Minutes from ECI-Member-Meeting 14.10.2005
Hosted by Bundesverband Druck und Medien (bvdm) in Wiesbaden

Attendees:

1. Ackmann, Karsten (Onnen & Klein, Hamburg) - until 18.15 Uhr
2. Adloff, Michael (Unternehmensgruppe Vignold, Ratingen)
3. Bestmann, Dr. Günter (Heidelberger Druckmaschinen, Kiel)
4. Bühler, Roland (Springer & Jacobi Digital, Hamburg)
5. Cremer, Ulrike (ifra, Darmstadt)
6. Drümmer, Olaf (Callas Software, Berlin)
7. Hilmer, Michael (Serviceplan, München) f. H. Beinhold
8. Hoffstadt, Dr. Johannes (Color Solutions Software, Ulm)
9. Khoury, Elie (Alwan Color Expertise, F-Sainte Foy les Lyon) - as of 13.00 Uhr
10. Kraushaar, Andreas (FOGRA, München) - until 17.00 Uhr
11. Meinecke, Karl Michael (bvdm)
12. Rossée, Jan-Willem (Laser Soft Imaging, Kiel)
13. Schaul, Prof. Ronald (HDM, Stuttgart)
14. Schmidt, Maren (repro 68, Hamburg)
15. Schmitt, Ulrich (FOGRA, München)
16. Schober, Jörg (redblue Marketing, München)
17. Schoeppy, Rainer (Schoeppy freeconsultants, Gründlau)
18. Schützenhofer, Andre (CON.CEPT.PRO, Köln)
19. Süßl, Florian (MetaDesign, Berlin)
20. Widmer, Erwin (Ugra, CH-St. Gallen)
21. Wüller, Dietmar (Image Engineering, Frechen) - until 18.00 Uhr

Start: 11.35 am

Minutes: Michael Adloff (German version), translation via Jörg Schober

1 General issues

a) Former minutes
The minutes of the last ECI-Meeting on 4th March 2005 (circulated on 4th October 2005) have raised no objections. The wish has been expressed to circulate future minutes more promptly after the meetings.

b) Structure and duration of future meetings:
The multiplicity of topics can hardly be covered in just one day. Furthermore the time for the necessary discussions is not available.

Based upon suggestions made (in part by e-mail), the schedule for future meetings will be as follows:
- *Meet for informal dinner the eve before the meeting (approx. 7 pm)*
- *Duration of the meeting approx. 9 am to 5 pm the following day*
- *Reports of working groups and liaisons will be generated and distributed two weeks before the meetings by e-mail.*

c) Date and location of next meeting
Jan Rossée will check on Kiel as the next venue. Ronald Schaul offers Stuttgart as an alternative. Suggested dates for the next meeting are: 4th/5th May 2006 or 11th/12th May 2006. Suggested dates for the meeting after next are 5th/6th October 2006 or 12th/13th October 2006.

d) Enquiry by Stephan Jaeggi for ideological support of ECI:
Stephan Jaeggi has enquired by e-mail whether an ideological support of ECI for a PDF conference as part of the "XPlor/Graphics of the Americas" conference, to be held in the United States beginning February 2006, is possible. Amongst other things he would like to use the ECI logo in announcements and documentation for the event. Florian Süßl and Peter Kleinheider are participating in the conference with lectures and tutorials.

The plenum agreed to the following procedure:
- *An approval of Stephan Jaeggi's request*
- *The ECI advisory board can approve future requests of this nature*
- *Instrumental to the decision of such requests is an active involvement of ECI members at the event*

e) Presentation of ECI corporate design: Jörg Schober presents artwork with the ECI logo designed by four apprentices at "redblue". The presented artwork consists of a landscape (e.g. presentations) and a portrait-orientated (e.g. documentation) template. The aim is to create templates for various applications (InDesign, Word, Pages, Powerpoint, Keynote) and make these available in the near future.

The following persons will discuss the details of the presented work directly with Jörg Schober: Karsten Ackmann, Karl-Michael Meinecke, Maren Schmidt, Roland Bühler, Andre Schützenhofer, Prof. Ronald Schaul and Jan Rossée.

2 Digitalproof-Forum (DPF)

a) Review of last DPF on 20th/21st September 2005
The Event and the Altona Test Suite workshops were sold out. Altogether around 365 attendees were counted.

The task presented to the proof system producers was as follows:
- *Generation of colour adjustment for a reference print on ProfiSilk-Paper (paper class 2) by means of a provided ICC profile (+ characterisation data) that followed a technically measured evaluation*
- *"Adaptation" of the adjustment to a substrate of the same classification ("ProfiBulk": a volume substrate with a coarse surface) by means of a reference print and provided dot gain values. A visual assessment followed.*

Compared to previous events the following procedure was new:
- *Presentation (no assessment) of various softproof installations, visual comparison with provided prints of SCID images.*
- *This time the measurement devices were tested before the event.*

– *In addition measurement devices were tested that had been brought along by visitors of the event (approx. 40 devices)*
– *Simultaneous translation English/German and German/English*
– *Feedback was retrieved from the participants with questionnaires*

b) Proposal for a further DPF
The next DPF is planned to take place in Wuppertal on 21st/22nd September 2006. A detailed discussion on the contents of the event is scheduled for Saturday morning.

Roundup of the most important proposals and advice:
– *Task is not so interesting to proof system producers any more*
– *Reorientation necessary*
– *Soft proof (possibly test and assess, highlight economic aspects)*
– *Possibly provide participants with files and briefing before DPF and assess the results of the proofs. Possibly request prints of file to assess in advance.*
– *Status Quo of "inexpensive proofers" (without RIP)*
– *Possibly pick up the topic of digital photography*
– *Presentation of selected topics (e.g. user survey) with video clips*

Slightly off topic note:
A scientific colloquium titled "Digital Proofing Systems 2005 – a practical analysis" is to take place at University of Wuppertal on 3rd. November 2005. Unlike the DPF, the users (in contrast to the producers) of proofing systems will be confronted with a formulated task following an assessment. The aim is to evaluate the usability of such systems.

For further DPF contributions, see II-1

3 ECI/bvdm Gray balance control strip (GrayCon)

a) Current status: The most important notes on GrayCon:
– *Assessment of GrayCon by comparing the stepped greyscale (black ink only) patches and grey balance (composed grey) patches that are to be in visual accordance with each other in print (and proof)*
– *The respective grey balance of a GrayCon is based on the FOGRA Characterization datas 27 through 32*
– *GrayCon is available in three different layouts that can be downloaded for free from the ECI und bvdm web sites.*
– *More than 500 downloads (ECI web site) since first announcement at DPF*

b) How to handle requests for special GrayCons? At present there is a concrete request from Epple, asking for a GrayCon for Aniva printing condition. Based upon this a discussion took place on how to handle this particular and future requests of a similar nature.

Outcome of the discussion:
– *Possibly an application "Graukeilgenerator" (Gray control strip generator) can be provided*
– *A template can simplify the generation of control strips and would lead to a consistent layout (specificly: InDesign template with a layer for the individually adaptable contents (text, halftone patches)*
– *ECI will only support control strips if these, together with the ICC profile and characterisation data, can also be made available on the ECI web site (unanimous decision of the plenum)*
– *Minimum requirements need to be ensured through ECI (unanimous decision of the plenum)*
– *The official nomenclature (e.g. "ECI_GrayConL_FOGRA27.pdf") is to be used exclusively for ECI control strips only (unanimous decision of the plenum)*
– *-he requesting party must agree to distribution and redistribution licences*
– *Bearers of the rights are ECI and bvdm; for legal issues bvdm can act as an organisation*
– *German documentation for GrayCon is already available; an English version is to follow*

c) Relevance of GrayCon in international standardisation. Grey balance is gaining increased importance within printing standardisation. GrayCon is an instrument that can

be used free of charge as a visual control factor in the implementation of ISO 12647-2. In the "Gracol7" method employed by Don Hutcheson the grey balance is, however, used differently than in "Process Standard Offset" (PSO). Due to good lobbying there is a danger that the "Gracol" method could rapidly establish itself globally, especially with users unaware of ISO and PSO.

The following items were named in a discussion

- *Improved worldwide lobbying for ISO methods necessary*
- *An example of this could be the integration of positive experiences with ISO (and PSO) in the Pab mailing-list (www.printingacrossborders.org (see item 4))*
- *The Gracol method needs to be examined more closely*
- *Comparative prints Gracol vs. ISO necessary*
- *Possible formation of a working group "Gracol vs. ISO"*

Further discussions on this topic are to be held on Saturday.

4 Printing across Borders (PaB)

Based upon the experience that the ISO norms seem to attract little attention around the world, Olaf Drümmer has formed Pab (www.printingacrossborders.org), which intends to be a communication platform with the aim to promote more exchanges on the topic of print standardisation.

To date the following meetings have taken place:

- *May 2005 in London (47 participants from 3 continents)*
- *June 2005 in Chicago (mainly American participants)*
- *Beginning of September 2005 in Chicago*
- *End of September 2005 in Stuttgart (DPF)*

In general the Americans are also very interested in the so-called European methods of standardisation (ISO and PSO). The next Pab meeting is scheduled to take place during IPEX. Further information about the meetings and the mailing list can be found at www.printingacrossborders.org.

