U.S.S. ENTERPRISE
NCC-1701 (2009)
SPECIAL ISSUE

CONSTITUTION CLASS
2009 KELVIN TIMELINE
LAUNCHED: 2258
CAPTAINS: PIKE, KIRK
The stand fits over the back of the saucer.

Push the engineering hull down into the stand

Push the stand forward over the saucer.

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Stand assembly:
U.S.S. ENTERPRISE

SPECIFICATION

CLASS: CONSTITUTION
CONSTRUCTED: RIVERSIDE SHIPYARDS, IOWA, EARTH
LAUNCHED: 2258
CAPTAINS: CHRISTOPHER PIKE, JAMES T. KIRK
WEAPONRY: PHASERS, PHOTON TORPEDOES
DESIGNING THE ENTERPRISE

The Enterprise in the 2009 STAR TREK movie was a curvier, more modern version of the classic design.
When *STAR TREK* returned to the big screen in 2009, director J. J. Abrams wanted to go back to the series’ roots. Rather than invent an entirely new version of the *Enterprise*, he wanted to take the original approach to the design and rework it as if it had been created for a modern blockbuster. As production designer Scott Chambliss explains, “Our task was to reinterpret what was essentially an original low budget television show design that was much too undeveloped to stand up to big screen requirements.”

In many ways the movie would be a love letter to the original series. There was no question when you watched it, that this was *STAR TREK*, so there was no question of radically altering the *Enterprise*’s design. Instead it would be a case of taking the elements Matt Jefferies had established and pushing and pulling them into something new. “There would have been no point in making a new *STAR TREK* if the *Enterprise* were unrecognizable,” Chambliss...
Tim Flattery was the first concept artist to work on the new Enterprise. He established the basic direction, but the changes he made were relatively subtle, and Chambliss and Abrams would push them much further.

From the beginning the art department knew that we would see the Enterprise under construction on Earth, so Flattery produced this concept showing what it would look like.

Scott Chambliss produced these rough sketches to show how he wanted to alter the Enterprise’s design. The ideas behind them would inform all the work Flattery and Church did.

Chambliss told him to take the design in a direction his notes described as “sardenized.” Chambliss wanted to make the nacelles and the body more curved so rather than having a circular cross section they bulged. He also asked Flattery to make the nacelle support struts sweep out, while the saucer would become more dominant. He suggested restoring the 45 degree angle on the edge of the saucer, which had been part of Jefferies’ original design but had been abandoned over the years, and altering the design of the nacelles so that you could see the energy operating inside them.

Flattery produced some initial concepts but he was only with the production for a relatively
short period of time. When he left, the task of redesigning the Enterprise was handed over to Ryan Church, who took Chambliss’ basic direction and applied his own sensibilities to it.

Church began by returning to Jefferies’ original design from the original 1960s TV show. In May of 2007 he produced a series of sketches showing alternative ways the design could be modified. For each version he created a side and a three-quarter view to give Chambliss and Abrams a clear idea of what the ship would look like from different angles. He worked with Chambliss’ basic desire to exaggerate the curves on the ship. As he explains, his goal was “to create something that lived up to the high standards of all the versions that had gone

▲ During May of 2007, Ryan Church produced a series of concepts showing alternative Enterprises. Chambliss picked the elements he liked best so Church could combine them (bottom).
One of the last elements to fall into place was the design of the nacelle caps. Church suggested several different ways they could be cowed, and produced a series of front-on sketches to show what each version would look like.

Church’s designs showed versions of the ship where the curves had become more extreme and a series of shapes were built out on top of the familiar design. For example, in one rejected approach he ran a fin down the side of the engineering hull.

As he recalls, one of his goals was to make the shapes look more unified. “I was keen to come up with a design that implied an interaction between the saucer and the nacelles so that it looked like the saucer was almost part of the propulsion system. I played around with sleeker silhouettes and also more functional ones. I noticed that Scott and JJ tended to respond more favorably to designs that looked the most cohesive and sleek, more ‘all of a piece’ than the slightly Tinkertoy feel you get from the original.”

After a week, Chambliss selected the parts he liked best from the different designs Church had submitted and asked him to combine them on the next pass. Church went back over his
original set of designs and refined them. One of Chambliss’ requests was to restore the orange spinning nacelle caps so Church produced an additional view that showed the Enterprise more or less head on so he could see what his alternatives looked like from the front.

