

13
Sci-Fi & Fantasy

MODEL ENTERTAINMENT MAGAZINE

Talking with

Dinosaur

Creators

Framestore • Crawley Creatures

Plus—

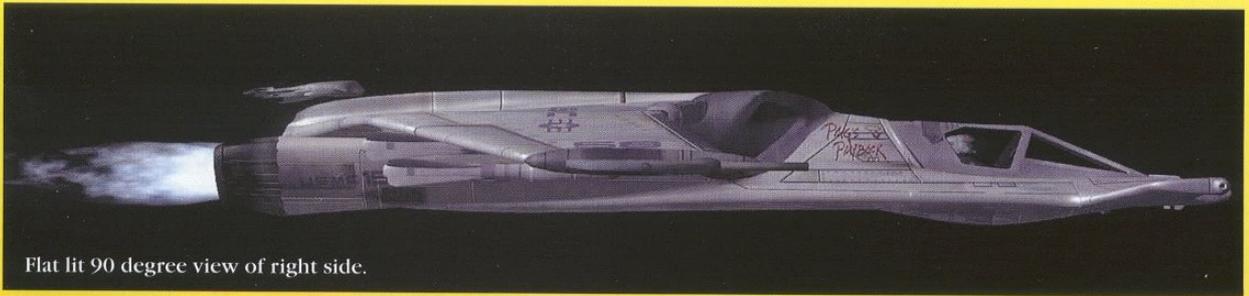
Matrix

Space: Above and Beyond

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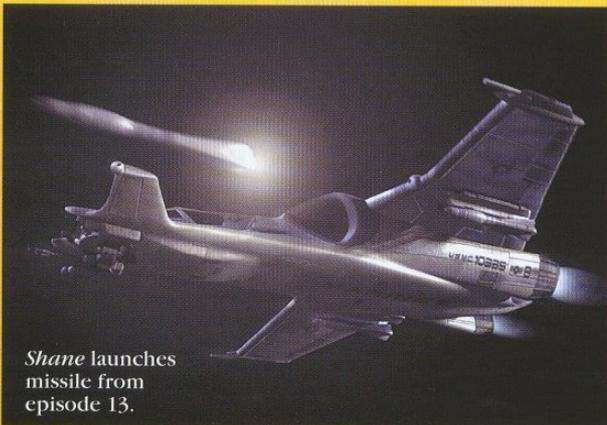
Flat lit 90 degree view of right side.

Area 51:

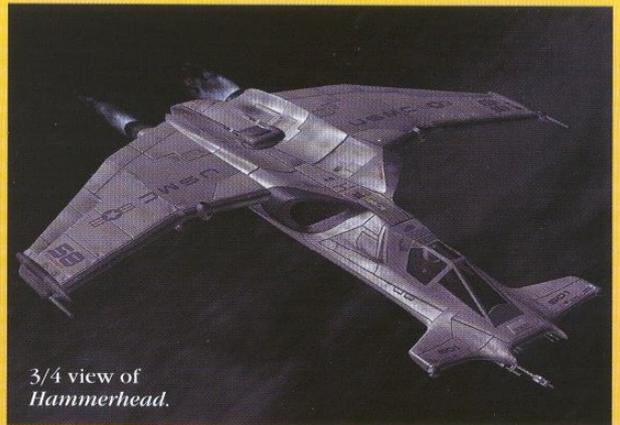
Straight Talk on the World of Visual FX

An Interview with Tim McHugh and Glenn Campbell

wes sargent



Shane launches missile from episode 13.



3/4 view of Hammerhead.

With shows like the X-Files, Space Above and Beyond and the elegant mini-series From the Earth to the Moon under their belt, Area 51 have amassed a long list of notable credits. Often these have included ground breaking achievement in digital FX. Transitioning from long and distinguished careers in practical effects, Area 51's CEO Tim McHugh and Visual Effects Supervisor Glenn Campbell have been in the business for over two decades. Together, they were not only able to give us a rare insider's perspective on the inner workings of the company, but also on visual effects in general.

WS: How far back do your histories in visual effects go?

McHugh: Sometime around June 1978. We were both accepted into the same class the camera union offered. It was the first

training program they ever had for visual effects. It was right after *Star Wars* when all of a sudden people realized that visual effects had been on the back burner for a decade or more. Most of the studios had closed

down their effects divisions which were considered dinosaurs. *Star Wars* made more money than anyone had ever seen before and all of a sudden everyone was crazy for effects. They wanted to do opticals,

