

# JUMP POINT

ISSUE: 06 04

IN THIS ISSUE →→→

**03** **BEHIND THE SCREENS:**  
Composers

**19** **WORK IN PROGRESS:**  
Origin 100 Series

**35** **WHITLEY'S GUIDE:**  
300i

**39** **WHERE IN THE 'VERSE?**

**40** **ONE QUESTION PART 2:**  
What was the first game & system you played?

Editor: David Ladyman    Roving Correspondent: Ben Lesnick  
Layout: Michael Alder

## FROM THE COCKPIT

### GREETINGS, CITIZENS!

As promised last month, we deliver the parts we couldn't fit in the March issue. We have interviews with the two primary composers for *Squadron 42* and SC Persistent Universe music (Geoff Zanelli and Pedro Camacho, respectively) — basically Part 4 of our three-part Audio Behind the Screens discussions. The body of previous work for each of these composers is stellar, and it appears that they are going above and beyond with CIG's soundtracks.

We also have the second half of the CIG staff responses to our One Question, for your reading pleasure: What was the first electronic or computer game you can remember playing, and on what system?

We've also got a double-serving of Origin ships, with the Work In Progress article featuring the newly released 100 series, and an excerpt from Whitley's Guide on the well-established 300 series.

And thank you, Sven Algermißen, for your star-faring response to our most recent question of "Where in the 'Verse?"

Meanwhile, we hit a couple of noteworthy milestones since the last issue that I want to mention. Why mention milestones? I'm told that some of you occasionally re-read earlier issues, and that when you do, you'd like a reminder of what was happening when the issue was first released. So for the record, the 'verse has expanded to two million Citizens as of

a couple weeks ago. I am boggled by the number of zeros that entails, and I can do no better than quote Chris in saying, "It's your belief in the project, from the earliest backers to those relatively new to the 'verse, that make it all possible."

We also hit Alpha 3.1 on schedule, with plenty of expanded role-playing features (including a character customizer and service beacons), with a dozen new personal weapons, and with five new flyable (or driveable) craft: the Cyclone, Reclaimer, Terrapin, Razor and Kue. Your enthusiasm is so important in fueling the drive of everyone at Cloud Imperium Games to continue creating and innovating in ways that others can only dream of.

And before I close, I want to thank all of you who give feedback in the Subscribers' Den and in email directly to me. Some of it we take and apply. Some we appreciate, but please realize that we aren't going to be able to deliver exactly what you request. In particular, our writing team is more and more focused on writing the game itself, which is directly related to the reduction in fiction and lore in **JP**. And some... well, while we're an open company, some things are gonna be too open for us to discuss in **JP** or anywhere else.

Until next month...

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

David.Ladyman@cloudimperiumgames.com





# COMPOSERS

## PEDRO CAMACHO

Photos pages 4-7  
by Sofia Pinto

**But wait, there's more! We concluded our three-part series on the CIG Audio teams last month, with a focus on the sound designers who fold the music into our games. As part of that focus, we thought it would be nice to run short sidebars with the two composers who create most of our music.**

**... Six thousand words later (yes, that's a lot), we realized that they weren't sidebars, they were a completely separate Behind the Screens article. And so, for April, we give you Pedro Macedo Camacho and Geoff Zanelli, two very different but equally powerful composers. We begin with Pedro.**

### BEGIN TRANSMISSION →

**JP:** *Let's start with who you are. When people ask what your job is, or what do you do for a living, what do you tell them?*

**PEDRO MACEDO CAMACHO:** No one asks me what my job is nowadays. Most people I meet know that I write concert and non-concert music, which is hard for me to believe. But sometimes I get people who are puzzled about how can I do this for a living.

**JP:** *Do they think it's too easy, or that there isn't a demand for it?*

**PEDRO:** I never seem to make a proper answer to anyone. I don't know how to answer people who struggle in this business; maybe I just have always been incredibly lucky. Everyone told me it would be impossible to live in Portugal and still get to do anything meaningful.

My career started with a post online with my portfolio. A week later I had my first gig and it has never stopped.

**JP:** *What did you do to prepare? Are there schools that teach composing?*

**PEDRO:** I did attend film scoring school, which is very superficial in general (but useful, nevertheless) but before that I studied classical composition for 8 years.

I studied this long because I was absolutely in love with music and wanted to do music because I feel like my life would be meaningless without it. I wanted no shortcuts, I wanted to study music in depth — from its dawn in the Renaissance to modern-day composers and film composers.

The main thing is not finding a school; the main thing is to find your composition master.

**JP:** *Who was your main composition master (or masters)?*

**PEDRO:** I went to the best school in Lisbon to study with Portugal's best ever composer and composition teacher, Eurico Carrapatoso. I had to wait a year until he allowed new students to study with him.

He is a fantastic human being and a superb master in all fields of composition. In a public address, four years after I finished studying with him, he told the audience something I was not prepared for. After ten years of learning music, I had taken those four years to process everything and wasn't sure if I was good enough (this was back in 2005).

I went to his public speech, and when he started he identified several former students. In the end he looked at me and said this: "I can see we have in the audience the Composer (which was the first time I had been entitled with that term) Pedro Camacho. For those who don't know him yet, he was simply the best student I ever had in 25 years of teaching."

Of course I cried... I was not prepared for that...

**JP:** *That's a wonderful accolade.*

**PEDRO:** And he didn't stop there. He had with him a CD with the first composition I ever wrote for him, a five-voice Renaissance Kyrie Eleyson from 1998. You can read on the final page his comment, "I'm speechless."

**PEDRO:** This is old-school composition, pen and paper, which everyone should do.

**JP:** *I was noticing that. It's all real neat! How long have you been doing this — when did you post that first portfolio?*

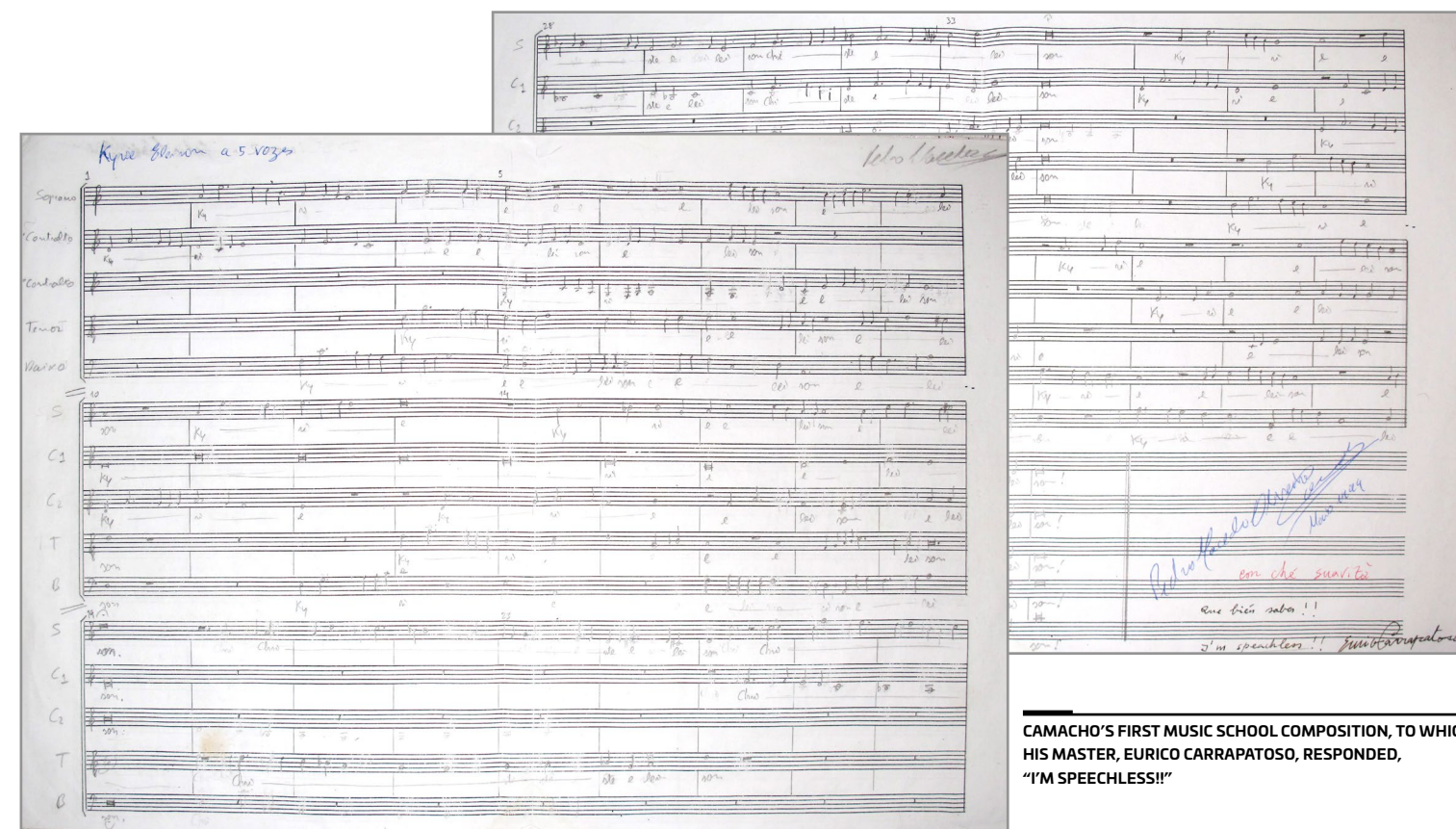
**PEDRO:** My first portfolio was placed online in 2006.

**JP:** *And what was in the portfolio? Various pieces you had composed? Were any of them for video games?*

**PEDRO:** I just placed my first ever MIDI tracks, including this one:

[www.musicbypedro.com/old\\_music/SynthQuest\\_Blue.mp3](http://www.musicbypedro.com/old_music/SynthQuest_Blue.mp3)

Curiously, this MIDI track, one of my first ones, was actually bought



**CAMACHO'S FIRST MUSIC SCHOOL COMPOSITION, TO WHICH HIS MASTER, EURICO CARRAPATOSO, RESPONDED, "I'M SPEECHLESS!"**



CONDUCTING THE STAR CITIZEN  
ORCHESTRA IN BRATISLAVA.



by Cloud Imperium Games for *Star Citizen*! It was very flattering that my first ever MIDI production was deemed good enough for this incredible and fabulous game. I didn't say anything about how old it was to our first ever audio director, Martin Galway. He and Chris Roberts just loved it.

I think this is the first time I've revealed that.

**JP:** *Where in the game can we hear it?*

**PEDRO:** It's available here:

[www.youtube.com/watch?v=fYJD1wiTBmM](http://www.youtube.com/watch?v=fYJD1wiTBmM)

**JP:** *You've told us a bit about your fascination with composing. What about games? Why compose for games?*

**PEDRO:** I started playing games when I was three years old, with my father. I've played games every single day of my life since then.

I played most Spectrum 48k Games, then Commodore 64, then the wonderful Commodore Amiga 500 (then 600 then 1200). I had around 500 games for Amiga systems, Sega Mega Drive [Genesis], etc.

**JP:** *We have a question we're asking the CIG staff for this issue, and I'll ask you, too: What was the first electronic or computer game you can remember playing, and on what system?*

**PEDRO:** *Manic Miner*, Spectrum 48k.

**JP:** *What do you remember about it?*

**PEDRO:** I remember seeing my father playing and me trying to play it, I remember how long it took to load it . . . I remember the loading noise from the cassette.

**JP:** *It's interesting what memories will persist.*

*Have you composed for any other games?*

**PEDRO:** I've composed for several. I would highlight *Audiosurf* (2007), which was my second gig, and which got me my first music award (Independent Games Festival (IGF) Excellence in Audio Award 2008). Then things went spiralling upwards to other projects like *Civ 5*, *Wolfenstein*, and so forth.

**JP:** *Audiosurf sounds like it's a music game.*

**PEDRO:** Definitely. This is my main music in the game:

[www.youtube.com/watch?v=fgl5Y7EXT48](http://www.youtube.com/watch?v=fgl5Y7EXT48)

**JP:** *How did you get involved with CIG? And why CIG?*

**PEDRO:** *Wing Commander* was one of my favourite games ever on the Commodore Amiga. When *Star Citizen* was announced in Kickstarter,

I emailed Chris Roberts. He asked me for a test and . . . here I am! The test became *Star Citizen's* main theme:

[www.youtube.com/watch?v=poG3Wvb8FU8](http://www.youtube.com/watch?v=poG3Wvb8FU8)

CIG has the best project in the making on the planet.

**JP:** *Did you really get full orchestral recording as part of the test?*

**PEDRO:** I was picked based on the MIDI mockup. But we are always being tested in a way. I believe music has a special ability to convey the dream Chris has about *Star Citizen*. I think he and I have really connected very well as a true director/composer relationship. Even when the game was extremely small the music could sell the dream that Chris had in his mind about this project.

**JP:** *Let's talk about how things happen. When CIG wants a new piece from you, what do they ask for? How do they describe it?*





**PEDRO:** In its current form, CIG Audio makes a written request describing what they want, and I have to deliver as close as possible to what CIG Audio team asks for. Chris also makes some direct requests to me. Those are more flexible, but I think they also end up being a bit more special.

They are way harder to nail, though. Chris is one of the most demanding and talented directors I have ever worked with, and I have worked with many. I love that; it makes me go further than I normally would.

