INTERVIEWS

CHRIS ROBERTS, DIRECTOR / EXECUTIVE PRODUCER

Q: *How is* Wing IV *different from* Wing III*?*

CR: With *Wing IV* I guess we tried to have better story and gameplay than *Wing III*. We haven't changed the technology that much. Sure, we made the 3-D engine better, put digital sound in, 16-bit Dolby stereo and have a new movie compression technique with 16-bit color. Still, it's all sort of incremental changes. With *Wing III* we made such a big technological leap that we had an entire system that we never really got to exploit because we had to get it in and get it out. Afterwards we said, "Hey, wouldn't it be really cool if we did this and that?" So with *Wing IV* we set out to use the tools better — tell a better story and create a better game.

On the production side, the production is far more ambitious and detailed. The story concept is richer. The script is improved. The interactivity between the story and the actual gameplay is far higher. There is more going on out in space. We've got a lot more options ... more strategy and tactics. The missions have more variety. The sum of it all should be a much more involving, engrossing game than *Wing III*.

Q: *How about the Hollywood side? Are you doing anything differently there?*

CR: To make a production with a much higher standard, we had to go to real sets and shoot with 35mm film.

The thing with real sets is that it's easier for the actors to use. Usually on green screen, even if the scene is of a huge room, you just have two guys surrounded by green — it's not the same for them. A real set allows you to fill it with extras, give it some sort of depth, light it, give it a texture. You can move the camera around, which helps tell the story better, plus that allows the actors to have an environment which enables them to slip into their roles more easily. In general I think it helps tell the story far better. 35mm film gives you a better look than video does. In the future, as the platforms get higher resolution, we'll have a source we can go back to that will have a resolution to match it.

Plier's Workshop Set

Q: *Has it turned out the way you envisioned?*

CR: Actually, it turned out better than I was hoping it would be. I think the story works very well with the game. We tried a lot of stuff, and it all works very well. The quality of the movie playback is very high. I wasn't sure that was going to happen when we started out, because I wasn't sure how good the compression was going to be.

Q: *Is there anything you would have done differently, if you knew then what you know now?*

CR: Only a couple of things. More time would have been nice. That was really kind of out of our control. The other thing is, *Wing IV* is a very ambitious story, we had a very short time line to do it, so we ended up running so fast that we didn't have time to sit back and say, "Maybe we don't want 37 sets. Maybe we need to rewrite the story so we only have 20 sets." It would have been easy to do. Generally I would prefer to have less sets that are bigger and more detailed.

Our in-flight comm stuff came out really well — I would have liked to have stretched that out and done more with that.

Q: *What was the most interesting part for you?*

CR: I like the spontaneity of directing live action. I appreciate the fact that you can come in and get a seat and shoot two or three scenes in one day and get it done. Doing the same thing in computer graphics takes a month or so. I had fun just shooting a lot of film. We had a camera, and real sets, and I could stop and do things that I couldn't in *Wing III* because the camera were locked down for the green screen. It was a learning process for me. Towards the end of *Wing IV* I felt more confident of how I was shooting and blocking stuff than I had been on *Wing III*. I wish I had more time on the pre-production side to get the look of *Wing IV* the way I wanted it. It was so short that I had to delegate a lot of responsibility. I would have rather been far more involved. Of course, the game side is always kind of fun. It's kind of cool when you see it all coming together.


Conference Room Set

Q: *Were there any difficulties in spending half your time in California and half in Austin?*

CR: It's more of the same trouble we encountered last time. Essentially you have two productions going on at the same time. A lot of time we'd have computer graphics artists doing work for the stuff we filmed and also for the computer stuff we do here. When we are shooting out in California the communication between the artists is very important. It wasn't as good as it should have been, but it was better than it was on *Wing III*. Still, it wasn't enough. It would be nice if everyone was in the same place so they could all see what was happening and everyone was up to date. The project was so big, things moved so fast, and there were so many people involved that no one knew what was going on with the rest of the project. Besides me, and I can only be in one place at a time.

