



Ghent  
Workgroup

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# Ghent PDF Output Suite 5.0

Four Pees Café, February 3<sup>rd</sup>, 2022

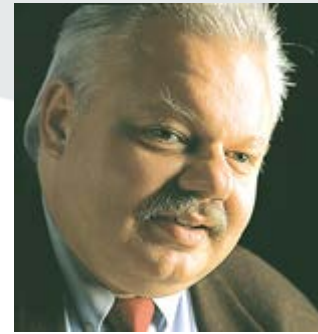
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**Stephan Jaeggi**

Principal PrePress-Consulting, Switzerland  
Co-Chair GWG Process Control Subcommittee

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## About Stephan Jaeggi

- Print and Packaging engineer ESIG-COMEM, Lausanne
- Manager typesetting system, GBC Basel
- Head of technical IT at Swiss Printers Association
- Principal of PrePress-Consulting since 1992
- Technical Expert at ISO TC130/TF2/WG2 since 1998
- Certification Officer at PDFX-ready Switzerl. since 2005
- Co-Chair GWG Process Control Subcom. since 2005
- Technical Officer at GWG from 2006 to 2015
- Blog [www.pdf-aktuell.ch](http://www.pdf-aktuell.ch) (in german and english)

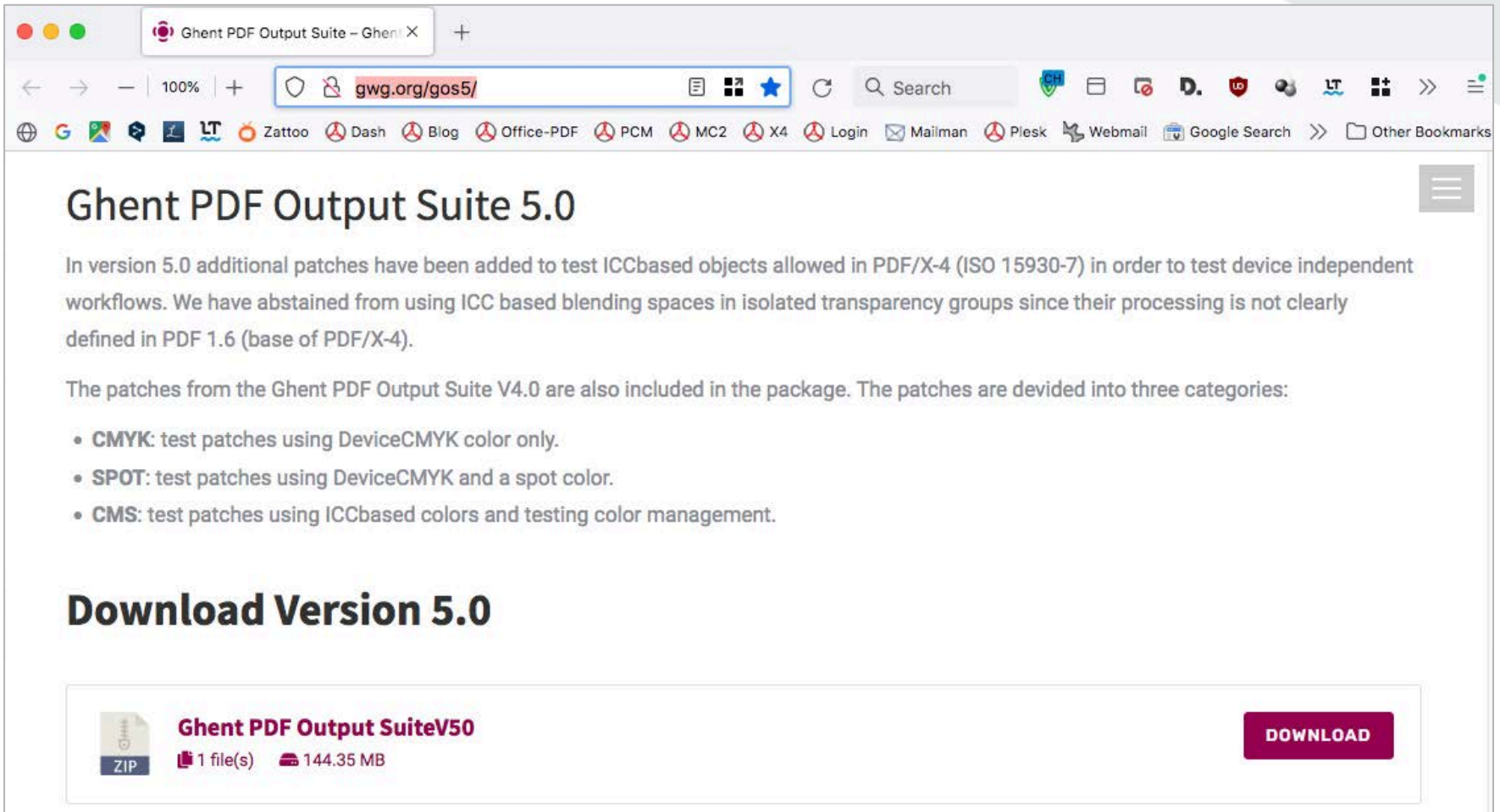
# Agenda

- Goal and target audience for Ghent PDF Output Suites
- Download, Delivery, Documentation
- Evaluation of results
- PDF/X-4 Conformance / Preflight Audit Trail
- Amalgamated test pages – CMYK, SPOT, CMS
- Processing of Ghent PDF Output Suite
- In case of problems
- Compliancy label and instructions for successful output
- Conformance Certification for print service providers (NEW)
- Last advice

# Goal and target audience for Ghent PDF Output Suites

- Goal
  - Test of output workflows (not just RIPs) regarding PDF/X-4 compliancy.
  - Not limited to GWG specifications.
    - Reason: In order to visualize compliancy problems special object properties (eg. overprinting) must be used.
- Target audience
  - Developers of RIPs, output workflows, hard/soft proof, review tools, layout applications, imposition, viewer.
  - End users who want to test their output workflows and adjust their settings.

# Download



Ghent PDF Output Suite – Ghent X

gwg.org/gos5/


## Ghent PDF Output Suite 5.0

In version 5.0 additional patches have been added to test ICCbased objects allowed in PDF/X-4 (ISO 15930-7) in order to test device independent workflows. We have abstained from using ICC based blending spaces in isolated transparency groups since their processing is not clearly defined in PDF 1.6 (base of PDF/X-4).

The patches from the Ghent PDF Output Suite V4.0 are also included in the package. The patches are divided into three categories:

- **CMYK**: test patches using DeviceCMYK color only.
- **SPOT**: test patches using DeviceCMYK and a spot color.
- **CMS**: test patches using ICCbased colors and testing color management.

