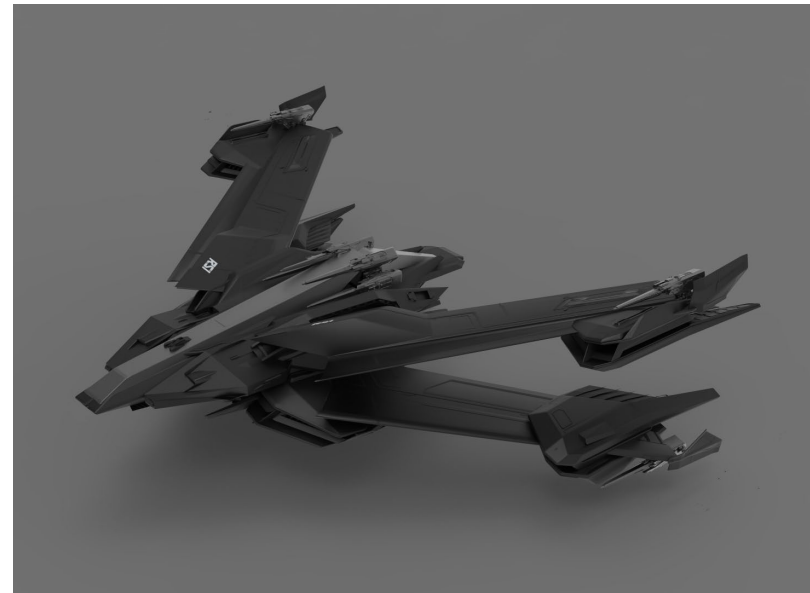
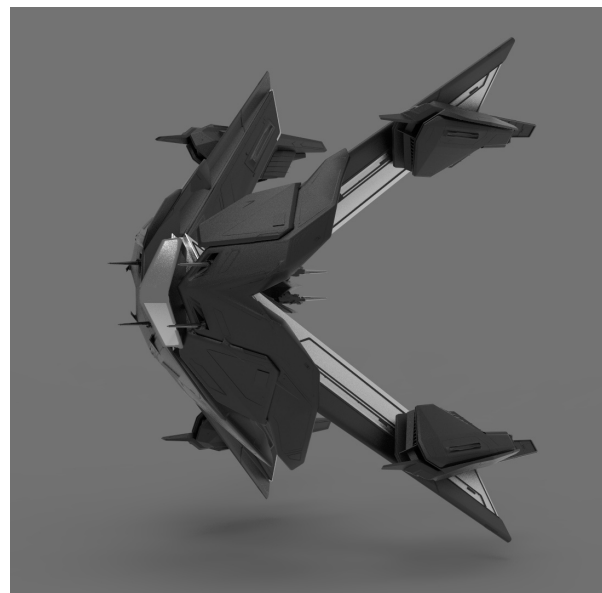
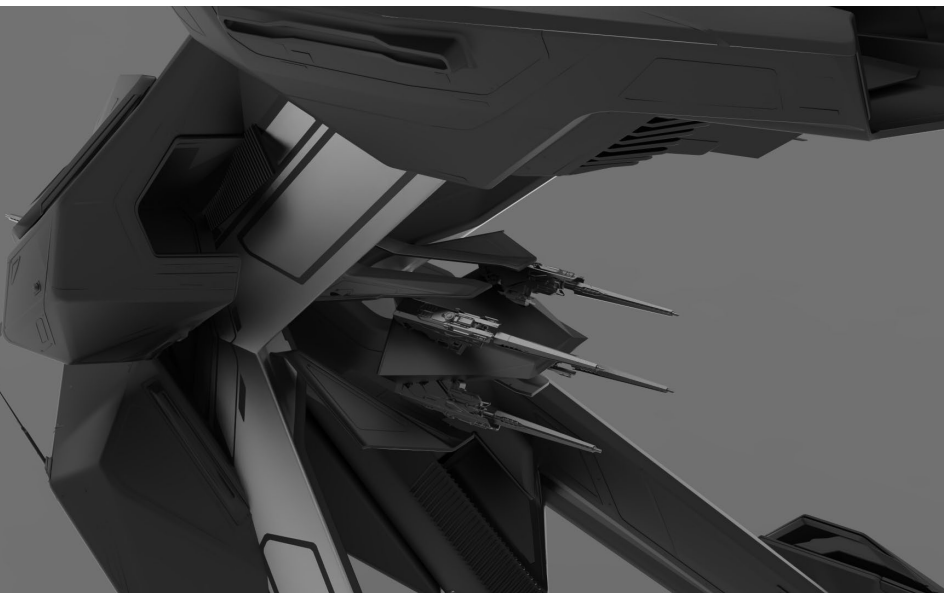
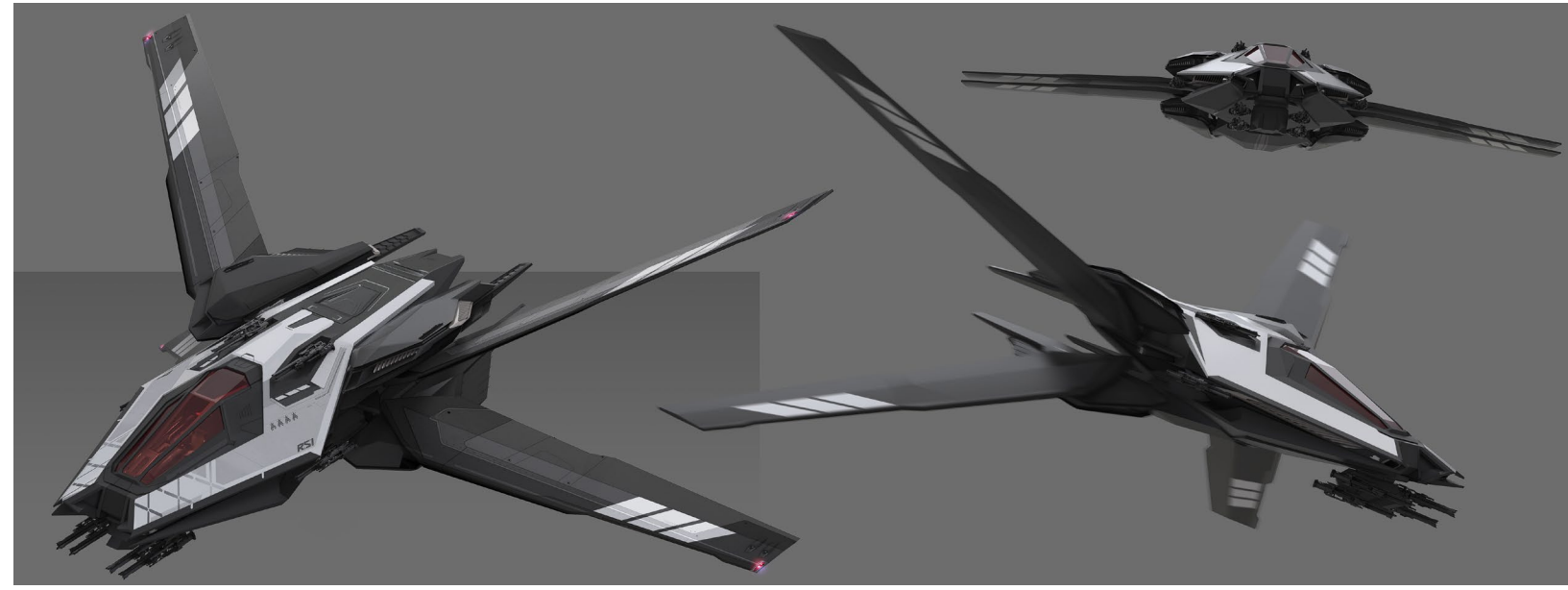
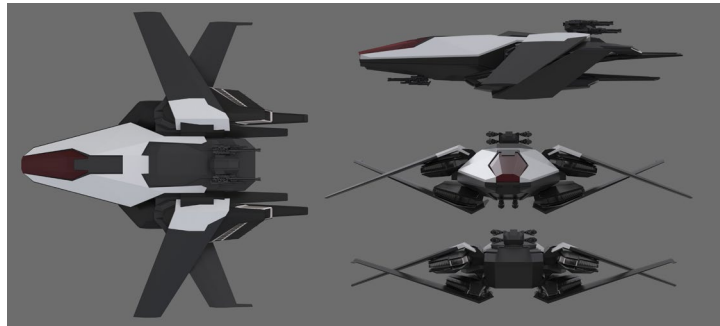
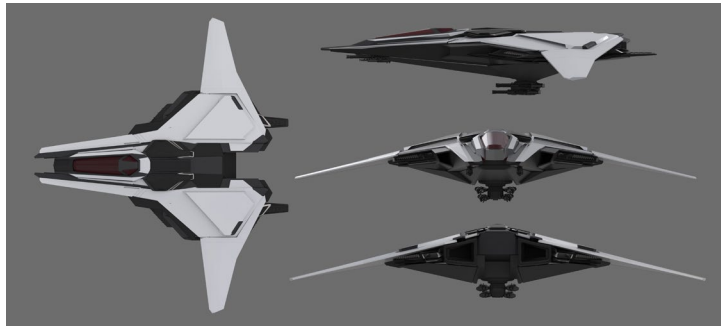
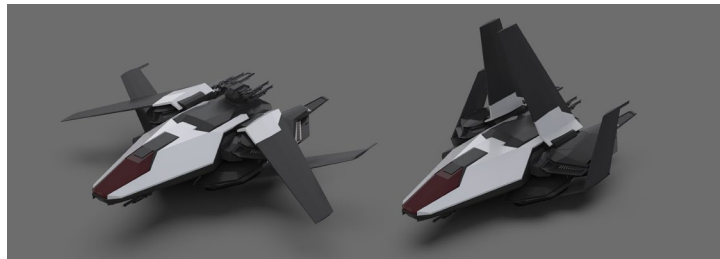
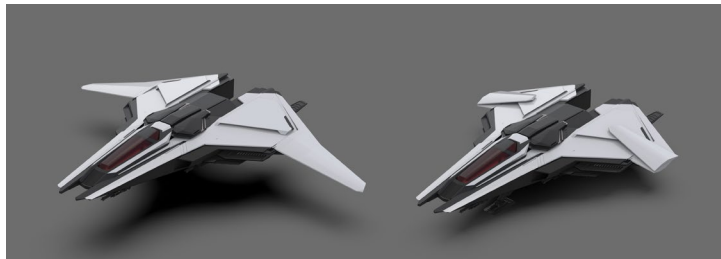
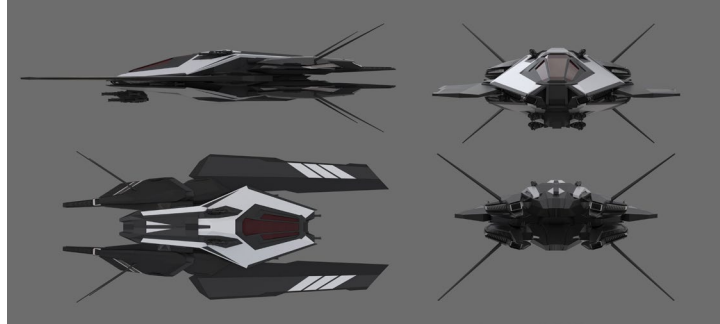
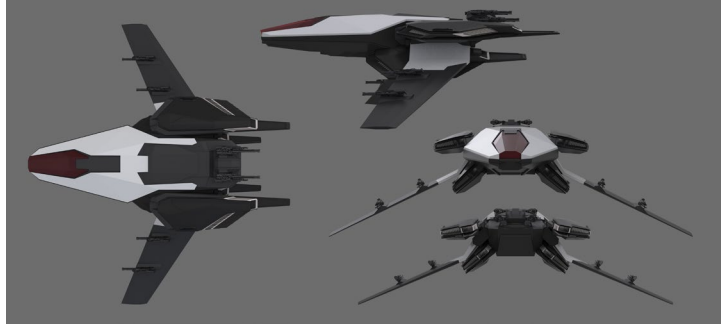
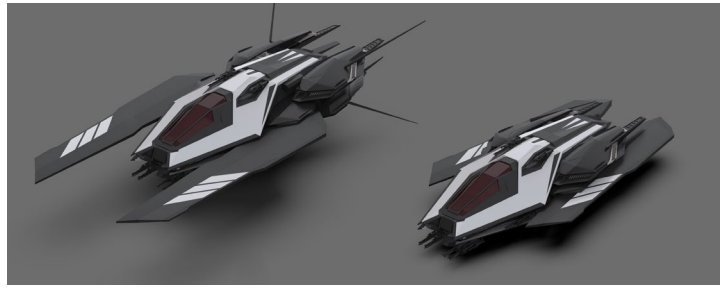
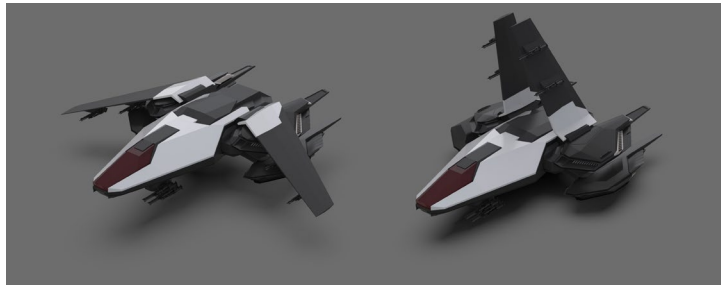
but interesting birth because the team had never tackled an RSI fighter before. The closest had been the RSI Mantis, an interdicator platform, with the rest of the company's output being civilian-focused ships like the famed Aurora and Constellation. That was the first challenge of the design: *Star Citizen's* fighters typically represent themselves with wings while RSI designs are generally wingless and built around sets of engine nacelles. Bridging that gap alone would require a careful hand! What's more, Jones joked that RSI is the company with *Star Citizen* founder Chris Roberts' name attached, so the Scorpius would have to be good!

