

JUMP POINT

ISSUE: 07 12



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FROM THE COCKPIT

GREETINGS, CITIZENS!

Welcome to a very special 'all ships' issue of **Jump Point!** We had not one, but two major ships premiere in the last month, so we're doubling up on development histories this time around! First up is the ARGO MOLE, the new mid-sized miner revealed during CitizenCon last month. So, how does it fit into a universe of single-occupant Prospectors and massive Orion platforms? Sometimes going back and figuring out exactly what goes in the middle is the biggest challenge of all, as we learned from the designers.

The second half of our ship spectacular is the brand-new Crusader Industries Ares Star Fighter. The Ares premiered just a few days ago and you're likely only just becoming familiar with this exciting new ship... but I'm sure you already realize how much potential for fun there is with a ship built around an enormous fixed gun! We spoke to the art and design teams to find out how this new ship is bringing frontline military designs to the Crusader lineup and how it's going to change combat itself. My bet is that it's going to give rise to a very particular kind of pilot who is extremely competent with that size seven weapon. I can't wait to find out how it goes!

On the lore side, we start off with a brand-new Whitley's Guide covering the Aegis Vulcan. We covered the 'real-world' history when it launched early last year, and now we're following it up with an exploration of the ship's in-universe history. The ship's brochure established that the repairing, refueling, and rearming ship had been used in some form or another since the Second Tevarin War, and

we thought it would be exciting to provide a little more detail. Then, we have a lore feature taken from the game... literally! The Narrative Team have turned one of the prop books that you may have noticed onboard the Origin 890 Jump (if you're lucky enough to have visited one!) into a real story you can read. Pretty neat!

This December also marks another notable anniversary. *Chris Roberts' Wing Commander III: Heart of the Tiger* turned 25 years old this month, which certainly makes me feel very old! *Wing Commander III* was Chris' first 'interactive movie' and the project where he first worked with future *Squadron 42* stars like Mark Hamill and John Rhys-Davies. Most importantly to me, it's proof of just how good he is at weaving advances in technology into gameplay and narrative... playing through the game always leaves me more excited to see what's ahead with everything that can now be accomplished in *Star Citizen* and *Squadron 42*.

Well, that's a wrap for 2949! From law and order to mining to whole fleets of flyable ships, 2019 was a thrilling year for *Star Citizen* and 2020 promises to be even more exciting! It has been my pleasure to help chronicle this story through **Jump Point** and you can rest assured that we're already plotting out how to do more next year. Until then, we'd like to wish you all a great holiday season and we'll see you through the next **Jump Point**... in 2950!

Ben

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ARGO ASTRONAUTICS MOLE

KEY CONTRIBUTORS:
 LEAD DESIGNER - JOHN CREWE
 DESIGNERS - MARK GIBSON
 CONCEPT ART - GAVIN ROTHERY
 ART DIRECTOR - PAUL JONES



TUNNELING INTO SPACE

On May 16, 2011, Space Shuttle Endeavour blasted off from Cape Canaveral, Florida on a mission to the International Space Station. Aboard was an unlikely passenger, a plush replica of Czech cartoon character, Krtek, carried by Andrew Fuestel. Krtek, literally 'Little Mole', became the first mole to travel in space. Roughly eight years later on November 24, 2019 at Manchester's Central Convention Complex, *Star Citizen's* Ship Team revealed the second: the ARGO Astronautics Multi-Operator Laser Extractor.

Mining was, of course, not a new concept for *Star Citizen*. Alpha 3.7 had

recently premiered small asteroid mining and the MISC Prospector single-person mining ship was already traversing the 'verse. At the other end of the scale, the RSI Orion had already been designed alongside plans for industrial-scale mining, and it had not yet been revealed how players would make the transition from lone prospecting to running large operations. As such, the MOLE was the answer to a question that many of *Star Citizen's* mining-invested players had been asking: how do we get there from here?

CRACKING THE MOLE-CULAR FORMULA

Filling the blanks in a system can be one of the most difficult challenges for a game designer, and the addition of a mid-level miner meant much more

than simply plotting a point between the two existing ships. How will the new design improve on the Prospector? How will it be further improved by the Orion? What will it add to the game without stepping on the toes of existing designs? Why would the player want to upgrade versus waiting until they can move directly to the larger ship? While unquestionably necessary to making *Star Citizen's* universe real, mid-level ships face special challenges in keeping them engaging.

Designer Andrew Nicholson was assigned to write the first brief for ARGO's newest ship. He envisioned the MOLE as a vehicle that would, in ideal circumstances, be operated by small teams of players at once. This would give it an additional layer of gameplay not present in the

single-person Prospector and allow more experienced miners to team up for greater rewards, ultimately progressing to operating an Orion or other large mining ship together. In a rare occurrence for *Star Citizen*, Nicholson hit a hole-in-one with the ship's name in the first draft of the design brief, developing the perfect ARGO-style 'backronym' for the ship straight off: Multi-Operator Laser Extractor.

Next, the team thought about exactly how it would work and what would make it worthwhile to team up with other players. Lead Systems Designer Jon Dadley explains: "The MOLE is designed to be operated by a team of two to four players. Each mining cab is operated independently, so maximum efficiency is achieved with a team of three



To realize the MOLE, Jones selected experienced *Star Citizen* artist Gavin Rothery, the mind behind key ships like the Aegis Sabre and Eclipse. The MOLE would be Rothery's first ARGO ship, though there was no doubt he was up to the challenge given his past experience. His first task was to familiarize himself with the established look and feel of the brand. Jones provided him with reference images and models from the MPUV and SRV, along with the early designs of a ship still in development.

Jones and Rothery began discussing ideas and developing the earliest silhouettes for the ship. Jones was keen to allude to an oil or mining rig, which he decided could be expressed with physical shielding that would infer protection from meteorite strikes. More than anything else, he wanted to make sure the MOLE was something entirely new. "It's *Star Citizen*", he explained, "we're always trying to do what hasn't been done". This also meant eschewing existing sci-fi mining as a reference and instead looking at real-world excavators and other equipment to imagine how they might be adapted for the 30th century.

Some ships come together quickly while others require several concepts to be examined until the right one is decided. The MOLE would prove to be the latter, with a lengthy concept phase that went in a number of directions.

miners and a pilot." What about players interested in a larger mining ship who aren't ready to team up? The team envisioned exactly this scenario as well: "Technically, the MOLE can be operated by a single person. However, none of the mining lasers are controllable by the pilot, so a single player would spend a lot of time moving between the pilot seat and mining cabs."

With the unique functionality of the MOLE determined, the brief was completed with all of the usual metrics: size, hardpoints, thrusters, internal requirements, etc. Nicholson further envisioned the MOLE as part of an intentional ARGO-designed industrial system that would allow the mining ship's resource pods to be detached when full and carried away by MPUVs.

ALL SYSTEMS ARGO

Next, the MOLE moved on to *Star Citizen*'s Ship Team and Art Director Paul Jones. Jones had recently wrapped up development of the ARGO SRV and notes that the team's brains were "already in gear for ARGO". Nevertheless, it was his team's first multi-crew mining ship and it would be going directly to implementation, making development a particular challenge. Before starting, they discussed existing mining processes and reviewed the Orion to better understand how Chris Roberts envisioned mining ultimately functioning.



VERSION 1



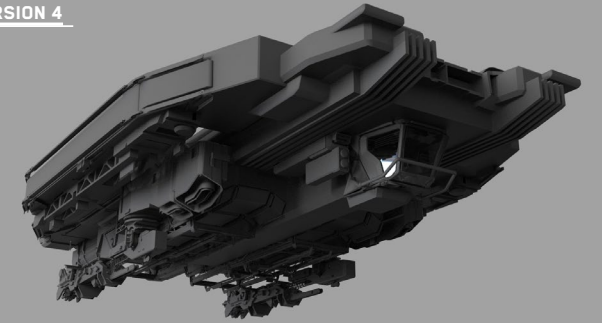
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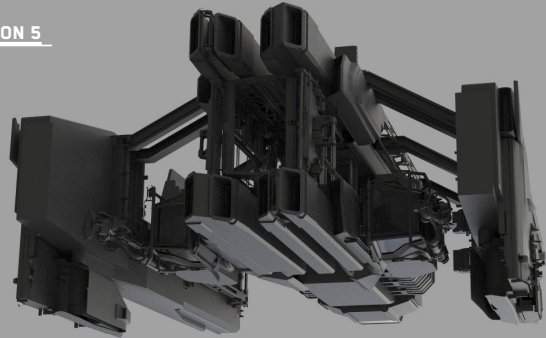
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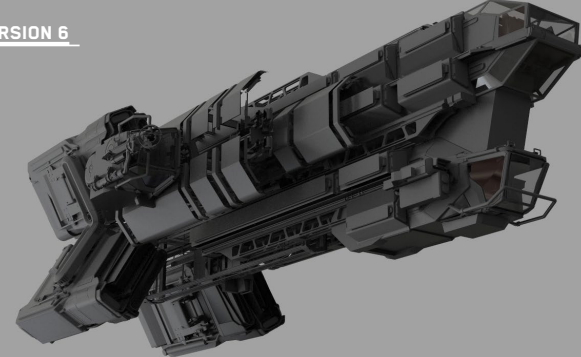
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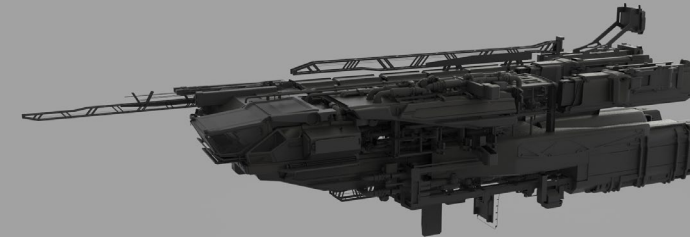
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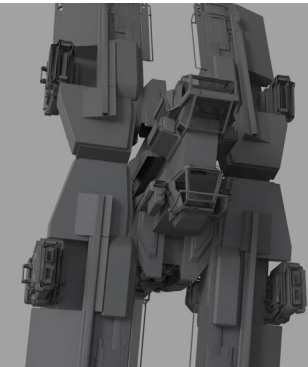
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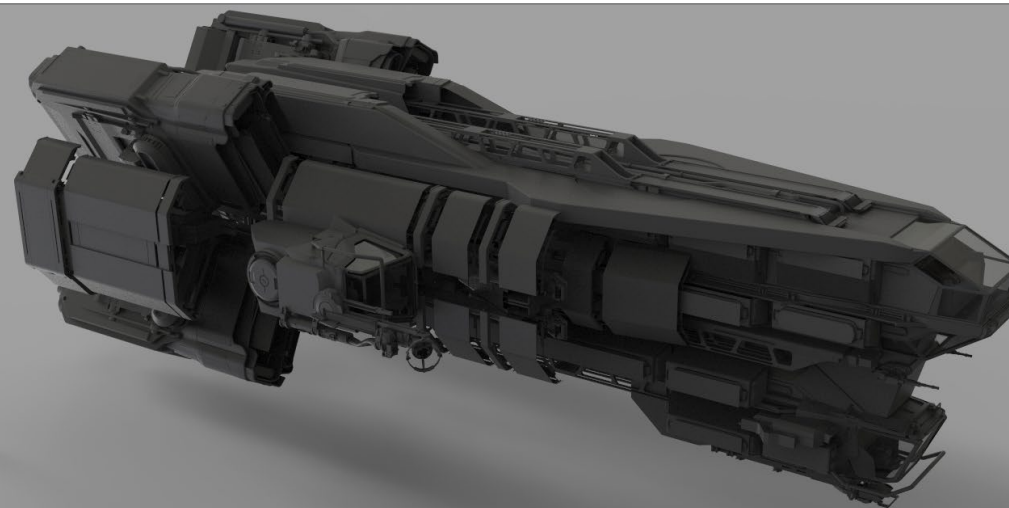
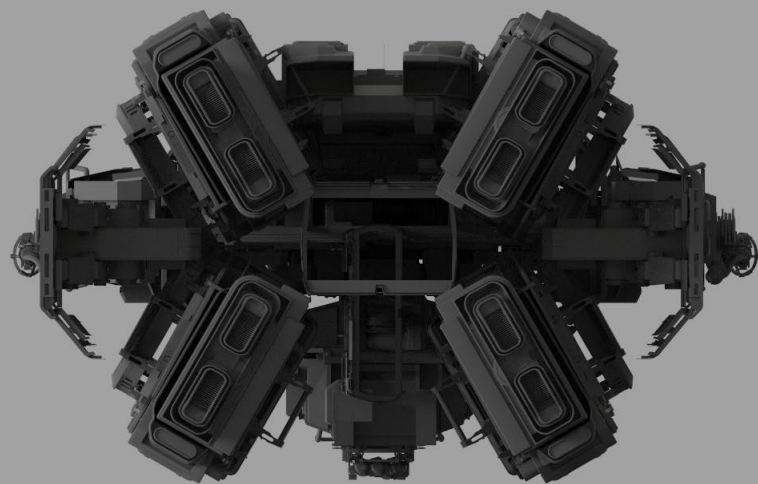
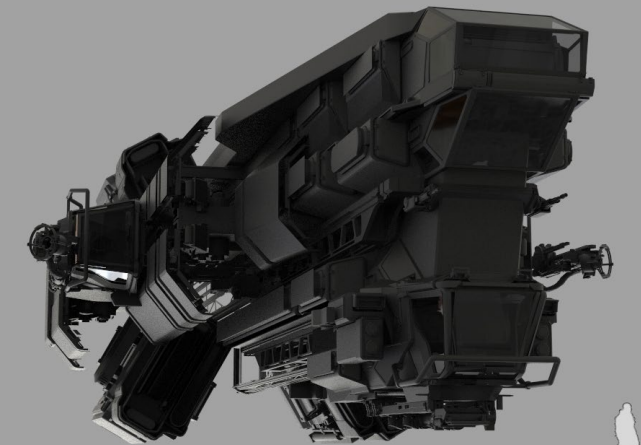
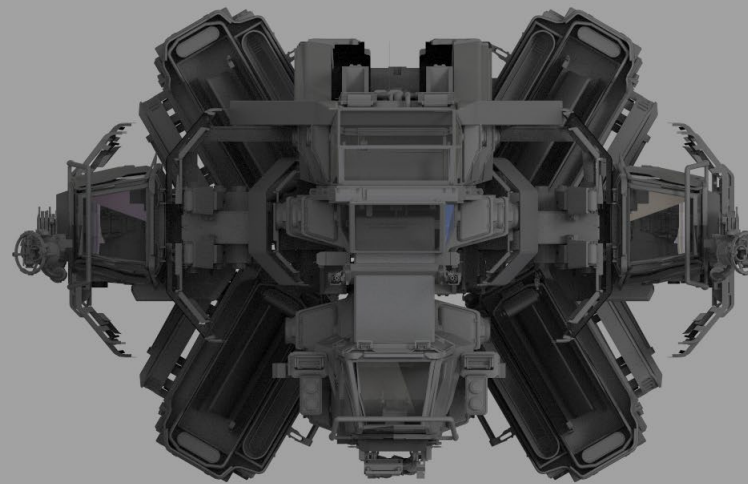
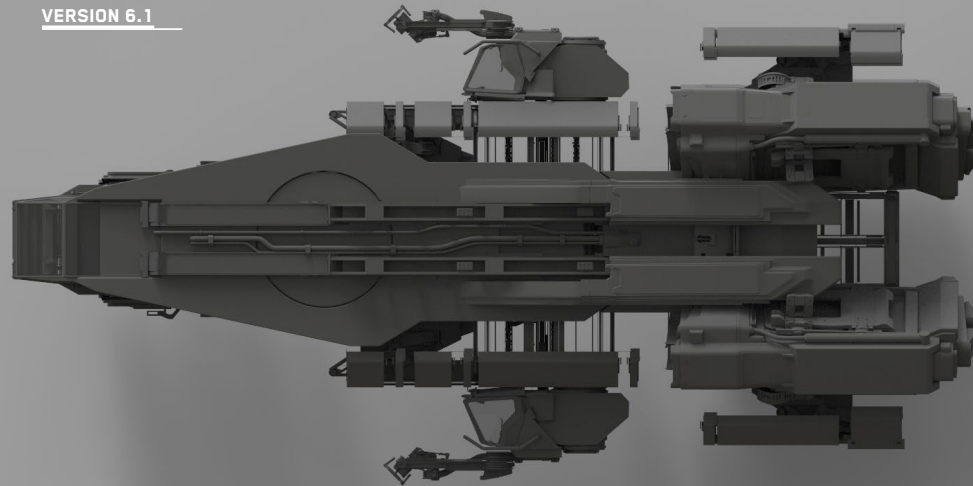
VERSION 7



