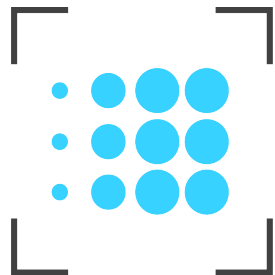# DPFManager

nestor Workshop Formaterkennung
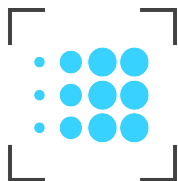
Kiel, 2017-06-29, Marco Klindt

DPF Manager

DPF Manager is the most advanced TIFF conformance checker for digital preservation

We are creating a strong open source community of experts with a common interest: FILE FORMAT VALIDATION for DIGITAL PRESERVATION
We are looking early adopters like you. Join the community now!

DPF Manager

DPFMANAGER FEATURES

Digital preservation needs to go beyond

TIFF structure

Gain full control over the technical properties and structure of TIFF images.

Check ISO compliance

Check ISO compliance of TIFF/EP and TIFF/IT files. Receive errors and warnings regarding ISO compilance.

Policy checker

Define your own acceptance criteria. Validate the TIFF images based on user defined policy rules.

Metadata fixer

Include or remove metadata inside the TIFF files. Work with different metadata containers including EXIF, XMP, IPTC

Digital preservation

Get a report about the suitability of the image for Long Term Preservation.

Report

Get multiple reports in different formats, including HTML, XML, JSON, for different purposes.

Flexible

DPF Manager is suitable for different scenarios. Working as standalone application, client-server or command-line all in a single APP

Multi-platform

DPF Manager is distributed for multiple platforms (Windows, Linux and Mac).

Reference documentation

Select one of the following options to see the specified documentation

TIFF Baseline 6.0	**TIFF Extended 6.0**	**TIFF/EP**	**TI/A Draft 0.1**
TIFF/IT	**TIFF/IT-P1**	**TIFF/IT-P2**	

Search

Baseline TIFF 6.0

TIFF 6.0 Specification. Part 1: Baseline TIFF

Baseline TIFF (Part 1) is the core of TIFF, the essentials that all mainstream TIFF developers should support in their products. Baseline TIFF image is capable of describing bilevel, grayscale, palette-color, and full-color RGB images. Tiff Revision 6.0 Final - June 3, 1992

validation rules for the TIFF IFH

A TIFF file begins with an 8-byte image file header(IFH), containing the following information:

Bytes 0-1: The byte order used within the file. Legal values are: "II" (4949.H) for little-endian and "MM" (4D4D.H) for big-endian.
Bytes 2-3: An arbitrary but carefully chosen number (42) that further identifies the file as aTIFF file.
Bytes 4-7: The offset (in bytes) of the first IFD. The directory may be at any location in the file after the header but must begin on a word boundary.

DPF Manager

CONFORMANCE CHECKER

File ⓘ

	Browse ...

Configuration ⓘ

- ○ Baseline HTML.dpf
- ○ Baseline JSON.dpf
- ○ Baseline PDF.dpf
- ○ Baseline XML.dpf
- ○ Custom config...

Check files

Reports

📅 31/05/2017	📄 BBM_92_6_2.tif	HTML	⬇	🗑

🗑 Clear reports

DPF Manager

MULTIFILE REPORT

1 file processed

0   Conforms to Baseline TIFF 6.0

0 passed
1 failed
Global score 0%

BBM_92_6_2.tif

Conformance checker

Baseline TIFF 6.0   **2 errors**   **0 warnings**

Failed
Score 75%

BBM_92_6_2.tif

/home/dpfmanager/DPF Manager/server/1496227616537/BBM_92_6_2.tif

Size: 542 Kb

⚠ **Baseline TIFF 6.0**
✔ **Extended TIFF 6.0**

	Errors	Warnings
Baseline TIFF 6.0	**2**	0

🏷 IFD Tags

☐ Expert mode

	Tag Id	Tag Name	Value
↔	256	ImageWidth	720
↕	257	ImageLength	480
⠿	258	BitsPerSample	[8,8,8,8]
↗	259	Compression	LZW
⬤	262	PhotometricInterpretation	RGB
📷	271	Make	Canon
📷	272	Model	Canon EOS-1D X
🎞	274	Orientation	TopLeft
⠿	277	SamplesPerPixel	4
↔	282	XResolution	96000/1000
↕	283	YResolution	96000/1000
🏷	284	PlanarConfiguration	Chunky
▤	296	ResolutionUnit	2
▤	305	Software	Adobe Photoshop CS6 (Macintosh)
📅	306	DateTime	2012:12:16 12:08:35
👤	315	Artist	Michael Setzpfandt
©	33432	Copyright	michael@setzpfandt.com?+49-177-935 1355

