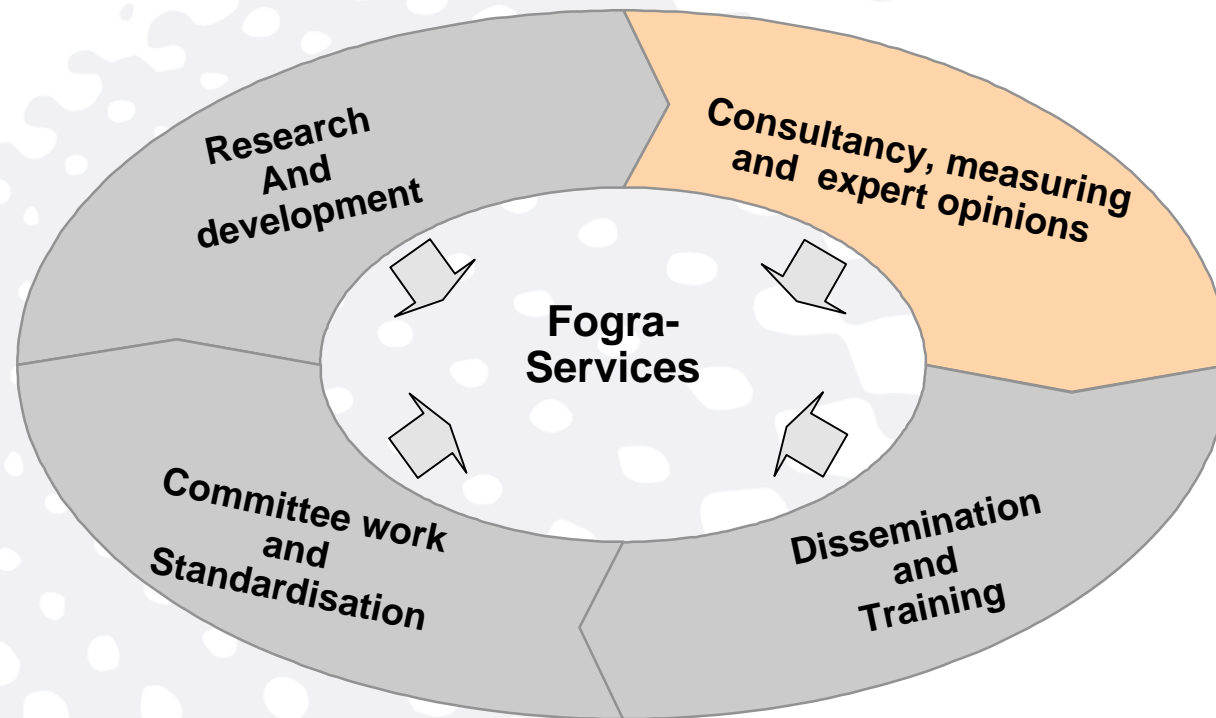




# Fogra Graphic Technology Research Association: FOGRA39 and Proofcert news

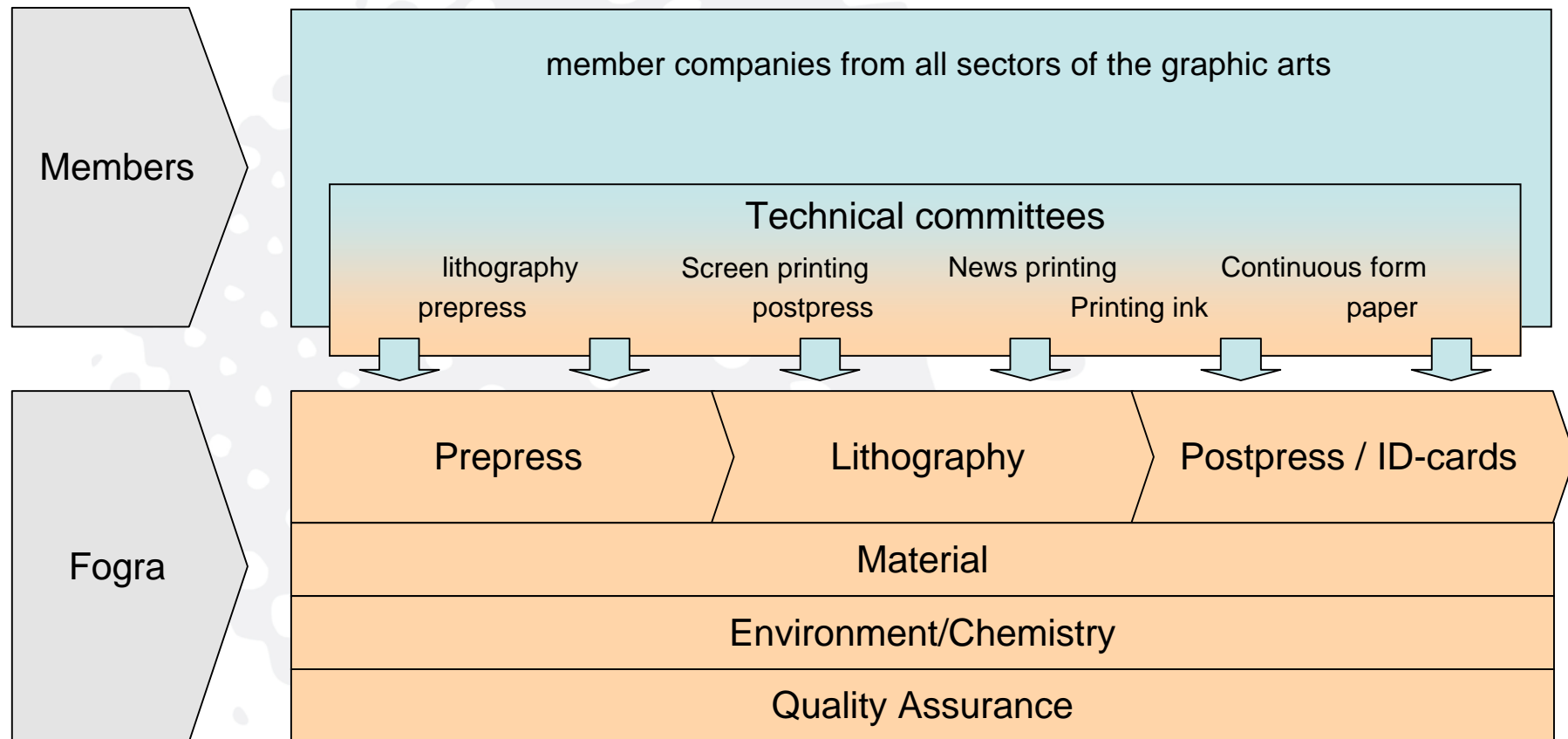
- **What is and what does Fogra?**
- **Why we need FOGRA39?**
- **Certification according ISO standards**
- **News and where the journey goes**