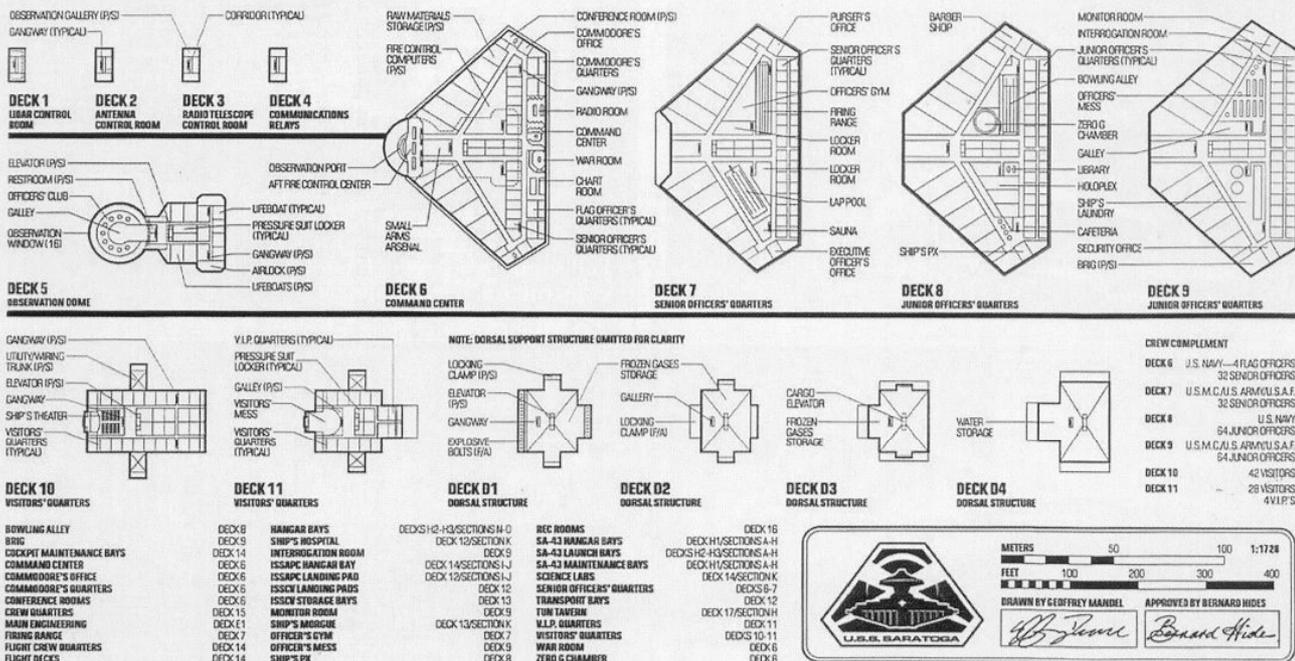
motion control and all those cool things but there was no real generation of people to do them. So the union set up a training program and Glenn and I were both lucky enough to become part of the first team that was accepted. We actually started our apprenticeship in the same place on the same day over at *Paramount Studios* which nearly lasted a year. Every few months we were transferred to another studio and we'd learn at the feet of the masters, so to speak. It was great but because it was the first program no one really knew what to do with us. So, for example, when we were at *Paramount* which was over