Once the basic design was approved, Church moved on to produce an image showing the Enterprise under construction at the Iowa shipyards.

Around the same time, the design was passed on to Joe Huira, who produced a CG model so that Chambliss and Abrams could examine their new Enterprise from every angle. This model was given to ILM who would build their own, much more detailed version, which would be used for the visual effects shots, at which point the design of the Enterprise would be refined even further.

Church used Huira’s model as the basis for a beauty shot that showed the finished design and for key frames that showed the Enterprise taking on Nero’s ship, the Narada, a battle that would be at the heart of the movie.

Another key moment showed the Enterprise battling the Narada. You can see that the nacelles are glowing in response to Chambliss’ request to show their inner workings.

This illustration was produced to show the overall design of the Enterprise before it was sent to ILM where it would be refined as the VFX model was built.
DESIGNING THE NARADA

Nero’s ship was like a vast knife in space that was designed to dwarf the Enterprise.

In the opening moments of 2009’s STAR TREK, an extraordinary alien ship appears through a black hole and instantly attacks the U.S.S. Kelvin, killing Kirk’s father and changing the course of history forever. The Narada, and its battle with the Enterprise, is the spine around which the movie was built. Nero’s ship was a Romulan mining ship from the future – a six mile long nightmare that would destroy Vulcan and come close to destroying Earth. The task of designing it would fall to concept artist James Clyne. As he remembers, production designer Scott Chambliss and director J. J. Abrams gave him a lot of freedom. “Initially the Narada was nebulous,” Clyne says, “The only information I really got was that it was a new ship that would be the antagonist to the Enterprise, that it was Romulan, and that JJ wanted to see something that he’d never seen before. They didn’t want it to be too conventional; they wanted it to be more sculptural or just more alien.”
Clyne freely admits that he didn’t have a detailed knowledge of STAR TREK’s different cultures so he didn’t worry too much about what it meant to be Romulan, instead he concentrated on the rest of the brief.

“I started to do very rough black and white sketches,” he says, “knowing that they wanted something new and strange. It’s important for a design that it evokes something visceral. I was thinking about being organic and about whalebone, or vertebrae, or a repetitive shape that you see in nature from a Mojave plant to the backbone of a humpback whale.”

He rapidly produced 12 sketches that showed variations on this theme, each evoking the skeleton of a whale or some other vast creature. They had, as he says, a “Jules Verne feel to them.” When he presented the sketches to Chambliss and J. J. Abrams, one of them instantly stood out as the favorite. “JJ looked at one and said, ‘That’s kind of it,’” which surprised everybody. He liked this very organic, animal carcass feel. He liked the way it was very aggressive and very ‘alien strange’. It had these very aggressive blades, which were sticking forward, which gives it a very menacing feel.”

For Chambliss, the appeal of the design was that it looked like “an organism primarily constructed of sharp knife blades pointed directly at anything or anyone that approaches it.” This made it threatening and ominous.

UNDER THE SKIN
The sketch gave a pretty good sense of what the Narada looked like from the outside but, as Clyne explains, there was still a lot of creative work to do. “The hard process wasn’t coming up with the actual skin, it was removing that skin and finding out what kind of structural elements were underneath. We had this general shape of
James Clyne began by creating a series of quick digital sketches showing possible directions for the Narada. He wanted something organic and was inspired by the skeletons of whales and plants that grow in the Mojave desert.

One of the most obvious questions was what did the different elements in Clyne’s early sketch actually do? “We started to dig into some logic. There was some organization to it. The top maybe had more of a shell and then the back end would have more of a specific look to it for the propulsion. What propulsion system did it use? What direction did it move in?

“Initially, I went with a vertical wash of afterburner rather than a horizontal one. But in the end I went very conventional with the propulsion system. I think some of what I proposed made it into the final film. It would actually fire energy out of some kind of core as it flew. In some of the sketches you can see small white bursts of fire coming out towards the back.”

The script also called for shuttles to fly deep inside the Narada before landing, as Clyne says, that posed all sorts of questions. “Where does a shuttle enter the ship? Does it enter from the bottom? The top? The center? If it enters from the center what does that aperture look like? How does it open? How porous would the Narada be? How open would it be?”

