

The PREFORMA PCP

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WP2 Lead



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Centre of Expertise in Digital Heritage

PREFORMA – SUCCEED workshop
The Hague, 2nd october 2014



- ❑ Pre-Commercial Procurement project co-funded by the European Commission under its FP7-ICT Programme.
- ❑ Start: 1 January 2014
- ❑ Duration: 48 month (end 31 December 2017)



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- ☐ RIKSARKIVET, Sweden (**Coordinator**)
- ☐ PACKED, Belgium
- ☐ PROMOTER, Italy (**Technical Coordinator**)
- ☐ FRAUNHOFER - IDMT, Germany
- ☐ HOGSKOLAN I SKOVDE, Sweden
- ☐ UNIVERSITA DEGLI STUDI DI PADOVA, Italy
- ☐ NEDERLANDS INSTITUUT VOOR BEELD EN GELUID, Netherlands
- ☐ KIK-IRPA, Belgium
- ☐ GREEK FILM CENTRE, Greece
- ☐ LOCAL GOVERNMENT MANAGEMENT AGENCY, Ireland
- ☐ STIFTUNG PREUSSISCHER KULTURBESITZ, Germany
- ☐ AYUNTAMIENTO DE GIRONA, Spain
- ☐ EESTI VABARIIGI KULTUURIMINISTEERIUM, Estonia
- ☐ KUNGLIGA BIBLIOTEKET, Sweden



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PRE-COMMERCIAL PROCUREMENT



- ❑ procuring R&D services
- ❑ competition-like procurement method
- ❑ developing innovative solutions that address specific public sector challenges and needs.
- ❑ phased procurement of development contracts to reduce risk.



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



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☐ 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
- perform 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



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PRESERVATION FORMATS



MXF | MPEG | IMX | XDCAM HD422 |
DPX | DCP | JPEG2000 | MOV |
MPEG2 | AVI | MPEG4 | AVC | PDF 1.4
| PDF/A1 | TIFF 6.0 | JPEG | RAW |
AS-07 | MPEG|AF | PDF | MKV |
FFV1 | OGG | Dirac | PNG | WebM |
VP8 | OGG | Theora | PDF/A2 |
PDF/A3 | LPCM



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Adoption?	AUDIO VISUAL			TEXT	IMAGE
	broadcast	film	Consumer		
PREFORMA stakeholders	MPEG-IMX (MXF/MPEG2) XDCAM HD422 (MXF/MPEG4)	DPX DCP (MXF/JPEG2000)	MOV/MPEG2 AVI/MPEG2 MPEG/MPEG2 MPEG/MPEG4-AVC	PDF 1.4 PDF/A1	TIFF 6.0 JPEG JPEG2000 RAW
Industry standards	AS-07 (MXF/MPEG2) (MXF/JPEG2000) FIMS (MXF/MPEG2)	DCDM (TIFF 6.0) DCP (MXF/JPEG2000) IMF (MXF/MPEG4)	MPEG-AF	PDF	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

uncompressed / lossless?	AUDIO VISUAL			TEXT	IMAGE
	broadcast	film	Consumer		
PREFORMA stakeholders	MPEG-IMX (MXF/MPEG2) XDCAM HD422 (MXF/MPEG4)	DPX DCP (MXF/JPEG2000)	MOV/MPEG2 AVI/MPEG2 MPEG/MPEG2 MPEG/MPEG4-AVC	PDF 1.4 PDF/A1	TIFF 6.0 JPEG JPEG2000 RAW
Industry standards	AS 07 (MXF/MPEG2) (MXF/JPEG2000) FIMS (MXF/MPEG2)	DCDM (TIFF 6.0) DCP (MXF/JPEG2000) IMF (MXF/MPEG4)	MPEG-AF	PDF	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

Open standard?	AUDIO VISUAL			TEXT	IMAGE
	broadcast	film	Consumer		
PREFORMA stakeholders	MPEG-IMX (MXF/MPEG2) XDCAM HD422 (MXF/MPEG4)	DPX DCP (MXF/JPEG2000)	MOV/MPEG2 AVI/MPEG2 MPEG/MPEG2 MPEG/MPEG4 -AVC	PDF 1.4 PDF/A1	TIFF 6.0 JPEG JPEG2000 RAW
Industry standards	AS 07 (MXF/MPEG2) (MXF/JPEG2000) FIMS (MXF/MPEG2)	DCDM (TIFF 6.0) DCP (MXF/JPEG2000) IMF (MXF/MPEG4)	MPEG-AF	PDF	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 (?)

INTEROPERABILITY ISSUES



- ❑ (technically) open $\neq$ (free/libre) open format
- ❑ standard formats $\leftrightarrow$ multiple implementations
- ❑ technically appropriate formats $>$ little support/adoption

- ❑ too often we copy format policies without checking if they are appropriate



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File formats



Content type	Standard specifications
TEXT	ISO 32000-1:2008 (PDF 1.7) ISO 19005-1:2005 (PDF/A-1) ISO 19005-2:2011 (PDF/A-2) ISO 19005-3:2012 (PDF/A-3)
IMAGE	ISO 12234-2:2001 (TIFF/EP) ISO 12369:2004 (TIFF/IT)
MOVING IMAGE	OGG MKV ISO 15444-1 (JPEG2000 core coding system) FFV1 Dirac LPCM



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