



Ghent  
Workgroup

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## PDF and PDF/X-Plus

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**David van Driessche**

Executive Director & co-chair Specifications Subcommittee, GWG  
CTO, Four Pees


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## Who am I?

- Started working at Enfocus in 1996  
(Tailor, PitStop...)
- Helped to start the Ghent Workgroup in June 2002
- Co-founded Gradual Software in 2004  
(Switch)
- CTO at Four Pees from 2008  
(working with callas software, axaio software,  
Elpical, InSoft...)





An orange vertical bar is located on the left side of the slide.

Universal  
Self-sufficient  
Compatible  
Vendor-neutral  
Compact  
Well-behaved



**ISO 32.000**



PDF is not enough – PDF/X



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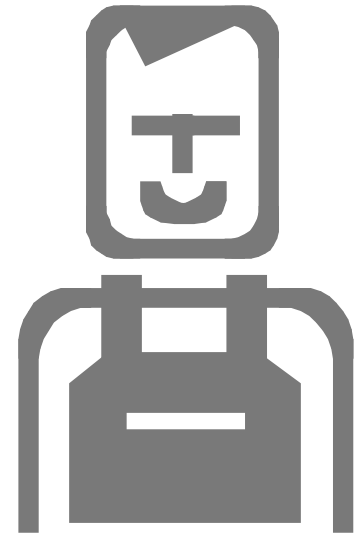
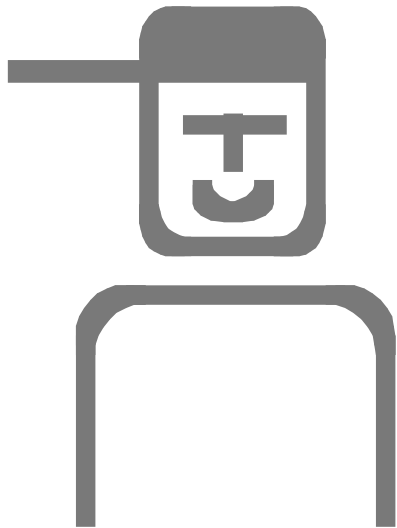
[www.gwg.org](http://www.gwg.org)

## PDF/X origins...

- PDF/X-1 was developed by amongst others the DDAP (Digital Distribution of Advertising for Publishing).
- Taken up by the ISO standards organization
- In 2001



# blind eXchange



# Standards in standards

PDF

PDF/X





## PDF/X flavors

- PDF/X-1, PDF/X-1a
- PDF/X-2
- PDF/X-3
- PDF/X-4, PDF/X-4p
- PDF/X-5g, PDF/X-5pg, PDF/X-5n
- PDF/X-6



## PDF/X flavors

- PDF/X-1, PDF/X-1a
- PDF/X-2
- PDF/X-3
- PDF/X-4, PDF/X-4p
- PDF/X-5g, PDF/X-5pg, PDF/X-5n
- PDF/X-6

## PDF/X-1a

- Based on PDF 1.4
- No support for transparency (has to be flattened), layers, JPEG-2000...
- Supports only gray, CMYK and spot color



## PDF/X-4

- Based on PDF 1.6
- Allows transparency, layers, JPEG-2000 etc.
- Allows all color-managed color spaces
  - ICC-based gray, RGB, CMYK
  - Calgray, CalRGB
  - Lab
  - (and spot color as well of course)

PDF/X

PDF/A

PDF/UA

PDF/E

PDF/H

PDF/VT

PDF/VCR

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# How did the GWG start? (January 2001)