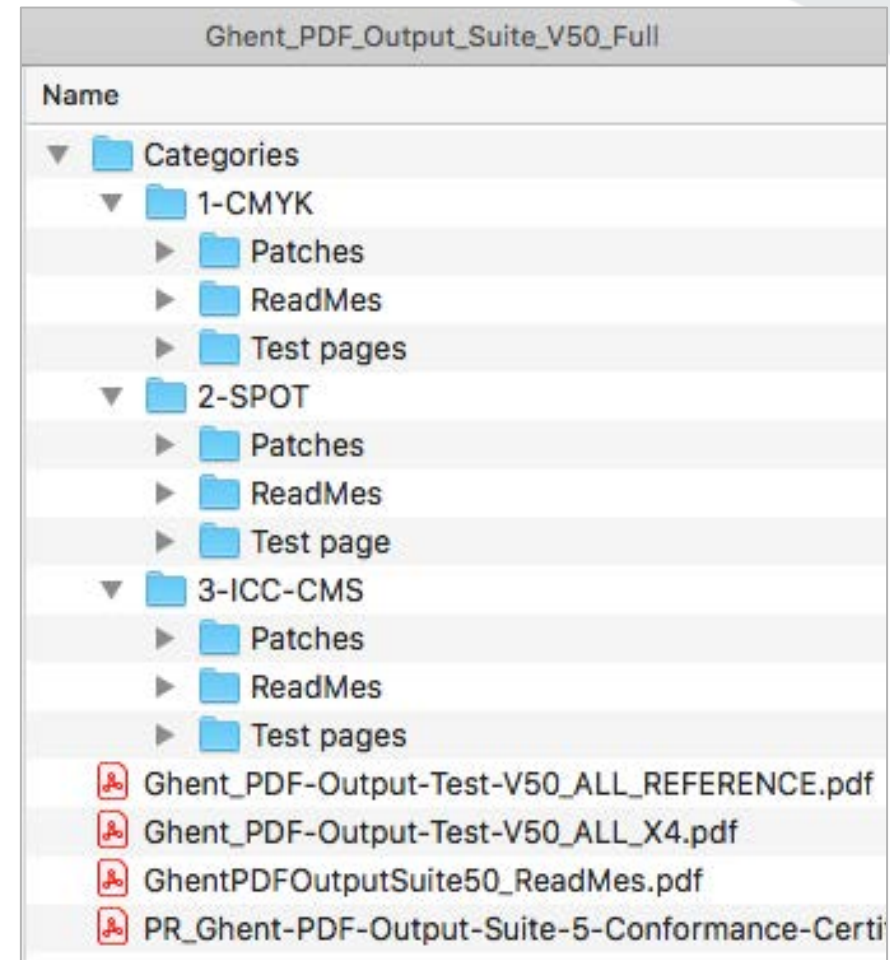
### Download Version 5.0

 **Ghent PDF Output SuiteV50**  
1 file(s) 144.35 MB

DOWNLOAD

# Delivery

- 51 test patches in three categories:
  - CMYK: 27 test patches using DeviceCMYK color only
  - SPOT: 8 test patches using DeviceCMYK and Spot color
  - CMS: 16 test patches using ICCbased colors and testing color management.
- 6 amalgamated test pages
- Reference file
- Documentation





# Amalgamated test pages – CMYK

**Ghent Workgroup Ghent PDF Output Suite 5.0 – CMYK Conformance Level 1**

The pages contain test patches with essential features of PDF/X-4 (ISO 15930-2). Errors are identified either with a cross or by a deviation from the integrated reference.

Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance.

**GWG 6.0 – Use of shadings**

Shading type 1 reference image is shown. The shadings should look like the reference image.

**GWG 1.1 – CMYK Overprint Mode**

Overprint mode is shown. The overprint mode is set to 'on'.

**GWG 16.0 – DeviceN Overprint (Black)**

DeviceN overprint is shown. The overprint mode is set to 'on'.

**GWG 16.2 – DeviceN Overprint (White)**

DeviceN overprint is shown. The overprint mode is set to 'on'.

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**Ghent Workgroup Ghent PDF Output Suite 5.0 – CMYK Conformance Level 1**

Die Seiten enthalten Testpatches mit wesentlichen Merkmalen von PDF/X-4. Fehler sind mit einem Kreuz oder durch eine Abweichung vom integrierten Referenzbild markiert.

Personalisierte Testseiten sind für die Gent PDF Output Suite 5.0 Conformance erforderlich.

**GWG 16.0 – Transparency Basic Blend Modes (DeviceN Blend Modes)**

Transparency basic blend modes are shown. The blend mode is set to 'multiply'.

**GWG 16.1 – Transparency Basic Blend Modes (DeviceN Blend Modes)**

Transparency basic blend modes are shown. The blend mode is set to 'multiply'.

**GWG 16.2 – Transparency Basic Blend Modes (DeviceN Blend Modes)**

Transparency basic blend modes are shown. The blend mode is set to 'multiply'.

**GWG 16.3 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.4 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.5 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.6 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.7 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.8 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.9 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.10 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

**GWG 16.11 – Vector Software**

Vector software is shown. The vector software is set to 'on'.

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**Ghent Workgroup Ghent PDF Output Suite 5.0 – CMYK Conformance Level 1**

Les pages contiennent des patches de test comprenant des fonctionnalités essentielles de PDF/X-4 (ISO 15930-2). Les erreurs sont identifiées soit par une croix, soit selon une déviation par rapport aux images de référence.

Des pages de test personnalisées sont requises pour la certification de conformité de Ghent PDF Output Suite 5.0 !!!

**GWG 9.0 – Font Support**

Font support is shown. The font support is set to 'on'.

**GWG 9.1 – OpenType Font Support**

OpenType font support is shown. The OpenType font support is set to 'on'.

**GWG 5.1 – Font subset and substitution**

Font subset and substitution is shown. The font subset and substitution is set to 'on'.

**GWG 5.2 – Font subset and substitution**

Font subset and substitution is shown. The font subset and substitution is set to 'on'.

**GWG 5.3 – Font Substitution**

Font substitution is shown. The font substitution is set to 'on'.

**GWG 16.1 – 16Bit Image (DeviceCMYK)**

16Bit image is shown. The 16Bit image is set to 'on'.

**GWG 17.0 – JPEG2000 compression (DeviceCMYK)**


JPEG2000 compression is shown. The JPEG2000 compression is set to 'on'.

**GWG 17.1 – JPEG2000 compression (DeviceCMYK)**

JPEG2000 compression is shown. The JPEG2000 compression is set to 'on'.

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# Amalgamated test pages – SPOT + ICC/CMS

 **Ghent PDF Output Suite 5.0 – SPOT**  
Conformance Level 1

De pagina's bevatten test patches met essentiële PDF/X-4 (ISO 15930-7) fouten worden aangeduid met ofwel een kruis of door een afwijking met het peilstege. Gepersonaliseerde testpagina's zijn vereist voor Ghent PDF Output Suite 5.0 Conformance Level 1.

**GWG 3.0 – Spot to CMYK Overlay**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 1.

**GWG 4.1 – White Overlay**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 1.


**GWG 5.0 – Gray Overlay Patch**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 1.

**GWG 6.1 – White Overlay**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 1.

**GWG 7.1 – Gray Image Overlay (CMYK over Spot)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 1.

**GWG 8.1 – DeviceN Support (5 colors)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 1.

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 **Ghent PDF Output Suite 5.0 – ICC/CMS**  
Conformance Level 2

Las páginas contienen parches de prueba con características esenciales de PDF/X-4. Los errores se identifican con una cruz o con una desviación de las imágenes de referencia. Las páginas de prueba personalizadas son necesarias para la certificación de conformidad de Ghent PDF Output Suite 5.0.

**GWG 2.0 – 4 different Grays**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 3.0 – ICC based CMYK Overlay**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 4.2 – White Overlay**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 5.1 – Transparency Black Blend Modes (CC-based/RGB)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 6.2 – Image Softmask (CC-based/RGB)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.


**GWG 7.2 – ICC based CMYK Overlay**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 8.2 – ICC based CMYK Overlay**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 9.0 – Color Conversion Indicator**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 10.0 – Outfitment Change Indicator**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

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 **Ghent PDF Output Suite 5.0 – ICC/CMS**  
Conformance Level 2

Le pagine contengono patch di prova con caratteristiche essenziali di PDF/X-4 (ISO 15930-7). Gli errori sono identificati da una croce o da una deviazione dalle immagini di riferimento integrate. Le pagine di prova personalizzate sono necessarie per la certificazione di conformità di Ghent PDF Output Suite 5.0!!!