For reference, the team collected a variety of existing RSI ships, some of which could be used for kitbashing purposes as needed. Jones notes that a particular style has developed for RSI over the years, with distinct, easy-to-read shapes that would need to be incorporated here. Beyond this, he didn't give Chryssaphes a great deal of direction, wanting him to essentially have a blank sheet of paper that he could take in countless directions. The pressure was on! Chryssaphes started with 2D work, plotting out an entire fleet of different top-down silhouettes. "He came up with a lot of really good ideas," Jones says, "some more alien than needed, some fast and speeder-like, some slow with just nacelles and

many with wings."

Jones felt this was a very strong design sheet and an excellent start to the project, with the winged designs in particular becoming the focus for the immediate future. At this point, it became clear there had been a small problem: the need for the Scorpius to be a heavy fighter had not been passed along to the concept artists. They had been operating based on the initial description that it was a small fighter and now it was clear something larger was needed. With this in mind, Chryssaphes now knew to embolden his current designs as the 3D stage began.





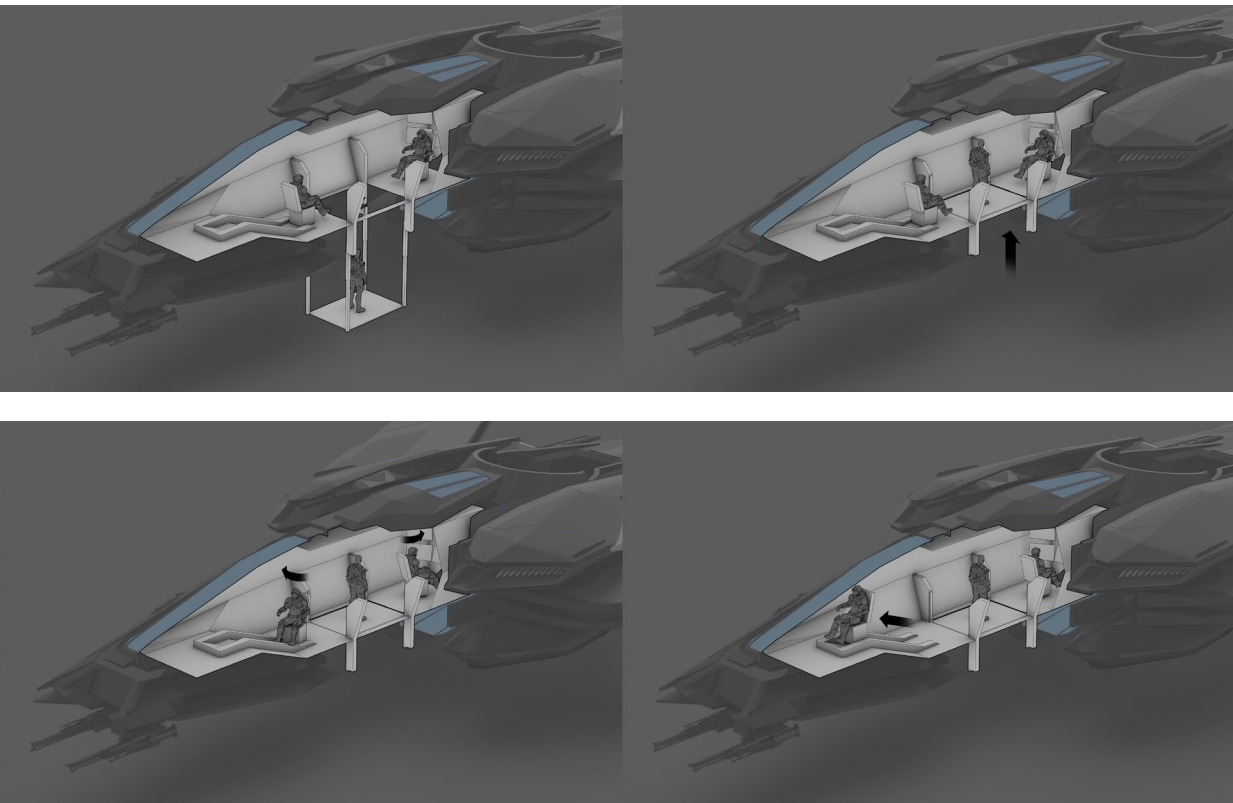
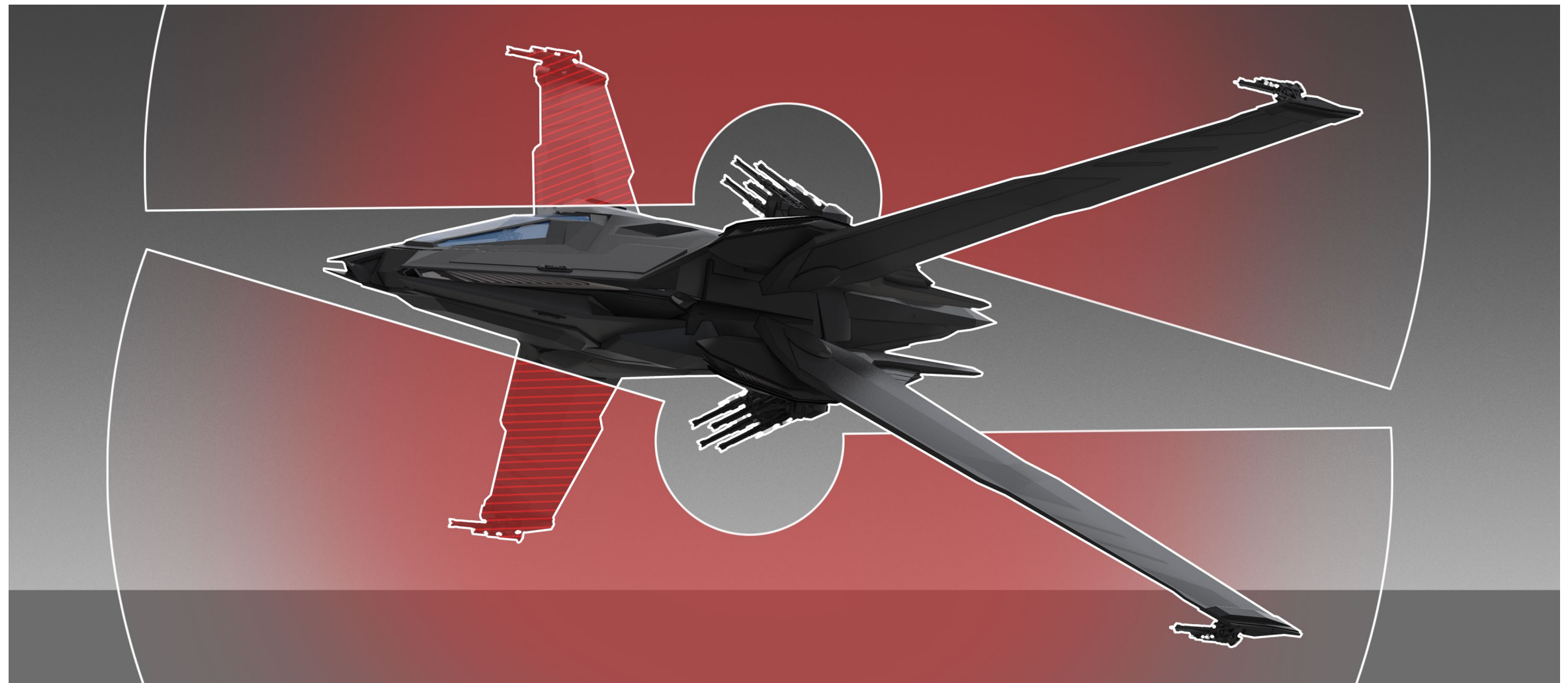
Jones picked six designs that he liked for Chryssaphes to further develop in 3D. The artists attempted some kitbashing to further sell the RSI aesthetic, using engines from the Mantis. The pair continued to work up variants of the six initial takes, moving parts around to hit on the right direction. The focus here was to find a clean, angular design that involved a number of interesting takes on wing orientation ranging from forwards, backwards, two wings, and, finally, four wings. At this point, Jones shared the current variants with Chris Roberts, who particularly liked the four-winged fighter.

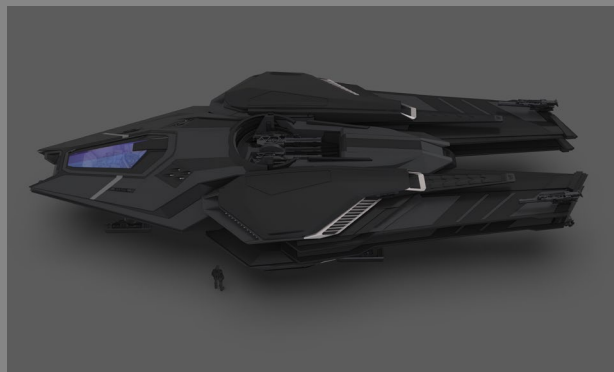
With Roberts' feedback proving especially valuable so early in the process, Jones went on what he called a 'voyage of discovery.' He developed several variants of the four-winged concept in the hopes of pushing it into a more experimental fighter, what he called an "RSI skunkworks vibe." His first impulse was to develop a more aggressive and stealthy ship, somewhat in the direction of the more modern designs offered by Aegis, but Roberts did not want to go in that direction; an RSI fighter needed to be something different, standing out on its own.

Meanwhile, Chryssaphes continued his work on the overall shape. He hit on that shape particularly early in the process, meaning that the Concept Team would have more time to focus on the deeper details. Taking his initial 3D models, he continued to develop variants by 2D-bashing them into new designs for review. With the shape established, he next looked at the major exterior features: turret placement, the size of the cockpit, and the overall proportions. Getting these right would be the next major challenge, especially for a ship on whose turret functionality so much would ride.

For entry and exit to the Scorpius, Chryssaphes began by adapting the RSI Mantis' system. In this version of boarding, the pilot and gunner would step onto a lift which would carry them up into the fuselage and then they would need to seat themselves. The lift version of the Scorpius would remain part of the design for the time being.

Having hit on something close to the shape of the final ship very early on, Jones began clearance testing the design. For example, did the landing gear work with the boarding system? He noted that the ship looked somewhat "too leggy" at this point, though he was not concerned long term. The other major clearance aspect to develop was the remote turret, which at this point worked by physically going up and down through the ship to give it alternate access above and below. Jones was not sold on this concept, especially because it wasn't yet clear if there was a way to implement such a system. The specifics of turret movement and landing gear deployment were animated along with an additional option for the entry elevator based on the Gladiator with back-to-back seats that locked into place. Chryssaphes did additional 2D work to develop the central line between the wings, trying to define a visual point of interest. Jones felt the current version looked too skinny from above and so took the file and proportioned it to add more bulk to better signify an armored, heavy fighter.