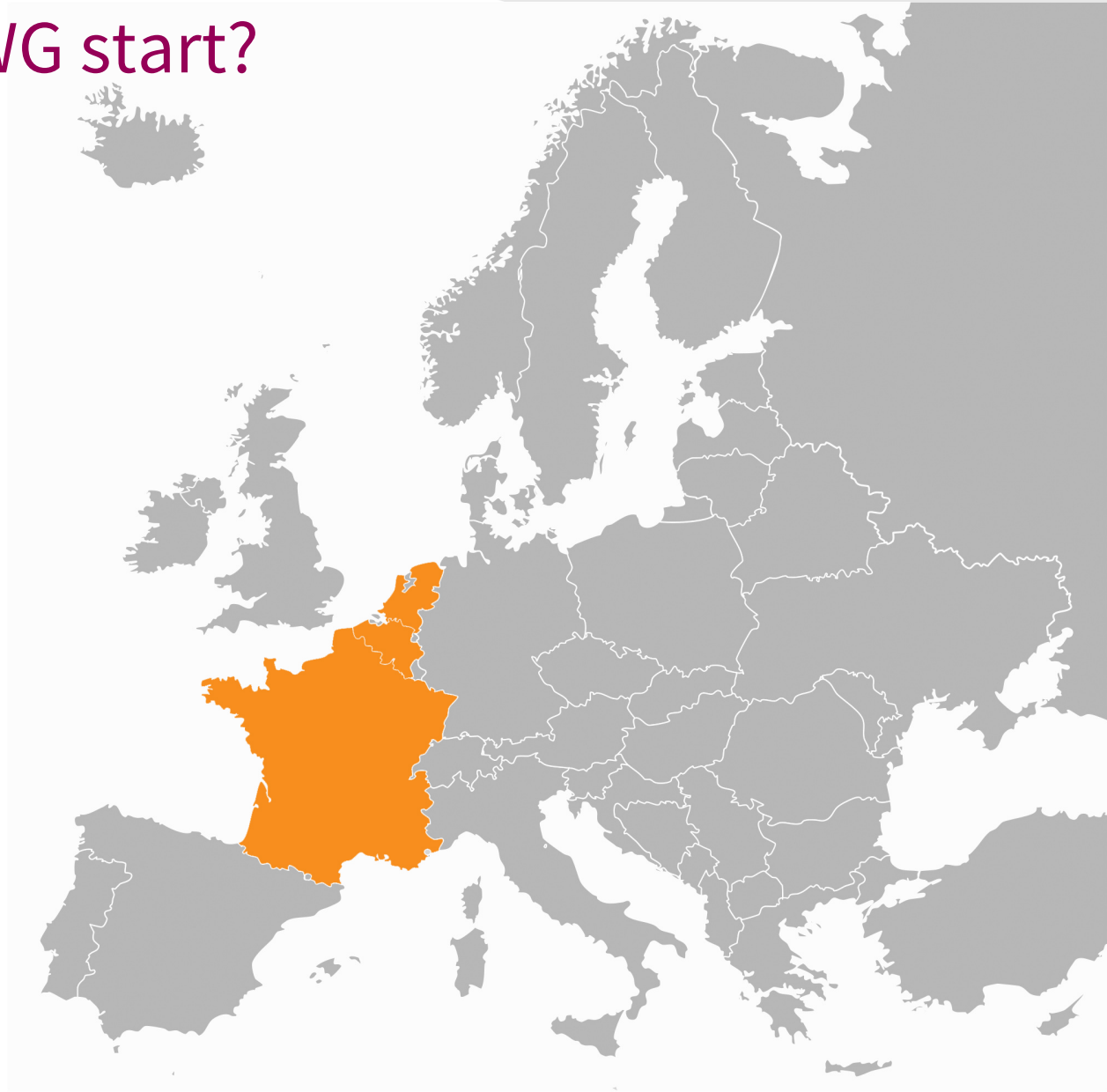