**GWG 10.1 – 16Bit Image (DeviceGray)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 10.2 – 16Bit Image (CC-based/Gray)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 10.3 – 16Bit Image (CC-based/CMYK)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 10.4 – 16Bit Image (CC-based/RGB)**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 10.5 – CMYK image with ICC V4 profile**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 10.6 – RGB image with ICC V4 profile**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

**GWG 21.0 – Color Conversion Indicator**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

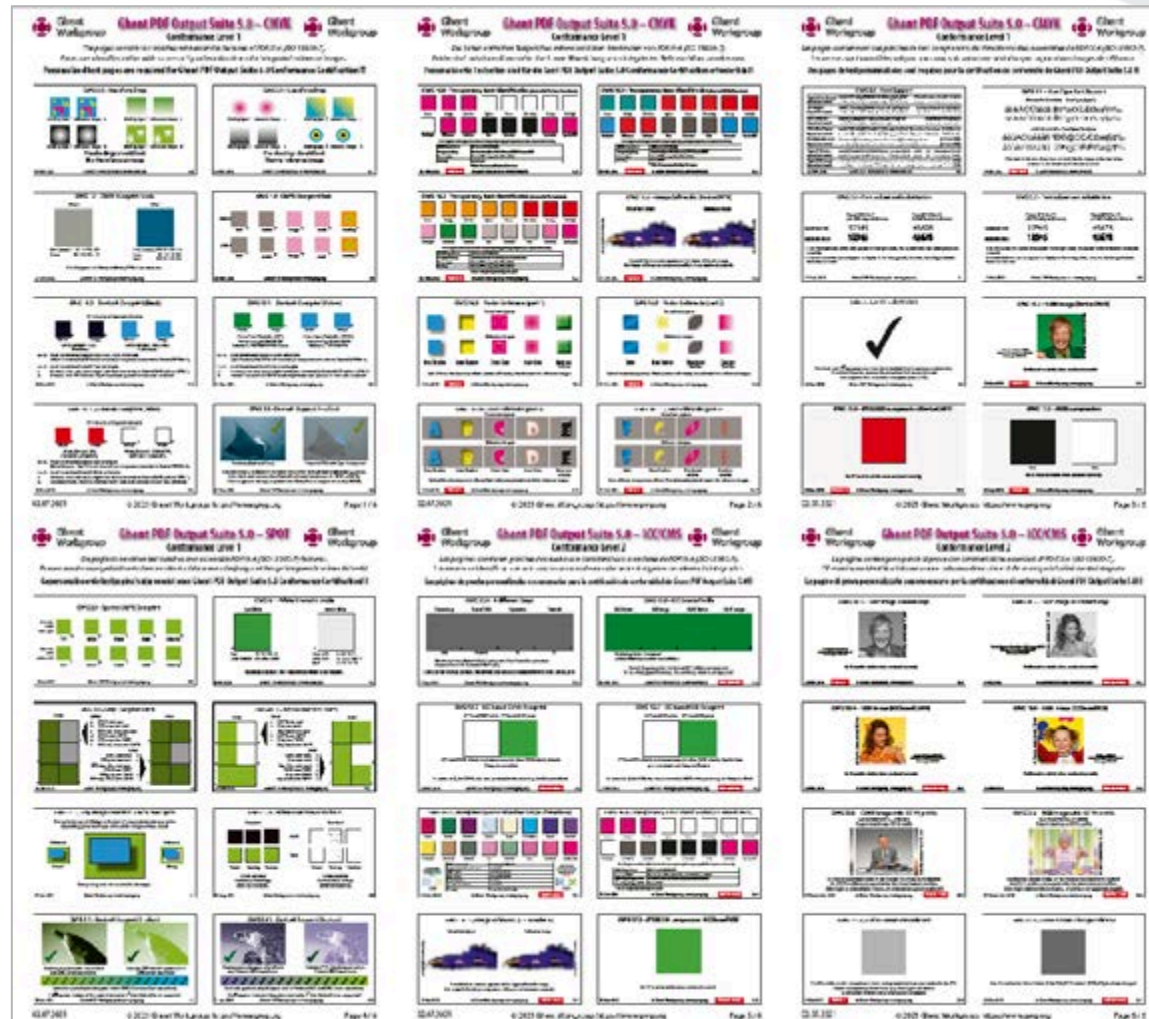
**GWG 21.1 – Outfitment Change Indicator**  
This page contains test patches with essential PDF/X-4 (ISO 15930-7) errors. The errors are identified by a cross or a deviation from the reference image. Personalized test pages are required for Ghent PDF Output Suite 5.0 Conformance Level 2.

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# Reference file



Texts are in Register color (All) => visible in all separations.

# Documentation

- General ReadMeFirst



## Ghent PDF Output Suite 5.0

### Introduction

The Ghent PDF Output Suite was created for users who process PDF files in the graphic arts industry, as an aid to determine whether their workflows are behaving conforming the PDF/X standards. These patches can be used by end users of graphic arts equipment as well as developers of applications that handle PDF files.

The suite consists of a series of PDF patches. Each patch tests a specific property of a PDF/X file. The patches can be used on their own but the intention of the suite is that the patches are grouped together (as PDF pages would normally be grouped together within a workflow). It is likely that application settings and RIP settings can have a significant effect on the results.

All the issues tested by these patches are real world issues that can be found in a production environment; however, these patches do not reflect normal production files and the results may in some cases appear extreme. They have been carefully constructed to allow effects that are normally subtle to be seen clearly and unambiguously and this should be taken into account when evaluating the results of any tests based on these patches. On a technical note, all patches conform to either the PDF/X-1a, PDF/X-3 or PDF/X-4 ISO standard but they do not always conform to the Ghent Workgroup PDF/X-Plus specifications.

It is likely that this suite will be updated, new patches will be added, and existing patches will be revised. For this reason the documentation for each individual patch is distributed along with the patch. It is advised to check regularly for updates to the suite on the Ghent Workgroup website at <http://www.gwg.org>.

### Version 5.0 Release Notes

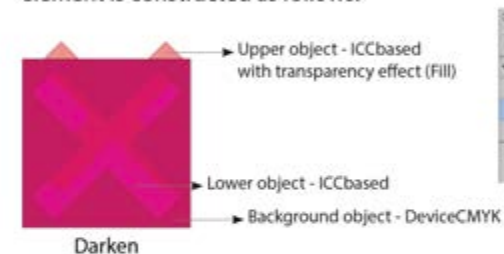
In addition to the patches from version 4.0 in version 5.0 additional patches have been added to test ICCbased objects allowed in PDF/X-4 (ISO 15930-7) in order to test device independent workflows. We have abstained from using ICC based blending spaces in isolated transparency groups since their processing is not clearly defined in PDF 1.6 (base of PDF/X-4).

- ReadMe for each patch

## Patch 16.1, 16.4 – Transparency Basic Blend Modes (ICCbased)

### Intent

The intent of the patch is to check for correct rendering of Transparency Basic Blend Modes (Multiply, Screen, Overlay, etc.) for ICCbased objects. Each test patch element is constructed as follows:



### Testing guidelines

This patch can be used in two ways:

- A single patch may be used to test a specific step in a workflow, such as a RIP.
- Patches may be grouped with other patches to test the whole of a workflow that will aggregate multiple files together, e.g. for partial page advertisements in a magazine.

### Method of evaluation

#### Method 1

A clear X indicates the improper handling of a file.

## Evaluation of results

- We have tried hard to make the evaluation of the test results as easy and unambiguous as possible.
- Hint: you will not need a loupe to evaluate the results.
- Evaluation is possible with a viewing distance of 0.5 m.



