Data sheet

- **Platform:** Amstrad CPC 464
- **Time of development:** 5 weeks

Story

Age 2050. In a world where the food is insufficient because of the climate change, particularly his favorite food, bananas, MouseCPC has to get the sustenance for this small babies. There aren't few. However, it isn't easy. The world has a lot of habitants. The fierce competition to get the banana have started…

Characters of the game

- **MouseCPC**: He's the protagonist of our story. The objective is found bananas around the world. To get them, MouseCPC can to move to the left with the key A, move to the right with the key D and move up with the key W. You have to guide him to avoid obstacles and enemies.

- **EvilRat**: Your enemy. Run away when you see it or he will kill you! He attacks you body to body and you die if he touches you.

- **Banana**: Your objective. You must get it all. It appears in random places in the different maps.

- **Heart**: When the enemies touch you, you lost a life. However, you can restore your health getting one of these objects. The game finishes if you haven't any lifes in your counter.

Development

- **Pathfinding:** To move the enemies into the different maps, we create many routing tables where we specify the most near node and the action that the current will have to realize to arrive to this node.

- **Collisions:** To get a banana, we have implemented a system of collisions based on the area of the MouseCPC. That it's know as hitbox. The dimensions of the box are the height and the width of the protagonist. If the banana touch the box, it will disappear and our counter will increase with one banana. This operation is similar to identify when a enemy touch you.

- **Double buffer:** To paint all the items correctly in the screen, we have included the technique of double buffer. It's consists at switching the two buffers where we paint the current sprite of the protagonist or the enemies and the previous to the previous sprite of them. So, when we modify the position of the frame or animate it, we have to realize a redrawing and the used memory increase.

License

GNU General Public License (GPL), third version. The code is attached with this memory.

Problems, issues and lessons

- **Worse planification:** One of the problems that we have had is a worse planification in our development. We have dedicated more time to the graphics of the game and we haven't had time to increase, for example, the number of levels of our game.

- **Flickering:** When we drew a lot of items in the screen, flickering appeared. So, we had to redesign our implementation to introduce the technique of double buffer.
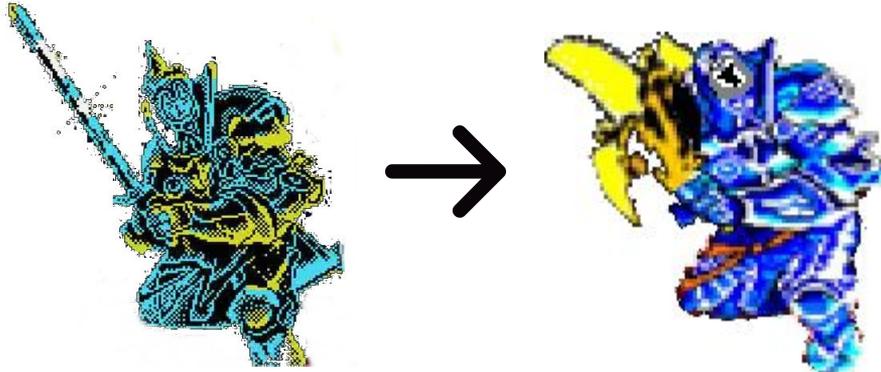
As wink to the game Camelot Warriors, we have included the image of the protagonist of this game. However, in our game, he gets a banana in place to a sword.

- **Lessons**

  - We have learnt to create games to Amstrad using the CPCtelera library. We always have been checking the used memory. It's very important, also with machines where memory is more bigger.

  - We really have understood the importance of a good planification.

Bibliography and credits

- **CPCtelera:**
    - **Authors:** Francisco José Gallego Durán
        Augusto Ruíz
        Diego Freniche Brito
        Francisco Fernández
        Stefano Beltrán

    - **License:**
    http://lronaldo.github.io/cpctelera/files/license-txt.html

    - **Link:** https://github.com/lronaldo/cpctelera

- **WinAPE:**
    - **Author**: Richard Wilson.
    - **Link:** http://www.winape.net/

- **CDT2WAV:**
    - **Authors:** Markus Hohmann
        Francisco Javier Crespo
        John Girvin
    - **License:** Freeware
    - **Link:**
    http://cpcrulez.fr/emulateurs_UTIL-CDT-CDT2WAV.htm

- **Creating games to Amstrad in 1 hour** (code):
    - **Author:** Francisco José Gallego Durán
    - **Link:** https://www.youtube.com/watch?v=zov-yI7I00s

- **Double buffer:**
    - **Author:** Francisco José Gallego Durán
    - **Link:** https://www.youtube.com/watch?v=T2u6223FrHU

- **Code of other games to the CPCRetroDev:**
    - **Link:** http://cpcretrodev.byterealms.com/juegos/

- **CPCWiki:**
    - **Link:** http://www.cpcwiki.eu/

- **Kung Fu Guns:**
    - **Authors:**
        Developed for BitBitJam 3rd edition. Powered by CPCtelera
        Game created and coded by Fran Gallego
        Music and SFX by Joe McAlby
        Graphics, Story, Design and Torreznos by Jon Cortázar

    - **Link:** http://gamejolt.com/games/kung-fu-guns/162292

- **Camelot Warriors** (Image of the beginning)**:**
    - **Authors:** Víctor Ruíz
            Luis Rodríguez