VERSION 8



VERSION 6.1

**CONCEPT**

Rothery's four initial versions began a conversation about mining functionality and led to additional concepts with cab location and shielding in mind.

Jones felt that #5 nailed the physical shields look, while #6 seemed to step too close to the Orion.

#7 was considered the wrong direction (though looked closest to an actual mole!), while #8 was considered with and without mining pods.

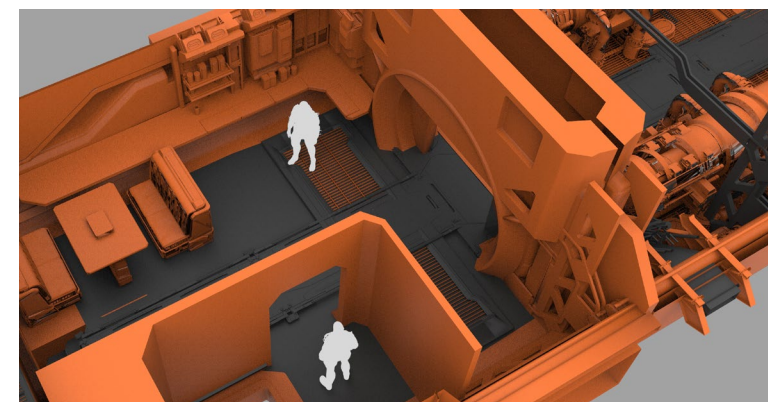
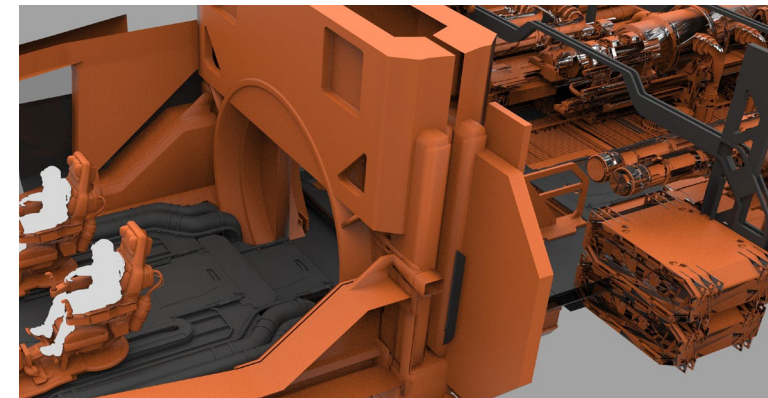
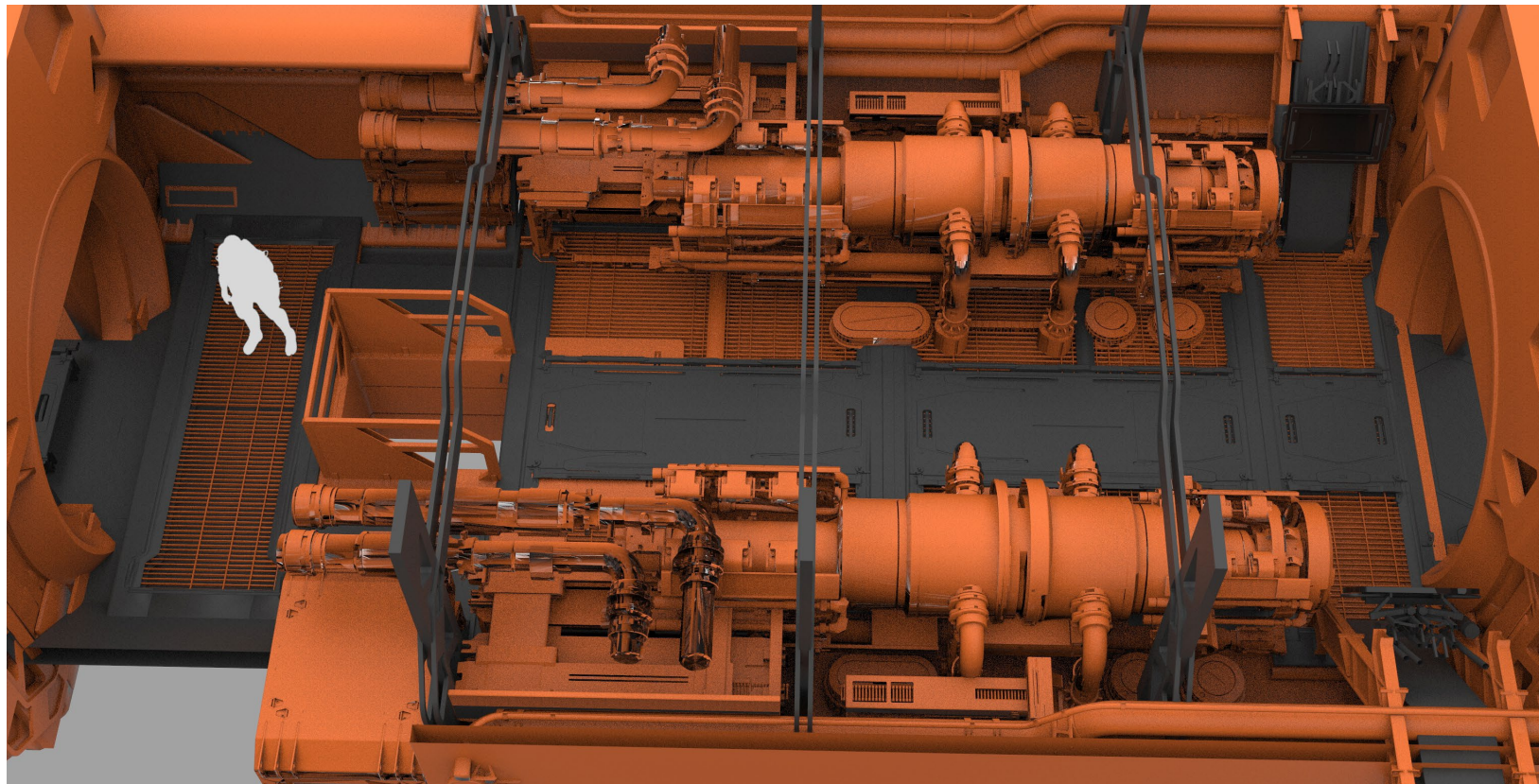
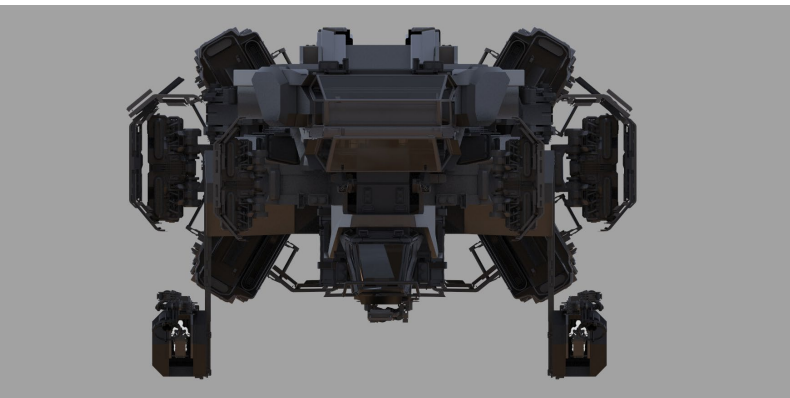
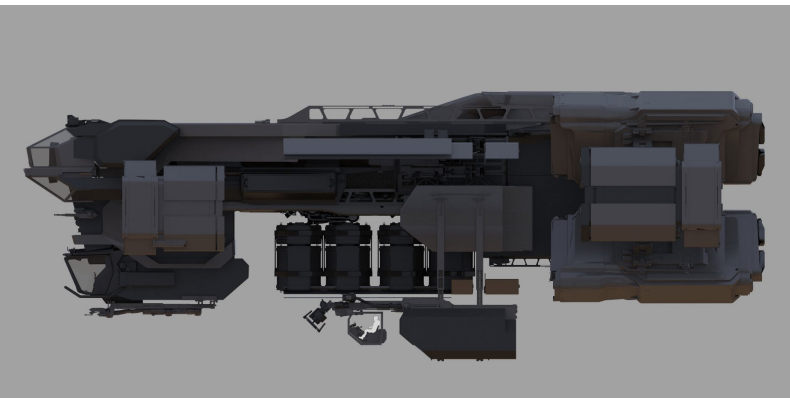
The successful concepts were further developed, with Chris Roberts ultimately favoring #6.1.

