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U.S.S. FRANKLIN
SPECIAL ISSUE

STARSHIP CLASS

LAUNCHED: 2140s

FIRST WARP 4 SHIP

PULSE PHASE CANONS

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U.S.S.
FRANKLIN

Stand assembly:



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U.S.S. FRANKLIN

SPECIFICATION



CLASS: STARSHIP

CONSTRUCTED: SAN FRANCISCO FLEET YARDS

LAUNCHED: 2140s

CAPTAIN: BALTHAZAR EDISON

LOST: 2160s

WEAPONRY: PULSED PHASE CANNONS

SPATIAL TORPEDOES





U.S.S. FRANKLIN

The *Franklin* was an historic Earth vessel that was lost in the early 2160s, but its story was not over...



The *U.S.S. Franklin* NX-326 was a Starship-class vessel that was launched from the San Francisco fleet yards in orbit around Earth in the 2140s. It was an historic vessel that was the first Earth ship to achieve Warp 4. After the Earth-Romulan War (2156-2160) it was transferred to the newly formed United Federation of Planets. And put under the command of a former Earth MACO Major Balthazar Edison, a veteran of the Xindi and Romulan conflicts. He would become known as one of Starfleet's first heroes.

The *Franklin* was armed with pulse phased cannons and spatial torpedoes and equipped with transporters that were designed for cargo, but were capable of transporting up to 20 people if necessary.

The *Franklin* remained in service until the early

2160s, when it was lost in the Gagarin Radiation Belt. Its service was taught in the Academy, but Starfleet didn't learn what had happened to the *Franklin* until 2263, when the crew of the *U.S.S. Enterprise* found it crashed on the surface of the planet Altamid. They surmised that the *Franklin* had fallen through a wormhole that had taken it light years away from its original location.

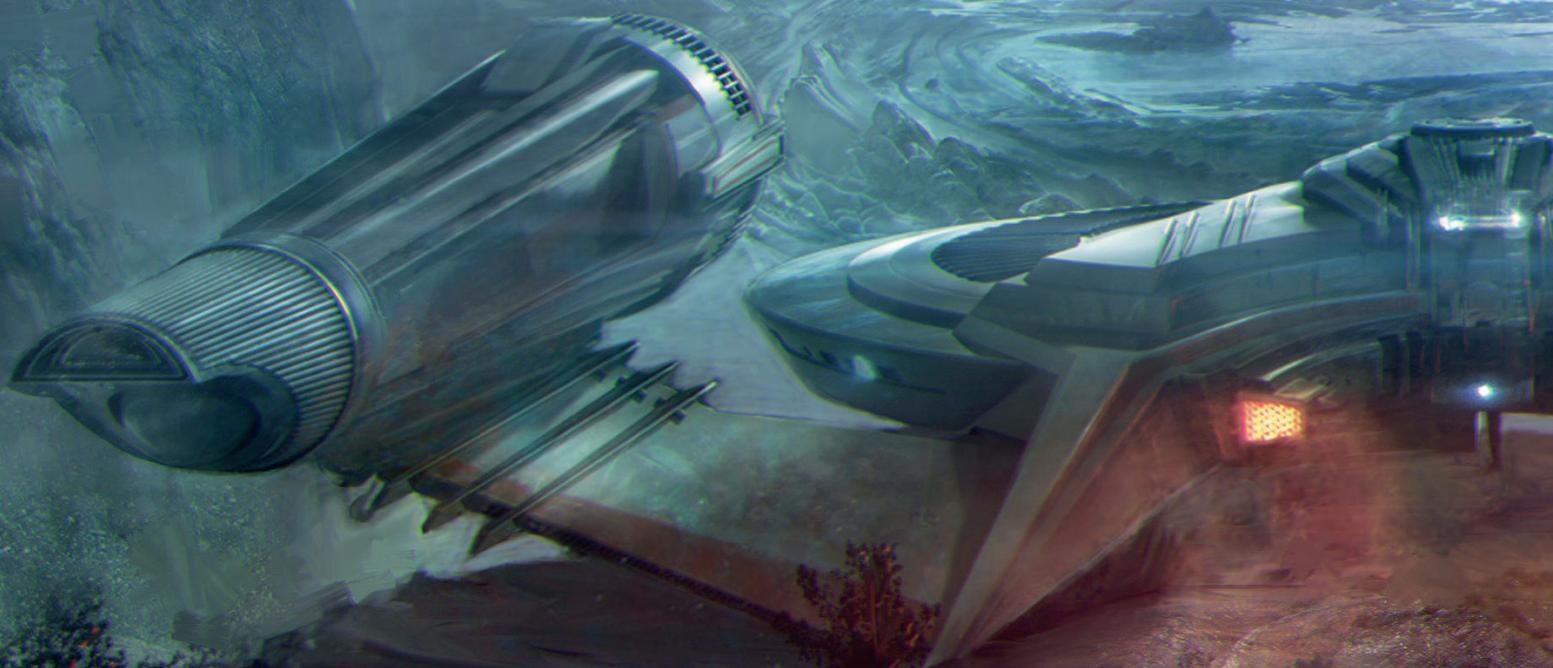
Only a handful of the *Franklin*'s crew survived including Edison and three others. They found alien technology on Altamid that prolonged their lives, but Edison lost his grip on sanity and blamed the Federation for the loss of his crew. He used the alien technology to destroy the *Enterprise* and was determined to attack the Federation station *Yorktown*. He was eventually stopped by Kirk and his crew who managed to repair the *Franklin* and to pursue him. The *Franklin* was severely damaged during the battle, ending its journey crashed in a plaza inside *Yorktown*.



◀ James T. Kirk in the captain's chair of the *Franklin*. He used the ship to broadcast a signal that destroyed a fleet of alien drones.

DESIGNING THE FRANKLIN

STAR TREK BEYOND tore the *Enterprise* to pieces and gave Kirk and his crew a primitive replacement: the *U.S.S. Franklin*.



For Sean Hargreaves the design of a starship is always driven by the script. It's not just about making it look cool, you have to know whether it's going to land on a planet, or take a beating, or have massive doors so hundreds of people can board it. When it came to *STAR TREK BEYOND*, as is the case with many modern movies, the script was still evolving when the art department started work, and as a result the design of the *U.S.S. Franklin* evolved too.