**SOME EXAMPLES OF THESE INCLUDE:**

- **PUPIL TO PLANET:**  
[www.youtube.com/watch?v=-yLTm8DZ8s4](http://www.youtube.com/watch?v=-yLTm8DZ8s4)
- **STAR CITIZEN:** Procedural Planets v2:  
[www.youtube.com/watch?v=pdCFTF8j7yl](http://www.youtube.com/watch?v=pdCFTF8j7yl)

• **SEVERAL SHIP COMMERCIALS, INCLUDING:**

- 300I:** [www.youtube.com/watch?v=YTBzrUwB6Qo](http://www.youtube.com/watch?v=YTBzrUwB6Qo)
- 600I:** [www.youtube.com/watch?v=gbCSQDhPOIk](http://www.youtube.com/watch?v=gbCSQDhPOIk)
- HORNET:** [www.youtube.com/watch?v=g0gZES2pTWk](http://www.youtube.com/watch?v=g0gZES2pTWk)
- AURORA:** [www.youtube.com/watch?v=UvDs7RDKCag](http://www.youtube.com/watch?v=UvDs7RDKCag)
- MUSTANG:** [www.youtube.com/watch?v=BR07oZC0QHU](http://www.youtube.com/watch?v=BR07oZC0QHU)
- FREELANCER:** [www.youtube.com/watch?v=v07RxsZpcKc](http://www.youtube.com/watch?v=v07RxsZpcKc)

Some of these won a couple of international awards, including the Hornet and Freelancer.

**JP:** This is... impressive. That's a lot of really good music!

**PEDRO:** Thank you so much, sir! When you are guided by a great director, you go beyond your natural skill and risk becoming better. I

think that is our purpose in life, trying to meet and speak with people that make you a better human being, a better professional. Chris Roberts is just a genius, and that is why *Star Citizen* is as great as it is.

**JP:** When it's not a special request from Chris, what sort of things does Audio request from you?

**PEDRO:** The Audio team requests music for our Persistent Universe. It is fantastic because Lee Banyard, Darren Lambourne, Ross Tregenza and Philip Peers-Smallwood are really talented individuals. They awake another part of me as a composer, which complements my natural abilities, to create an interesting music logic system and a very rich music experience in our universe.

**JP:** Do they ask for a particular length, or key, or time signature? Do they specify mood?

**PEDRO:** In general, the audio team asks for specific lengths and specifies the moods. It's a great teamwork.

**JP:** How long is an average cue/composition that you do for the PU?

**PEDRO:** Around two to three minutes each. Sometimes it can be five!

**JP:** That seems like a lot of music to stay on one mood, but then I realize that orchestral music is typically much longer than that.

**PEDRO:** Five minutes isn't long at all, I think. Sometimes I struggle to fit all I want in two minutes. It depends on how much I have to say. Music is a dialogue of the mind, of your soul. Music connects my soul with the soul of the listener. When you have something real to say, five minutes seems super short.

I want *Star Citizen* to always say something to our backers. That is why each track is treated with very special care — its sounds, everything...

**JP:** What are your inspirations as you compose? How do you prepare to create music?

**PEDRO:** My inspiration comes from the visuals and the story behind each part of our world. If you do music with your heart, each time you create something it is a part of you that goes away. I can't describe this well... but it's like something that was in me that goes out to the whole world and never comes back. So it is always a slightly painful process to me.

**JP:** So you are given a description and images of the world, or ship, or whatever it is that you're composing for?

**PEDRO:** Yes, that is right! Then I try to get into music the emotion I had when I saw those images for the first time!

**JP:** How is composing for SC different from composing for other games?

**PEDRO:** *Star Citizen* comes from my heart.

**JP:** Does that make it more difficult? More enjoyable?

**PEDRO:** It makes it easier and much more enjoyable due to the community we have and due to Chris. They are both very sensitive and can easily tell when something was done with true passion. The hard part is that you expose yourself a bit more, and that bit of you will never be yours alone anymore.

But the people who get it are very kind people. We are very lucky with the community we have. Fantastic human beings. And sometimes they do connect with me and tell me how important a certain track was for them in their very own lives.

**JP:** For how many instruments do you compose? Does it vary from piece to piece? Do some of the shorter pieces have fewer instruments?



**PEDRO:** I compose for whatever is needed. The orchestral tracks usually have the full symphonic orchestra. Here is a good example:  
<https://soundcloud.com/pedrocamacho/scifi-homage>

**JP:** And a full symphonic orchestra is about 80 instruments?

**PEDRO:** 100. Other pieces have a mixed orchestra with synthetic instruments, electric guitars and vocals. In this case it was Julie Elven:

<https://soundcloud.com/pedrocamacho/first-light-starfarer-trailer>

Other have synthesizers only, like the Grim HEX tracks.

**JP:** What is the most difficult piece that you've done for Star Citizen?

**PEDRO:** The Main Theme, because it was my first ever track for Chris Roberts.

**JP:** How much back-and-forth work was there on this?

**PEDRO:** It was accepted on first attempt. But when I composed for the Mustang commercial with Chris, I had to make around thirty full revisions. It is such a fabulous commercial... loved working with Chris Roberts and John Schimmel. It is not a commercial, it is a life statement... Chris's life's statement: "Dare to dream."

**JP:** How about the most enjoyable? What is the piece you had the most fun composing, and what piece do you

*enjoy most now that it's done?*

**PEDRO:** I enjoyed every single track I wrote for *Star Citizen*... really... every single note was placed with the same effort in all tracks. The one that made me cry was "Majesty of Space":  
<https://www.youtube.com/watch?v=AQ3GndmvSi0>

This track represents the five-year-old Pedro who looked every night into the sky, into the stars, and wondered, on the little Madeira Island in the middle of the Atlantic. Back when there was no internet. I think Chris and I connected somehow in the early '80s, when we saw *Star Wars*, *The Last Starfighter*, etc. We both went outside and looked to the stars...

That is when *Star Citizen* started. Chris absolutely loved this track too.

**JP:** And one more "most" question — what's the most unusual piece you've composed for SC?

**PEDRO:** The whole Galactic Gear commercial was so unusual and I had so many different moods to tackle (guitars/country + rock for a show + epic synth + fast driving rock) — not an easy task! :)  
[https://www.youtube.com/watch?v=\\_SpsjUHj\\_I1](https://www.youtube.com/watch?v=_SpsjUHj_I1)

**JP:** Final question: any last words?

**PEDRO:** Thank you so much for having my music filling the dreams of so many people.

**JP:** And thank you so much for sharing your dreams and visions with us!



Photos pages 9-10 by Petr Pololanik





# COMPOSERS

## GEOFF ZANELLI

**JP:** Let's start with who you are. When people ask what your job is, or what you do for a living, what do you tell them?

**GEOFF ZANELLI:** I usually say, "I'm a composer. I write music for film, video games and television."

**JP:** What sort of training, schoolwork, or other preparation did you have before you launched your professional career?

**GEOFF:** Well, I started in rock bands as a guitarist and songwriter. But that very quickly turned into other pursuits. I never liked the constraints of songwriting, the whole "3 minutes, 20 seconds maximum, must have at least 2 verses, 3 choruses" of it all. And so I looked to longer forms of music or things that could evolve more, or be more outside the box. And that naturally led me to media like film or games where you change style more often. It keeps you from getting bored!

This was all before I went to college. I already knew I didn't want to go on tour with a band and "play your hits" for a few decades. That's if it all goes well! So, from there I went to Berklee College of Music in Boston on scholarship. This would have been 1992. I had two majors there, Film Scoring and Music Production & Engineering. Which is really a perfect combination. It's exactly what I do now. I write music, and the production side of that is crucial.

**JP:** It sounds like you were already somewhat involved in films and/or games by the time you started college.

**GEOFF:** Oh no! But I was interested and headed in that direction. Actually I had literally no contacts in either industry. Where I grew up, I didn't even know where there was a recording studio!

But what I meant was that I was eager to get into film, TV and game music. So I started looking for ways to break in. About halfway through college, I started applying for internships in Los Angeles, which was

about 60 miles from where I grew up. I was going to be there for the summer and was willing to make the drive up and down each day just to be around music. I sent probably 50 resumes around, with a cover letter going "will work for free" and I got only one response.

That was my rude awakening! This was going to be harder than I thought . . . I showed up to that one interview with a lot riding on it. It turned out to be Hans Zimmer's studio. He was writing *The Lion King* at the time. And I talked my way into that internship, which is to say I begged them to let me clean the coffee cups and wash the dishes and clean the bathroom. That was my toe in the door.

And then I just never went home. I'd finish my shift and sit in the back of the mix studio while Alan Meyerson was mixing, or I'd bring food into a studio and walk out really slowly so I could hear a little bit more music . . .

**JP:** Of course, I know every detail of the film and music industry, but for those who don't, who is Hans Zimmer?

**GEOFF:** Hans has written tons of the scores that people know and love. *Inception*, *Interstellar*, *Gladiator*, the recent *Batman* movies, and the first four *Pirates of the Caribbean* films. I've had a few mentors in my career but he's the most influential. I wrote on probably two dozen of his scores, writing what's credited as "Additional Music." I worked on all four of the first *Pirates* films, which led to me getting the job scoring the fifth one which came out last year.

Some of your readers may have even seen his concert. He toured the world last year to packed houses, huge shows everywhere he went! I think he played Coachella here in the States even.

**JP:** That's neat!

**GEOFF:** It's like a rock show, really the opposite of what people used to think of when they imagined a film composer. Bow ties and pretentiousness are out the window!





**JP:** How did you land the Pirates score?

**GEOFF:** *Dead Men Tell No Tales* came to me for a few reasons. First, I was Hans' right hand on the first four Pirates films, having written not just arrangements of his themes but also a few of the original themes that appeared in the films, starting with the second one. Tia Dalma's theme and Cannibal Island from the second film, and then the Spain theme from the fourth film were mine. And to some extent the mermaids music in the fourth one, at least the action moments were mine as well. So I was already steeped in Pirates music.

But then what put it over was *The Lone Ranger* actually. What I did for that was the big train chase finale which weaved the William Tell Overture, which is what people think of as The Lone Ranger Theme since it was used in the black and white series from decades ago, with the other themes from the film.

That was a big job! I spent months on just that one cue, lots of back and forth, lots of experimenting. It took perseverance to see

that through to the end, but I did it. So both Jerry Bruckheimer and all the executives at Disney were impressed with that. I think my work there gave them the confidence to move forward with me scoring the fifth Pirates. Jerry and Disney, of course, make both the Pirates films and *The Lone Ranger*.

We were on the scoring stage for *The Lone Ranger*, recording that final cue, and Hans was talking with Mitchell Leib, Disney's head of music. Hans endorsed the idea that I score the film. I think he felt he had given everything he could to the franchise and it was time to let me take it over. You'd have to ask Hans, but I thought of it as his way of thanking me for sticking with him and with Pirates for so long.

**JP:** So how long did you fetch coffee before you actually did something related to music?

**GEOFF:** It was off and on, since I was still in college, but a total of 15 months. I'd go in the summers and winter breaks. But I couldn't have taken a full time job then anyhow,

unless I dropped out of college, which I didn't want to do.

When I finished college, there was a composer moving into Hans' studio who needed a full-time assistant. That was John Powell. I worked for and with him for three years or so. He was scoring *Face/Off* and then went on to a bunch of Dreamworks animations, like *Shrek* for instance. He's another fantastic composer, one of the best we have! He wrote the *How to Train Your Dragon* scores, but that was long after I worked with him.

**JP:** 15 months before you did anything besides gofer work?

**GEOFF:** Yes! Actually a little bit before I started working with John, I was a tape operator in Hans' studio for a few months. This was back when we had things like "tape" in studios... 1996! That meant I hit 'rewind' and 'play' over and over while an engineer mixed, or I hit 'record' when musicians were playing. Anything to be around music!



So John hired me in 1996, and I gradually started doing more arranging and other musical tasks for John. I was a quick study, so in 1999 Hans asked me to work on *Hannibal* with him. That was the first one I did with Hans.

From there it was a gradual build up. I'm not a composer who had "the big break," for me it's been a long, deliberate climb up through the industry.

**JP:** I have the impression we'd be sitting here for awhile if I asked you what movies you've made significant contributions to. What are some of the other highlights? And what was the first movie for which you composed the score?

**GEOFF:** Well my early career was mostly those Additional Music credits. Highlights from that side of my career would be *Pirates*, *The Last Samurai*, *Pearl Harbor* and *Rango*. The first film I scored on my own was an indie film in 2005 called *House of D*. David Duchovny wrote and directed that. It's a coming-of-age story set in the 1970s.

As for other jobs where I'm the main composer, highlights would be *Disturbia*, *Hitman*, *The Odd Life of Timothy Green* and a pair of Spielberg mini-series called *Into the West* and *The Pacific*. *The Pacific* was

co-written with Hans and Blake Neely. *Into the West* got a lot of exposure for me. They awarded me an Emmy for it, which I couldn't believe! I was 29 when I started writing it and I felt like I was in over my head the entire time. Maybe that pressure helped me somehow!

*The Pacific* was nominated for an Emmy as well, so I've had some good results working in the miniseries format.

**JP:** What specific categories were the Emmy's? Original Score, or something like that?

**GEOFF:** Primetime Emmy Award for Outstanding Music Composition for a Limited Series, Movie or Special. I had to look it up just now! It's a mouthful. But it's the Emmy for music for any non-series on TV. They have a third category for main titles as well.

**JP:** So, lots of impressive work on movies and television. How about games? How did that get started?

**GEOFF:** *Star Citizen* is easily the biggest game project I've been involved with. I did do three *Call of Duty* spinoffs and an *Everquest* spinoff. Those were not the main games, but it was enough to get me excited about the possibilities

in game music that aren't there in films.

But actually, I know Chris Roberts from a film he produced called *Outlander*. I scored that for him in 2007 or 2008. So he actually knew me as a film composer rather than a game composer. Sometimes composers focus on one or the other, so I think it took a little leap of faith for him to call me and ask if I wanted to do *Star Citizen* with him.

And John Schimmel surely played a big role in that as well. I think Chris and John were both looking at *Squadron 42* as a specifically narrative-driven game, very different from the persistent universe! And they thought "wouldn't it be great if this story were told musically more like a film?"

So they asked me to get involved. I started with some of the ship commercials. I think the Constellation one was first, then there was the Cutlass and a few others. But that quickly evolved into me being asked to do *Squadron 42*. That was an easy thing to say "yes" to! Chris's ambition and excitement for the material is contagious. You can tell the whole team is trying to make the best game possible, and there's always someone looking for a way to "do more," make it bigger and better, more engaging. Music, of course, can play a big role with that.