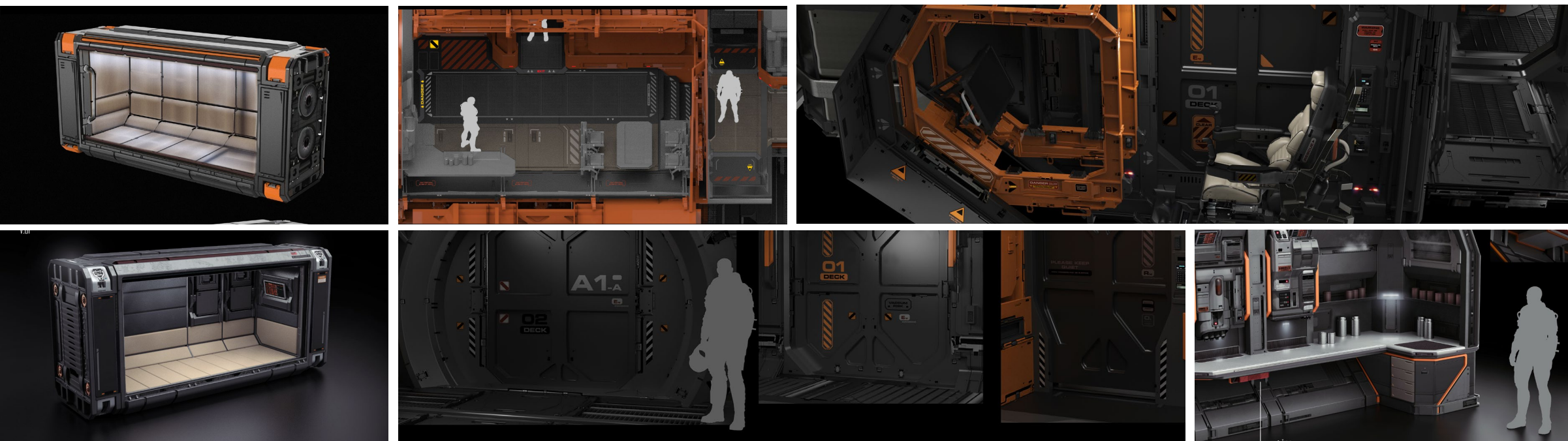
#6.1 was further developed to distance the silhouette from that of a 'traditional' spacecraft and included the first iteration of the interior. Concept Artist Sarah McCulloch joined the project to assist with the exterior paintover, which Jones wanted simpler and more in keeping with the MPUV and SRV.

The mining lasers evolved to a three-location layout, while the long remote manipulator arm (known as 'Mr. Tickle') didn't work as intended when animated and led to the mining cab moving instead.

The MOLE reached #6.4 with the mining pods, shields, and engines it would keep in the final delivery.

Further art development saw the mining machinery move to the center of the ship and the interior shift around it.





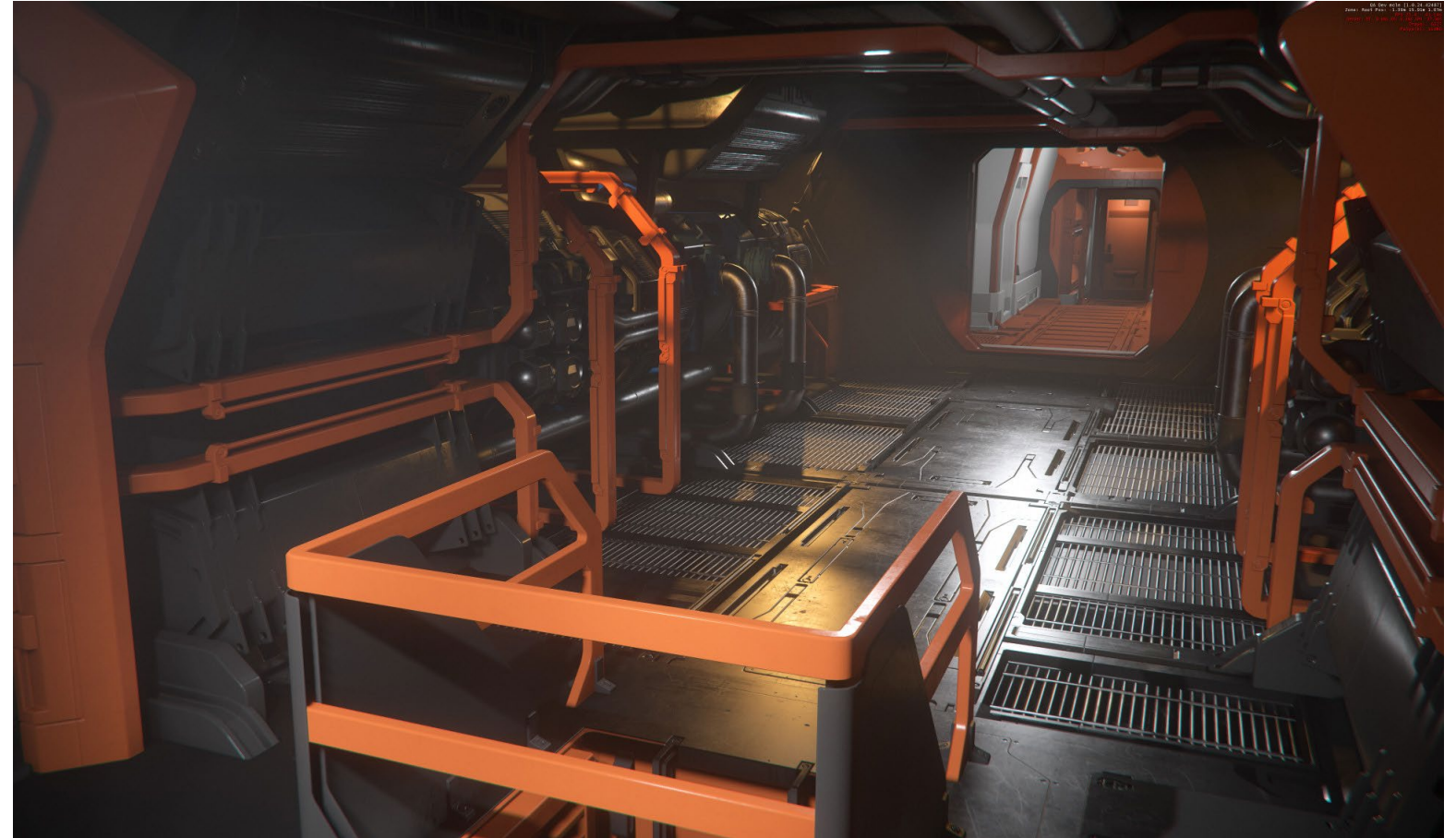
For final delivery, Jones developed a new, higher standard for what would be passed to the Implementation Team, including additional artwork and a guide to ensure the team's designs were interpreted correctly. Rothery provided a beautiful cutaway of the MOLE's interior to show how it should function, displaying everything from color rations to how the mechanics of the interior worked. He also designed sheets of decals that could be applied to the final look. Jones put together a special sign-off board and added flooring breakup, colors, markings, and more. The new junior concept artist, Greg Chryssaphes, developed the ship's toilet, kitchen, ejection pod, and updated the seats. In the end, the process of drilling down on the MOLE's appearance had taken roughly six months of back and forth, with the design packaged and moved on for implementation in July 2019.



TAKING FLIGHT

From here, Junior Systems Designer Adam Parker oversaw the MOLE's in-game implementation in preparation for Alpha 3.8. Parker worked alongside Joe Neville, Daniel Dexter-Taylor, Jonas Prunskus, and Daryl Fearon of the EU Ship Art Team to make the ship a reality, along with the usual expert support of the Tech Art, VFX, and Audio teams. With the ship implemented in internal builds of the game, the next step in the process was to test it. Jon Dadley explains how it was accomplished: "On the design side, we tested it by doing what players would do; we gathered a team of four designers and headed to mineable locations in the PU. From there we used the MOLE as intended and iterated on any design issues we encountered. We did this many times until we were happy with the setup."

This process allowed the team to test and modify different processes that had previously existed only in their heads. Dadley notes, "we briefly experimented with making only the mining laser heads pitch and yaw and the mining cabs themselves remain stationary. We quickly found that this was too restrictive and instead altered the mining cabs to pitch and yaw freely." By moving straight to implementation, the ship retained the benefit of being fresh in the minds of the designers.



The mighty MOLE was first revealed to the world during Ship Talk, a panel covering *Star Citizen's* current ship pipeline, at CitizenCon 2949. When the annual Intergalactic Aerospace Expo (IAE) kicked off a few days later, the MOLE was shown for the first time in-universe in a special video with Jax McCleary.

With implementation already complete, the MOLE joins other first-to-flight ships in proving that the team's dedication to introducing new designs directly to the game is superior to the previous process of early concept presentations. Following the recent launch of the Roberts Space Industries Mantis, the MOLE will be the third in a hopefully long line of vehicles that launch alongside their mechanics.



WORK IN PROGRESS...

