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History of the Portable Gaming Console

Evolving from poor leds and choppy buttons to multimedia entertainment devices

Since the invention of the pocket watch (1524), people have always tried to miniaturize technology and increase functionality. Everybody wants to take as much as they can with them when they leave the house. And of course, the smaller things get, the more you can carry with you, which is quite an important issue, since most of their people want to take as much of their homes as possible wherever they might go.

But this seems natural, doesn't it? I mean, if you can have a watch with you at any time, why wouldn't you? If you could have a portable air conditioner with you to cool down on a hot day, why wouldn't you? Although it seems rather funny to have an entire air conditioner with you on the go, you never know where science will lead to.

Back to our problems, it seems that somewhere in the the 70's, arcades were very popular and gaming in particular was catching up with the release of different gaming consoles. These brought non-computer experts to the gaming realm, since they were a lot easier to operate and didn't require complicated commands to start a game. As in the case of most other things, the more popular it is, the more often people wanna do it.

This also became the case with games. But you just couldn't grab your gaming console and TV set every time you wanted to game on the go. So, companies began developing portable gaming systems. And even though most of you will probably think "GameBoy", Nintendo wasn't the first to come up with a portable gaming console.

The first company to announce a handheld console was Mattel Electronics. In 1978, Mattel launched a single game, LED-based console. Yes, the display used a few LEDs to actually show information. Game options were limited to Football, Baseball, Basketball and a few arcade-type games. As the attribute "single game" suggests, you bought one console and you could only play the game on that device. Gaming cartridges were not heard of at that time.

A year later, a company going by the name of Milton Bradley announced the first cartridge based portable gaming console - Microvision. This one was a huge improvement over the 1978 Mattel wannabe. It had almost double the game library (for a total of 11 games) and came with an impressive 16x16 LCD screen. Every game came with a new front cover to suit the game's theme, but what I can't figure out is why every game cover had it's own CPU. Anyway, the console was bloated with problems. From the electric-charge sensible cartridges to the fragile LCD screen, the entire system was a disaster.

In 1980 (5 years before its first home gaming console), Nintendo launched the Game&Watch series. The designer, Gunpei Yokoi, got the idea when seeing a bored businessman playing with a portable calculator. So the idea to create a watch that doubles as a time killing machine came up. Granted, the LCD's had predefined backgrounds, but the console introduced some of the most loved characters from Nintendo: Donkey Kong and the red plumber Mario. Over the years, some variations based on this system were, among which the most important are the Multiscreen (1982), Panorama (1983) and the Super Color (1984). It wouldn't be until a decade later that Nintendo would taste the success of the GameBoy trademark.

Early writings mention something of another console named the Game Pocket Computer. As you might think, no one really knows anything about this system, and for good reasons too. Firstly, the console only had 5 games, which was a huge step back even compared to the first contenders. And second, it was a Japan-release only. So to bad for the Epoch system.

But half a decade later came one of the first true winners: the GameBoy. This was the king of them all, outselling even popular home gaming system. So, why was a low-quality LCD screen with shameful graphics such a market breaker? Two words: "affordable" and "Tetris". In other words Nintendo had the brilliant idea of licensing the Tetris game for their console only and in the mean time launched the system at an affordable $109 price point. The price was right since the system used an 8 bit Z80 processor (which was almost 10 years old) and the LCD was as simple as you'd get at that time. This was the first system that proved Nintendo right: "It's not about the graphics, it's about the games" (not an actual quote!).

Later on (1996), when costumers expected Nintendo to develop a colored screen GameBoy, the company announced the GameBoy Pocket. This was a revamped GameBoy with a bigger and improved (grayscale) screen and better battery life, all packed into a slightly smaller form factor (not that small to be named Pocket, though).

Let's go back to 1985 and visit a small company called Epyx, where some hardware engineers started working on a prototype gaming handheld with the goal of revolutionizing the portable gaming industry. The 1987 prototype they came up with was amazing for that time. If it were to be released sometime in 1988 (one year before the GameBoy) it would have become market leader by the time Nintendo launched the GameBoy series.

But the company deemed the device too expensive to manufacture and the project failed. However, the developers didn't gave up and sold the plans to Atari. The company bought the rights and renamed the system from Handy (stupid name) to Lynx and released it in 1989. The Lynx and the Lynx II both failed, due to poor games support.

Another worthy contestant for the GameBoy was the Sega Game Gear. It had a color screen, larger than the GameBoy's. The console was released in 1991 and had every chance of making it big, but the GameBoy crashed it. Why? Because Nintendo already had a large game base and the GameBoy was very popular. The Game Gear was more expensive ($149) and ate up batteries like crazy. Nevertheless, Sega had another try at the portable gaming console's market with the Nomad.

The Nomad was an evolution of the Game Gear and had a very impressive ace up its sleeve: it could run US Genesis cartridges! This provided an impressive games library to start with. But again, the system was kind of large for something portable and ate up batteries like there was no tomorrow. Although technologically advanced, offering a controller port and TV output, the thing eventually failed.

The next GameBoy challenger was called Neo-Geo Pocket developed by a company called SNK. This was a pretty amazing unit, but was released in 1998 with a monochrome screen, which in the end was a big mistake since it was supposed to compete with the GameBoy Color. A year later the company released the Neo-Geo Pocket Color. Same 16bit processor, but with color screen. As its former wannabes, the console lacked third party support and could not match Nintendo titles like Zelda or Metroid. Three years after the launch date the company closed its Japan offices in 2001.

