

FFV1 and Matroska

IETF 93, Prague 2015

PREFORMA Project

Aim: Address the challenge of implementing good quality standardised file formats for preserving data content in the long term

MediaInfo PREFORMA Projects:

Phase 1: Researching community standards and developing file conformance checks

Phase 2: Developing an extensible, open source software project consisting of an implementation checker, policy checker, reporter, and fixer that targets preservation-level audiovisual files

FFV1 and Matroska

FFV1

Lossless intra-frame codec

Maintained by the FFmpeg project under the leadership of Michael Niedermayer

Matroska

Extensible media container

Found .MKV files (matroska video) and others; basis for .webm files

Maintained by Matroska.org

FFV1: Current Work

Specification: <http://www.ffmpeg.org/%7Emichael/ffv1.html>

Discussion and Development (ffmpeg-devel list)

<https://lists.ffmpeg.org/mailman/listinfo/ffmpeg-devel/>

GitHub Repositories

<https://github.com/ffmpeg/ffv1> (markdown version)

<https://github.com/mediaarea/ffv1/tree/markdown>

<https://github.com/ffmpeg/ffv1/pulls>

Matroska: Current Work

Specification: <http://matroska.org/technical/specs/index.html>

Discussion and Development (Matroska-devel list)

<http://lists.matroska.org/cgi-bin/mailman/listinfo>

GitHub Repositories

<http://matroska-org.github.io/libebml/specs.html>

<https://github.com/mediaarea/ebml-specification/tree/data-types>

<https://github.com/Matroska-Org/ebml-specification/pulls>

Objectives

- Improve the sustainability factors for both formats including disclosure, credibility, and transparency
- Create a mechanism to clarify, authoritatively, the intent of the specifications
- Ensuring that complete, authoritative, open and accessible documentation is available

History of development

Current work on listservs ffmpeg-devel and Matroska.org

FFV1 specification: <http://ffmpeg.org/~michael/ffv1.html>

Matroska specification:

<http://www.matroska.org/technical/specs/index.html>

Why FFV1 and Matroska

“When used in combination with the Matroska open source container it has the benefit of creating fully open source files.”

- Open source
- Active development community
- Increasing adoption

Why IETF

Preforma and IETF share purposes; see 7/19 email

Charter

Organizations tasked with the preservation of audiovisual materials (such as governments, cultural heritage institutions, media organization faces obsolescence challenges as videotape technology is diminishing). They must digitize now to preserve materials and seek to use open, transparent, self-descriptive, lossless formats, and there is an important role to be filled by open source standards. The PREFORMA project has selected FFV1 and Matroska as open formats to develop preservation tools around, but these formats are both in need of more formal standardization efforts.

Charter

FFV1 is a lossless video codec and Matroska is an extensible open source media container based on EBML (Extensible Binary Meta Language) a binary XML format.

There is an increasing interest in and support for use of FFV1 and Matroska. However, there are concerns about the sustainability and credibility of existing specifications for long-term use. The existing specifications require a broader review and formalization in order to allow for widespread adoption.

Charter

The Working Group deliverables will build on the extensive work done by the development communities of Matroska and FFV1.

FFV1: <https://mediaarea.net/temp/ffv1.html>

Matroska: <http://matroska.org/technical/specs/index.html>

EBML: <http://matroska-org.github.io/libebml/specs.html>

Development

FFV1: <https://github.com/ffmpeg/ffv1>

Matroska: <https://github.com/Matroska-Org/foundation-source/blob/master/spectool/specdata.xml>

EBML: <https://github.com/Matroska-Org/ebml-specification>

Charter

The Working Group will seek consensus and refinements for specifications for both FFV1 and Matroska in order to provide authoritative, standardized specifications for users and developers.

Deliverables

- Internet Draft RFC for FFV1
- Internet Draft RFC for Matroska

Review of the internet drafts will inform the working group's next steps towards standardization

Questions for Discussion

So: is this worth doing?

How do we move forward?

Contact:

info@mediaarea.net

More information about the PREFORMA project:

http://mediaarea.net/en/PREFORMA_Phase2