CRUSADER INDUSTRIES ARES ION & INFERNO



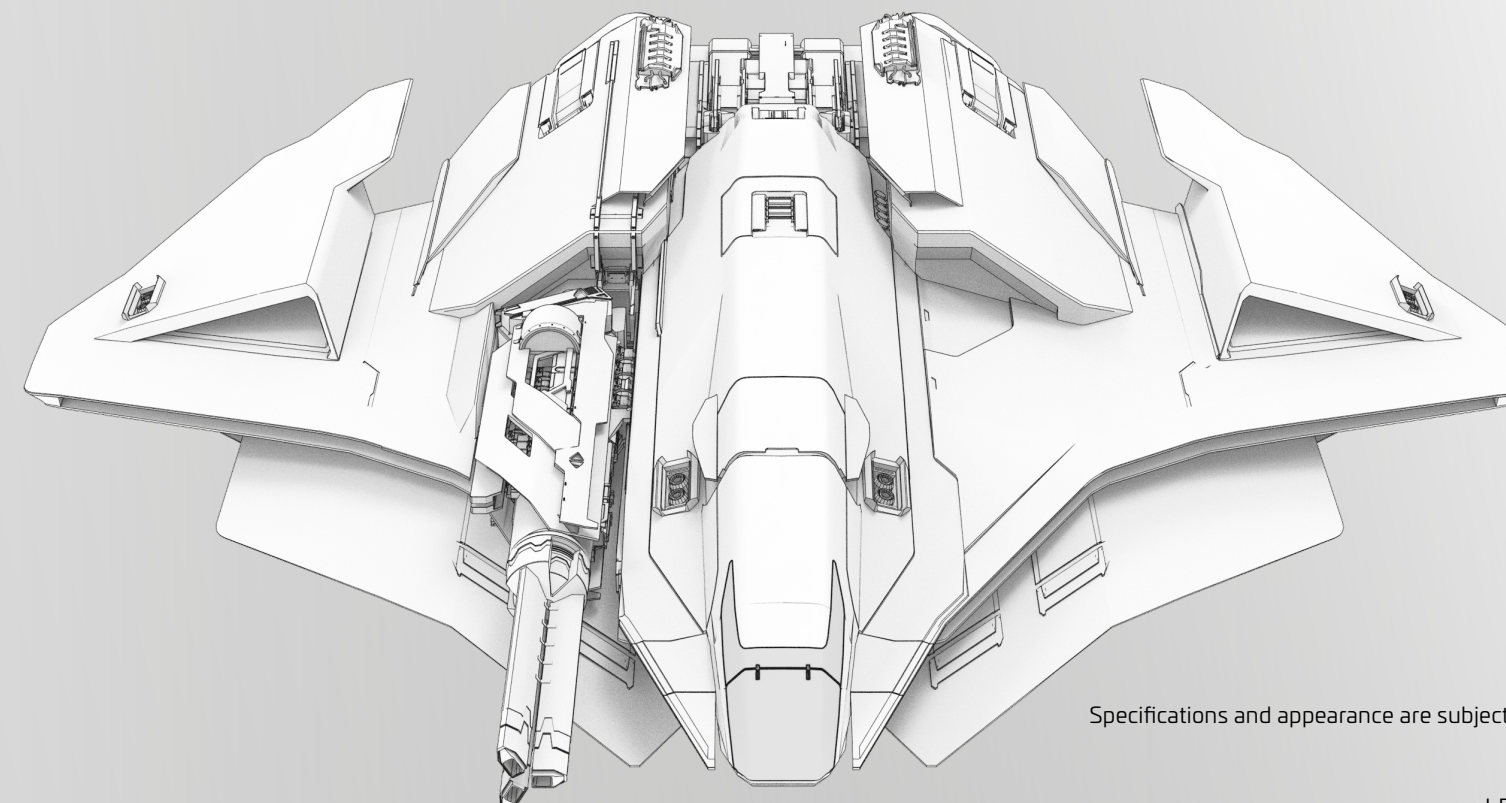
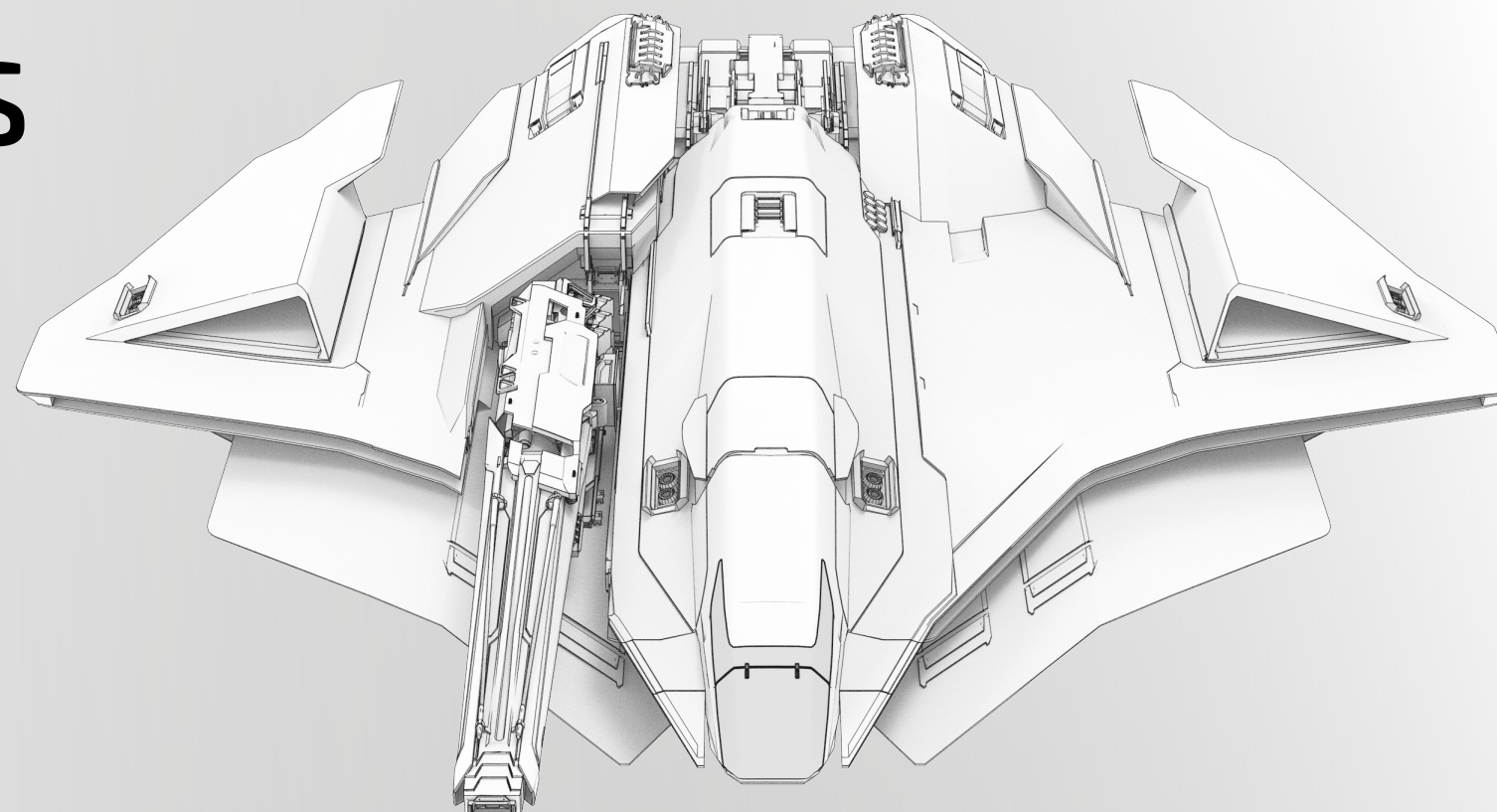
AIMS

- Private military fighter designed by Crusader to rival Aegis' Vanguard in size and surpass it with firepower. Low maneuverability and high defences. The Ares is great for getting the drop on people at range and punching holes in larger or unknowing targets.

AESTHETIC

- Asymmetric aesthetic similar to the Mercury with the single large cannon on one side and missiles on the other. Maneuvers similarly to the Freelancer and Vanguard.

Length	27.2m
Width	30.2 m
Height	5.5m (in flight)
Max Crew	1
Weapons	ION: Behring SF7E Laser Cannon INFERNO: Behring SF7B Ballistic Gatling Gun
Missiles	4x S5 missile slots total 2 (Fixed slot) x4 3S Missiles 2 (Changeable slot) x4 3S Missiles
Counter Measures	4x Flare/ Chaff Launchers
Thrusters	2x Main Thrusters 14x Man Thrusters 2x Retro Thrusters
Quantum Drive	1x Medium
Power Plant	ION: 2x Medium INFERNO: 1x Medium
Shield Generators	ION: 3x Medium INFERNO: 2x Medium
Coolers	ION: 3x Medium INFERNO: 2x Medium
Battery	ION: 2x Medium INFERNO: 1x Medium
Jump Drive	1 x Medium



Specifications and appearance are subject to revision during development.

KEY CONTRIBUTORS :

LEAD DESIGNER - JOHN CREWE
DESIGNERS - MARK GIBSON
CONCEPT ART - GAVIN ROTHERY
ART DIRECTOR - PAUL JONES

THE BIGGEST GUN IN THE UNIVERSE

In 1972, an unusual attack plane made its first flight. The A-10 Thunderbolt II, better known as the Warthog, was a plane like nothing before - a jet aircraft designed specifically for ground assault missions, built entirely around a massive central 30mm GAU-8 Avenger rotary cannon. Its existence seemed to fly in the face of modern warfare, which increasingly involved expensive ranged smart missiles. The biggest question was would this armored, flying gun find a place on the battlefields of the late 20th century? Indeed, the A-10 immediately proved to be one of the Air Force's most effective weapons, especially in close-air and anti-armor roles, and remains in service to this day.

Meanwhile, in the 29th century, *Star Citizen's* United Empire of Earth seemed to be on course for a future take on such a ship, whether the designers were planning for it or not. In fact, the seed for the brand-new Crusader Industries Ares Star Fighter was planted back in mid-2013. As the development team standardized weapon sizing for the launch of *Arena Commander*, they offered the community their thoughts on how the system could expand in multiple directions, from personal weapons to huge cannons initially intended to cover capital ships. But once the idea had been put out into the universe, the game's supporters immediately hit upon the question that would someday necessitate the Ares: what if a fighter could carry a size seven gun?





BEAUTIFUL ASYMMETRY

The choice of Crusader for a combat ship would make for special consideration at the concept art phase. By this point, Art Director Paul Jones was very comfortable with expanding the brand's style to additional ships, but this would be the first time a Crusader ship was really meant for frontline engagement instead of support. How would that impact the established look and feel? To tackle the design for Crusader's first combat ship, Jones chose artist Gavin Rothery, best known for his work on the Aegis Saber and Eclipse and fresh off the design of the ARGO MOLE. Rothery's intensive experience with combat ships made him the perfect choice to premiere the next generation of combat fighters.

Jones saw the first challenge as the ship's asymmetry. While Crusader already had a well-established asymmetrical ship in the Mercury, he was not immediately convinced that the plan for an asymmetrical fighter would work. His fear was that the ship would feel generally unbalanced, with the pilot tending to lean towards one side rather than the other. For reference, he provided Rothery with the Crusader materials kit and copious artwork of the Mercury and Genesis. Real-world examples included the A-10 and twin-boom aircraft, thinking the latter might help balance the Ares. To begin the process, Rothery developed four slightly asymmetrical ship concepts that were designed to intentionally seem more symmetrical the further away they were viewed, each with a large gun running through the center.

LUCKY NUMBER SEVEN

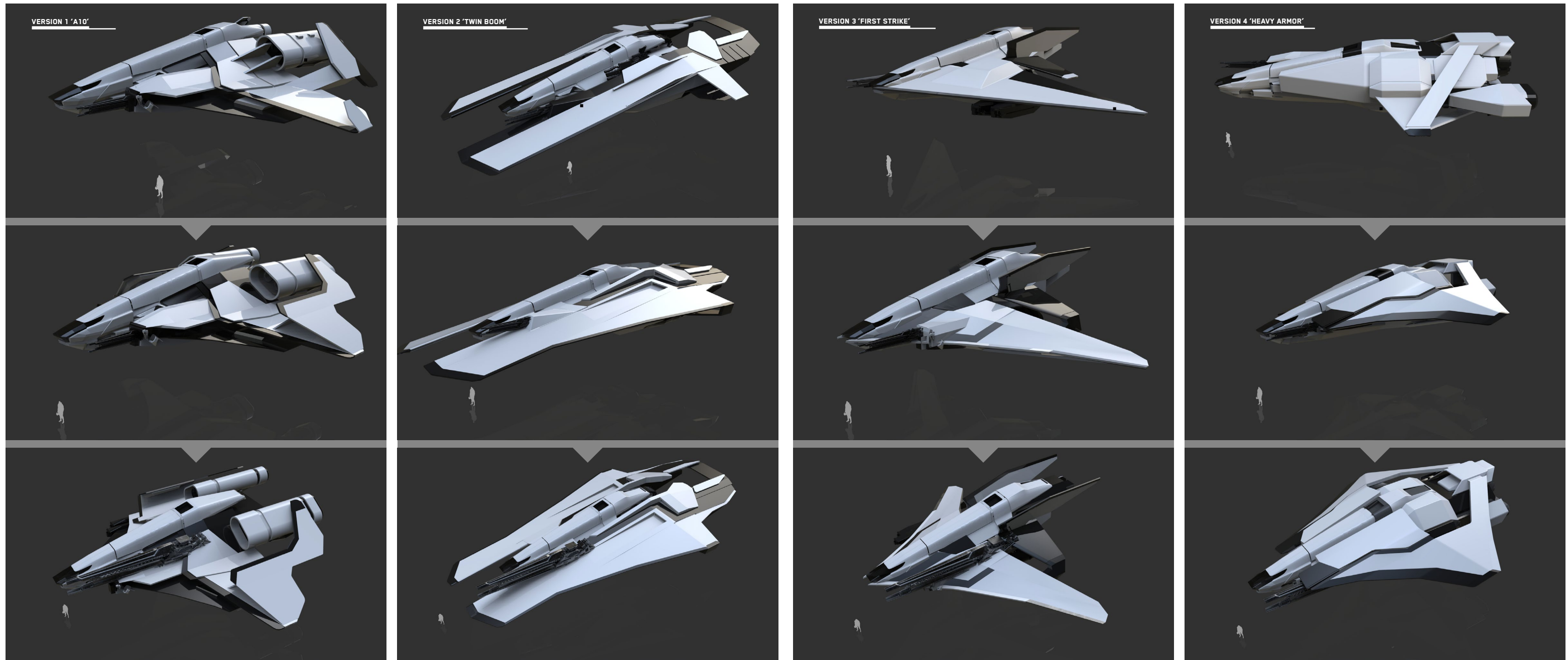
The task of developing the brief for a ship based around a large modular gun fell to designer Mark Gibson. His first basis for comparison was Aegis' popular Vanguard deep-space fighter, for which the Ares was intended to be a privately developed competitor. With the Vanguard as a more balanced jack-of-all-trades, the Ares would instead focus on punch at the expense of armor and versatility.