U.S.S. SARATOGA SCVN-2812

SPACE CARRIER VEHICLE JOHN F. KENNEDY CLASS

SUPERSTRUCTURE

DECKS 1-11/D1-D4

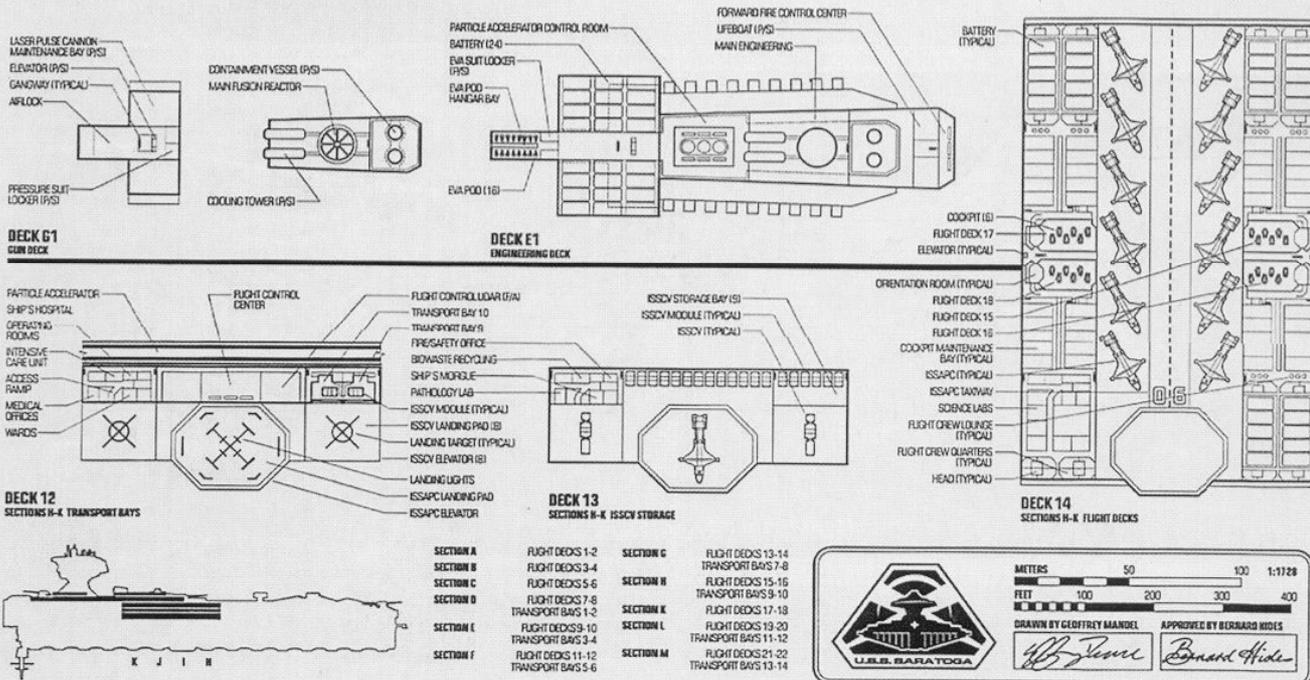


U.S.S. SARATOGA SCVN-2812

SPACE CARRIER VEHICLE JOHN F. KENNEDY CLASS

MAIN HULL

DECKS G1/E1/12-14



taking off. Few people knew how to do it so we were able to jump right in.

WS: Would either of you care to comment on some of the other highlights of your careers?

McHugh: A year after our apprenticeship, *Universal*

Hartland closed its doors. **Buck Rogers** was canceled. **Galactica** was canceled. They shut the facility down because, basically, I don't think the studio knew what to do with an effects company that they couldn't quite keep functioning. So I ended up going to work with Doug Trumbull's company on **Blade Runner** and that was

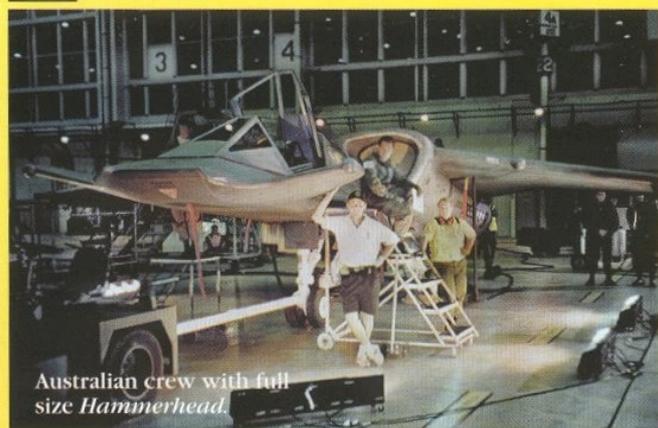
a great project. It was supposedly a little, three week gig but it lasted close to nine months for us.

WS: What kind of work did you do on **Blade Runner**?

McHugh: I ended up shooting almost all of the flying car (*Spinner*) shots and a number

of city backgrounds and things. If you remember the blimp flying over the city, I also did all of those shots as well. And Glenn worked on it too. I believe at the time he was in the animation department.

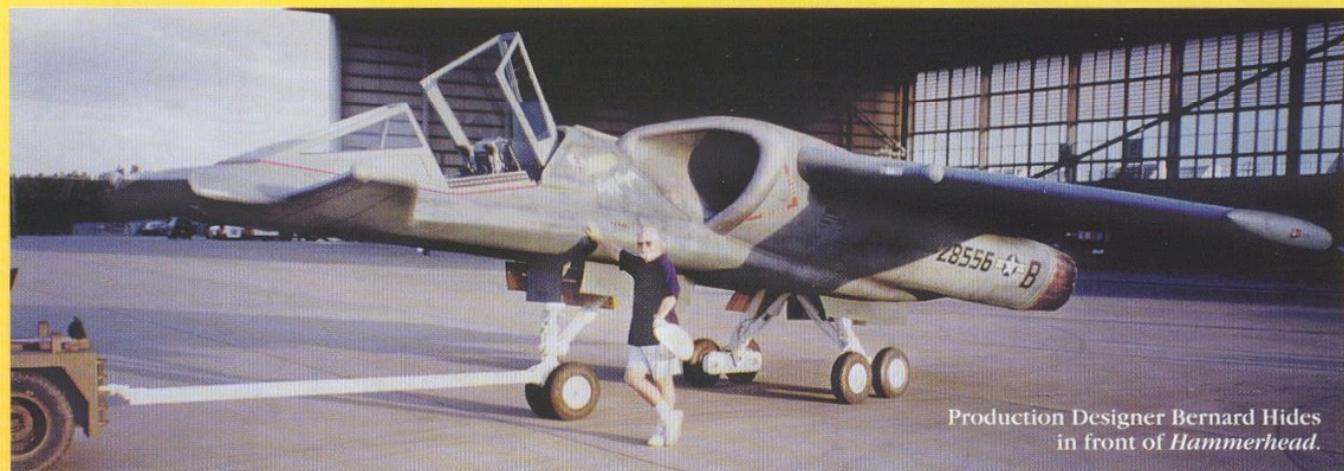
Campbell: I was working on the animation stand, shooting effects elements