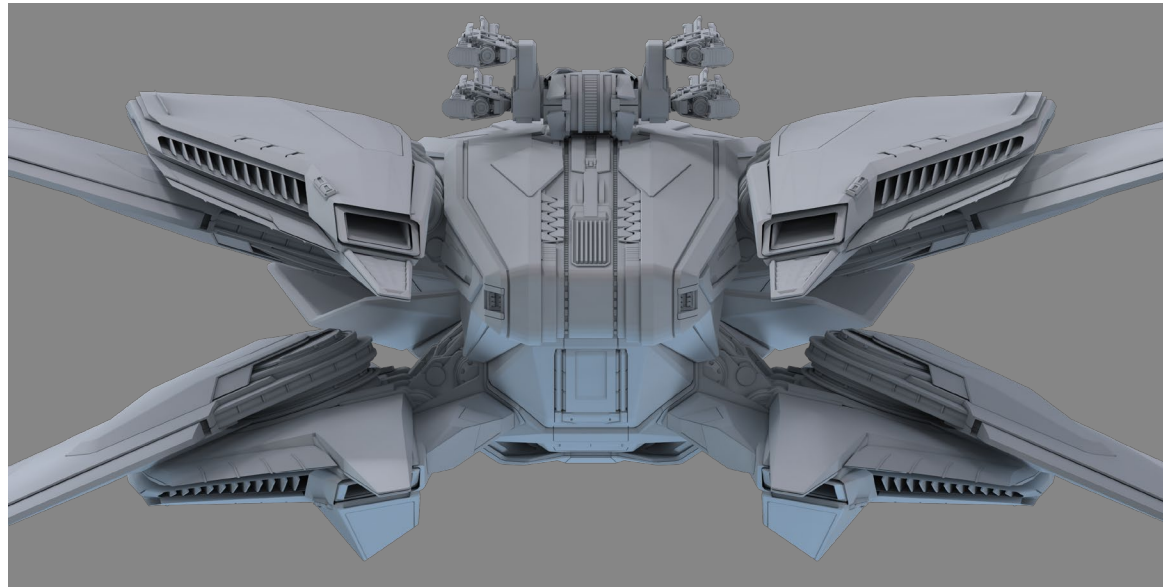




Jones and Chryssaphes worked very well in parallel, with one tackling a task like the landing gear while the other began work on promo renders and the like. Chryssaphes began the promo process early, modeling various animated parts (like the wings opening) to share with the Marketing Team. Additional work was also done at this stage to enhance the RSI vibe, calling back as far as the Aurora for some of the details. Overall, the pair continued

to look at volume, size, open space, angles of wings, and what might be scaled differently to improve the read of the ship. Soon, the two had a singular concept they were very happy with, bringing phase one of the process to a close. Like its birth, the Scorpius' first pass review went well, with Jones calling it "very, very strong." Everyone there felt the ship had a great read, liked the new compact landed

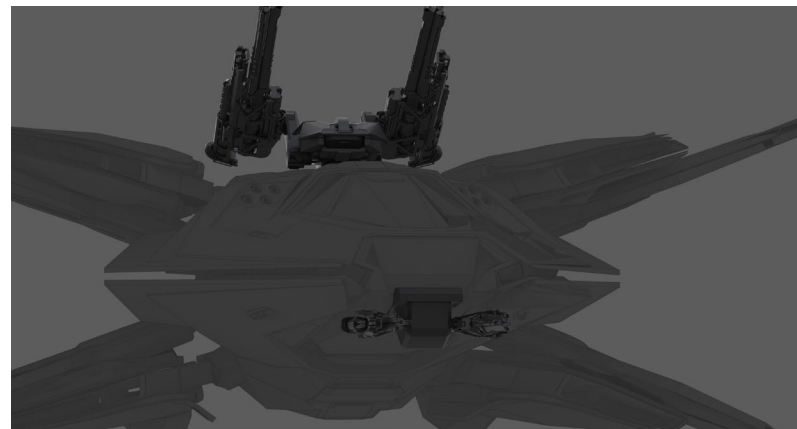
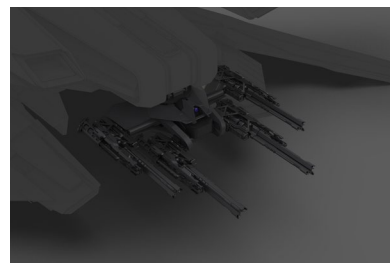
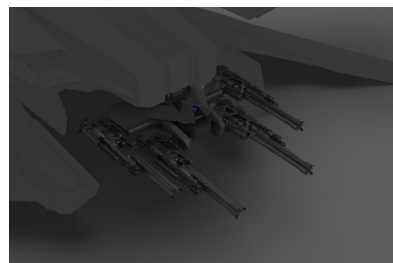
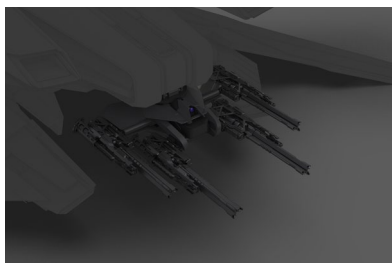
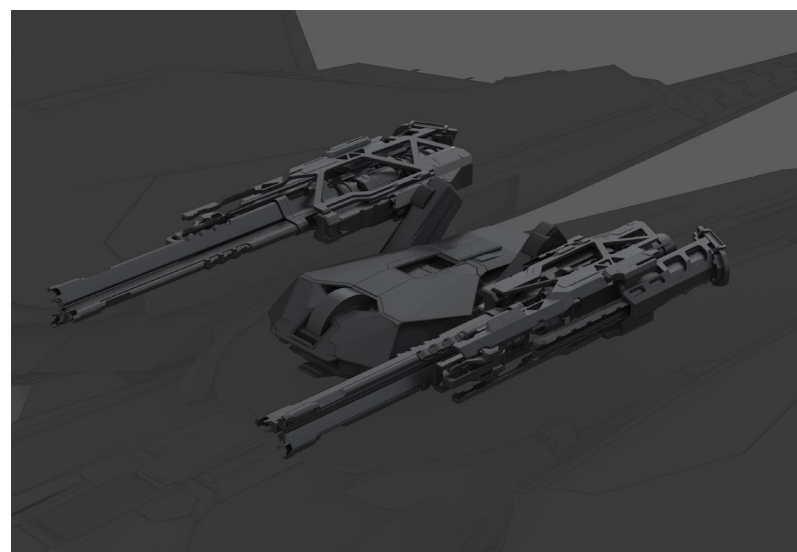
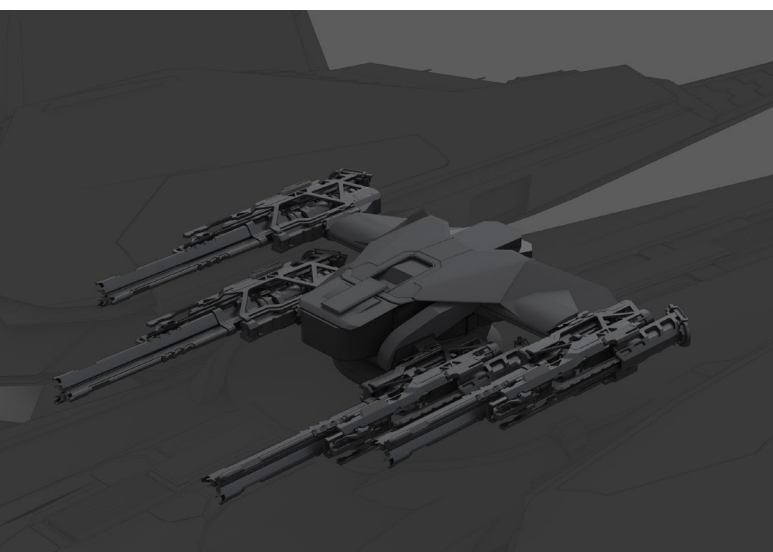
stance, and felt it was coming together very well. Next, Jones would perform the checks and balances needed to make sure the required components would fit and that everything would work together properly. Chryssaphes focused on enhancing the landed stance, one of the few notes to come out of the first pass review. Working from the initial dual front leg, he tried an array of options to pick something that better matched the ship's volume.



