AKIRA CLASS
SPECIAL ISSUE

ACTIVE: FROM 2365
LENGTH: APPROX 440 METERS
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Stand assembly:

Push the top of the stand onto the back of the ship.

Find position.
AKIRA CLASS
SPECIFICATION

ACTIVE: FROM 2365
LENGTH: APPROX 440 METERS
WEAPONS: PHASERS AND PHOTON TORPEDOS
DEFENSES: DEFLECTOR SHIELDS
FIRST APPEARS: STAR TREK: FIRST CONTACT
LAST SEEN: ENDGAME
DESIGNED BY: ALEX JAEGER
The Akira class was part of the fleet that engaged the Borg at the Battle of Sector 001.
At a time when most 21-year-olds have only just decided on a career, Alex Jaeger had landed a job working in ILM’s model shop. However, as he recalls, he wasn’t sure it was the right thing for him. “I was a little person low down on the totem pole of the model shop. I was pretty new and pretty young. After about a year, I started to debate whether or not I should stay at ILM or whether I should go back home and start all over again doing something different, maybe take one of the video games jobs that had been offered to me when I graduated.”

STAR TREK: FIRST CONTACT gave a young designer at ILM the chance to have a real influence on the franchise.

THE STAR TREK ART OF
ALEX JAEGER

STAR TREK: FIRST CONTACT gave a young designer at ILM the chance to have a real influence on the franchise.
Fortunately for Jaeger, around the same time there was a mass deployment of staff to work on the special edition ‘Star Wars’ movie, which left the Star Trek art department in dire need of new blood. Jaeger’s former boss at ILM, Jeff Olsen, was the visual effects producer on First Contact. One of his first tasks was to staff up the art department. Recalling Jaeger’s desire to move into design, Olsen showed the young man’s sizeable portfolio to art department supervisor, John Knoll who was impressed enough to approach him.

“I remember seeing Jeff with John Knoll who I didn’t know at the time,” recalls Yeager. “Jeff was like ‘Hey, this is John Knoll and we have a question we’d like to ask you: how would you like to art direct the new Star Trek film? I don’t know if I had control over my lips but I remember hearing myself say, ‘Yes’. They said, ‘Great’ and immediately started making arrangements. Shortly after that I remember leaning over and asking, ‘What does an art director actually do?’

Knoll replied that Yeager’s new job mainly entailed doing whatever the production in Los Angeles wasn’t able to do. Rather than be fazed by such a vague job description, Jaeger jumped at what he rightly saw as a golden opportunity.

“From almost the first day on the job I was dipping in and out of as many different departments as possible,” he recalls. “My days were spent getting my hands dirty in the model shop, working on
storyboards and ship designs. I even got involved in designing the Borg Queen. At that point, I had no idea how long any of it was going to last. It helped that John Knoll and director, Jonathan Frakes were very collaborative so the visual effects department got to do a lot more things than they would typically do."

*FIRST CONTACT* was made at a time when physical models were starting to be replaced by CG. While the visual effects team still used a physical model of the *Enterprise*-E built from scratch by ILM for most of the scenes, for others it was the CG model of the ship. At the same time all the background ships were CG, the exceptions being the Borg Cube and the Borg Sphere.

**STARFLEET ARMADA**

Jaeger was given the opportunity to come up with designs for the background ships in the battle of sector 001 at the beginning of the movie. "That was fun," he says. "It started out as a request for a dozen or more ships. At first I thought ‘Oh, okay, STAR TREK has got like a backlog of ships we can use.’ But the one thing they wanted to make sure was that we didn’t have a ship in the background that looked like the old *Enterprise* and we didn’t have anything that looked too similar to the new *Enterprise*. It came down to using silhouettes and asking if it looked different and if it still fitted within the design language of the *STAR TREK* universe. In other words, making sure that the front of the nacelles were exposed and the deflector dish was situated in a place where it was actually deflecting particles away."

Jaeger studied the designs of the previous ships to work out the reasons behind the design choices. At that time the most current ships were the *Defiant* and *Voyager* and he says they both influenced his thinking. "The only criteria I was given was to make the ships look cool and to make them look different," he says. "So I took a little bit from both those ships and kind of mixed them around. The idea of embedding the nacelles into the saucer, kind of came from the *Defiant* design. Streamlining everything a bit more came from *Voyager*. Then..."
The Akira became an extremely popular ship that went on to feature in *STAR TREK: VOYAGER*. 
we had the design cues from the E itself that I could pull from as well. So it was a real case of mix and match. The brief mentioned a dozen ships but for the sake of the budget they cut it down to around eight or so. I designed a bunch more that had gotten approval but then that was cut down to the four or five that appeared in the movie. I remember there was one that had a saucer separation from the bottom, which was called the U.S.S. Yeager.”