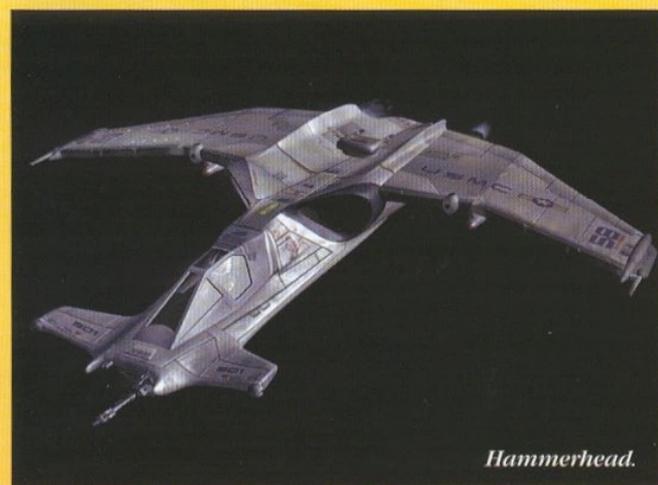
Australian crew with full size Hammerhead.



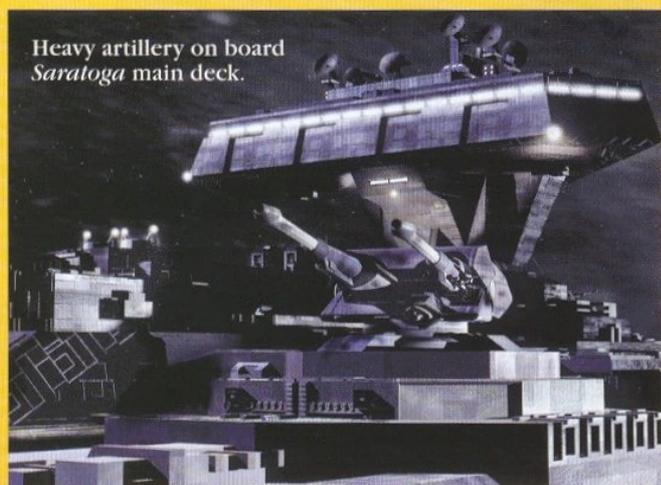
Full-sized Hammerhead under construction in Australia.



Production Designer Bernard Hides in front of Hammerhead.



Hammerhead.



Heavy artillery on board Saratoga main deck.

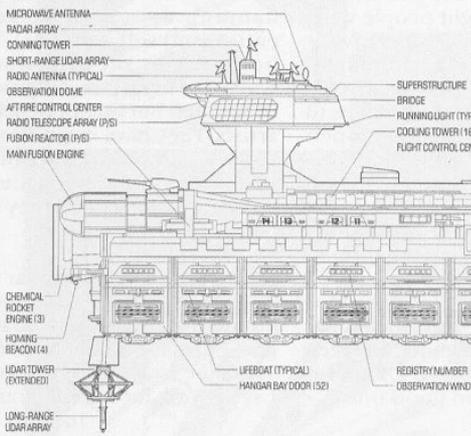


Saratoga.

U.S.S. SARATOGA SCVN-2812

SPACE CARRIER VEHICLE JOHN F. KENNEDY CLASS

STARBOARD PROFILE



ORIGIN
COMMISSIONED
CONSTRUCTION

USA
AUGUST 26, 2059
AERO-TECH SPACE DIVISION
NEWPORT NEWS, VIRGINIA
JAMES LOVELL ORBITAL ASSEMBLY FACILITY

SHIPS IN CLASS

JOHN F. KENNEDY (SCVN-2800)
COUN POWELL (SCVN-2801)
YORKTOWN (SCVN-2802)
VALLEY FORGE (SCVN-2803)
FRANKLIN D. ROOSEVELT (SCVN-2804)
GEORGE WASHINGTON (SCVN-2805)
LEADSTON (SCVN-2806)
DWAYNE D. EISENHOWER (SCVN-2807)
TODDINGROGA (SCVN-2808)
CHESTER W. NIMITZ (SCVN-2809)
BUNKER HILL (SCVN-2810)
WILLIAM F. HALSEY (SCVN-2811)