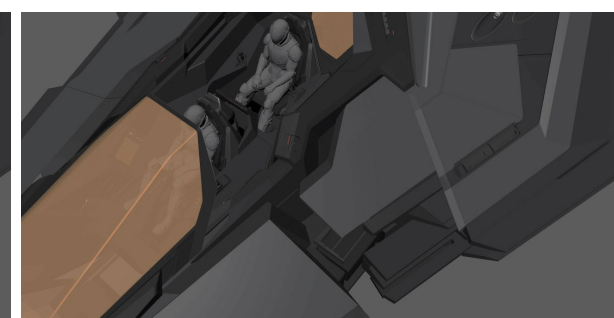
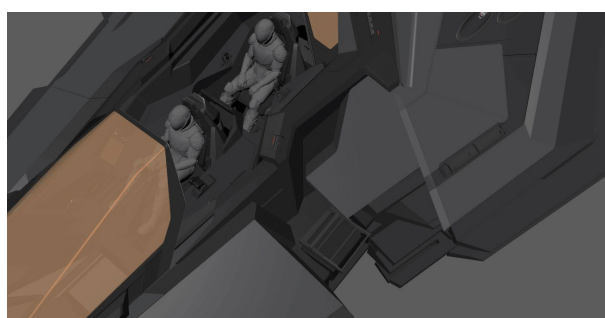
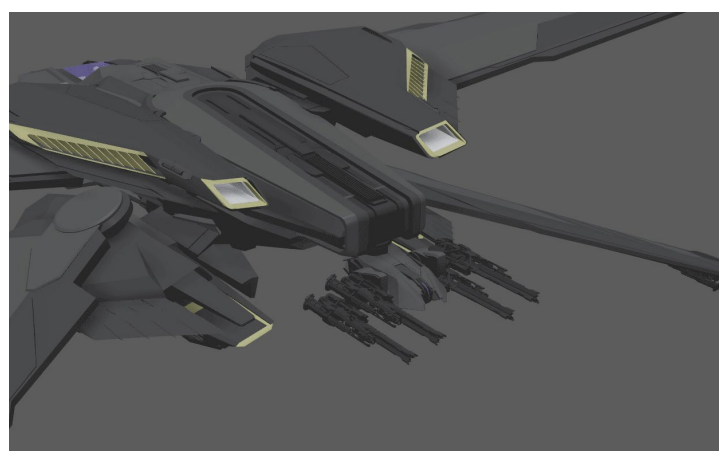
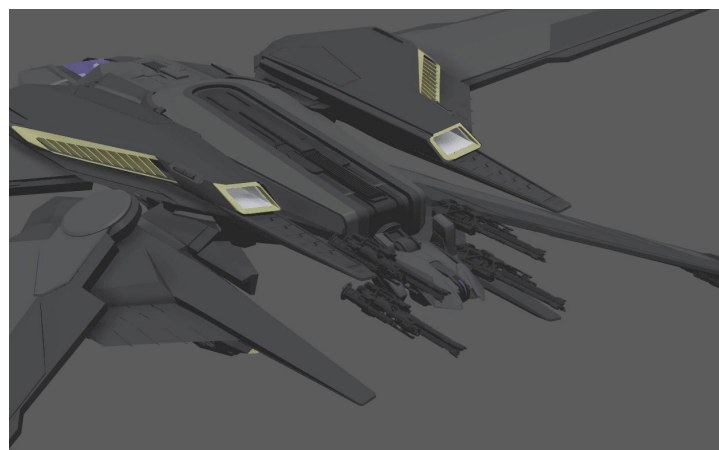
TURRET

One aspect of the ship that still wasn't right was the turret. Jones strongly felt that Chris Roberts wouldn't be happy with the 'pop through' design and assigned Chryssaphes to develop some alternate takes that would look more appealing in action. He ultimately developed a version that drops down and around the rear of the ship, passing through the back. Roberts liked the design a great deal even though it would require additional implementation work to function seamlessly for the gunner.

From there, Chryssaphes began work on the details of the turret itself, using his experience to take the weapon in many different directions: alternate formations, sizes, versions with more guns and fewer guns, versions with different types of guns, and ones with more stylized custom guns. It's a great ability for an artist to be able to turn out so many options that can be reviewed by the entire team. Jones notes, "It's the kind of thing that's only possible when the general shape of the concept comes together so quickly early on."



