

A photograph of a modern building at night. The building's facade is covered in a grid of colorful, abstract light patterns in shades of red, blue, green, and yellow. The building has a glass and metal structure. In the foreground, there are large, white, stylized letters 'A', 'M', and 'A' on the ground. The sky is dark blue.

Media Conformance Checking of AV files in the PREFORMA project

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EBU Open Source Meetup

IBC 2015, Amsterdam

Sound and Vision LABS

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APPLICATIONS



DATASETS



APIS

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PREservation FORMAts for culture information & e-archives

The screenshot displays the PREFORMA website interface. At the top, a navigation bar includes links for WEBSITE, PROJECT, PARTNERS, TENDER, ACTIVITIES, OPEN SOURCE PORTAL, COMMUNITY, and DOWNLOAD. The date "Friday, 14 March 2014" is shown. The PREFORMA logo is prominently displayed, along with the European Union flag and the SEVENTH FRAMEWORK PROGRAMME logo. Below the navigation bar, there are sections for "BLOG HOME" and "RESERVED AREA".

The main content area features a "PRESENTATION OF THE PROJECT" section with a diagram showing a stack of documents being processed into a box and then a document with a smiley face. Below this, a text block reads: "A new Pre-Commercial-Procurement project started in January 2014" followed by the heading "PREFORMA, FUTURE MEMORY STANDARDS". The text continues: "Memory institutions are facing increasing transfers of electronic documents and other media content for long term preservation. Preservation models are often inspired by ISO 14721:2003, known as 'the OAIS model', where transfers and preservation are built on information packages containing both data and metadata. [Continue reading ->](#)"

Below the main text, there is an "IN FOCUS" section with a green "INFO DAY" icon and the heading "PREFORMA Call for Tender, Information Day". The text states: "Brussels, 4 April 2014" and "On April 4th 2014 PREFORMA project will organise an information Day to present the call for tender that will be held as part of the [unclear] management."

On the right side, a "PARTNERS" section lists several organizations with their logos: Riksarkivet, PACKED (Centre d'expertise pour les Archives Numériques), PROMOTER, Fraunhofer IDMT, UNIVERSITY OF SKÖVDE, and UNIVERSITÀ DEGLI STUDI DI PADOVA.

On the left side, there are sections for "Logged in as: preforma" with a "Logout" link, "MEDIA PARTNER" featuring DIGITAL CULTURE, and "CONTACTS" listing the Project Coordinator (Borje Justrell), Technical Coordinator (Antonella Fresca), Communication Coordinator (Claudio Prandoni), and Scientific Coordinator (Nicola Ferro). At the bottom left, there is a "LATEST NEWS" section.

Empower memory institutions to gain **full control** over the **technical properties** of **digital content** intended for **long-term preservation**

Challenge Brief

- ❑ Develop an **open source conformance checker** that:
 - checks if a file complies with standard specifications
 - checks if a file complies with the acceptance criteria of the memory institution
 - reports back to human and software agents
 - performs simple fixes

- ❑ Establish an ecosystem around an **open source reference implementation** that:
 - generates useful feedback for those who control software
 - advances improvement of the standard specification
 - advances development of new business cases for managing preservation files



❑ **VeraPDF Consortium:**

- Open Preservation Foundation
- PDF Association
- Digital Preservation Coalition

❑ PDF/A Validation



❑ **TIFF/A Standard Initiative:**

- Digital Humanities Lab / University of Basel
- Agents Research Lab / University of Girona
- Easy Innova

❑ DPF Manager



Open standard?	AUDIOVISUAL			TEXT	IMAGE
	<i>broadcast</i>	<i>film</i>	<i>Consumer</i>		
PREFORMA stakeholders	<i>MPEG-IMX (MXF/MPEG2)</i> <i>XDCAM HD422 (MXF/MPEG4)</i>	<i>DPX</i> <i>DCP (MXF/JPEG2000)</i>	<i>MOV/MPEG2</i> <i>AVI/MPEG2</i> <i>MPEG/MPEG2</i> <i>MPEG/MPEG4-AVC</i>	<i>PDF 1.4</i> PDF/A1	TIFF 6.0 <i>JPEG</i> JPEG2000 <i>RAW</i>
Industry standards	<i>AS10B (MXF/MPEG2)</i> <i>(MXF/JPEG2000)</i> <i>FIMS (MXF/MPEG2)</i>	DCDM (TIFF 6.0) <i>DCP (MXF/JPEG2000)</i> <i>IMF (MXF/MPEG4)</i>	<i>MPEG-AF</i>	<i>PDF</i>	JPEG2000 TIFF
Open standards	MKV/FFV1 OGG/Dirac	PNG	WebM/VP8 OGG/Theora	PDF/A1 PDF/A3 PDF/A3	PNG
PREFORMA	MKV (?) OGG JPEG2000 (?) FFV1 Dirac LPCM (?)			PDF/A	TIFF 6.0 (?)