"In the past," Hargreaves explains, "you'd have a script and it was pretty much what you would shoot. Now you get given a script and the script is almost like an outline for the story. Everyone agrees that is the story they want to do but it's going to change."

Under the command of production designer Tom Sanders, the art department divided up the different things the script called for. As the production's senior concept artist, Hargreaves was

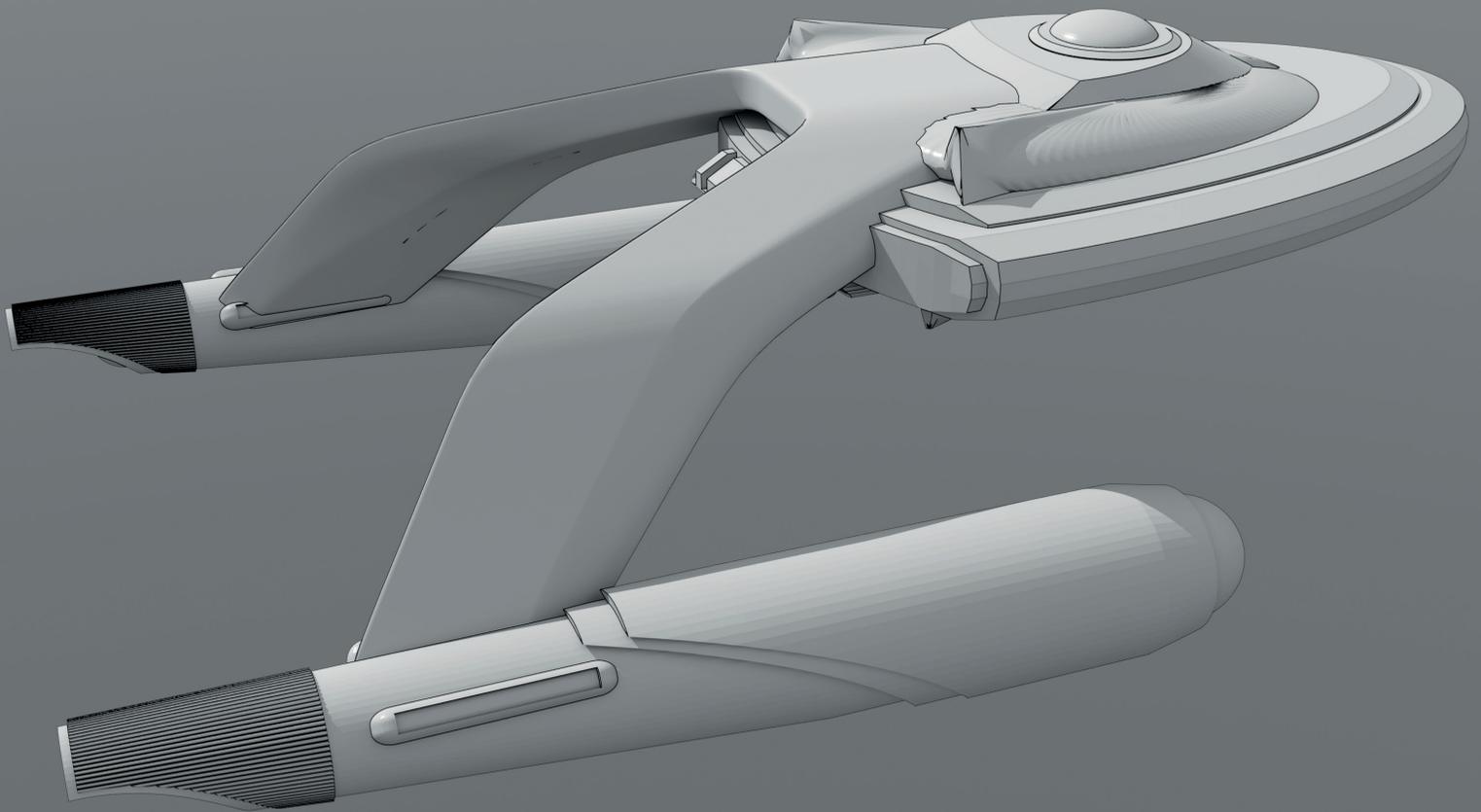


given the task of designing the *Franklin*, or, as it was then known, the *Pioneer*. In that early script it was a relatively small scout vessel that Scotty would find buried in the sand.

Hargreaves starting point was that he was designing a Starfleet vessel, and, he says, this dictated his approach to the design. "I design in threes: What's the shape? What's the medium detail and what's the finer detail? Getting the shape right is always the most difficult thing so I

spent time working on that. Designing a Starfleet ship's not that difficult – it's a saucer with a body, a neck, two pylons and two engines. That's the *Enterprise* and if you can take that and put it into configurations for other ships that's the *STAR TREK* world."

Hargreaves had watched *STAR TREK* when he was growing up in England in the 70s and had always been drawn to the simplicity of Matt Jefferies' designs. "The thing that I loved about



Jefferies' stuff," he says, "is he kept those things strictly apart. This is where the engines are, and this is where the engineering hull is, and these are the parts that join it together. That's why the *STAR TREK* ships look so different because that was his basic rule. And if you stay with that then you're going to have these ships that are really cool and different looking."

FIRST THOUGHTS

With this in mind he started to sketch some initial ideas on paper before rapidly moving into 3D, where he could explore the shapes more thoroughly. "When you draw something you always think in 3D," he explains. "I always used to think 'I want to get my hand around the other side of this flat piece of paper.' 3D gives me that."

