

THE LUCASFILM INTERVIEW

George Lucas was one among the generation of new Hollywood film directors who emerged during the 70's to regenerate the cinema. Lucas made a science fiction film called **THX 1138**, hardly anyone saw it. He followed it up with **AMERICAN GRAFFITI**, it fared well and people reckoned a new talent had emerged. But with the third film, **STAR WARS**, George Lucas became a giant, and together with his friend Steven Spielberg, revolutionised the fading fortunes of modern cinema. Since then, he has gone on to produce films, create Industrial Light and Magic, a special effects company centred around the use of computers and now his company, **LUCASFILM** has inevitably turned its attention to electronic entertainment in the form of computer games. Lucas was able to build on the strength of his film computer division, the men responsible for the fantastic effects in films like **RETURN OF THE JEDI** and **STAR TREK**, to produce games that would be new and different, sure to change the nature of computer games.

To date **LUCASFILM** has produced only four games, all of them have been innovative and here in Britain they have been hailed as the best of new American software. Thanks to the good agency of **ACTIVISION** who market the games in Britain, we were able to set up an hour and a half telephone link to Lucasfilm's headquarters in Marin County near Los Angeles. The resulting material is too long for one issue, so we're breaking it up into two parts with the second half next month. For this **ZZAP** exclusive, **GARY PENN** was on the line to ask the questions.

THE LUCASFILM INTERVIEWS: PART I

- DAVID FOX

(PROJECT LEADER FOR **RESCUE ON FRACTALUS**)

"We're all very much impressed with the type of work that George Lucas did with his films."

First of the Lucasfilm team to speak to Gary Penn was David Fox, Project Leader for **Rescue on Fractalus**. Gary began the session by asking David whether he was actually responsible for the fractal routines used in the game

"No I didn't do the fractals -- it was Loren Carpenter. I was the project leader for the game. We had three people on the project -- myself and Charlie Kellner."

David went on to elaborate,



"In addition to the sound he did the flight dynamics, a lot of the animation routines -- things like that. Loren Carpenter was responsible for the fractal routines -- he's not here right now."

When asked by Gary about how many people worked on a game Dave replied,

*"It varies, in the case of **Ballblazer** it was mostly 95% -- 90% Dave (Levine's) work. Peter Langston did the intelligence routines for the practice droids and some of the music -- most of the music. And at the other extreme, with say **Koronis**, we had three people working on it -- **Rescue** had three people -- I guess I'd say between one and three people working on a game. Then on top of that we also have artists who did the animation artwork."*

GETTING A FILM-LIKE FEEL

So how did the team get involved with Lucasfilm ?

"It was about three and a half years ago and George Lucas said that we should-be working in active entertainment. So to the computer division we brought on a man called Peter Langston, who also had an agreement with Atari to do development work. That continued for the first two games, but unfortunately just before the first two games were ever released, Atari changed hands and we ended up going entirely different Ways."

Gary asked David why, despite the fact that none of the game were based on George Lucas's films, they all seemed to possess a film like quality. Where then did the ideas actually come from ?



"I'd say that the people that came here, or the reasons we ended up here, are because we're all very much impressed with the type of work that George Lucas did with his films and we appreciate film type experiences, so we did the games in a conscious effort to create that feeling and bring it over into the games. The games themselves -- each of them came about in different ways. Like in the case of **Rescue** it started out with me sharing an office with Loren Carpenter, and him being an expert with fractals -- well, we were wondering what would happen if we could somehow incorporate that on a small computer. And then the game scenario came out of that, and went in that direction. So in that case we came up with the graphics idea first -- the game came out of the graphics routine. The other two games, **Koronis** and **Eidolon**, just went in the other direction the ideas were first and the graphics followed."

TRENDS AND TENDENCIES

When David mentioned that each game took about a year to design Gary enquired as to how much of that time a game would spend in development or whether it was a case of development and programming being simultaneous.

"The initial part is the concept, generally, and then -- that's how we do it now -- it's purely concept first and then development afterward. There's development all the way though the whole phase, although we usually have a pretty good idea of where we're going"

One thing the Lucasfilm team is not famous for of course, is having a prolific output. Four games in three years is a figure that might have some software houses desperate to release whatever they could as soon as possible. Lucasfilm however, are evidently more patient in this respect.