# Fogra - the service provider in the graphic arts industry

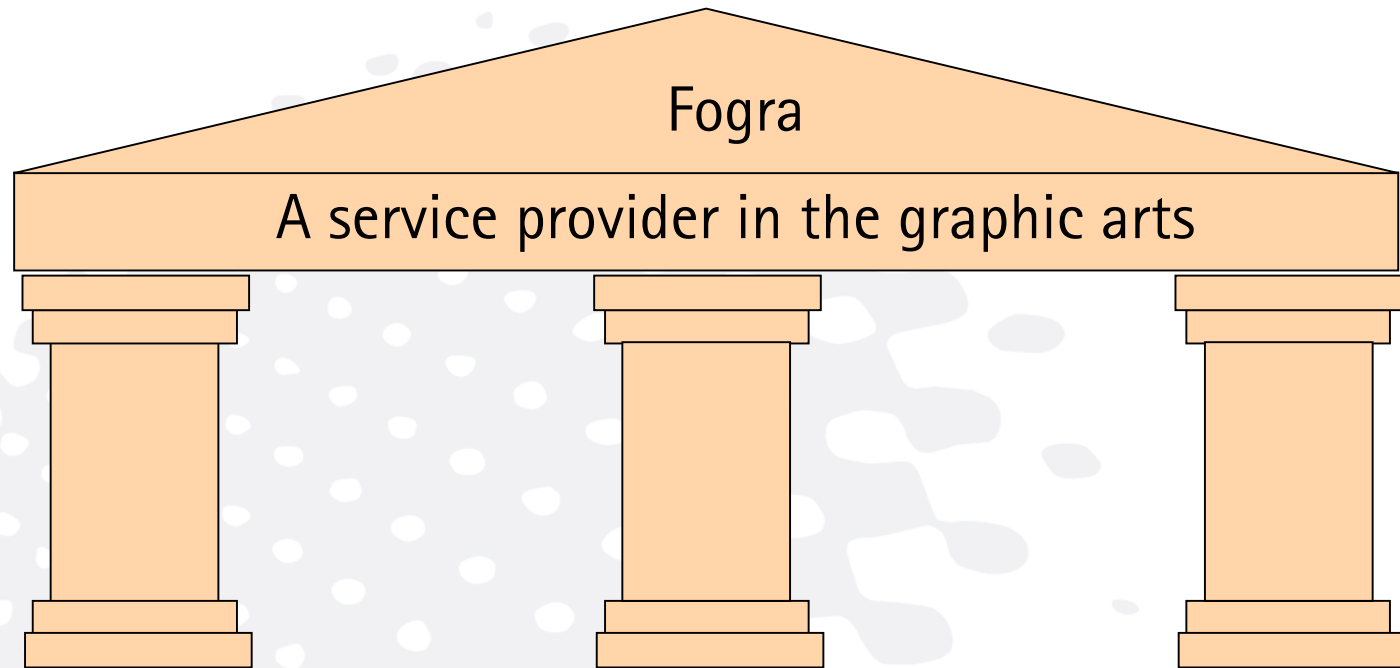


Fogra, active in four fields of activities

# Collective Research Institute for the Printing Industry



# Consultancies and expert opinions



## FograCert

- Proof creation