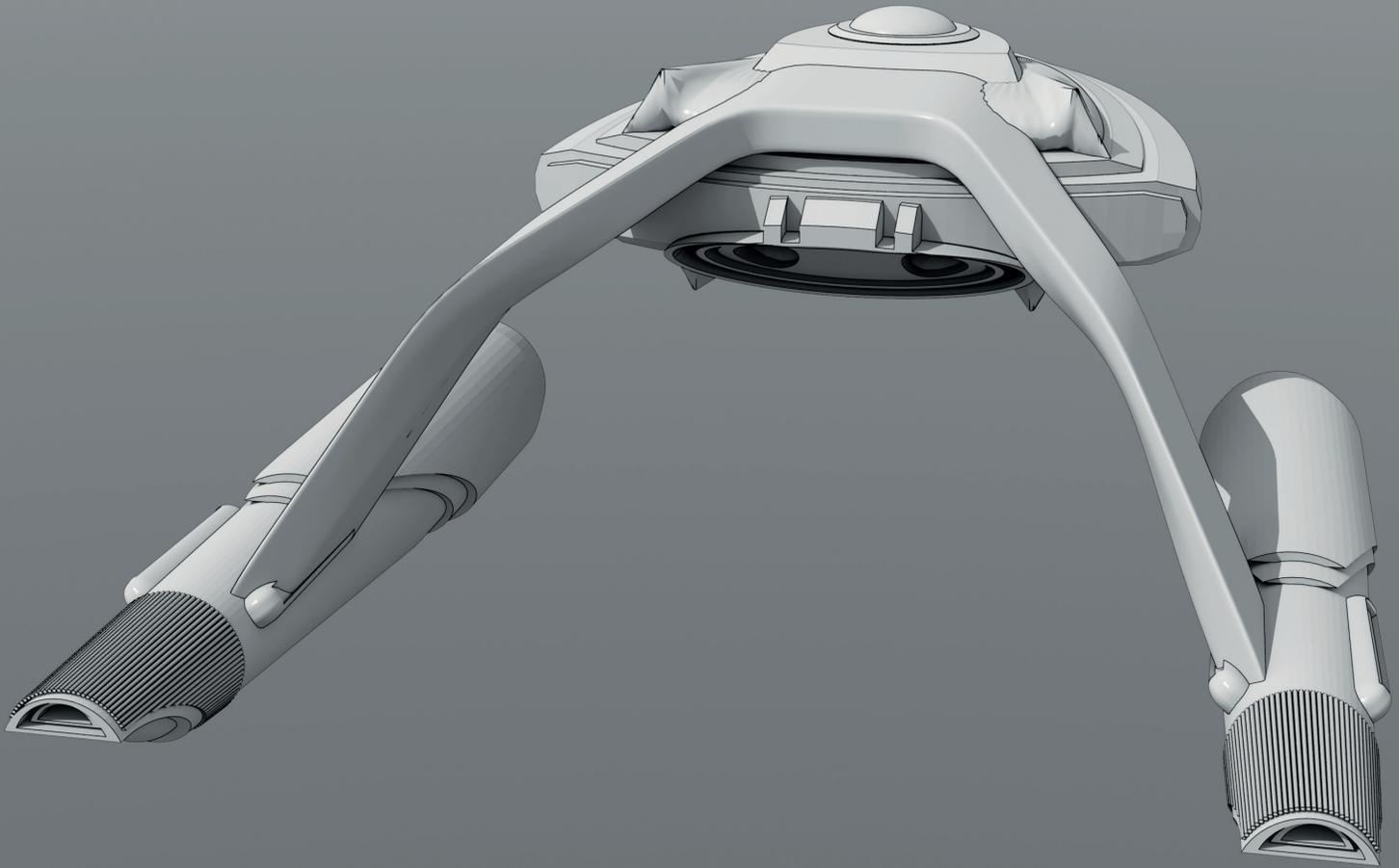
Hargreaves produced a series of variations as he was looking for a shape that he liked. "It went through a bunch of things. I always say it's a case of getting the junk out of your system. So the more you draw, the more you design, you're getting the

junk out of your system and your mind's finding whatever it's going to find.

"I didn't want to do a streamlined, atmospheric looking ship. I could have done one easily, but the challenge for me was to keep it simple, keep it Jefferies-like, and also keeping it in line with what the script was giving us."

The design that Hargreaves settled on was for a much smaller ship than the one that ended up on screen. At the time, the script called for the *Pioneer* to be a scout ship that had been buried on the surface of the planet. "I know about the shuttlecraft how they have those similar pylons almost like a helicopter. So I went along with that."

The design he came up with had a shovel-shaped 'saucer' section with twin pylons coming off the back, sweeping below the ship until they connected with the warp nacelles. "We didn't want it to look like an *Enterprise* type ship," Hargreaves remembers. "It was a different kind of ship. It had more of that compact singular look, which was basically what they were looking for at



the time. And the way the pylons went right into the back of the underside of the hull was kind of interesting.”

The fact that the nacelles hung below the ship was important, because the script called for it to land on the surface and to take off vertically. “Originally as the *Pioneer* it was going to be buried in the sand. They were going to find it in a sand dune. Scotty was going to just climb in the back and over time rig the thing together and it was going to take off. So these engines would also serve as landing legs.”

SOMETHING ‘OFF’

This version of the design met with enough approval from Tom Sanders and director Justin Lin for Hargreaves to continue working on it. But there was something about it, that wasn’t working. “As you’re working through a design,” Hargreaves says, “you’ll drift away from things and you’ll drift into other things. I was wandering around design wise thinking ‘Where am I going with this?’ I was playing

around with that early design for a long time and trying to make it work.

“It had the *STAR TREK* design language. It had the main body, the arms and the pylons and then the engine, so it had those three elements, but it was bugging me. I also wanted to make it more of that Federation world.