It was understood by Jaeger and both design teams, that rather than build physical models of all the background ships they would be CG. However, an exception was made for the Akira class, the design of which proved popular enough for it to be fleshed out enough for close ups.
Many of the tasks the visual effects dept were called on to do were things that were needed on set – such as the scene where a pin is inserted into Picard’s eye. Jaeger recalls being in the studio on the day the sequence was shot. “It was kind of horrific,” he laughs. “They had a needle on a c-stand and they were sliding it towards Patrick Stewart’s face. He just sat there looking calm because I think he had no idea how close they actually got. After that we did the touching of the eye in VFX, which was just as horrific and scary.”

The visual effects team were also heavily involved in the shooting of the Borg Queen assembly sequence where the head of the Borg Queen is seen being attached to her body. “That was a learning curve for me,” muses Jaeger.
Once of the most important things it taught me was to always date your artwork. I remember sitting down with John Knoll and discussing how we were going to do the Borg Queen scene. While they were talking, I’m sketching the whole gimbal thing of putting Alice Krige at an angle and then putting the prosthetic of the spine hanging off her neck. We could use her real face with a real prosthetic and just paint out her body. I showed it to John and he got really excited and said ‘Yeah, let’s do this. Color it in and we’ll present it.’ When it came to the Academy Award nominations, John said, ‘Where’s that piece of paper that you did that sketch on?’ I pulled it out and they noticed there wasn’t a date on it. There were other people claiming credit for the idea. John got kind of angry with me that I hadn’t put a date on the sketch, which would have put an end to the debate.”

**PLOTTING THE ACTION**

For other major sequences such as the space walk and the battle on the saucer, Jaeger did storyboards which helped drive the camera angles so the visual effect department knew what to shoot. He also storyboarded Zefram Cochrane’s Phoenix flight, which appeared at the end of the movie, the opening scene with Picard’s dream and the sequence where the Borg assimilate the crew. “I looked at what they were doing with the Borg outfits and extrapolated some of the form language to do the ‘cheek popper’, which comes out of Picard’s face” he recalls. “Then that was made into a prosthetic, which was used in other parts of the film.”
Jaeger also contributed storyboards for the big battle sequence along with some of the animatics which was a new thing for the time. “David Dezorits, who at one time was my roommate, was there doing some of the animatics. He took me through the software we were using which was Electric Image. I built all the ships in Electric Image and John Knoll showed me how to texture them quickly. I kind of learned on the fly how to animate ships and cameras. To my surprise they used my animatics to follow the motion control shots for the Enterprise and then the animators cleaned it up a bit but then took the same sort of pathways the ships in the animatics took. So that was a cool thing for me.”

Jaeger admits that when it came to certain design challenges such as the Borg Queen it was hard to sit and wait for the go ahead. In fact, having read the script, he formulated his own ideas of how the Queen should look. In his spare time he worked on his own version of the Borg Queen, which he presented only to be informed...

When ILM returned to STAR TREK for the 2009 movie, Jaeger played a major role in finalising the look of the new Enterprise, and was responsible for working out a lot of the detail that would be added to Ryan Church’s concept.
Jaeger had designed futuristic cars for the scenes that would play out on Earth in STAR TREK (2009). When they were dropped, he repurposed them as rail cars on Vulcan.

INCREDOBLE OPPORTUNITY
While he might not have got the chance to design the Borg Queen, Jaeger worked on the movie for the best part of a year and looks back at this time fondly. “It was very cool. I can now look at the screen and think, ‘Not only did I design that, I helped come up with a way to make these things happen.’ To do that so early on in my career was pretty rewarding. I was definitely blessed but I worked really hard at it because here I am, this young kid, coming in from the model shop where the usual channels are that you become a PA in the art department and you get coffee for everyone and put paper in the print machine and do that job for a year or two before you even get to touch a pencil and paper. After that you become a concept artist for a while where you do storyboards and concept art and then eventually you become an art director. To come straight from the model shop to being an art director was unheard of. I had lots of eyes burning the back of my head and I knew they were thinking, ‘Who are you?’ and, ‘You don’t belong here’. Three quarters of the way in that changed. It was my audition and I was very aware of that.”

Once Jaeger had earned his stripes he went on to work on other sci-fi movies such as ‘Starship
One of the ideas that could be seen in Ryan Church's concept artwork was that the nacelles would light up in some way. Exactly how would be left to ILM.
Troopers’ and ‘Wild Wild West.’ He also worked on ‘Pearl Harbor’ where, as before, his desire to do everything saw him creating animatics, drawing storyboards and visiting the model shop to help paint the physical models. Of course as the movies got bigger that became impossible to do.

“My end of year assessments would always say needs to learn to delegate,” laughs Jaeger. “Eventually I started learning to say ‘This guy’s really good at this while I’m only okay, so I’ll let him do it.’ That’s when I learnt that ILM is full of really creative people and that if you give each one specific things to do they’ll really run with it. Looking back at FIRST CONTACT, if I could do it again I would have someone else do the CG models. Mine were pretty rudimentary and were barely texturable. But that did mean they rendered fast because there was literally nothing there.