Q: *Where do you see the game industry going next?*

CR: It depends. I think the game industry is going to go towards two types of games. On one hand, I think it's going to go towards a multi-player game; the ultimate evolution will probably be something where you go to the Internet. It'll be anything where you just get inside an environment, and you and a whole bunch of other real people fight against each other or work alongside each other. That is always going to be a lot better than computer interactive. It's a lot of fun. That's one of the major components of the future.
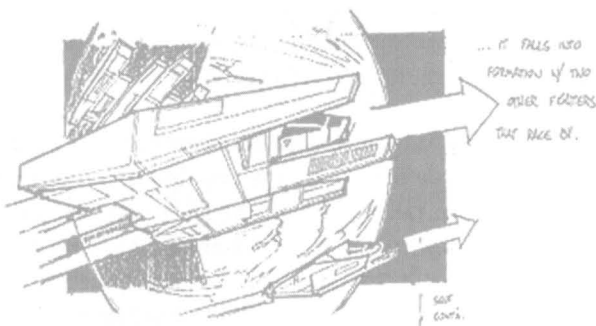
Storyboard Panel

The other major component will be solo games which will evolve around stories; that's something that you won't be able to get with the group. Those will probably involve high production value. I view *Wing Commander* as the "story" kind of game. Those kind of games will have the look and feel of a major motion picture. They'll require a higher production budget than we currently have.

Q: *What are your plans for the future?*

CR: Right now we're working on *Silverheart*, a story/adventure kind of game. I'm also trying to get a *Wing Commander* movie/game put together so we can film the movie and the game together.

CHRIS DOUGLAS,
PRODUCTION DESIGNER

Q: *From an artist's point of view, what are the differences between* Wing III *and* Wing IV*?*

CD: We knew we had a shorter period of time to generate at least as much art work as we had on *Wing III*. We were looking at having to reuse as much of the artwork as we could. At the same time, we wanted people to feel they were getting a very different game — to look at the artwork and feel *Wing IV* had achieved a new level of quality. So we did a couple of things.

For one thing, we got rid of computer generated sets except in a couple of cases. Instead, we used traditional matte painting. That freed up a lot of time to focus on animations and the big, exciting pieces of artwork like starships exploding and cinematic sequences. That's a lot more fun that spending time tweaking cameras to get backgrounds for talking heads in conversations. We definitely have a lot more animation in this game than we did in the previous one.

Secondly, I think the animation is a lot better. In *Wing III* we're working with the 3-D animation package *Alias*, but we weren't very familiar with it yet. We were all learning and experimenting. Now we've all gotten into a groove where we actually know how to exploit some of its strengths. I think that shows a lot. The animation we have is more sophisticated, plus it's better lighted. The cinematics — the continuity and the film-making aspects of it — also improved as we got more familiar with that.

Bearcat before battle ...

Since we had to reuse a good chunk of the *Wing III* spaceship, about half the ships were new, and half were old ships recycled from *Wing III*. On these, we went through and re-textured them, and also made some changes to the geometry, to spruce them up a little bit. We just put a lot of energy into it. *Wing III* was just 256-color, but in *Wing IV* we did it all in true color, with 24-bit texture maps. We visited Air Force and

... and with damage texture.

Navy bases, and the *Lexington* down in Corpus Christi, and shot lots of photographs for reference. That had a lot of influence on the way things turned out. The textures are just much more realistic. In a close-up of the fighters, you can see that there is often a world of difference between the textures of *Wing III* and *Wing IV*.
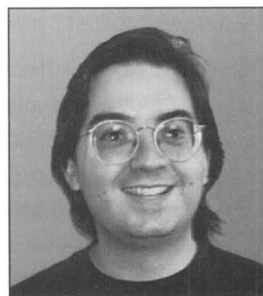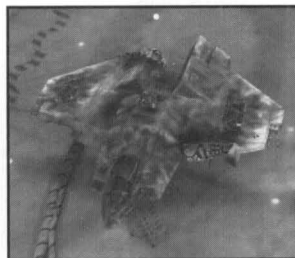
**Q:** *Besides ships, are any other things animated?*

CD: Most of our effect sequences, of course, are spaceships flying around and things exploding. We also worked where there was a lot of integration between the live action and cut sequences, like in the opening ... times when the pilots are flying around, and you'll see both in the cockpit and outside at other things flying around. A fair amount of things like that, but you know, we aren't doing any character animation or things like that. It's all spaceships. Guns. Special effects. Explosions. Force fields. That sort of thing.