Flying inside the ship meant that it couldn’t simply have an interesting exterior; it also had to make sense as you entered it. Because of this, Clyne was determined that the ship would have a sense of structure. “You can see there’s kind of a triangular lattice work underneath the skin. We did play around with the structure underneath it. What’s holding all these seemingly random pieces together? I didn’t want everything to feel like a small, thin, skinny blade or needle. I wanted to give some backbone to it.”
Abrams chose the third of the 12 sketches Clyne produced and asked him to work it up into a more developed design.

Once the initial sketch had been chosen, Clyne created a more refined concept. The arrow showing the direction of flight was added because some members of the staff assumed it flew from left to right.

Exactly how “porous” the *Narada* was proved to be something that would continue to evolve, and Abrams and Chambliss would later ask ILM, who built the CG model of it, to remove parts of the ship to make it less symmetrical and to create more negative space so that you could actually see through the structure.

The script also called for the *Enterprise* to sneak up on the *Narada* and this was something that Clyne felt needed some explanation. “We were trying to figure out how the *Enterprise* could get close to the *Narada* without being detected. We played with the idea that it cloaked itself with this kind of mist, or atmospheric cloud. And I proposed this idea that the *Enterprise* would jump right into that cloud and hide in it.”

Clyne produced a concept showing this, but ultimately it was decided that this wasn’t necessary and the *Enterprise* could simply appear from warp.

The other major element that the script called for was the drilling platform that the *Narada* would use to tap into the surfaces of
According to Clyne, a lot of the work involved working out what the insides of the Narada would look like as various shuttles flew into it.

By December of 2007, Clyne had produced a series of elevations which were sent to ILM.

Vulcan and Earth with catastrophic consequences. As Clyne remembers the exact nature of the drilling platform went through some major changes. “In an early draft of the script it called for the drill machine to be its own vehicle. I created a few designs for it, which were shown to JJ.”

Clyne’s sketches show an almost bug-like ship with insect-style pincers that would grab onto the surface, allowing the drill to penetrate the ground. However, as Clyne was designing, the script was evolving. “JJ liked the direction we were going in, but he was working in tandem with the writers and the whole thing on the drilling platform became more of this moment. So we changed it so the actual drilling apparatus was directly connected to the ship itself, which made more sense for what they needed in this specific action sequence.”

The revisions to the script called for Kirk and Sulu to fight a team of Romulans on the top of the drill platform. This involved a major rethink, not least because the top of the drill platform had to be built on a soundstage. “The platform itself had to be designed for actors and stunt men to have a sword fight on,” Clyne explains, “so it had to be a certain size. It couldn’t be 500 feet in diameter, although it got quite large. They wanted holes around the platforms that actors could possibly fall into. I built something quickly in 3D to give a general sense of the layout. Once they were happy with that we decided to add details.”

One of the last elements to be added to the Narada was its weaponry, which would be used to destroy the Kelvin. “Pretty late in the game there was a demand to think about the kind of weaponry that it used,” Clyne recalls. “JJ didn’t want traditional Federation phasers; he wanted something different. It was one of the few one-on-one conversations I had with him regarding the Narada specifically. I threw out...
Clyne suggested that the Narada might cloak itself with a cloud, and the Enterprise could surprise Nero by warping into this.
the idea, and I sketched it out right then and there, that maybe the missile splintered off halfway on its travel towards an enemy object, and it would create an effect like a cluster bomb. It was a really terrible sketch but he liked it.”

MASSIVE MODEL
The Narada was built as a CG model at ILM, by Bruce Holcomb’s modeling team. The staff at ILM theorized that its extraordinary shape was at least partially the result of its journey through time. For ILM one of the biggest challenges was creating a model that would convince the audience it was six miles long. They understood that the only way to achieve this was to make it incredibly detailed. The model they built was one of the largest ever constructed and rendering a single frame showing the entire ship could take as long as 24 hours.

And having built it, they also had to tear it apart as Nero attempted to escape from the black hole. This part of the sequence was handled by a team led by James Tooley, and ILM described it as being more like smashing skyscrapers apart than making a conventional pyrotechnic effect. Like everything in the movie, the effects for the Narada were bigger than anything that had come before.
The Narada was a massive vessel. The VFX team eventually settled on making it 30,737 feet long (and three inches).