# Graphic indicators

- Check marks to indicate correct rendering

GWG 8.1 - DeviceN Support (5 colors)



Duotone (should appear only in Black and GWG Green separations)



Spot color gradient (should appear only in GWG Green and Cyan separations)


If a **X** appears instead of the green checkmarks

20 Jan 2013      Ghent PDF Workgroup © www.gwg.org

GWG 8.1 - DeviceN Support (5 colors)



Duotone (should appear only in Black and GWG Green separations)



Colorized TIFF (should appear only in GWG Green separation)



Spot color gradient (should appear only in GWG Green and Cyan separations)

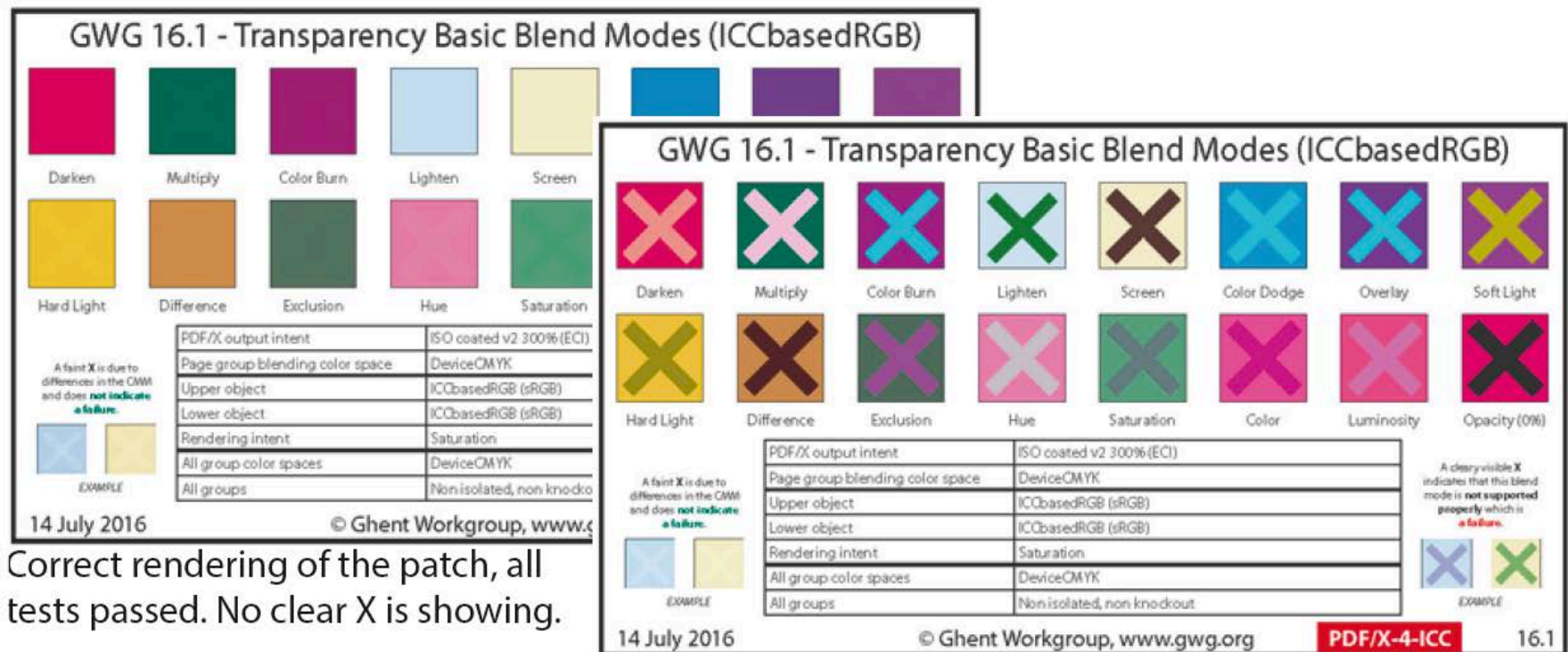
If a **X** appears instead of the green checkmarks ✓ then DeviceN is not supported!

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# Graphic indicators

- **Crosses** to indicate incorrect rendering



Correct rendering of the patch, all tests passed. No clear X is showing.

Incorrect rendering of the patch, all tests have failed. Each X indicates an incorrectly rendered test.



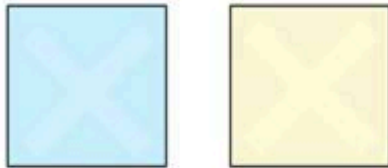
# Faint X does not indicate a failure!

## ATTENTION!

When rendering this patch, please take the following considerations into account:

- A faint X is due to differences in the CMM and does **not indicate a failure**.

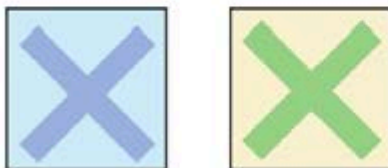
*Example:*



EXAMPLE

- A clearly visible X indicates that this blend mode is **not supported properly** which is **a failure**.

*Example:*



EXAMPLE

The same markers were added to the test files to indicate the caution.

# Reference images

## GWG 9.0 - Font Support

<b>Type1 PostScript:</b>	äöüÄÖÜäääfiſl©®@ÐŒÆØæfÿ†%p½ð	(NewCenturySchlbk Italic)
Expected result:	äöüÄÖÜäääfiſl©®@ÐŒÆØæfÿ†%p½ð	(NewCenturySchlbk Italic)
<b>TrueType:</b>	ä ö ü Ä Ö Ü ä ä ä fi ſ l © ® @ Ð Œ Æ Ø æ f ÿ † % p ½ ð B o o k A n t i q u a - B o l d I t	
Expected result:	äöüÄÖÜäääfiſl©®@ÐŒÆØæfÿ†%p½ð	(BookAntiqua-BoldItalic)
<b>CID (Type1):</b>	äöüÄÖÜäääfiſl©®@ÐŒÆØæfÿ†%p½ð	(WarnockPro-BoldIt)
Expected result:	äöüÄÖÜäääfiſl©®@ÐŒÆØæfÿ†%p½ð	(WarnockPro-BoldIt)
<b>CID (TrueType):</b>	fl @ ſ i E T H a > l Œ Æ Ø æ f o L †	
Expected result:	äöüÄÖÜäääfiſl©®@ÐŒÆØæfÿ†%p½ð	(PalatinoLinotype BoldItalic)
<b>Multiple Master:</b>	dit is een multiple master ex ponto mon	
Expected result:	dit is een multiple master ex ponto mon	
<b>Type 3 Vector:</b>	⌘ ⌘ ⌘ ~ ⌘ ⌘ Æ	
Expected result:	äöüÄÖÜäääfiſl©®@ŒÆØæ	
<b>Type 3 Bitmap:</b>	null fällt ein negativer Zahlu	
Expected result:	null fällt ein negativer Zahlu	