GROSS MASS

LIGHT 646,269 TONS
FULL LOAD 880,755 TONS

DIMENSIONS

LENGTH OVERALL 1,724 FT (525.6 M)
BEAM OVERALL 204 FT (62.1 M)
HEIGHT OVERALL 608 FT (185.4 M)
HULL DEPTH 254 FT (77.4 M)
SUPERSTRUCTURE HEIGHT 222 FT (67.7 M)
LIDAR TOWER DEPTH 132 FT (40.2 M)

ARMAMENT

1.2 GW LASER PULSE CANNON
2.450 MW LASER PULSE CANNON
6.300 MW LASER PULSE CANNON
4.50 MW LASER PULSE CANNON
30 PHALANX II MISSILE LAUNCHERS
72 KEW/TORPEDO LAUNCHERS

PROPULSION

HELIUM 3 FUSION ENGINE
3 CHEMICAL ROCKET ENGINES
BUSSARO PAALET

PERFORMANCE

MAXIMUM SUBLIGHT VELOCITY: 98 C
ENDURANCE AT MAXIMUM VELOCITY: 7.0 DAYS
SUBLIGHT RANGE: 7.1 LIGHT YEARS

POWER

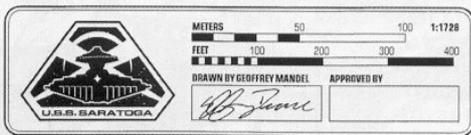
2.1M-3600 FUSION REACTORS

COMPLEMENT

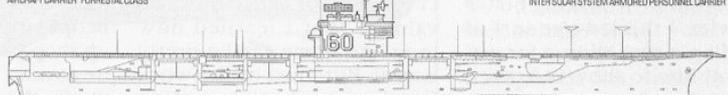
SHIP'S COMPANY: 3,226
U.S. NAVY AIR WING: 1,008
U.S. MARINE CORPS AIR AND SPACE CASUALTY: 1,244
U.S. NAVY WARRIOR: 665

AIR WING

168 SA-43 HAMMERHEAD ATTACK JETS
144 F-72 STINGRAY RECONNAISSANCE PLANES
4 B-230 BARRACUDA FIGHTER-BOMBERS
4 SNAC SPACEBORNE WARNING AND CONTROL VEHICLES
18 ISSAPC ARMORED PERSONNEL CARRIERS
8 GSST SUBLIBRITIAL SHORT-RANGE TRANSPORTS
8 UC-15 LANDING CRAFT



U.S.S. SARATOGA CV-60
AIRCRAFT CARRIER FORRESTAL CLASS



like the sun outside *Tyrell's* (Joe Turkel) office window, distant *spinners*, blinking lights on buildings, the lightning bolt in the opening sequence, that sort of thing. I also shot a lot of temp tests of the matte paintings. Syd Mead would take a frame blowup of a live action plate and literally paint right on top of it. We'd line it up with the original live action clip and run off some footage that would then be projected up on the matte stand as a lineup guide for the actual painting. A fellow named Don Baker and I also shot all the phony ads you see displayed on the gigantic billboards; *Coke*, *Offworld*, etc. The coolest thing we did was the sequence where *Deckard* (Harrison Ford) uses a device to scan and zoom inside a photo of *Leon's* (Brion James) room. That was accomplished by switching between a series of similar photos, hiding the transitions behind flickering white flashes.

WS: At what point did you decide to make the transition from practical effects over to CG effects?

McHugh: During 1990, I was at a company called *Apogee*. They were looking at the new computer technology, trying to decide which system to purchase. While they debated the giant SGI systems and

tried to figure out how to swallow the giant expense involved, a few of us began using *Lightwave* on the *Video Toaster*. We delivered episodes of *Unsolved Mysteries* right out of the *Amiga* computer. Even though the technology was very primitive in those days, the possibilities were obvious and I could see the end for traditional effects was definitely on the horizon.

Campbell: I'd worked on *TRON*, and we could all see where things would eventually be going. We just didn't think it would get here so quickly and become so readily available for the mass market.

WS: What kind of services does *Area 51* bring to a production?

McHugh: I like to believe that what sets us apart from the other four billion computer based companies is that Glenn and I have a history in traditional optical effects. Our approach is very different. We start with the original script or sometimes we get treatments before they even become scripts. We will sit down and design shots with the director. Glenn and I have both directed sequences in movies so we are very comfortable speaking to the directors as directors. We are

both cameramen, both in the camera locale, so we're able to speak to the cameramen as cameramen. We speak to the editors as editors and we speak to the actors as directors because we often have to work with actors. So I feel we really bring that kind of production knowledge and experience to the computer world. Basically, we're using the computer as a high tech optical printer, a motion control stage, and a blue screen compositing system but the techniques we bring are very much old world.

WS: So you prefer to be working with a production quite early?