Further notes:

- *The SWOP specifications are available as a PDF at www.swop.org.*
- *An enquiry from Netherlands has been made as to whether an informational event can be held about the work of ECI. This could for example be held after an ECI meeting (Karl-Michael Meinecke will maintain the contact).*

5 ISO TC 130 (meetings May in London and September in Sao Paulo)

a)-b) ISO 12647 + Amendment

An amendment has been submitted since the republishing of ISO 12647-2 that was reviewed and updated at the last ISO meeting. For this purpose colour values were gathered from various countries. The new amendment will be submitted as a DIS (Draft International Standard). Dr. Günter Bestmann has already generated generic characterisation data and a profile based on the new values, which can be tested (see 5c).

Further notes:

- *Development of a standard for digital proofing, ISO 12647-7 (Dr. Dolezalek)*
- *Development of a standard for soft proofing, ISO 12646 (Andreas Kraushaar)*

c) New characterisation data (FOGRA39)/ new ICC profile "ISO Coated"

Dr. Bestmann mentions that very good generic characterisation data can be generated with new benchmark values that match the new benchmark values (see 5a)-b). A presentation of this procedure will possibly take place on Saturday.

Summary of the discussion:

- *Extensive testing needs to be performed before new characterisation data and profiles can be published*
- *Spectral data of the ECI chart should be gathered during these test prints*
- *Which tool is to be used for the genration of the future profile?*
- *Decision: A group of experts will prepare and conduct the generation of the new profile un-*

der the supervision of Florian Süßl. Volunteers so far: Andreas Kraushaar, Dr. Hanno Hoffstadt, Michael Hilmer, Karsten Ackmann, Elie Khoury, Andre Schützenhofer, Ronald Bühler, Dr. Günter Bestmann. Further volunteers please contact Florian Süßl directly.

Further notes:
Ulrike Cremer mentions the announced availability of the new Ifra profile for beginning 2006. This is based on the same characterisation data, but uses different separation settings. The new profile can be tested as of the end of November.
Volunteers for the tests: Michael Adloff, Andreas Kraushaar, Michael Hilmer, Karsten Ackmann, Andre Schützenhofer, Maren Schmidt, Roland Bühler, Jörg Schober.

d) Proofing standards
Dr. Hanno Hoffstadt mentions the draft for ISO 12647-7 (standardisation of digital proofing). The ECI working group Proof provided input for the criteria list.

e) Measurement targets
The layout of the ISO12642 chart has been adjusted. ISO12646-2(ECI2002) now conforms to IT8/7.4.

f) Measurement, light sources, optical brighteners: In order to get a grip on the optical brighteners in measurement (ISO 13655) and viewing conditions (ISO 3664) the following methods are recommended:

1. Viewing light and measurement device have an identical, ideal UV proportion (very expensive)
2. Measurement and viewing with UV-Cut (retrofitting sign-off lighting with polycarbonate foils). Signing off in daylight becomes very difficult.
3. Development of a UV scale (e.g. paper samples), establishing the amount of brightener and finally measurement of the sample using a UV-Cut filter plus calculating the UV proportion into the measured data. In this case viewing is in a viewing booth with regulated UV proportion

The methods 2 and 3 have been suggested to ISO; currently method 2 seems more probable for the implementation.

g) Evaluation/ revision of Ugra/Fogra Media Wedge
A presentation prepared by Mr. Bestmann cannot be presented due to lack of time. Instead he briefly presents the most important issues:

Improved evaluation methods for the existing Media Wedge are necessary to achieve a closer match between the measured values and the visual appearance:
- *Additional viewing of the dot gain calculated from the Lab values*
- *Additional weighted assessment of Delta E values by areas of the colour space*
- *Development of a quality index*

During a possible revision of the current Media Wedge the following proposals could be accommodated:
- *Addition of 20% tonal value patches*
- *Addition of trapping patch CMY*
- *Addition of trapping patch CMYK (to check ink acceptance)*
- *Addition of grey balance patches such as GrayCon*

A working group "AK-Medienkeil" (WG Media Wedge) will be formed, which will discuss the above proposals with FOGRA. Volunteers for the working group are: Ulrich Schmitt, Prof. Ronald Schaul, Dr. Günter Bestmann, Andre Schützenhofer, Erwin Widmer, Florian Süßl, Andreas Kraushaar.

h) Color data exchange format (Cdxf)
GretagMacBeth has been trying to establish the Cdxf as a standardised file exchange format. Due to the fact that there is currently no involvement from GretagMacBeth in the relevant ISO committees it seems likely that the Americans will manage to establish the CGats.17 format (contains measured data only), which is already an ANSI standard. Cdxf, however, is far more extensive. Andreas Kraushaar requests feedback in time to be able to take a position.

i) PDF/X-4 (ISO 15390-7); PDF/X-5 (ISO 15390-8)

PDF/X-4 contains various amendments (e.g. transparencies, layers, JPEG2000). The goal of PDF/X-5 is to omit certain parts of a PDF during transfer (e.g. Fonts, OPI-Images). In addition the output intent can be omitted in order to keep file sizes to a minimum (e.g. newspaper ads). PDF/X-5 is also intended to enable the use of multi-channel profiles as output intent. It is important to understand that PDF/X-4 and PDF/X-5 will not replace older PDF/X versions.

6 Strategy of distribution and licensing of ECI products

a) General strategy: All findings of ECI should be distributed as widely as possible.
b) See point 3
c) Availability of the ECI RGB images in Altona Test Suite (ATS): Following a brief discussion the following was voted on: The ECI RGB images in ATS will be provided under the condition that: The images may not be redistributed in altered or unaltered form. The images may not be commercialised. Result of the voting: one dissent, one abstention, remainder in agreement.

7 Reports from the working groups (AK)

a) Web Offset: The working group aims to complement the existing specifications for web offset printing conditions (LWC) with the following paper classifications:

– *SC = super calendared*
– *MFC = machine finished coated*
– *INP = improved newsprint*

In order to draft the SC profile, test prints have already taken place at five European web offset printers on four different SC papers. A visual assessment of the results showed a very constant reproduction. Averaged measurement data was used as a basis for an ICC profile that is currently being tested. The proofs generated with the ICC profile are too yellow. The cause of this is currently being investigated. The working group is still to define the separation settings for the profile. The SC profile is expected to be available for the beginning of 2006.

The last meeting of the working group was beginning of September; the next is scheduled to take place February in Brussels. The findings of the "new" offset paper classifications are intended to be incorporated in the ISO classifications.

b) Gravure

The event "Tiefdruck Spezial" (Gravure Special) on 23rd/24th June 2005 in Düsseldorf was held in cooperation with the ECI working group Gravure. In addition to the already existing gravure standards (SC, LWC, MF) an ICC profile and characterisation data have been developed for the paper classification HWC (high weight coated). These can be downloaded from the ECI web site. A report from the working group Gravure (submitted by e-mail by Bernhard Schmidt) has been included in as an attachment.

c) Proof Evaluation

The last meeting of the working group Proof Evaluation was held in the forefront of the ECI meeting in March. Here plans were made to devise a user guide. Meetings have taken place with manufacturers of proofing systems to discuss and establish a list of criteria.

Dr. Hanno Hoffstadt reports of a test conducted with Jürgen Seitz at GMG. Two purely instrumental proof adjustments were created; the first for D50 (standard) and the second for the light spectrum of the viewing booth at GMG. The expectation was that the second adjustment would visually match the printed reference print more closely. A significant difference could not be detected between the two adjustments when printed on an EPSON 4800. Further prints of the adjustments on an EPSON 4000 yielded the same results.

The next step is to complete the catalogue. The working group will not be able to focus on the topics metamerism and fluorescence any further. The working group can develop concrete suggestions for objective visual assessments based upon a sequence

of images of differing quality (in terms of the annex of ISO 12647-7 that was added in Sao Paulo).
(Presentation attached)

d) Coating
Members of the working group are, amongst others, representatives of the two large German coating specialists Achilles and Nickert and the student Victoria Hartwig from HdM working on a thesis at Achilles to this topic. The aim of the working group is to provide better predictability of varnishing and coatings by simulating the effects on screen and in proofs. In doing so standard profiles are to be generated and provided to the public for matte and gloss varnishes that are adapted from existing standard profiles such as ISOcoated.icc. Unfortunately it will not be possible to produce varnished prints of the by now aged Altona test prints and measure these. Instead a method is to be devised by which the characterisation data of unvarnished prints is to be used as a basis for the calculatory addition of the varnishes (i.e. generating synthetic measurement data). Earlier research by Dr. Hanno Hoffstadt has shown that varnishing increases dot gain and matte foils introduce a scattered light quota. Further investigation needs to be conducted for situations when an overprint of several colours occurs in screened areas to see if colour is influenced. A testform was defined in June containing technical and visual assessment elements. This was printed and varnished (several gloss and matte foil types) at Achilles. Several unvarnished sheets of this production and various other samples were varnished by Nickert in September (one gloss and one matte lamination respectively). Measurements were made before and after the lamination of the same sheets. Preliminary results show that two-colour overprints cause a slight interaction (the additional dot gain decreases).
(Presentation attached)

e) Digital photography
The manual "Digipix" has been printed and was included as a supplement in the June edition of "Profi-Foto". Digipix has been available on the ECI web site since December 2004 and has already been downloaded a couple of thousand times. A translation into English and an online provision of this in form of a PDF are to follow. Advertisements in the publication could be used to finance the costs of translation, which are estimated to be approx. 3000,- EUR. Jörg Schober will ask a colleague whether he can do the translation. Dietmar Wüller has been officially authorised to coordinate the financing of the translation.