Q: *What's the hardest thing to animate?*

CD: In a *Wing Commander* game? Well, a lot of the effects gets pretty sophisticated ... pretty complex. Like the shockwave explosion effects, with lightning arcing over the ships and particles flying out. Of course Chris Olivia is good at that — he was able to handle a lot of that kind of stuff. It's really technical and very elaborate. Really, the hardest things to animate on computer are characters, but we didn't have to deal with that much.

Q: *When you make a special effect, for instance a shockwave, and you are staring at a blank screen, what stages do you go through to make it actually play?*

CD: There's not any one way you go about it. You can start by layering shaders and geometry, image planes, lights with fractal fog effects, things like that. Layer textures onto textures onto textures — all the textures are animated, doing different things. It gets really elaborate. In some of the animations that Chris Olivia does, like the flash-pak effects, there are 20 or 30 different things going on at once. Different textures and lights and shaders will be animating at the same time, with objects popping in and out of existence. Then explosions get layered onto everything else.
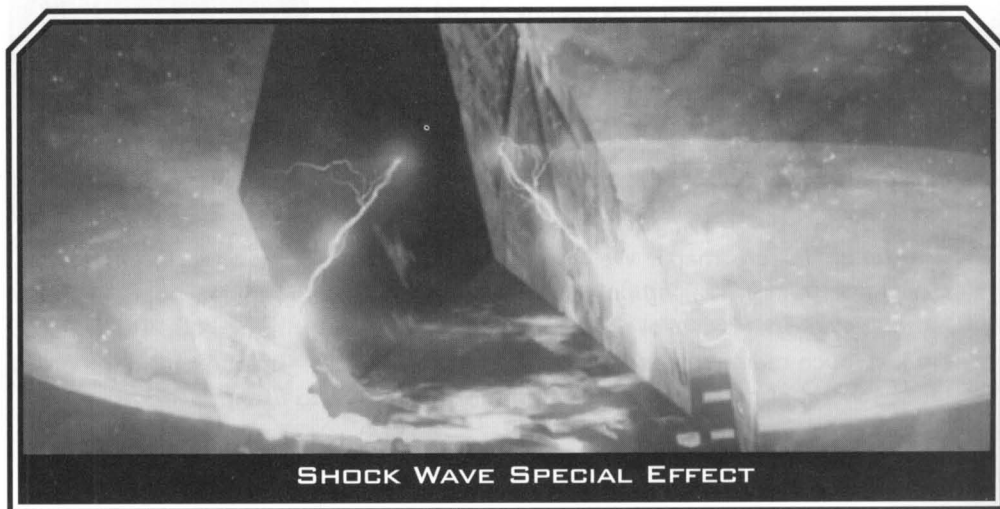

SHOCK WAVE SPECIAL EFFECT

Q: *What tools do you use in coming up with a spaceship? Is there ever a point where you are working with pencil and paper?*

CD: Yes. This is where we get into the production design/art director thing. The production designer is in charge of the look-and-feel type stuff — the conceptual art, making sure that all the Border Worlds ships look like Border World ships, and all the Confederation ships look like Confederation ships, and that sort of thing. I do a lot of sketching. At ORIGIN, we don't do it to quite the extent they do in Hollywood, where they do many, many revisions of a sketch, followed by a full-color copy drafted up by a professional drafter with side views, and all that. You only need to do that when you're going to have four or five people working on the same physical model so everyone is working on the same plan. But it's stifling creatively.

If you are going to have an artist build a spaceship, I think it's good to have the sketches be a little vague so later artists can put some of themselves into it. Even if they didn't design it in the first place, they can look at it and see that there is room for innovation. Artists should be able to feel like whatever they work on is partially theirs. It shouldn't be a mechanical task we've been given: "here's this, build it." So really, I'd like to have more pre-production to do sketches and stuff like that. Not just me; I don't want to do it all myself. I love doing it, but the more you can get the artists who are going to be building objects to do their own sketches, or at least doing their own color comps for things, the better. The problem is, doing that sort of stuff takes time. We didn't always have time to do it. We certainly didn't on this project.