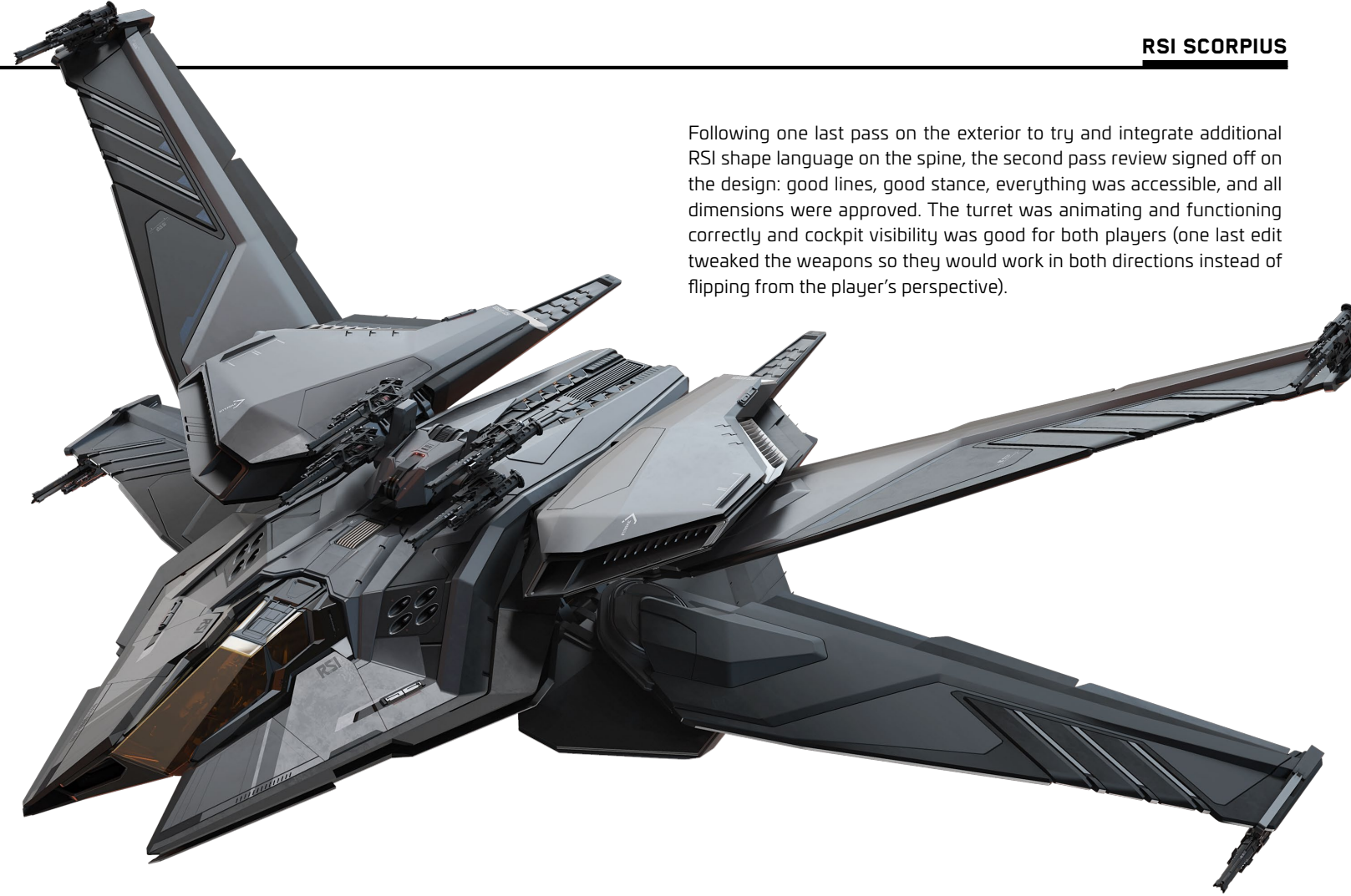
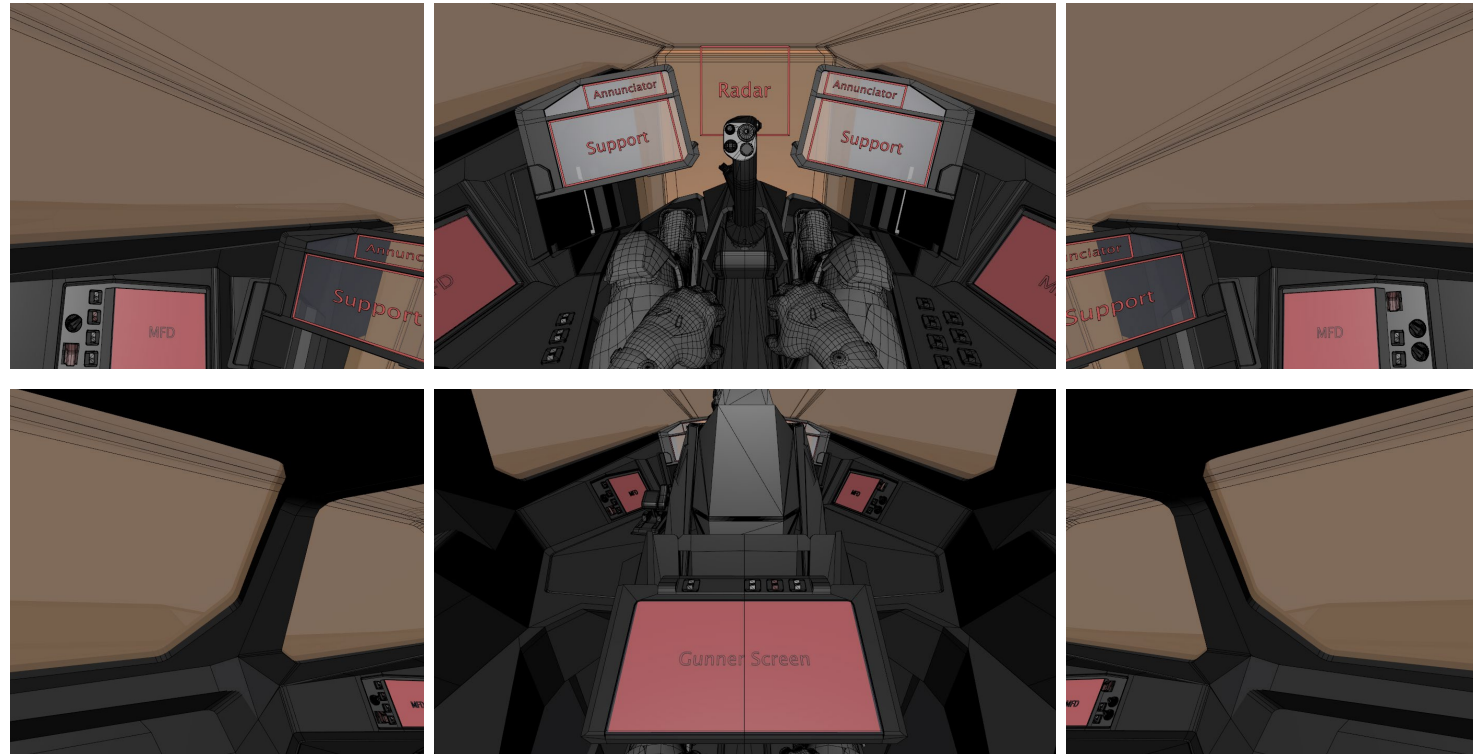
A review of the current state revealed that cockpit visibility was an issue and that the artists would need to take a further look to improve it. Jones also wanted it to be less of a traditional fighter canopy and instead tie into the glass-heavy RSI cockpits seen everywhere from the original Constellation to the Polaris. But there's no singular RSI cockpit that scales to every ship as each concept is carefully developed considering everything from overall viewing angle to how many struts might appear in the player's vision. There were also concerns about the visibility of the remote turret. Here, though, the solution was not to redesign the turret but to animate the ship around it, developing a process by which components and wings shift to allow the turret to move from place to place along its track freely.



Chris Roberts also noted that he wasn't happy with the current elevator options for boarding and that he would prefer a ladder. Jones, who had been expecting this feedback, had already developed a more traditional ladder that would extend from the side of the ship; now players would enter the Scorpius more like the Gladius than the Gladiator. What's more, the new boarding process could reuse the Hornet F7C animations to cut down on extra work. The artists placed the foot and hand holds in the same places but tweaked the overall look for a distinctive experience. Jones notes that getting that right is a more difficult proposition than it sounds, with there being a very careful balance that needs to be maintained when reusing such animations.

Finally, the artists moved to concept the interior of the cockpit itself, which had been very basic geometry based on the control surfaces of the Mantis until this point. Jones wanted something particularly high-tech, where

displays and surfaces would seem to wrap around both players, giving them a “tech center” sensation. Once again, Chryssaphes provided a great cross-section of ideas aimed at giving the player an impressive startup experience.



Following one last pass on the exterior to try and integrate additional RSI shape language on the spine, the second pass review signed off on the design: good lines, good stance, everything was accessible, and all dimensions were approved. The turret was animating and functioning correctly and cockpit visibility was good for both players (one last edit tweaked the weapons so they would work in both directions instead of flipping from the player’s perspective).



RELEASE

For the concept presentation, Jones and Chryssaphes developed a record number of concept images showing the Scorpius in a variety of configurations and environments. They also developed a number of paint schemes for the Marketing

Team, something Chryssaphes already had a great deal of experience doing. A model of the ship was also readied for in-game use so that it could be shown off as an exciting new spacecraft for the 2951 Invictus event.



RSI SCORPIUS SHIP PAGE

<https://robertspaceindustries.com/pledge/ships/scorpius/Scorpius>

SHIP PRESENTATION

<https://robertspaceindustries.com/comm-link/transmission/18127-RSI-Scorpius>

Q&A

<https://robertspaceindustries.com/comm-link/engineering/18124-Q-A-RSI-Scorpius>

RSI SCORPIUS BROCHURE

<https://media.robertspaceindustries.com/basw80pcpk164/source.pdf>

THE AEGIS DYNAMICS JAVELIN

DEVELOPMENT HISTORY



DEVELOPMENT HISTORY



DEVELOPMENT

The Javelin program began in 2685 as part of Emperor Illyana Messer VI's efforts to take advantage of the newly discovered Vanduul threat to further consolidate her family's hold on the government. The development of the Javelin, intended to significantly adjust existing naval tactics, was the crown jewel of these efforts, resulting in billions spent and a great movement towards the war footing that exists today. Called the first modern destroyer at the time, the Javelin would be a nimble and responsive tool for the UEEN, which was built around the heavy-hitting power of cruisers and battleships. The Javelin was envisioned to fulfill six major roles that had previously been performed in limited capacities by six other spacecraft designs. They were:

- **Fleet and Commerce Escort:** Destroyers would act individually as powerful escort craft for long-haul commerce runs now threatened by Vanduul attacks and, when brought together in squadrons, as coverage for major fleet movements (which was centered around battleships at the time, though they would soon be more associated with the protection of carrier assets).
- **Convoy Raider:** Javelin destroyers would be deployed to strike at vulnerable supply trains or to engage with similarly sized warships. While little was known of Vanduul infrastructure at the time, it was generally assumed further contact would reveal weaknesses that could be exploited by effective modern warships.

- **Reconnaissance in Force:** The Javelin would carry sufficient armament and armor to fight its way through unexpected threats behind enemy lines while also being more expendable than other capital assets that would not otherwise be risked on such operations.
- **Command and Control:** The Javelin would be equipped with sufficient command and control equipment to allow it to serve as the nucleus of a small battlegroup or to backup fast flagships should the need arise during fleet engagements. Additionally, the Javelin's comparative speed and modularity would allow it to act as a dedicated search and rescue platform in after-action situations.
- **Planetary Bombardment:** Though intended as support ships, the new destroyers would have to be able to strike planetary targets and space-based installations with a more surgical hand than existing battlecruisers and be able to lend additional force during larger fleet bombardments.
- **Armored Transport:** The least common formal military role assigned to the Javelin, the destroyer would be called upon to protect high-value VIPs or other assets during particularly dangerous operations. The Emperor herself would only travel in space aboard Javelins for the rest of her life following the model's first deployment.