Lead Designer John Crewe notes that the aviation influence was there from the beginning. "The big standout inspiration gameplay-wise was the A-10 Warthog, a ship built around its main weapon and its reflection in the Ares is clear. From an art side, it takes a lot from the Mercury Star Runner with its asymmetrical design." And how would such a ship transition to the *Star Citizen* universe? "The Ares is a heavy fighter designed to take on large and capital ships. As a result, it's not as agile as our other heavier fighters, such as the F8 and Vanguard, which can dogfight with smaller ships. The Ares simply does not have the maneuverability to efficiently deal with smaller threats."

Balancing the Ares with *Star Citizen's* already elaborate system of combat ships would be a major challenge. Where would it fit in alongside the Hornet and Sabre, or more specialized vehicles, like the Hurricane? Crewe notes the Ares is actually intended to bring the fight to large and capital ships. "Traditionally, a lot of the vehicles in *Star Citizen* tend to only be effective against similar sized ships, requiring groups to take down larger threats. The Ares skews that by tackling larger craft alone. Whilst it's unlikely a single Ares could take down an Idris, a few of them or one leading a strike team will prove a real threat."

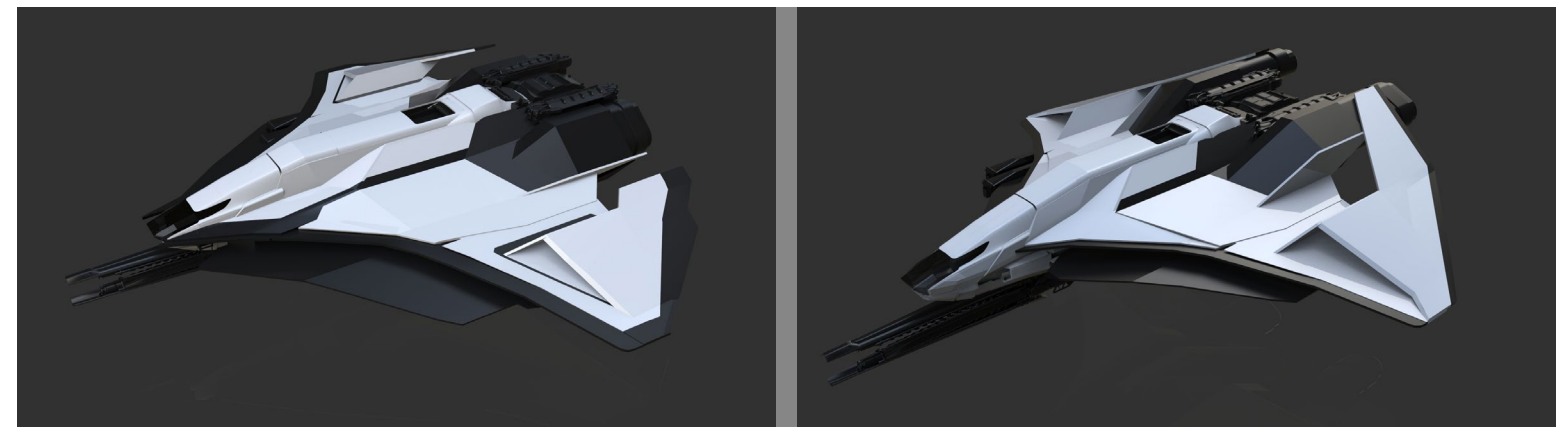
The team wanted a non-military company to develop the Ares to help it stand out from the pack. "We picked Crusader for a few reasons," Crewe explains. "Firstly, we have a lot of military ships from Anvil and Aegis and secondly, it was clear from the start that with such a large weapon, the ship would have to be asymmetrical. We had the perfect shape language from the Mercury to aid this." With Crusader already acting as a major support vehicle manufacturer for the UEEN, it only made sense that the company might want to try its hand at producing direct combat vessels.





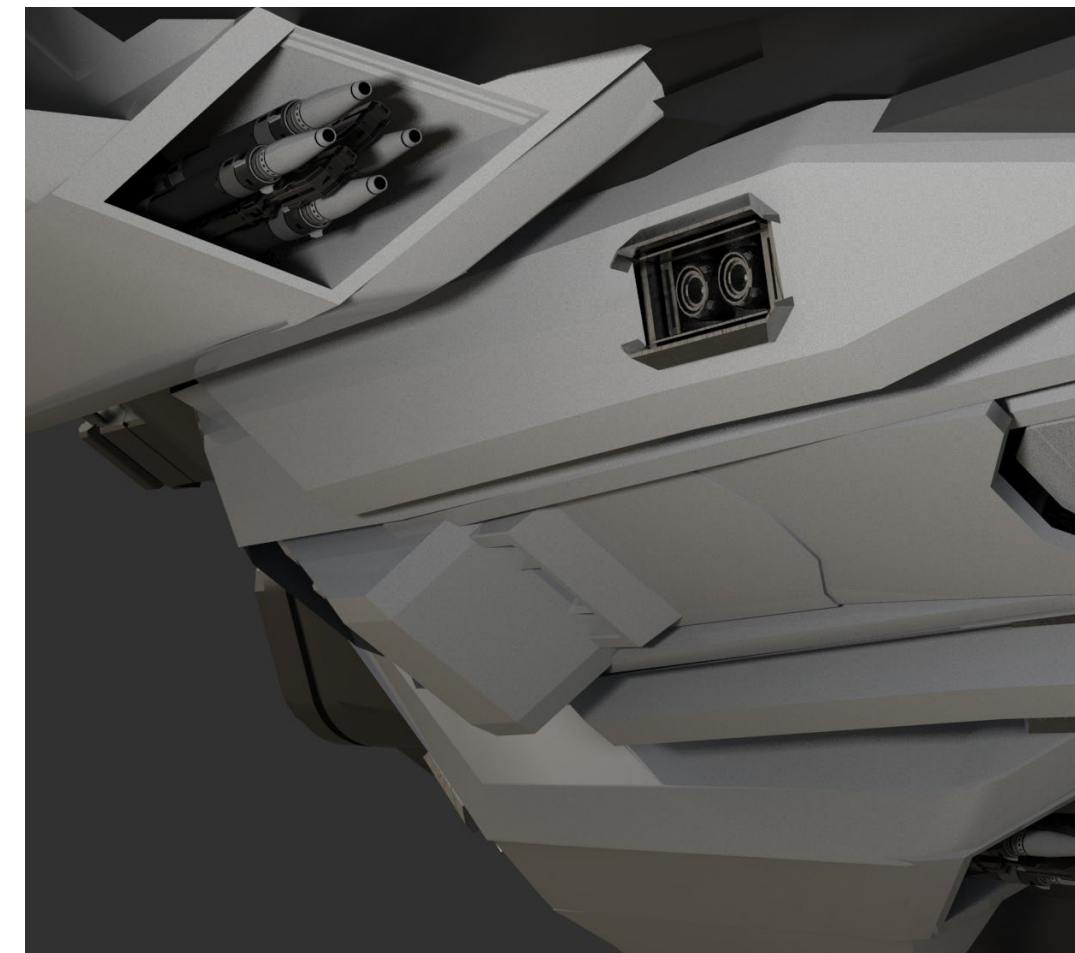
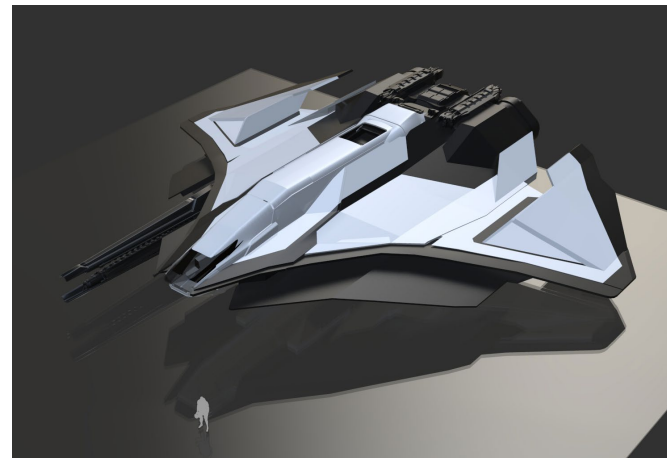
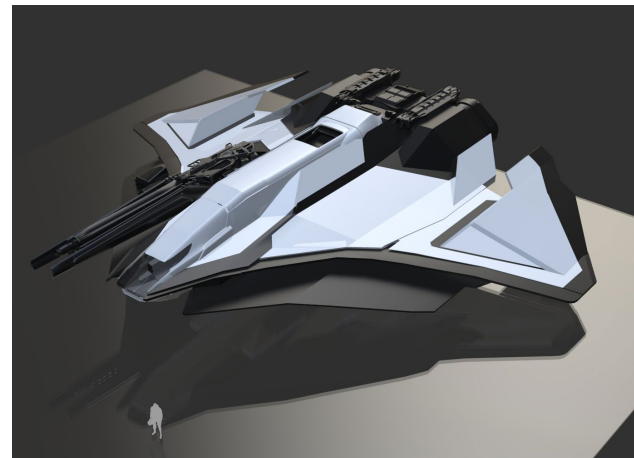
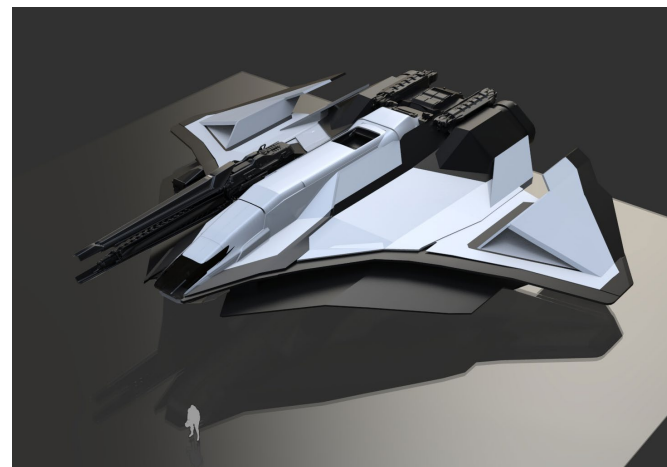
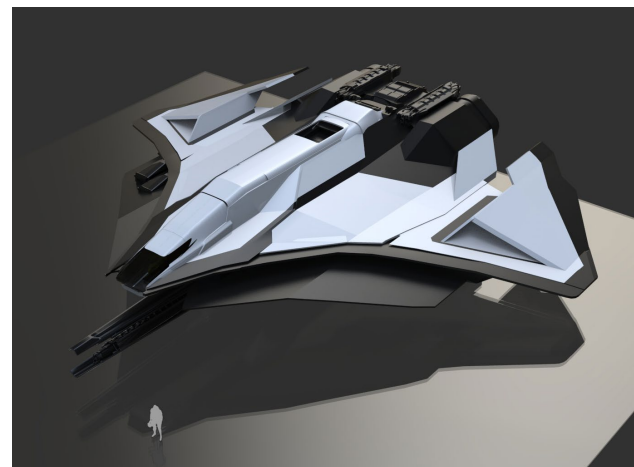
Rothery's four takes were each fascinating in their own right. The first, dubbed A-10 after the Warthog, had the appearance of a wide ground assault ship. The second, Twin Boom, buried the gun and missiles under a split forward hull. The third, named First Strike, built the ship into an enormous flying-wing-inspired forward hull and the fourth, Heavy Armor, looked like a true bruiser. Each take would, on its own, have been an excellent new ship, so Jones provided an additional paintover and showed the options to Chris Roberts earlier in the process than usual. Roberts liked the designs and chose Twin Boom and First Strike to develop further... but in the process noted a major issue: the concepts were using the wrong size gun! The first round had a smaller weapon rather than the 16-meter-long size 7 gun intended for the ship.

Despite the larger-than-expected gun, Jones opted to keep the gun running down the center of the ship in its much larger form. Unfortunately, he soon realized that this caused major issues, including problems with landing animations because of the amount of clearance required to keep the ship off the ground. He followed this with a paintover of Rothery's latest drop which resulted in a happy accident - the creation of a secondary aerofoil shape on the wings, giving it a multi-layered appearance with negative space running all the way through. This unplanned development helped reinforce the Crusader look, mirroring similar designs seen on its larger commercial designs.



