

From: Barrie Ellis [mailto:oneswitch@gmail.com]
Sent: Thursday, 27 December 2012 7:36 AM
To: [removed]
Subject: Drop Zone 4 and Bombs Away

Hello David,

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[OneSwitch: Was the anti-war 'score 0' approach in Drop Zone 4 something you intended, as detailed here: [http://deserthat.wordpress.com/2008/04/11/the-first-antiwar-game/?](http://deserthat.wordpress.com/2008/04/11/the-first-antiwar-game/)]

[main()]] Mostly accurate. My initiative with defining and including the "pacifist option" was actually greeted w/ horror by Mr. Kurick, the company president. It was intentionally hid from Meadows Games customers who it was believed wanted only violence. The sound of bombs hitting a ship was a rumble from low pass filtering of a pseudo-random digital sequence using an algorithm derived from an old Silicon Valley founding company, Signetics, application note. The sound of a bomb missing a ship was a high pass filtered version of that same digital noise pattern. The visual effect of the explosion was a video variant on that same sequence, but mirrored to be symmetrical horizontally and vertically... sorry if this is too nerdish. I guess old codgers like to reminisce.

After consulting DBA Mainnovation Inc. for many years I was forced into gainful employment as a Director of Engineering at Intevac Corp., Leapfrog, Element Labs, and then (alas) Solyndra due to the devastation of the consulting sector by California Senator Dianne Feinstein sponsoring the American Competiveness Act of 1999 which flooded the US engineering market with many thousands of H1B engineers primarily from Europe. She received enormous political donations from large corporations by lowering their cost of engineering through over supply of engineers. I do not like her. After I realized how corrupt Solyndra I quit about 6 months before the shit hit the fan there with public revelations of the crony capitalism and dirty money I saw evidence of as a mid-level executive. I re-invented myself as Mainly Design LLC (www.mainly-design.com) and presently am pursuing the development of proprietary products and assisting my wonderful wife in her establishment of Boulder Creek Candy Company by designing and building modest scale candy making equipment.

<http://web.archive.org/web/20010309231903/http://members.cruzio.com/~main/employ.htm>
[main()]] very old stuff, but amusing!

[OneSwitch:It's a book about games that can be played with a single button, linked to disabled/enabled gamers. I'd like to inspire people to write more one-switch games, whilst highlighting some of the most interesting, curious and best that already exist.

[main()]] I like your thought. One of my Rules of Thumb: "Simplicity is next to Godliness". To accomplish more with less is to accomplish eloquence. I eschew much of the modern gadgetry because I find it gaudy and shallow in purpose by the producer and benefit to the customer. I remain somewhat tied to my generation in which many valued minimalist philosophies. Many others, unfortunately, pursued liberal fascism, materialism, and cultural bullying in violation of so much virtue the 60's aspired toward.

[OneSwitch: Really interested in your games Drop Zone 4 and Bombs Away, and was wondering if you could tell me just a little more...]

1. Do you recall if Drop Zone 4 was released before October 1975. If so, your game would be the earliest one-button playable commercial video game. I'd love to find this out.

I believe the answer is YES... but I'm not sure how to verify that. Meadows Games was my 1st job after graduating from Cal Poly (SLO) subsequent to high school graduation in 1969. That would place me in Meadows at the start of 1975, with my 1st game taking ~5 months. I'm not sure how to nail this down with certainty. If it was critical I could probably rummage through my old stuff and find some sort of evidence one way or another. What game am I competing against? Perhaps I would recall if my memory was jogged by that title. [OneSwitch: Atari Steeplechase]

2. Was Drop Zone 4 deliberately abstract? How did you feel when Bombs Away added recognisable ships as the targets?

LOL... no, it was "abstract" because that was the cheapest thing to do at that point in time. The ships became recognizable in an updated version because PROM memories became practical in cost and size. The original version used rectangles because simple, low cost 7400 series TTL parts could readily generate the graphics. If you could compare the PCB board size of DZ4 with all other games of that time you would see my design was substantially smaller even though it had explosion graphics, explosion/miss sounds, a disappearing horizon that defined the water level, and dual modes of operation. I put myself through Cal Poly by grading papers for professors, cleaning toilets, installing burglar alarms (Main Alarm), and implementing the inventions of an eccentric psychiatrist father of a high school friend. I was so cheap the buffalo farted when I squeezed each nickel I earned. I also loved the book On Walden Pond which taught the philosophy of being economical. Today I recycle kitchen waste in my compost pile which helps my garden grow great food for my family as well as those we charitably assist in their times of need. I have disdain for the reckless waste American culture developed back when we were affluent. Abstract ship graphics allowed the essentials of game play which are all that mattered to enthusiasts who would quickly lose interest in fancier visuals if the dynamics and strategy weren't good.

3. Were you disappointed when Space Invaders and the like became very popular (thinking about the violence angle)?

The space Invader [Computer Space] game by fledgling Atari (a Bushnell and Dabney partnership) was, if I remember, the 1st arcade style video game. Ted Dabney used to recount how he and Nolan built it (with insane lack of engineering methods, I add) and tried it out in the Stanford student union. They had a pinball machine coin box mechanism which charged 25 cents/game (I think). After a few days they went to the game to check on the money receipts and dumped out the coins onto a small table. An impressed student walked by and seeing the pile of coins asked if the game had taken in \$20 (or some such low amount) but when Ted counted the money it was actually hundreds of dollars (or some such much larger amount). Hence the industry was born. The algorithm in the game was extremely simple. People tried to derive the complex algorithm used by the games "computer" and they always vastly over-estimated how trivial it was. You should find Ted (assuming he's still living) and ask him for more details J

4. Did you remain involved with video games in anyway after Bombs Away?

I was screwed by Mr. Kurick when he encouraged me to devote extreme time (100 hours/week?) to perfecting a video pinball game he wanted design. I did devote huge amounts of time with his assurance that he would compensate me justly when I was done. I did what he asked... but when we brought it to the MOA trade show in Chicago (my introduction to trade unions... I had the audacity to unpack my crated prototype game and set it up thus causing a shut down of the entire convention center because I violated union work rules... I negotiated that I would do the work and they would get paid union scale for my labor) nobody wanted a video pinball game. Meadows closed the project budget and I was told I could not be paid for my massive effort over 6 months because there was no budget to charge that cost to. I quit and went to work for commercial video equipment companies, developing video processing equipment used by NBC, ABC, CBS, CNN, and production companies.