- Proof substrate
- Proofing system

## Misc. scrutinies

- Fountain solutions
- Washes
- ID-Cards

## Expert opinion

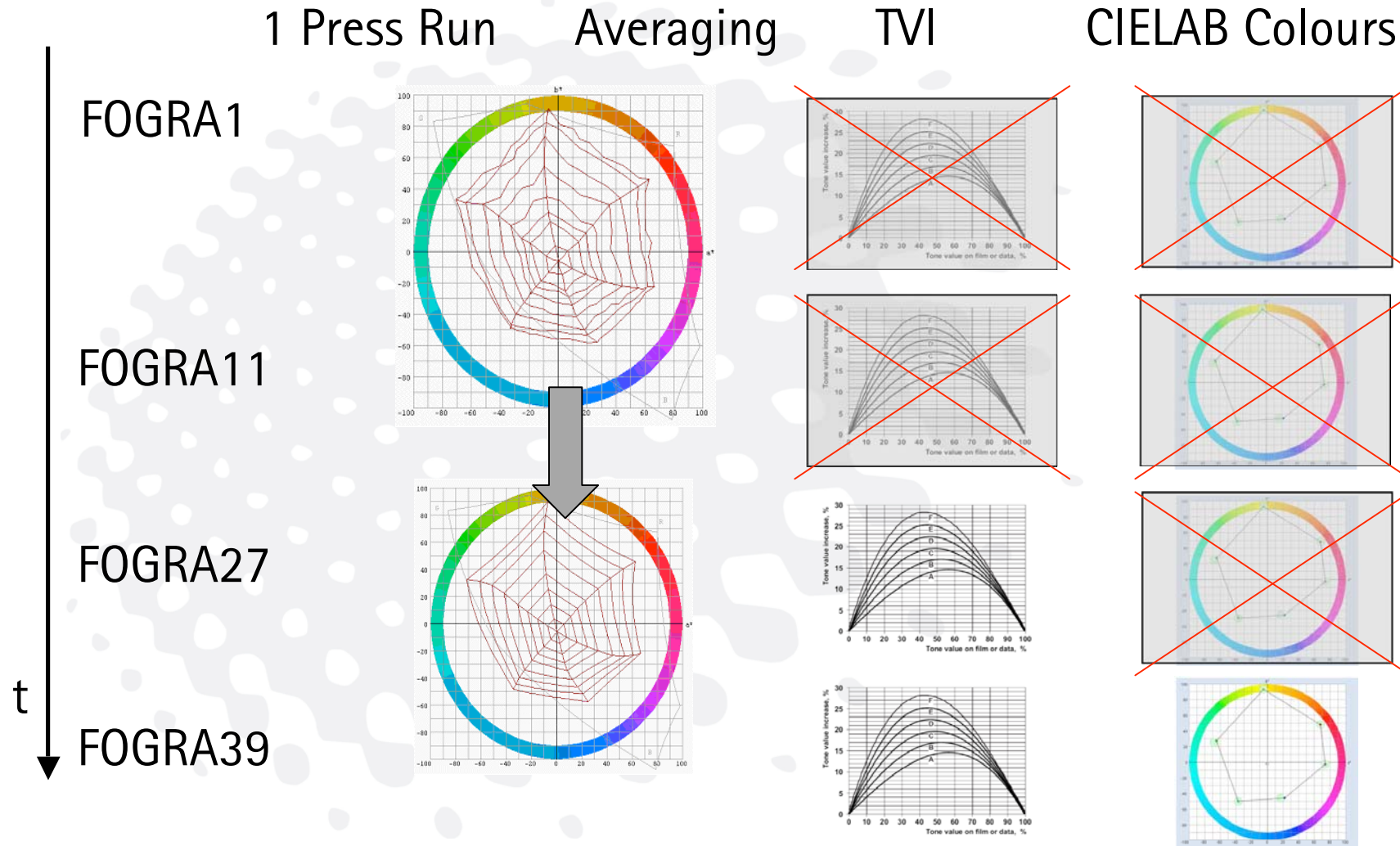
- aprox. 1000 p. a.
- within Fogra
- external

