

Video

Jan Růžička

Institute of geoinformatics

VSB-TU Ostrava

17.listopadu 15, 70833 Ostrava-Poruba,

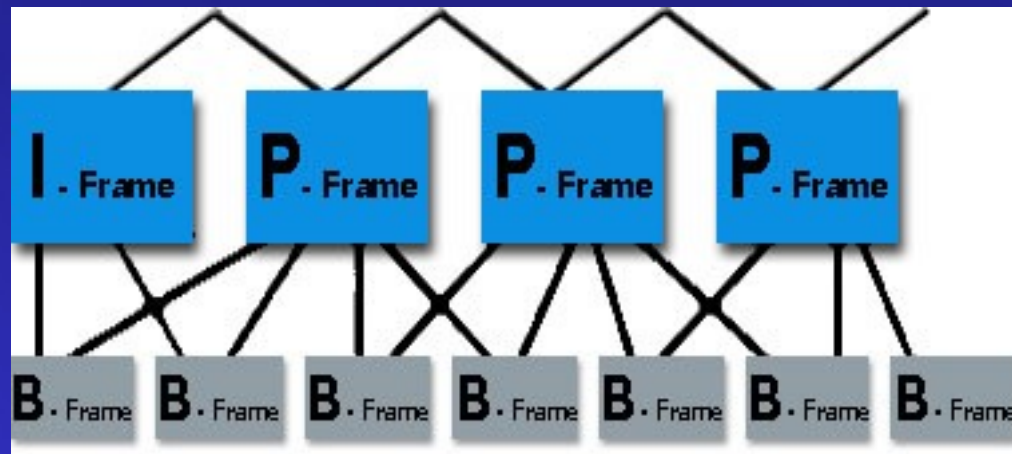
jan.ruzicka@vsb.cz

Structure, Behavior

- Set of frames -> Frame rate
- Images and sound together
- Compression
- Bit rate

Compression – basics / 2

- A standard sequence of [[I-B-B-P-B-B-P-B-B-P-B-B-P-B-B-I]] would have a Group Of Picture of 15, with 15 representing the interval at which I-Frames repeat



CODEC

- CCompression
- DECompression
- Algorithm
- Tool (software component)

CODEC - Examples

- MPEG-2
- MPEG-4
- DivX
- XviD
- MS RLE
- HuffyuV

Formats

- Stand-alone: AVI, MPEG, QT
- On-line: ASF, WMV, RM
- Special: M-JPEG

Playing

- Player + CODEC
- DivX Player, MPlayer, BSPlayer, Windows Media Player, Real Player, Quick Time Player, Direct Show, Micro DVD...

Video sources

- Digital video camera (camera)
- Analog video camera
- Digital record
- Analog record
- Animation

A/D conversion

- PC graphic (video) card (PCI, APG)
- Software
- D/A conversion

Video cutting

- Linear
- Non-linear

Software tools / 1

- A/D conversion
- Open stream - CODEC
- Save stream – CODEC
- Join streams, overlay (transition) between streams
- Cutting – cut, copy, paste, move

Software tools / 2

- Filters – hue, lightnes, transformation, ...
- Color depth
- Frame rate
- Bit rate

Software tools / 3

- Masking
- Export image sequences
- Import image sequences

Audio in Video Editing

- Save track
- Add track
- Some filters
- Coding
- Synchronize

Software for editing

- VirtualDub
- NanDub
- AviDemux
- Kino
- FFmpeg
- Adobe Premiere
- ...

Sources / 1

- <http://www.m4if.com>
- <http://www.virtualdub.org>
- <http://ndub.sourceforge.net>
- <http://mjpeg.sourceforge.net>
- <http://www.afterdawn.com/glossary/>
- <http://www.doom9.org>

Sources / 1

- <http://www.unixuser.org/~euske/vnc2swf/>
- <http://www.sodan.org/~penny/vncrec/>
- <http://www.videohelp.com/tools?s=23>
- <http://www.newsforge.com/article.pl?sid=04/08/16/2128226>
- <http://avidemux.sourceforge.net>

Advanced

- MPEG – 7
- MPEG – 21
- <http://www.mpeg.org>

Advanced / 2

- Fractal compression