International Color Consortium

Graphic Arts Special Interest Group

June 19, 2007
Chiba University

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Graphic Arts SIG Charter

The primary focus of this working group is to address issues raised when using ICC Profiles for printing presses or related printing systems, for example digital proofers.

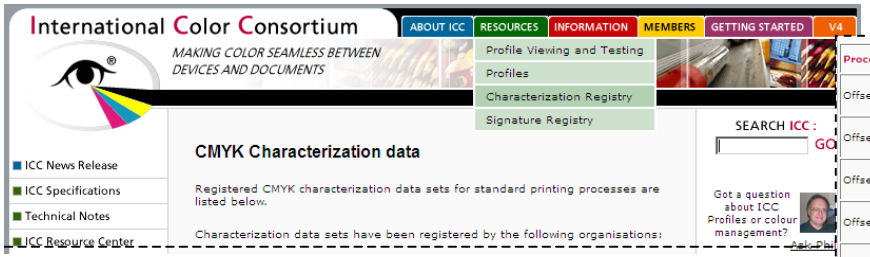
Objectives

- **Promote the use of ICC Profiles in “high end” graphic arts applications.**
- **Identify areas where the existing ICC Profile format is unable to provide the functionality required by these printing systems.**
- **Propose changes in working practice and if necessary in the ICC Profile format to address current limitations.**

Activities

- **Characterisation data registry to support the PDF/X standard**
- **15 common problems listed by Graphic Arts users resulting in:**
  - development of a series of white papers
  - profile identification tags activity
  - Black Point compensation algorithm published
  - measurement standards changed to allow white backing
  - Profile Assessment working group
  - improved applications
- **Paper standardisation task force**
- **Profile registry to support PDF/X-4 and PDF/X-5**
- **Version 4 sRGB profiles developed by HP, Fujifilm, Fuji-Xerox and other ICC members**

Registry support for PDF/X-1a



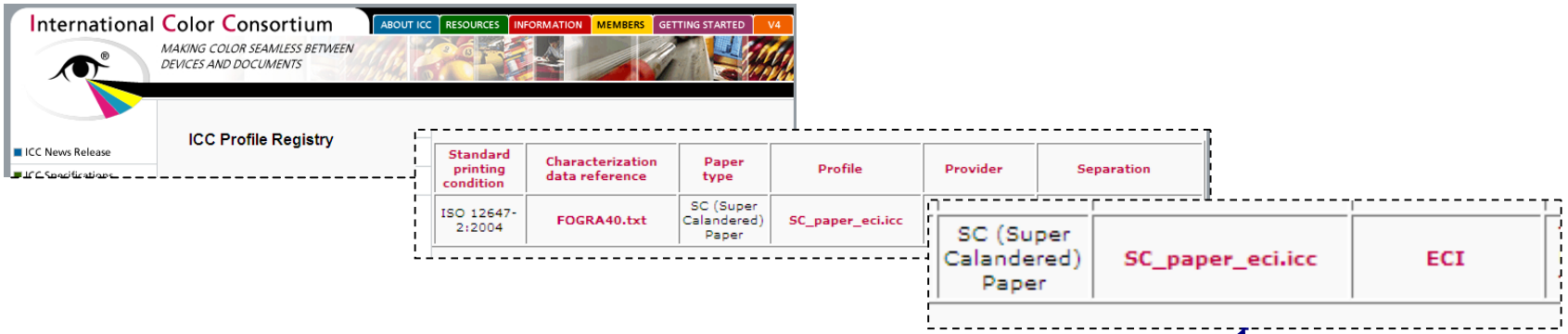
Process	Media	Screen	TVI	Backing	Designation	Reference name
Offset	Gloss or matt coated, 115 g/m2	60 l/cm	13%	white	OFCOM	FOGRA39
Offset	Gloss or matt coated, 105 g/m2	69 l/cm	.	black	Japan Color 2001 Coated	JC200103
Offset	Gloss or matt coated, 115 g/m2	60 l/cm	13%	white	OFCOM 1.2 Altona	FOGRA27
Offset	Gloss or matt coated, 115 g/m2	60 l/cm	.	white	Japan 2003	
Offset	Gloss or matt coated, 115 g/m2	60 l/cm	15%	white	'Euro 15%	
Offset	Gloss coated web, (LWC)	60 l/cm	16%	black	SWOP	