I'm working on it like a giant film. Or maybe it's better to say a giant mini-series, in a way, since it's not just two hours long, it's much, much longer and grander. The main characters will each have their own theme, which will recur and develop as the story unfolds, and those will all intertwine with one another.

Those are the subtle things that enrich a score, things that most players won't necessarily even notice, but they enhance the world-building aspect, they engage the player, and actually they help raise the stakes as certain story events happen.

**JP:** *I want to talk about your process, but first, we have a question that we asked the CIG staff for this issue, and I want to ask you as well. What was the first electronic or computer game you can remember playing, and on what system?*

**GEOFF:** Easy! *Adventure*. Atari 2600. That's my gamer roots! I started with an Atari 2600 back in the '70s.

And yes, I'm old enough to have a grey beard . . .

**JP:** *So, let's talk process. CIG has asked you for . . . well, you tell me. What does CIG ask for, and how do you go about creating it?*

**GEOFF:** The big picture of what CIG is asking for is nothing less than a massive, epic score for a massive, epic story set in space. So it's daunting right from the outset! But that can be broken down into smaller, manageable pieces of music. That's what I'm really doing, I'm taking this enormous problem, "how do I write the music for this?" and breaking it down into smaller pieces that I can work on. I'm still writing the score but I've already written between three and four hours of music. Some estimates for what the game will eventually need put the total much higher than that. So again, it's like a mini-series in the sheer amount of music that the game needs.

But now that things are broken out into specifics, I'm able to keep writing at a steady pace. Just for an example, let's say we know we'll be in a ship a lot of the time. And many different things can be happening. You could just be travelling. You could be in a small dogfight. It can be mysterious, you can be ambushed, you can be winning, you could be damaged and barely holding on. And the music needs to play all those things, and be able to rapidly shift gears as the player goes through all of that.

So I worked with the audio team, Lee Banyard, Ross Tregenza and Phil Peers-Smallwood, to design a music logic matrix. The game can track what's going on, and it can switch between all the various pieces of music at any point in time, smoothly, to 'score' the experience.

Just that one set of space flight music that I'm describing ends up being close to 20 minutes of music. And of course, since we know we're going to spend a lot of time in the ships, it can't all come from that. You can see how this quickly adds up to a lot of music. Then you have first-person to deal with, which needs a different sound since it's more intimate or visceral. And EVA moments which have a totally different feel.

And that's just for the gameplay music! There are also cinematic moments, as people saw if they watched the *Vertical Slice*. And certain locations will need their own specific music. Certain characters who show up often will have their own themes as well, which will mostly come from cinematic moments in-game.

There are a lot of bespoke moments to address with the music. You may not notice as you watch the *Vertical Slice*, but I think that was upwards of 50 different cues playing. We learned a lot from the *Vertical Slice* by the way. We're going through all of that to tweak and fine-tune all the music, making improvements along the way and using it to aim us forward in all the right ways.

In some ways, going up with the *Vertical Slice* was terrifying. I think the players know it's all work-in-progress, but it still makes me uneasy to have unfinished music out there.

**JP:** *What type of things did you learn from the Vertical Slice?*

**GEOFF:** One of the things the *Vertical Slice* taught us is to not be too heavy-handed with the music for certain moments. I think, and this is just my opinion, that the mix played the music too loud in some moments where it should just be supporting the scene. That last thing music should do is take a player out of the game, so that's something we're all working to smooth out,





and it's already gotten much better. Some of it is in the writing, which is to say that when I watched the whole thing done in context, I could feel a build-up of heaviness that wasn't my intent. Now I'm going back through to make sure the score is supportive when it needs to be, and out in front when it needs to be.

These are all usually things that are taken care of internally, but Cloud Imperium's focus on showing the players what we're up to is unique. It gives everyone a chance to see the process, which I think is great!

Not having a live orchestra yet is important to be aware of. The idea is we get all the notes just right, and then we record the orchestra. And the Vertical Slice is the tool we use to get all the notes right!

**JP:** Once you have a description of a cue to compose, how do you get started? What's your inspiration?

**GEOFF:** I'm usually able to get gameplay videos. Even a rough or unfinished video of a level helps me immensely. So in that sense, I'm inspired by the game and the gameplay itself.

That's really all I need. I do discuss with Chris and the audio team any specific goals they have. Sometimes it's easier for me to just write something and play it for them and make changes from there. But really, once a level or cinematic is ready for me to look at, they send it, we have a brief conversation and I get to work. Chris and I have a shorthand by now, having done both *Outlander* together, and now many hours of *Star Citizen* music. I think people will be very pleasantly surprised to hear how this all sounds once 96 musicians play on it!

**JP:** How much of the *S42* score will be recorded live, and how much will be synthetic?

**GEOFF:** Right now it looks like the vast majority will be live, possibly all

of it. I'd only not record musicians if it were for a purely synthetic piece of music. There isn't a cost consideration here, really — we've promised a live score and will deliver it. But there are times when I may choose to use a synth-only sound. I'm thinking of a long-standing tradition in sci-fi scores, *Blade Runner*, say, where the music can be entirely synthetic if that's the right musical choice.

**JP:** How does composing for *S42* compare to composing for other games? How is it similar, and how is it different?

**GEOFF:** The scale of *S42* is enormous. That's one of the main differences. Not just because it's more minutes of music to write, but because it means it's necessary for me to write more varied music, to avoid a feeling of sameness throughout. It has to evolve a lot over the long story arc. And it really comes down to Chris's ambition here. Which I said before is contagious, so all the departments are inspired by that. Everyone is pushing the envelope as far as they can, including with the music!

**JP:** What's the most difficult piece that you've composed for *S42*?

**GEOFF:** Ooh, good question! I feel like it's "the one I haven't written yet," because there are a lot of interesting things coming down the pipeline. New locations which I can't talk about yet, and other game events. So I'm spinning the gears trying to think of how I'll address them when the designers are ready to show me!

**JP:** How about the most enjoyable or the most fun piece?

**GEOFF:** I've had tons of fun writing some of the songs, actually. It's a diversion from the main score. I wrote a song called "The Stars Are Mine" for the Galactic Tour spots. I don't know that they've used the

full-length version yet, but it's come out on a few of the spots already. That was great fun!

And maybe the "Cutlass Tango," which was in the commercial for the Cutlass.

As for the *S42* game-specific music, I loved how the launch sequence in the Vertical Slice came out, and that was a blast to write as well.

**JP:** Have you found it easier (or harder) to compose themes for specific characters?

**GEOFF:** You know, that's a pretty standard way for me to work, actually. It's comfortable for me to work that way so I wouldn't say it's any harder or easier. The acting performances are great though. That helps make things easier. Mark Hamill is great, really the whole cast is. And the motion capture on them is fabulous also, it really lets the performance shine through.

**JP:** And what is the most unusual piece you've composed? In fact, let me expand that one — the most unusual piece you've scored for *Cloud Imperium* and not for *CIG*?

**GEOFF:** The "Cutlass Tango" is pretty out there for this, I think. You wouldn't necessarily expect to be asked to write something like that if you're the composer for *Star Citizen*! But there's a little easter egg song for *S42* that I can't talk about yet. Except I did just talk about it . . . but

that's all I can say so far . . . it's definitely unusual!

**JP:** You're not telling? You mean I'm going to have to play *S42* to find it?

**GEOFF:** Yeah, you may even have to play all the way to the end!

**JP:** You're allowed to tease the readers, but it's not nice to tease the interviewer! I think our work here is just about done. Any last words?

**GEOFF:** Just a big shout out to the backers, who are so supportive of everything we're all doing! We're glad you're along for the ride, and I hope you enjoy getting a little inside view of the developer's process. I'm enjoying it for sure!

**JP:** Thank you for taking the time to talk to us all — I really appreciate it!

END TRANSMISSION ←

**CUTLASS TANGO COMMERCIAL:**

[www.youtube.com/watch?v=qE7TFnSI9y4](https://www.youtube.com/watch?v=qE7TFnSI9y4)

**VERTICAL SLICE:**

<https://www.youtube.com/watch?v=BHR1aEdTA4M>

**CONSTELLATION COMMERCIAL:**

[www.youtube.com/watch?v=zG-82TakEqk](https://www.youtube.com/watch?v=zG-82TakEqk)

**GALACTIC TOUR:**

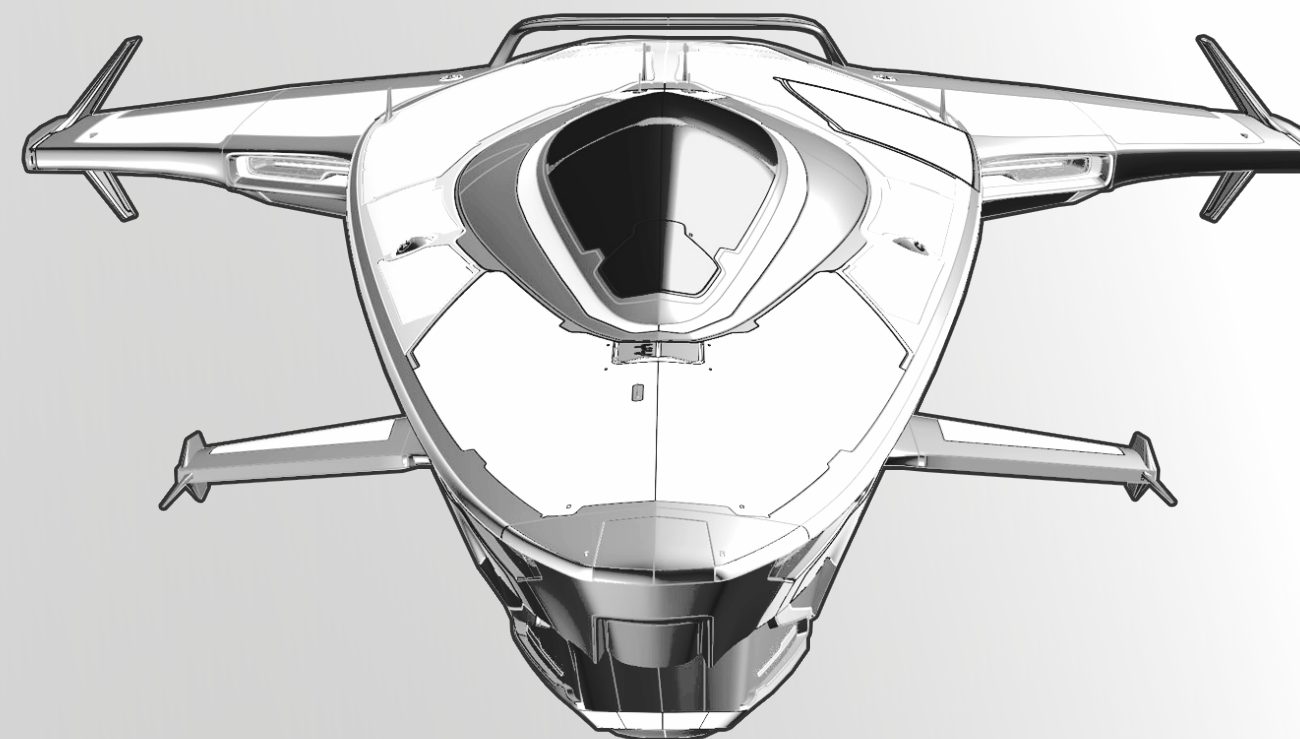
<https://www.youtube.com/watch?v=OMGs63MsSBI>

photos by Brandi Welles





# WORK IN PROGRESS... ORIGIN 100 SERIES



## AIMS

- Starter ship, equivalent to Aurora.
- Exploration (100i) / combat (125a) / cargo (135c) variants.
- Single seater. Has a bed, 2SCU inside (+4SCU in 135c).
- Needs to stay "starter-like" in terms of components.

## AESTHETIC

- Follows new Origin design guidelines, lots of curves. Close to ground, avoid camping car look.
- Bed behind the pilot seat, side entrance. Ramp necessary for cargo.
- Nods to classy 70s/80s sport cars (Fairlady 240z, Miura, M1...).
- Syd Mead influences.

<b>Length</b>	15m
<b>Width</b>	10m
<b>Height</b>	4m
<b>Mass</b>	625,330kg
<b>Variants</b>	100i (Exploration) 125a (Combat) 135c (Cargo)
<b>Speed</b>	100i 210 m/s 125a 230 m/s 135c 190 m/s
<b>Crew</b>	1
<b>Powerplants</b>	1x Small
<b>Shield</b>	1x Small

<b>Armour</b>	Small
<b>Weapon Hardpoints</b>	2x S1 Laser Cannons 2x S1 Missiles (125a only)
<b>Thrusters</b>	2x main 2x retro 12x fixed mav
<b>Interior</b>	Small Avionics x 1 Small Cooler x 2 Small Radar x 1 Small Life Support x 1 Small Gravity Generator x 1
<b>Cargo Capacity</b>	2 SCU 6 SCU (135c only)

The vehicle depicted herein is undergoing concept and design as of the release of this publication. Specifications and appearance are subject to revision during development.

**KEY CONTRIBUTORS :**  
 LEAD DESIGNER: JOHN CREWE  
 SHIP DESIGNER: CORENTIN BILLEMONT  
 ART DIRECTOR: PAUL JONES  
 ARTIST: ANDRIAN LUCHIAN



## ALL ABOUT ORIGIN

Designing any starter ship is a deceptively difficult proposition. After all, starter ships need to let new players sample many parts of the *Star Citizen* game universe without necessarily being the best at any one thing. They need to stand unique in a lineup of other starters, but they can't go so far as to be totally specialized. Creating a starter is an exercise in balance, one that may be upset time and time again until a ship works just right. Building an Origin starter is an even bigger challenge. In addition to the design balance itself, an Origin starter needs to represent the unique 'status symbol' sensibility of the Origin line . . . but without breaking the bank or stepping over more advanced ships like the 300 or the M50 racer. To create the Origin 100 series, designers and artists would need to work together to hit a very narrow target. Could the Origin design team turn out a starter ship that adds variety to the game universe without duplicating existing efforts?