"Well, we're continuing with other projects, but I really can't go into them specifically we're continuing to do some work on home computer games and we're looking into some other areas."

And what of the future? The American market seems to thrive on simulation and strategy games

"Right. That's -- I think that's probably going to continue. People seem to be looking for deeper and deeper games because they're not interested with video games any more. They don't seem to carry, so they want something which they can really spend lots of time in and explore the play areas of the game, so they need to be more and more complex, deeper and richer."

David made a reassuring statement after Gary had expressed his surprise at some of the poor reviews **Ballblazer** received in the States.

*"I've seen both good and bad reviews for most of our games, actually. **Ballblazer** -- there have been some excellent reviews too. It seems like it's really a matter of taste. Like some people we've talked to, they're convinced that one game or another game are fantastic games, and in some ways I think that's great - it means we aren't just appealing to the exact same market with all our games."*

With that one neatly dealt with, the inevitable question arrived. Did George Lucas contribute in any way?

"In some ways -- yes. It's his company and he's essentially the senior designer and developer of any project that happens here. He has been in from time to time to give us support on the projects we do."

Apparently, George also contributes game ideas and although the team aren't working on an adaptation of any of his films at the moment, no one seemed too certain about what might happen in the future. Ever the patriot, Mr Penn went on to ask David if he had seen any British software and how he thought it compared, only to be answered,

"I have not seen very much, no. So I can't really say how it does compare -- Noah might be able to answer that question, because of all of us, he's the one who plays games a lot."

There's no doubt that Lucasfilm take their aims very seriously when creating a new game themselves however.

"I would say when we're designing a game, the aim is to create some sort of an experience -- in most of our cases it's trying to have something happen that we want to ... we really want to get someone feeling like they're in a new universe. We really wanted to create an experience of exploring a new universe."

"It's the sort of thing that happens in a George Lucas film. It's like you've been transported to somewhere else. Most of us like that feeling and we wanted to be able to transport the person to another universe too, through a game that's really different. I think it's very exciting to do that. I wish we had wide screen and stereo sound and things like that, to make the experience even stronger. But we're doing the best that we can within the limitations of the machines."

"We really wanted to create an experience of exploring a new universe"

FITTING IT ALL IN

On the subject of machines, Lucasfilm use a 68000 based, semi-micro development system to design their games. It runs the Unix operating system and an assembler. From there they download the code to the Commodore and Atari machines. Unfortunately, they feel the pinch of the limited memory on these eight bit micros. When it comes to the crunch, David is certain about which gets the best results from the treatment.

*"I think our stuff looks the best on the Atari, but they're fairly close on the Commodore, although the graphics are certainly slower. We've been able to come across on both machines. There are some things you can do on the Atari that you just can't match, like the shading -- if you take a look at **Koronis Rift** on the Atari."*

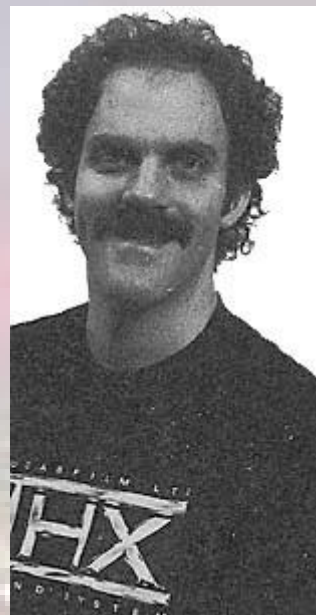
But then, unlike **Fractalus**, **Koronis Rift** didn't appear to be a straight conversion. It looked as if both versions were written specifically for each machine. David adds,

*"Yes, with **Rift** the Commodore version and the Atari version were both developed in parallel and we tried to make each version look the best we could within each machine's capabilities."*

While they were on the subject of different machines' capabilities, Gary took the opportunity to ask about Lucasfilm's plans for software on the new megamachines, Commodore's Amiga and the Atari ST.

"Well, we're watching the market with the new computers. We have an Amiga; we've played with it a bit and with the direction the computers are going in, more speed and so on, the better we can make our games look and what we can do with them."