In a move surprising to few at the time, the prime contractor position was

assigned in a no-bid process to Aegis Dynamics. Dozens of additional manufacturers received subcontracts that ranged from component construction to building out the support infrastructure needed for the new ships at extant naval facilities. Aegis began development in earnest in late 2686 with an aggressive 18-month design phase that would occur as the first set of yards were modernized for production. The earliest timelines called for the first ship to undergo space trials in 2688 and a huge number of credits were poured into making sure this goal would be reached.

The strict timeline came close to working, with the majority of the ship's functionality determined by the time the first berths were ready. With only minor design aspects still undecided, the initial batch of eleven "Flight One" Javelins was laid down at the now-defunct Aegis Io shipyards. Construction would be conducted as a careful 18-month process with an eye towards allowing the teams to refine plans and techniques, better preparing the yards to quickly produce additional vessels in the future.

In fact, the first major controversy of the Javelin project came not during the design process but during the final painting of the first run. The Emperor's advisors insisted on propaganda-focused paint schemes for the new warships that would allow them to be shown off to a rapt public,

while the UEEN wanted to experiment with newly developed role-specific camouflage that it believed would enhance overall function and survivability. The result was an odd mix, with the first three ships and the fifth produced being commissioned in 2690 with stunning pearlescent white hulls with gold highlights and the others having an unusually colorful range of camo schemes intended to speak to different roles. These included two olive drab bombardment destroyers, three stealth black raiders, and a pair of grey fleet support ships. The white-and-gold scheme would quickly make its way to the propaganda efforts of the day and has since become closely associated with the Messer administration while the camouflage variants would ultimately be dropped when it was found they were not particularly effective and significantly limited multi-role functionality.

SERVICE

The UEEN's 8th Destroyer Squadron was officially established on August 9, 2690, with five of the newly constructed Javelins. While it was the only active destroyer squadron at the time, the designation was chosen to confuse enemy intelligence at a particularly paranoid time in Earth's interspecies relations. The group was awarded its first action star for supporting a search and rescue operation that resulted in the rescue of an errant civilian freighter initially thought to have been captured



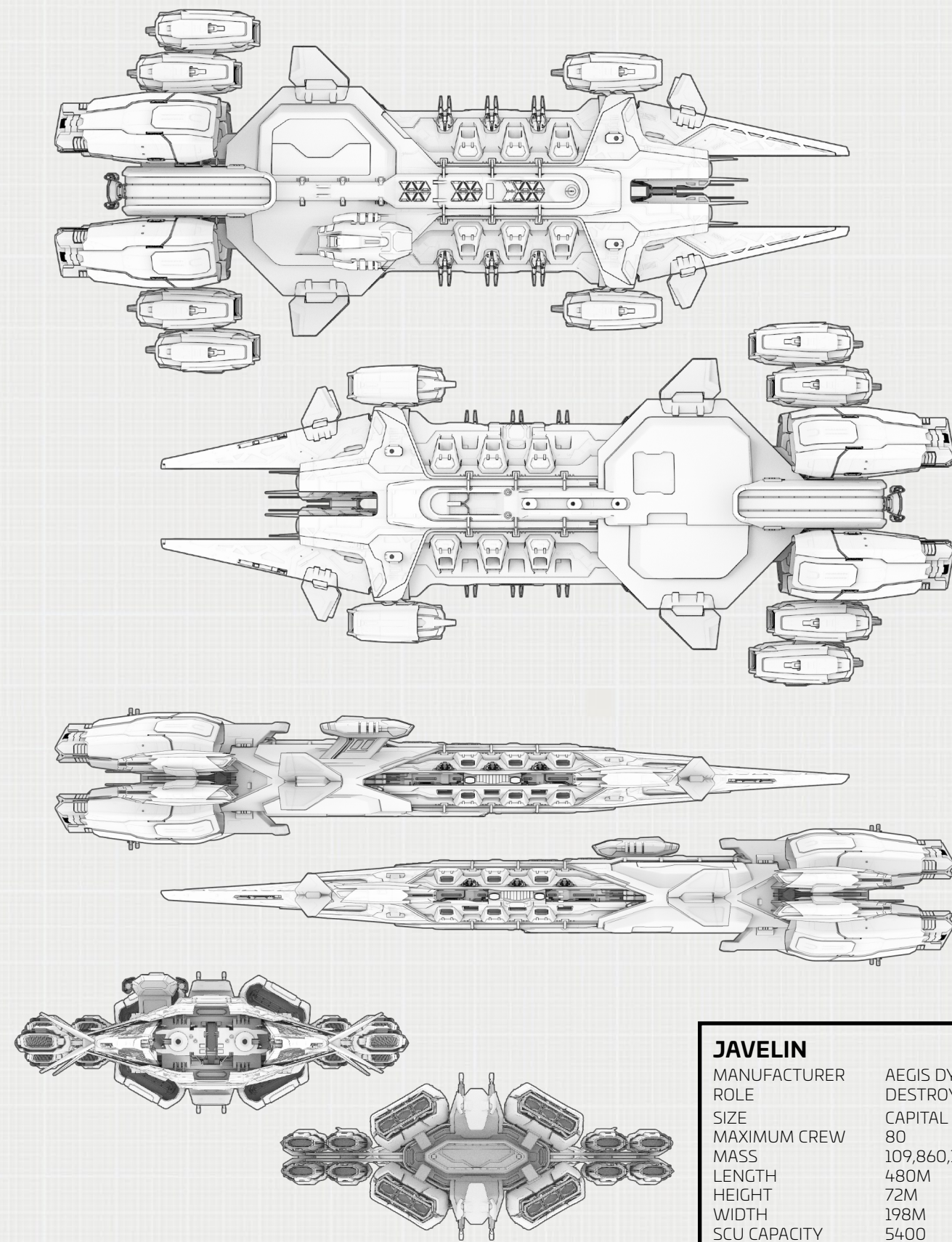
by the Vanduul (the ship had actually suffered a major system failure and drifted away from standard interstellar communications lanes). The Javelins saw first combat against the Vanduul in 2692 when an aggressive raider squadron consisting of a single destroyer and escorts located and engaged a squadron of enemy corvettes protecting a tender. The Javelin's domination was total, with the Vanduul ships destroyed or forced to flee in an otherwise bloodless fifteen-minute operation.

From 2690 through today, Javelin production continues unabated, with the time and cost at which new ships are constructed continually reduced. Owing to the careful production plan enacted years earlier, little has interrupted the flow of Javelins including three major yard moves and countless expansions. Similarly, countless changes and modifications have been made on the fly without the need for a ground-up redesign, meaning that a Javelin produced in 2740 is significantly different from one of the lead ships, though no singular redesign has yet occurred.

The first major update to the design did not occur until the frame's hundredth anniversary in 2790 when shipyards switched to the Flight Two revision, which had been developed by a fleet-lead design program (largely bypassing Aegis itself) with an eye towards increasing overall modularity and improving the overall interior space of the ship. Before the Flight Two Javelin launch, major role switches (e.g., from fleet support to VIP transport) would require several days in a shipyard. Afterward, any modern Javelin could be quickly reset in the field. A further Flight Three model was introduced in 2820 in response to the increasing complexity of carrier-based bombers and fighters that were now able to field munitions

capable of sinking destroyer-sized capital ships. The Flight Three revision focused on defenses, reworking the shield system, and introducing point-defense guns and sensors to increase anti-fighter coverage. As a result, the Javelin gained another major role, serving as part of a multi-ship bomber screen for larger fleet movements; a job it performed with incredible effectiveness (to date, no Vanduul fighter has ever destroyed a Javelin on its own). The retirement of surviving Flight One Javelins began in 2810 and was completed by 2840, while the retirement of Flight Two models began in 2915 with the earliest Flight Three models heading to boneyards today.

