Behind the Scenes of the Great TikZlings Xmas Extravaganza

Ulrike & Gert Fischer, Carla Maggi, Paulo Cereda, samcarter
A Tikzducks Production
Graphics, Animations, Video and Sound

SamCarter  Paulo Cereda  Ulrike Fischer  Carla Maggi

Storyboard
Gert Fischer

Assistant
Bär

Cast
Loads of Tikzlings


July 14 – 16, 2023  |  U. & G. Fischer, C. Maggi, P. Cereda, samcarter  |  Behind the Scenes of the Extravaganza  |  TUG 2023 (Bonn)  | 2
How it started

YES!

Ulrike can make a tikzducks video for samcarter!
Artful and detailed storyboards were created.

15 Pirate Ducks

3 Ducks with Bagpipes

4 Men... [A Bottle of Rum]

"Scotland the Brave"
Artful and detailed storyboards were created
Help will always be given to those who ask for it

Dear Carla, dear Paulo,

I think we should make a video for samcarter . . .

Do you think that this would a good idea and will you participate?

Ulrike
Well prepared for the task

- never tried it before
- I tried something but it doesn’t work
- I have almost no experience with videos
- when everything fails, I will record my own screen
- the arara rule doesn’t work
- it’s the first time I use github
Many scenes were created
Ulrik @samcarter We want to ask you when you have some time. We have a surprise. It makes noises, so you shouldn't be in a conference. And a not too small screen would be good too.

Ulrik @PauloCereda, @CarLaTeX, my husband and me have a christmas present for you. It is a bit early but some ducks are killed by the suspense and not so good at keeping secrets.

sam @UlrikeFischer Oh, this is so gorgeous!!!!!!!!!! I love it!
The next year we got professional

samcarter joined the team
Let’s get TeXnical...
Basic idea:
create a multipage document with incremental movement between pages

Many possible implementations, one possibility:
- beamer overlays for multipage document
- tikz for easy positioning

Source code available, e.g. https://github.com/TikZlings/Extravaganza2022
\documentclass{beamer}
\usepackage{tikz}
\usetikzlibrary{tikzlings}
\begin{document}
\begin{frame}
\begin{tikzpicture}[overlay]
\path (2*\thepage,-0.7*\thepage)
  pic{bat};
\end{tikzpicture}
\pause[6]
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Animation example

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Converting PDF into video

Multipage PDF

PNGs

MP4
Converting PDF into video

Convert PDF to PNG

Many possible tools

- convert from Image Magick
- sips from macOS
- pdftoppm from poppler-utils
- ...

Current choice:

```
pdftoppm -png -r 240 Example.pdf Example
```
Converting PDF into video

Multipage PDF → Set of numbered PNGs → MP4

Set of numbered PNGs

1 2 3 4 5 6 7 8 9 10 11
Converting PDF into video

Convert PNGs to MP4

**First step:**

```
ffmpeg \
  -ss 00:00:00 -i Example-%03d.png \
  -ss 00:00:10 -i Music.m4a \n  -shortest \n  Example_raw.mp4
```

**Second step:**

```
HandBrakeCLI --crop 0:0:0:0 \n  -i Example_raw.mp4 -o Example.mp4
```
Converting PDF into video

Multipage PDF

PNGs

MP4

Movie clip as MP4
Stitching clips together

Many possible tools:

- Freemake Video Converter (MS)
- iMovie (macOS)
- kdenlive
- moviepy
- ...

Requirements:

- transfade videos for smooth transitions
- adjust volume levels individually
- scriptable


Finalise video with another pass through HandBreak
Vimeo
https://vimeo.com/

List with links to all previous videos
https://github.com/TikZlings#extravaganza-videos
Movie time

The Great Tikzlings Christmas Extravaganza 2022

https://vimeo.com/780457002