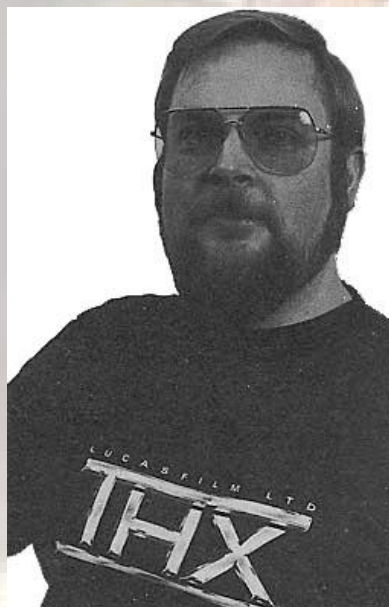
"In terms of graphics and sound-- I think that what we've done can be refined a bit more, but I don't think we can make a huge leap on that. We're approaching the limits of what can be done (on the eight bit computers), but doing what we're doing with say fractal based landscapes, we're really limited by the computer's graphics capabilities and also the speed of the processor. I'm not sure whether we have anything in the future that we'll be doing with fractals."



David Fox - Project Leader for 'Rescue on Fractalus', the game that took its title from the type of graphics.

THE LUCASFILM INTERVIEWS: PART II

-- CHARLIE KELLNER
(PROJECT LEADER FOR THE EIDOLON)



Charlie Kellner- Project Leader for 'The Eidolon', seen here sporting a THX T-shirt, a reminder of George Lucas' origins.

The Eidolon is arguably Lucasfilm's most innovative and thought provoking game to date. And yet, as Gary discovered, the original the game concept came from a relatively simple background as Charlie Kellner explains,

"Well, actually, that's an excellent question. I'm really not sure where the inspiration actually came from. In general, I'm a collector of dragons and I have been interested in them for a long time. And so has Gary Witnik -- the fellow who did the artwork on it, and together we wanted to do a game with dragons in it."

One of the game's strongest features is its incredible animation sequences. So how were they achieved ?

"Thank you for the compliment," says Charlie, "but the animation did not turn out as spectacular as we'd hoped. We were hoping to be able to animate a large number of creatures most of them at the same time, but it turned out to be beyond the limits of the machines. Actually, the cell animation that we're doing is very similar to cartoon style animation. Each creature that you're looking at on the screen is composed of up to six independent moving parts."

FRACTAL GRAPHICS

Most of the Lucasfilm titles, with the exception of **Ballblazer** take advantage of fractal based graphics. Gary assumed this to be the case with **Eidolon**.

*"Oh yes, the corridors are fractally generated. It's an adaptation of the original fractal generator that produced **Rescue**. The fractal backgrounds of the caves were produced using the same type of fractal technique that Loren Carpenter produced for **Rescue**, but the application of it was quite different. We tried to produce a feeling of enclosed space rather than an open plain with mountains. It turns out there are major differences in the routines which drive the fractal generator but the fractal generator itself is exactly the same. It turned out to be more adaptable than we thought- I think there's a lot of flexibility for the future too."*

For someone who developed such an original game, Charlie Kellner has some interesting views on the future of the market specifically the next year or so.

"Well, I think in general we'll be moving away from the concept of games, but we're trying to adapt games into more interactive technology. We're trying to produce an experience that's like being part of film, rather than just being part of a game. But we want to maintain the game aspect of -- the play aspect of a game. I think the thing that we're trying to do in the future can best be described as play rather than games. We want to produce a development, perhaps a toy box for people to play with and let them invent their own games."

Charlie confirmed David Fox's earlier statement that the game had taken at least a year to create. While he enjoyed working on it, there were, he admits, complications.

"Well, actually we did have to modify the design. We started out with something completely different, that was difficult to even recognise as the same game. And really, by just changing a small portion of it, changing the theme of the game we were able to maintain 90% of what we wanted to do originally. And came up with a completely new games concept."

THE LUCASFILM INTERVIEWS: PART III

NOAH FALSTEIN
(PROJECT LEADER FOR KORONIS RIFT)

At this point, Noah Falstein came on the line. The game of futuristic Techno-scavenging looks set to become a classic along with the other Lucasfilm epics. Did being the project leader on **Koronis Rift** mean it was his brainchild also?