🔗 File structure

Elements

🖼 **IFD0 - Main image**
  📄 ICC
   Description: Adobe RGB (1998)
   Creator: Adobe Systems, Inc.
   Version: 2.1
   Class: Display

👍 Conformance checker

❌ Baseline TIFF 6.0

☑ Show infos

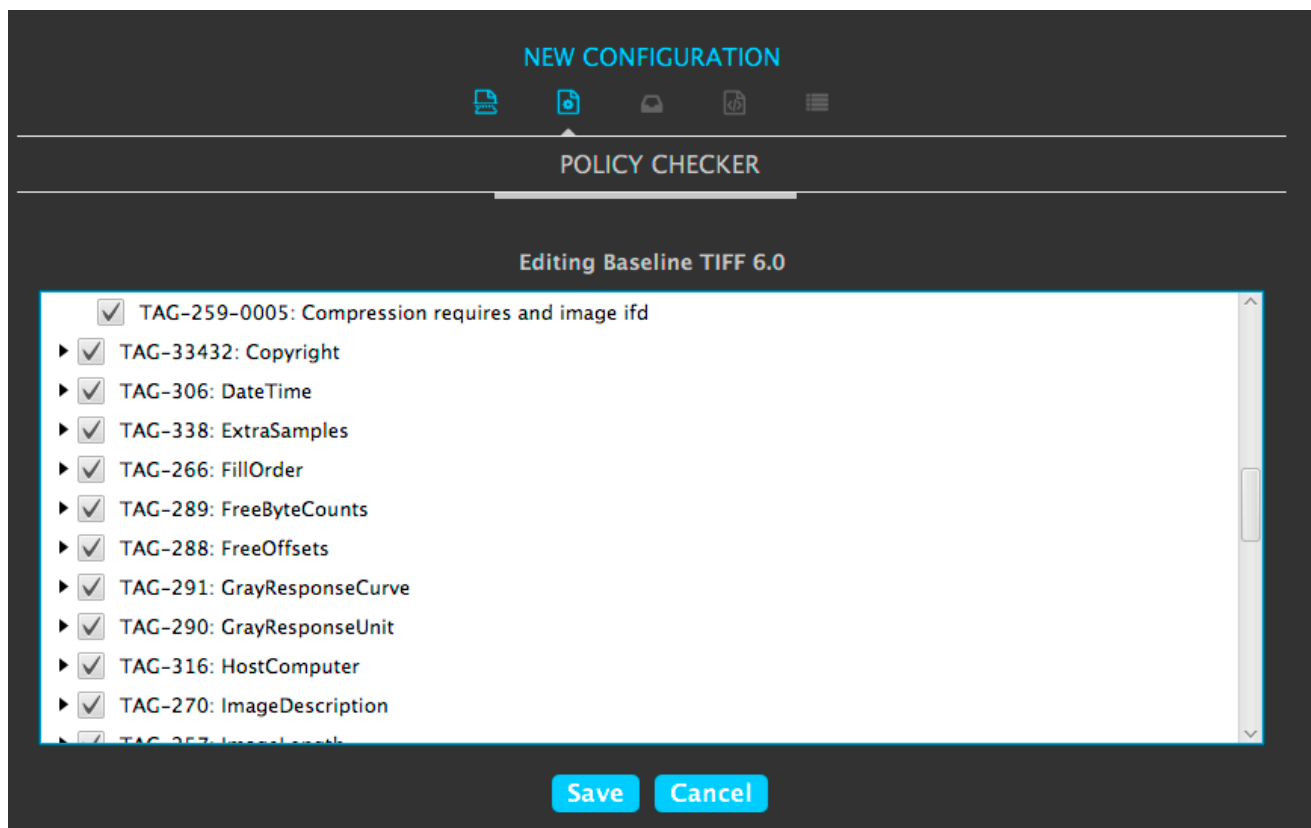| Type	ID	Location	Description
❌	IFDR-0002	IFD1	Invalid Compression for RGB image
❌	TAG-259-0003	IFD1	The Compression tag must have a valid value
ℹ	TAG-315-0002	IFD1	Some older TIFF files used this tag for storing Copyright information.
ℹ	TAG-281-0005	IFD1	MaxSampleValue Tag is not defined. Then 2**(BitsPerSample) - 1 value is assumed
ℹ	TAG-280-0005	IFD1	MinSampleValue Tag is not defined. Then 0 value is assumed

👍 Conformance checker

❌ Baseline TIFF 6.0

☑ Show infos

Valid compression for RGB image

In Baseline TIFF, RGB images can either be stored as uncompressed data or compressed with the PackBits algorithm.