# Global Data exchange

- Trend for global data exchange - global production
- The CMYK colour space must be defined [ICC-profile]
- An ICC-profile needs „decent“ characterization data
  - Should represent internationally agreed upon aims
  - Solid coloration and tone value increase [TVI]
  - Representative grey balance, black generation, gamut mapping

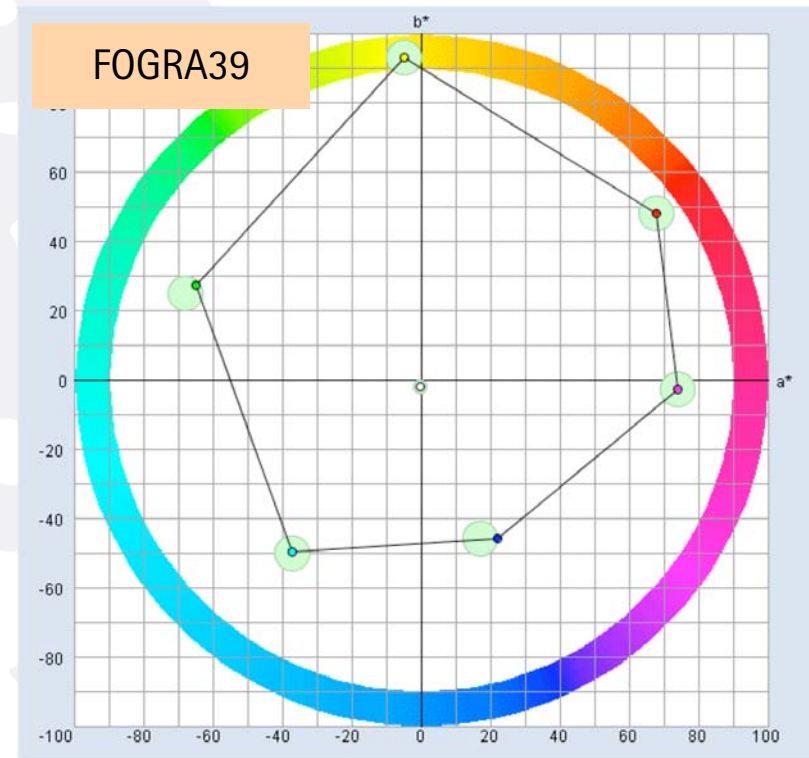
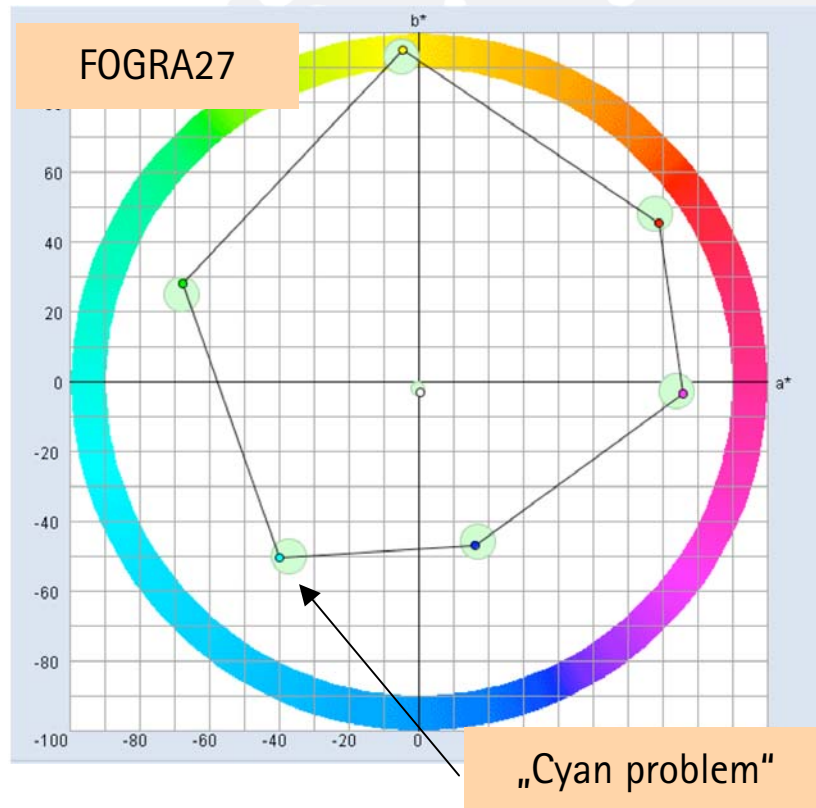