*"Yes, it was my idea. I wanted to do something. We had just about finished **Rescue** and **Ballblazer** at that time and I wanted to do something that improved on what we'd done -- In particular with **Rescue**, in that I thought the fractals were a very good piece of software and that it would be nice to design a game that used them a little bit more directly."*



*"We had this way of making reproducible landscapes that were full 3D, and in **Rescue** you don't really care about the fact that they're real landscapes because it's just an obstacle. So I figured that a game that put you right in the middle of it, so that you actually have to find your way around the mountains, and know where they were and find out where things were behind them. It would certainly emphasise what we were doing."*

"Also, I spent some time thinking about what makes computer games fun, and tried to take some of the basic principles of exploring, hunting, using different kinds controls, seeing what they do -- apply that to a game design and come up with something where a game was involved in figuring out what the various kinds of items and gadgets, and things that you find, will do. So basically what I did was come up with something where

it's a game of exploration and the basic format is an action game, but you use what you do in the action game to work out fairly complex strategies."

BEING IN THE SAME UNIVERSE

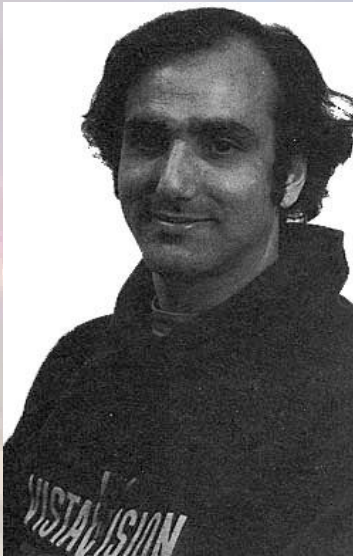
Koronis has been compared to **Fractalus** -- the two are at least superficially similar in that both involve exploration and searching an alien world. So does Noah see **Koronis Rift** as a follow up to **Fractalus**?

"Well; early on we figured that we could make it that way or not as we chose, but it really doesn't have to be in the same universe, but on the ones and a lot of ideas we'd kicked around and then built up something out of what we had left. I know that sounds rather vague, but it was really the creative process."

As to whether or not the final version was worth it, Noah continues,

*"I'm not disappointed, but it's not what I had really hoped at the beginning I think with any game you end up with less than you would have liked, because of the limitations; I guess primarily the amount of time you've got to do it and also the computers that you're putting it on and their own limitations, always conspire to make the game less perfect than the vision. But I think that we achieved a good part of it with **Koronis**. In particular I think that **Koronis** would have been improved if we had been able to add a little bit more tension and action to it."*

"I'm very satisfied with the way the strategy works out and the kinds of planning that you have to do to win. And the fact that if you work out the strategies correctly and learn the paths and find the best modules, you can win the game without having to be very dextrous at all. Knowing the best path through and some of the best ways of getting around on the planet I can get through to the end of the game and from start to finish, take about 45 minutes and never really be in any particular danger of getting blown up. And yet if you are starting from scratch, then it can take weeks of playing around before you get to the point where you are finally up to the twentieth level and have a shot at winning the game."



Noah Falstein -- Project Leader for Kronis Rift, a designer with a wide sense of vision.

PLAYING OTHER GAMES

Gary asked whether Noah had a favourite game, and he admitted that having designed **Koronis Rift**, it has to be the closest to his heart. As to whether he plays other games

"Oh yes, I'm more of a game player than most of the others in the group-- I spend most of my lunch hours and a lot of evenings keeping up with what's out. I've got a little library of computer games at home as well."

Out of these he has one current favourite,

*"Well, I'm really fond of strategy games, in general, and currently I've been playing **Ultima 4** which has just come out and I've been enjoying that quite a bit. I haven't played the earlier **Ultima**'s, but this one is quite good and it's amazingly deep -- I've been spending about a month now, playing it fairly frequently and I'm just, I don't know, maybe a quarter of the way through, I think."*

As with David Fox, Gary couldn't resist asking Noah what British Software he had encountered.

*"Not too much," was the reply. "We do get a few titles that have filtered out, but for the most part I think it tends to go in the other direction." What about his opinions of the British software he had seen! "It's hard for me to remember now what I've seen that was British as opposed to just the games I've played in general. But the impression I get is that because of the way that the industry has evolved, a lot of the software that's popular in Europe in general, is the kind of stuff that was popular in the US a year or two ago, and there is a sort of a lag in that direction. Also because of things like the fact there are fewer computers with disk drives in Britain and Europe, that some of the nature of games-- things like **Ultima** or **Koronis** or **Eidolon** are more complex games and use lots of disk access. We did a cassette version of **Koronis** for example, but it really is fairly. ..."*

Clumsy?

