

Flashback Cutscene Player

Files

On PC :

- .POL files contain shapes polygons and palette colors.
- .CMD files contain bytecode for one or several animations.

The Amiga version bundles the two files into a single file (.CMP) compressed with bytekilker.

All data is indexed, so a .POL file will contain 4 offsets table :

- shape offset
- shape data
- vertices offset
- vertices data

This allows to reduce and re-use vertices data.

Opcodes

The cutscene player routine interprets 14 opcodes.

Num	Name	Description
0	markCurPos	set delay = 5, update palette, flip graphics buffer
1	refreshScreen	set clearScreen, if 0 clear by copying pageAux and use 2nd palette, otherwise clear with 0xC0 and use first palette
2	waitForSync	set delay = n * 4
3	drawShape	draw shape, if clearScreen != 0, page1 is copied to pageAux
4	setPalette	load 16 colors palette (RGB444)
5	markCurPos	same as 0x00
6	drawCaptionText	draw text below the animation
7	nop	
8	skip3	
9	refreshAll	same as 0x00 + updateKeys (0x0E)
10	drawShapeScale	draw shape with scaling
11	drawShapeScaleRotate	draw shape with scaling and rotation
12	drawCreditsText	set delay = 10, update palette, copy page0 to page1
13	drawTextAtPos	draw string on top of the animation
14	handleKeys	poll key inputs (used in Level 2 and job description cutscenes)

Rendering

The cutscene player allocates 3 buffers of 240x128 bytes :

- 2 buffers (page0, page1) are used for double buffering
- 1 buffer (pageAux) is used to keep a copy of previously drawn primitives. This is typically used as an optimization to avoid redrawing the background.





There are 3 drawing primitives :

- polygon (n points)
- ellipse
- pixel

Each primitive can be transformed :

- scaling
- rotation
- vertical and horizontal stretching

Animations are based on a palette of 16 colors (RGB444), with alpha blending achieved by allocating the upper half of the palette colors to blended colors. Turning a pixel transparent is then done by or'ing its palette color index with 8 (bit 3).

Copy protection

The copy protection of the game relies on the same cutscene player to draw and zoom out the shapes.

There are no external files, the data is embedded in the executable.