Software Engineering: Biography

David Brevik

David Brevik is a game developer and game designer, he is most famously known for creating the video game series Diablo. Brevik was part of Blizzard North, the company that developed Diablo I and Diablo II, and he was lead programmer and lead designer on those projects. I chose to write about him for the assignment as I am big fan on those two original games and got inspired after seeing a conference about him talking about the development of the original Diablo I. I thought it would be a funny and interesting story to tell. I will talk about his career as a whole and about some of the technicalities of making Diablo, his main accomplishment as the game is credited as the father of a whole genre of games and received many awards.

So, David Brevik first got around programming and game development when his father came back from work with an Apple II+ computer. It was on this device that Brevik first taught himself how to program, first in BASIC, and then in assembly. Brevik would play video games with type-in games that he would find in computer magazines. Those magazines would feature listings of source code in their pages for different software. This would include video games listings and users would have to type-in all the source code in their personal computer to run and use the software.

Growing up, Brevik developed his programming skills by making video games in his free time. Later on, after reading an article about Richard Garriott (The creator of the Ultima series of games), Brevik realized you could make a career out of developing video games, from that point on, he knew that game programmer was his goal in life. He later enrolled in a Computer Science course at California State University in 1986.

After college, Brevik got hired as a programmer in a clip art company that got a contract from Atari to make a video game. Brevik only work on that project for 6 months before leaving the company but he made some important acquaintance during his time there. He would then join Iguana development and work on a platforming game for the Sega Genesis (US) / Sega Megadrive (EU/JP). After this, his team at Iguana got a contract from a Midway Games to port an arcade game of their choice to console. This is the first of the many anecdote, that with hindsight, look like terrible choices. Brevik and his team went to an arcade venue to figure out which game they would choose to work on. Brevik saw an arcade of the game Mortal Kombat, the original, and propose to work on this port. The team did not agree and instead they instead would work on a basketball game called NBA Jam. Mortal Kombat went on to become one of the highest-grossing media franchise of all time and a major cultural impact on media in general. The port to Megadrive of the game, made by another team, went on to sale 2.63 million copies. Anyway Brevik only worked on this project for a little while before leaving Iguana.

David Brevik went on to create his own video game development company with old coworkers from his previous jobs, the company would be called Condor in

1993. And with his previous experience, Brevik knew people working for video game publisher such as Acclaim or Sunsoft and managed to get contract for his new company. Condor had obtained a contract to make a game called “Justice league task force” for the Megadrive, once again. So far nothing special until his team were invited by Acclaim to the CES (Consumer electronic show) to present their work on the game. There Condor would make a very important meeting; next to them, at the CES, another developing team was there to present their work for “Justice league task force” for the SNES (The other main console at the time). The two version were identical, as the contract demanded the same kind of game, but both team had no idea the other one existed, until that meeting at the CES. The other developers were known as Silicon&Synapse, which is now known as Blizzard Entertainement. Both team would talk and realise that they both want to make PC games of their own. Silicon&Synapse shows to Condor their work on a PC game called Warcraft I that they made on the side, and talks about how they are planning on selling their company to make their own PC game publishing company. And release Warcraft as their first own game. Brevik had an idea for a PC game, which would become Diablo, that he wanted to developed and Blizzard was interested in publishing it. After Blizzard was done with Warcraft I, collaboration and work on Diablo began, Condor would be acquired by Blizzard and be renamed to Blizzard North shortly before the release of Diablo I on the 31st of December 1996.

Now for the early development of Diablo I itself, it is important to note, that most software that Brevik made so far in his life, are console games, which are programmed in assembly, Diablo would be Brevik first C program. Also, Condor made the questionable choice of signing the contract for making Diablo to Blizzard for 300,000$. The studio was hiring 15 people at the time, so that’s less than 20K$/year for the employees as they need to pay the office space. So in the meantime they have to another source of revenue and 3DO, another gaming publisher, gave them a contract for an American football game for 1M$. And so they working on making two games at the same. That is not a good way to manage any kind of software project.

A lot of changes happened during the development of Diablo, as Brevik originially presented the game as a single-player, turn based, DOS game with permadeath mechanic. Blizzard was not happy with the turn based system and demanded it to be real-time. Everyone at Blizzard North but Brevik, agreed with the change. He thought that change would required a lot of developing time but in the end, had a working prototype of real-time in one afternoon of coding. He kept the whole turn system and forced turns to execute in real-time instead of having the player tell when a turn his turn is over. So the game routine is based on executing x amount of turns per second.