Fighter Concept Sketches
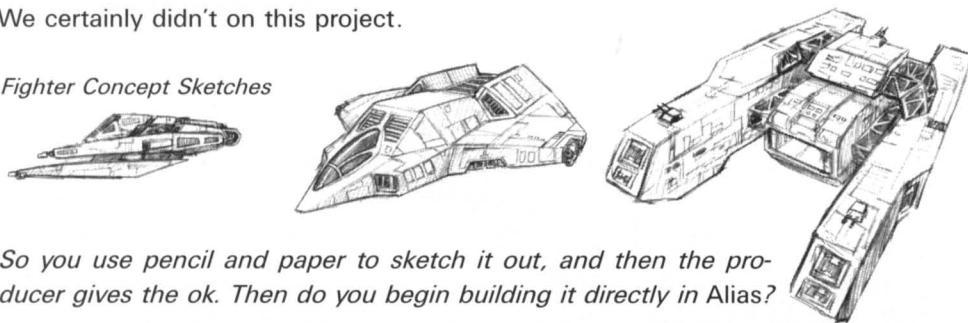
Q: *So you use pencil and paper to sketch it out, and then the producer gives the ok. Then do you begin building it directly in* Alias?

CD: Yeah. We just go from the sketch and start building it up in *Alias*. You build your model first so you have all the geometry, and then draw up your texture maps to go with the geometry and map onto it.

For the actual space flight engine, you give some renders of the spaceship to one of the EOR artists (EOR is our in-house object-building software), and they use that as a reference to build a much simpler version of the ship, and texture from that. Each ship will have two actual versions — the high end, glitzy *Alias* mesh, and the much slower 200-face polygon EOR version that you actually see in space flight. You see the bigger, more elaborate ones in the cinematic cut scenes and special effects sequences.

Q: *If somebody wanted to be an artist working in a game like this, what kind of experiences and skills do you think they ought to have?*

CD: It's changing. We used to be able to just hire traditional artists off the street and train them to do the computer art here. Now, though, we've gotten to the point where it's hard to hire somebody who hasn't had some sort of *Alias* exposure in school, or some other high-end SGI package like *Wave Front* that lets us teach them *Alias* pretty easily. The learning curve on *Alias* is so steep it's really hard to train anyone. It takes a long time. I've worked with it two years now, and there's still stuff I don't know. If it's somebody who hasn't worked with a computer before, you can forget about getting into UNIX — it's pretty complex. It's easy to do a lot of damage if you don't know what you are doing.

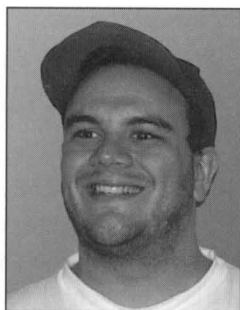**Q:** *Do you have any plans on how to make the next game look bigger and better?*