03 Nov 2005

Ghent PDF Workgroup

## GWG 16.6 – Image Softmasks (DeviceCMYK)

Actual test object

Reference Image



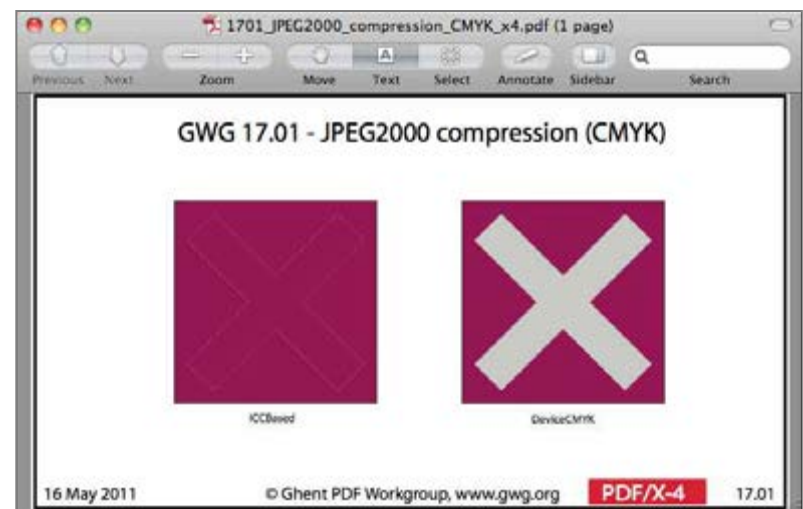
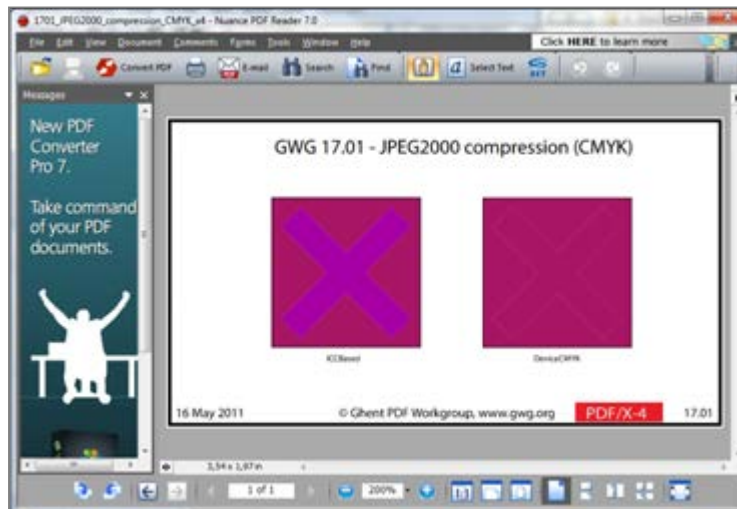
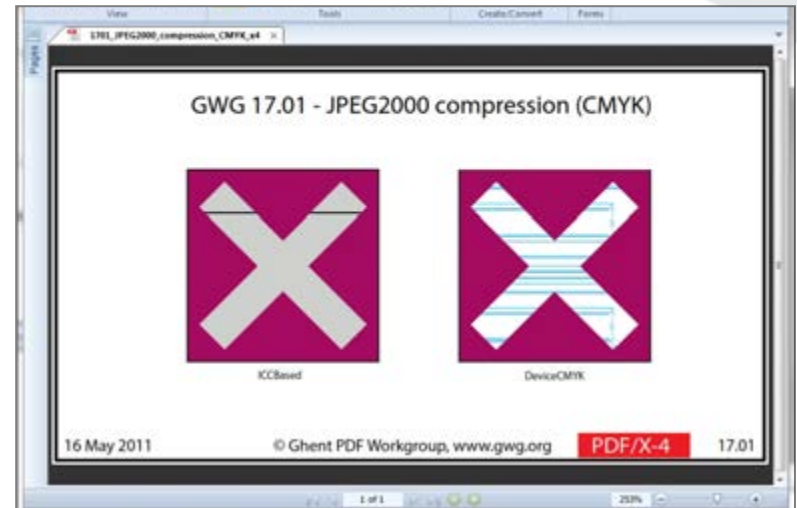
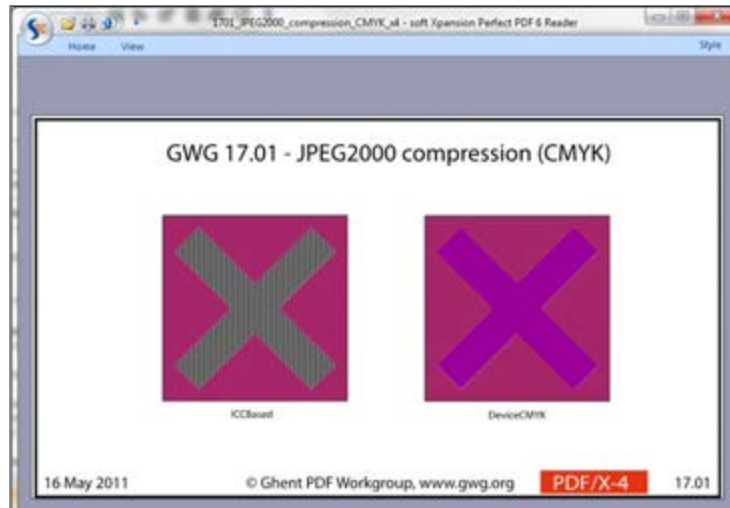
If a solid black contour appears at the edges of the left image, the Image Softmask (a transparency effect) is not rendered correctly.

## 16-bit image (GWG 18.x)

- 8-bit image (with X-mask) on top of 16-bit image



# Different artifacts





# Font Substitution (GWG 5.0)

## GWG 5.0 - Font Substitution



If a check mark ✓ appears above, then the embedded font  
If an other character appears, the embedded font  
with a Symbol font installed in the system (h

16 Nov 2005

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## GWG 5.0 - Font Substitution



If a check mark ✓ appears above, then the embedded font is used (correct behavior).  
If an other character appears, the embedded font was substituted  
with a Symbol font installed in the system (host or RIP).

16 Nov 2005

Ghent PDF Workgroup © [www.gwg.org](http://www.gwg.org)

5.0

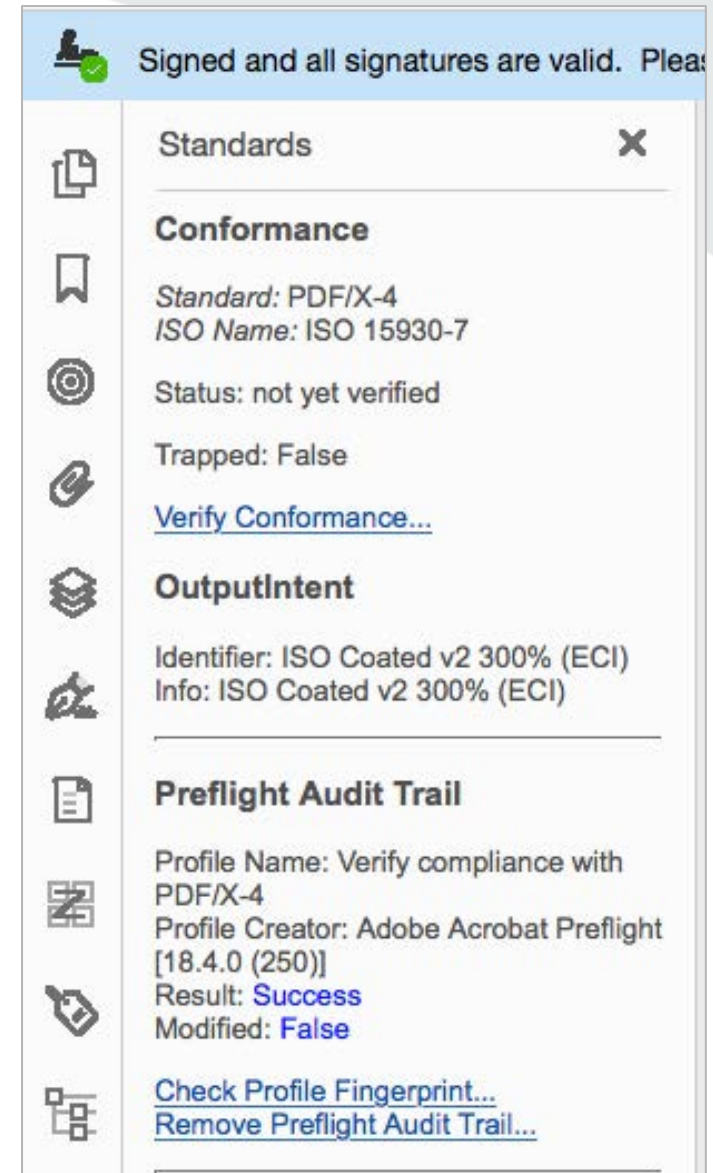


## Labels

- **PDF/X-4** indicates that this patch uses PDF/X-4 features.
- **PDF/X-4-ICC** indicates that this patch uses ICC based colors which must be color converted for the output.
- No label for older patches (PDF/X-1a, PDF/X-3).

# PDF/X-4 Conformance / Preflight Audit Trail

- All patches and test pages are PDF/X compliant
- PDFs are checked with
  - Acrobat DC Preflight
  - Callas pdfToolbox
  - Enfocus PitStop
- The test pages contain a Preflight Audit Trail (a GWG specification!)