Jones and Rothery continued refining the two designs, tweaking engine sizes, working on overall proportions, and making sure the necessary animations could be used correctly. Part of the overall specification for the ship was that the team be able to reuse the animations already generated for the Hornet to board and exit the Ares - a common choice that would save a great deal of time during the implementation phase. At this point, the pair continued to run into issues with the centerline gun and began experimenting with an asymmetrical position. Rothery developed four variations of this, one with the gun down the center, one with it mounted vertically, one mounted horizontally, and one under the wing. A bounding box was placed around the gun to make sure that it would work with other size 7 weapons. Attempts to centralize the gun were dropped at this point and Chris Roberts was sent four asymmetrical options to review: energy and ballistic versions of the horizontal and vertical takes, along with all the design and animation data generated to date.

Meanwhile, the concept artists took on the ship's missiles, which had begun to cause confusion. There was a breakdown over the number of missiles it needed to carry because of its special pylons that can carry multiple sizes. The solution was to house some missiles in the lower section and others in the body, all exiting through a single aperture. With so many possible missile configurations, additional time was taken to test variants to make sure players wouldn't be able to do anything unusual. Jones also experimented with dropping the gun down a size, but it resulted in a massive change of appearance, as though it were a gun attached to a ship rather than the other way around.

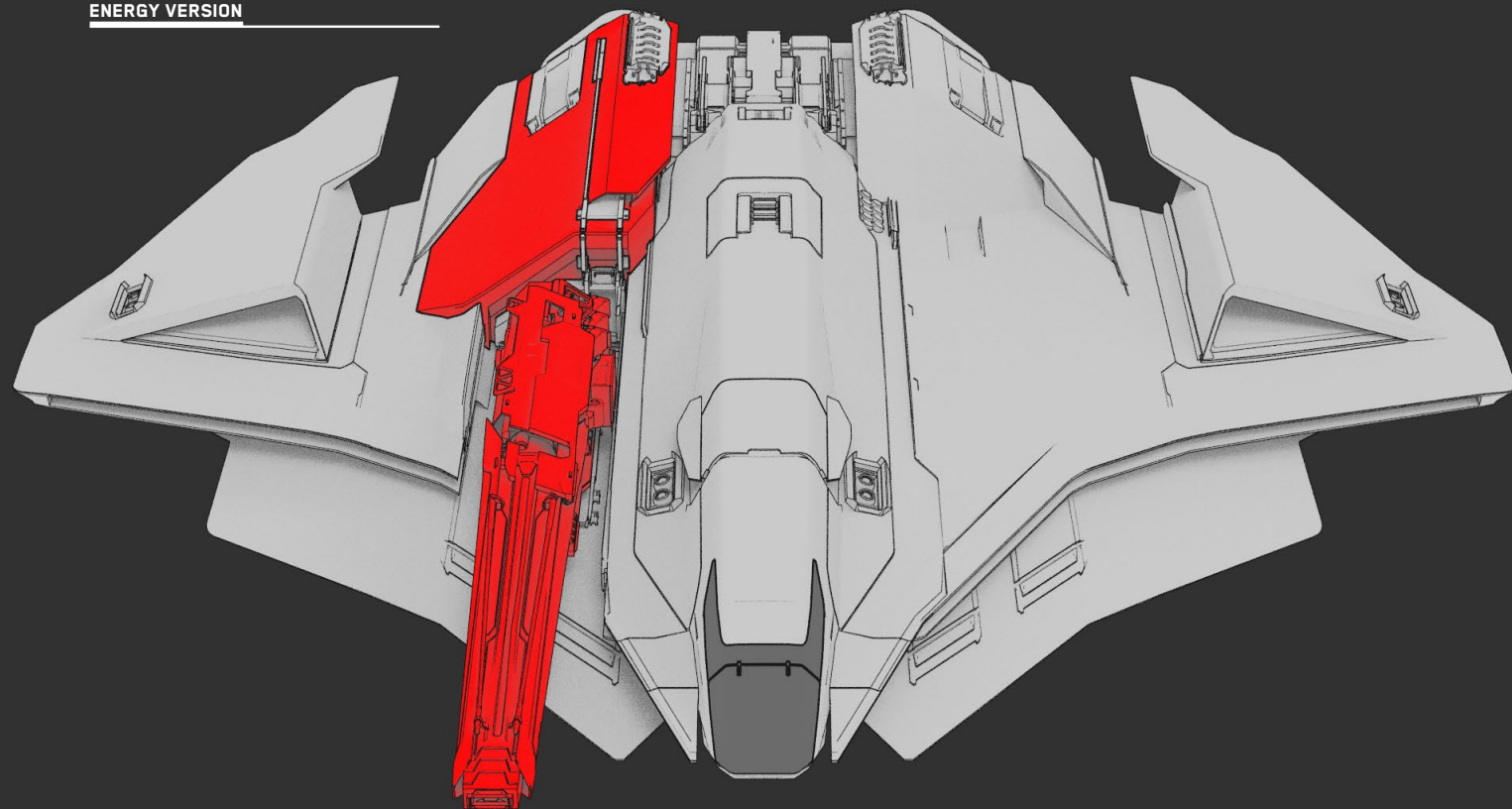




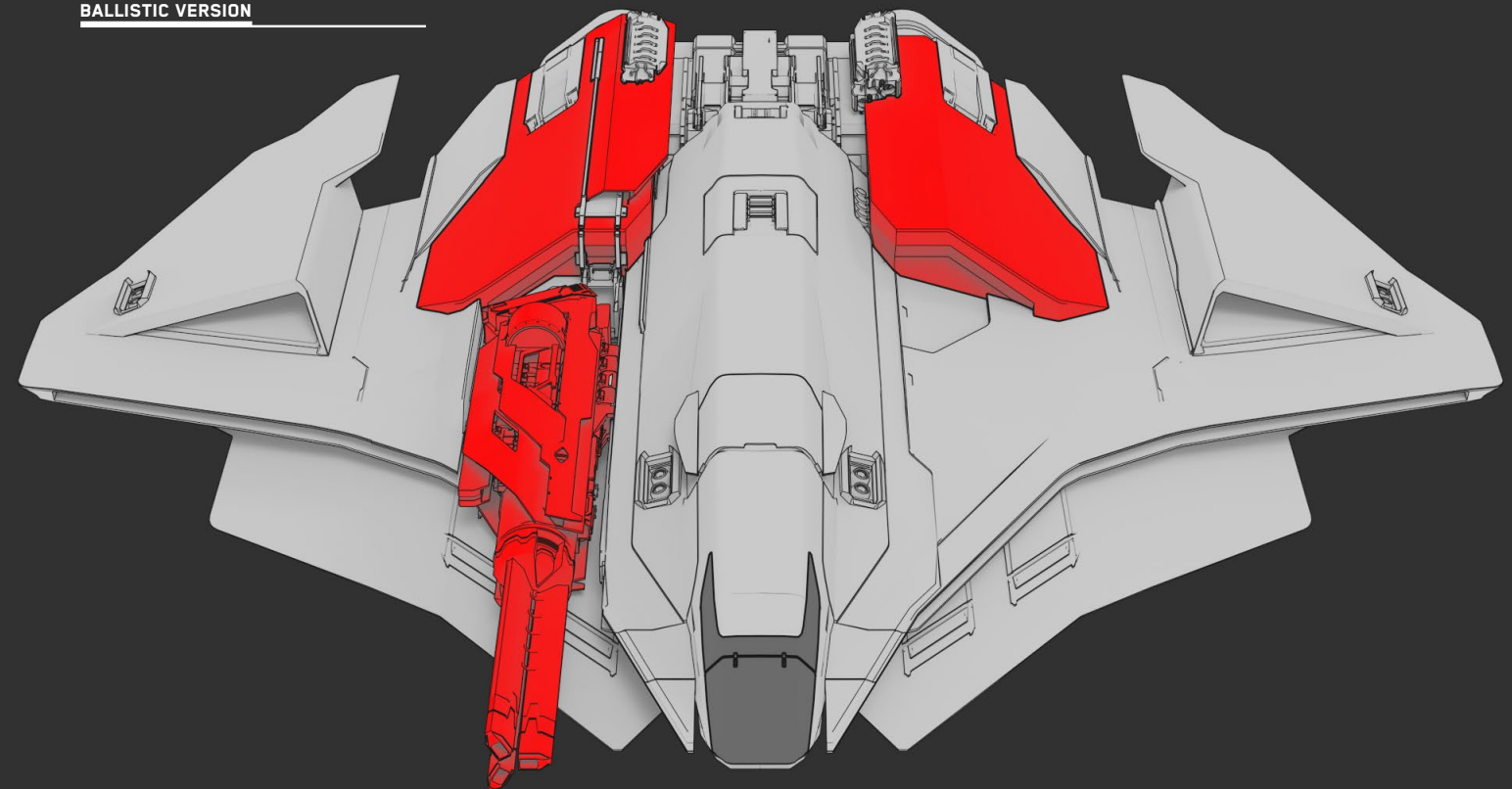
THE HOME STRETCH

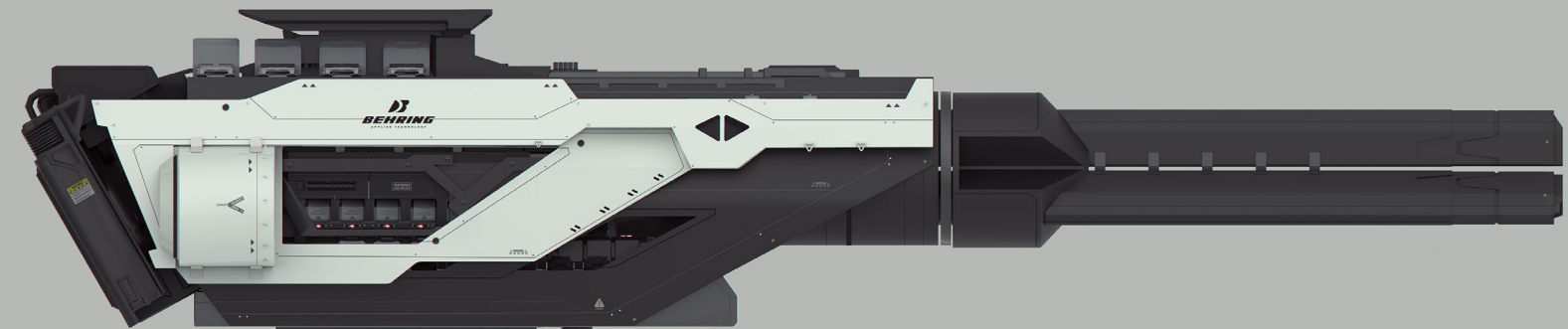
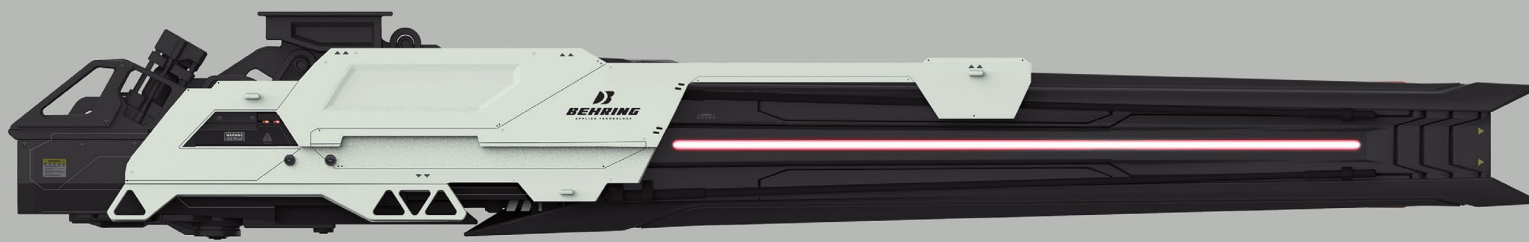
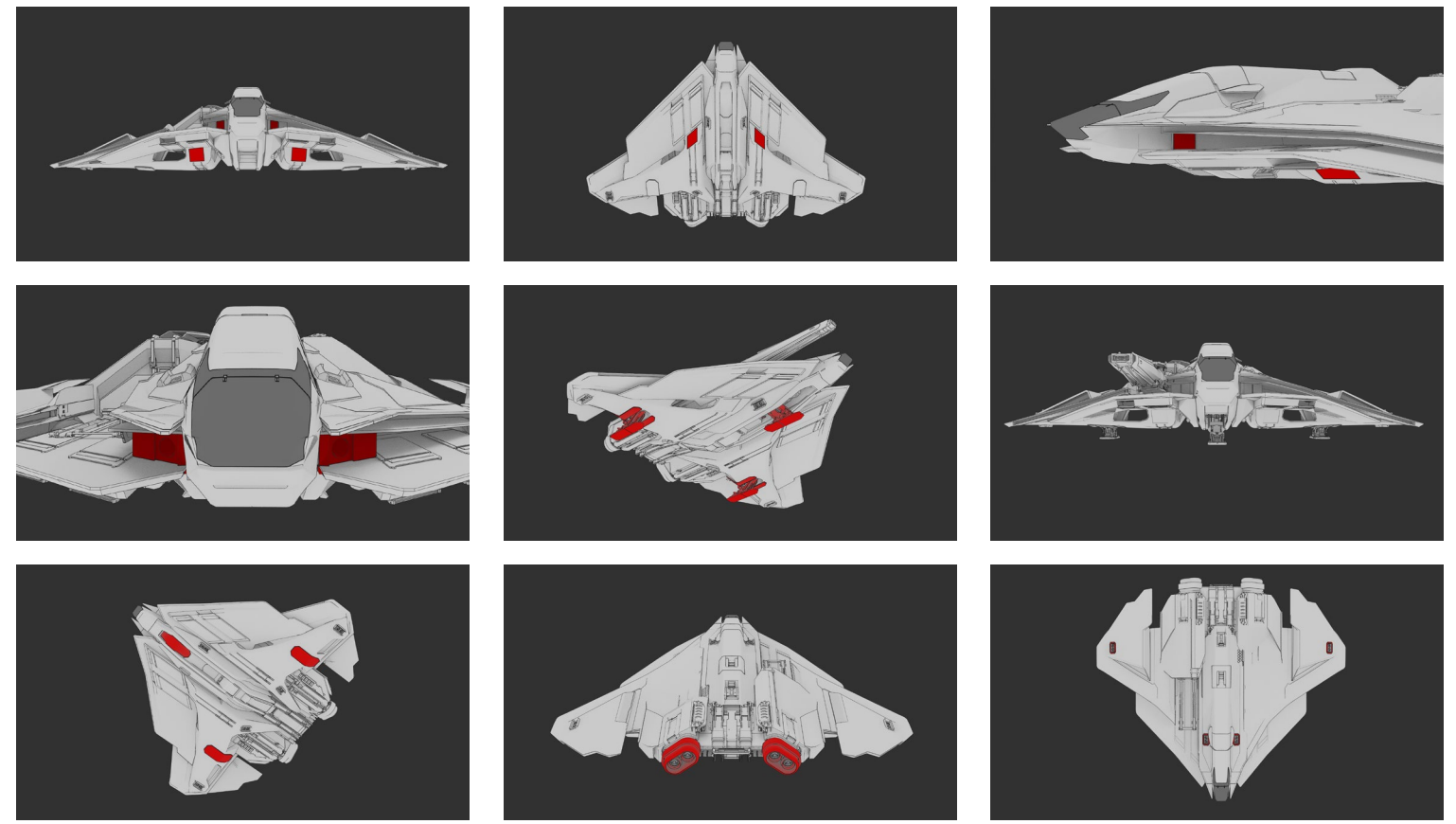
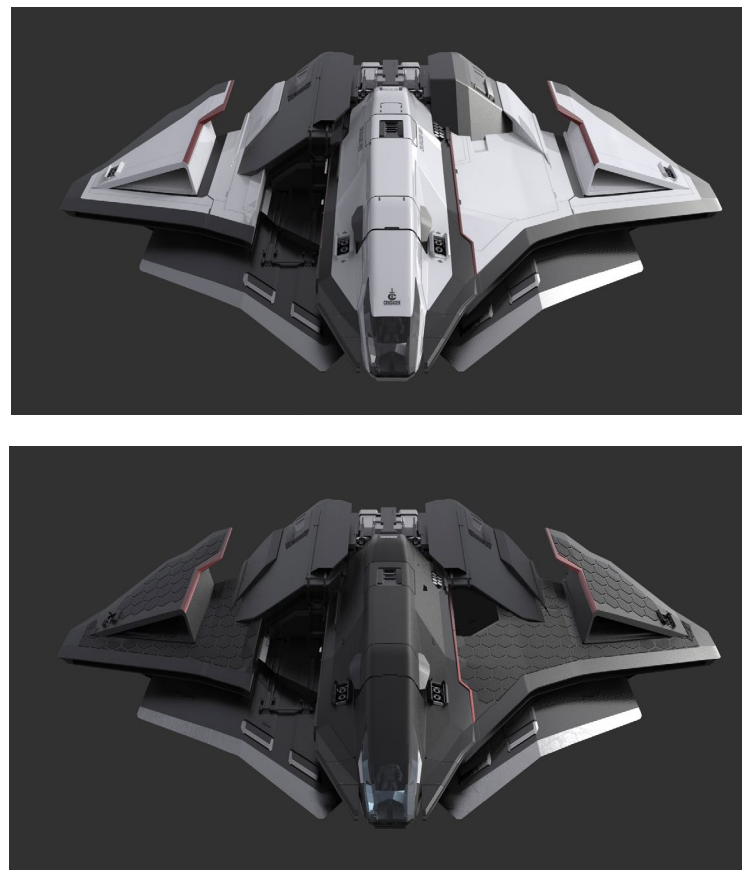
Chris Roberts was happy with the state of the Ares but recognized that there were not enough differences between the energy and ballistic versions. He wanted each model to stand out and seem distinct from one another. The artists and designers discussed their options and quickly developed a system by which the ballistic version would feature a side cover to house additional ammo, while the energy version would not.

ENERGY VERSION



BALLISTIC VERSION





With the first pass review (always the most important check) completed, the team moved onto fitting components and making sure the pilot could still see out. It wouldn't do to have the size 7 weapon blocking the pilot's visibility after so much work to get its external position right. Luckily, there were no such major issues and the team could proceed onto the always interesting phase of polishing the design and finalizing the overall shapes. On his own review, Jones decided that the ship had gradually lost some of the Crusader elements he had liked earlier on. So, he produced a paintover to get them back into the mix, including one of the underside to properly develop split lines.

With the overall look completed, Jones developed optional paint schemes and materials for both the ballistic and energy versions. Veteran Concept Artist Sarah McCullough joined the process to properly develop the two size 7 guns. Behring was chosen as the manufacturer, as its style naturally complemented the Crusader look, though the two weapons were built to specifically complement the Ares' design and overall flow. From here, the team put together a package for the Implementation Team. Cockpit artwork was reused from the Mercury for this stage, with changes to be made during the implementation phase. Special care was taken to note the differences between the energy and ballistic versions, as they would be particularly important for the final presentation of the ship and for making it identifiable when available in-game.

CRUSADER INDUSTRIES ARES ION SHIP PAGE

<https://robertsspaceindustries.com/pledge/ships/crusader-ares/Crusader-Ares-Ion>

CRUSADER INDUSTRIES ARES INFERNO SHIP PAGE

<https://robertsspaceindustries.com/pledge/ships/crusader-ares/Crusader-Ares-Inferno>

SHIP PRESENTATION

<https://robertsspaceindustries.com/comm-link/transmission/17379-Crusader-Ares>

TRAILER

<https://www.youtube.com/watch?v=sn7A6En6ROA>



THE
AEGIS DYNAMICS
VULCAN

DEVELOPMENT HISTORY



INITIAL DEVELOPMENT