The original description of Origin, developed during *Star Citizen's* early planning days, reads: ORIGIN JUMPWORKS GmbH The BMW of the *Star Citizen* universe. Their craft are more expensive, sleeker-looking status symbols, maybe more so than they're worth? They get numbers instead of names: 'Origin 300i,' 'Origin 890 Jump,' 'Origin M50 Turbo,' etc." From that original description and list of numbers, a fleet of stylish, luxury-oriented starships have been developed over the past several years. The initial 300 series, intended as a midpoint between the Aurora and Freelancer/Hornet, was one of the project's first ship designs and the first to include unique variants. The M50 became a specialist racer, the 890 Jump an interstellar yacht. Since then, Origin has seen the addition of the 600 series multi-crew vessel, the 85x snub and the X1 bike. Although the company does not, by nature, produce military or industrial focused ships, its lineup still runs the gamut . . . with the obvious exception, up till now, of a game starter!

As *Star Citizen's* ship team discussed new designs for 2018, Chris Roberts expressed a special interest in having an Origin starter to go alongside the RSI Aurora, MISC Reliant and Consolidated Outland Mustang. The broad idea of an Origin starter was one thing . . . but how, specifically, would it work? That task fell to designer Corentin Billemont, who settled on three design aims that he felt would bring focus to the difficult-to-pinpoint Origin starter. One, it should be equivalent to the Aurora, with cargo, exploration and combat variants. Two, it should be a single seater with a

bed and with both internal and trunk cargo capacity. Three, it needed to use starter components instead of the higher-end luxury materials seen on other Origin designs. As noted, an Origin ship is as much look as it is specifications. To that end, he developed three accompanying aesthetic goals: it should follow the Origin design style (smooth curves with a hull close to the ground). It should include a bed behind the pilot seat, a side entrance and a ramp for cargo. And it should look for inspiration from 1970s/80s sport cars.



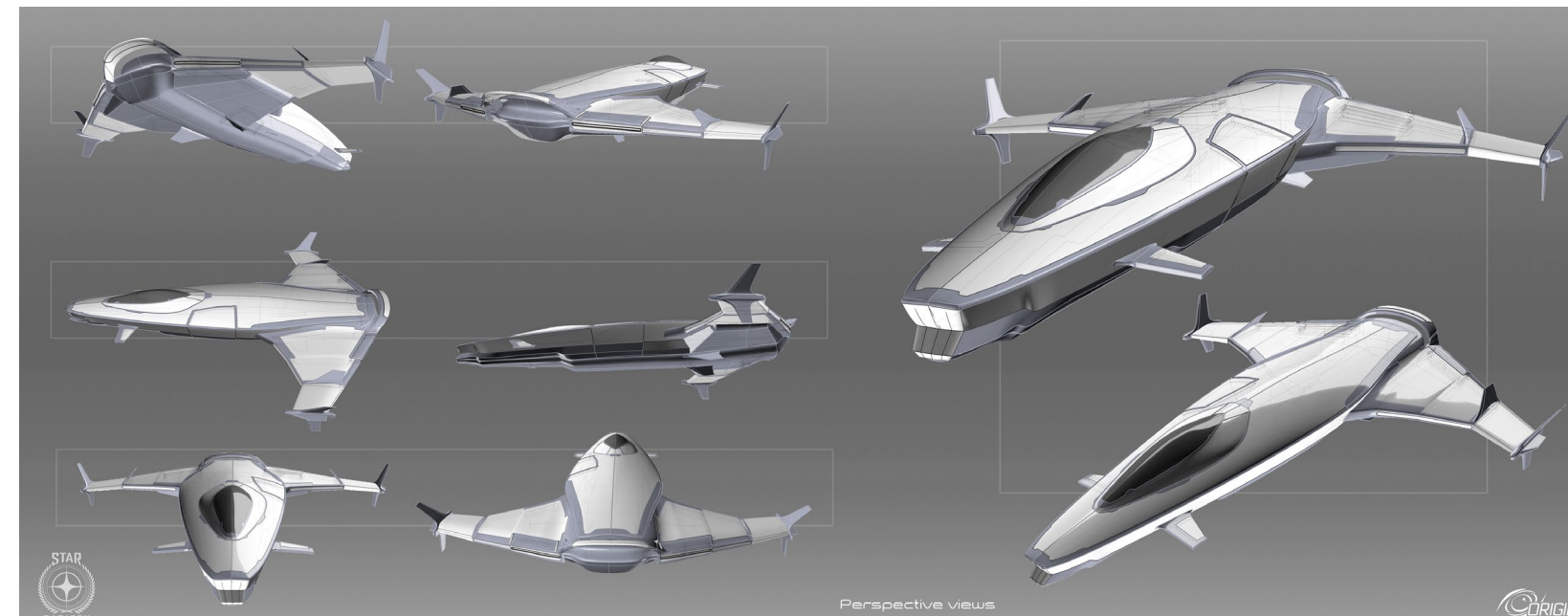
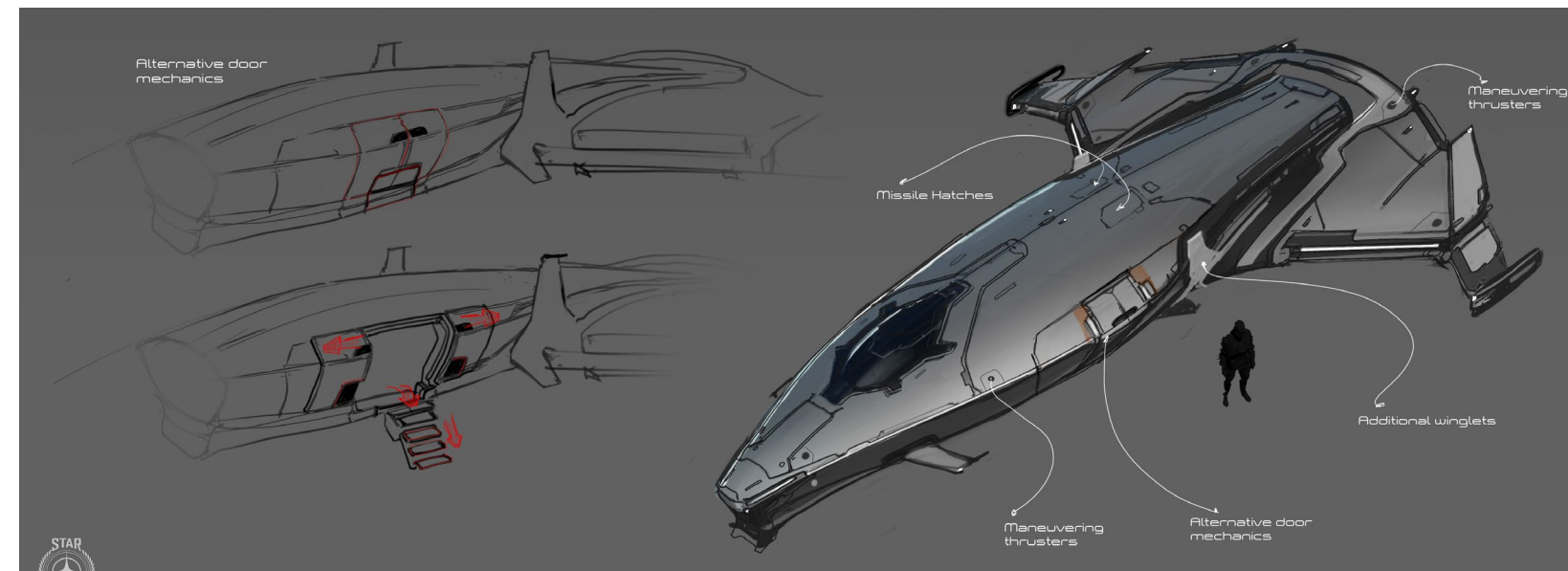
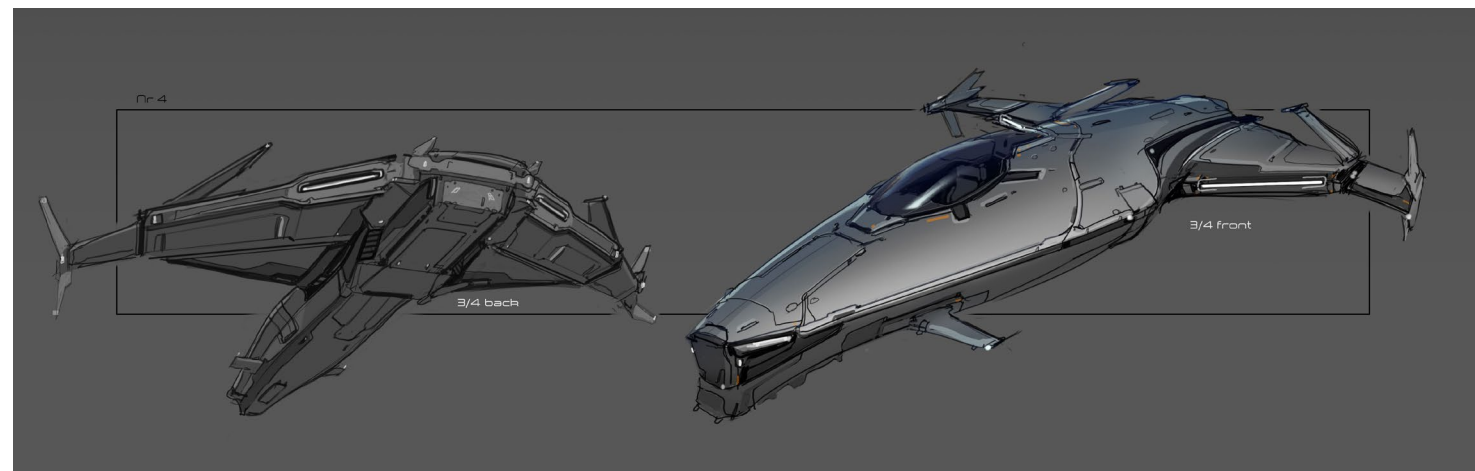
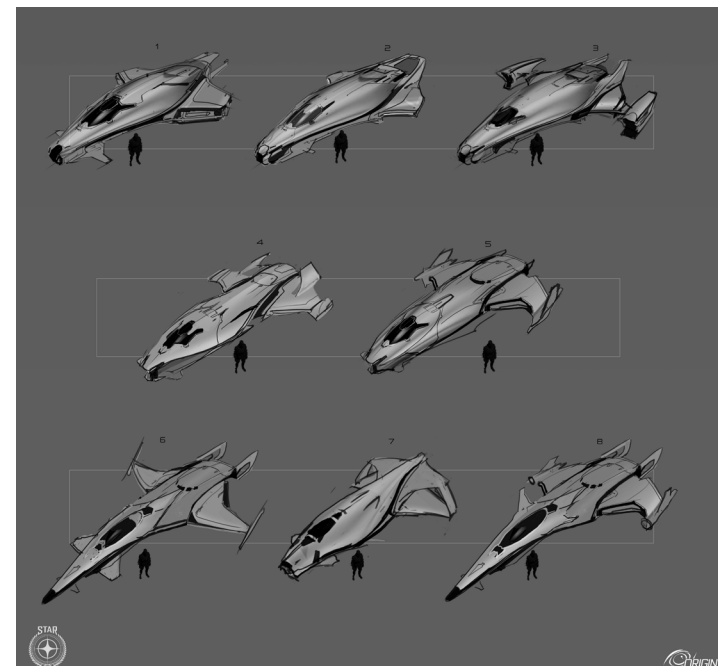
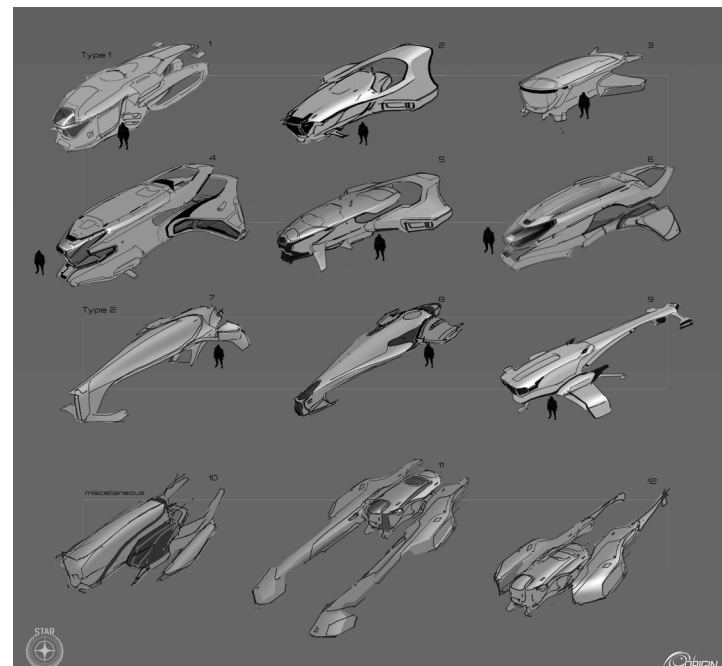


KEEPING IT 100

One part of Origin's starter was actually easier than other ships: coming up with the name. The new ship needed to be positioned below Origin's lineup of larger ships (300, 600 and 890 series) and above their smaller designs (X1, M50 and 85X). *Star Citizen's* lore had also already established that the "200 series" was a vintage Origin design from the early 30th century that was no longer in production. With all of that already established, choosing 100 for the base ship was an easy choice!

