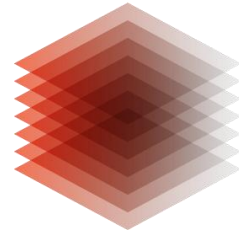

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TIB

Comparison of Lossless Video Codecs for Digital Preservation

Merle Friedrichsen

Berlin, July 18th, 2016

No Time to Wait!

Standardizing FFV1 and Matroska for Preservation

TIB AV-Collection

<https://av.tib.eu/>

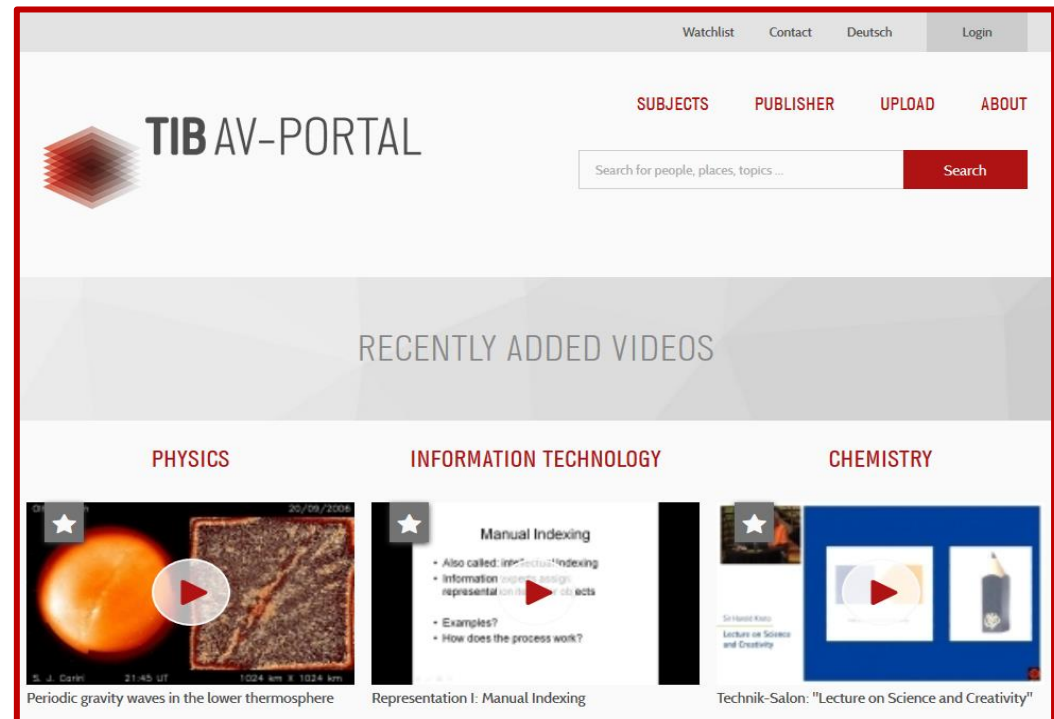
scientific videos

simulations, experiments ...

- engineering
- architecture
- chemistry
- computer science
- mathematics
- physics

formats

- different video file formats
 - mp4 ○ mpg ○ vob
 - wmv ○ mov ○ avi
 - m2ts ○ webm ○ flv
- as well as analog media