"Well, I think it's probably -- cassette owners will not find it too bad, but if you've gotten used to playing the disk version then it certainly takes longer you want."

*"Ron Gilbert, who is our Commodore programmer, we hired expecting him to do a fairly straight conversion, but early on he became involved in the design process and one thing that we're very proud of is that the actual program was identical for very large parts of **Koronis**. Since we use all the same development system here, we actually used the same files and identical programs for most of the internal parts of the game and even a fair amount of the graphics."*

"Really, all that we had to do that was specifically different was when you get down to the very lowest level of drawing the pixels on the screen. That helped us a great deal, particularly later on, because it became very easy to add some new software and new changes, that it was just a matter of a few minutes work usually to adapt them over to the other machines once they had been written for one machine. By the end, chunks were being written first on the Commodore and first on the Atari and swapped back and forth interchangeably."

Noah worked only worked on **Koronis Rift** as Gary discovered when asking him about his overall involvement with the company.

*"No, I came in just at the end of the development cycle for **Rescue** and **Ballblazer**, and I helped a very minor amount with some of the testing and the polishing. But really about the only credit I can take for it is that I get to have my picture in the back of the **Rescue** manual, and that's about it."*

Of course no game's development is complete without a game testing session. Noah explained the procedure to our man with the mouthpiece.

*"Well, we test them first internally in that we have available people who will come in and our coworkers will pilot them and take a look at them. And also Epyx, who did our domestic marketing and production, provided some playtesters for us. Some kids who'd played their games and had sent in the cards expressing an interest to help, and they brought them in for -- I guess for **Koronis** we had two sessions."*

FROM MACHINE TO MACHINE

So considering that the Lucasfilm projects were originally envisioned as an Atari experiment, what brought about the decision to market versions for other machines?

"That was because the original games group was started through Atari. There were some very close ties to Atari and it wasn't until Atari folded and changed hands really, that we ended up making them for other computers -- although there were some plans early on to make the conversions anyway. The reason that we ended up primarily with Atari games at the beginning was because we were dealing so closely with Atari. We're generally of the opinion that the Atari is a better computer for graphics at least, and it's easier to do fairly spectacular things on it. But of course our Commodore programmers are just as excited about the Commodore 64. It's really a matter of viewpoint. There are things that you can do on each computer that will show it off best, and that's what we've been trying to do -- we're trying to emphasise on each one."

THE LUCASFILM INTERVIEWS: PART FOUR

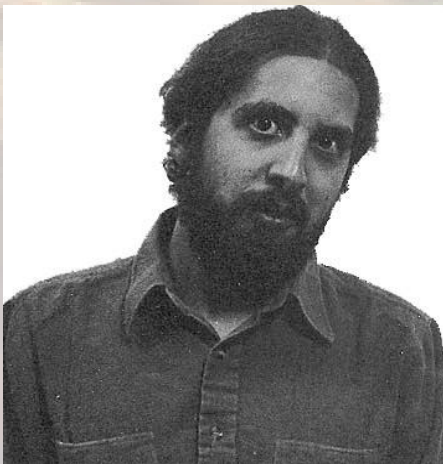
DAVE LEVINE
(PROJECT LEADER FOR BALLBLAZER)

It was easy enough for Gary to begin asking Dave questions about this game as it is almost worlds apart from the other Lucasfilm games in terms of style. Where and how was the concept for **Ballblazer** originated?

*"Okay, well, you have to keep in mind it preceded all of the other Lucasfilm titles, except **Rescue**, which was at the same time," began Dave "I've always wanted to build a device which allowed people to play with invisible forces, such as magnetic fields, and to have these things manifest in such a way that you can actually manipulate forms from action into distance, like you have some kind of mechanism to play with. The original conception of the game was to provide as realistic an environment as possible and to keep people as an important part, it is necessary to involve more than one person in it."*

*"Then it becomes a social interaction -- the computer becomes a, or is in the case of **Ballblazer**, a neutral concurrent medium of interaction between two people. You do not play against the computer or you're not testing your skills or abilities against someone's program but instead you're given an equal opportunity to play against another person."*

THE INHUMAN PLAYER



'Ballblazer' Project Leader David Levine is a man whose eyes run on grids.