And yes, in 1998 Nintendo released the long awaited GameBoy Color. It had better graphics together with good compatibility with older GameBoy titles. This ironed Nintendo's lead in the market. The device came with a better Z80 processor, an infrared port and more memory. GameBoy's Color new "Tetris" was called Pokemon and the franchise made the GameBoy even more popular with cartoon TV series broadcast all over the world. It seemed like with every new system Nintendo also came up with a killer exclusive which made sales go insane.

Even after the release of the GameBoy Color, companies were still trying to match Nintendo. The first to take on the GameBoy Color was the WonderSwan, released in 1999. And again, like the Neo-Geo, the people at Bandai (developing company) released a monochrome system. If the Neo-Geo failed, why would the WonderSwan be any different? You'd think companies would learn from other's mistakes.... Well, they do, but not before repeating the mistakes themselves.

One year later, Bandai released the WonderSwan Color. This one was, like the original, a 16-bit portable video console with a 2.8-inch screen and faster video memory. Battery life dropped by 10 hours, but as bad as that sounds, wait to hear the rest of the story.

Finally, three years after the initial launch date, Bandai released the WonderSwan Crystal which came with a TFT screen. Again, battery life went down another 5 hours. So, a total of 15 hours were cut from the original version's battery life. How much could there be left? Well, the Crystal version could run (hold on to your PSPs) 15 hours with only one AA battery! Yes, you're right, that meant a full 30 hours for the monochrome version with only one AA battery. Now compare this with the six battery eating Nomad and the developers are sure to get a design award.

As far as games go, the WonderSwan had a promising start with an exclusive license to port Final Fantasy I and II to the system. This made it a winner in Japan (no US or Europe release) for a short period of time, until Nintendo bought exclusive rights to all the new coming Final Fantasy titles. Once again, Nintendo left the competition in the dark.

So what happened on the dawn of the new millennium? Well, the GameBoy's Color life was way shorter than the GameBoy Classsic, so 3 years later, Nintendo announced the new GameBoy Advance. And compared to the Color it really was advanced. First of all, the form factor changed from a candybar-like design to a wider layout scheme. Buttons and Dpad went to the right and left side of the screen, and two trigger buttons were added on top of the system.

The GameBoy Advance screen was backlit, had a 240x160 resolution and was powered by a 32-bit processor with embedded memory. Backwards compatibility was provided using an Z80 co-processor, so games were not a problem for the Advance. The infrared port from the GameBoy Color was dropped and a special link port was added for multiplayer connectivity using the Game Link cable (sold separately).

Later on, in 2003, Nintendo released a new version of the GameBoy Advance (adding an SP suffix), with the same specs, but with a clamshell design. In my opinion the new SP looked horrible compared to the original GameBoy Advance. But my personal tastes are not that important. In 2005, Nintendo announced the last incarnation of the Advance, the GameBoy Micro. The thing was aimed at iPod lovers or something. Talking about stupid decisions...but hey, they could afford it.

In the era of the Advance, even Nokia took a shot at portable gaming by releasing the

N-Gage - a gaming phone. Sounds stupid? You betcha! Plus, the whole design was dumb. For example it used a narrow screen, while the popular GameBoy used a 4:3 screen, and users where forced to hold the phone sideways when having a conversation. Six months later, an improved version called the N-Gage QD was released. To be short, none of them were much of a success. Simply put, there was no affordable way (at that time) to make a device that was a robust mobile phone and in the same time an entertaining gaming machine. I guess the future will change that.

Now, we finally arrive to the current generation or portable gaming consoles: the Nintendo DS (plus DS Lite and DSi) and the Sony PSP. The PSP was the first successful attempt to dethrone Nintendo as the portable gaming leader. Granted that, even if PSP and DS sales are comparable, this is the first time a company was not forced to abandon their system because it was eating more money than it was earning. I wonder what would have happened if Nintendo would have kept the naming scheme and had gone with something like GameBoy DS. Funny fact that exactly when they decided to loose the GameBoy tradition, Sony steps in and collects.

The DS comes pretty close to the Game&Watch design, but you can imagine that it has a whole lot more under the hood. It uses two screens, one of which is touch sensitive, and produces pretty impressive sound. The DS Lite is a revamped version of the DS and comes with even better sound and screen, while reducing sizes.

Although the DS is a lot more powerful than the GameBoy Advance, it still fades when compared to the Sony PSP. This one comes with an impressive 4.3-inch display and PS2-grade graphics. The PSP followed on the success of the popular PlayStation series and proved once again that Sony can get it right. A couple of years later and upgraded version of the PSP, the Slim&Lite (or the PSP-2000), was released. It had a 33% weight loss and was 22% slimmer then the original version.

At the dawn of 2009 (present) Sony released the PSP-3000, an improved PSP Slim&Lite. This was supposed to bring a better and brighter screen while still maintaining battery life, but users have been complaining about screen issues which Sony deems as features.

There's also the mysterious open-source Pandora project. This is an open source platform for designing games that would run on the Pandora portable gaming system. It's supposed to be the most powerful and feature-rich portable gaming console of them all, but not many of them have been spotted and there's no real promise of game support, except for the open source community.

All in all, portable gaming has had it's share of failures, that's for sure. But one company always seemed to come out clean. That was the case until Sony decided to give it a shot. Today there's a lot of competition between the PSP and the DS. This is generally good for consumers, since developers, while trying to eliminate each other, will lower prices and provide buyers with more attractive bundles. Game exclusives are always being hunted by console companies, and when they nail one down, they usually expect some impressive release for their money, so game developers will give their best in designing the respective title.