

## PREFORMA – Future Memory Standards

### Objectives

Memory institutions are facing increasing transfers of electronic documents and other media content for long term preservation. Data are normally stored in specific file formats for documents, images, sound, video etc. that are produced by software from different vendors. This software is controlled neither by the institution that produces the files, nor by the institution that holds the archive. As a result, memory institutions have to make conformance tests before accepting transfers of electronic collections, but these tests are again out of control and not totally reliable. This poses problems in long-term preservation. Data objects meant for preservation, passing through an uncontrolled generative process, can jeopardise the whole preservation exercise.

The main objective of PERFORMA (PREservation FORMAts for culture information/e-archives) – a Pre Commercial Procurement project co-funded by the European Commission under its FP7-ICT Programme – is to give memory institutions full control of the process of the conformity tests of files to be ingested into archives, through the development of a set of tools which enable this process to happen within an iteration that is under full control of the institutions.

The procurement, following the rules for tenders in public sector, matches the memory institutions professional knowledge and the supplier's skills in development and promotion of products, creating a win-win situation. Joint procurement enables PREFORMA to build a sustainable network of common interest, where the public procurers can remain in contact and cooperate beyond the EC funding period.

### Target Users and Stakeholders

The network of common interest of PREFORMA will be set up with representatives from memory institutions, researchers and developers who are interested to contribute to the definition of the requirements and to take part in the assessment and the exploitation of the results produced by the suppliers. In particular:

- **Memory institutions** and cultural heritage organisations coordinating or representing them, that are involved in (or planning) digital culture initiatives.
- **Developers** contributing code for the PREFORMA tools as well as developers implementing the reference implementations in production software.
- **Research organisations** providing technical and expertise advice to cultural stakeholders.
- **Standardisation bodies** maintaining the technical specifications of the preservation formats covered in PREFORMA.
- **Funding agencies**, such as Ministries of Culture and national/regional administrations, that own and manage digitisation programmes and may endorse the use of the PREFORMA tools in the digitisation process.
- Other **projects** in the digital culture, e-Infrastructures and policy arenas.

**Project acronym:** PREFORMA

**Contract nr.** 619568

**EC Call ID:** FP7-ICT-2013-11

**Start date:** 01/01/2014

**Duration:** 48 months

**Web site:**

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**Partners:**

Riksarkivet (SE)

Packed Vzw (BE)

Promoter Srl (IT)

Fraunhofer IDMT (DE)

University of Skovde (SE)

University of Padua (IT)

Netherlands Institute for  
Sound and Vision (NL)

KIK-IRPA (BE)

Greek Film Centre (GR)

Local Government

Management Agency (IE)

SPK (DE)

Ajuntament de Girona (ES)

Estonian Ministry of  
Culture (EE)

Kungliga Biblioteket (SE)

## The Open Source Projects

### Objective of the procurement

The total costs of the pre-commercial-procurement launched by PREFORMA amounts to 2,805,000 euro. Its main objective is the development and deployment of an open source software licensed reference implementation for file format standards aimed for any memory institution (or other organisation with a preservation task) wishing to check conformance with a specific standard.

The media types covered by the tender are:

- **Texts**, standard specs to be checked: PDF 1.7, PDF/A-1, PDF/A-2, PDF/A-3
- **Images**, standard specs to be checked: TIFF/EP, TIFF/IT
- **AV records**, standard specs to be checked: MKV, Ogg (wrapper); JPEG2000, FFv1, Dirac v2.2.3 (video encoding); LPCM (audio encoding)

### The PREFORMA suppliers

Six suppliers have been selected (two for each media type) to carry on the first design phase that lasted 4 months and completed with the ranking of the delivered designs. The suppliers of the best three designs (one for each domain) were then requested to proceed to the prototyping phase, which includes two releases and the re-design phase and which lasts until December 2016. The selected suppliers are:

1. **veraPDF**, led by Open Preservation Foundation and PDF Association – “*The PDF/A conformance checker accepted industry-wide*” (PDF/A)
2. **EasyInnova** – “*Digital Preservation Formats (DPF) Manager*” (TIFF)
3. **MediaArea** – “*PREFORMA MediaConch: CONformance CHEcking for audiovisual files*” (MKV|FFV1|LPCM)

### Expected Outcomes

- Development of an **open source conformance checker** that checks if a file complies with standard specifications, if it complies with the acceptance criteria of the memory institution, reports back to human and software agents and perform simple fixes.
- Establishment of an ecosystem around an **open source reference implementation** that generates useful feedback for those who control software, advances improvement of the standard specification and advances development of new business cases for managing preservation files.

### How to contribute

An Open Source Portal ([www.preforma-project.eu/open-source-portal.html](http://www.preforma-project.eu/open-source-portal.html)) has been implemented to provide an overview and references to each open source project that is currently working in the prototyping phase. It acts as an entry point for all interested suppliers and memory institutions allowing easy navigation to all externally hosted resources.

- **Researchers and developers** are invited to access the Open Source Portal and get in contact with the PREFORMA suppliers to contribute code to the open source projects.
- **Memory institutions** are invited to participate to the testing phase by providing datasets, including valid/conform files as well as corrupted files.

### **Keywords:**

Digital preservation  
Data transfer  
Standard file formats  
Conformance tests  
Memory institutions and archives  
Open Source Software  
Pre-Commercial  
Procurement

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### **Forthcoming events:**

Open Source Workshop:  
Stockholm, April 2016

Experience Workshop:  
Berlin, December 2016

Final conference:  
Stockholm, December 2017

[www.preforma-project.eu](http://www.preforma-project.eu)