INNOVATION WORKSHOP | PREFORMA
Padua, March 7th, 2017
#Preforma

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CTO at Easy Innova

Dr. VÍCTOR MUÑOZ
R&D Manager at Easy Innova

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Project Manager at Easy Innova

Prof. JOSEP LLUÍS de la ROSA
Full Professor at University of Girona

www.easyinnova.com
Are you sure...?
Are you sure...?

TIFF FLEXIBLE FILE FORMAT

- TIFF Revision 3.0
- TIFF Revision 4.0
- TIFF Revision 5.0
- RFC 2301 TIFF-FX
- TIFF Revision 6.0
- TIFF Page Maker
- ISO TIFF
- Geo TIFF
- ISO TIFF-EP
- TIFF Photoshop
- ISO TIFF-IT
- RFC 3949 TIFF-FX
- ISO TIFF-IT ext

Initial Presentation

1. Consortium & People Involved
2. Scope of the Project
3. What is DPF Manager?
4. TIFF Specificacions

Dr. MIQUEL MONTANER
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EASY INNOVA
www.easyinnova.com
Consortium & People Involved

**Easy Innova, S.L. (Spain)**
Spin-off of the University of Girona

- Certified by: TECNIO, AENOR
- Member of: Generalitat de Catalunya, CTN50/SC1 Subcommittee

Know-how:
- R&D Projects
- Platform Architectures
- Digital Preservation
- IPR
- Standards
- Artificial Intelligence
- Open Source Projects

- **Dr. Miquel Montaner**
  - CTO
- **Robert Sallo**
  - R&D Manager
- **Xavi Tarrés**
  - Project Manager
- **Antonio López**
  - Senior Developer
- **Dr. Víctor Muñoz**
  - R&D Manager
- **Prof. Dr. Josep Lluís de la Rosa**
  - Full Professor and Researcher
- **Dr. Albert Trias**
  - R&D Manager
- **Dr. Peter Fornaro**
  - Managing Director

**University of Girona (Spain)**
Agents Research Lab

- Know-how:
  - R&D
  - Open Source
  - Digital Preservation

**University of Basel (Switzerland)**
Digital Humanities Lab

- Know-how:
  - Cultural Heritage
  - Medical Image
  - TIFF
  - Image Formats
  - Digital Preservation

- **Prof. Dr. Lukas Rosenthaler**
  - Full Professor and Researcher
- **Dr. Peter Fornaro**
  - Managing Director
Scope of the Project

Standardization process
TI/A Standard Initiative
Research

DPF Manager
Open source software
Main features

Memory Institutions
TIFF Experts
Developers

Community

Universitat de Girona

PREFORMA
What is DPF Manager?

DPF Manager is the most advanced TIFF conformance checker for digital preservation.
DPF Manager is able to validate all these TIFF specifications:

- TIFF Baseline, Revision 6.0 Final
- Extended TIFF 6.0
- TIFF/IT (ANSI IT8.8–1993)
  - TIFF/IT-P1 (ISO 12639:1998)
  - TIFF/IT-P2 (ISO 12639:2004)
- TIFF/EP (ISO 12234-2)
- Customized specification

None of these specifications is prepared for digital preservation!!

TIFF For Archival Recommendation
The TI/A Standard Initiative
Initial Presentation

TI/A Initiative

1. TI/A Standard initiative
2. Timeline

DPF Manager

Community

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Official standardization process started at the end of 2016

Recommendation of TIFF for Archives already submitted to the ISO TC-171

• Similar to PDF/A the TI/A initiative defines “tags” of TIFF as not recommended, optional and required.
• The recommendation for TIFF in archival environments is precisely specified based on feedback of the expert user community and a large (> 2 M files) survey of „hot“ data.
• The aim of the recommendation is to prevent the need for early migration due to wrong chosen features.
• The recommendation is focused on technical aspects and not on content based archival concepts (e.g. compression).
Collecting feedback from the community

- **Jun 2015**: TI/A Whitepaper published
- **Jul 2015**: Discussion of approach on ICAI’16 Tokyo
- **Sep 2015**: Expert Community has been created
- **Oct 2015**: Pre-draft of TI/A specification released
- **Feb 2016**: Discussion on Archiving'16 Washington
- **Apr 2016**: Start a survey with real TIFF files
- **Jun 2016**: Discussion with Adobe in San José
- **Jul 2016**: Results of the survey with real TIFF files
- **Sep 2016**: 1st official draft of the TI/A specification
- **Oct 2016**: Experts discussion in the TI/A intranet
- **Nov 2016**: Results of the survey with real TIFF files
- **Dec 2016**: Discussion on iPRES’16 Berm
- **Jan 2017**: 2nd official draft of the TI/A specification
- **Feb 2017**: DPF Manager checks TI/A specifications
- **Mar 2017**: Submission of the proposal to ISO TC-171
- **Apr 2017**: TI/A presented to TC-171 meeting Sydney
- **May 2017**: TI/A specification improvement with TC-171 working group and TIFF experts