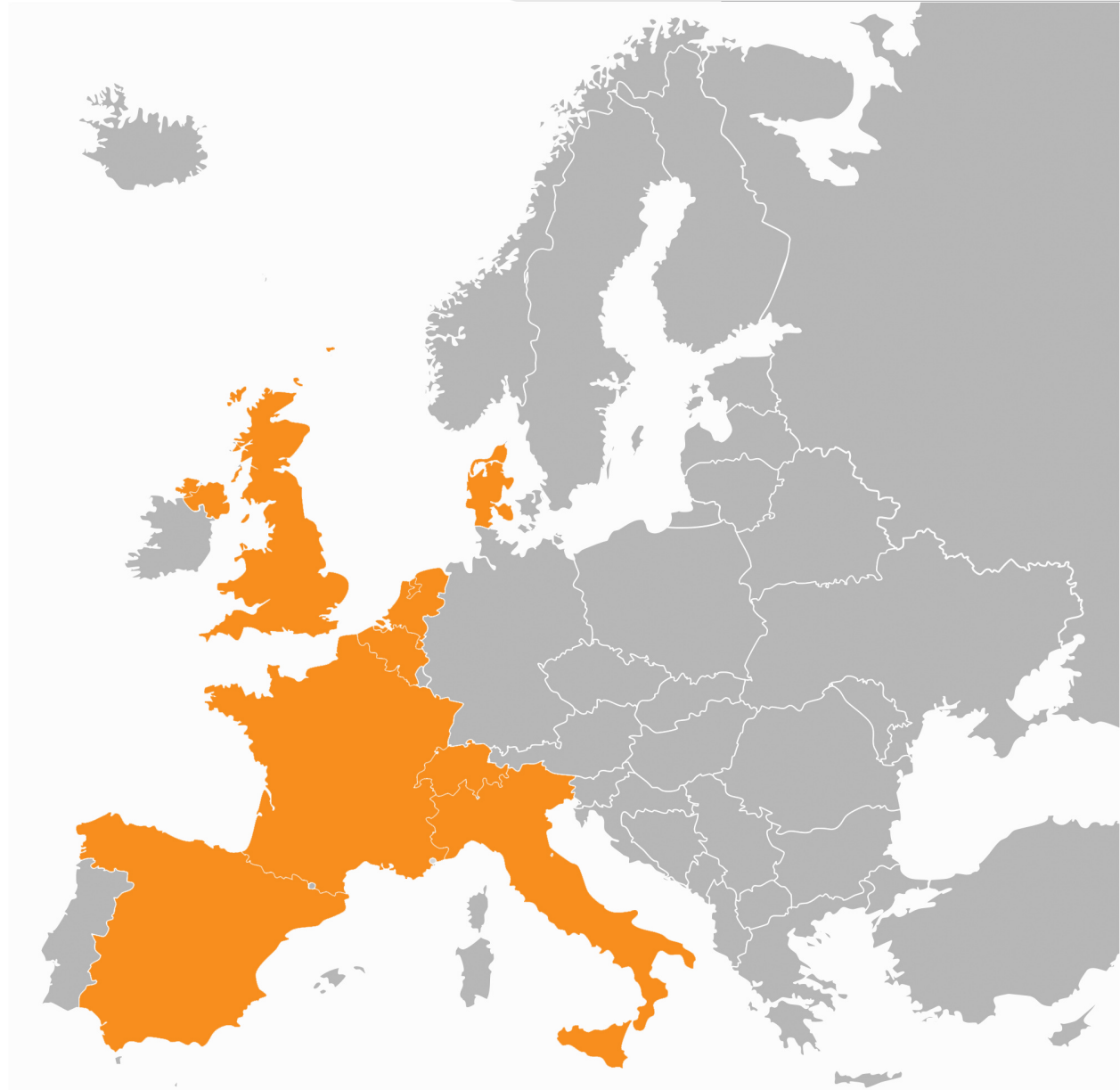
# How did the GWG start? (February 2001)