# Processing of Ghent PDF Output Suite

- Use single patches or combination of patches (e.g. amalgamated test pages)
- Process patches and test pages like regular PDF/X-4 print jobs (e.g. supplied by customer)
  - imposed to a sheet for offset printing
  - printed as single or double pages in digital printing
  - placed like ads on a page




## In case of problems

- Use a setting for PDF/X files (if provided by your vendor)
- Try changing the settings of your workflow
  - Deactivate settings which change Overprint behaviour <sup>\*</sup> (white = knockout; black = overprint)
  - Color management settings
    - Do not delete ICC profiles
    - Use embedded ICC profiles
    - Do not convert spot colors to CMYK
    - Use Output Intent of the PDF
  - Deactive the use of system fonts, font caching

<sup>\*</sup> PDF standards require honoring the overprint settings defined in the PDF

# Ghent Output PDF Suite 5.0 Compliancy label and instructions for successful output



 <p>Compliant product: <u>AGFA Apogee Prepress</u></p> <p>AGFA Apogee Prepress 9.2</p> <p>AGFA Apogee Prepress 10</p>	 <p>Compliant product: <u>callas pdfToolbox</u></p> <p>callas pdfToolbox</p>	 <p>Compliant product: <u>Canon PRISMAsync print server</u></p> <p>Canon PRISMAsync Print Server</p>	 <p>Compliant product: <u>DALIM ES and DALIM TWIST</u></p> <p>DALIM ES</p> <p>DALIM TWIST</p>	 <p>Compliant product: <u>EFI Fiery digital front ends</u></p> <p>EFI Fiery XF and Fiery proServer (Sign &amp; Display) – US</p> <p>EFI Fiery FS100 to FS400 Pro servers (Cutsheet) – US</p>	 <p>Compliant product: <u>PageProof</u></p> <p>No special settings required to correctly display the Ghent Output Suite 5.0 pages in PageProof</p>
 <p>Compliant product: <u>Enfocus Switch PDF Review Module</u></p> <p>No special settings required to correctly display the Ghent Output Suite 5.0 pages in Enfocus Switch PDF Review Module</p>	 <p>Compliant product: <u>ESKO Software Platform</u></p> <p><u>Esko ArtPro+ 18.1</u></p> <p><u>Esko Share &amp; Approve</u></p> <p>ESKO Software Platform</p> <p>No special settings required to correctly</p>	 <p>Compliant product: <u>Harlequin® MultiRIP™</u></p> <p><u>Harlequin® Host Renderer SDK™</u></p> <p>Harlequin® RIPs</p>	 <p>Compliant product: <u>HYBRID Cloudflow</u></p> <p><u>HYBRID Proofscope</u></p> <p>Hybrid Cloudflow</p> <p>Hybrid Proofscope</p>	 <p>Compliant product: <u>Kodak Prinergy Workflow</u></p> <p>KODAK PrinergyWorkflow</p>	 <p>Compliant product: <u>ColorGATE Productionserver 10</u></p> <p>ColorGATE Productionserver 10</p>



## Ghent PDF Output Suite 5.0 Conformance Certification (NEW)

- GWG members can offer Conformance Certification to their members, customers, community, ...
- GWG Admin provides test files, guidelines, validation, labels and certificates
- Requirement: personalized test files must be used for the conformance test
- Goal: print service providers can prove that their PDF output workflow is compliant with the PDF/X-4 standard (ISO 15930-7:2010)

# Conformane Certification procedure



Candidate	GWG Member	GWG Admin
Request for certification →		
	← Send personalized PDF, questionnaire + guideline	
Process personalized PDF →		
	← Check of result	
	Send (successful) result →	
		Validation of result
		← Create certificate + label
	← Send certificate + label	
Use label on their website		Publish name etc. on gwg.org

## Test by the Candidates

- Output of the personalized Ghent PDF Output Suite 5.0 test file by the candidate
- Send picture of the printed pages to the GWG member

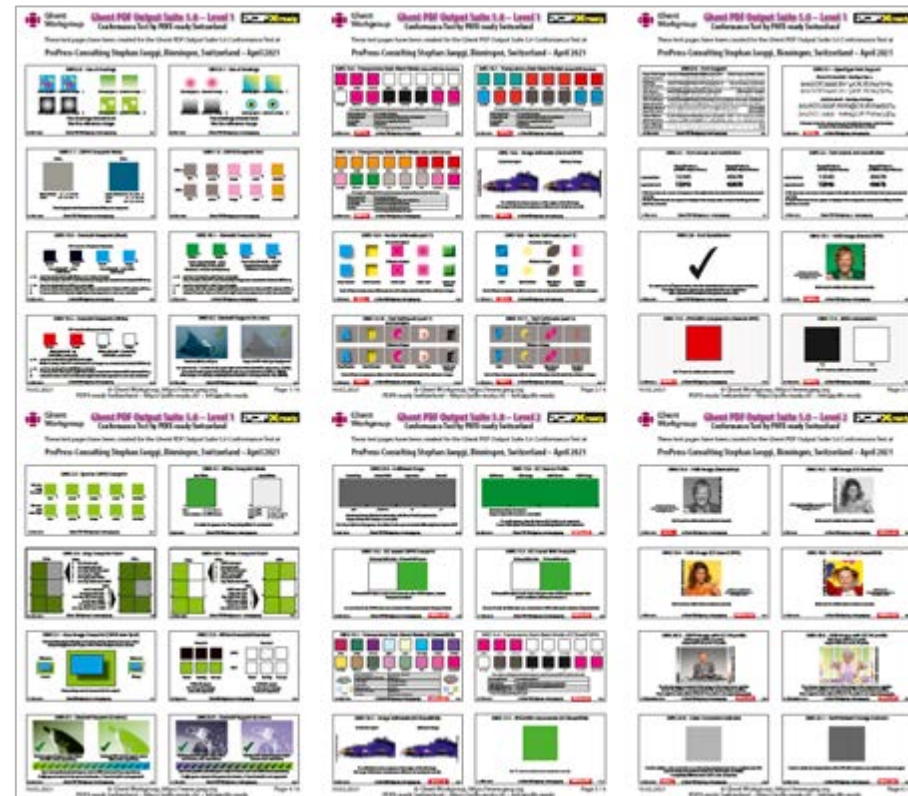


# Guideline for Candidates (14 pages)

1	Introduction .....	3
1.1	About the Ghent Workgroup (GWG) .....	3
1.2	About the Ghent PDF Output Suite (GOS) .....	3
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5.2	Instructions for successful processing of Ghent PDF Output Suite 5.0 .....	8
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# Ghent PDF Output Suite 5.0 Conformance Certification

- The pages of the Ghent PDF Output Suite 5.0 are grouped into two conformance levels:
  - Level 1:** pages 1-4  
with CMYK and Spot colors
  - Level 1+2:** pages 1-4  
with CMYK and Spot colors  
AND pages 5-6  
with ICC based colors