McHugh: The earlier we join a production the better I think it is for everybody because we can help sort out the problems while they're still just lines on paper. To date, the easiest way to fix an effects problem is with *White Out*. If it's a confusing jumble of words, you can still dab some on the script before it becomes a mess on the stage. You don't want a situation where it gets into post-production and thirty-five takes later everyone's wondering why it's not working. Hopefully, you can be there to help design a sequence to work before it ever goes to the camera. We're not always that

successful. Maybe a third of the work we get is what I call *Band-Aid* jobs where people bring us a project that someone else has shot. It's not quite going together right so they ask us, "Can you fix it?" Well, we'll always make a valiant attempt at that but if the original footage is disastrous, then it's only going to get so much better.

WS: How do you go about determining what will work from a financial standpoint?

McHugh: Well, we'll generally get the script or story boards. We'll do a very detailed breakdown of every single shot that we feel will involve visual effects. We will then try to come up with a very reasonable schedule and a budget that allows it to get done. So we essentially are able to give the producers a cost per shot. Now obviously, if we're building a model or if there's a set that needs to be amortized over a number of shots, we will break it down that way. We try to show the producers where they're spending their money. If they're going to have a stroke because it costs way too much then we'll say, "Well the reason it costs that much is because of this sequence here or that idea you're trying to do over there." So we'll help them tailor their script to

match their budget, which is a fairly radical concept in this town.

WS: Do you find that producers sometimes have unrealistic expectations or misconceptions about what to expect from the visual effects house?

McHugh: The beauty and the curse of the digital world is that everyone now thinks you can just fix everything in post. "I didn't like that performance! I don't like that set! I don't like the make-up! I don't like . . ." You can fill in the blank. Then people say, "Oh, they'll just fix it in post," and to some extent that'll be true. You can go in and manipulate images on a pixel by pixel basis but that's not always the best solution. The fact that you can now show more and do more, does not seem to be making better movies. I think we're sort of trading clever editing for just the ability to show too much sometimes.

There also seems to be this conception that one doesn't really need to do pre-production planning. The expectation on the part of some is that those of us who are delivering the effects will somehow just sort of wing it in post; as if there's just some button we can press that makes it all work. It's kind of like, "Well, don't you just have the *add dinosaur* button on your computer?" And, like the eagle in the barrel, no, there really isn't a button that does that.

WS: Do you also find that new animators often have misconceptions about what visual effects animation is really about?

McHugh: Well, we get an enormous amount of demo reels here and most of them are fairly atrocious, I have to admit. What I've been seeing are people who will essentially learn the tutorials, render them out, slap 'em on tape and then send it to us. We have lots of people who can move objects from 'A' to 'B' but not necessarily animate them. There's a real lack of people who are grounded in any kind of traditional animation. Even the ability to take a paper and a pencil and actually sketch something out or take a soda can and a still camera and create a scene rather than

just moving something from 'A' to 'B' in the computer seems foreign to them. So we're seeing a lot of what I call video game reality people who make these large clunking robots that meander down hallways and looking very unrealistic. They bang into the artificial looking CG dragon and a lighting bolt comes out of his head. All this has very little to do with the kind of work we're asked to do on a daily basis.

WS: Does part of your background also include traditional animation?

McHugh: Very minimally. I was actually a teaching assistant at the *University of Southern California* in animation. So I did a little bit of cut out and cell animation. I think the value is that I learned how long one frame can be pretty useful. But most of the work I've done has been in motion control or compositing. I have not done a lot of cell animation. It's certainly not one of my strong points. Even though I did work at *Disney* for about six years in the visual effects unit, not the animation department.

WS: How do you find it working with animators who may not have a strong background in film or television?

Campbell: It's exciting when you can train them. It's frustrating when they don't understand that they don't know everything and aren't willing to learn, or find themselves unable to learn.

Most of the new generation of animators are self-taught. They haven't gone to film school. They haven't learned how to work with others in a group project. What they've done is gone out and purchased a program that permits them to do literally everything; including tasks that used to require a group effort. In the days when we were starting out you didn't have access to a studio where you could build your own