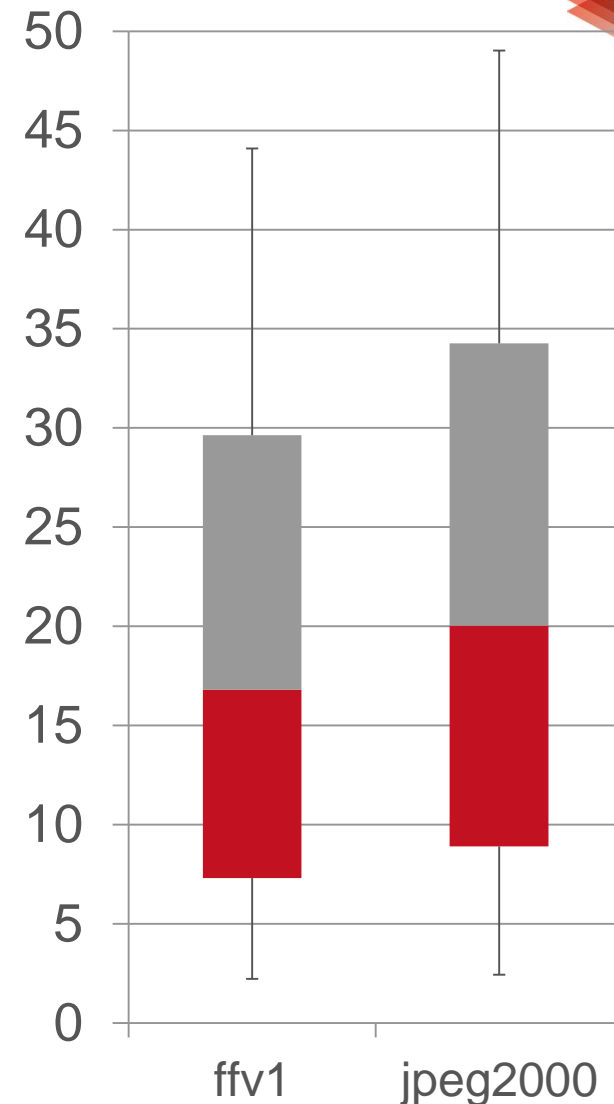


Comparing file size

The testset of 25 video files increased from 4.27 GB to

- 57.33 GB (ffv1)
- 65.59 GB (jpeg2000)

Statistic	ffv1	jpeg2000
Minimum	2.23x	2.44x
1st Quartil	7.31x	8.90x
Median	16.80x	20.04x
3rd Quartil	29.63x	34.27x
Maximum	44.08x	49.02x

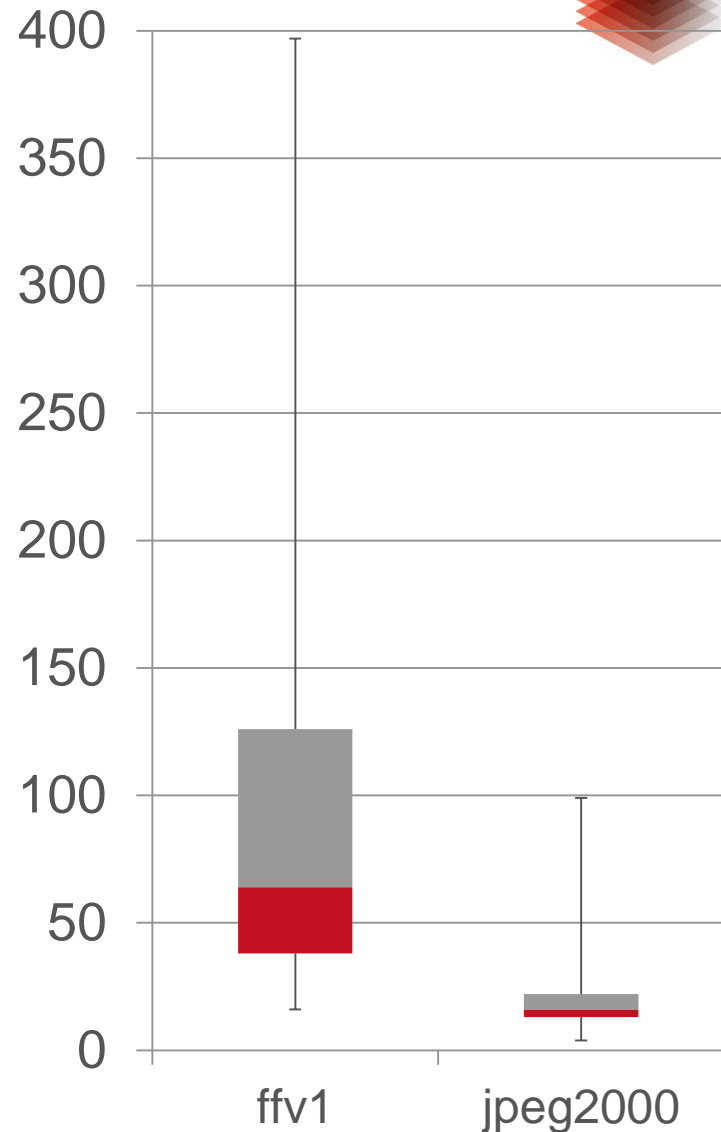


Comparing conversion speed

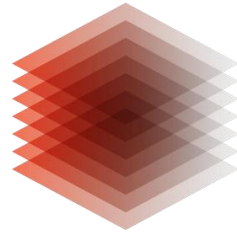
The testset of 25 files has a running time of 6h 17min in total.
Migration takes

- 2h 27min (ffv1)
- 9h 40min (jpeg2000)

Statistic	ffv1	jpeg2000
Minimum	16 fps	3.8 fps
1st Quartil	38 fps	13 fps
Median	64 fps	16 fps
3rd Quartil	126 fps	22 fps
Maximum	397 fps	99 fps



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