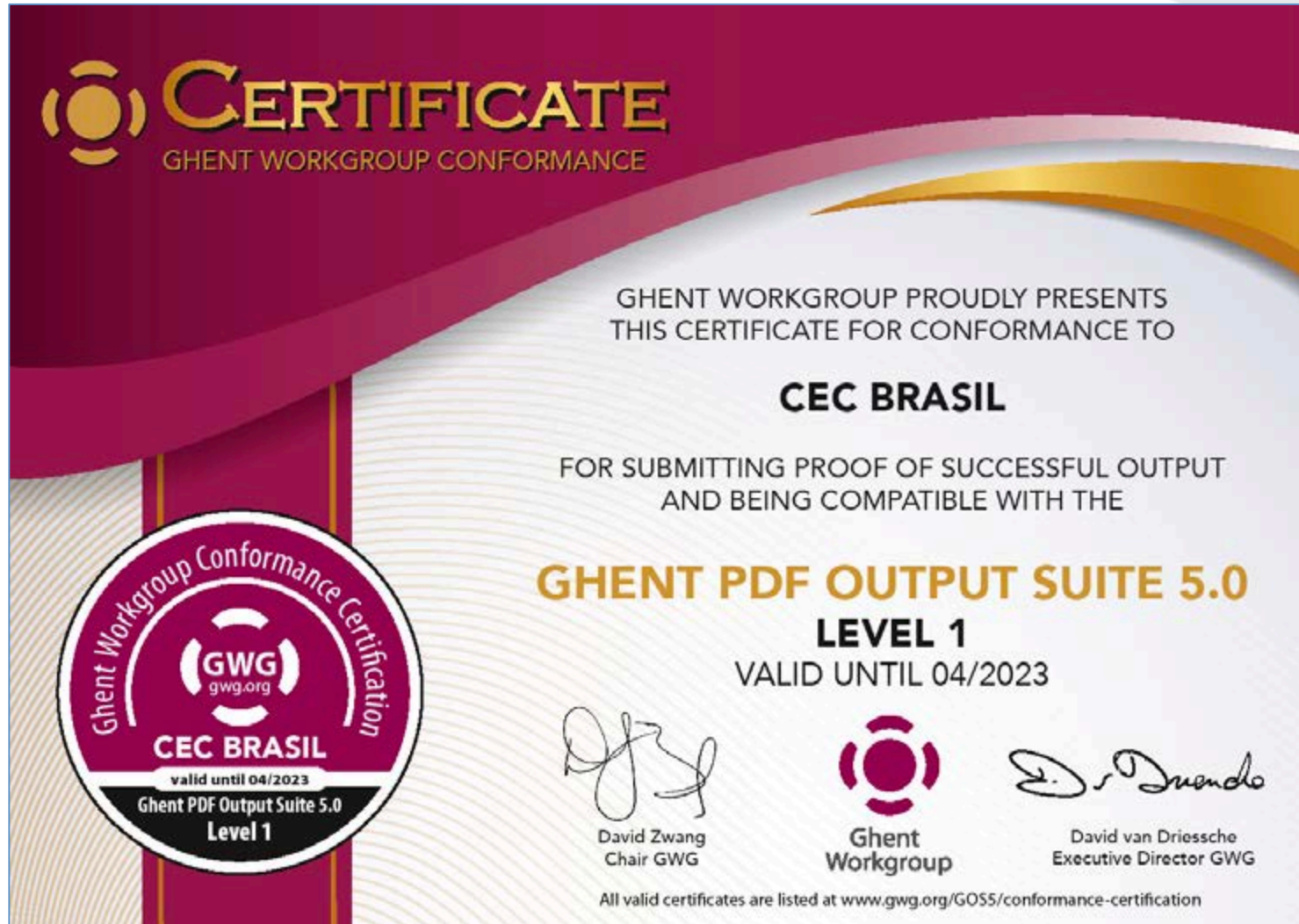


# Labels



The certificates are valid for 2 years. They must be renewed after that.

# Certificate





# Certified companies are listed on gwg.org

## Companies that passed the conformance test

Print Excel CSV Copy

Show 10 entries

Search:

Company ^	City ^	Country ^	Workflow/DFE/RIP ^	CTP/Printing device ^	Conformance ^	Valid until ^	GWG member ^
Alfagraphics EU	Cali Valle del Cauca	Colombia	Kodak Prinergy	Kodak Trendsetter	Level 1+2	03/05/2023	CEC LATAM
Bpack S.A.S.	Armenia	Colombia	Esko SmartStream Designer Labels and Pack	HP Indigo 6900	Level 1	03/05/2023	CEC LATAM
CEC Brasil	São Paulo	Brasil	EFI XF	Epson 7900	Level 1+2	03/05/2023	CEC LATAM
Gamut - Gestión de Procesos	Córdoba	Argentina	Kodak Prinergy	Canon imagePROGRAF	Level 1+2	03/05/2023	CEC LATAM
Graficas Mundia SAS	Bogota	Colombia	EFI Fiery 7	Epson P6000	Level 1	03/05/2023	CEC LATAM
MM Packaging Columbia S.A.S	Yumbo	Colombia	Esko Automation Engine PILOT	Epson P7000	Level 1	03/05/2023	CEC LATAM
Multipresos S.A.S	Medellin-Sabaneta	Colombia	Agfa Apogee 10	Epson Sure Color P6000	Level 1+2	03/05/2023	CEC LATAM
Polybol S.A.S	Cartagena	Colombia	Kodak Prinergy WorkShop	EPSON Stylus Pro 7900	Level 1+2	03/05/2023	CEC LATAM
Smart Graphics Solutions Inc.	Panama	Panama	Heidelberg Printect Metadimension		Level 1	03/05/2023	CEC LATAM

Showing 1 to 9 of 9 entries

The certificates are valid for two years.

# Web page

## CONFORMANCE CERTIFICATION

### Ghent PDF Output Suite 5.0 Conformance Certification

*The Ghent Workgroup is offering a new service called Ghent PDF Output Suite 5.0 Conformance Certification. Print service providers can prove that their PDF output workflow is compliant with the PDF/X-4 standard (ISO 15930-7:2010).*

The well-known **Ghent PDF Output Suite** is used which was developed to help testing PDF/X-4 compliancy of PDF output workflows. The Ghent PDF Output Suite 5.0 consists of several dozen patches each testing a specific aspect of the PDF/X-4 standard. The GWG has put together a great number of these patches into six amalgamated test pages:



## Participating GWG members

- The following GWG member indicated interest to offer the GOS5 Conformance Certification program
  - ARTOPTION (Germany)
  - CAPT (China)
  - CEC LATAM (Latin America)
  - EFI (International)
  - Four Pees (International)
  - Future Schoolz (India)
  - Government Institute of Printing Technology, Mumbai (India)
  - UiTM (Malaysia)
  - University of Ljubljana (Slovenia)
  - VIGC (Belgium)



# Ghent PDF Output Suite Certification course @ FourPees



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## Ghent PDF Output Suite

Certification course

## Last advice

- The Ghent PDF Output Suite files are regular PDF/X files which do not contain objects which cannot be part of any other PDF/X file in daily production.
- If you have found the appropriate settings for processing the Ghent PDF Output Suite files correctly then you should use these settings for ALL of your PDF/X-4 files!!!
- You need different workflow settings for PDF/X files and non-PDF/X files.

# Thank you!

Questions: [sjaeggi@prepress.ch](mailto:sjaeggi@prepress.ch)



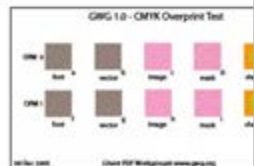
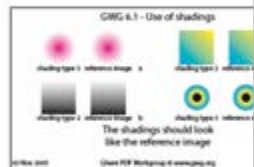
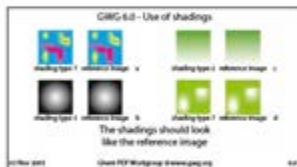
Ghent  
Workgroup

[www.gwg.org](http://www.gwg.org)

# Import into Adobe InDesign CC 2017

## Ghent PDF Output Suite 5.0 – CMYK

These test pages should be processed like regular PDF/X-4 print jobs. The pages contain test patches with essential PDF/X features. Errors are identified either with a cross or by a deviation from the integrated reference images. This page only has CMYK and Spot. It does not contain any ICCbased elements.