**We are here**
Initial Presentation

T/A Initiative

DPF Manager

1. DPF Manager Functionalities
2. DPF Manager Technical Features
3. Use Scenarios
4. OAIS Integration
5. DPF Manager current version
6. What’s Next?
7. Open Source Project
8. DPF Manager Website

Community

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DPF Manager Technical Features

- **Multi-platform**
- **Flexible**
- **Modular**
- **Technologies**
  - Maven
  - Java 8
  - Spring
  - Travis CI
  - JavaFX
  - JACPFX
Use Scenarios

1. Standalone
   - Graphic Interface
   - Command line
   - C:\>dpfmanager.exe - files=/archive/*.tiff - config=config.xml -reports_folder=/tmp/reports - fixed_files_folder=/tmp/files

2. Client - Server
   - Client
     - client:\>dpfmanager.exe -server=80.45.32.45 -port=80
   - Server
     - server:\>dpfmanager.exe -mode=server
     - DPF Manager client mode
     - DPF Manager server mode
     - HTTP/S
Use Scenarios

Web application

Browser Client

Server

High availability

Client

Server
OAIS integration

Integration with OAIS

Document lifecycle
Conformance checking at:

- Creation
- Transfer
- Migration
- Digitalization

Reference framework
QA, AIP generation
Open Source Project

Open source licenses

- MPL v2+
- GPL v3+

Projects:
- https://github.com/EasyinnovaSL/DPFManager
- http://dpfmanager.org/
- https://github.com/EasyinnovaSL/DPFManager
- http://preforma-project.eu/dpf-manager.html
VERSION 3.1.2 – Released on February 28th, 2017

Interfaces
- Command line interface
- Graphical user interface
- Client/Server
- Online validator

Implementation checker
- Baseline version 6.0 (Baseline 6.0 and Extended 6.0)
- TIFF/EP
- TIFF/IT (Profile 1 and 2)
- TI/A conformance checker

Policy checker
- Create Policy rules from GUI (with critical, error, warning and info levels)
- Custom standards implementations

Metadata fixer
- Add, edit or remove metadata
- Metadata fixer (Make baseline compliant fix, Autofix metadata incoherencies)

Report
- Human readable (HTML, PDF)
- Machine readable (XML, JSON)
- Achievable data formats (METS, PREMIS, NISO, Dublin Cores)
VERSION 3.1.2 – Released on February 28th, 2017

File inspection analysis
- File structure
- Tags list
- IPTC fields
- EXIF tags
- ICC Profile
- XMP data (including history)
- File identification
- Metadata incoherencies
- Expert mode option

Other features
- Periodical checks
- Wizard to create and save configuration files
- Multi-threading
- Load balancing
- Console and tasks widget
- Logging system
- Show ISO references
- Conformance checkers interoperability
- Maven artifact for easy integration in other projects
- Multi language
What’s Next?

In the next VERSIONS…

https://github.com/EasyinnovaSL/DPFManager/milestones

Implementation checker
• DNG
• TIFF-F (RFC 2306)
• TIFF-FX (RFC 3949)

Policy checker
• New policies to apply

Metadata fixer
• Detect and report file provenance

OAIS integrations
• Archivematica integration.

Reporting
• Global statistical analysis of TIFF checked

Contribute proposing new features
https://github.com/EasyinnovaSL/DPFManager/issues
DPF Manager Website content:

- DPF Manager software (different operating systems)
- Blog
- Documentation
  - User manual
  - Tutorials
  - Reference implementation
- Online validator
- How to contribute
- Developers area
Initial Presentation

TI/A Initiative

DPF Manager

Community

1. Join us!
2. Follow us!
Join us!

Memory Institutions
visit www.dpfmanager.org

DPF Manager
Install now
For Windows, Mac OS X and Linux

TIFF OA MOM
visit www.ti-a.org

Get involved!

Developers
visit http://www.dpfmanager.org/community.html
https://github.com/EasyinnovaSL/DPFManager

New pull request
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Thank you!

“DPF Manager is very easy to install and extremely easy to use”

“The tool is very fast – 80 TIFFs need less than a minute”

“I think in terms of usability this tool has easily won the contest”

“HTML output is very nice and there is also METS and XML”

“Findings of the DPF manager seem to be trustworthy to me, as the TIFF specification can be referenced for each error found.”

“I am tempted to think of the DPF manager as the reference tool for whether a TIFF really is valid or not.

It certainly aims at being the go-to-validator for TIFF-files”
Thanks for your attention!
FEEL FREE TO ASK US

www.easyinnova.com