

Digital Video Standards for "Performing Medieval Narrative Today: A Video Showcase"

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Bibliography

- [Performing Medieval Narrative Today: A Video Showcase](#)
- [University of North Carolina's MPEG4 User's Group](#)
 - [MPEG-4 Conformance Testing \(Powerpoint\)](#)
 - [MPEG-4 Compliance Spreadsheet \(Excel\)](#)
- [3ivx](#)

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Assumptions & Goals Driving Decision Making

- choose a format that is universally readable
(i.e. Quicktime, Real, Windows Media Player, etc.)
- create only 1 hi & lo bandwidth version for each video clip
(cable modem/LAN vs. 56k phone modem)
- Preference for:
 - clean site
 - simple workflow
- Intended users = potentially the whole world, hence:
 - can't depend on broadband access (must consider 56K modem users)
 - functionality can't be difficult
 - no need to download additional player software
- Streaming (vs. download) to protect IP

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Assumptions & Goals, continued...

- What do Libraries/Archives Prefer?
 - non-proprietary systems and standards
 - open standards (internationally accepted, widely adopted, etc.)
 - openly documented
 - standards not software/hardware dependent
 - good/strong software support for the standard

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Choosing a Video Standard

- Proprietary Standards
 - Real video
 - Windows Media
 - Quicktime
- Non-Proprietary Standards
 - MPEG1 (VCD) ~ VHS quality
 - MPEG2 = DVD format & quality, but no easy streaming
 - MPEG4 = "standard for very low bitrate audio-visual coding" (MPEG-4 group)
- Why MPEG4?
 - non-proprietary, international standard
 - high-quality, low bitrate coding
 - hinted streaming (optimized for streaming)
 - based on successes of MPEG1, MPEG2, & Quicktime
 - MPEG4 files play in Quicktime, Real, & Windows Media Player

 - MPEG4 standard does not specify encoding process

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Video Codecs

- Codecs (**CO**der/**DE**Coder) = algorithms (software) used to **encode** media files & then **decode** them at the time of playback.

- Why compress/encode?
 - raw, uncompressed video ~ 1 GB per 5 minutes, 12 GB per 1 hour
 - comparison: DVD holds > 4.5 GB
 - You can't stream this to anyone's desktop

- Compression --> less data per pixel -->
 - smaller video window
 - jerky video (fewer frames per second)
 - tinny audio
 - artifacting

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Video Codecs, continued...

- Example: [Hi Quality Clip](#) vs. [Low Quality version](#)
- GOAL: select a standard designed for **high-quality** compression + standard-compliant codec to achieve that compression
 - 3ivx (<http://www.3ivx.com/>):
 - > MPEG4 video **and** audio,
 - > produces "fully compliant MPEG4 files" (3ivx website)
 - > **free!**

Perfect, right?

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MPEG4, the Reality (the Chimera?)

- [University of North Carolina's MPEG4 User's Group](#)
 - Conformance Testing for MPEG-4 Compliance (Winter/Spring 2004?)
 - No MPEG4 codec tested was compliant with the standard! (including 3ivx)
- What happened to Real?
 - RealVideo 9 (RealOne) introduced MPEG4 support
 - Envivio MPEG4 codec pulled from v.10 of RealPlayer (why??)
 - Real can play MPEG4 using Quicktime as plugin... sometimes...
 - Real just re-introduced MPEG4 support in v.10's latest update, but...
 - > unknown (non-compliant?) codec
 - > no documentation
 - > won't play 3ivx files (but can play Quicktime MPEG4 files)

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MPEG4, the Chimera? continued...

- Windows Media Player
 - MPEG4 not natively supported
 - needs MPEG4 codec plug-in such as 3ivx... but...
 - doesn't support RTSP streaming protocol
- Media Players duking it out: Quicktime vs. Real
 - Real can't play the files but insists on trying
 - Q: how to stop Real?

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Performing Medieval Narrative Pilot: Conclusions?

- [Performing Medieval Narrative Today: A Video Showcase](#) (Local Version)

- Decisions & Compromises:

- > continue using MPEG4 standard + 3ivx codec
- > embed video files in web page - requires use of Quicktime
- > watch MPEG4 development/adoption
- > re-encode only when a better solution is obvious

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