

Free Software and Open Formats: virtual immortality and independence for digital archives

Peter Bubestinger

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Peter Bubestinger

- Studied computer science at the Technical University, Vienna
- Hands-on experience with major archives since 2002:
 - Austrian Mediathek
 - ORF (National broadcaster, Austria)
 - VoV (National broadcaster, Vietnam)
 - RTV (National broadcaster, Slovenia)
 - SRTC (National broadcaster, Sudan)
 - Fonoteca Nacional (Mexico)
 - Memnon Archiving Services (Belgium)
 - SRF (Sweden), YLE (Finland), SRR (Romania), ...
- Working with GNU/Linux Systems since 2001
- Coordinator of FSFE's activities in Austria

Free Software defines itself by providing the user these 4 digital freedoms:

- Use
- Study
- Share
- Improve

The right...

- ...to use it for any purpose (USE)
- ...to study how the program works and understand it (STUDY)
- ...to share copies of the software (SHARE)
- ...to improve the program and distribute these improvements (IMPROVE)

Common misunderstanding: "Free" does not mean "gratis".



Perceived professionalism and quality of Free Software:

Why isn't it more widely used or known in archival domains?

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Introduction

Status Quo

**Professional vs.
Free**

Benefits

Independence

Price

Interoperability

Sustainability

Why isn't it more widely used or known in archival domains?

"Professionals" often consider brand and price as an indicator for quality.

This is why "free" is often mistakenly thought to be "unprofessional" or of lower quality.

With these doubts, and because "*noone has ever done this before. . .*", archives currently rather stay with proprietary products.

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Understandable.

BUT...

Important: Quality of software is price- and license-independent!

- You can get buggy software under all licenses:
proprietary and free
- And within any price-range ;)

In other areas, Free Software already has its status as a professional standard (Webserver, Networking, Programming, ...)

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Recent case:

Professional high-grade broadcasting video A/D converters (3.000 - 12.000 EUR) from renowned vendors, silently produce output frames containing heavily mangled content. ^a

^ahttp://www.dva-profession.mediathek.at/fidelity_analyzer/

Professionals don't use Free Software. . .

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Really? Some even produce and promote it!

- BBC:
 - Dirac: <http://diracvideo.org/>
 - Ingex: <http://ingex.sourceforge.net/>
 - and many more: <http://www.bbc.co.uk/opensource/projects/>
- Industrial Light & Magic:
 - OpenEXR Film Codec: <http://www.openexr.com/>
- Austrian Mediathek:
 - DVA-Profession: Mass video digitization workflow system for archives (GPLv3).
<http://dva-profession.mediathek.at/>
- CinePaint:
 - Used in: Harry Potter, LOTR, The Last Samurai, . . .
<http://www.cinepaint.org/>

Where are the benefits for archives by using Free Software and Free Formats?

- Independence
- Price
- Interoperability
- Sustainability

Let's look at it in detail...

To consider:

- Archive domain: relative small market (niche)
- Small number of off-the-shelf solutions (or products) (often focused on broadcasting demands)
- Highly specialized demands: often custom in-house solutions

⇒ high potential for vendor dependence. . .

With Free Software / Free Formats:

- free choice of (local) support
- no black-box
- common tools/codebase: larger user base

To consider:

- Niche market = high prices
- Custom solutions necessary

With Free Software / Free Formats:

- Reusability of existing solutions
- Free choice of suppliers
- Less "forced" upgrades

To consider:

- Very important for flexibility and sustainability
- Proprietary vendors benefit from less interoperability
- Disadvantages of patented or proprietary licensed formats for its users:
 - Widespread implementation limited
 - Uncertainty of sustainability
 - Additional costs

With Free Software / Free Formats:

- Developers by definition support interoperability
- Missing features can always be added on demand

To consider:

- Archives embody sustainability :)
- Never-ending migration (formats, tools, carriers, ...)
- Archives require sustainable equipment (replayers, carriers, ...)
- Necessary to restore and modify equipment

With Free Software / Free Formats:

- Includes source code (equivalent to service manual and schematics)
- Their definition forces sustainability: practically and legally
- No artificial restrictions

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That's virtual immortality for an archive and its content!

To consider:

- Not only money!
- Non-broadcasting archives: usually government-financed

With Free Software / Free Formats:

- Knowledge and tool transfer between institutions (and the public)
(Examples: Archivematica, DVA-Profession, METS, ...)
- Independence
- Interoperability
- Sustainability
- Openness
- ... and many more!

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