Like many Aegis Dynamics spacecraft, the Vulcan support ship has a long and storied history that stretches back several centuries to the height of the Messer era. In 2590, innovations in fuel refinement allowed ships to spend longer on the drift, so the UEEN requested proposals for a medium-sized support spacecraft with the flexibility to conduct both refueling and rearming operations. Given the military contracting process at the time, it was a foregone conclusion that Aegis would be awarded the project. Nevertheless, the Vulcan team opted to go beyond the military specification and develop what they referred to as a true 'three R' spacecraft: one capable of rearming, refueling, and repairing. Aegis' designers reasoned that if they could deliver a ship capable of supporting smaller fighters and bombers (rapidly becoming a more important aspect of naval doctrine), they would have a chance at building something instrumental to the UEEN's arsenal longer term.

Early prototypes would be completely different spacecraft compared to the models released three and a half centuries later. Early Vulcans lacked the BARD drones of the modern version, meaning that each of the three main processes had to be accomplished manually in a considerably more dangerous way. After a series of early accidents destroyed several Vulcans, engineers developed a process by which munitions were kept inert and then activated by remote once loaded. Early refueling using the Vulcan platform was a more difficult proposition. Spacecraft were required to maneuver extremely close and connect via external probe for the duration of fueling. Unlike with munitions, there was no option to make quantum fuel inert; crews were keenly aware of the increased danger during refueling. In ideal situations, refueling was done at a full stop. However, this was often not possible under combat conditions, earning Vulcan crews the genuine respect of fighter and bomber squads.

DEVELOPMENT HISTORY



However, repair was a comparatively simple process, with the ship's rear compartment allowing the storage of repair tools and supplies that could be easily accessed by crewmen in external maneuvering suits.

As was common of support spacecraft at the time, the early Vulcans were completely unarmed and featured limited armor. As advances in process and military strategy improved over the decades, the Vulcan's defensive capabilities would be reworked significantly.

The resulting ship, formally launched in 2594, impressed the UEEN on its formal review, prompting them to order nearly four times the number stated in the original proposal. As the ship found its place in active service, Aegis prioritized future development to keep it from becoming obsolete. Changes to the Vulcan platform happened rapidly as the company adapted to battlefield reports and worked to integrate the latest technology. Within a decade, the simple but dangerous 'workshop' concept for repair operations had been replaced with a formalized process using manipulator arms, while training for in-flight refueling had improved and significantly reduced casualties. Changes

to all three of the Vulcan's processes would occur regularly, supported by Aegis at every turn. The modern Vulcan took shape in 2895 with the adoption of Saga Datasystems BARD drones that standardized the ship's support functions and significantly reduced danger. By using the soon-to-be industry standard drones instead of developing their own, the overall cost-per-unit of the Vulcan was reduced and Aegis entered into a strategically important relationship with an up-and-coming technology company.

THE VULCAN AT WAR

The Vulcan was first bloodied in 2603 during the early battles of the Second Tevarin War. By the start of the conflict, the spacecraft had been part of the UEEN inventory for almost ten years. There it had proven its worth in peacetime, supporting and expanding the range of convoys and patrols. Its first combat missions, however, did not go well. Tevarin forces quickly realized that they could reduce UEE effectiveness by targeting the slow and under-defended support ships. For the first six months of the war, Vulcan losses were significantly heavier than anticipated and a



number of strike missions failed when returning bombers were unable to refuel and were destroyed by Tevarin fighters. These problems were solved by both manufacturing and doctrinal changes. Aegis developed a battlefield upgrade for early Vulcans that improved armor and added a defensive turret; changes that would speak to the eventual rework of the ship. The military itself adapted the ship's role by operating Vulcans in groups of three: one for repair, one for rearming, and one for refueling. These trios were then assigned escort fighters, defending the ships when they came under attack and using their services in downtime.