CD: To do more of the same. I think we've gotten to a pretty high level of sophistication with the textures right now, and now it's time to go back and put some more energy into the modeling, try to make it a little bit better. Plus, I'm working pretty heavily on my design skills, brushing up on them quite a bit. So we're hoping our conceptual designs will be of a little bit higher level, too. A little bit more elaborate and integrated.
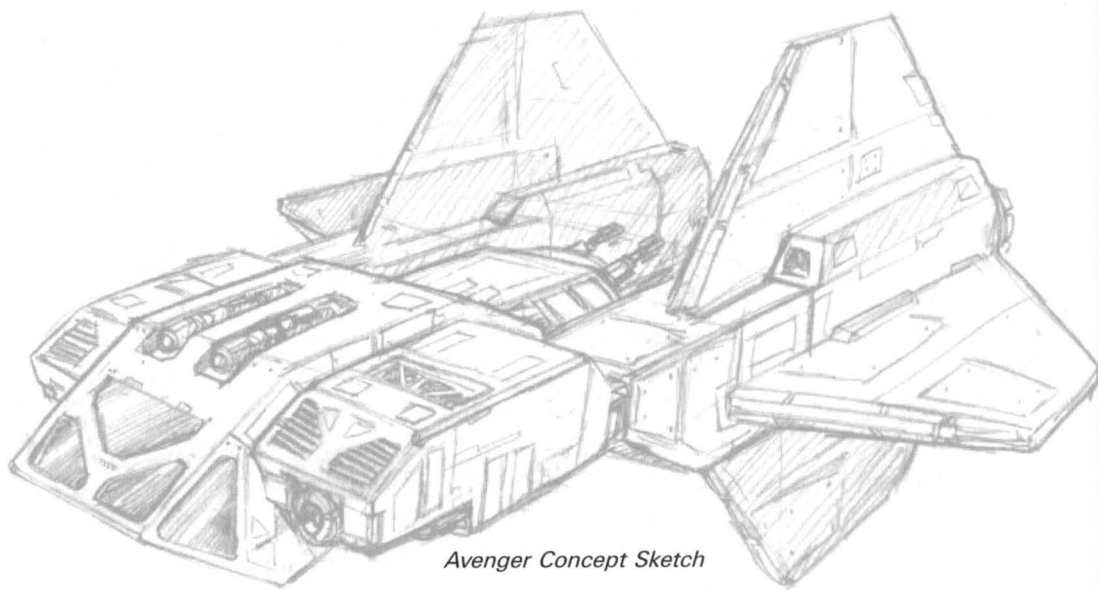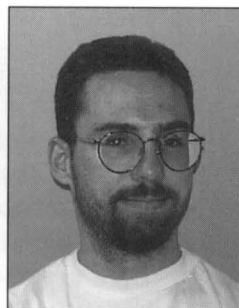

Avenger Concept Sketch

ANTHONY MORONE,
GAME DIRECTOR &

FRANK ROAN,
LEAD PROGRAMMER

Anthony Morone

Frank Roan

Q: *What were the differences between* Wing III *and* Wing IV*? What were the challenges?*

AM: Well, we feel that *Wing IV* was more of an artistic endeavor than a technical one. Remember that *Wing III* was basically a new medium in terms of developing an engine and using full motion video for the first time. We were so busy developing the technology for that, that the gameplay came second. Whereas in *Wing IV* we didn't have the need to develop the technology again, so we basically spent most of time in resolving gameplay issues. For example, we literally spent about six months doing the mission design. That was before any coding was done on the missions. The Technical Design Assistants (TDAs) worked with the scriptwriters from January until about May or June just doing revisions of scripts, checking for continuity of the game, and allowing for an increase of flow between the space flight and the movie aspects of the game. So basically we've been concentrating on developing a good game.

Q: *You said the TDAs got to work with the writers. Did you get to have a lot of influence as programmers?*

FR: Our titles don't cover everything we did. We sat with the writers for the first month or so. We did more than work with the design; we helped with everything. The TDAs had a lot more input than they ever did on *Wing III*. And Tony and I got to do more designing than we ever had before.

The technology — in *Wing III* we tried to go vertical with the technology, where in *Wing IV* we tried to go laterally with the technology. In other words, with *Wing III* we said "let's do technology," where with *Wing IV* it was "let's take the technology that we have and expand it." *Wing III* had about two gigs of data done in 22 months, where *Wing IV* is about 4 gigs of data done in 11 months. Basically, that's twice the volume in half the time. Everything we did in *Wing III* has been retouched in *Wing IV*. The objects have been re-textured, every byte has been tweaked. Tony says this is what *Wing III* could have been like if we had another year. Actually, I would say beyond that, because we've gone so far beyond the *Wing III* storyline that we've taken it to a new level. This is probably *better* than if we had spent another year on *Wing III*.

Q: *Because you have a better story?*

FR: Because we had the chance to rethink it. We spent so much time concentrating on technology that even if we had another year we would have just done even *more* technology.

