

ISO Standards for offset printing

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Organisation of the international standardization for graphic arts industries

revitalization in 1989

WG 1
Terminology

WG 2
Prepress
Data Exchange

WG 3
Process Control
+ Metrology

ISO TC 130
Graphic technology

participants:
Austria, Brasil, China, France,
Germany, **Japan**, **Netherlands**,
Russia, Sweden, **Switzerland**,
Spain, Thailand, Ukraine, United
Kingdom, **USA**

WG 4
Media + Materials

WG 5
Ergonomics
+ Safety

Liasions:
TC 6
TC 42
IEC TC 100
CIE

Achievements of the international standardization for graphic arts industries

- ▮ definition of transfer procedures (data- and document-formates)
- ▮ definition of qualities (processes, materials, measurement equipment, proofs)
- ▮ definition of terminologies
- ▮ **predictable and reproducible print quality at international level**
- ▮ supplier independence (presses, consumables, software, metrology)
- ▮ widely accepted in Europe and Latin America
- ▮ ongoing improvements

ISO 12647-2 - a quality standard for four colour offset printing

- supplies international recognized transfer definitions from pre-press to print
- defines quality requirements for predictable and reproducible print quality
- specifies different print conditions defined by
 - paper type (coating, colour, gloss, brightness, grammage)
 - solid tone colour coordinates (for each single colour)
 - dot gain characteristics (for each single colour)
 - tolerances in colouration, dot gain, spread of dot gain

ISO 12647-2 - the history

- ↪ **1981:** first manual (PSO*) from bvdm/Fogra
- ↪ **1989:** profound improvements of PSO (1st engl. version 92)
- ↪ **1996:** first edition of ISO 12647-2 published
- ↪ **2001/2003:** improvements of PSO (colour coordinates/
measurement/management; CtP, digital proof, tolerances)
- ↪ **2004:** second edition of ISO 12647-2 published
- ↪ **2006:** amendment for second edition of ISO 12647-2
- ↪ **2007:** international edition of revised PSO (english)
- ↪ **200x:** further improvements to come (see later)

* Process standard offset printing

Topics for further improvement of ISO 12647-2

- ▮ update of paper categories
(paper types, colour, fluorescence)
- ▮ effects of ink drying (conventional inks)
- ▮ non-periodic screens
- ▮ spot colours and inks
- ▮ harmonization of dot gain curves
- ▮ finishing (lamination, varnishing)
- ▮ comparability of prints from different print
processes (colour gamut classes)
- ▮ **grey balance?**

Possible future strategies to promote ISO 12647-2

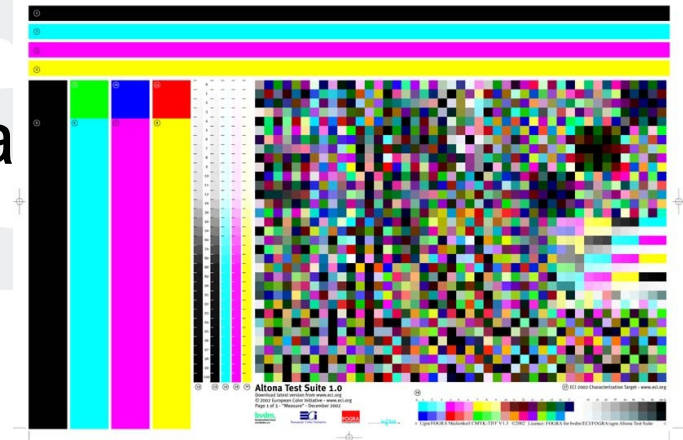
- ▮ marketing and information strategy
- ▮ establishment of a brand
- ▮ convincing/inviting international print buyers to use/apply ISO 12647-2
- ▮ certification of print shops (so far >200 in Germany, requests from all over Europe)
- ▮ print-contests e.g. „Drucken nach Standard“ by Fogra (award?)

Network of standards for the graphic arts industries

- ↪ colour measurement (ISO 13655)
- ↪ colour and density measurements (ISO 13656)
- ↪ viewing conditions (ISO 3664)
- ↪ ink set colours (ISO 2846)
- ↪ various pre-press related standards (test charts, ICC colour management, data exchange formats, proof prep. ...)
- ↪ ISO 12647-2 offset: part of a series of standards for all printing processes (also gravure, newspaper ...)
- ↪ supplier independance (presses, consumables, software, metrology)

Tools for applying standards in the graphic arts industries

- control devices
- test charts/suites
- typical characterization data
- ICC profiles
- guidance books
- standard colouration samples



Standards - a key to improve competitiveness of print vs new media

- ↪ huge differences in the colour output for office monitors/printers
- ↪ colour management in web and home applications has to be improved (proprietary solutions)
- ↪ colour output with the application of graphic arts standards is defined, predictable and reproducible
- ↪ colour quality in graphic arts application is reliable

Standards - a key to improve Europe's competitiveness vs emerging markets

- ↪ high quality application of standards requires staff skills (available especially in Europe)
- ↪ competition takes place via quality and costs
- ↪ social standards in Europe do not allow conditions like those in China and India
- ↪ **Quality matters**
- ↪ active role in developing and applying standardization secures technological leadership

Advantage of standardization for the graphic arts industries

- ↪ supplier independence!
- ↪ improved technical communication both nationally and internationally
- ↪ materials of predictable properties are available
- ↪ quality security:
 - customer knows technical possibilities/limitations
 - printer is guarded against unreasonable quality requests
- ↪ independent pre-press procedure requires standardization

Resumé

Application of standards for the graphic arts industries will result in quality improvements, process stability, improved customer relations, reputation and competitiveness

but

ignorance of standards for the graphic arts industries will result in strategic disadvantages.