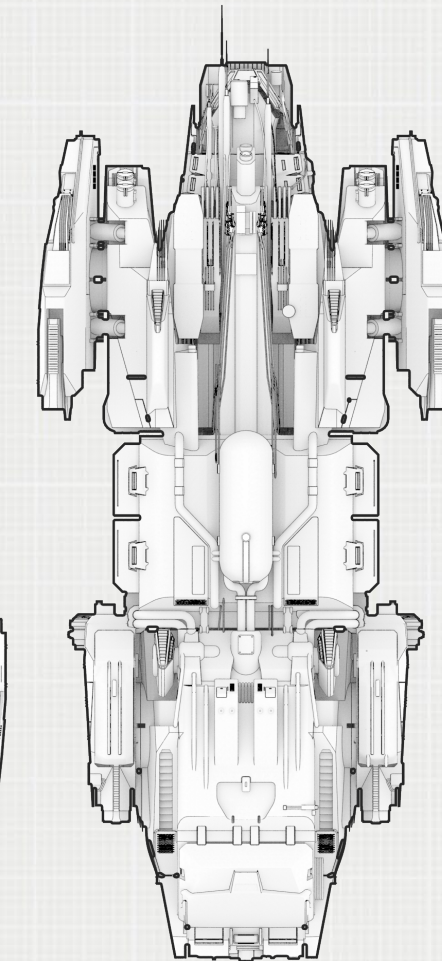
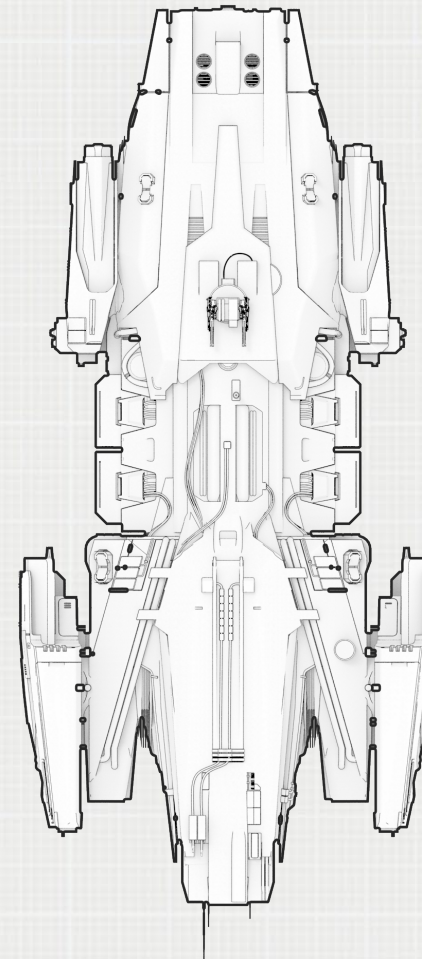
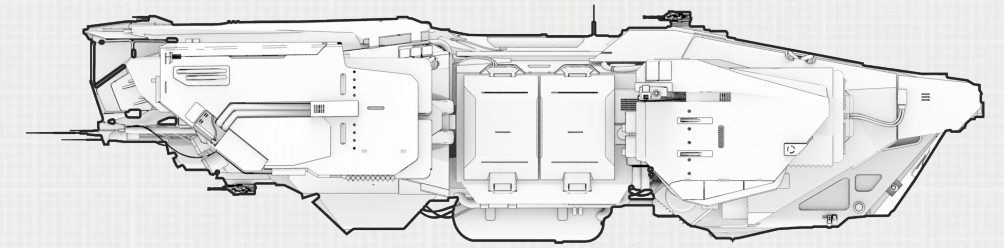
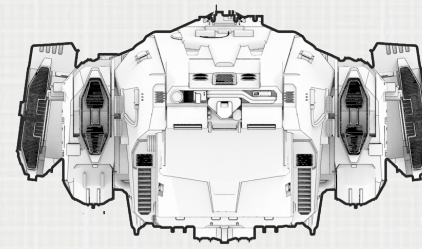
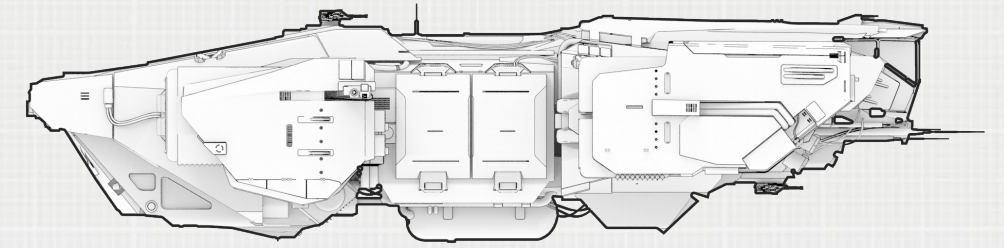
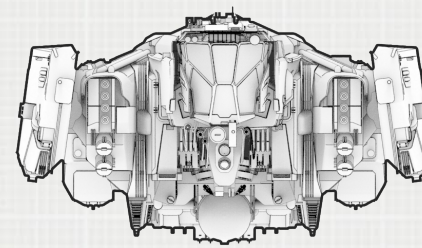
The Vulcan saw no such problems when first pitted against the Vanduul. In early battles, the Vanduul seemed to have limited interest in targeting support ships at all, instead focusing on engaging fighters and taking others as scrap or prizes. Continued advances to the platform allowed the ships that first battled the Vanduul to be much more effective, both at their core roles and in defending themselves. With drones improving the 'three Rs', Vulcans were pressed into service in greater numbers than ever before, both in their traditional roles and as fleet support, with multiple Vulcans often assigned to closely follow destroyers and cruiser squadrons. In recent years, the UEEN has taken to deploying what they refer to as 'ranged strike groups' in an attempt to relieve pressure from the Vanduul. These strike groups consist of base-launched fighters and bombers supported by modern Vulcans to significantly extend their range and striking power, allowing them to deploy into enemy held territory to conduct raids. The strategy was developed around the idea

of responding in kind to Vanduul anti-commerce raids and seems to be proving effective.

THE VULCAN AT PEACE

The Vulcan expanded beyond its original military role quickly due to the simplicity of the original design. Without military-grade weapons or advanced technologies like drones, the UEE saw little reason in preventing the sale of the design to corporate and private users. This gave the Vulcan its second life as a civilian support ship. Initial marketing was aimed at large corporations operating their own convoys that required support ships to operate safely. Aegis sold civilianized Vulcans in great numbers and, within five years, the design was a staple of well-trodden trade routes.

What Aegis could not have predicted was the ship's ensuing popularity with so-called 'wayfarers'. Initially started as an alliance between three hobbyist flying clubs in the late 29th century, wayfarer groups had become a kind of all-for-one do-gooder's organization supporting independent spacecraft owners. The Vulcan provided exactly what they had been lacking: a uniform flagship capable of providing the kind of assistance they had previously been doggedly adapting civilian spacecraft to offer. Today, you can find these versatile and durable ships in most systems, whether they're attached to companies, orgs, or as independent service providers.



VULCAN	
MANUFACTURER	AEGIS DYNAMICS
MAXIMUM CREW	3
MASS	625,330KG
LENGTH	38.5M
HEIGHT	10.0M
WIDTH	16.5M
ROLE	MEDIUM REPAIR MEDIUM REFUEL

ALWAYS FORWARD: A UEE MARINE HISTORY

BY: MARCUS ESTES, LT. COL (RET.)

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CHAPTER 3: OPERATION OBERON

With the recent trend of military defeats, High-Command knew the UEE was losing the Second Tevarin War. Corath'Thal's guerillas proved too agile and elusive for the lumbering military war machine, and forced civilians to pay the heaviest price. Desperate to turn the tide, Navy officials met with spacecraft manufacturers and offered lucrative contracts for technology that could overcome the Tevarin's upgraded phalanx shields. The UEE placed thousands of new proximity sensors throughout high-risk systems in an attempt to track roving Tevarin forces and, following Bremen's lead, worked with the Senate to legislate the creation of local militias to patrol and protect their home systems. While the Army and Navy scrambled to counter the Tevarin's successful strategy, they at least had a clear purpose. Meanwhile, the Marines struggled to define their role in the war. Their difficulties, however, didn't exclusively lie with the enemy.

The Army, still stung that the Marines were removed from their command structure decades earlier, argued that they were best suited to battle the Tevarin on land, and repeatedly referenced their

victory at Koren Pass as proof. As such, High Command passed any land engagements and operations to the Army to execute. Meanwhile, the Navy refused to provide the small Marine fleet with any new fighters, claiming that their combat pilots needed them, and often assigned old and outdated ships to take Marines into battle. Even Marine numbers were proving difficult to fill. The Army and Navy understood an ascendant Marine force would drain resources and talent from them, so they bitterly fought the Marines' right to recruit top-tier soldiers from their ranks. Both branches begrudgingly worked with the Marines but remained determined to prove they were the key defenders of the Empire.

This conflict over the Marines' role came to a head in mid-April 2605 when reports out of Oberon described an attack on Uriel that wasn't a typical hit-and-run operation. A Tevarin force had captured a sizable landing zone and the accompanying warrens near a quantum fuel refinery. Until then, the Tevarin had forgone establishing groundbases in favor of keeping their forces mobile. Military officials feared this meant that the Tevarin had entered the next phase in their war strategy; one that could see them taking land away from Humanity and using the existing infrastructure to establish resupply points. Such a spot in Oberon could be used

to aid attacks on Vega and the UEE's primary food producers in Bremen. Worse still would be if the Tevarin slipped through Bremen and entered the Perry Line. Military strategists deemed a Tevarin and Xi'an alliance a 'Human Doomsday' scenario that must be avoided at all costs.

Yet, when Marine General Russ Adachi presented to the joint fleet command a plan to attack the Tevarin base on Uriel, Army and Navy leadership balked at the operation. Oberon was unclaimed and Army and Navy officials believed that the war's limited resources should only be deployed to defend UEE systems. Furthermore, they felt that the occupation was an obvious feint, designed to attract UEE forces. Raising the proposal to High Command, General Adachi underlined the strategic importance of denying the Tevarin a safe haven near UEE space and protecting Humanity from Tevarin aggression on every front. He feared that ignoring Oberon would only encourage the Tevarin to take more systems.

When High Command prioritized eliminating the Tevarin base, the Army and Navy argued that their combined force would be more effective than the Marines alone. Projection models of the

proposed attack showed that a large scale engagement by Army and Navy forces would lead to considerable casualties and the destruction of a significant number of ships. Making matters worse, mobilizing forces for the assault would leave other areas of the Empire vulnerable to counterattack. High Command carefully analyzed the collected data and decided on a surgical strike, clearing the way for the Marines to show the Tevarin what they were about.

The Marines were ready for the challenge. Special forces from the 1st Marine Combat Battalion had been training for weeks when word came down that High Command had authorized Operation Oberon. In preparation, they trained in an advanced combat style that could neutralize the infamous hand-to-hand expertise of the Tevarin's elite soldiers, and used schematics and scans to build a replica of the landing zone's warrens on Corin. Now an official go, they tirelessly drilled the assault before boarding a secretive Navy transport to Oberon.

The Marines knew they would be outnumbered and outgunned, so they needed to get to the planet without alerting the Tevarin. This involved waiting days until weather conditions provided





enough cover for the deployment of “Nails” to quickly and covertly deliver the troops planetside. The Marines spent several anxious days waiting aboard a ship in Vega until getting word in the middle of the night that conditions were right. Their transport set out for Oberon, cautiously evading Tevarin patrols buzzing around the planet.

In the early hours of June 24, 2605, Marine commandos touched down on Uriel near a decommissioned maintenance enclosure that provided access to the subterranean tunnels connected to the quantum fuel refinery. The Marines believed that eliminating the facility’s strategic importance would drive the Tevarin to abandon the landing zone, so they advanced toward the refinery’s control room intent on destroying it.

The first stage of the mission went as planned. The Marines carefully avoided engagement until they entered the control room and killed all the Tevarin inside. While setting explosives, a contingent of Tevarin soldiers approached and engaged the Marines. The ensuing firefight and ever growing number of Tevarin troops prevented the Marines from planting the final charges. Seeing no alternative, they resorted to an improvised demolition strategy as they fled.

The Marines raced through the tunnels to their secondary exfiltration point, assuming that their original entry point had been compromised. They successfully reached the planetside only to receive word that Tevarin ships had engaged and chased away their approaching rescue ship. They were now stranded.

Filled with uncertainty regarding the success of their mission and unsure if they would ever leave Uriel, the Marines fled through the snow-covered mountains surrounding the landing zone. Thus beginning an epic and often unbelievable journey across harsh terrain with better supplied Tevarin forces nipping at their heels. When military analysts received word of the situation, they put their chances of survival at 3.8%. As General Adachi famously said, “They’ve obviously never met my Marines.”

He was right. Despite the drastic odds, this incredible journey through Uriel’s mountains would become legendary and inspire generations of young soldiers to sign up. Yet, the truth behind what actually occurred is even more unbelievable than the stories would lead you to believe.

END EXCERPT

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