AM: In terms of the code, we basically finished *Wing III*, took a couple of weeks off, and then went back into full development mode on the *Wing III* code base. As far as the code goes, we basically reopened the book and started writing from where we left off. In terms of the content, we included a lot of fresh ideas. I don't want to make people think that *Wing IV* is a cheap rip-off or a cheap sequel. It's definitely a lot of fresh ideas.

FR: We're big gamers. I've been a *Wing* fan since *Wing I*. I played it religiously, both *Wing I* and *Wing II*. It was a thrill to get a chance to write *Wing III*. So when we went to *Wing IV*, we had so many ideas left over ... the way I see it, this is basically the customer getting the chance to write the game. I've always been a game customer, a player. I'm the audience we are writing for. I've been the audience, and I continue to be that.

Everybody enjoys being drawn into the game, and I've found the way to do that is to enhance the environment, make it like you're there. The wingmen are more organic in that there is more life to them. The missions are not always what they appear. You can be flying a mission when it turns out that the mission needs to be scrubbed for something else — something that just pops up. We tried to make it so there was something cool around every corner. We tried to vary the pace. In *Wing III* it was basically fly around and kill things, and once you've played the first five or ten missions you're going to kind of get the feel for them. There were some cool things, but that was basically that. Here there is always something new being introduced, like a new weapon halfway through or ending up in a new place or new ships. We tried to introduce ships all the way through. In *Wing III* you got them all in the beginning.

AM: Everything is really dynamic this time. The wingman-selection interface — you'll see your list of available pilots shrink and grow throughout the entire game. Sometimes you might go out and escort some new fighters back to the base, and after that you will get some new pilots that you can fly with. Then you'll get people defecting and leaving your ranks. It's dynamic throughout the entire game, and that should hold people's interest.

FR: The game's so much more complex now. With the missions — when you add complexity, you also add a number of things that can go wrong. There are so many new problems we've introduced for ourselves by adding new mission commands. For example, we added a tractor beam. So now we have to worry: what happens if he tries to tractor in a capital ship? What happens if he tries to tractor in asteroids? Why should you not be able to? Some say, no, it's a bug; or you say, sure, you just blow up when you do it because the systems aren't capable of it. I don't mind giving someone a knife and letting them cut their own throat if they want to. I don't like saying, here's a knife, but you can't do this and this and this because you "wouldn't want to." Let's see what the user wants to do.

Q: *Is it what you envisioned when you started off a year ago?*

AM: It's always evolving, I guess. You start with a particular idea, and that's a big part of the problem why software products tend to be late. People never really want to stick to their original ideas because when you get into the development of it …

FR: … you come up with better ones.

AM: Yeah. You get some momentum going and you say, well, geez, since we've come this far, why don't we do this? And we start adding more features. So really the design goes throughout the entire development process.

FR: It's never complete. A programmer never thinks his code is done. He just thinks it is shippable at that state. And it's the same thing, I'm sure, with all sorts of other mediums. I don't think I've seen anyone say, this is perfect. I cannot add anything else or make it any better. You always can. So we take a snapshot, ship it, and if we have the time we will either keep working on it or go on to other products. When I was designing and working on *Wing III* we got so many game ideas that we just kept jotting things down. By the time we're through with one project we have ideas for 50 more. Also, we have a gameflow programmer that completely redid our gameflow. That looks amazing, too. He's come up with a lot of his own ideas.

**Q:** *When you say gameflow, you mean the part in between the missions?*

FR: Gameflow is when you are on the *Lexington*, when you are on the *Intrepid*, etc. There is so much you can do with screen layouts. If you make the graphics look better, the game feels better. It's difficult to describe. There's a real passion in the stuff that we've done. It comes out. Look at the gameflow, for example, the nuances and special touches that have been put into it.

AM: We've got a pretty good team because we have a lot of veterans from *Wing III*. We all knew the process and we were able to do things efficiently. We've also added new talent to kind of freshen up some of the things. For example, in *Wing III* when it was time to enter your callsign, basically all you did was enter your callsign. There was a bland little screen where you typed in your name. Jason Hughes decided to spice that up by turning it into a huge log-in process as if you are logging into a huge mainframe computer. You get the feeling that there is more to logging in than just typing in a word — it basically adds to the fictional universe that we are trying to create.