CELLAR

Codec Encoding for LossLess Archiving and Realtime transmission

Project Advisors

MATROŠKA 

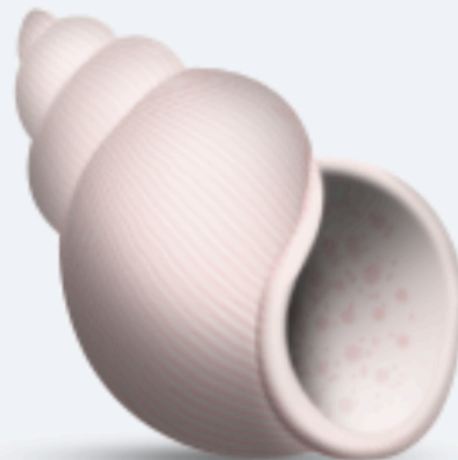
 **FFmpeg**

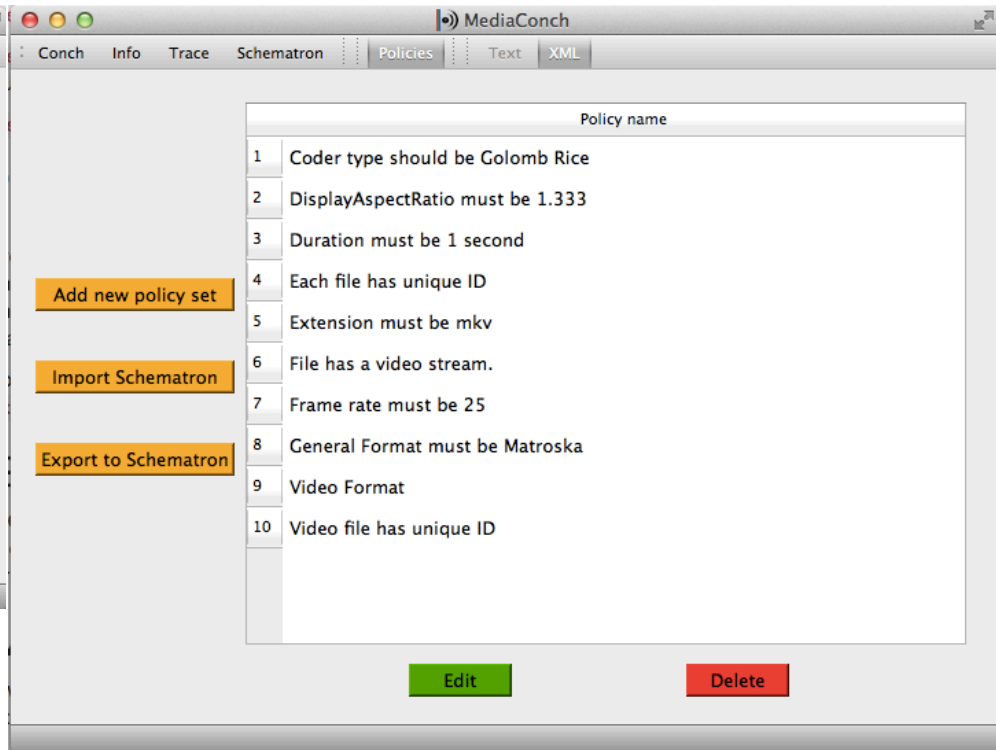
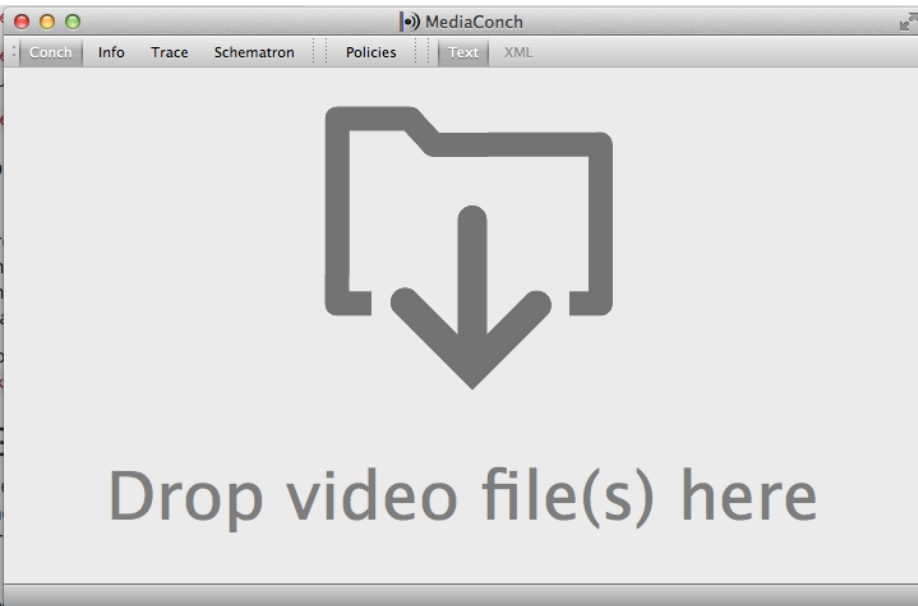
 **libav**

 artefactual

MediaConch

MediaConch is an extensible, open source software project consisting of an implementation checker, policy checker, reporter, and fixer that targets preservation-level audiovisual files (specifically Matroska, Linear Pulse Code Modulation (LPCM) and FF Video Codec 1 (FFV1)) for use in memory institutions, providing detailed and batch-level conformance checking via an adaptable and flexible application program interface accessible by the command line, a graphical user interface, or a web-based shell. Conch is currently being developed by the MediaArea team, notable for the creation of open source media checker software, MedialInfo. Furthermore, the MediaArea team is dedicated to the further development of the standardization of the Matroska and FFV1 formats to ensure their longevity as a recommended digital preservation file format.





preforma-project.eu

mediaarea.net/
mediaconch

MediaConch team

- Jérôme Martinez
- Dave Rice
- Guillaume Roques
- Florent Tribouilloy
- Ashley Blewer
- Tessa Fallon
- Erik Piil

Thank you

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