Art Director Paul Jones assigned the 100 concept to artist Andrian Luchian, who is new to the *Star Citizen* project. The art team had seen Luchian's impressive freelance spaceship portfolio on ArtStation and were eager to see what he could do working in *Star Citizen's* world. But

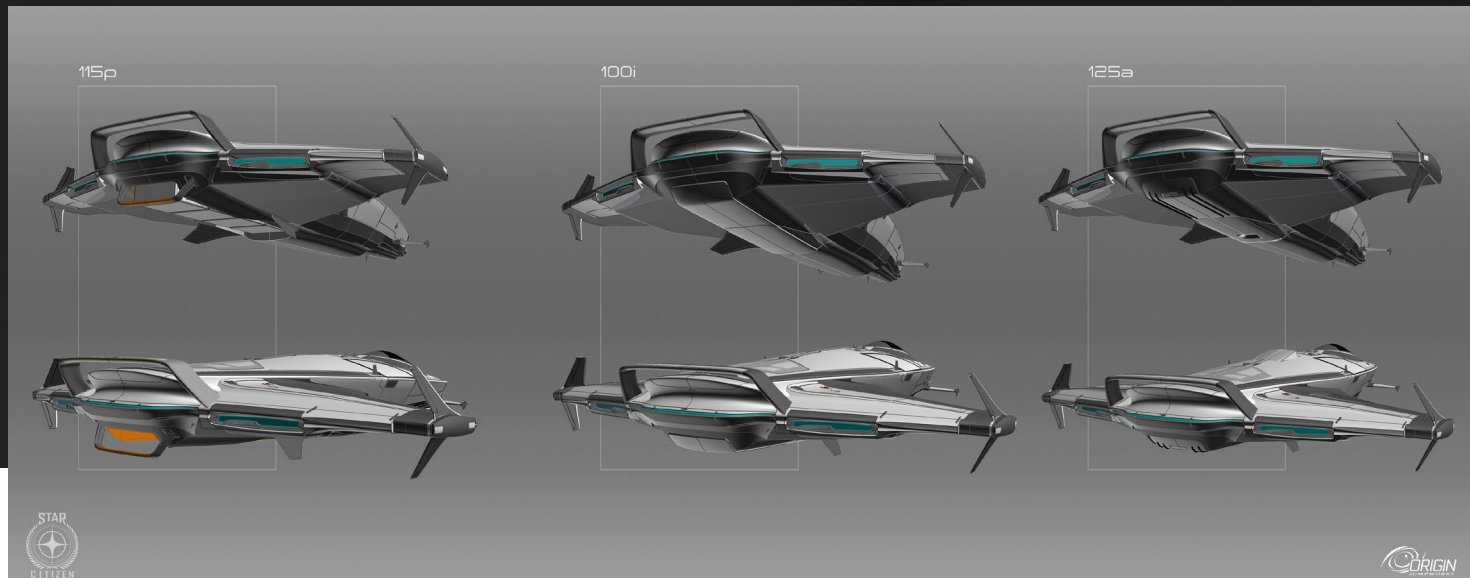
in working on the 100, he faced logistical challenges beyond getting the Origin starter concept just right. The 100-series would be one of the first ships shown in 2018, so the timeline to finish it would be short. An important aspect was the high amount of institutional knowledge specific to *Star Citizen's* concept ships that he would need to pick up quickly. A new artist unfamiliar with all of the specifics of previous ship projects would need to work especially hard to make sure his new design incorporates everything needed to function correctly in *Star Citizen's* 'verse. To bring him up to speed, Jones bombarded him with every piece of information available, from artwork of existing ships to cargo metrics to details about what must be included in every ship in terms of components.



Luchian began the project by generating an initial set of twelve rough sketches in late January. Among these, he identified two different directions: a beefier 600i-inspired starter with a living area and internal cargo space, and an 85x-inspired version with more of an aerodynamic, single-seater look. He also proposed an alternative for the latter type, a fully enclosed cockpit that featured a 360° holographic control deck. Jones liked the direction and asked to see versions of two of the closed versions with standard class cockpits. For the next pass, he asked that the 85x version reference the 300i. Additional rounds of feedback examined the concepts with and without wings and with different cockpits. This early concept phase also saw work on cargo metrics: how would these designs load

crates, and how would the player access them? Designer John Crewe assisted here, ultimately determining that the ship would need less cargo space than initially imagined. The next step was Chris Roberts' first review of the different design directions. As Art Director, Jones always prefers to have several distinct directions to choose from at this point, and the work on the 100 series to this point had generated just that. Chris identified option #9, a 300i-inspired design, as his top choice, while noting that it might feel too much like a dedicated racer. The next pass would expand the visibility of the cargo capacity so that it would read better as a multi-role starter ship. To accomplish this, Luchian adjusted the ship's proportions, reduced the overall technology and simplified split lines to make it appear more manufactured.





**VARIANT FARM**

Following in the footsteps of the Origin 300 series, the 100 series would have a set of permanent variants. This would give the design additional weight as a starter, showing it to be part of a system like the Aurora or 300, rather than a purpose-built one-off like the 85x or the M50. Designer Corentin Billemont was again charged with specifying these variants. The focus on variants became interesting early on as the art and design team opted to deal with the ship's cargo plan differently than originally intended. Instead of having a single 6 (4+2) SCU design, the standard

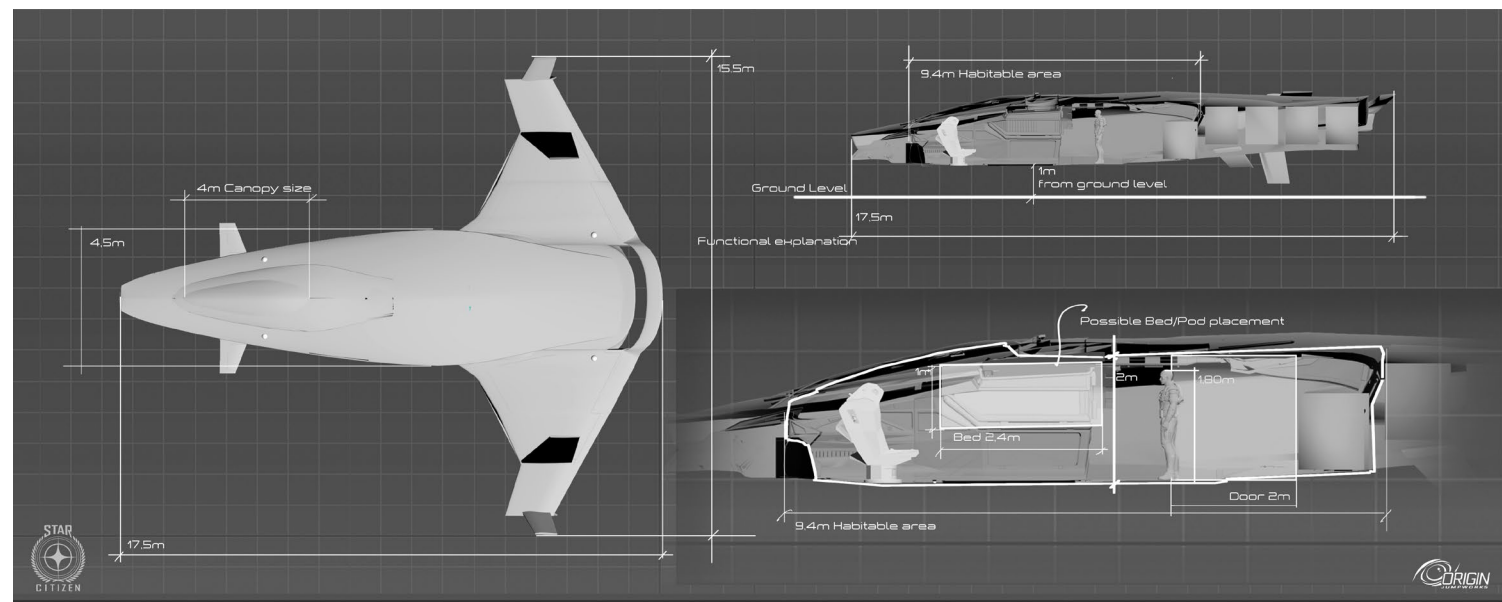
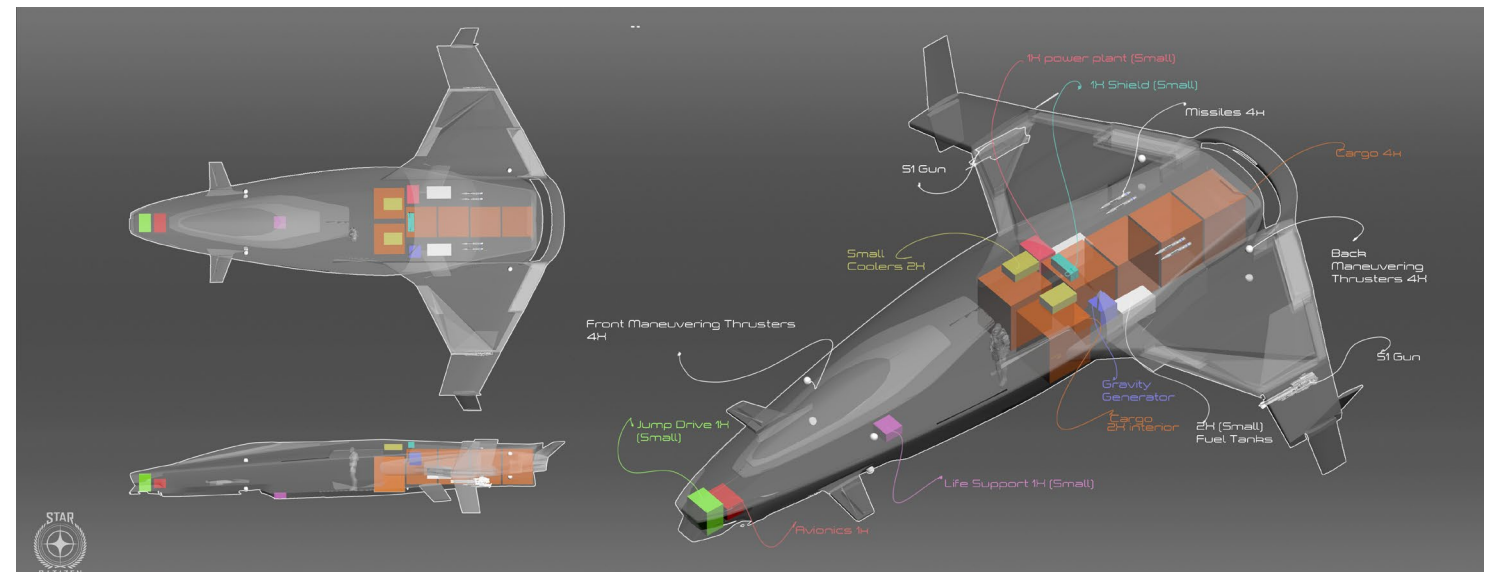
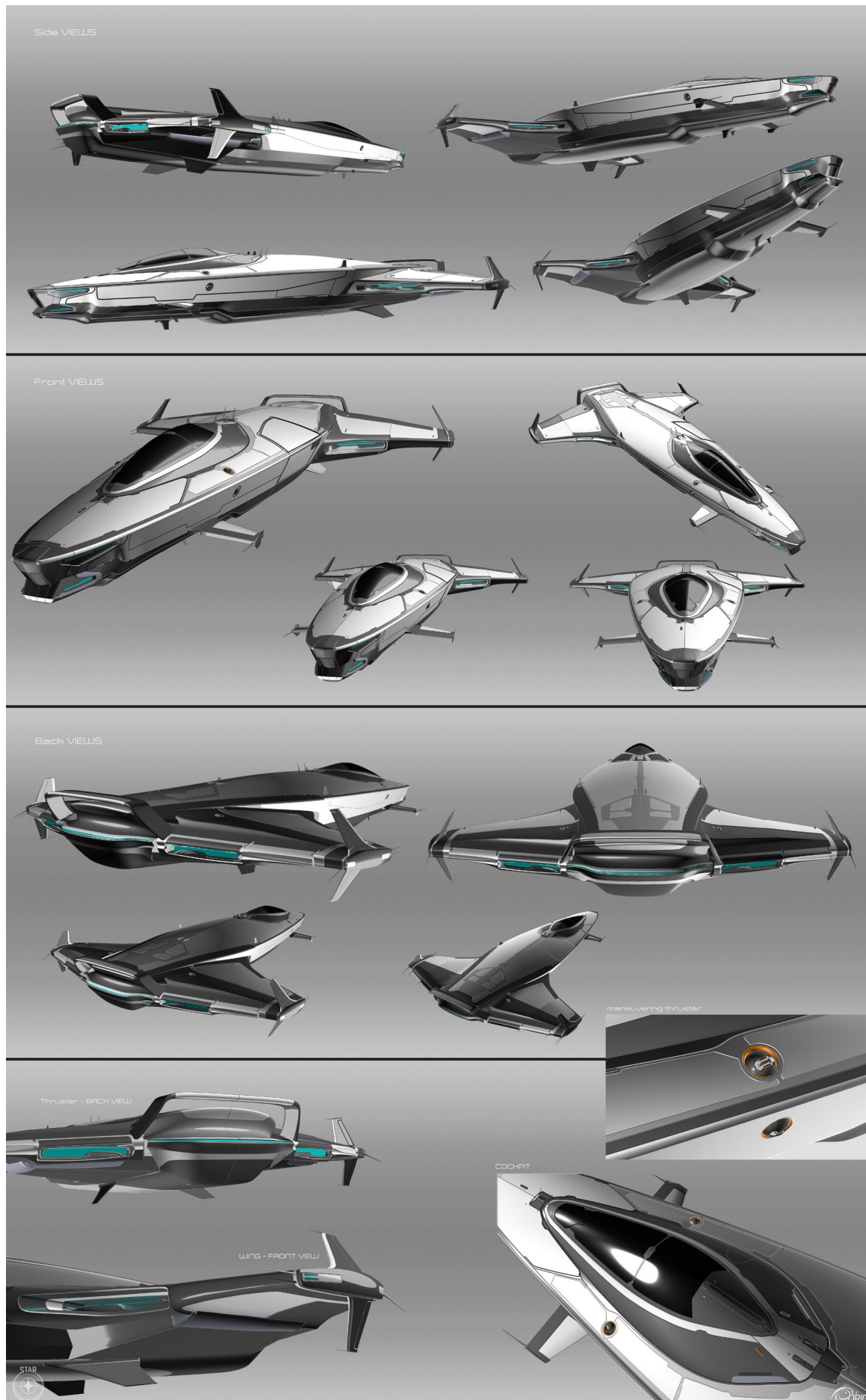
model was reduced to a smaller 2 SCU payload with the additional 4 SCU internal storage being reserved for another version. Work was also done to the hull of the 125a to speak to its more powerful engines, such as the addition of an intake at the top center of the hull.