Further tests have been conducted with the monitor test image. As soon as the corporate identity has been specified a new version will be provided on the web site.

A set of RGB test images will be developed before the next ECI meeting and presented there.
The enquiry placed with Dietmar Wüller whether ECI-RGB is to be incorporated into the ISO as the standard colour space has previously been put on hold due to current discussions about an update of ECI-RGB (e.g. to L-Star-RGB). Currently, however, there seems to be no need to update ECI-RGB. As long as no clear advantages are to gained from an update, ECI-RGB will remain as version 1.0.

End of session on Friday: 6.35 pm.

(Continuation on Saturday)

Minutes from ECI-Member-Meeting 15.10.2005
(Continuation from 14.10.2005)
Hosted by Bundesverband Druck und Medien (bvdm) in Wiesbaden

Attendees:

1. Adloff, Michael (Vignold Group, Ratingen)
2. Bestmann, Dr. Günter (Heidelberger Druckmaschinen, Kiel) – until 12.15 pm
3. Bühler, Roland (Springer & Jacoby Digital, Hamburg)
4. Drümmer, Olaf (Callas Software, Berlin)
5. Hoffstadt, Dr. Johannes (Color Solutions Software, Ulm) – until 1.10 pm
6. Khoury, Elie (Alwan Color Expertise, F-Sainte Foy les Lyon)
7. Meinecke, Karl Michael (bvdm)
8. Rossée, Jan-Willem (Laser Soft Imaging, Kiel)
9. Schaul, Prof. Ronald (HdM, Stuttgart)
10. Schmidt, Maren (repro 68, Hamburg)
11. Schoeppy, Rainer (Schoeppy freeconsultants, Gründlau)
12. Schützenhofer, Andre (CON.CEPT.PRO, Cologne)
13. Süßl, Florian (MetaDesign, Berlin)
14. Widmer, Erwin (Ugra, CH-St. Gallen) – until 1.10 pm

Start: 9.10 am

Minutes: Michael Adloff (German version), translation via Jörg Schober)

Continuation of themes from Friday evening

7f) Workflow working group

Roland Bühler presents the results of the first meeting. A method has been developed that allows the splitting of complete workflows into individual modules. Herein "abstract modules" represent a template that can be transferred to concrete modules for individual steps of a process (e.g. colour transformation of an image from ECI-RGB to ISOcoated). The complete workflow can be pieced together, similar to a puzzle, as needed. This method offers superior communication due to a defined description of every single step within a workflow. In addition this form of description (or history) is intended to be included with transferred files, e.g. in the form of JDF.

(Presentation attached)

8 Affiliations and activities with other organisations

a) Ifra
Ulrike Cremer was unable to attend the second part of the meeting.

b) ICC
Elie Khoury reports amongst other topics on the redesign of the web pages (www.color.org). Information is now structured much better.
The following working groups exist within the ICC:
- *Workflow*
- *Proof certification: The ICC is supporting standardisation by communicating the different approaches*
- *Colour management in moving images*
- *Digital photography*

A discussion emerges about version 4 of the ICC-Standard and the ICC in general. Resume of the most important statements:
- *Version 4 is not an improvement in terms of quality; it is a much more precise description.*
- *Heidelberg will be able to support and generate Version 4 profiles*
- *The advantage of Version 4 is the exact definition of the black point in the PCS.*
- *The generation of the LUT of the colorimetric rendering intent has been defined (this needs to be identical to the characterisation data)*
- *The output of ICC is judged to be less "effective" than that of e.g. ECI*
- *ICC seemingly more a forum for manufacturers, ECI for users*
- *The desire exists for ICC to focus more effort on unresolved issues of CM (such as CM with greyscale images)*
- *Olaf Drümmer, together with Dr. Günter Bestmann, Dr. Hanno Hoffstadt and Elie Khoury will try to draw up a document describing the unresolved areas of the ICC, PDF and Postscript specifications.*

c) bvdm
Karl-Michael Meinecke refers to page 21 of the bvdm annual report (copies on tables), where several publications and services connected to PSO are listed (e.g. DIN-CD-ROM, certification, PSO-CD-ROM). Furthermore an event in cooperation with gwa and f:mp is in planning. Previously a gwa event with the participation of several ECI members has taken place, where a "gwa-ISOcoated" profile was presented. At later meetings, however, it was established that a gwa-labelled profile is unnecessary. Instead the revision of ISOcoated will take place in cooperation with gwa.

d) FOGRA
Both Ulrich Schmidt and Andreas Kraushaar were unable to attend the second part of the meeting.

e) Ugra
Since the beginning of 2005 Ugra has repositioned itself as an independent organisation and is no longer affiliated with EMPA. Along with the laboratory for paper tests the focus has been placed on the sales of the Ugra products and consulting. In connection with the repositioning the web site has been relaunched.
Due to the lack of ISO mirror committees (e.g. DIN in Germany) the initiative "swiss4color" has been founded in order to discuss the results of ISO TC 130 in Switzer-

land. Extensive information can be found on Ugra's web site.
Due to the fact that the ECI RGB images from ATS have not been available to date, Ugra is developing a set of RGB test-images. A short recitation by Oswald Grütter addresses this (see attachment). Dr. Hanno Hoffstadt expresses the wish of input for the working group Proof in connection with the topic of visual references (note: Erwin Widmer is a member of the working group Proof).

f) PDF/X-ready
PDF/X-ready is an initiative initiated by print-online (a platform for data distribution of adverts in Switzerland). The long-term goal is the distribution of PDF/X files with contained RGB images. Seemingly the ISO has not been defined accurately enough for this purpose.
PDF/X-ready is a member of the Ghent PDF Workgroup. PDF/X-ready certifies users for creating PDF/X files correctly. In search of a suitable testform the ATS and Kensington testforms were evaluated as not being extensive enough, therefore the Ghent-PDF-Output-Testform will be anticipated. Stephan Jaeggi is acting as intermediary. For the time being CMYK data is used as standard, in future RGB is to be added to the standard.

g) Verband Druck und Medientechnik
Karl-Michael Meinecke presents the web site of the Austrian association (www.druckmedien.at). This is primarily used for the distribution of publications of bvdm. In addition seminars and certifications assisted by German experts are offered. Mr. Handler was invited to the meeting in his function as ECI liaison but could not attend.

h) GWA
Michael Hilmer could not attend the second part of the meeting. Several discussions have taken place with GWA in the past weeks. The discussions have shown that it would be wise to revive the contact to GWA, due to contacts with previous ECI members (such as Gabi Ständer) having declined.

9 bvdm project "CM in DTP applications"

Karl-Michael Meinecke reports from the project. As a result of extensive research a technical report has been completed that is to be forwarded to manufacturers (Quark and Adobe). Furthermore a user guide has been written, which is to be published. Samples of both are handed out. The extensive projects are to be seen more as a kind of quality analysis of the software applications. It is yet to be considered whether the technical report will be made available to selected experts on request.

10 New working groups

a) Working group "Softproof"
Andreas Kraushaar is to be approached as to whether he can chair the working group.

b) Gracol vs. ISO WG
To be discussed later.

II-1 Future of DPF

Summarisation of the discussion:

- *Possibly a "Digital Proof Forum light" can take place after the DPF; e.g. Paris in November*
- *Soft proofing should be a main topic*
- *Possibly evaluate and exhibit proofs sent in or brought along by users*
- *Possibly evaluate and exhibit prints sent in or brought along by users*
- *Evaluation of special patches within images*
- *Demonstration of metamerism effect with different viewing booths*
- *Possibly set up a complete room with D50 and office lighting and equip for variable lighting*
- *Measurement device tests*
- *Possibly add further testform to evaluate transparencies and layers (PDF/X-4)*
- *Possibly evaluation of proofing software user interface*
- *Possibly extend alliance to gwa and f:mp in order to address print buyers better.*

Olaf Drümmer thanks all present, wishes a safe journey home and ends the meeting at 1.45 pm.