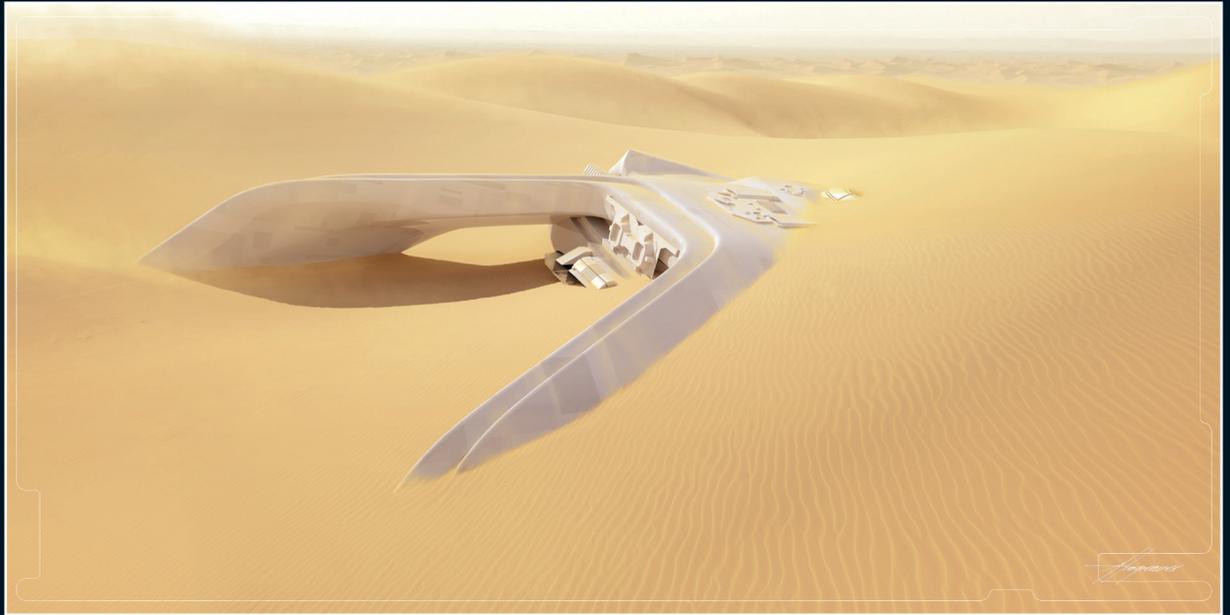
“For one thing, I always felt the main body was overpowered by the size of the engines. So I was fighting against that. When I made the body big the engines look a bit hard. It was a lot of proportional working out of stuff.”

Hargreaves talked to Sanders about the design and they agreed that he should try separating out the classic Jefferies’ design elements to make them more distinct from one another.

“I came in one morning,” Hargreaves recalls, “and I just went right back to basic shapes. I said, ‘This will work, just go old school and sit down with a pen and paper.’ These proportions work. These proportions don’t work. Go back to basics based on what you’ve already done. Just work on simple,

▲ In the beginning, the *Franklin* was known as the *Pioneer* and was a much smaller scout ship. After exploring various shapes, Hargreaves settled on this design, which drew inspiration from shuttlecraft.

► The script originally called for the *Pioneer* to be found buried in the sand. Scotty would climb in through a hatch on the top and get the ship working again.



straightforward proportions instead of this blending stuff, where I'd been enlarging this 10% and shrinking this 15% and fiddling for days.

PRIMITIVE POWER

"That was my turning point. I'm a huge believer of sleeping on a project. You get to a point that you're very close to it, then you go home and sleep and you come back and you see it with relatively fresh eyes. You make big brushstrokes and you just destroy things that you spent days on and you come to a solution in an hour. That's really something special that happens. And that is what happened in the case of the *Franklin*."

Hargreaves revised design was much more angular and all-impotantly, it now had a classic Starfleet saucer. "I went back to primitive shapes, which were cylinders and discs. Giving it the saucer made a huge difference. It was about redesigning those three elements so they were more separate than they were before."

You can still see echoes of the original design in this new version: the nacelles still hung under the ship and the pylons still had the same basic shape, although they were now more angular. The shape of the original shovel-shaped 'saucer' was even preserved by being cut into the back of the saucer.

The redesign also helped to address one of the requirements of the script, which made it clear that the *Pioneer* (as it was still called) was an older ship that had been lost on the planet for some time. Making the design more angular helped to differentiate it from Ryan Church's design for the *Enterprise*.

"Ryan's *Enterprise* got very, very slick and it got away from primitive shapes. For me, all I said was 'I'm not going to do that.' The brief was that it's old and I went back to Jefferies' stuff just to harken back to an earlier era. I took it back to simplistic shapes. I don't say simplistic in a derogatory way, it's just not something that was more futuristically, sleekly designed as Ryan's ship was. It was more Jefferies inspired."

ALL-IMPORTANT DETAILS

The new design was well received, so Hargreaves started to produce illustrations showing the ship in action. "I did an image of it lifting off vertically and that was what we showed around."

By now it had been decided that the *Pioneer* was not a scout ship after all, but a freighter, and this would influence Hargreaves thinking as he was

working up the surface details of the ship. "How you attack the details is very important," he says. "Evolution of design is an interesting thing. You start with something and as it's handed through other hands it changes. There's a point where it becomes not what it started as. It can be almost unrecognizable and that can be the overall shape or down to the little details. I felt that a lot of *STAR TREK* design had lost it in terms of the details, not in the overall shape but in terms of the feel of the *STAR TREK* world."