TIFF Baseline 6: Section 6: RGB Full Color Images. Page 23

Type	ID	Location	Description
❌	IFDR-0002	IFD1	Invalid Compression for RGB image
❌	TAG-259-0003	IFD1	The Compression tag must have a valid value
ℹ	TAG-315-0002	IFD1	Some older TIFF files used this tag for storing Copyright information.
ℹ	TAG-281-0005	IFD1	MaxSampleValue Tag is not defined. Then 2**(BitsPerSample) - 1 value is assumed
ℹ	TAG-280-0005	IFD1	MinSampleValue Tag is not defined. Then 0 value is assumed

NEW CONFIGURATION

POLICY CHECKER

Editing Baseline TIFF 6.0

- ☑ TAG-259-0005: Compression requires and image ifd
- ▶ ☑ TAG-33432: Copyright
- ▶ ☑ TAG-306: DateTime
- ▶ ☑ TAG-338: ExtraSamples
- ▶ ☑ TAG-266: FillOrder
- ▶ ☑ TAG-289: FreeByteCounts
- ▶ ☑ TAG-288: FreeOffsets
- ▶ ☑ TAG-291: GrayResponseCurve
- ▶ ☑ TAG-290: GrayResponseUnit
- ▶ ☑ TAG-316: HostComputer
- ▶ ☑ TAG-270: ImageDescription
- ▶ ☑ TAG-257: ImageLength

Save **Cancel**

Time (HH:mm:ss.SSS): 00:00:01.61
Starting check:
/Users/bzfklind/Work/STM_pictures_to_digis_server/IV_88-243_P_2.tif;/Users/bzfklind/Work/STM_pictures_to_digis_server/GDR_64-11,133_2.tif
Generated report into '/Users/bzfklind/DPF Manager/reports/20170531/8/'
Time (HH:mm:ss.SSS): 00:00:18.07
ERROR – Error in input path Select a file
Starting check: Select a file;/Volumes/Data/LZATransfer/GKM/Z-Zeichnungen/Z250.tif
Generated report into '/Users/bzfklind/DPF Manager/reports/20170531/9/'
Time (HH:mm:ss.SSS): 00:02:35.815

Task from command line
/Applications/Max...   00:00:03
HTML

Task from graphical interface
Select a file;/Volu...   00:02:35
HTML

Task from graphical interface
/Users/bzfklind/W...   00:00:23
HTML

```xml
<mets>
[…]<nisoContainer>
<niso:BasicDigitalObjectInformation>
  <niso:fileSize use="System">234</niso:fileSize>
  <niso:FormatDesignation>
  <niso:formatName use="System">
                TIFF/6.0</niso:formatName>
  <niso:formatVersion/>
  </niso:FormatDesignation>
    <niso:FormatRegistry>
    <niso:formatRegistryKey/>
    </niso:FormatRegistry>
    <niso:byteOrder use="System">
            Little endian</niso:byteOrder>
    <niso:Compression>
        <niso:compressionScheme use="System">JPEG
    </niso:compressionScheme>
[…]
<premis:eventOutcomeDetail>
      <implementation_checker TIAProfileChecker="false"
TIFF_Baseline_Core_6_0="false" TIFF_Baseline_Extended_6_0="false"
TIFF_EP="false" TiffITP1ProfileChecker="false"
TiffITP2ProfileChecker="false" TiffITProfileChecker="false" ref="DPF
Manager" totalErrors="2" totalWarnings="5" version="3.2.1“>
[…]
</mets>
```

```
dpf-manager [commands]
```

These are the available commands:
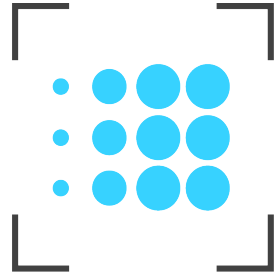- check: Performs a local files check.
- config: Manages the configuration files.
- gui: Launches graphical user interface.
- modules: Manage the conformance checkers.
- periodic: Manage periodical checks.
- remote: Performs remote file checks (client mode).
- server: Launches the server mode.

CMDLine

`dpf-manager [commands]`

These are the available commands:

- **check**: Performs a local files check.

- **config**: Manages the configuration files.

- **gui**: Launches graphical user interface.

- **modules**: Manage the conformance checkers.

- **periodic**: Manage periodical checks.

- **remote**: Performs remote file checks (client mode).

- **server**: Launches the server mode.

DPF Manager

http://dpfmanager.org