From the 'ship specifications' standpoint, the variants were created with a series of statistical changes working from the base 100 model. The 125a light fighter version is distinguished by a greater power plant that pushes the top speed twenty meters per second, to 230 m/s. It also adds a pair of Size-1 missile mounts, increasing its offensive capacity. The 135c freighter version trades off in the other direction: its top speed loses twenty meters per second (190 m/s) in exchange for triple the cargo capacity (6 SKU). Additional adjustments can be made to to-be-determined portions of the 100 series' stats, including maneuverability

and component quality to further tune the ship while retaining the more crucial stat decisions.

Each variant was also given a distinct livery by Jones. All three designs incorporate the Origin logo, further enforcing the idea that it is a fresh-off-the-factory-line ship instead of a long-fighting part of *Star Citizen's* universe. The Origin 100i used a traditional Origin white schema that will be familiar to anyone who has seen the 890 Jump. The 125a is presented in a high gloss grey combo scheme, with the Origin logo in a lighter grey. The look implies a stealthy, military nature without giving up the high luxury nature of the ship. Finally, the 135c has a beautiful blue pattern with orange highlights. That's not just a set of variants that look great on the flight lineup... it's a set you'll surely be able to identify from a distance.





ART REFINEMENT

With the art direction for the 100 series chosen, the next step was the creation of the ship's basic mesh. As Luchian had drawn his initial concept directions in 2D, he now built a basic mesh upon which to construct the ship. The basic mesh takes into account most of the ship's main functions: where the pilot sits, how you enter and exit, what special features Design has requested, what components must be fit inside the hull, the standard loadout and where those weapons should be placed, how the landing gear will work, what the view from the cockpit will be like, and other similar checks. The basic mesh also allows the Animation team to see early on what additional work might be required. Designer Corentin Billemont worked with Luchian to position the necessary components in a way that would work correctly when integrated into the game engine (another technical designer will make any necessary modifications once this happens). The two worked to make sure small components were as accessible as possible inside the ship and that others were not positioned in especially breakable parts of the design (such as the nose). Components that are accessible can be repaired or replaced in flight, while those buried far away from the player can not. At

the end of this stage, Chris Roberts provided a significant set of additional feedback, reducing the wing width and altering the spoiler shape to avoid seeming too sleek. He also asked for an additional pass on the landing gear, reducing their overall sense of weight.

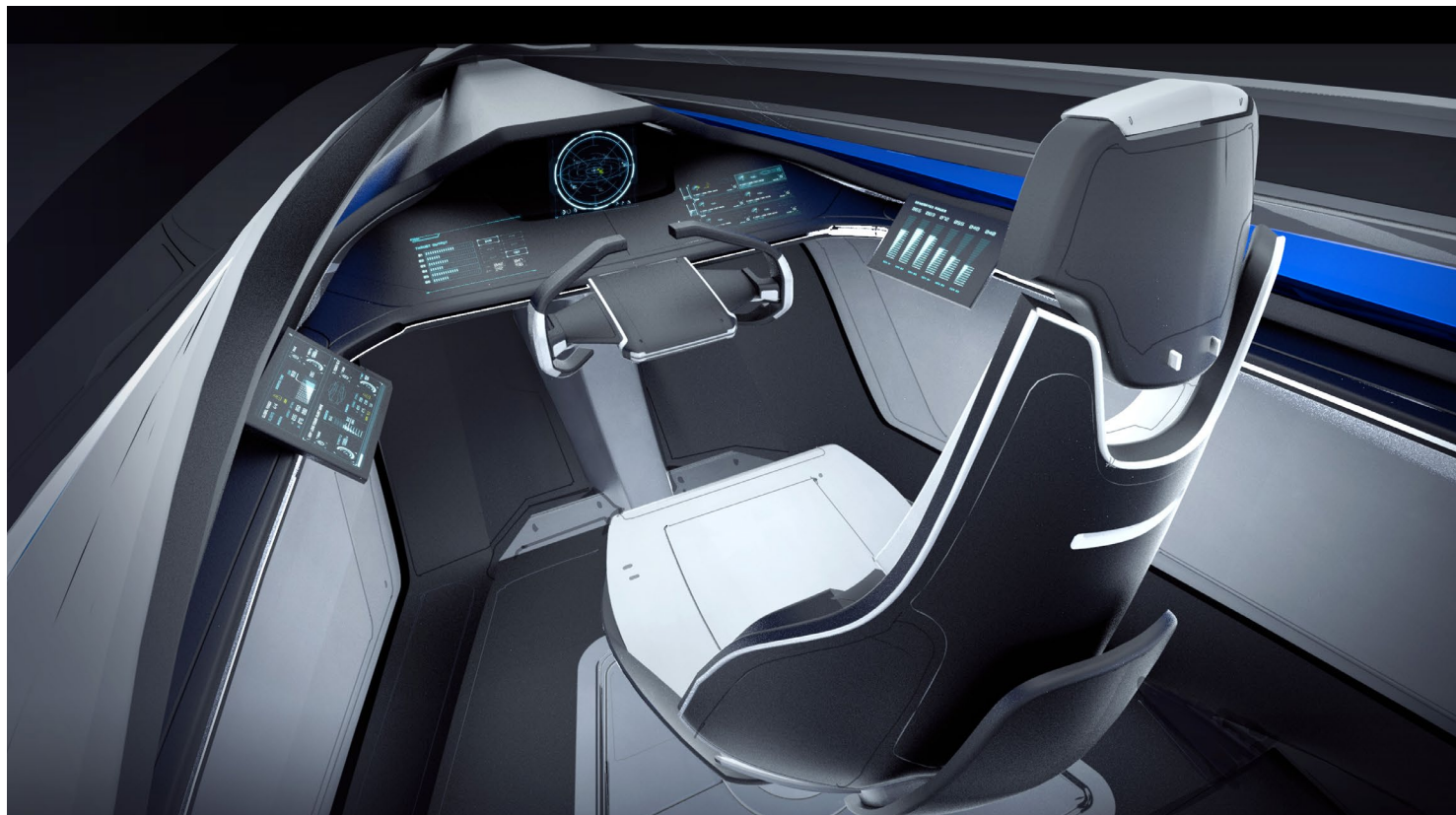
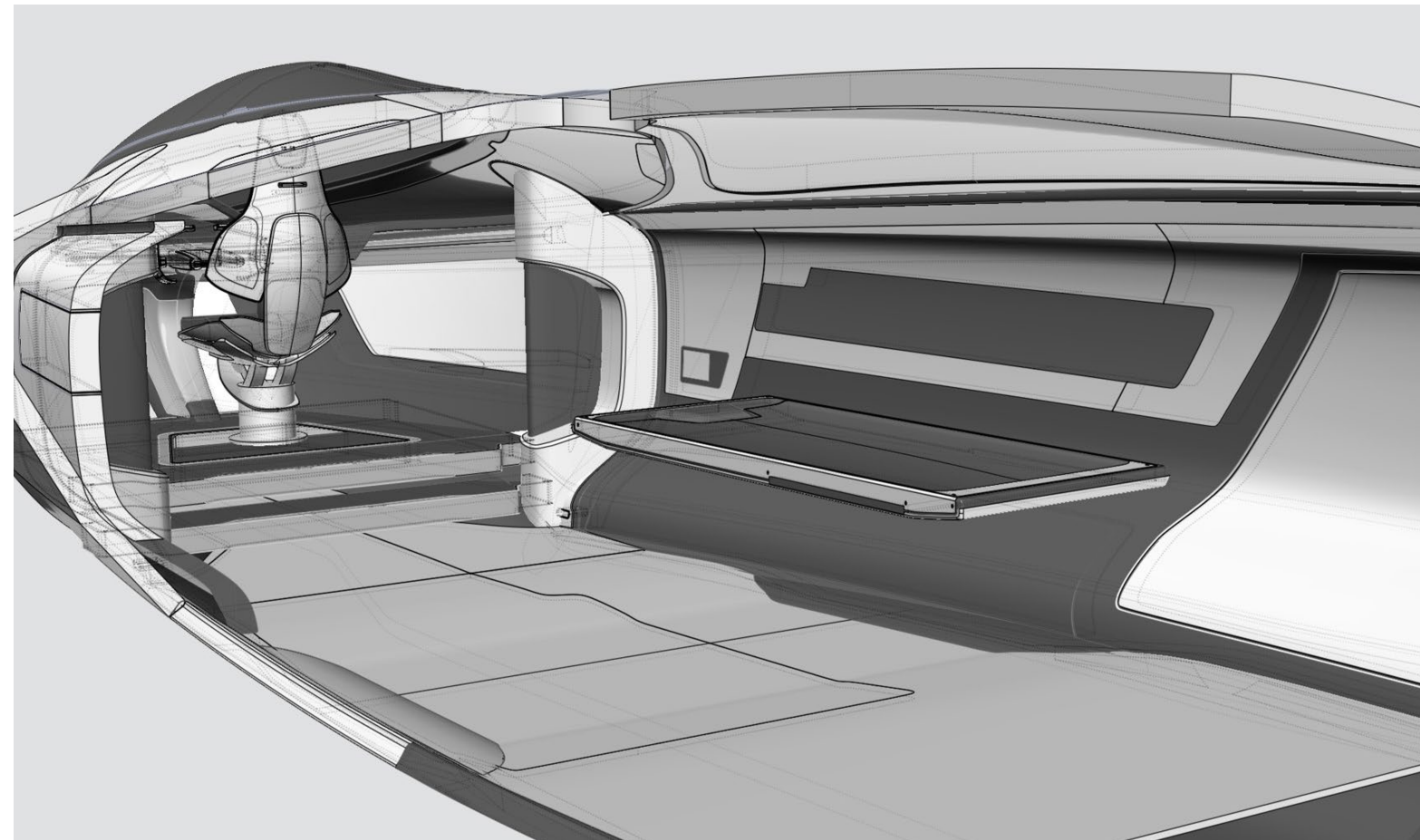
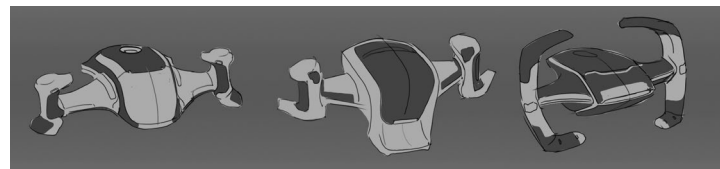
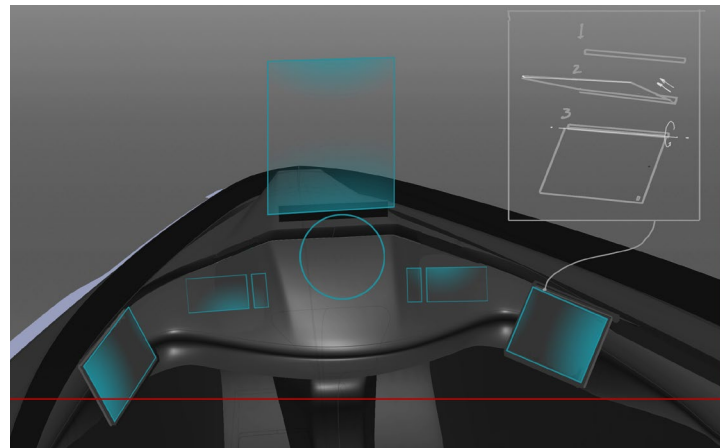
The basic mesh was completed in February and it was immediately followed by a functionality and refinement pass, a creative back-and-forth between Jones and Luchian. The most significant decision during this process was to incorporate a relatively slimline engine which would reduce the overall body and imply less power and complexity when compared to the 300 and other upgraded ships. In addition to shape refinement, this stage added properly positioned maneuvering thrusters, ship lighting, callouts for animated parts, final landing gear and physical navigation testing. Can the player fit in the door? Can they access necessary components? Reach and sit in the pilot's seat? The bed? With these refinements, the look of the 100i and its sister ships were presented to Chris Roberts for final approval. With his thumbs up, the design was officially set and ready for the promo art stage.



ORIGIN INSIDE

Work on the 100 series' interior required addressing two important aspects of the design: (1) the player's forward-facing pilot's seat and small living area and (2) how the cargo hold would be incorporated and how accessible it would be. Work on the cockpit and bed took the form of determining the cockpit interface and how it would sync up with the UI of the game. Luchian sketched the initial control board based on the games' needs and then refined it to best fit *Star Citizen's* cockpit functions with Paul Jones' feedback. As with the form of the base ship, the artist also provided three versions of possible steering systems and the refined ship's yoke. A variety of options for bed placement were explored, with an early favorite being just above the cargo . . . before changes altered that direction entirely.

As already noted, the plan for the 100's cargo went through a number of iterations, from an original plan to include a full cargo hold plus a 'boot' for the entire line, to spinning off that concept for a single variant. A major factor of discussion during the design process was how the cargo would be loaded into the ship. Did the player need to see the cargo all the time? Could the system created for the Aurora be reused here? It was determined that the latter would work best here, continuing to make it distinct from the 300. The 135c freighter variant was the subject of the most work on the cargo side, with art and design collaborating to determine how the variant 'pod' of the 135 would hold the two extra SCU.