As years went on I got married, had some kids, and then I divorced in a hideous gender biased liberal California court system. My sons stayed with me from time to time and I watched as the PC based video games they liked grew ever more senselessly violent. I am not against violence per se (my father fought at enormous sacrifice in the Pacific during WWII and I am humbled in my pride for his heroic contribution to just and moral violence there). I am absolutely against gratuitous violence. I had a falling out with some of my peers when I was Acting Director of Engineering at a Hasbro Toys subsidiary that was making violent video productions. I said that nothing good would come of glorifying death and destruction for its own sake. They scoffed and now in 2013 we see the fruit of 30 years of teaching children with interactive and realistic game simulations that killing and destroying creates personal identity and glory. We have horrible crimes which mimic those games.

I could ramble on... but perhaps I've written enough.

Good fortune to you WRT the book. I request that you plead for folks to open their eyes to the consequences of gratuitous violence in games and the media. Let me know if you have other questions. From the Colony Across The Pond,

David Main <david.main@removed>
31 May 2014, 19:04
to Barrie

Barrie,

I doubt I still have any of my old schematics but I'm doing a bit of spring cleaning in my shop so I might stumble onto something. If I do then I'll let you know.

FYI I did two game2 for meadows Games after I completed Drop Zone. One was an exhausting engineering effort to make a video pinball game in traditional form factor. After a year of work the game was a total flop at the MOA trade show in Chicago: pin ball players did not WANT a video version. The last game was 4-in-1 which pulled together drop zone, flim flam, breakout, and one other that I don't recall.

Best of luck in your writing.

Dave

From: oneswitch@gmail.com [mailto:oneswitch@gmail.com] On Behalf Of Barrie Ellis
Sent: Thursday, 21 August, 2014 2:21 PM
To: [removed]
Subject: Re: Drop Zone 4 and Bombs Away

Hi David,

Hope you're well.

[main()]] not so much. Prostate cancer and lyme disease.

I got in touch a little while back re. Drop Zone 4 and Bombs Away linked to a book I'm writing on the history of one-switch games and disabled/enabled gamers.

[main()]] yep. I replied to you then.

A friend of mine knocked up a quick Drop Zone 4 proof of concept today:
https://dl.dropboxusercontent.com/u/70092694/Bombs_Away_test/index.html

[main()]] fun to see this. Tell your friend that he needs 'attack', 'sustain', and 'decay' amplitude modulation of the white noise sounds. They hugely impact perception. My hardware design used a "clamp circuit" to modulate the amplitude, but since he's likely doing everything via s/w he should do PWM technique (each high/low sound pulse is divided into perhaps 16 time slots {more is better} and a PRSG filter routine is used to vary audio signal strength to N/16 strength (N = 0..15). Also, the object speeds seems a bit fast but that might be due to my being 63 instead of 23 J

Obviously, it's not quite there, but he's also looking at making a Bombs Away version too.

[main()]] there was a second generation DZ4 that used ROM memory to make rough approximations of a plane shape and ship shapes. Additionally, the ships when hit tilted to 45 degrees and sank beneath the waterline. Very WWII images. This 2nd generation game was much nicer but it came out a bit too late (4 months?) to be commercially competitive with games from Atari, Midway, etc. in the intense King Of The Hill battles of the marketplace. Did you know Sears made a video game that mimicked many of the features of DZ4? I was shocked when I walked through the department store and saw that I had been pirated!

[OneSwitch: I assume this was the Target Fun, better known now as Air-Sea Battle for the Atari 2600]

Did I tell you the game was pseudo colored: a B & W monitor (cheap) had colored tape placed over the ship tracks so they appeared to be from a colored monitor. Cheap tricks!

This is unlikely too, but I don't suppose you have any documentation of the graphics that we could make use of?

[main()]] I got rid of my flat file cabinet about 12 years ago (donated to a local high school art department that loved to get a cabinet that allowed respectful E size drawing storage) and that meant I threw away almost all my vellum, sepia, and blue line documents. Most were "D size" and all were hand drawn with a small plastic template for each type of logic gate (NOT, AND, OR, NAND, NOR, XOR, and XNOR). I ended up having C5/C6 vertebrae surgery on my neck in early 90's because of cantilevered posture for thousands of hours while bet over a drafting board drawing schematics w/ pencil on velum. Or maybe it was because of a Harley Davidson accident I had in Chepstow Wales near Tintern Abbey (near old steel foundry and The Two Brewers Pub) while dashing drunkenly about the UK, Western Europe, and Northern Africa in the late 70's J My consequential experience with the Wales medical system then (shoulder broken in 9 places, broken clavicle, knee ground to the bone) makes me more understanding of the profound ineptitude of our USA disastrous Obamacare now as I deal with my health issues.

Also, don't suppose you had any luck finding any schematics?

[main()]] Nope. If I find them I'll let you know and will gladly mail them to you. It would be a great pleasure to know they are of any contemporary relevance.