The graphics for Diablo I were using Super VGA display standard. It used a 640x480 resolution with 8-bit pixel. That means that every pixel colour on the screen was taken from a 256 colour palette. Brevik explained how they separated the palette between background colour and colour for all the rest. Basically the first bit on those 8-bit pixel, would determine if the colour was taken from the background palette or

the other palette. Than the 4 bits would determine the brightness level of the colour, so that every colour could range from black to white, and the last 3 bit would determine the colour hue (e.g red, blue or green), based on if it's background or not. This approach was able to create the great lighting atmosphere that is so important to the original game feeling and mood. The game has this brightness gradient and you can only see close to your character before the its too dark. At the time, the people from Condor were big fan of a PC game called X-Com and they decided to copy the look and presentation for Diablo. The tile system of Diablo was made from a screenshot X-Com. In the end, the game was released for Windows and used Direct X, one of the first game at the time. Direct X had proposed to release a demo version of the game to millions if they were to use Direct X for Diablo.

The major hurdle that came before the release of Diablo I was making the game online. Blizzard, in early 1996, was developing their online service called Battle.net and they wanted Diablo to be their first game to use it and asked Brevik to make the game online. Brevik said yes, sure, of course; but he had never programmed an online game before and didn't know anything about internet/web technologies and protocols. 8 months before the planned launch of Diablo I, there was no code for the online mode... So with the help of people from Blizzard, Brevik and his team managed to implement a basic multiplayer mode, in a hurry, based on a peer-to-peer model. Player would host games and other players would just join those instances of games. There was a major problem with this, the lack of anti-cheat. Nothing was stopping the players from altering the game files and using a third-party cheating software. Brevik was aware of that aspect for single player. But he couldn't imagine the impact it had on the multiplayer where cheats were spreading from game to game, quickly every player in the multiplayer mode had cheated items.

Despite that, the game managed to release on December 31st 1996, though it was planned to release before Christmas, it would go and sold 2.5 million copies worldwide by mid-2001 and would go to be considered one of the best games of all time. But during the last months of crunch for Diablo I, Brevik got a proposition by Sabeer Bhatia. Bhatia has an idea to make email on the internet and will exchange 10% of his company to Brevik against one room in Brevik's office space. Brevik refused the deal, focused on finishing Diablo at the time. 14 months later, Bhatia business, Hotmail, would sell for 400M$, 10% of which is 40M...

Work for Diablo II began soon after the launch of Diablo I, and after Condor had been acquired by Blizzard and became Blizzard North, there was no more payroll problem and the whole team was focused on the new game. The team was bigger now and so was the project. Brevik had more of a design role and doing less programming. The development for Diablo II was characterized by a quick prototype of the core of the game, so they could as soon as possible polish that aspect. And a client-server model for the online to fix the problems of the first game. Diablo II was bigger and better in many aspect and its sales reflected that. Diablo II would be released in 2000 and its expansion in 2001. In the first two weeks, Diablo II sold 1 million units and as of June 2001, it had sold 4 million copies worldwide.

After that, work began on Diablo III but in 2003, David Brevik left Blizzard North and Blizzard altogether, and two years later, in 2005, Blizzard North was closed, and so the development of Diablo III stopped. Some of the reasons for the resignations of Brevik and other employees of Blizzard North was in part due to conflicts with Blizzard mother company, Vivendi, which was not pleased with the way Blizzard North was developing their games.

After that David Brevik and Bill Roper (Vice President of Blizzard North) found another development studio called Flagship Studios and would release in 2007, a game called Hellgate: London. After that, Brevik left Flagship to this time join an already established studio and quit being chief of projects and managing teams. He worked on Marvel Heroes, a game similar to Diablo II but in the Marvel universe.

Nowadays Brevik is at the head of his own studio Graybeard Games, once again, but this time, he is all alone and is an indie developer. He released in 2018, a game called 'It Lurks Below' in which he made everything on his own, from the code to all the art assets such as the music and 2D sprites. He made his own engine and build his own tools for the making of this game, mostly using C. Brevik wanted to go back to his roots of game making; with some of his previous positions, he spent the majority of his time managing his business and was mostly doing a financial job. Now he is able to do what he always to do, which is game making.

Sources:
https://www.youtube.com/watch?v=VscdPA6sUkc&t=2633s
https://www.youtube.com/watch?v=4D_bVgplit0&t=4036s
https://www.gamasutra.com/view/news/268507/20_years_later_David_Brevik_shares_the_story_of_making_Diablo.php
http://www.gamasutra.com/view/feature/131533/postmortem_blizzards_diablo_ii.php
https://en.wikipedia.org/wiki/David_Brevik