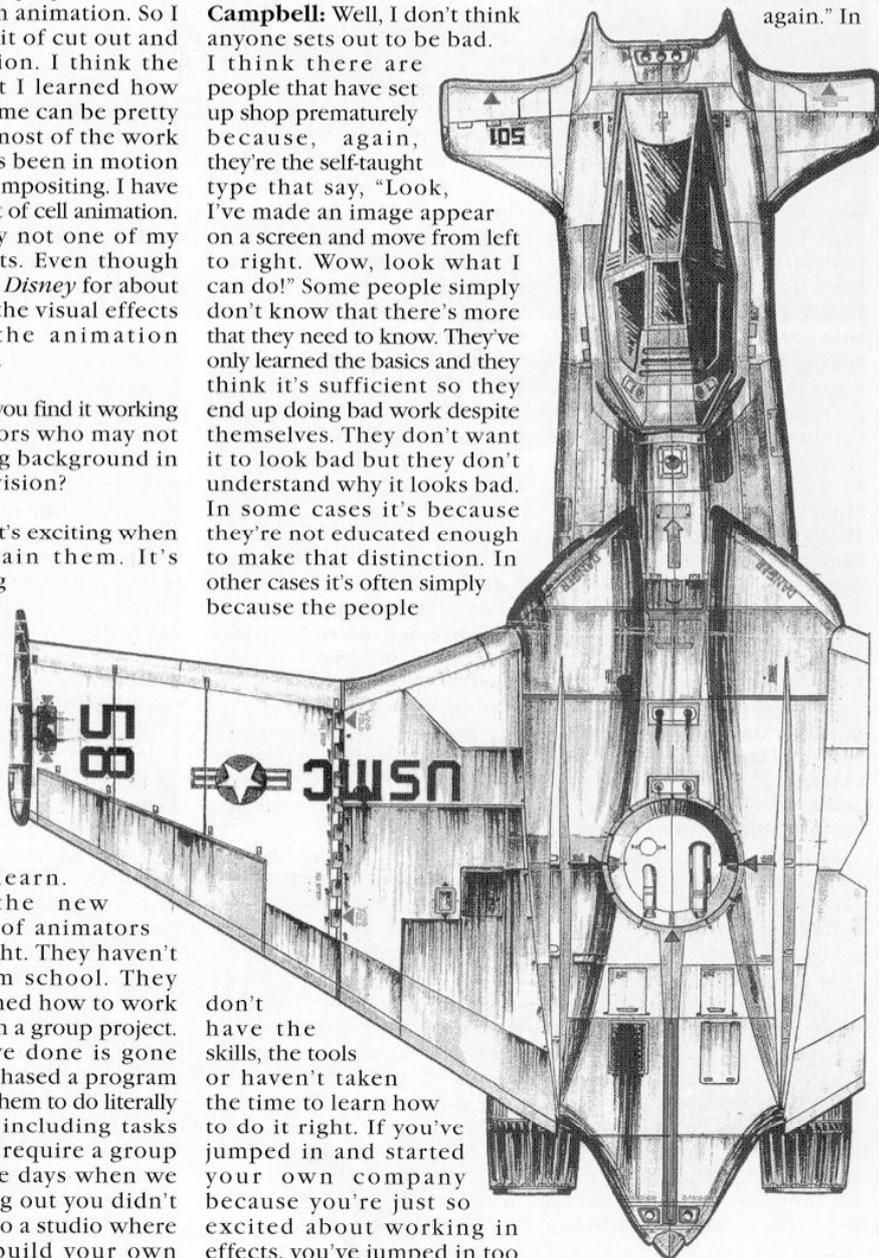
models and sets, light them, animate, and output the result for all to see. Now you can buy a program that allows you to do all of that. So what happens is that you have a lot of self-taught people who, unfortunately, by the very nature of being self-taught, are also very proud of what they've taught themselves to do and aren't usually open to working with others. It's something they get disabused of very quickly once they get into the real world but some guys never do get the hang of it.

WS: In your opinion, what makes the difference between the good CG based FX houses and the not so good ones?