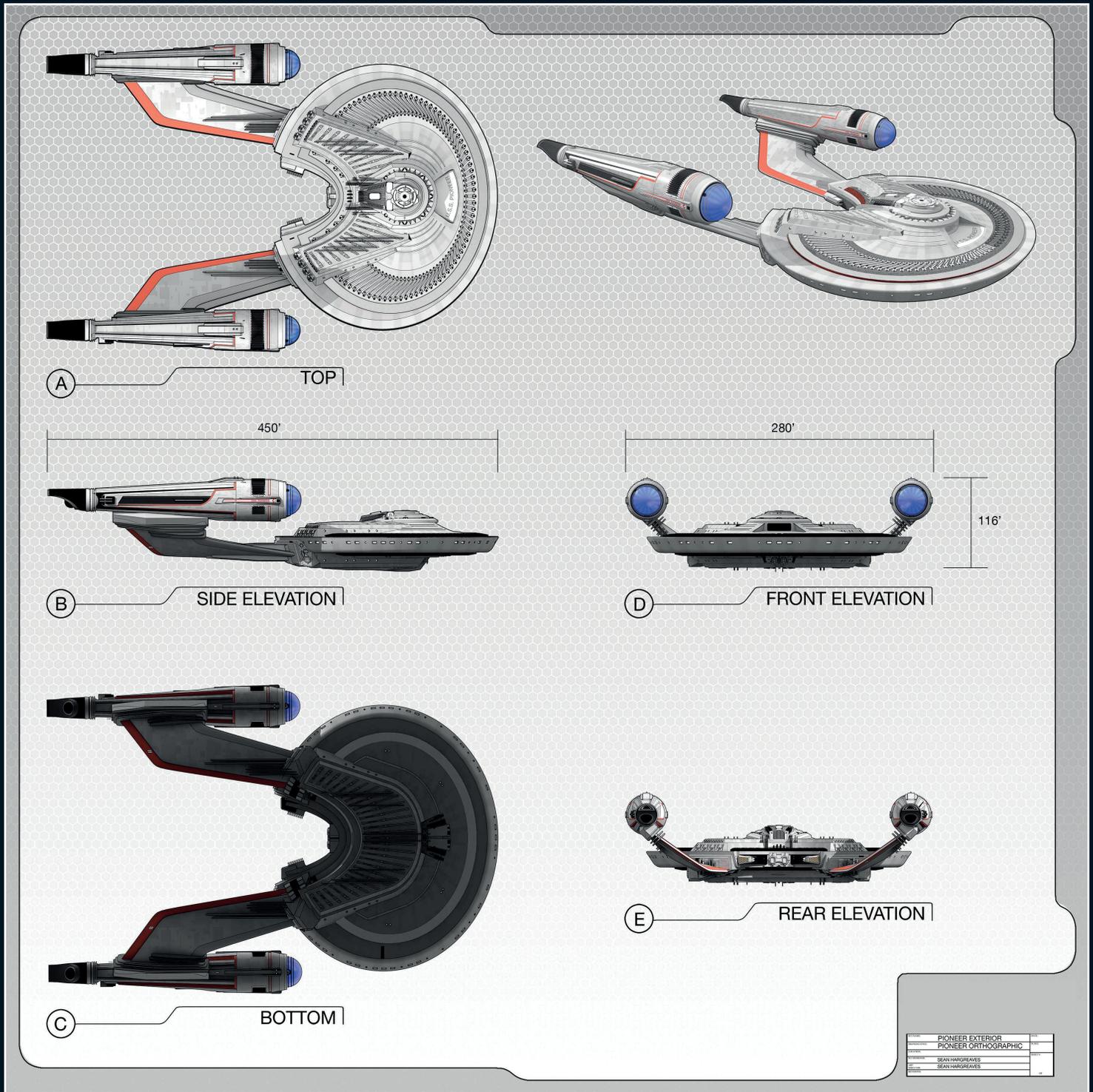
"So I brought back a lot of original Jefferies' little touches that I felt had been lost. The side of the saucer that Jefferies did was never vertical, it had a cant in, it was wedge shaped so when the *Enterprise* went by the camera it had direction. All the saucers since then the side is almost straight. It always bothered me so I brought that back."

"Then there's the spinning nacelles. I was determined to bring those things back because I loved them when I was a kid. I don't know what it is or how it's propelling the vehicle. To me that was the future. That was really cool to me and so I brought that back on the *Franklin*."

"I remember as a kid in 1979 when I saw *THE*

▼ Hargreaves wasn't entirely happy with his design and reworked it, giving the ship a traditional saucer. This illustration shows the revised *Pioneer* taking off with the aid of eternal rocket packs that Scotty had attached to the underside.





▲ These plan views show the the next stage of the *Pioneer* from every angle. By now the nacelles had been flipped so they were above instead of below it.

MOTION PICTURE with that beautiful *Enterprise* – everyone knows I love that ship – but the spinning nacelles were gone. I just thought ‘Aargh’. It was dead when it moved past camera. Also the tail end of the engines – they’re a bit wedgy and I brought that back. Those things give a ship personality.

“It was all little details like that I tried to bring back on the Franklin and keep that original

Federation look but at the same time give it the tough kind of freightery look that we needed.”

Hargreaves says that one of the other requirements from the script was that the ship looked as if it could take a beating. “Because of what happens in the script – all the battering and beating it goes through when it goes through *Yorktown* and also being attacked by the Swarm ships – they wanted to make it look like it was a