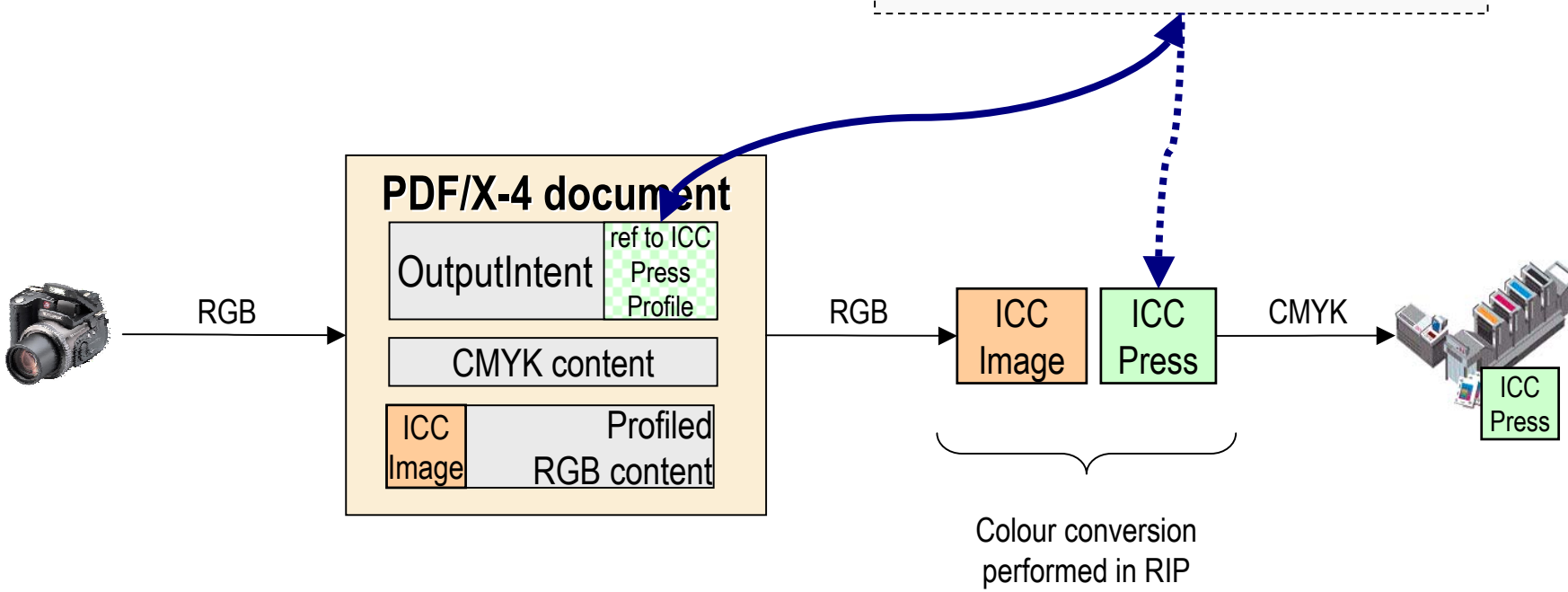
SWOP | CGATS TR 001

RGB → ICC Image → ICC Press → CMYK → **PDF/X-1a document** (OutputIntent: Registered printing condition; CMYK content) → CMYK → 

Colour conversion performed in imaging application such as Adobe Photoshop

Registry support for PDF/X-4: virtual CMYK





2002 problem list

Problems reported by ICC members and industry experts

Industry survey conducted to determine priority

Many problems have been addressed – others are in progress

	Problem description	*Priority*	*How this problem is being addressed*
1	The way in which applications handle Rendering Intent is inconsistent.	57	We have developed three white papers on rendering intent usage for different target audiences. [WP 1, 2, 8 (Ann Mc); WP 9 (Jack H & Ann)]
2	The current set of colour rendering operations is too limited for some applications - in some cases the required mapping is image/media specific.	47	This problem was investigated and it was found that most of these problems can be addressed by introducing a standard form of BlackPoint compensation. Adobe provided a white paper describing their implementation.
2a	Some current solutions (for example where device link profiles are needed) are not open.	44	Support throughout workflow needed? Vendors to be encouraged to provide open solution.
3	In Graphic Arts workflow (when printing rather than when proofing) it is undesirable to unintentionally perform CMYK->CMYK conversion.	58	Produce a white paper for applications developers. [WP10 in draft review]
...	Additional problems (15 in all)	...	A number of different solutions required...

Paper standardisation activity

- **Paper standardisation problem**
  - Users often need to know which ICC Profile is appropriate for a given printing condition. One big unknown is the paper category.
- **Paper standardisation activity**
  - originally a joint activity between ICC and ISO TC130 to identify a set of key parameters that could be measured and reported by paper manufacturers to help identify whether two papers have similar printing characteristics
  - result of the ICC meeting was a working group led by Uwe Berthold that includes industry experts from all regions, paper manufacturers and now includes a link with ISO TC6 (Paper, board and pulps)
  - at the recent ISO TC130 meeting in Bangkok it was reported that this is now considered an urgent matter by paper manufacturers as many buyers are demanding a solution

Version 4 sRGB profile development

- **Fujifilm, HP and other ICC member companies worked together to develop a 'Default v4 sRGB profile'**
  - includes all tables including a Perceptual Rendering Intent table
  - can be used in an ICC version 4 workflow to ensure high quality rendering of sRGB images (avoiding clipping)
  - when completed will be made available from the ICC web site
  - includes re-rendering of images to the ICC perceptual reference medium gamut
- **Fuji-Xerox and others working together to provide an 'appearance matching' profile**
  - first version will be demonstrated at this meeting

Agenda for Tokyo meeting
21st June 9.00am – 4.00pm

• **Camera RAW to print graphic arts workflow**	*Eric Walowit*
• **sRGB profile update**	*Ingeborg Tastl*
• **Appearance matching sRGB profile**	*Hiroaki Ikegami*
• **mediaBlackPoint definition**	*Jack Holm*
• **Profile registry**	*Phil Green*
— GCR specification	
— ISO name usage	David McDowell
• **Metadata for characterization data**	*David McDowell*
• **Device link tag proposal**	*William Li*
• **Exchange colour spaces**	*Craig Revie*
• **Header-only profile**	*Craig Revie*