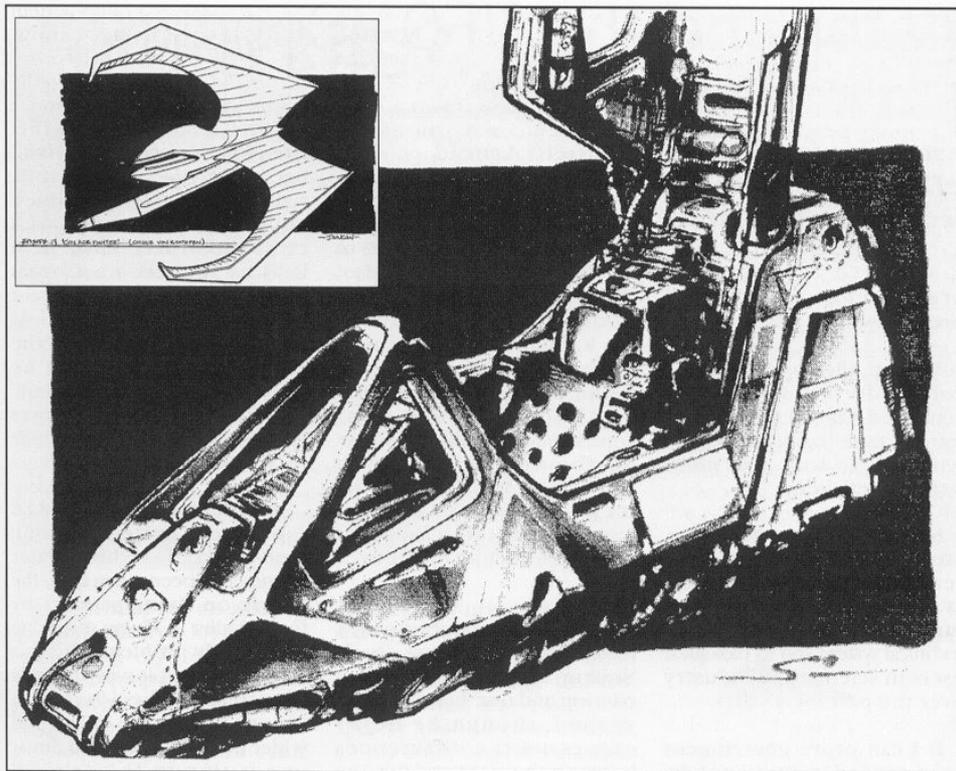
Campbell: Well, I don't think anyone sets out to be bad. I think there are people that have set up shop prematurely because, again, they're the self-taught type that say, "Look, I've made an image appear on a screen and move from left to right. Wow, look what I can do!" Some people simply don't know that there's more that they need to know. They've only learned the basics and they think it's sufficient so they end up doing bad work despite themselves. They don't want it to look bad but they don't understand why it looks bad. In some cases it's because they're not educated enough to make that distinction. In other cases it's often simply because the people

early. You haven't been patient enough to say, "You know, maybe I should go to art school a little more or maybe I should learn a little more about film before I start hanging up a shingle and calling myself an artist." I believe you see bad work when a company is composed of talented but inexperienced artists. They have magnificent skills in a narrow area of a wide field, but aren't patient enough to wait until they're better in all areas.

McHugh: It's also similar to the reaction I get from new animators sometimes. "Well, gee, I pressed all the buttons. The shot must be done!" And I say, "Well, let's go back and look at it again." In



don't have the skills, the tools or haven't taken the time to learn how to do it right. If you've jumped in and started your own company because you're just so excited about working in effects, you've jumped in too



effects in general, not just CG effects, I like to think the correct way to approach things is from the screen back to the camera or from the screen back to the computer. If you're starting from, "Hey, here's a cool plug-in. Let's see what it can do to this shot," you're probably not going to have a very successful shot. If you say, "Here's the shot I'm designing. How can I make it work?" and you think backwards from what you're aiming for to the computer, that's the right flow of information.

WS: Sometimes seemingly good companies do produce sub-standard work. Is that because someone is cutting corners?

Campbell: That's really hard to answer. When you see a

bad shot you have no idea [of] its history. It may be that the director came in and literally at the last minute said, "You know what? I want this thing to zig instead of zag." And you say, "Oh my God! There's no time to accommodate that request," but they make you do it anyway. I'll give you an example. We were working on an episode from SAAB where we had to do this sequence that involved an alien tank. We're not particularly happy with it because we were literally forced to do three weeks worth of work in one week. That episode had a scheduled air date, and the Studio called and said, "Guess what? We're shifting it up. It now airs next week." So we're screaming, "We haven't even touched that episode. You said we had

a month to spend on it. We haven't approached it at all!" The Studio didn't even blink, so we had to drop everything and hastily build, light, texture, and animate a very important sequence. It didn't get anywhere near the time and attention it deserved. It got on the air and it looked okay. It got the story points across but it's certainly not on our demo reel because it doesn't look the way it should. Now the problem is that there's no way to take out an advert in the paper saying, "This would have looked really neat if we'd only had a chance but we got screwed because of scheduling." But now those shots exist and I'm sure people look at them and say, "Yeah, *Area 51*'s pretty good but remember that tank episode? That wasn't so cool," and they have no

idea why it's not cool. So it's really a difficult question to answer. When you see a bad shot, the history that led up to that shot can be anything from, "It was beyond the reach of their talents," to "They weren't given enough time or money to do it properly," and there's just no way to know.

McHugh: Or it could be, the director and the producer knew better. So they basically said, "This is how I want the shot to look!" That's why it looks that way.

WS: In recent years we've seen some remarkable advances in animation software, we've also seen a growing number of effects houses spring to life. How important is it for a CG based effects company to be on that cutting edge of technology?

Campbell: You want to be as close as you can afford to be, but with the understanding that talent goes a long way towards offsetting not owning the cool new plug-in of the month.

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Corporation

All SPACE: Above & Beyond
artwork is © 1995 Twentieth
Century Fox
Corporation

All photos are © 1995 Glenn
Campbell

Opposite page and below:
Early sketches of
Hammerhead design.
Above: Later design illustration
of *Hammerhead*.
Inset: *Chiggy* fighter design.