# Evolution of Characterization Data

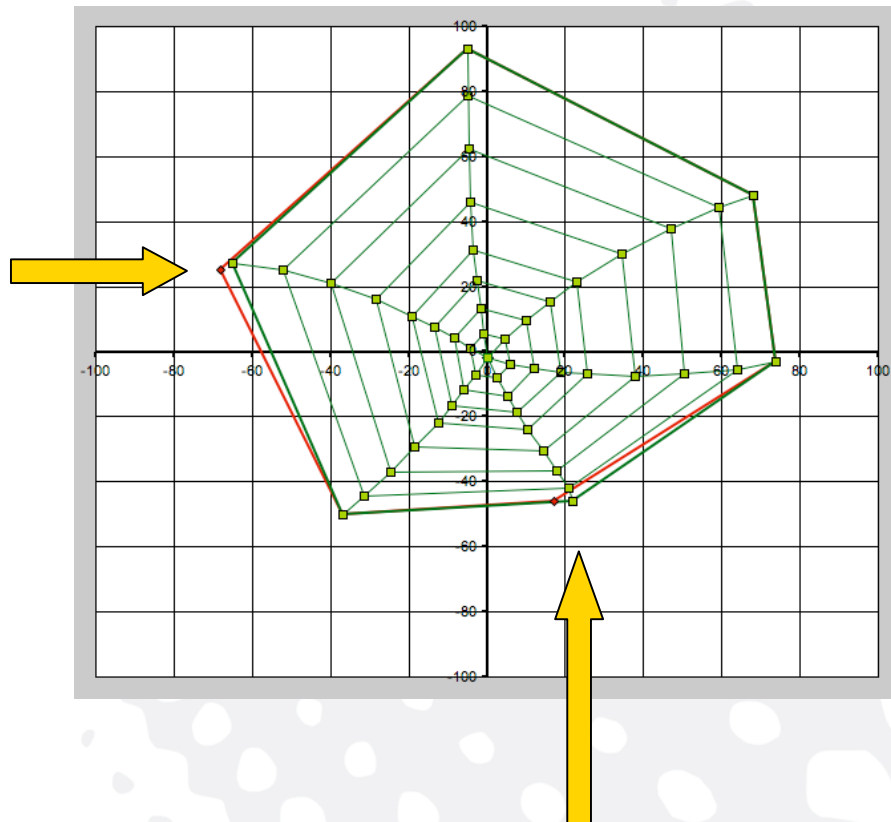


# FOGRA39 solves Cyan-problem

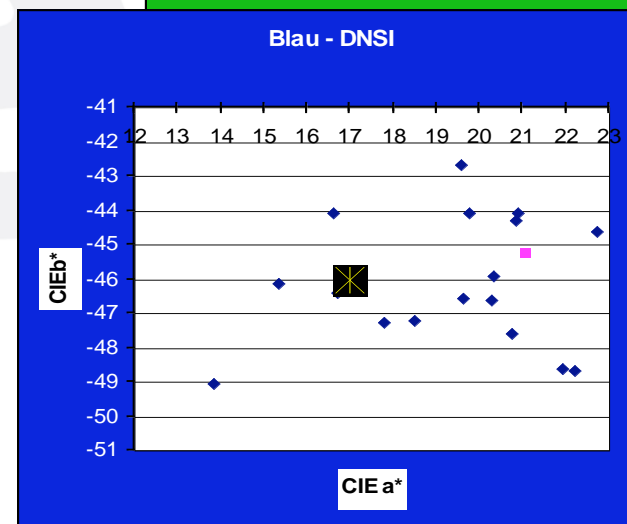
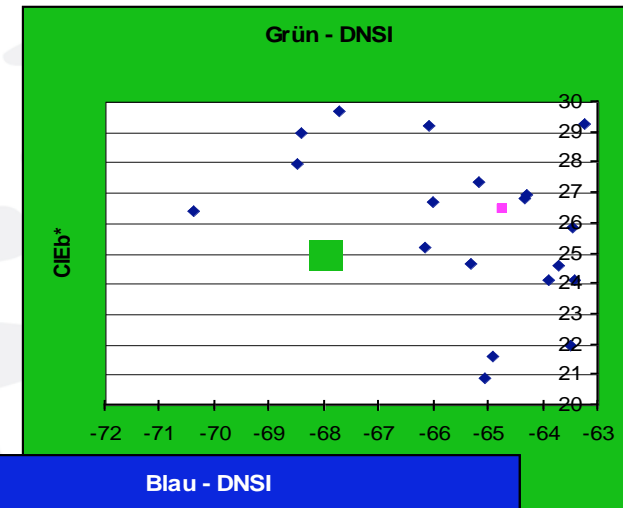
- Reference: ISO 12647-2:2004 / Amd 1
- International standards are always based on consensus



