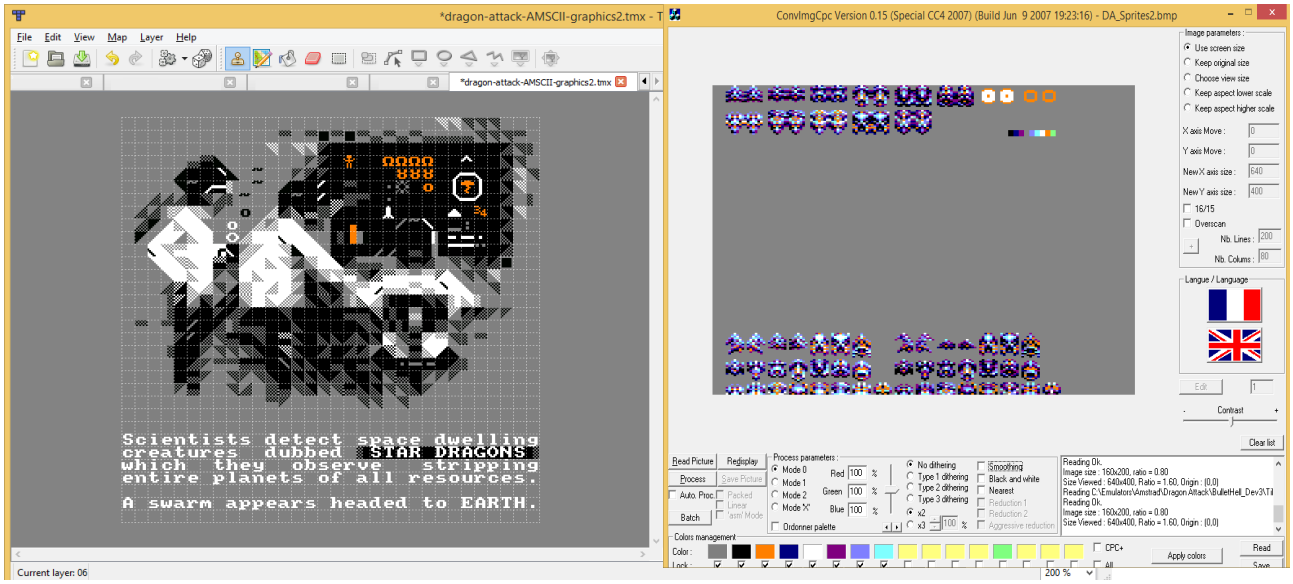
Dragon Attack – Making Of

Dragon Attack was written in assembly using WinAPE's integrated assembler. Music was created in Starkos, but the files were exported from Arkos Tracker as this music player features sound effects support. Bitmap graphics were created in Photoshop and converted to CPC bitmaps using ConvImgCPC. These were then converted to compiled sprites with tools of my own. The character graphics were created in Tiled and exported as text files. These was then converted into usable data for use in the loader and game with tools of my own.



Images from Tiled and ConvImgCPC

The genesis of Dragon Attack came about when a discussion was started on the CPCWiki early in 2016 which asked about the possibility of a bullet hell type of game on the CPC. I thought it unlikely to be practical, but at the same time that also made it interesting to see if it could be done.

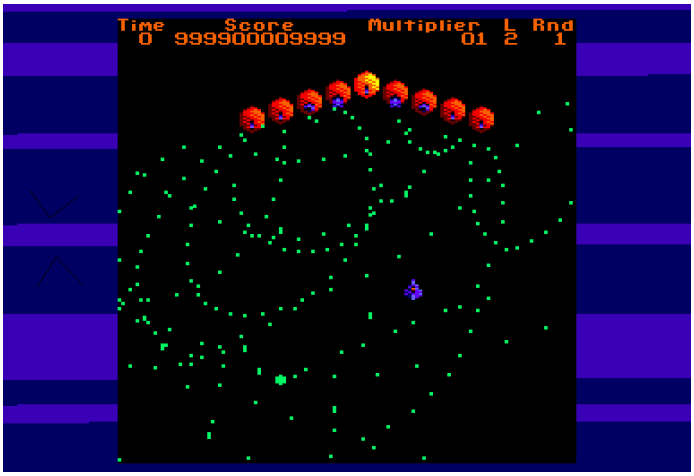
The biggest challenge was working out how to get the speed of the game high enough with as many enemy bullets as possible flying around, and this problem has been approached in two ways.

The first was to use mode 0 with effectively 3bpp graphics for the sprites rather than 4bpp. The fourth bit in each pixel went to the exclusive use of the enemy bullets so that this bit would also serve as a collision map for the player sprite (which is and/or-ed onto the screen) and provided a significantly faster approach than checking the player against all the bullet coordinates.

The second was to realise that the enemy bullet movement did not need to be all that fast, so instead of running at a higher frame rate with very small sub-pixel movement steps, the frame rate for the main engine is only 17fps, while the player, player bullets & collision detection operate at 50fps under interrupt in order to still provide the player with a high level of control response.

The approach to the design of the game was based around the idea that the quantity of enemy bullets were the key focus, so everything else about the design would be minimalist. No backgrounds, no complex waves of enemies, just a series of increasingly tough 'bosses' emitting bullets with a scoring mechanic designed to reward more challenging play.

Being minimalistic doesn't mean the game's design wasn't a challenge on it's own. After a few experiments with the necessarily reduced palette we decided to drop the traditional black background of the prototype for the most neutral of the CPC palette colours: grey. The benefit is that you can actually use colours that are darker than the scenery to define sprites and keep the brighter ones for things you need to pay attention to.



Early prototype with interrupt timing visible

With Hervé suggesting to having a different piece of music for each round as a way to keep each new boss encountered feeling 'new', the minimal design made even more sense. Although the music would consume a lot of memory, it made the game feel rich because the game-play really meant you were looking more at the space around the player than anywhere else during the game.

Having settled with how to spend available resources, we used carefully calculated character graphics to put a few decorative touches on non-gameplay areas. The story and intro as well as the manual are the wrapping to the game's tribute to Camelot Warriors.