Minutes from ECI-Member-Meeting 14./15.10.05
Attachment

Attachment to the minutes of ECI-Member-Meeting 14/15.10.2005
Hosted by Bundesverband Druck und Medien (bvdm) in Wiesbaden

- *Action Items*
- *E-Mail from Bernhardt Schmitt related to point 7d*
- *Presentation by Dr. Hanno Hoffstadt related to the points 5d, 7c, 7d*
- *Presentation by Roland Bühler related to point 7f*
- *Presentation by Oswald Grütter related to point 8e*

Action Items

Date	Topic	Responsible	Status
14/15.10.2005	Distribution of working group and liaison reports latest 14 days before next meeting	Working group and liaison responsibles	New
14/15.10.2005	Provide templates (InDesign, Word, Powerpoint...) in yet to be approved corporate design	Jörg Schober + Karsten Ackmann, Karl-Michael Meinecke, Maren Schmidt, Roland Bühler, Andre Schützenhofer, Prof. Ronald Schaul, Jan Rossée	New
14/15.10.2005	Generate and test new ISOcoated ICC profile	Florian Süßl + Andreas Kraushaar, Dr. Hanno Hoffstadt, Michael Hilmer, Karsten Ackmann, Elie Khoury, Andre Schützenhofer, Ronald Bühler, Dr. Günter Bestmann	New
14/15.10.2005	Generate and test new ISOnewspaper ICC profile	Ulrike Cremer + Michael Adloff, Andreas Kraushaar, Michael Hilmer, Karsten Ackmann, Andre Schützenhofer, Maren Schmidt, Roland Bühler, Jörg Schober	New
14/15.10.2005	Formation of working group "Media Wedge" with the goal of improved evaluation and modification	Ulrich Schmitt + Prof. Ronald Schaul, Dr. Günter Bestmann, Andre Schützenhofer, Erwin Widmer, Florian Süßl, Andreas Kraushaar	New
14/15.10.2005	Provide ECI-RGB images from ATS	Florian Süßl	New
14/15.10.2005	Provide ICC profile for SC printing conditions (web offset) MFC and INP will follow	Florian Süßl (WG Web offset)	New
14/15.10.2005	Complete Proof-Guideline	Dr. Johannes Hoffstadt (WG Proof)	New
14/15.10.2005	Develop methods for better predictability of varnishing	Dr. Johannes Hoffstadt (WG Coating)	New
14/15.10.2005	English translation of Digipix	Dietmar Wüller (WG Digital Photography)	New
14/15.10.2005	Provide modified monitor test image	Dietmar Wüller (WG Digital Photography)	New
14/15.10.2005	Develop RGB test images	Dietmar Wüller (WG Digital Photography)	New
14/15.10.2005	Document unresolved areas in ICC, PDF and PS specifications	Olaf Drümmer + Dr. Günter Bestmann, Dr Hanno Hoffstadt, Elie Khoury	New
14/15.10.2005	Formation of WG Soft-Proof	Andreas Kraushaar	New

E-Mail from Bernhardt Schmidt

The following is some information from the working group Gravure:

The last session of the working group took place on 2nd February. The next meeting is planned on take place on 8th November in Leeds during the ERA meeting.

This years activities are as follows:
- 02.02. PSR-Print on ultra white LWC paper (70gsm Bavaria Supra by MD)
- Existing proof adaptations should be matched closer to each other (e.g. DuPont to Iris)
- New proofing systems with a broad installation in gravure to be adapted to the established standards both visually and by measurement
- At the next working group meeting a method will be sought to make proof matching within the working group more effective

The following proofing profiles are currently being worked on, being revised or completed:
– ICC profile for HWC standard – available from the ECI server and integrated in the Altona package

- HWC proofing profile for:
    - Epson 4000/7600/9600 with GMG – beta version available and in use
    - Epson 4800/7800/9800 with GMG – work in process
    - Iris 2/4-Print with GMG – work in progress
    - Iris Veris with GMG – work in progress
    - DuPont AQ – beta version available and in use
    - DuPont B series – work in progress
    - CGS with Canon ?? – work in progress?? No news for quite a while from CGS

- PSR-ECI-LWC
    - Iris 2/4-Print with GMG – Used as reference proof system for this standard
    - Epson 4000/7600/9600 with GMG – in use on the market
    - Epson 4800/7800/9800 with GMG – work in progress
    - Iris Veris with GMG – in use on the market as beta version
    - DuPont AQ – undergone revision
    - DuPont B series – work in progress
    - CGS with Canon ?? – work in progress?? No news for quite a while from CGS

- PSR-ECI-SC
    - Iris 2/4-Print with GMG – Used as reference proof system for this standard
    - Epson 4000/7600/9600 with GMG – in use on the market
    - Epson 4800/7800/9800 with GMG – work in progress
    - Iris Veris with GMG – work in progress
    - DuPont AQ – undergone revision
    - DuPont B series – work in progress
    - CGS with Canon ?? – work in progress?? No news for quite a while from CGS

- PSR-ECI-MF
    - Iris 2/4-Print with GMG – Used as reference proof system for this standard
    - Epson 4000/7600/9600 with GMG – in use on the market

- Epson 4800/7800/9800 with GMG – work in progress
- Iris Veris with GMG – work in progress
- DuPont AQ – undergone revision
- DuPont B series – work in progress
- CGS with Canon ?? – work in progress?? No news for quite a while from CGS

Presumably there will be an update on these activities in the Working Group Gravure area of the ECI server after the working group meeting in Leeds.

My estimate is that there will not be a satisfactory solution on the topic of the characterisation data for PSR-ECI-LWC. The fact remains that there are purely visual deviations amongst the different proofing systems. We will have to accept these. If we sign off the characterisation data from the Iris, a proof generated with Best on the Epson 4000 will differ to that from an Iris. Unfortunately that can't be changed. Possibly the working group Proof can come up with a solution on how this can be improved. In the meantime I suggest we leave the standards unchanged on the server.

I hope to be able to participate at the next meeting.

Regards,

Bernhard Schmidt

Minutes from ECI-Member-Meeting 14./15.10.05

Attachment

Presentation by Dr. Hanno Hoffstadt related to the points 5d, 7c, 7d

ECI Meeting 2005 Wiesbaden

[5d] Work on Proofing Standards

[7c] Proofing Working Group

[7d] Coating Working Group

Hanno Hoffstadt

Color Solutions Software

ECI Meeting 2005 Wiesbaden

Summary: Work on proofing standards

- FOGRAcert used as basis for new ISO 12647-7 work item proposal (04/2005)
- Stable ECI criteria merged into proposal (04/2005)
- New work item discussed and accepted in ISO TC130 WG3 meeting, London (05/2005)
- Draft is currently under revision due to changes from ISO meeting in Sao Paolo (10/2005)

- During FOGRAcert applications, ISO criteria are being tested informationally (thanks to Andi Kraushaar)
- Hard to achieve drying and gloss criteria, gloss appears less relevant; some others are too "easy"
- Long-term tests missing (feasibility)
- Visual match not adressed (not objective, not repeatable; which reference?)

- Therefore acceptance is difficult for everyone who currently relies on visual matching, e. g.
  – PPA Proof4Press, UK
  – SWOP, USA
  – ECI gravure WG too, I suppose...

We need an approach for the **visual match problem!**

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Visual match needs objective methods (maybe feasible), and a visual reference (oops):

Why not a printed reference manufactured on a press?

- is **always an individual reference**, never precise enough for a ISO reference printing condition
- **limited shelf-life** (depends strongly on paper type)

A proofer is much more flexible and controllable.

Why not print a reference on some kind of "reference proofer"?

- limited availability of a given printer model (short product cycles)
- choice of reference proofer is a **political issue**
- must match the reference BOTH by **colour measurements** AND by **visual inspection**

Killer argument:
A proof which is a near-perfect match ($\Delta E < 1$) by measurements is usually not visually perfect!

Pragmatic approach (ECI gravure WG): visual edits for selected high-end proofing systems used as reference
Scientific approach (research project): find reasons for instrument-vs.-visual difference, minimize if possible

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ISO 12647-7 draft

"Graphic technology – Process control – Part 7:
Off-press proofing processes working directly from digital data"

Influenced by ECI ideas (and partly vice-versa...) on:

- Data delivery (PDF/X-1a, PDF/X-3)
- Proofing substrate colour and gloss (covers light fastness and gloss of unprinted substrate)
- Coloration of printed parts (covers colour and light fastness of solids, tolerances on other colours, homogenity of 4-colour greys)
- Repeatability (24 h, i.e. short-term only)
- Ink drying properties (by wiping method)
- Ink set gloss
- Reproduction of vignettes
- Image register and resolving power (positive and negative type and reverse lines)
- Margin information (including nozzle test)
- Gamut

ECI Meeting 2005 Wiesbaden

[5d] Work on Proofing Standards

[7c] Proofing Working Group

[7d] Coating Working Group

Hanno Hoffstadt

Color Solutions Software

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Summary: Proofing working group

- Work on "User Guide" (Michael Adloff, Renate Rewer, Hanno Hoffstadt) (02/2005)
- "List of Criteria" discussed with vendors (03/2005), switched to English version (04/2005)
- Ranking of possible causes for instrumental-vs.-visual mismatch (06/2005, at bvdm Gravure Special)
  (Results: see next slide)

- Colorimetry says: we all make a systematic error in instrumental proof matching
  – we match for D50 (and maybe proof and print match perfectly)
  – but we view the result under fluorescent light (no viewing booth has D50; potential effect ≈2 ΔE)

- GMG, Jürgen Seitz: visual edits are typically in the order of 2 ΔE
- Test at GMG to match by instrument once for D50, once for the actual viewing booth (07/2005)
  Results on Epson 4800: inconclusive, both almost perfect without visual edits
- Test repeates for the Epson 4000 (because ink is more sensitive to metamerism, 08/2005)
  Unfortunately same result

- Note that measuring fluorescent light spectra is critical!
  May need better hardware than what was available (Gretag Lightspex, JETI specbos)

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“The visual side: ranking effects

Putting it all together...