# Practical compromises



## Fogra Shootout - DnS



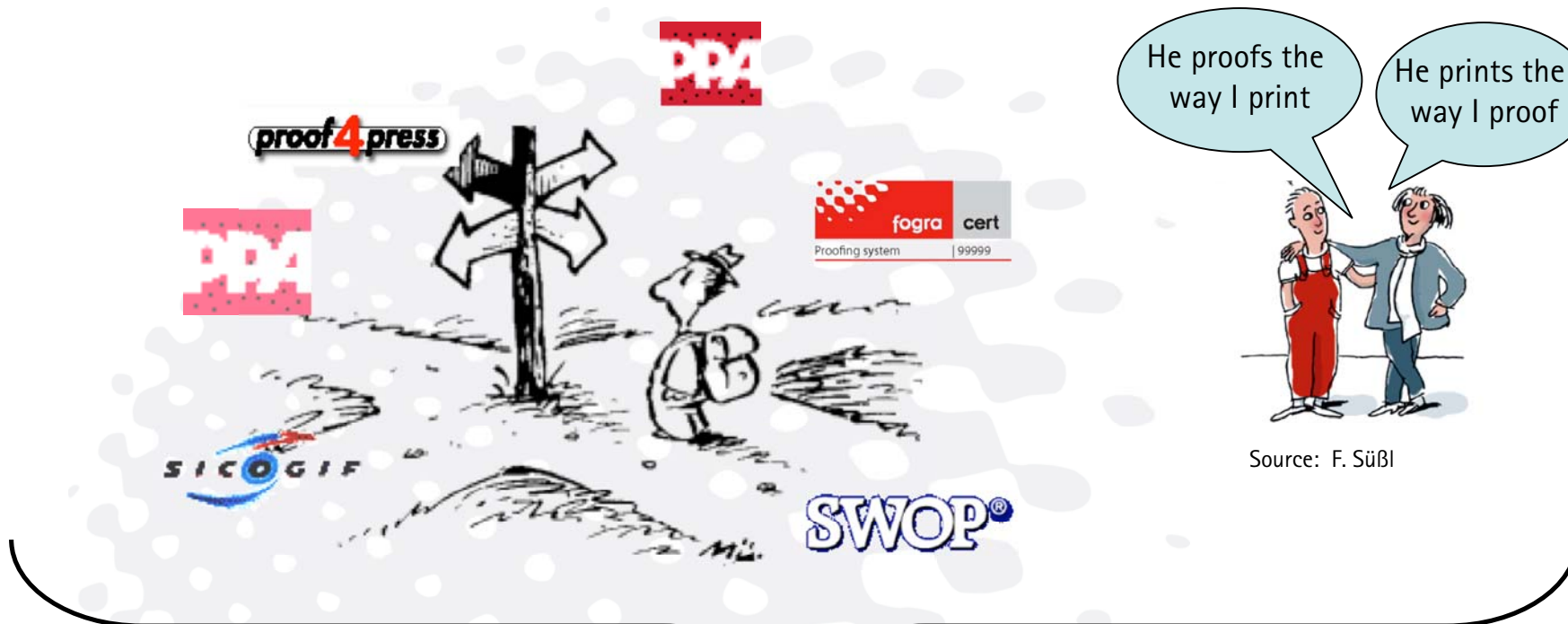
# FOGRA39 versus ISO12647-2

	ISO 12647-2:2004/Amd1			FOGRA39			dL* = +/-3 dE* = 5
	L*	a*	b*	L*	a*	b*	
Paper	95,0	0,0	-2,0	95,0	0,0	-2,0	0,0
Cyan	55,0	-37,0	-50,0	55,0	-37,0	-50,0	0,0
Magenta	48,0	74,0	-3,0	48,0	74,0	-3,0	0,0
Yellow	89,0	-5,0	93,0	89,0	-5,0	93,0	0,0
Black	16,0	0,0	0,0	16,0	0,0	0,0	0,0
Red	47,0	68,0	48,0	47,0	68,0	48,0	0,0
Green	50,0	-68,0	25,0	50,0	-65,0	27,0	3,6
Blue	24,0	17,0	-46,0	24,0	22,0	-46,0	5,0
CMY Gray	23,0	0,0	0,0	23,0	0,0	0,0	0,0

	$\Delta E$
Mean	2,0
Max	6,8
Std	1,3

Differences between FOGRA27 and FOGRA39 just significantly in the bluish region.

# Proof certification - finally standardized



- Common Input
- International Consensus



ISO 12647-7

# ISO 12647-7

„Proofing processes working directly from digital data“

- Voted Yes on 20th Oct. 2007
- Final publication soon
- A revision is planned [“Validation Print”]
- Defines the outcome - not the way how to achieve!

FINAL  
DRAFT

INTERNATIONAL  
STANDARD

ISO/FDIS  
12647-7

ISO/TC 130

Secretariat: DIN

Voting begins on:  
2007-08-20

Voting terminates on:  
2007-10-20

Graphic technology — Process control for the production of half-tone colour separations, proof and production prints —

Part 7:  
Proofing processes working directly from digital data

Technologie graphique — Contrôle des processus de confection de sélections couleurs tramées, d'épreuves et de tirages —

Partie 7: Processus d'épreuve travaillant directement à partir de données numériques

Please see the administrative notes on page III

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Reference number  
ISO/FDIS 12647-7:2007(E)

© ISO 2007

## Levels of “approval”

ISO 12647-7 defines:

1. Proofing System Certification
2. Contract Proof Creation

ISO 12647-7 defines **not**:

1. Colour reliability for day by day production



Technical specification

Media Standard Print 2007

[www.bvdm.org](http://www.bvdm.org) [free of charge]

# Colour reliability - old and new tolerances

		Mediastandard Print 2006		ISO 12647-7	
		Proof OK?	Max	Max	Proof OK?
substrate	$\Delta E$	Proof OK	3	3	Proof OK
average	0,0	Proof OK	4	3	Proof OK
maximum	0,0	Proof OK	10	6	Proof OK
primaries	0,0	Proof OK	5	5	Proof OK
primaries ( $\Delta H$ )	0,0	not applicable		2,5	Proof OK
composed grey (average)	0,0	not applicable		1,5	Proof OK

Please copy your CIELAB values into the green box							
Media	Aim	Aim	Aim	Actual	Actual	Actual	Diff.
Wedge 2	$L^*$	$a^*$	$b^*$	$L^*$	$a^*$	$b^*$	$\Delta E$
Feld-Nr							$\Delta H$
A1	55,0	-37,0	-50,0	55,0	-37,0	-50,0	0,0
A2	66.9	-24.7	-37.1	66.9	-24.7	-37.1	0,0

- Ugra/Fogra Media Wedge CMYK 2
- Reference for OK-print and in case of dispute
- Margin information [human readable]
- ISO 12647-7 criteria that are applicable on a control strip

# Requirements at a glance

## Proofing system

- **Colour**
  - Proofing substrate [colour, gloss, aging, light fastness]
  - Colour accuracy, gamut, grey balance, uniformity
  - Tone value reproduction
- **Resolution**
  - Rendition of smooth vignettes
  - Misregistration, resolution power
- **Repeatability & misc.**
  - repeatability [1h und 24h]
  - Rub resistance [drying]
  - Fading, light fastness, aging

## Contract Proofs

- **Colour**
  - Proofing substrate [colour, gloss, aging, light fastness]
  - Colour accuracy, gamut, grey balance, uniformity
  - Tone value reproduction
- **Resolution**
  - Rendition of smooth vignettes
  - Misregistration
  - Resolution power



