

An Interview with Jonathan Gay
Programmer of *Airborne!*, *Dark Castle*, and *Beyond Dark Castle*

Conducted via e-mail by David J. Lohnes

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Jonathan Gay is most well-known as the developer of *Macromedia Flash*, but many Mac users in the 1980s first learned his name in connection with three Silicon Beach Software titles that he programmed, *Airborne!*, *Dark Castle*, and *Beyond Dark Castle*.

Recently, Mr. Gay agreed to answer some questions for the vintage Mac community.

David Lohnes is a teacher by day and a vintage Mac hobbyist the rest of the time.

Regarding Silicon Beach:

DL: Describe the work environment at Silicon Beach. What did you learn about how to run a company from your years there?

JG: I tended to work pretty independently but the process of developing a product, testing it, and making sure the details were right was a big lesson. Silicon Beach did not have a lot of formal process or education in the early days, but the people were smart and did good work.

DL: In addition to your coding, what other responsibilities or decision-making influence did you have?

JG: In the early days, I was an independent contractor who was paid a royalty on the sales of the games, so my involvement in the company was limited. After I graduated from college, I became an employee, but the company was larger, and I was focused on building next-generation graphics software, *IntelliDraw*.

DL: During the dot.com bubble in the late nineties, taking a company public and cashing in on your vested shares was a major motivator for many people in the industry. To what extent did the financial motivator drive the engine at the Beach? When did a buyout become recognized as a possibility or even perhaps a goal?

JG: In the Silicon Beach days in San Diego, no one knew what stock options were, so the employees were not aware of what a liquidity event was or might mean. Some of the early programmers who got paid a royalty on sales did well, but generally the employees were happy to have a good job doing something they enjoyed and were not thinking about big money events.

DL: Which was Silicon Beach's most successful product?

JG: I think *SuperPaint* was the product that really helped the company grow. *Dark Castle* was also very successful in that it was a leader in its generation of computer

games and helped establish the reputation of the company, but there was more money to be made in tools like *SuperPaint* and *SuperCard* than in games at the time.

Regarding Software Development at Silicon Beach:

DL: Describe the development process for *Airborne!*.

JG: The goal was to design a simple game that could be implemented quickly. At the time, Mac development was done in Pascal on a Lisa Computer. I was still in high school and would go over to Charlie Jackson's home to work on the code after school. *Airborne!* was mostly written in 68000 assembly code with some Pascal for the starting screen. *Airborne!* was one of the first games to have digitized sound. The sound work was done by Eric Zocher.

DL: Can you describe one significant challenge you overcame during the programming?

JG: Keeping the animation from flickering was a big challenge. The Mac was not designed for game-style animation. The early Mac software had some bugs, and there was not a good debugger. *MacsBug* existed, but it was very primitive at the time.

DL: Describe the development process for *Dark Castle*.

JG: Mark Pierce did the artwork and much of the game design. He was living in San Francisco while I and the rest of Silicon Beach were in San Diego. We had an in-person meeting to start but did most of the work remotely. He would design the animations in *VideoWorks*, send them to me on floppy disks in the mail, and I would write the code to implement the various parts of the game. For the sound, Eric Zocher spent a few hours with a professional voice actor, Dick Noel. He did various voices and sound effects with his voice in his studio. *Dark Castle* was one of the first games to use a professional for sound like this.

DL: Can you describe one significant challenge you overcame during the programming?

JG: *Dark Castle* was also developed on the Lisa, again mostly in 68000 assembly language with a little bit of Pascal for high scores and things. We solved the flicker problem in *Dark Castle* by using hardware page flipping which was vaguely documented by Apple but not supported by the OS. It was a bit of a hack but made full-screen, flicker-free animation possible.

Regarding the Preservation of Abandonware:

DL: "Abandonware" is a concept without legal standing. Legally, people like myself who copy and distribute vintage software are software pirates, and even within the community, sites run the gamut in their attitudes towards the practice. Seemingly corporations do as well.

Speaking personally, however, it seems that people like me do perform a valuable service to society in preserving for everyone (even the original authors or publishers or current rights holders in some cases) software that would otherwise be lost.

You, as a successful software developer and author of several classic abandonware titles, are uniquely positioned to offer an opinion on this issue.

Do you think there is, or may be, a moral difference between software piracy and the archiving and distribution of so-called abandonware?

JG: I think that copyright law is quite imperfect, but to the extent that the owner of a work is no longer making it available or intending to make money from it, I think the work should move into the public domain. Copyrights used to expire after 14 years which was probably a good metric for this, but with the rise of large corporations wanting copyrights for many years, the law has evolved in ways that I think are overly restrictive for many types of work.

From a moral perspective, I believe there is a partnership between creators of software and the users. It's important for the creators to get paid so that the world continues to get good software built, but I think creators also have a moral responsibility to respect the rights of their users who have put their own energy into learning and promoting a product. If the creator is no longer interested in selling and maintaining their product, I think that it's very appropriate for the software to go to the public domain, and the creator should be grateful to people taking over the creator's rolls of keeping it alive. The value of software and information is in the combination of creation and use.

DL: Do you believe that it is important to preserve the early history of computing in a tangible and open way for future generations?

JG: I'm actually sad about this in terms of the work I did with *Macromedia Flash*. There has been a lot of effort put into developing multimedia content for web sites. This kind of material is very difficult to preserve because much of it does not work without proper server software and network configuration. I think it's sad that much of this has already been lost. I'm very happy to see people preserving the old Macintosh and other software.

In Closing:

DL: On behalf of everyone who used and enjoyed a Silicon Beach Software title back in the day, allow me to offer my thanks for your time in reading and responding to these questions. And thanks for the memories.

My dad brought home a Mac Plus in 1986 when I was eight years old. He also brought home *Dark Castle*. I loved that game. This year, my son turned nine. For his birthday I gave him an emulated Mac Plus on his own thumb drive (and later a vintage SE) with a copy of *Dark Castle* and *Airborne!*. He loves *Airborne!* especially, and watching him hone his skills (with my tutelage) in *Trouble 3* to the point where he can bonk the Whip Henchman, get the key, and get out alive, has been a cross-generational bonding experience for us.

JG: I'm glad to hear you are doing this. Any pointers for me to try and get an emulator running on my OSX laptop? My twins are three years old, but it would be nice to show them what their dad built as they get bigger.

Interviewer's Note:

Mr. Gay now has an emulated Mac Plus complete with copies of *Airborne!*, *Dark Castle*, and *Beyond Dark Castle*.