- Metamerism: potentially big effect – much better with appropriate D50 simulators
- Geometry: differences due to gloss are a problem and make viewing difficult
- Field of View: changes only in large areas – don’t view uniform colours from too close
- Observer: moderate effects – group viewing is more reliable
- Fluorescence: with current papers not important for gravure proofing

To summarize:

If your colour vision is okay and you’re using proofing papers with similar gloss and without brighteners, the **lighting is the single most important factor** to worry about.”

(Hanno Hoffstadt, bvdm Gravure Special 2005)

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To do list

Finish user guide!

Metamerism criteria:

– we cannot match the spectral properties of press inks for gravure, offset, flexography, spot colours...
– so how "vulnerable" is the proof if you have "wrong" illumination?

Fluorescence:

– how strong is the impact of different amounts of optical brighteners
– for the colour measurement?
– for the visual appearance?

Objective Visual Evaluation:

– either find and get rid of the reason why instruments and eyes disagree
(so that we can rely on colour measurements only, as we would so much like to)
– or define "semi-objective" methods based on group observations (e. g. ranking)
AND solve the problems around producing the visual reference

ECI Meeting 2005 Wiesbaden

[5d] Work on Proofing Standards

[7c] Proofing Working Group

[7d] Coating Working Group

Hanno Hoffstadt

Color Solutions Software

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Summary: Coating working group

- Members: several ECI members,
  – Achilles and Nickert, German print finishing companies
  – Ebner & Spiegel and Clausen & Bosse, German book printers
  – HdM student Victoria Hartwig (diploma thesis done at Achilles)

- Design of test form with new prediction test element, ECI 2002 charts, visual test elements (06/2005)
- Press run scheduled at C&B, but canceled due to press problems (07/2005)
- Successful press run at Achilles, coating done at Achilles (two glossy and two matte OPP films)
- Measurements before and after coating (Victoria Hartwig, 08/2005)

- New method found to analyze ink interaction which involves ICC device link profiles
- Subsequent press run at Achilles to test compensation by imagesetter curves (09/2005)

- Second set of sheets coated at Nickert, measurements before and after coating (09/2005)
- Analysis of two-color overprints (10/2005)

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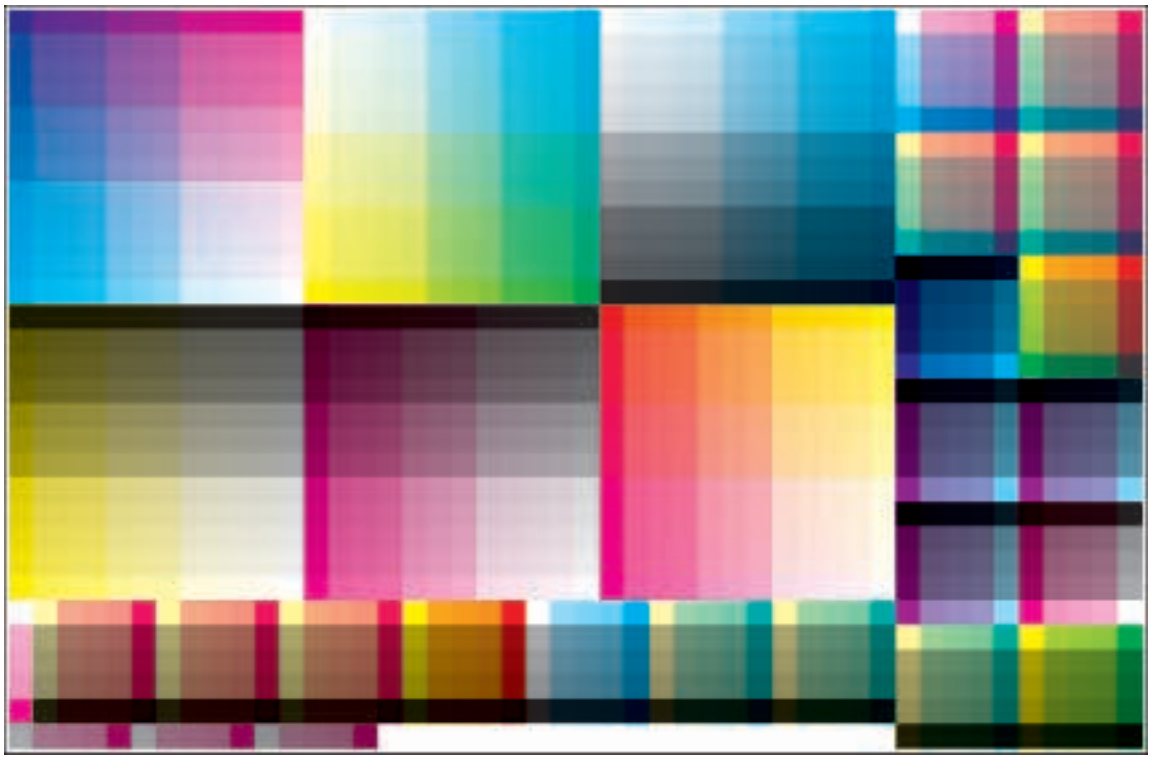
New prediction test element

- Contains all CMYK two-color overprints at 0 – 7-10-13-16 – 40-46-52 – 70-74-78 – 100%
- Contains all CMYK three-color overprints at 0 – 40-46-52 – 100%
- Coating causes additional dot gain: 40% C patch on a coated sheet looks like 46% C on uncoated sheet
- General idea: see what the coated print at 0-7-10-40-70-100% combinations looks like
  – find same colour by interpolation on the uncoated print (we expect 3–6% additional dot gain)



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Next steps

- Discuss results of prediction element
- Compare accuracy to ECI 2002 data (much coarser grid)
- Analyze three-color overprints, adjust model?

- Find suitable proofing material to simulate glossy and matte OPP films
- Visual assessment of images, correlation with ICC profile-based proofs
- Visual assessment of large colour patches (proof vs. press sheet)

- Larger-scale press run (2-3 different papers) at C&B with proper statistics
- need at least one other press run with FM-screening

Final goal:

- Create standard profiles or data sets for glossy coated and matte coated prints
  by model prediction (not by measurement because of consistency!)
  – ISOcoated_glossy_coating.icc (which applies to glossy OPP coating and glossy UV varnish)
  – ISOcoated_OPPmatte.icc

Minutes from ECI-Member-Meeting 14./15.10.05

Attachment

Presentation by Roland Bühler related to point 7f

European Color Initiative

ECI Working Group Workflow

Wiesbaden, 14./15.10.05

Current status - the differences.

Different workflow conditions in different production enviroments with different needs:

- Different applications for the same purpose
(e.g. XPress, InDesign, Word)

- Different application data formats

- Different definitions of subprocesses

- Cuts at different points in the whole process

- Different specifications of in- and output of subprocesses

Conclusion: There is no „master workflow“ for all kinds of print productions. The workflow depends on the product and the production enviroment.

Current status - the similarities.

Standardization on a high level:

- A bunch of ISO-standards
(e.g. ISO 12647-X, ISO 15930-X)

- A bunch of recommendations and helpful tools
(e.g. PSO, ECI Whitepaper, Digipix, Altona Testsuite)

- Standardized colorspaces
(e.g. ECI-RGB, ISOCoated, PSR)

- Open technologies
(e.g. ICC, XML, JDF, PJTF, data formats)

Conclusion: The standards and other similarities make it easy to keep a workflow open to others.

A standardized workflow should be...

- as flexible as possible
(in order to fit many different production enviroments)

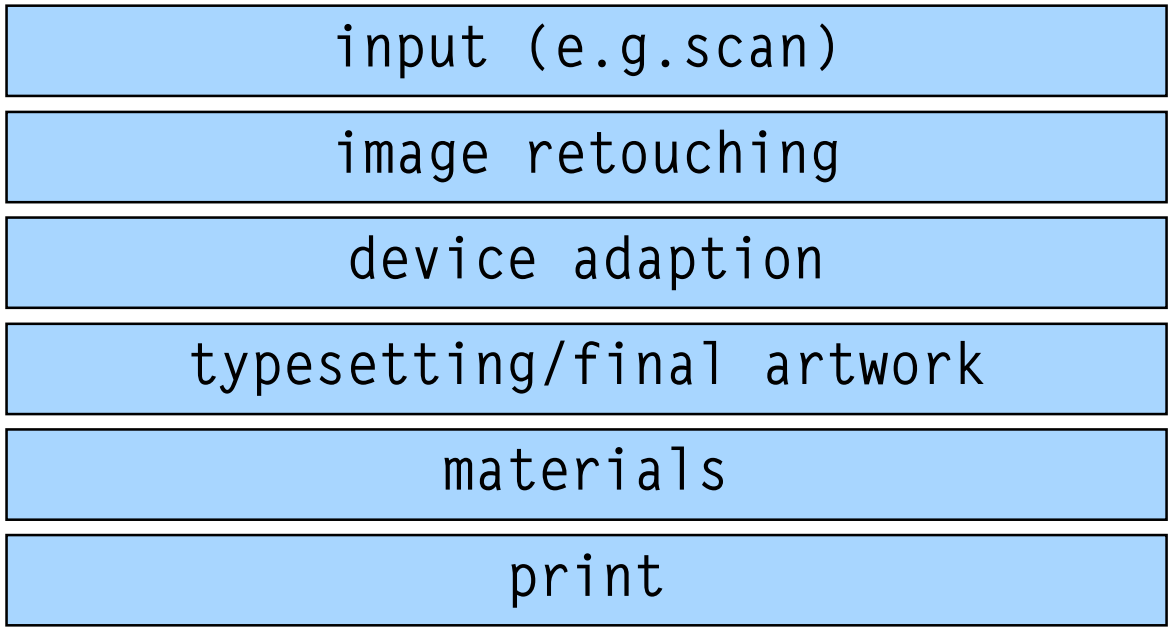
- as restrictive as necessary
(in order to comply with current standards and recommendations)

Flexible: a modular workflow structure.