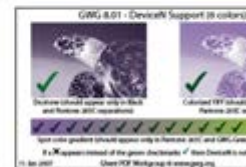
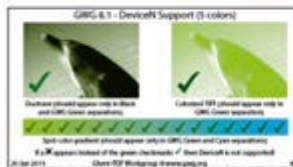
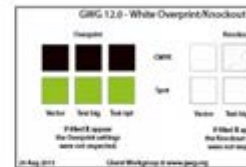
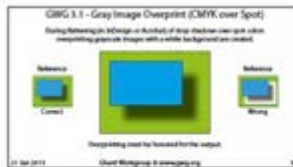
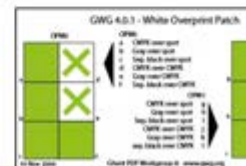
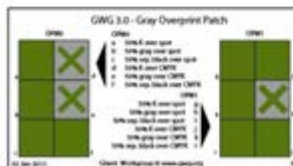
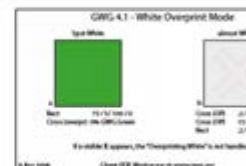


Errors are clearly visible from a viewing distance of 0.5 m / 20 inches. Faint or outlined X are not a problem.

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## Ghent PDF Output Suite 5.0 – SPOT

Deze testpagina's moeten verwerkt worden als gewone PDF/X-4 print jobs. De pagina's bevatten test patches met essentiële PDF/X-4 features. Fouten worden aangeduid met ofwel een kruis of door een afwijkend geïntegreerd referentiebeeld. Alle test patches zijn CMYK en bevatten geen ICC gebaseerde elementen.

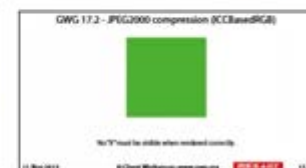
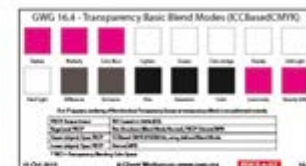
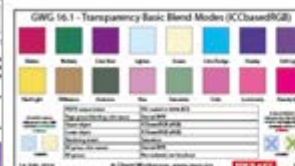
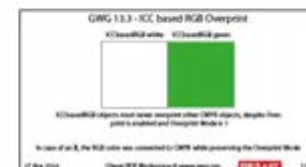
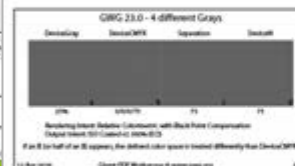


Fouten zijn duidelijk zichtbaar vanaf een kijkafstand van 0.5 m. Vage X of contour zijn geen probleem.

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## Ghent PDF Output Suite 5.0 – CMS

These test pages should be processed like regular PDF/X-4 print jobs. The pages contain test patches with essential PDF/X features. Errors are identified either with a cross or by a deviation from the integrated reference images. This page does contain ICCbased elements.



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Overprint settings not honored.



# Import into QuarkXPress 2017

## Ghent PDF Output Suite 5.0 – SPOT

Deze testpagina's moeten verwerkt worden als gewone PDF/X-4 print jobs. De pagina's bevatten test patches met essentiële PDF/X-4 features. Fouten worden aangeduid met ofwel een kruis of door een afwijking met het geïntegreerde referentiebeeld. Alle test patches zijn CMYK en bevatten geen ICC gebaseerde elementen.

**GWG 3.0 - Spot to CMYK Overprint**

11 Jan 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 5.0

**GWG 4.0 - White Overprint Mode**

12 Apr 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 5.0

**GWG 3.0 - Gray Overprint Patch**

12 Jan 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 5.0

**GWG 4.0.1 - White Overprint Patch**

16 Nov 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 5.0

**GWG 3.1 - Gray Image Overprint (CMYK over Spot)**

12 Jan 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 5.0

**GWG 12.0 - White Overprint/ knockout**

16 Aug 2015 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 12.0

**GWG 6.1 - DeviceN Support (3 colors)**

16 Jan 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 6.0

**GWG 6.01 - DeviceN Support (6 colors)**

16 Jan 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 6.0

Fouten zijn duidelijk zichtbaar vanop een kijkafstand van 0.5 m. Vage X of contour zijn geen probleem.

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## Ghent PDF Output Suite 5.0 – CMS

These test pages should be processed like regular PDF/X-4 print jobs. The pages contain test patches with essential PDF/X-4 features. Errors are identified either with a cross or by a deviation from the integrated reference images. **This page does contain ICC based elements.**

**GWG 23.0 - 4 different Grays**

12 Apr 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 23.0

**GWG 13.0 - ICC Source Profile**

12 Mar 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 13.0

**GWG 13.2 - ICC based CMYK Overprint**

12 Mar 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 13.0

**GWG 13.3 - ICC based RGB Overprint**

12 Apr 2014 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 13.0

**GWG 16.1 - Transparency Basic Blend Modes (ICC based RGB)**

14 Sep 2015 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 16.0

**GWG 16.4 - Transparency Basic Blend Modes (ICC based CMYK)**

16 Oct 2015 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 16.0

**GWG 16.7 - Image Softenings (ICC based RGB)**

16 Mar 2017 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 16.0

**GWG 17.2 - JPEG2000 compression (ICC based RGB)**

11 Nov 2015 Ghent PDF Workgroup [www.gwg.org](http://www.gwg.org) 17.0

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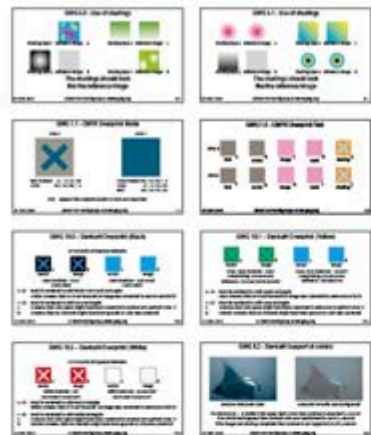




# Import into Affinity Designer 1.5

## Ghent PDF Output Suite 4.0

These test pages should be processed like regular PDF/X-4 print jobs. The pages contain test patches with essential PDF/X-4 features. Errors are identified either with a cross or by a deviation from the integrated reference images. These patches are all CMYK and spot. They do not contain any ICC-based elements.



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## Ghent PDF Output Suite 4.0

Diese Testseiten sollten wie normale PDF/X-4-Druckaufträge verarbeitet werden. Die Testelemente enthalten wichtige PDF/X-4-Features. Fehler sind entweder als Kreuz oder als Abweichung vom Referenzbild zu erkennen. Alle Objekte sind in CMYK oder Spot-Color (ICC-basierte Farben definiert).



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## Ghent PDF Output Suite 4.0

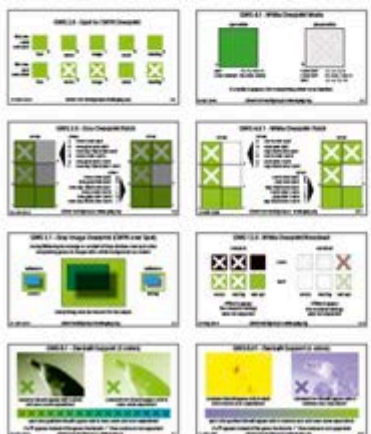
Ces pages de test doivent être utilisées comme images qu'on traite PDF/X-4. Les pages contiennent des patches de test comprenant des fonctionnalités PDF/X-4 essentielles. Les erreurs sont identifiées soit par une croix, soit selon une déviation par rapport aux images de référence intégrées. Ces patches sont tous en CMYK ou spot (couleurs définies par une table de couleur ICC).



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## Ghent PDF Output Suite 4.0

Diese Testseiten sollten wie normale PDF/X-4-Druckaufträge verarbeitet werden. Die Testelemente enthalten wichtige PDF/X-4-Features. Fehler sind entweder als Kreuz oder als Abweichung vom Referenzbild zu erkennen. Alle Objekte sind in CMYK oder Spot-Color (ICC-basierte Farben definiert).



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## Ghent PDF Output Suite 5.0

These test pages should be processed like regular PDF/X-4 print jobs. The pages contain test patches with essential PDF/X-4 features. Errors are identified either with a cross or by a deviation from the integrated reference images. This page does contain ICC-based elements.



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# Import into Affinity Designer 1.9