‘First Contact was probably the last effects movie where it was possible to do a lot of the work yourself. John Eaves and those other guys down in LA designed all the sets and even the shuttles. In the 2009 STAR TREK, we see the young Jim Kirk in rural Iowa. Jaeger’s original concept included a futuristic combine harvester.

We also got to see Spock’s birth. The idea was that his ear would look human until it unfurled to reveal the Vulcan tip, as seen in this concept.
The scene in STAR TREK (2009) where the policeman stops the young Kirk had originally been shot so you could see the actor. Director JJ Abrams asked Jaeger to design a new face so they could replace the human with something that looked more mechanical.

BACK IN ACTION
While Jaeger and ILM were not involved with the next two STAR TREK films they took on the challenge of designing the JJ Abrams 2009 reboot of the franchise. “JJ already had Scott Chambliss doing all the set designs and production stuff when it came to starting ILM on the visual effects,” recalls Jaeger. “There was also John Eaves, Ryan Church and James Clyne. But JJ knew where our strengths were. He said, “I know you have all this art from the production department, but you guys are ILM. You guys are STAR TREK. I want you to take this stuff and imagine what you would do if the original show had a massive budget. That’s where the detailing of the Enterprise came in. It was really cool to have a director like JJ say, “You guys know what you’re doing, just do it.”

It was Abram’s request that the film should look as 60s as possible which led to the streamlined look of the Enterprise. “While the older ships looked a little clunky, when we get to the Enterprise it looks a lot more windswept. We pulled a lot of that from the sleek and white interior stuff that Scott Chambliss did. So when you cut from the exterior to the interior you immediately knew which ship you were on. Whereby the Narada was clunkier, darker and had more of a submarine feel. It came down to a case of remembering when STAR TREK was conceived and imagining that if it was done in the 60’s what it would look like. We also did a lot of
work playing with how we would light the Enterprise. Eventually we came up with the idea of giving the ships these kind of stadium lights. JJ wanted to avoid anything that felt like magic, so we gave the Enterprise guns that popped up rather than a phaser array and a space jump rather than simply beaming down.

WORLDS REIMAGINED

"It was a pretty big jump in the overall production quality", recalls Jaeger. "JJ changed things quite often and quite late in the day sometimes but the visual effects were left up to us. The mining cable that cuts a hole into Vulcan, the look of Vulcan itself, even the look of Earth in Iowa was ours. JJ just said come up with a bunch of shapes in the background, which made sense. I had done all sorts of things, like a hover tractor, which I thought was cool, but he said get rid of that. It was just enough for you to know it was the future.

"They had the hover bike design and they had a guy playing the police officer, but when they got it into the editing bay JJ felt that having a human face wasn’t very futuristic. The message I got was that it had to be a robot, so I did a couple of sketches. When we showed them to JJ, he said, ‘Oh no, it doesn’t have to be an obvious robot. I want people to guess – like the stormtroopers in ‘Star Wars’ So I did some more sketches. We painted some armor on him, painted over the face and changed the helmet to one that flipped up. I designed it but another company – I think Digital Domain – did the sequence."

Abrams’ was determined to limit the fantastical and to ensure that where possible the movie relied on hard science. For example, he was keen for there to be only one light source in space. This resulted in the sides of the ships looking darker than usual and space itself looking stark but at the same time accented with nebulas. "The nebulas were a key thing and answered the question of which space we happen to be in at a given time,” explains Jaeger. “Were we in Vulcan space, Earth space, were we in Klingon space? And that was all
shown by the star field and the type and colour of the nebula going on in the background."

When it came to one of the big set pieces in the film – the implosion of Vulcan, Jaeger was given a very simple brief. "It literally said, ‘a planet gets a black hole put in the middle of it and it gets sucked into itself,’ he recalls Jaeger. "First I thought, ‘OK…’ and then I started to think about how that’s going to work. I had the idea that they drilled straight through and the black hole is in the middle. It starts tearing up around that hole. Stuff on the inside is going to get sucked away first. You try to maintain that outer donut as long as possible. We used grounded physics as much as possible. We were running gravity and cloud simulations. We’d do little subtle things to augment it and make it look as cool as possible. In the early cut they even used my key frames and just dissolved between them."

Abrams and both design teams knew that all eyes would be on the enemy ship the Narada and the new Enterprise. "The Narada was probably the hardest thing in the film," says Yeager. "James Clyne collaborated with us and the sketches looked great but building it was a real nightmare. We had to build these splines and then work out how to texture it and light it. There were perspective problems, so much so that we had to change the shape of it for a lot of the close up shots."

ILM created set extensions for the inside of the Enterprise shuttle bay.

A lot of work went into working out how to light the ships, which were eventually given a lot of built in lighting that created a dramatic ‘stadium lighting’ effect.