- Modules which describe each workflow step (subprocess)
- Each module has an in- and output interface which allows the connection with preliminary and subsequent modules
- Individual workflows can be built with such „pieces of puzzle“

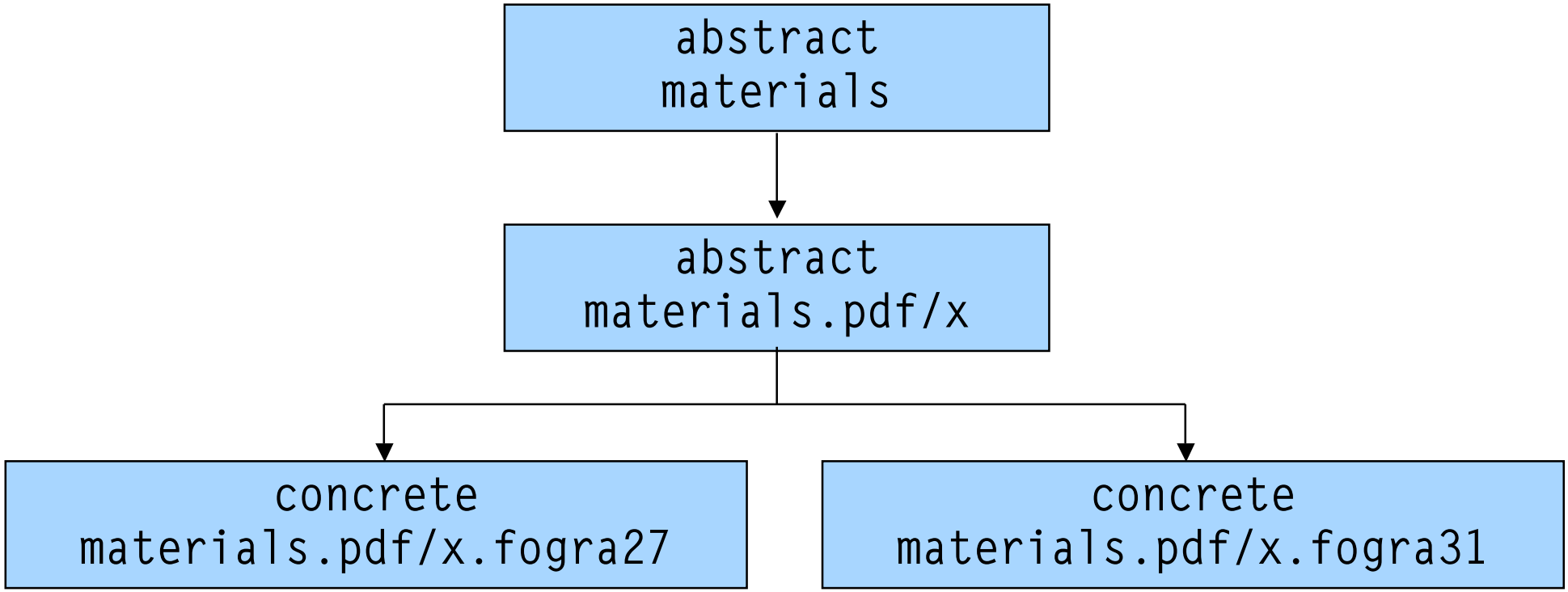
Flexible: a modular workflow structure.

How can these pieces of puzzle look like? An Example for some subprocesses:



Flexible: abstract modules. Restictive: concrete modules.

Flexible abstract modules are the basis for the creation of restrictive concrete modules. An example:



Flexible: a modular workflow structure.

Let‘s have a closer look at an abstract example module and its structure:

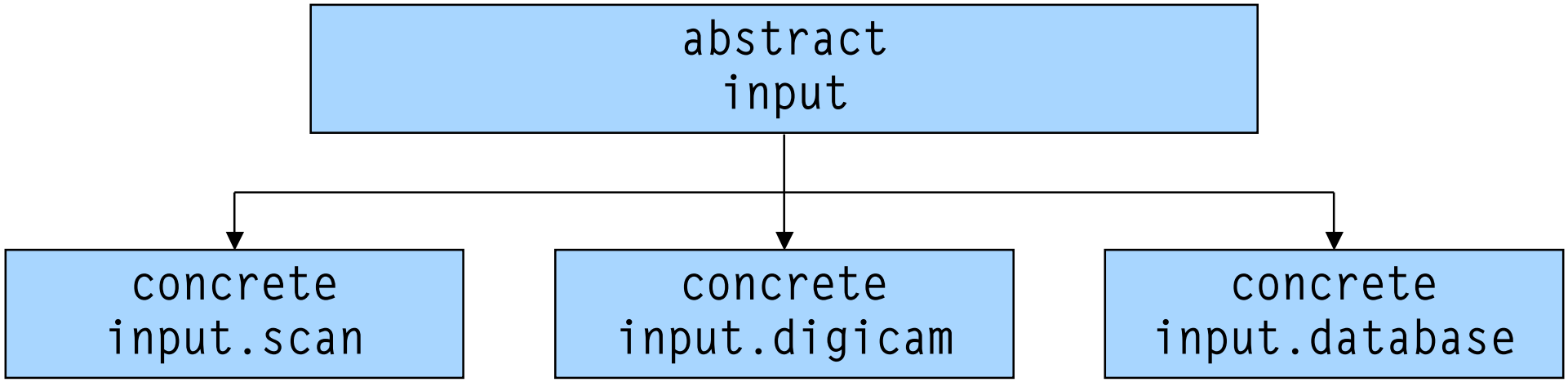
abstract module: materials	
input:	module typsetting/final artwork module device adaption
output:	attribute format attribute colorspace attribute spotcolors attribute xyz...
method:	a description how creation of printing materials should be done

Flexible: a modular workflow structure.

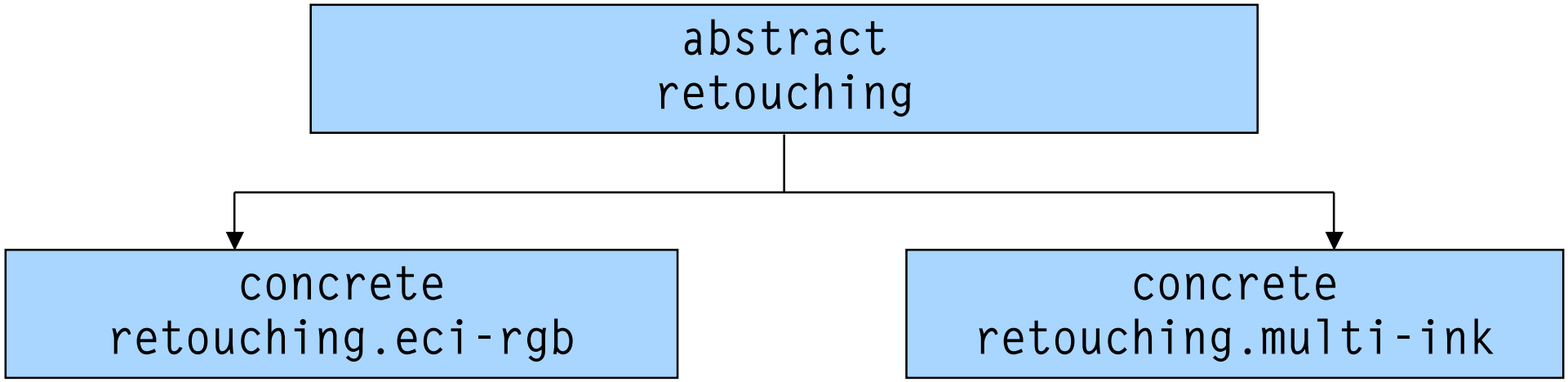
Let‘s have a closer look at a concrete example module and its structure.
An example which extends our abstract module:

concrete module: materials.pdf/x.fogra27	
input:	module typsetting/final artwork module device adaption.fogra27
output:	attribute format = pdf/x attribute colorspace = ISOcoated.icc attribute spotcolors = Pant. 4711C attribute xyz... = abc...
method:	a description how creation of pdf/x-3 for offset printing with coated paper should be done.