# How did the GWG start? (April 2001)



June 2002

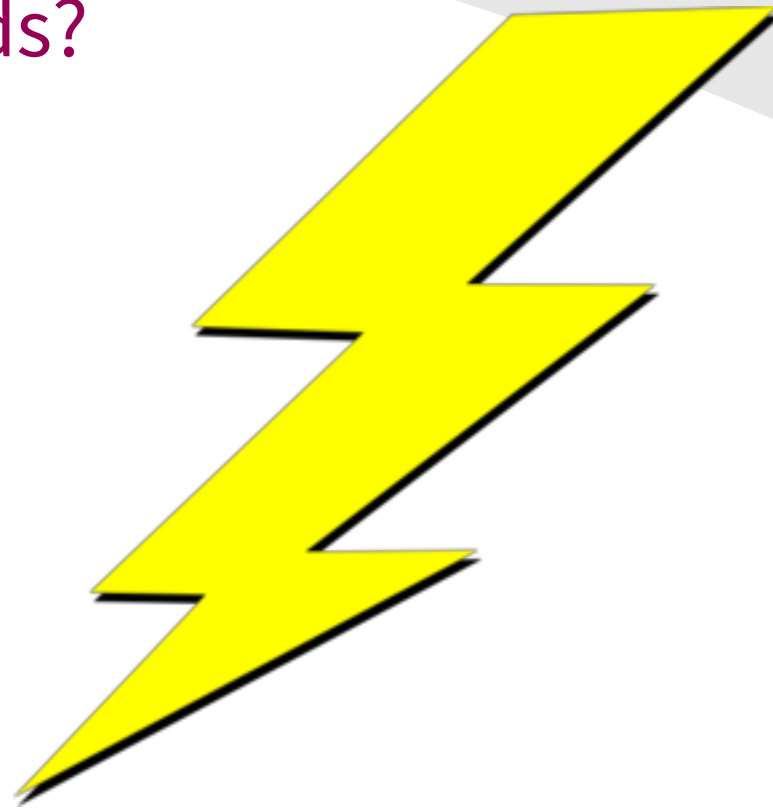


# Mission Statement

To establish and disseminate  
process specifications  
for best practices in graphic arts workflows



# Clash of the standards?



## Differences between PDF/X and GWG Specifications

- Faster
  - More practical
  - More user driven
  - Less accurate
  - Diversified for specific markets
- Slower
  - More theoretical
  - More vendor driven
  - More accurate
  - A global graphic arts standard

# Standards in standards







## PDF/X-Plus

- Unintended spot colors
- Low resolution
- RGB images/artwork
- Missing fonts
- Hairlines
- 4/C black elements / TAC
- Page size inconsistent
- Overprint problems
- Annotations
- Missing bleed

### PDF/X    GWG





## Variants

- There is one PDF/X-1a standard
- There are many GWG specification variants
  - Newspaper Ads
  - Magazine Ads
  - Sheetfed Offset CMYK
  - Sheetfed Offset Spot Hi-Res
  - Sheetfed Offset Spot Lo-Res
  - ...

# The GWG specifications

1v4



- Current standard
- Used by most national standards in Europe
- Based on PDF/X-1a

# The GWG specifications



- Used frequently for testing
- Virtually not used in production (with the exception of Switzerland)
- Based on PDF/X-4

# The GWG specifications



- Approved in October 2015
- Based on PDF/X-4
- Tested extensively
- Implementation steps planned by organizations

## Conclusions



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

## So what should you use?

- Ask your printer / publisher / significant workflow-other
- PDF
- PDF/X
  - PDF/X-4
  - PDF/X-1a
- Ghent Workgroup specifications

## Where do you find that?

- gwg.org
  - Application Settings area
  - [gwg.org/application-settings](http://gwg.org/application-settings)
- Look in your software
  - The settings might already be included!



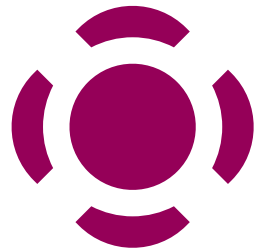
Thank you! Questions?

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