In 2944, the UEE began to offer retired Javelin-class destroyers to the civilian market on an extremely limited basis. Aegis had begun petitioning to allow such sales almost a century earlier but was continually refused; by law, the company could not sell capital class weaponry to anyone but the government. Instead, it was the UEE itself that made the decision to offer the ships to concerns that might be most likely to use them in action against the Vanduul. A number of high-profile militia organizations pooled their resources to operate retired Javelins, as did larger shipping concerns seeking additional protection. Reaction to the decision to allow Javelins to operate beyond the military was mixed, with many critics claiming it was going too far to allow untrained personnel to operate significant military equipment. Others countered that without personnel to operate them, the ships would otherwise have spent decades in boneyards and that this was decidedly in the best interests of countering the increased Vanduul threat. The UEE itself was apparently not in favor of the idea, making a point of publicly updating its war books to include the Javelin silhouette as a potential threat the same day the first civilian sale occurred.



JAVELIN	
MANUFACTURER	AEGIS DYNAMICS
ROLE	DESTROYER
SIZE	CAPITAL
MAXIMUM CREW	80
MASS	109,860,179KG
LENGTH	480M
HEIGHT	72M
WIDTH	198M
SCU CAPACITY	5400

SIEGE OF TIBER

Lasting from 2732 to 2736, the Siege of Tiber is remembered today for the UEE military's heroic struggle to keep Vanduul from overrunning the system, and as the longest unbroken combat engagement between the two forces up to that point. Though Tiber would eventually fall to the Vanduul invaders, the UEE military doesn't consider the campaign a complete loss. A lot of Humanity's collected knowledge of Vanduul military strategies and tactics were first learned during those four long, bloody years of battle.

Many consider Humanity's first contact with the Vanduul to have occurred in 2681 when the settlement of Armitage in the Orion system was attacked, a prelude to the sporadic attacks that ensued over the following decades. The combined brevity and ferocity of these attacks often prevented the UEE from collecting definitive intelligence about the Vanduul but, in 2688, renowned anthropologist Dr. Arlow Gellis released a groundbreaking study about Vanduul social dynamics titled *Clan Theory*. Dr. Gellis posited that Vanduul forces weren't organized under a conventional government but consisted of clans of various sizes and strengths that could be identified by the markings on their ships. These clans usually operated independently of each other, but would occasionally join forces, like during the coordinated attack on Orion in 2712 that ultimately pushed Humanity from the system. After the defeat, UEE forces fell back to Tiber to prepare a secondary defensive line, but the Vanduul didn't follow. Instead, they stayed in Orion,

harvesting the system for resources.

The UEE Navy strengthened forces in Tiber and anxiously watched the jump to Orion, certain that an attack was imminent. Some military historians have even claimed the Navy conducted several classified experiments that failed to collapse the Tiber-Orion jump. Then on February 4, 2726, a Vanduul light fighter (military designation 'Blade') was spotted in the system. Navy forces scrambled to contain the fighter, but it ultimately disappeared. Soon after, Vanduul appeared in increasing numbers and, by the end of the year, small clan raids were happening with erratic frequency similar to the attacks on Orion. Often months passed without incident. This pattern of engagement lasted until April 19, 2732, when a large Vanduul clan entered Tiber and attacked UEE forces monitoring the immediate area around the jump. When smaller clans followed closely behind and joined the fight, UEE forces fled and ceded control of the Tiber-Orion jump point to the Vanduul. The Siege of Tiber had officially begun.

FLEET IN BEING

High-Command assigned Grand Admiral Tesca Halimeade the unenviable task of evicting the Vanduul from Tiber. While Halimeade knew as much, if not more, about the Vanduul than anyone else in the Navy thanks to

his in-depth study of academic papers and after-action reports, he was still considered a controversial choice to lead the campaign. His extensive knowledge was widely respected, but critics characterized Grand Admiral Halimeade as a "classroom" commander who hadn't gleaned any of this knowledge through combat experience.

Grand Admiral Halimeade first tripled the number of troops guarding the jumps to Virgil and Oberon. Then he docked his ship, UEES Aquilon, at the system's largest shipyard, INS Aniene, to defend the jump to Virgil. He kept capital ships docked at strategic space stations across Tiber while smaller fleets patrolled as loose guerilla units. These patrols were given specific instructions on when to engage and when to flee Vanduul forces. Rules of engagement varied greatly depending on force size and objective, but in practice, the policy usually only advised attacking if the Naval force had superior numbers. Ridiculed as a "run, don't gun" strategy, Grand Admiral Halimeade defended his position by claiming he saved pilots by pushing them toward engagements they could win.

This cautious engagement strategy allowed the Vanduul to slowly expand their foothold in the system. By mid-2733, Tiber II had become a fierce battleground with various clans vying to control space stations and established outposts. Yet, most UEE capital ships remained docked

in well-defended space stations, drawing intense criticism from other generals who felt that the Vanduul were entrenching in the system. Only in private did Grand Admiral Halimeade disclose to his advisors the real reason why he wouldn't commit his full forces against the Vanduul: he maintained a hope that diplomacy was the way to end the war. "What I need is intelligence and time to figure out how to reach them (Vanduul)," he wrote a confidant. "If we fully commit to war, then total war is the only path forward."

In early 2734, the Vanduul began pushing more aggressively on Tiber II. Vids of Vanduul Harvesters chewing through Tiber II made it to spectrum and caused a stir across the empire. Sensing that their overall grasp of the system was slipping, Grand Admiral Halimeade responded by finally deploying UEES Aquilon and a large contingent of UEE forces near the planet. Vanduul clans, clamoring for a fight, eagerly launched to clash with the large fleet. This left Vanduul encampments lightly guarded and allowed UEE strike teams to carry out aerial bombardments that devastated most of them. Though this was a victory, it also turned out to be a provocation that would not go unanswered.

The clans that were devastated by the aerial bombardments fled the system, while others arrived to claim what was abandoned. Declassified



Naval reports indicate that Vanduul numbers actually increased after the aerial bombardments of Tiber II. Grand Admiral Halimeade dispersed his capital ships to try and repeat the success. He would use ships as decoys to bait clans into chasing them around the system, while strike teams hit targets exposed by the distraction. Intelligence gathered and battle tactics first tested during this time greatly advanced the military's understanding of the Vanduul. The Navy even reclaimed several lost space stations, though it would prove to be too little, too late.

In November of 2735, Naval Intelligence received word of a large Vanduul clan amassing in an unexpected part of the system. Grand Admiral Halimeade gathered a small force around UEES Aquilon and went to assess the situation personally. He discovered the Vanduul pouring through a previously unknown jump point to the system designated Vector, right around the same area the initial Vanduul scout ship had disappeared years ago. Moments after arriving, the recon team was discovered and ambushed. Vanduul forces destroyed UEES Aquilon, killing all aboard including Halimeade. The few surviving ships limped back to INS Aniene.

LOST CAUSE

The loss of Grand Admiral Halimeade sent the Navy scrambling and High-Command appointed Admiral Mira Triolo, a staunch critic of Halimeade's measured engagement strategy, as the new commander in Tiber. The new admiral consolidated her forces into a huge fleet meant to directly challenge the Vanduul. Her first major encounter resulted in the

loss of thousands of starmen and three capital-class ships. Undeterred, Admiral Triolo continued to confront the Vanduul directly and, in a move that would later draw much scrutiny, ordered the redeployment of reinforcements from Virgil to bolster her offense.

In 2736, the war for Tiber would reach a fever pitch. Emperor Galor Messer IX personally ordered a massive campaign of aerial bombardment on Tiber II, convinced that controlling the planet would limit the Vanduul's ability to resupply their war machines. Instead, it turned the planet into a wasteland and earned it the epitaph 'Tomb.' Then, on 29 December 2736, a Vanduul capital-class 'Kingship' arrived from Orion. Identified as one of the largest and oldest clans that had been documented by the military, the kingship led an attack on the INS Aniene. Despite a valiant resistance, half of all Navy forces in-system were lost during the battle. With the Naval line broken and their ships routed, Admiral Triolo ordered forces to fall back to Virgil. Admiral Triolo assumed the Vanduul would remain in Tiber to rip apart the system, as they did in Orion, but the Vanduul followed instead. They took control of the Tiber-Virgil jump point and sent scouts across the system. Only a few days later on January 2, 2737, a vast Vanduul fleet pushed into Virgil. Admiral Triolo managed to slow its advance, buying precious time to cover the retreat of over one million refugees, but Virgil soon fell.

The Siege of Tiber may be best remembered as a failed military campaign to save the system, yet many consider it an invaluable time in the war against the Vanduul thanks to the lessons learned during the siege that are still being put to use today.



STYLE MEETS
SUBSTANCE

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