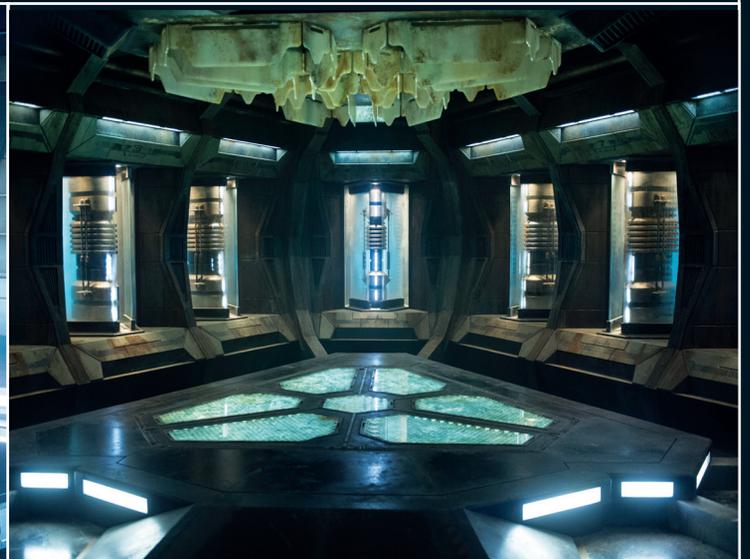
INSIDE THE FRANKLIN

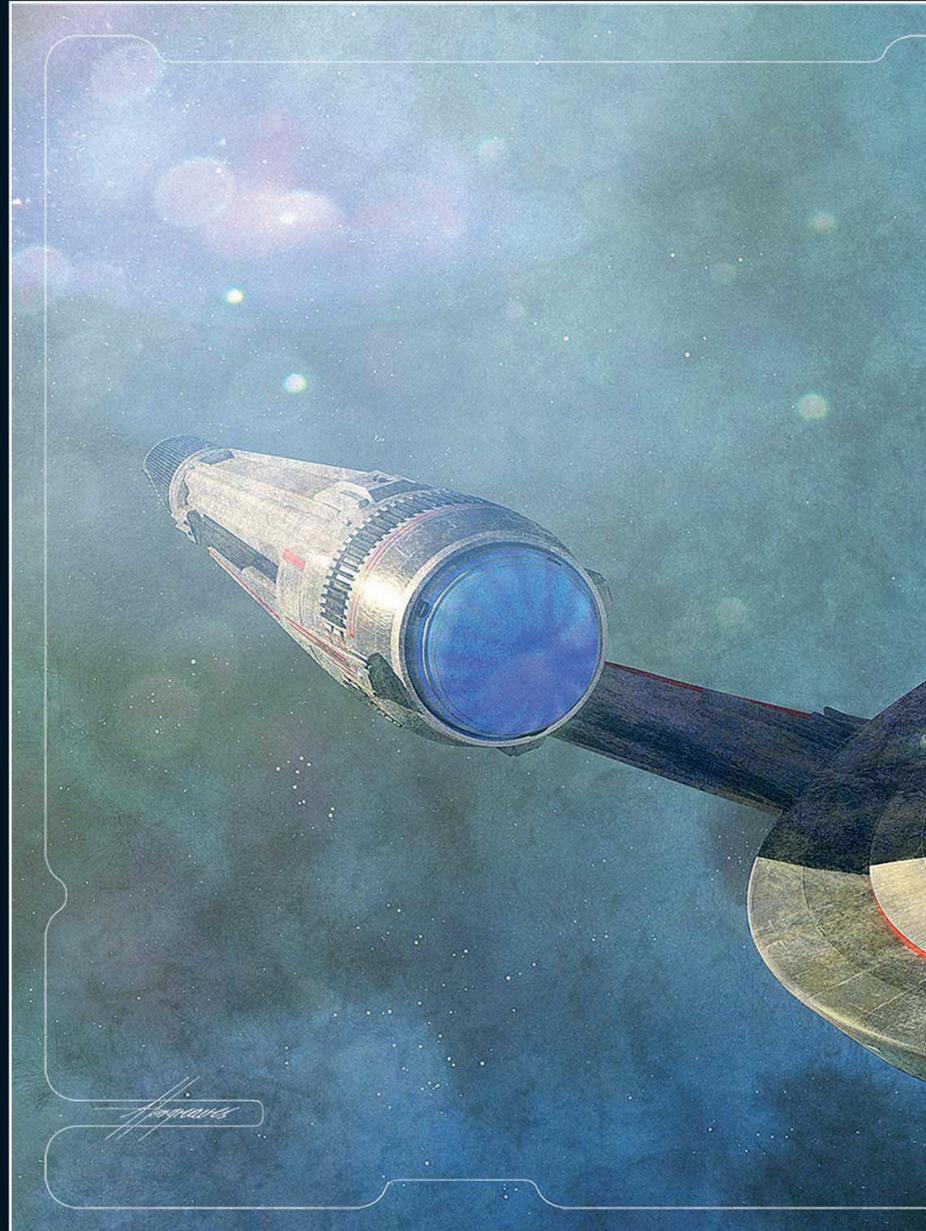
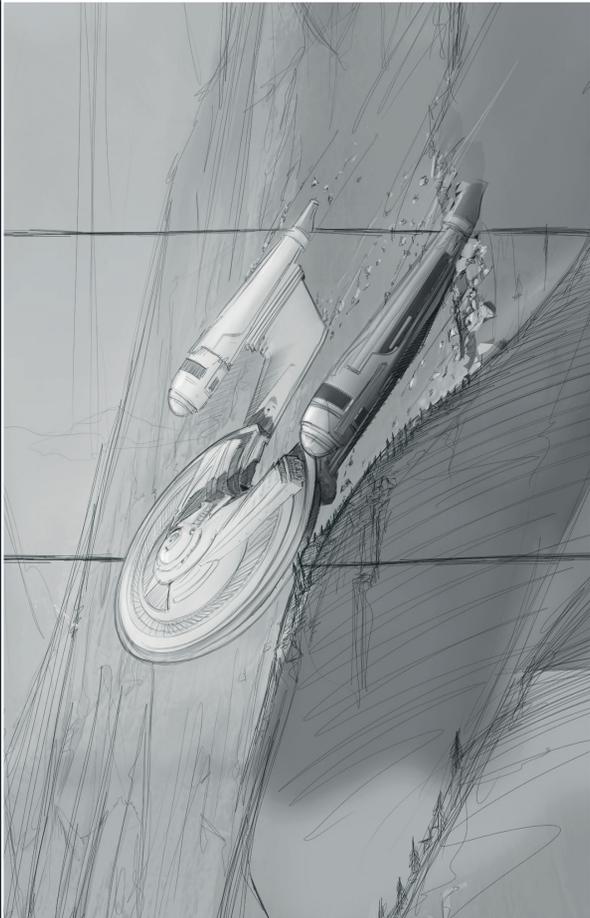
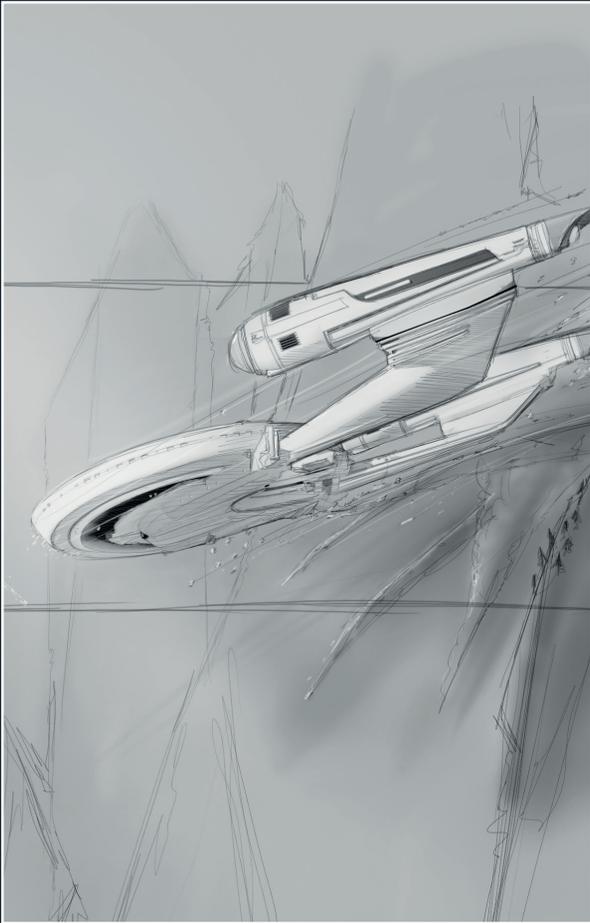
The interior of the *U.S.S. Franklin* went through a number of changes as the script evolved. With each draft the ship became more important to the story and more sets were built. The design challenge was to create something that looked both futuristic and old.