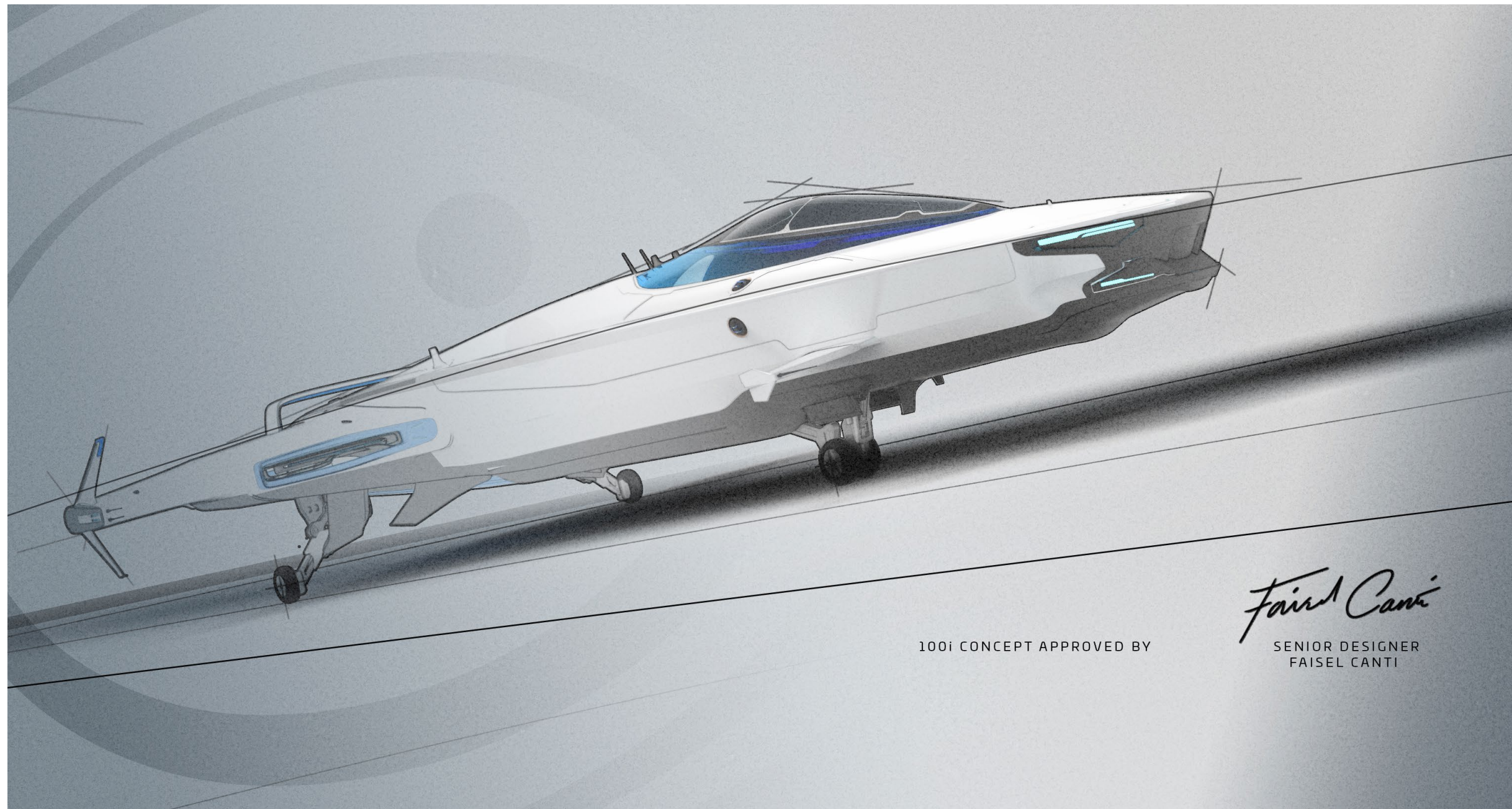
**GOING TO 100 PERCENT**

There's a saying in the 30th century that Origin ships don't need advertisements because they sell themselves. Introducing the 100 starter ship to a 21st century audience, however, seemed likely to require a little more work! *Star Citizen's* Marketing team opted to present the 100 series like a brand new car being revealed by Origin for the first time, complete with beautiful action concept images and a brochure inviting future ship captains to learn about the ship as though they were sitting in an Origin dealership's sales office. The 100i would, overall, focus on the sheer fun of owning such a ship, making it a welcome break from the recent series of more utilitarian 'working' ships. Future Origin 100 pilots would find a ship that could be too much fun to resist.

To create concept artwork of the 100 series 'in the 'verse,' Art Director Paul Jones directed artist Andrian Luchian to create a number of composite images that treat the ship as though it were a model spacecraft being photographed by Origin for a marketing campaign. The imagery improves on the style established with the 890 Jump brochure by focusing on bright, soft colors, natural environments and beautifully positioned starships. Each of the 100 series variants received its own wide 'personality' shot patterned after luxury car advertising that emphasizes the finer things. The 100i touring model is portrayed alongside an X1 bike at a futuristic parasailing race, the hardened 125a is shown with guns firing as the vanguard for a flotilla of elegant Origin spacecraft (pp20-21), and the 135c cargo model is delivering a pallet of Radegast whiskey to an elite party.







100i CONCEPT APPROVED BY

*Faissel Cantì*  
 SENIOR DESIGNER  
 FAISSEL CANTI

The team also decided to adapt a real-world automobile marketing trick to the 100 series' sale page: giving particularly sharp focus to a single, unique element. For the 100, the Adaptive Intake Refinery (AIR) system was chosen. Said to "combine standard-setting, low-impact/high efficiency thrusters with a state of the art intake, and a record-shattering integrated refinery," AIR is a revolutionary new technology that reduces fuel usage in non-Quantum space travel by taking in and processing spaceborne gases (such as hydrogen). While reduced fuel usage might be a selling point on its own, the presentation also mirrored physical marketing campaigns and builds the verisimilitude of the *Star Citizen* 'verse by talking up how 'eco friendly' AIR is — something that might not mean much in a dogfight but which aims to draw the player into the universe. A special AIR logo was

created and released in advance of the rollout.

For the 100 series' brochure, the marketing art team went with a double-page layout presenting images wider than ever before, showing the concept images alongside world-building materials, beauty renders and other information in a bold, cinematic style. The brochure itself is designed to look like a luxury dealership pamphlet and presents all information in that lens; instead of blueprints with numbers, the specifications are done in a 'marketing' style with smooth graphs and graphics. The booklet is full of tiny details, from the signature of Senior Designer Faissel Cantì to the final block of faux-legalese which ends by encouraging you to learn more by visiting your local Origin dealer.

**ORIGIN 100 SERIES RESOURCES:**

**ORIGIN 100 SERIES PAGE:**

<https://robertsspaceindustries.com/comm-link//16505-Introducing-The-Origin-100-Series>

**ORIGIN 100 SERIES BROCHURE:**

<https://robertsspaceindustries.com/media/sb217acbbj976r/source/Origin-100-Series-Brochure-FINAL.pdf>

**ORIGIN 100 SERIES Q AND A:**

<https://robertsspaceindustries.com/comm-link/engineering/16520-Q-A-Origin-100-Series-Part-I>





THE  
ORIGIN  
300 SERIES

SERVICE HISTORY



SERVICE HISTORY



POINTS OF ORIGIN

Origin Jumpworks unveiled their X3 prototype at the 2889 Terra Air and Space Show, sending a shock to aerospace watchers and industry insiders alike: a company previously known for fusion engines and industrial transport ships was looking to take on the competitive single-seat market with a bold new aesthetic that looked like nothing else in the galaxy. While only a one-off technology and 'look' demonstrator, the reception of the X3 made it clear that the company was capable of competitive single-seat starcraft design and that there was an audience for their new design philosophy: there's room for style in the vacuum. Emboldened by the public's reaction to their new charge to combine aesthetic and utility, Origin began the conversion to single-seat manufacturer. There followed nearly a decade of work to develop a marketable ship and expand design facilities and factories for mass production of the final spacecraft.

The X3 programme had been headed by Otto and Andreas Lang, brothers and aerospace wunderkinds who were known for melding form and function. The Langs were not yet 35 when they were recruited from Seal Corporation to oversee advanced plasma manifold development at Origin. It was a position the brothers held only briefly: together the pair threw out the current design and outlined their own more efficient version in the first six months. Thanks to profits generated from that change, within a year they were appointed to head up the highly experimental X3 programme.

The ultimate vision, they insisted, was clear from the start: manufacture a single-seat luxury spacecraft that incorporated clean, modern design. "Many creatures create tools," Andreas would preach, "but Humanity is defined by a more sacred ability to appreciate beauty and to use that appreciation to create art." It was their calling, then, to design spacecraft that would maintain our innate Humanity as we reached to ever-further stars and expanded beyond the ability to maintain a singular society.

In the wake of the X3's success, each brother built out his own team: Otto, the younger of the two, to shepherd the 200 series observation craft and Andreas to design what the company saw as its crown jewel: the 300 series personal spacecraft.

Andreas stacked his design team with fanatics, idealists after his own heart who believed in making sure the 300's styling would carry some higher ideal. The resultant team was an eclectic mix: standard ship design specialists focused on areas like power plants, thrusters and life support, while outsiders from other industries were brought in to work on aesthetics, comfort and the general feel of the ship.

Despite all of this, a major factor in the 300's success came not from the design think tank on the Rhine, but instead from the depths of the United Empire of Earth's legal system. In 2898, the high court passed down a verdict in *Pressman v. United Empire of Earth* that allowed civilian craft to

use the same speed safety standards that racing ships had been using for years. Pressman argued that with the current advances in avionics, the older safety regulations set by the Department of Transportation and Navigation were an unfair burden for modern pilots. The court agreed and the timing could not have been better for Origin: the 300 would be the first new spacecraft to take advantage of these new speed safety limits. As a result, in 2899, the 300 was one of the fastest ships available in its class. Although RSI, Drake and others quickly followed suit and produced ships that were 'uncapped,' Origin won popular acclaim by getting there first.

TAKING FLIGHT

The first hand-machined Origin 300 prototype (pre-production models lacked the closing alphabetic variant designators such as "-i" or "-p") took flight at Frankfurt Cosmodrome on August 3, 2897. From a technical standpoint, the first flight was an enormous success: the prototype completed nine Earth orbits without a hitch. Additional early tests rapidly checked off the standard first flight objectives, including the Earth-Luna slingshot and the initial quantum to Io. Inside six months, 300-1 was ready to perform the first jump tests in real space. The only problem: a complete materials manifest of the current metals, alloys and components indicated that the end retail cost of the ship would be over fifteen times that of an Aurora. The company's board, previously content to let Lang work without restrictions, stepped in. For the next fourteen months, the factions of the company fought a vicious internal battle over the 300's

production model, with a chain of executives resigning in defiance of Lang's obstinance. Spacecraft designers and outside consultants were tasked with determining how to turn a perfect, expensive prototype into a working production model without sacrificing the soul of the machine.

The result of these reworkings was a spacecraft with a sticker price roughly four times that of the contemporaneous Aurora. On December 18, 2899, the 300 series premiered at a special reveal ceremony at Baikonur to incredible acclaim. The combination of its stunning lines and incredible performance won over audiences immediately. The Origin 300 quickly became the 'look' of popular spaceflight — a symbol of success and a goal for everyone setting out into the galaxy. While RSI may have offered Humanity an easier path to the stars, Origin offered a collective chance to make that leap in style.

VARIANTS

The 300 series launched in 2899 with a single model: the 300i. Andreas was insistent that Origin would begin producing variants in the third model year by designing entirely new models to fulfill different specialized tasks. Origin, remembering the expense of the first prototype and the ensuing battle to lower production costs, balked at the idea. For all of the project's rhetoric, later amplified by the series' initial marketing, the company wanted to borrow an important aspect from RSI's Aurora: a modular space frame designed to easily adapt variants. Like the Aurora,





the 300 series would adapt the initial version into a host of different factory models built atop the standard design. By all accounts, the decision to develop variants instead of bespoke models soured Lang on the project altogether. Instead of helming the 2903 model year as previously intended, he built a smaller, separate team to construct the Origin 350r speed model. Not intended for wide sale, the 350r project allowed Lang and his most fervent acolytes a chance to build the high performance ships he desired for the racing circuit.