# FograCert - when quality matters



Certification of the proofing system

Reflects ISO 12647-7



Certification of the proof creation

Reflects ISO 12647-7



Certification of the proofing substrate  
important parameter [aging, colour, ..]

planned:

- SoftProof
- "Validation Print" [Design Proof]



# FograCert - when quality matters



Certification of PDF creators (ad agencies or prepress houses) with respect to PDF/X conformant data generation [based on PDFXready]



Certification of print houses with respect to PDF/X conformant data interpretation and output [based on PDFXready]



Certification PDF(X)-experts that successfully pass a written exam at Fogra [based on PDFXready]

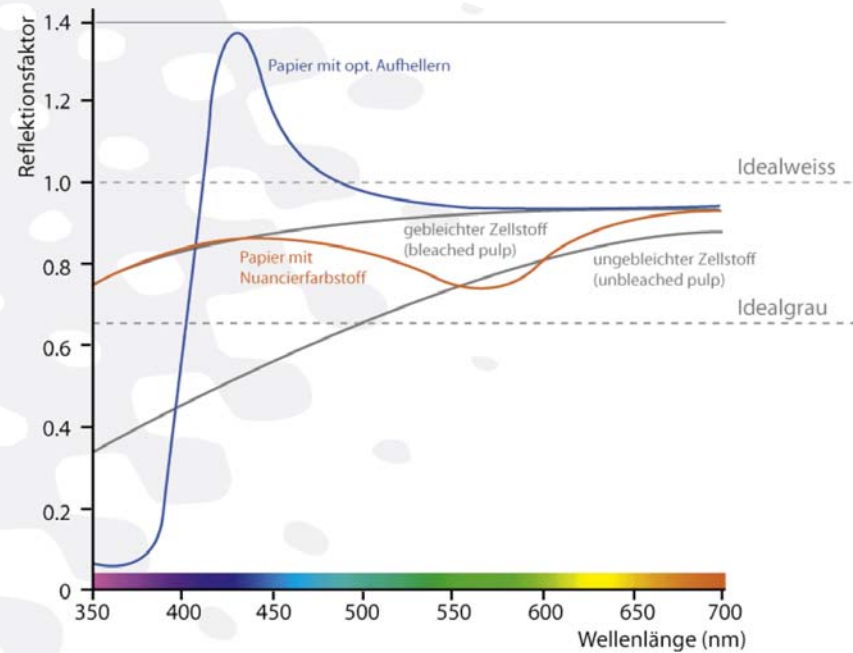
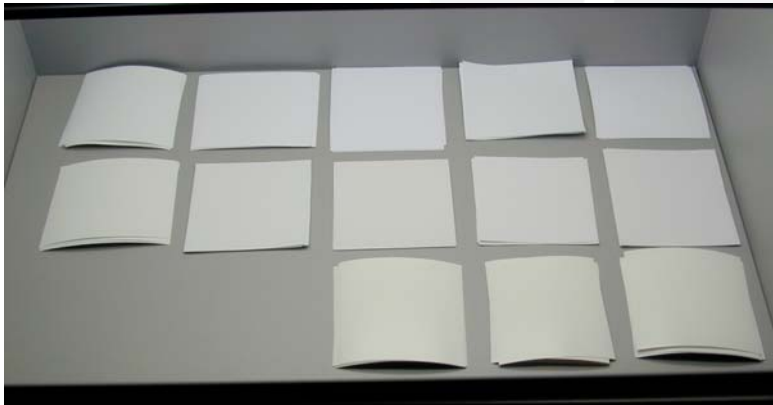
## Latest News: ISO TC 130 + Co

- The Measurement Standard (ISO 13655) will define UV-Cut and Pol.-Filter
- The viewing condition standard (ISO 3664) will decrease tolerance for UV
- A new technical specification (TS 10128) for press calibration is on the way ["TVI-method", "Grey balance method", "DeviceLink"]
- PDF/X-4 and PDF/X-5 are to be published soon
- Fogra works on a Media Wedge V3
- Media Wedge V3 will be part of Altona Test Suite 2008 [ATS]
- Fogra conducts a drupa project - Web2Proof



# Proof to Print Match

And why it's getting harder to achieve ....



# Thanks for your kind attention

## and visit:

### Fogra Colour management symposium 2008



- "Science meets Colour"
- 15th anniversary of ICC (at the founding place)
- Munich – [www.fogra.org](http://www.fogra.org) | Events

18 - 20.2.2008      ICC meeting

21 - 22.2.2008      Fogra colour management symposium