FR: As a gamer you take for granted the main pieces of the game. Of course there is going to be space flight and gameplay and all that. But it has always been the little nuances that you appreciate. It's always the little details that you add that people look for. I've always likened it to the craftsmen who did the great Gothic churches. You've got these workers who did the lattice work in the attic way at the top that no one is going to see. They do it because they are passionate about their work and they believe in it. Some day someone does walk up there and sees it, and he says, "Oh wow, I can't believe someone put this much detail into such a small portion of the project." But they did it because they wanted to, not because they had to. No one came to Jason Hughes and said, "We want you to make this really cool." We said, "Hey, do the gameflow." He slept here many nights and killed a lot of his own time just to put in the details that he thought he wanted to see in it. He loved what he was doing. I think that was true for everyone on the project. That's what really drives people to do a good game. Not the pay ... it's basically just loving your work.

ANTHONY L. SOMMERS,
QUALITY ASSURANCE
PROJECT LEADER
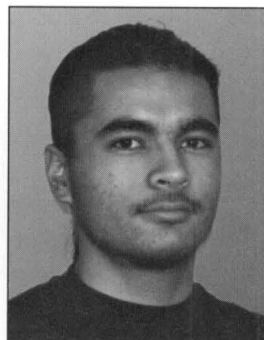
Q: *What does the Quality Assurance team do?*

AS: The QA team is primarily responsible for insuring that the game is up to ORIGIN standards. We're responsible for finding all the problems with the game and reporting those problems to Development so that they can be fixed.

Q: *How long does QA work on a project?*

AS: That all depends on the position. The Project Leader is normally involved with the project from conception to close. The Assistant Project Leader and the testers don't primarily come into the project until maybe three or four months before it's ready to go out the door. I attend design meetings from the beginning. I guess I'm there to represent the customer. I keep what the customer wants and expects from being overlooked. ORIGIN games should be fun, intuitive and should run well on their machine. Customers should get something that they are basically happy to pay for. That's what I want whenever *I* buy a game.

Q: *What's the most fun part about working on games like that?*

AS: Well, since I have no life, basically I just spend all my time here at ORIGIN. The most fun part about it? I like managing a team. I don't play the game as much as some of my testers do. But I am involved in pretty much anything that has to do with testing the project.

It's a lot of work. Some people are cut out for it, and some aren't. But as far as I can see I wouldn't mind doing this again.

Q: *What's it like to work on a big game like* Wing IV*?*

AS: It's not easy. One, I have to manage a lot of testers. Right now we have 16 people, excluding myself. Two, I have a lot of demands from Marketing, Creative Services, Product Development, my managers, and the test team itself. Being in QA, I'm responsible for a lot of the end result. There is a lot of documentation I have to review. There is a lot of input I need to provide as far as design of the game goes, missions, etc. And then there is the actual physical testing and maintaining of the bug data base. And with a project of this size — six CD's — there are a lot of bugs.

Q: *How does working on a big game like* Wing IV *differ from working on a smaller game, like a 3DO game?*

AS: Well, with *Wing III 3DO*, most of the design issues had already been laid out because the PC version had already been completed. Comparing it with something like *CyberMage* or even *Crusader* — having a smaller test team means you have more communication with the testers, there's more communication with the project leader and his team. With a large team I find that I don't have enough time to devote with each individual tester. And that's one of the drawbacks.

Q: *Do you find that people from QA go on to join the product development side of things?*

AS: The two are very different. In my opinion I think coming from QA is good because you get an understanding from talking on the phone with a customer; you know what they want. By testing games, you know what to look for in designing one. Also, having QA's strong software and hardware background — DOS, hardware, sound cards, CD-ROM drives — you pretty much know what's going on.

THE WING COMMANDER IV QA TEAM

Ken Baumbach
'LEVIATHAN'

Reece Thornton
Kil Torh

Marin Williams Jr.

Kevin Matthews
"Backlash"

"Wile E"

Todd Wackham
'Viper'

Megan Ouellette
"Rook 'year"

Captain Squishy

"R.O.U.S."