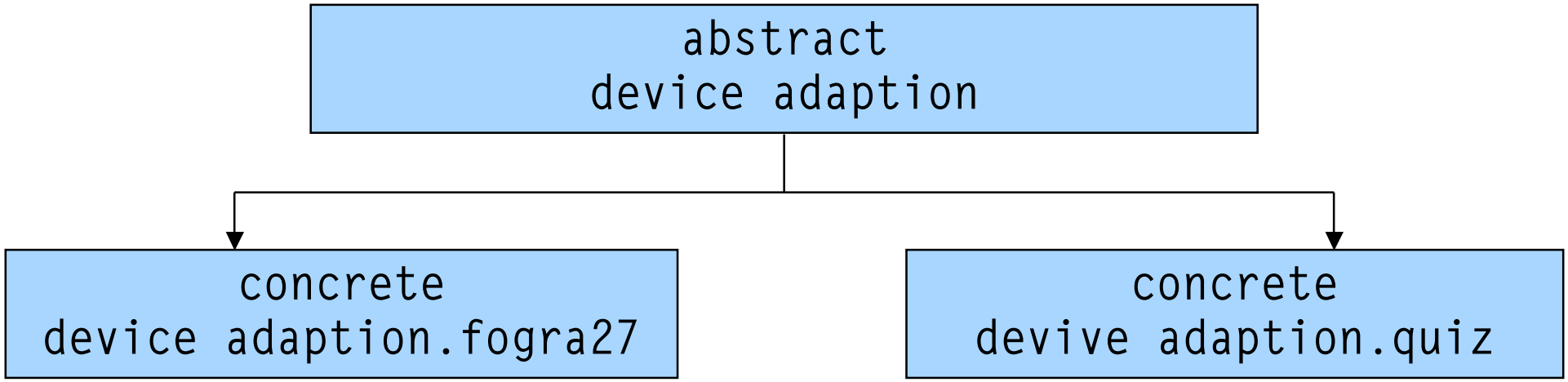
Some possible concrete modules.



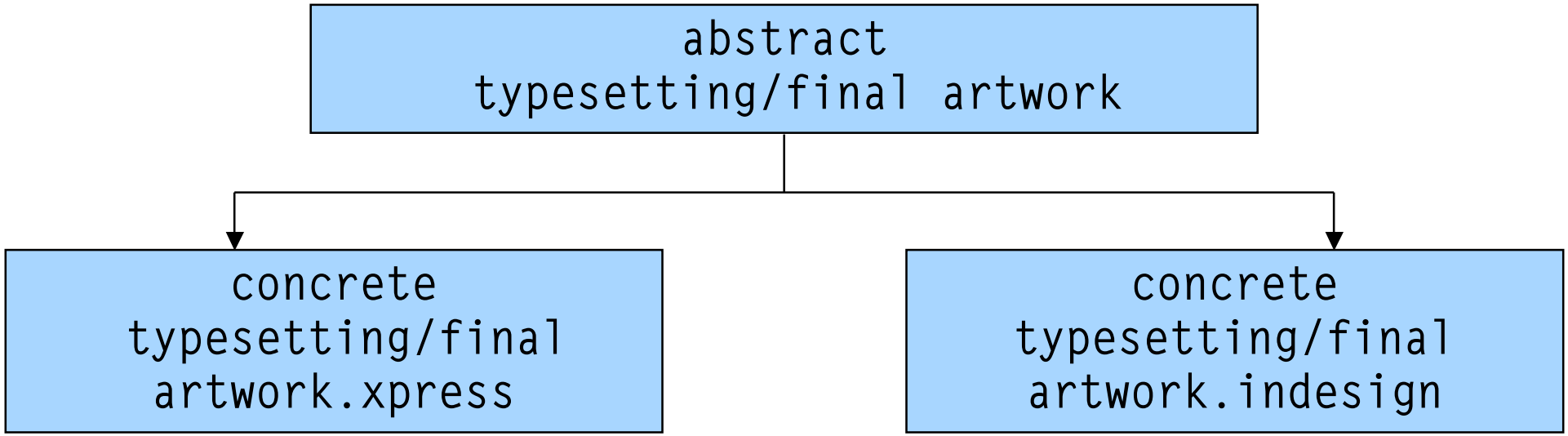
Some possible concrete modules.



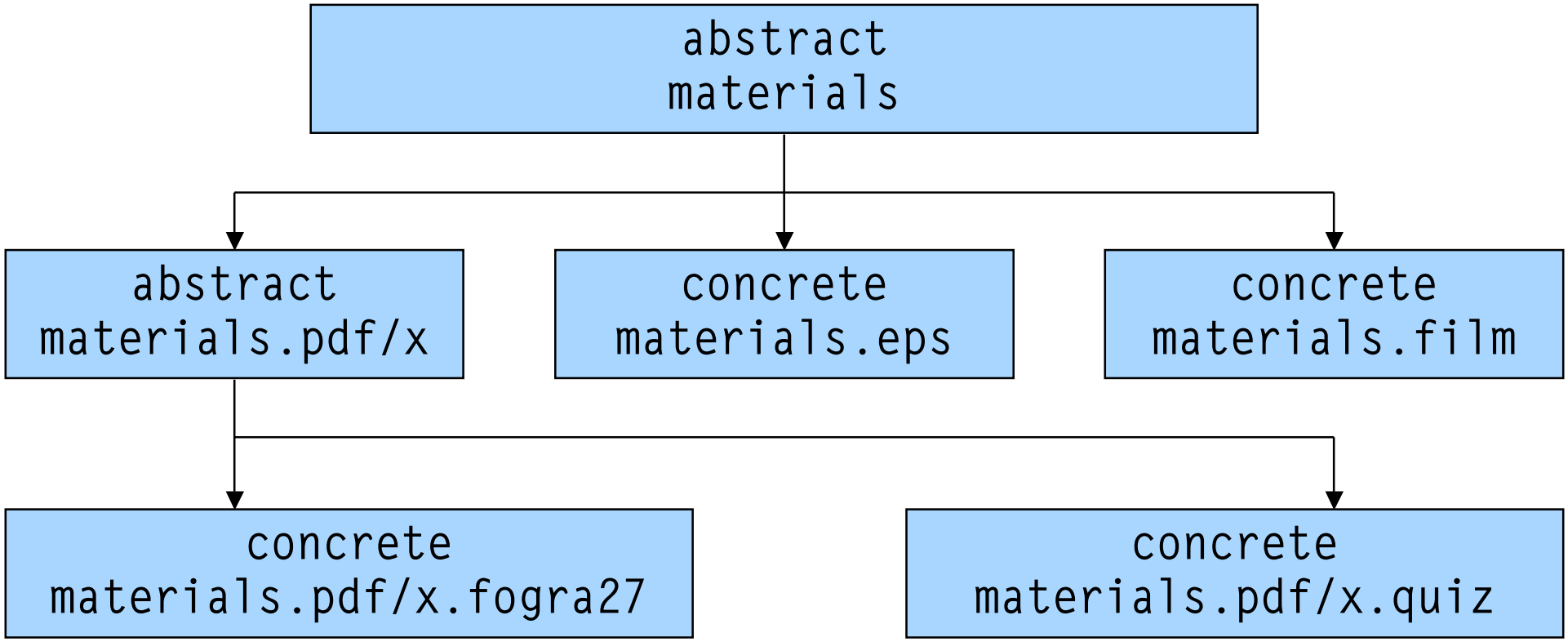
Some possible concrete modules.



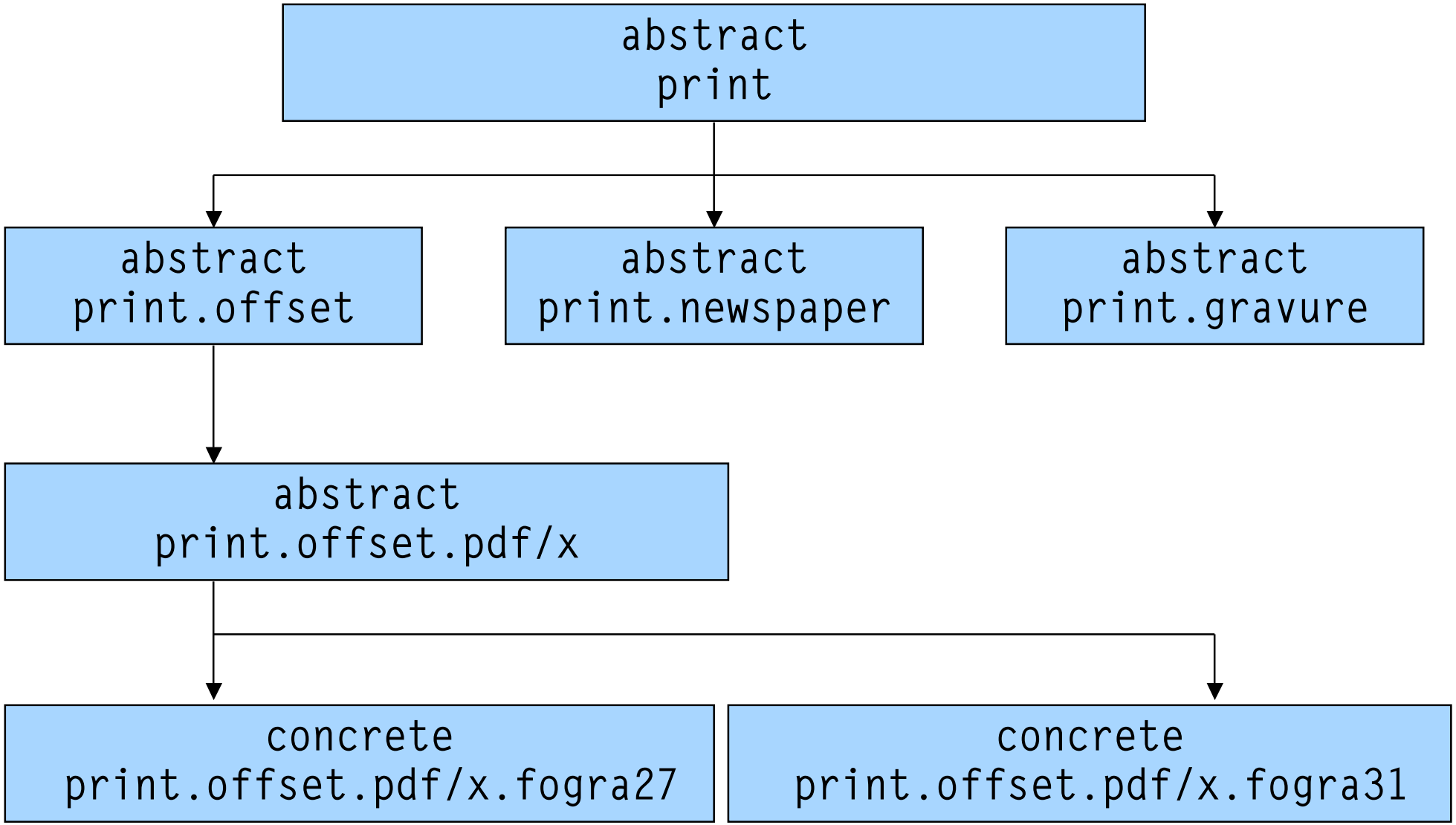
Some possible concrete modules.