When asked about problems with the artificial intelligence required, Dave replied

"The only problem with the artificial intelligence was that we had to put it in. The game is a two player game and it was designed to be as such. Atari, at the time of development, insisted on having a one player version because that was their company policy, and so we hooked up the computer, actually worked a little bit of artificial intelligence for the droid partner idea -- the practice partner. But they don't play like humans. They're not intended to play like humans. They're also not intended to be entertaining -- the game is strictly a two player game. A lot of attention was paid to constructing the game in such a manner it was something like table tennis, where you have an inert physical system that moves about with computed high enough precision to actually become a sport, as opposed to a game."

However, when Dave was asked whether he was satisfied with the Commodore version his reply was,

"Truthfully, no!"

Gary mentioned the lack of sound effects but was otherwise surprised by Dave's reply. Mr Levine elaborated,

"Well, I just don't think enough attention was paid to them (the sound effects). The person who originally did the sound effects for the game is no longer with us, and that was one of the problems. But, the major problem I think with the Commodore version is its lack of high resolution and the graphic presentation. The game dynamics themselves are exactly the same as the Atari version and the two run at exactly the same speed. So, that was of primary importance -- in order to make the gameplay the same as the Atari version. The game originally was not designed with conversion in mind, and so it made extensive use of the advanced hardware in the Atari, so as to perform the animation of the grid and so on."

MORE FUTURE SPORTS

Bearing in mind some of Dave's reservations about the C64 version, did he have any other plans for 'future sports' in mind ?

"With Ballblazer we tried to introduce a genre of first person video sport, and my hope is that it will be maintained and advanced by our group and that the genre will be developed. I personally don't have an interest in further developing the genre -- my interest was in creating it. At this point I'll be moving on to creating a new genre of a different type."

But perhaps most astonishing of all was Dave's inexperience in the computer games field.

"It's the only video game I've ever written. I was a computer scientist by profession, and hired by the company into the games division. I've always liked computer games and decided that well, if I'm going to do this, then I should write one that I will enjoy playing-- that is done right. I approached the problem from a computer science point of view, and what was relatively rare, or unusual, in computer games was to provide a mathematical model of an environment that's being simulated, and to provide a program which renders the mathematical model in some form of first person perspective. It was myself and Peter Langston who worked on the game. Peter did the music and the artificial intelligence for the droids. It took roughly a year of development."

"It's unfortunate that it (the Atari version) hadn't gotten marketed sooner-- I don't know if you're familiar with the history of the first two products, but they hit the public long before they were intended to, through piracy. There was a version of Commodore Ballblazer that was deemed unacceptable for market by us, and it was rewritten. And that one got out as well. So, what used to be, to me, a sparkling, pure and clean concept in games has gotten muddled. It's an unfortunate thing hopefully the game itself will have enough integrity to stay it out. The Intention of the game is to provide something that can be moved to all future machines -- the basic games concept itself is valid regardless of the hardware, and then newer machines will just have fancier graphics, faster frame rates and higher precision."

"It's an extremely complex program, but the complexity is internal. And the complexity is not an arbitrary kind of complexity as most games that I see, are. This has a coherent kind of complexity, in that we're modeling some pretty subtle aspects of high precision of a physical system -- it's really a physical simulation, and the reason that it's complex to the player is because natural physical situations -- are complex. The complexity comes from the precision and the resolution of its computation, and what it does is allow the player to react at very fine and subtle levels of skill, with a high degree of timing, precision and accuracy. And this is something that just has never, never appeared in any other computer game."

"The only things that have ever come close are say, the old Lunar Lander games - those are also high precision physical simulations and you had to be really good -- but they were flat. The whole idea behind this was to provide an alternate physical reality. There's no-- there's very little attention paid to contriving the situation, and contriving roles and that for the player. Instead, what we tried to do with it is put the player into an artificially created, natural situation and it actually comes through in the richness, the energetic effect so that it's not a contrivance -- it's a natural outgrowth. It's a reflection of my design philosophy. You can be assured that the next thing you'll see from me will be based on the very same principles."