Everything was designed to fit inside Hargreaves design, with the 'window' of the

bridge clearly visible from the outside. The bridge set was actually mounted on a platform that could shake when the director wanted it to. The transporter set was only added relatively late in the day after Justin Lin and the writers decided that it made sense for Kirk and his team to beam the rest of the crew onboard rather than have them trek across the surface of Altamid.

A small part of the exterior saucer was built for the scene where Jaylah takes Kirk and Scotty to the top and shows how she has used refracting shields to conceal the ship. Other sets included the mess hall and a small part of the engine room. One area Ron Ames points out we never saw was the cargo hold, where most of the *Enterprise* are during the film's climactic third act.





◀ The decision to move the nacelles was taken for a practical reason: the script changed. Now, instead of taking off from a sand dune, the ship would launch itself by dropping off the edge of a cliff. When the nacelles were underneath, they made it difficult for the ship to slide, so they were moved.

tough little ship. It was built like a tank and had been through the wringer.”

In order to achieve this, Hargreaves added some of the surface detail and concentrated on making all the shapes as simple as possible.

The script also called for something that didn't make it into the finished movie: when Kirk and his team have rescued the rest of the crew, they had to get back on board. “I didn't really know how they were going to load up stuff into the ship. I was going to do these doors that were going to be on the top.”

As Hargreaves explains, these doors formed a ring around the middle of the saucer. “They were going to slide sideways, almost like on a single



hinge. There would be arms that were like pistons or hydraulics that would push the doors aside as they would open up. It was complicated. That ended up not happening because they said 'They would just beam everyone up.'

UNEXPLAINED DETAILS

Hargreaves liked the shape the doors made though, and felt that removing them would weaken his design, so instead of removing them, he added to them. "I modified the arms and hinges that would open the doors into this array. What I did was basically, I tripled them up. Originally it wasn't anywhere near as dense as that and it wasn't anywhere near as pronounced. They

were more of a lighter detail. I did that and everyone liked the look of it, which was great."

One of the things that still presented Hargreaves with a problem was that the ship had to land. "It was fiddly," he says. "It would land vertically and take off vertically. I did variations of it with landing struts, which would open up and they would come down as it was landing."

However, as the script continued to evolve the way the ship took off changed completely. "As time went by, the script changed. Now it was on top of a mountain and it had to fire up and then slide down the side of the mountain."

This presented Hargreaves with a new problem: instead of having to support itself with landing

▲ Once he had built the 3D model, Hargreaves put it in a variety of environments. By the time this illustration was produced, the ship had finally been renamed the *Franklin*.



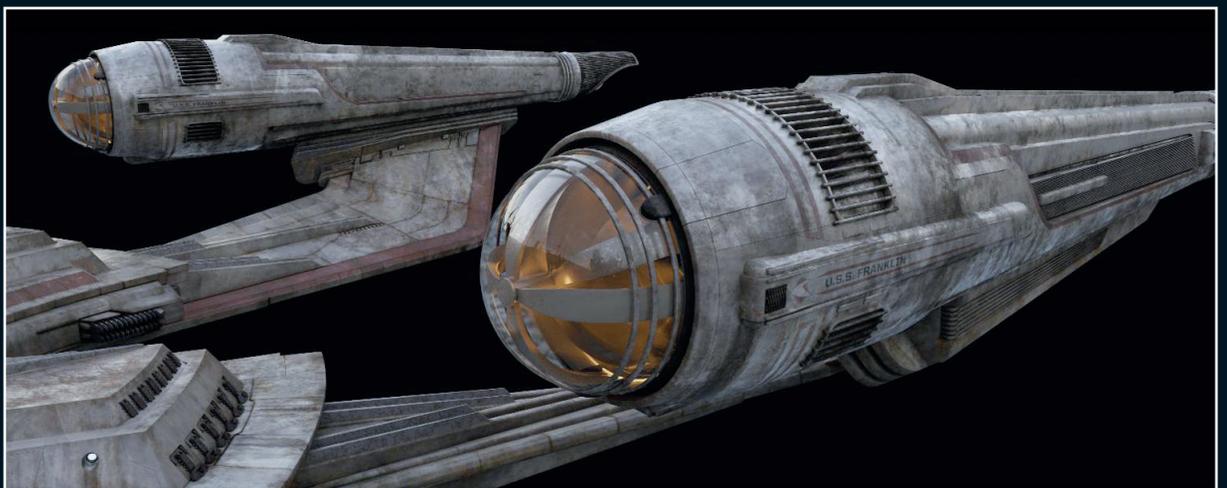
▲ Hargreaves produced illustrations that showed the *Franklin* from a number of key angles so the team could see how it would look in action.

gear, the ship, now renamed the *Franklin*, would have to slide across the surface of a mountain.

"I felt that the orientation of the engines wasn't going to work for what they wanted," Hargreaves says. "So I just flipped them upside down. I literally

had them on a different layer in 3D and I just did a 180 and said 'How about that?' and they loved it. I do like both designs, but the one we ended up with looks like it's having fun. It's got its arms up and it's on its way. So it ended up fine."

▶ Hargreaves believes that details are a vital part of a ship's identity and wanted to hark back to elements of Matt Jefferies' design for the original *Enterprise*. One of the things he wanted to bring back was the spinners at the front of the nacelles.





With the design finally approved, Hargreaves handed his model on to the visual effects team. By now all the details had been worked out. "I've always made sure that my design or vision is very, very clear from my end all the way to the final product. I consider myself a strict designer. It's my responsibility to carry the design through. I like to detail the heck out of my 3D models. If I just do some sketches and hand them off to someone else it's their responsibility to fill in the blanks that you didn't fill in. So I try and make my sketches and all my 3D stuff as clear as possible. That way there's no questions about what they're going to see."

