

You have to implement a player for a “text-movie” encoded like this:

1. Basic player

First 3 lines in the file contain the width,height and frame-rate.

The next lines contain a series of frames.

The full frame is specified as a matrix of chars.

Example:

width:5

height:3

frame-rate:1

frame

00x00

00000

00000

frame

00000

00x00

00000

frame

00000

00000

00x00

2. Delta frames

Besides the full frames one can have delta frames which are a list of changes.

r x,y v - replaces the value of cell x,y with v

The initial frame in the movie will always be a full frame

width:5

height:3

frame-rate:1

frame

00x00

00000

00000

delta

r 0,2 0
r 1,2 x
delta
r 1,2 0
r 2,2 x

3. Swap deltas

Besides r deltas a delta frame could also contain swaps

s x1,y1 x2,y2 - swaps the values of the cells x1,y1 and x2,y2

4. Subtitles

The player also has to display subtitles. They are one line and will replace the last line in the movie and are truncated to the width of the movie. The subtitles are a separate file encoded as a list of lines like this:

start-end:text

Start is the display second on which the subtitle line is shown. End is the last second on which the subtitle is shown. A new subtitle makes the previous one disappear.

Example

1-3:subtitle1

3-4:subtitle2

=> subtitle1 will be displayed from second 1 to second 2 and subtitle 2 will be displayed from second 3 to second 4

5. Successive subtitles

A subtitle line might have no end-second and this means it will be displayed until the next subtitle appears.

Example

1-3:subtitle1

5-:subtitle2

8-:subtitle3

10-12:subtitle4