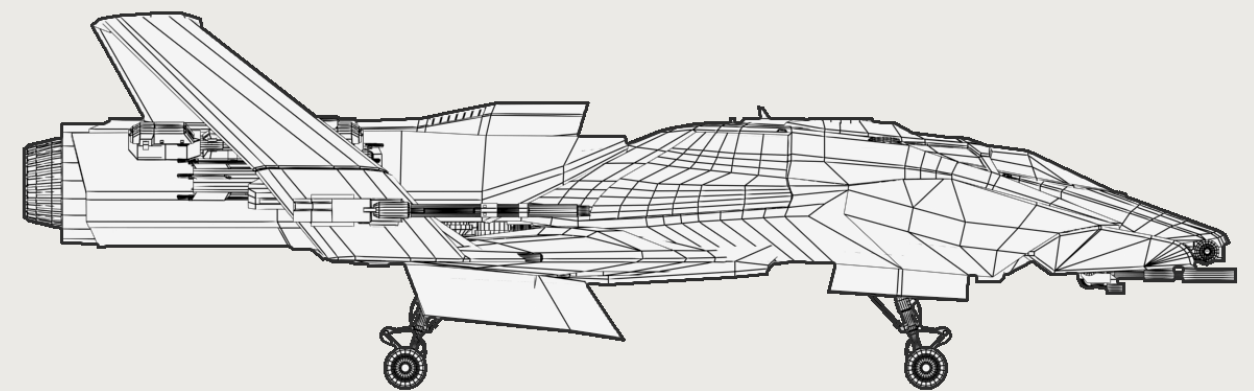
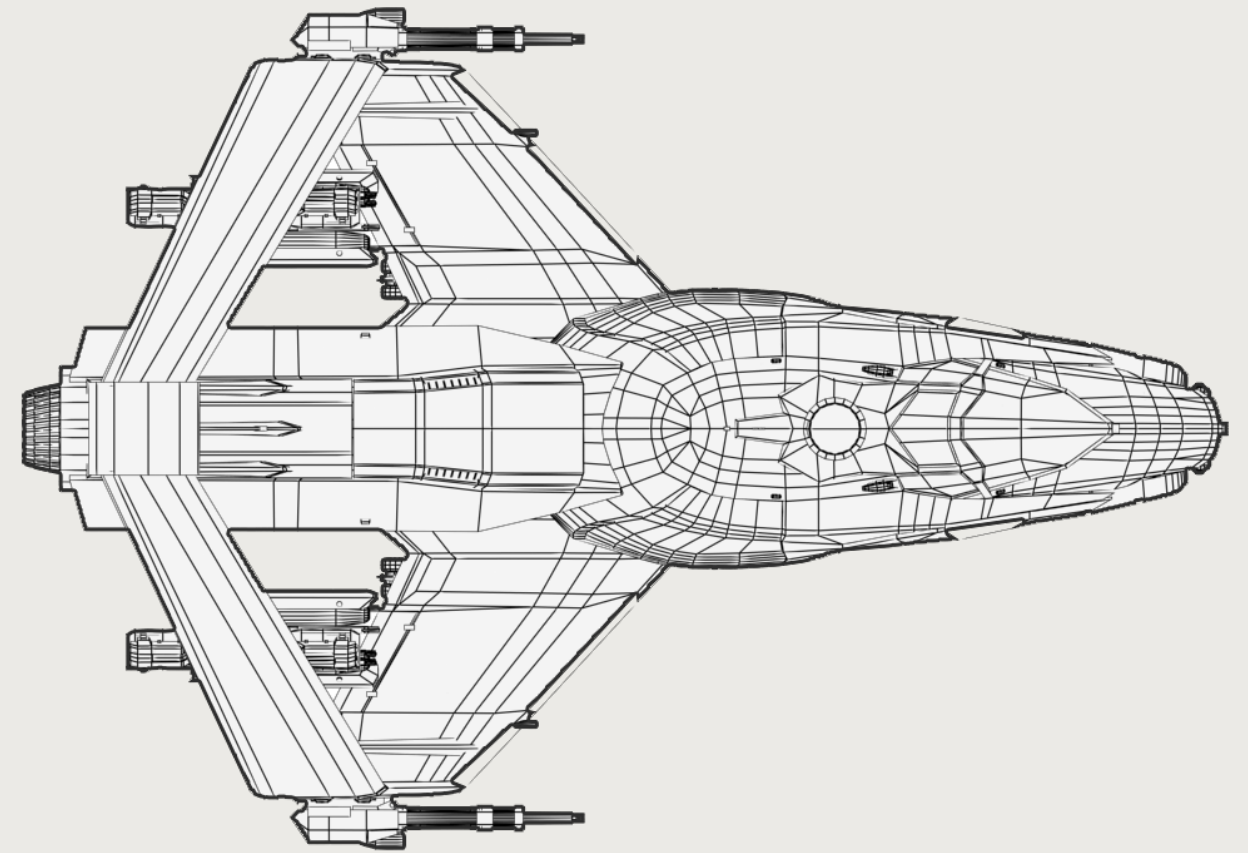
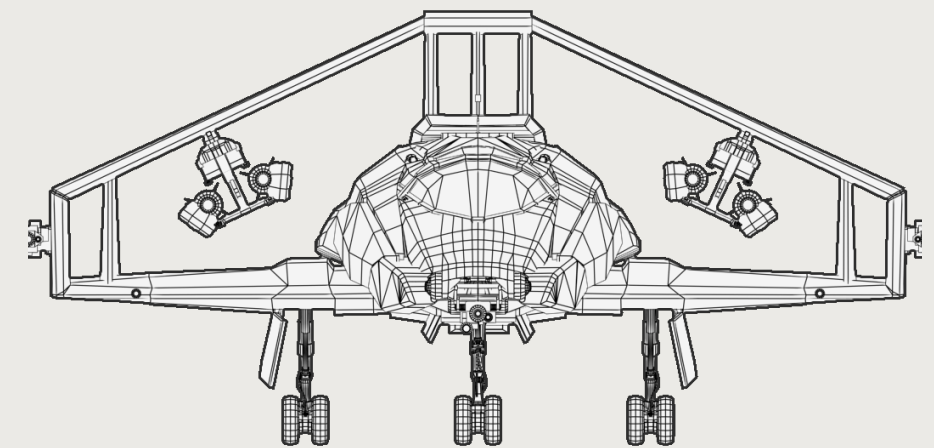
Over a dozen 300 series variants have been offered since the line's inception, with the majority being minor, one-off yearly models themed for particular events, such as the Origin 320c "Imperator's Edition." However, two design variants have proven so effective that they have become part of the standard production run, receiving the same incremental model year improvements as the base ship. The Origin 315p was launched in 2930 as a 'pocket explorer,' an unusual attempt to marry the 300i's lines with improved power output and a newly-developed scanning package. Despite the odd duck nature of the design, the 315p proved a reliable performer, with much of the success coming because

smaller prospecting outfits were happy to have a dedicated spacecraft that could perform just as well, but provide the comfort and style that was often overlooked by other manufacturers.

The second long-standing variant is the 325a dogfighter, generally believed to be the result of a naval contract. No information has ever been declassified on why the UEEN might have utilized a fighting-focused 300i design, but an in-depth analysis of the ship's properties suggest it was actually first designed as much as a decade before its 2940 reveal. In any case, the 325a adapts the 300i concept into a dedicated combat ship with upgrades to the weapons payload and the addition of a specialized targeting system.

Origin has expanded their production capabilities every year since the 300 launched, using the success of the design to finance more spacecraft that follow the same aesthetic philosophy. From the starter-level Origin 100 series to the beautiful-while-functional 600 ships to the luxurious 890 Jump flagship, Origin continues to adhere to Andreas Lang's basic belief that the look and handling of spacecraft should speak to our deeper nature.

<b>300i</b>	
MANUFACTURER	ORIGIN
MAXIMUM CREW	1
MASS	65,925 KG
LENGTH	23 M
BEAM	15.5 M
HEIGHT	7 M
ROLE	TOURING
EJECTION SEATS	NONE
CARGO CAPACITY	2 SCU



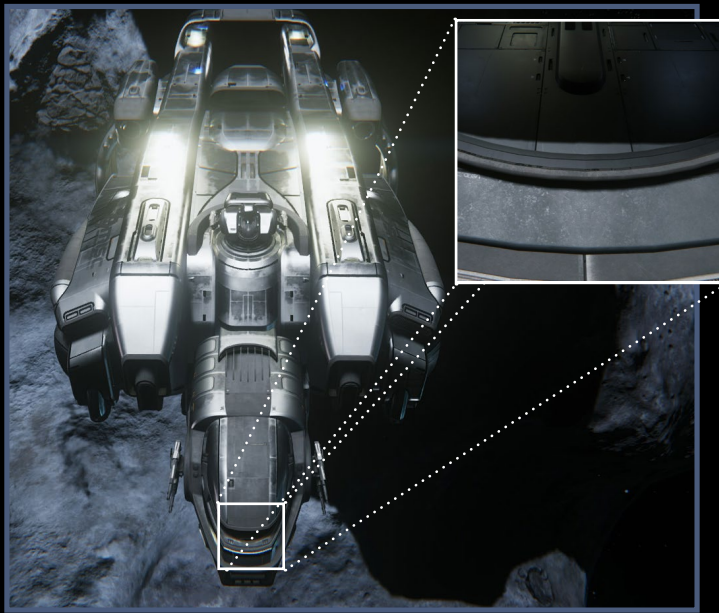


# WHERE IN THE 'VERSE?

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

[David.Ladyman@cloudimperiumgames.com](mailto:David.Ladyman@cloudimperiumgames.com)

Then next month, we'll reveal the image's location, and post the best replies we got. This month's image is courtesy of Ray Warner, Assistant QA Manager, UK. Where in the 'Verse did he find it? Please remember to send me a screenshot of what you find, so that I can give partial credit if what you've found is close to the actual image.



## Last month's image was also courtesy of Ray. Where in the 'Verse did he find it?

We have a winner for last month's location:  
Sven AlgermiBen (AKA 7INC - DisposableHero), who tells us:

BEGIN TRANSMISSION →  
*Originally, i was totally lost and couldn't make anything of it. But then today was cleaning day, and swinging around to the front of my trusted ole' Starfarer for cleaning them dirty windows, it fell like scales from eyes! I'd have to say though, not the usual way i look at my dashboard!*  
← END TRANSMISSION

And he is correct, as you can see from the larger image. Congrats, Sven!

# ONE QUESTION [PART 2]

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

## WHAT WAS THE FIRST ELECTRONIC OR COMPUTER GAME YOU CAN REMEMBER PLAYING, AND ON WHAT SYSTEM?

Last month's question was so popular that we got twice as many answers as we could fit. Here are the second half of CIG's answers.

### DAVID PENG, SENIOR ANIMATOR, ATX

My first gaming experiences were back in the early '80s. The first coin-operated arcade game was *Tron*; the first home computer game was *Choplifter!*, on the Franklin Ace 2000.

### CHRIS SMITH, LEAD VEHICLE ARTIST, ATX

My first experience with computer games was in the '80s when my stepdad bought an Atari 1040 ST computer for the house. I played *International Karate* almost non-stop, a lot of the *Summer and Winter Games*, *Turrican*, *Test Drive* and *Marble Madness*.

### MARK HONG, ASSOCIATE PRODUCER, LA

*Pong*. My family had the Home Pong console which I played a lot as a kid, until we got the Atari 2600. With the 2600, I stopped playing *Pong* and moved on to games such as *Combat*, *Adventure*, *Asteroids*, *Missile Command*, *Defender*, *Haunted House*, *Moon Patrol* and *E.T. the Extra-Terrestrial* (which I loved!).

### JEFFREY PEASE, DEVOPS ENGINEER, ATX

*Super R-type* on the Nintendo. Or maybe that skiing game [*SkiFree*] where the character gets eaten by a yeti after a few minutes. I'm sure there are other games I played earlier than that. *Solitaire*, *Minesweeper* . . . *Wing Commander II* came out in the same year, but I'm not sure what year my dad got that one for me.

### MICHAEL DILLON, GAMEPLAY ENGINEER, LA

The first game I remember playing was *Galaga* at the local pizza joint with my stepdad. This arcade was my goto for games until I got my first NES for Christmas with *Super Mario Bros. / Duck Hunt*. All games that directed me into the games industry, even as a 6-year-old.

### STEVEN KAM, JUNIOR COUNSEL, LA

It was likely *Space Wars*, published by Cinematronics Inc. It was a full size (really full size!) arcade game cabinet upright, vector graphics. It being a strictly two-player PvP game, my dad had to pay for two games in order for me to even try it out.

### MAC MCMONNIES, PRODUCTION ASSISTANT - ATX

The first game that I can remember playing is *Super Mario 64* on the Nintendo 64. My Tio Kiki had managed to get the next best thing and passed the Nintendo 64 on to me and my family. I can still remember trying to teach my father and mother how to play and everyone taking turns to try and beat some of the more frustrating moments.

### MIKE KINSHELLA, COPYWRITER, LA

The original coin-op version of *Rampage*, at a local pizza joint in my home town. I was around five years old, and enthralled by the idea of becoming a giant monster — leveling cities, smashing everything in sight, and gobbling up hapless civilians. I was so obsessed with the game, that my first home console was a Sega Master System, based solely on the fact that their *Rampage* port was superior to the NES version.

### MAX HUNG, ASSOCIATE GAMEPLAY ENGINEER, LA

Old *Tetris* handheld from the '80s. Bought by my grandfather, we would take turns with my brother to get the high score.

### JAKE MUEHLE, TECHNICAL DESIGNER, ATX

*Empire* on a green-screen Windows PC. I watched my dad play it and he gave me a couple shots at moving units.

### MICHAL PIATEK, VFX ARTIST, UK

Friggin' *Moon Patrol* on Commodore 64. I couldn't stop playing it. It really felt like driving a space vehicle on the surface of the Moon. I remember that the explosion VFX (they had one) was really good too.

### ARAN ANDERSON, VFX ARTIST, UK

The first game I remember playing was *Duck Hunt / Super Mario Bros.* on the NES.

### MARCO PISANU, AI PROGRAMMER, DE

The first computer game I can remember playing would be the *Age of Empires I* demo on Win95. I had a PC without internet and my dad brought me a stack of unlabeled floppy disks from work. At least half a year was spent just playing that before I managed to get my hands on a floppy disk with *Pokemon*.

### DEEN MUGAL, QA TESTER, UK

The first game I remember playing was *Tekken 2* on the PlayStation 1 (I'm going to make several people feel old . . .). It's a series that has followed me from childhood right through to adulthood, and the core mechanics/character roster hasn't changed a huge amount from when I was 4 years old.

### JULIA WILLSON, SCRUM MASTER AND SENIOR TESTER, LA

My first computer game was *Math Blasters* on Apple II Plus. That's an educational game on a green and black command prompt screen. It had 'graphics' and I remember getting up in the wee hours of the night (4 AM) as a kid to race to go play before my father would get up to get ready for work.

### JARED HUCKABY, CONTENT MANAGER, LA

It was definitely something on the Atari 2600. *Combat*, *Pac-Man* or that adaptation of *E.T.* everyone hated. I loved it. I'm not certain I understood what was going on, but I enjoyed it. With *Combat*, that was my first multiplayer game experience, and I've preferred playing with others in video games ever since.

### FRANCESCO ROCCUCCI, LEAD AI PROGRAMMER, DE

The first game I remember playing was *P.T. Barnum's Acrobats!* on a Magnavox Odyssey (Sold in Europe as Philips Videopac). I was probably 4 at that time, and my jaw dropped when I discover a joystick could move the acrobats on the screen making the TV interactive!

### DANIEL BAKER, JUNIOR DESIGNER, UK

The first game I can genuinely remember playing is *Pong*. I don't remember exactly which console it was, but it had a joystick which had a single red button, so I'm pretty sure it was an Atari 2600.

### YOGI KLATT, AUDIO PROGRAMMER, DE

Not counting hand held stuff on the Game Boy, it was really *Wing Commander Privateer* on my dad's 486 DX 33. Back then, games were not localized into German and I didn't know a shred of English. But I learned how to skim the mission computer lines for important words like "8566 credits," "bounty hunting" and "Oxford system." That was pretty much all I needed. :) . . . I didn't get too much of the story, though . . .