Although Hargreaves' model was incredibly detailed, there was still a lot of work to be done. As VFX and associate producer Ron Ames explains, every detail had to be considered again as the shots were finally composed. "We don't change Sean's design. We were quite loyal to it,

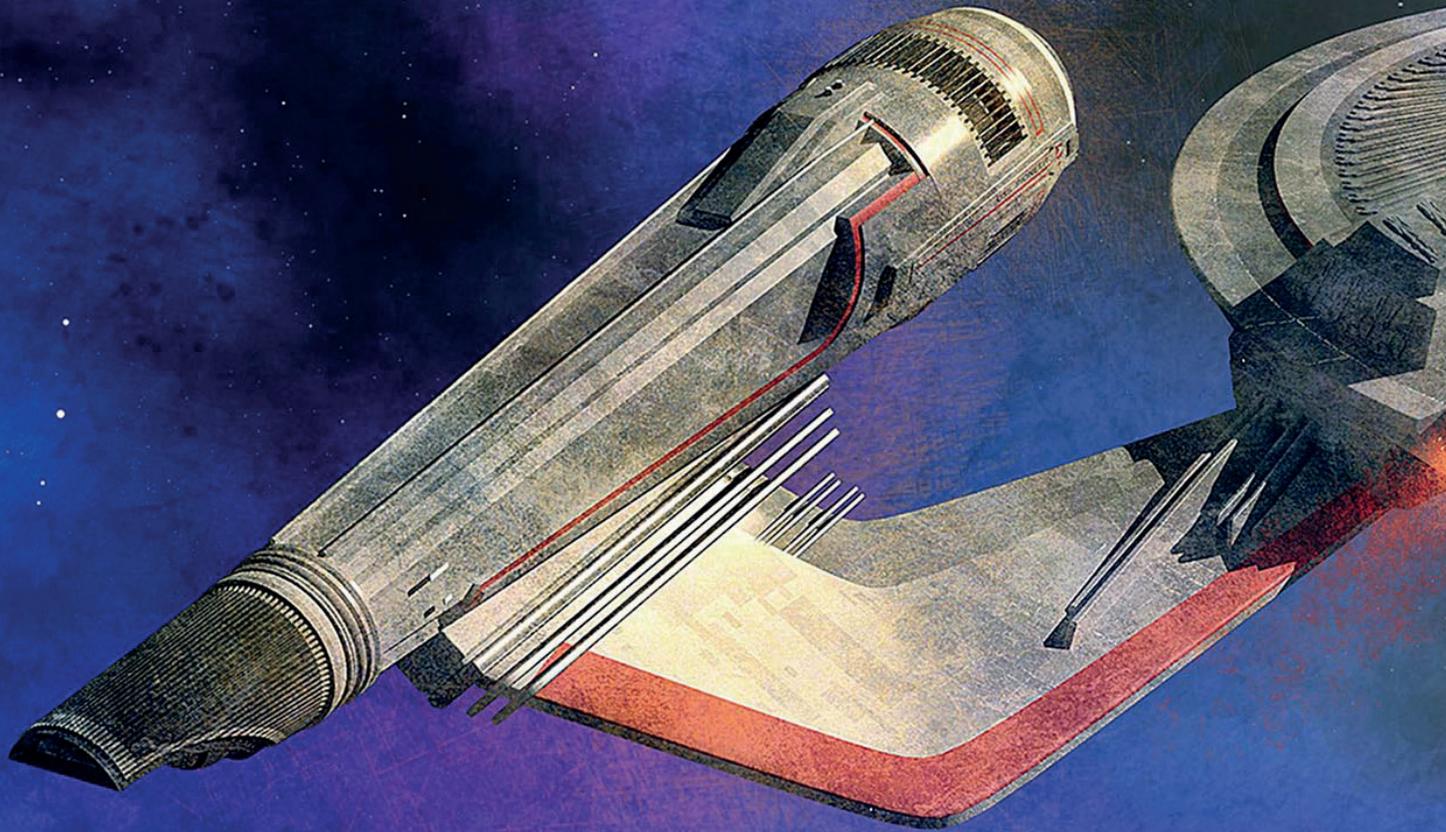
but we tweak it on a shot by shot basis and there was stuff that had to be added."

One of the first questions was exactly what kind of materials the *Franklin* would be built out of. "There was a great deal of conversation around that," Ames says. "We wanted to give the idea that the technology had evolved. What materials would they have used? Was it aluminium like? Concrete like? Is it some kind of really tough metal that has a pebbly texture to it? It definitely evolved."

TAKING DAMAGE

And once that material had been decided on, the VFX team added a load of material that had literally grown over the *Franklin's* surface during the decades it had spent on Altamid. "It had been sitting there for a couple of hundred years so it had dirt and rocks and trees growing on it. It was

▲ The ridged detail on the top of the saucer started life as a series of cargo bay doors that would have opened up to allow the crew to board. When this sequence was eliminated from the script, Hargreaves redesigned them as an array. He admits to being uncertain of its exact purpose.



kind of funky when it took off.”

And no sooner had the *Franklin* taken off than it started to sustain damage. First of all as it falls over the cliff and then in the battle with the Swarm ships before it finally crashed its way into the *Yorktown* station. All of this damage was carefully worked out by the VFX team and recorded so that it could be tracked in each shot. “We added scrapes when it comes off the edge of the cliff,” Ames explains, “then you had to know where it had been hit by Swarm ships, so you build a history of

the damage and follow that through.

“I thought the way the *Franklin* behaved in the final battle and as it came into the space station, was beautifully designed. It’s beginning to fall apart and bits of it are coming off. It’s really beginning to deal with atmosphere and hitting things as it’s coming through the station and finally it comes up through the water. We really tried to make that as real as possible. I thought that was very successful and pretty cool.”

In fact the *Franklin* sustained so much damage



that the VFX team had to look at ways of making it seem tougher so you would believe that it could survive for as long as it did.

The *Franklin* even continued to evolve after most of the film had been shot. When the crew were editing, it was decided that in the battle with the Swarm ships, the *Franklin* should be able to fight back a little more than had been planned.

"Originally," Ames says, "the *Franklin* was designed without weaponry at all or minimal weaponry that was not functional. As the third act was rewritten

when we were editing we had to add weaponry to tell the story, otherwise it would have been a sitting duck. So we took Sean's design and added firepower."

So just as Hargreaves had started the design process by asking what the script called for, the *Franklin* continued to evolve in order to tell a better story and make a better film, changing from a scout ship buried in the sand on an alien world into a tough explorer that ended its life crashed on the inside of a massive space station.

▲ Hargreaves was delighted with the final version of the ship, which he sees as very much a tribute to Matt Jefferies' original, simple design.

STAR TREK™

