Dan Kitchen: 2600 to Modern and Back

By Old School Gamer

Old School Gamer staff members have had the privilege of meeting many programmers from the heyday of the 1970s and 1980s, notably, David Crane, Garry Kitchen and Dan Kitchen, all of whom were influential during the Atari 2600 Generation and also the founding of Activision.

While at the Portland Retro Gaming Expo, we got to spend some time with Dan Kitchen to find out about his gaming history and how he has taken a game he started back in 1983 to finishing development on it now, in 2019.

Dan Kitchen is one of the original Activision developers and is one of the few that still actively programs. He developed classic games such as Crackpots, Ghostbusters, Crossbow, Double Dragon, Kung-Fu Master, along with F-14 Tomcat for the Atari 2600. As discussed elsewhere in this issue, F-14 Tomcat went on to make many other appearances on later consoles. It was then that he was able to capitalize on the additional power and memory beyond the Atari 2600's 1.19 MHz, 128 bytes of RAM and up to 4kB of ROM (64kB with bank switch), and finally make the games that he had envisioned.

Dan told us that with the resurgence of retro gaming that it would be fun to go back to his roots and design new Atari 2600 games.

Keystone Kannonball, 1983

"There were a few 2600 games I worked on while I was at Activision which never made it out of the lab for various reasons. One of the games was a sequel to my brother Garry's hit title, Keystone Kapers. Being a fan of railroading, I always wanted to create a game based on an old fashioned stream train and thought that would be a nice place for Keystone Kelly's next adventure. I started writing code for a display with railroad cars, added Keystone Kelly on top of them and called the game Keystone Kannonball. Around the time I began designing the initial game play, the Video Game Crash of 1983 was in full swing and Activision started pulling us off the VCS and onto the C64. So, I made a ROM of my work, took it home and lost track of it as the years passed.

"April of last year I began playing around with the various tools that are now available for Atari 2600 development and started rewriting Keystone Kannonball from scratch based upon my memory of the game. After a few months I had a display up with boxcars and a new character running across them. Then, sometime in June, I was cleaning out my offsite storage facility and found the Keystone Kannonball cartridge I had made in 1983! The cartridge display was almost identical to my new version, which in fact was actually better than the original."

After donating the original Keystone Kannonball ROM cartridge to the National Videogame Museum Dan decided to complete the game and release it as DAN KITCHEN'S GOLD RUSH in 2019.

"I initially started rewriting Keystone Kannonball for myself, but after video of the original game was posted online and articles about the game's 35-year journey began appearing on retro gaming sites, I realized there was still interest in 2600 games. So, I decided to complete the game and intend to follow it up with a few more new titles this year.

"Many people I know play retro games because it takes them back to their youth and connects them to a time that resonates with great memories. To me, the days I spent at Activision writing 2600 games were some of the best in my life. Designing new games for the 2600 helps me connect with those exciting days."

We asked Dan what advice he would give to someone who wants to develop for some of these older systems.

"For anyone who wants to craft new games on any of these older systems, I would suggest they read everything they can find online about the machine's architecture. They should also read the forums where other developers meet and exchange ideas. A lot can be learned by reading code examples posted by other developers. Also, search online for all the available tools. I was delighted to see that many tools are now available to assist 2600 developers. In the old days, we had to create all our own tools, from real-time debuggers to pixel editors. The tools of today definitely make some of the development easier.

Dan often encounters programmers who have a game concept they think will be fantastic. We asked him what questions they need to ask themselves in order to take their ideas to the next level.

"After they describe the theme of the game, which usually takes no more than a few words, I always say to them, "Great. Now, what's the game POV (visual perspective)? What's on the screen in terms of the player and NPC objects? How do you see the game play working?

"My advice is once you have a good idea, think it through. Play other games that are similar to learn what they did right or what they could have done better. Take the time to design every aspect of your idea from the game environments to the main character, enemies, pickups, to the actual game mechanics. When working on a game concept, I always take time to play it through in my mind to imagine what the player will see and experience. Any work done during this design period will save you hours, even days of work, when you finally get started creating the game."

To keep up on Dan Kitchen's "Kapers" check out DanKitchenGames.Com and look for more in Old School Gamer later this year.