Some possible concrete modules.



Some possible concrete modules.



A possible concrete workflow (draft).

1. input.scan.eci-rgb	
input:	*scanner*
output:	attribute colorspace = ECI-RGB attribute resolution = 305 dpi attribute format = tiff attribute ...
method:	description of subprocess

2. retouching.eci-rgb	
input:	module input.scan.eci-rgb
output:	attribute colorspace = ECI-RGB attribute resolution = 305 dpi attribute format = tiff attribute ...
method:	description of subprocess

3. device adaption.fogra27	
input:	module retouching.eci-rgb or module input.scan.eci-rgb
output:	attribute colorspace = ISOCoated attribute resolution = 305 dpi attribute format = tiff attribute ...
method:	description of subprocess

4. typesetting/final artwork.indesign	
input:	module device adaption
output:	attribute colorspace = device adaption.colorspace attribute spotcolors = pant. 4711 attribute ...
method:	description of subprocess

5. materials.pdf/x.fogra27	
input:	module typesetting/final artw.
output:	attribute colorspace = ISOCoated attribute spotcolors = typesetting/final artw.spotc. attribute ...
method:	description of subprocess

6. print.offset.pdf/x.fogra27	
input:	module materials.pdf/x.fogra27
output:	*a print product*
method:	description of subprocess

Which modules should be supplied by the ECI?

- A set of abstract modules

- A set of concrete modules for relevant workflows based on current standards and recommendations

- Each module consists of the following parts:
    - Definition of input modules
    - Definition of output parameters
    - Detailed descrition of the (sub-)process (method)

- The description of the method should contain obliging and optional parts. The optional part can be ignored by users who achieve the same result with other methods.

What the ECI cannot do.

- Supply solutions for any process in the world. Instead, any user will be able to build his own proprietary modules, based on an abstract module.

- Some workflows require additional workflow steps. Any user will be able to create proprietary abstract or concrete modules which fit into gaps between ECI-modules.

Next steps.

- Define relevant workflow scenarios in cooperation with an extended group of experts (e.g. digital photography, ad workflows, newspaper...)

- Define a set of concrete modules for these scenarios in compliance with standards and recommendations.

- Publish modules in a user-friendly form.

- Create a web-based „workflow configurator“

Future prospects.

- integration with XML?
- integration with JDF, PJTF?
- ISO-standard?
- ...

Futher experts and opinions in the working group welcome...

Minutes from ECI-Member-Meeting 14./15.10.05

Attachment

Presentation by Oswald Grütter related to point 8e

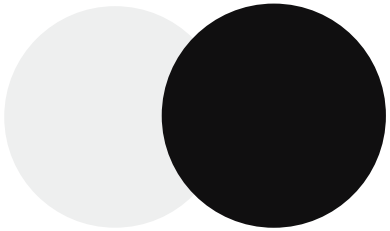
VISUAL

PRINT reference

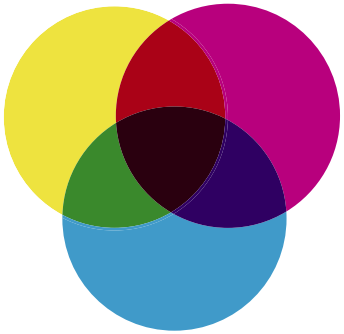

Black + Spot color "Orange"
Altona Test Suite 1.0
Download latest version from www.eci.org
© 2002 European Color Initiative - www.eci.org
ISO/CD 12647-2:2002 - Paper type 1 and 2
Gloss- and Matt-coated - "Substrate backing"
Page 1 of 3 - "Visual" - December 2002
bvdm
European Color Initiative
FOGRA
ugra
100k
100k+50c
304,8 dpi, 100%, 0°
274,4 dpi, 100%, 0°
304,8 dpi, 100%, 1°
304,8 dpi, 80%, 0°

Starke Kontraste reduzieren die differenzierte Wahrnehmung

- hell / dunkel



- Farbkontraste



- formale Kontraste

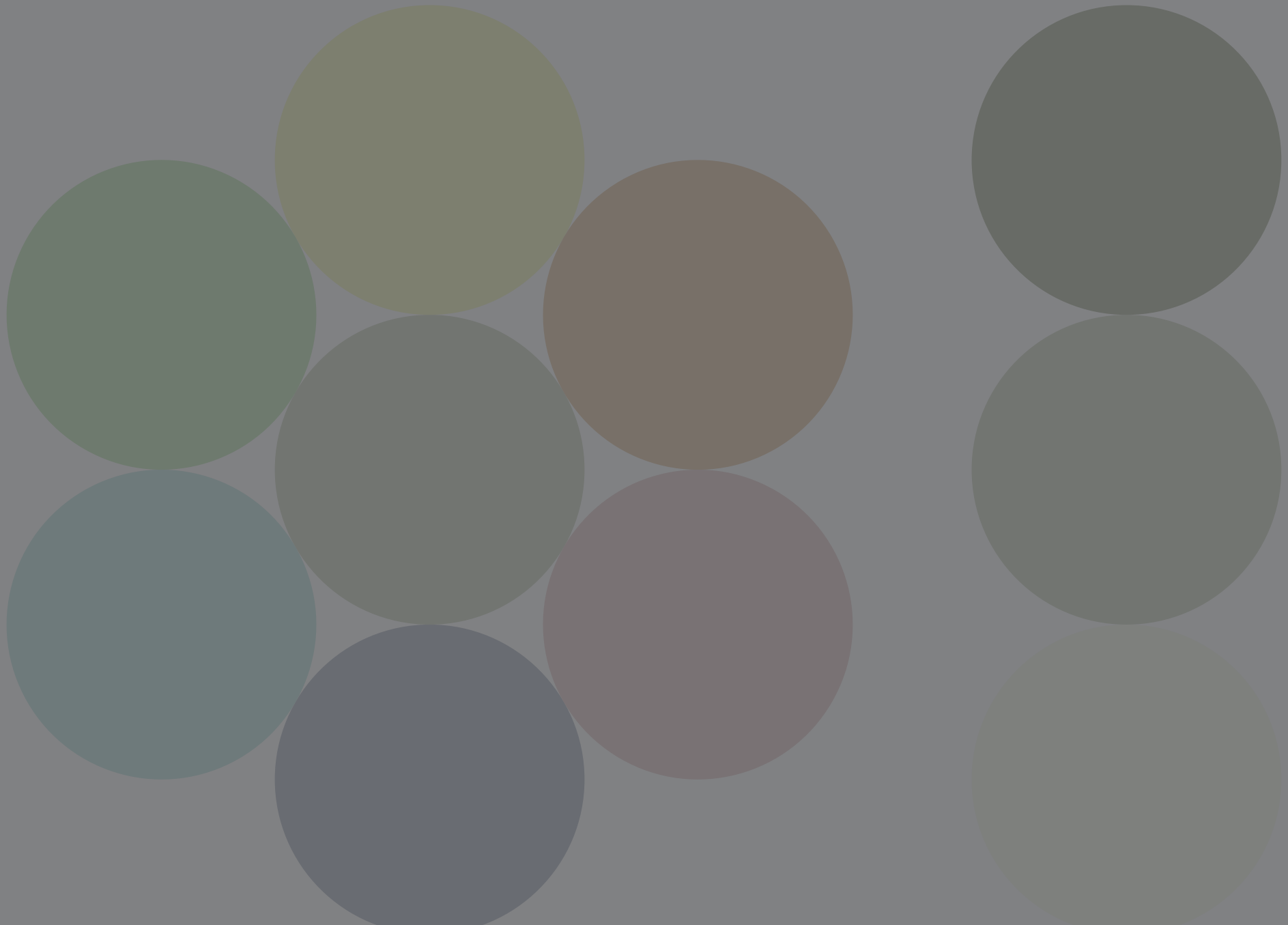
Divergierende
Abweichungen
+/- 4%

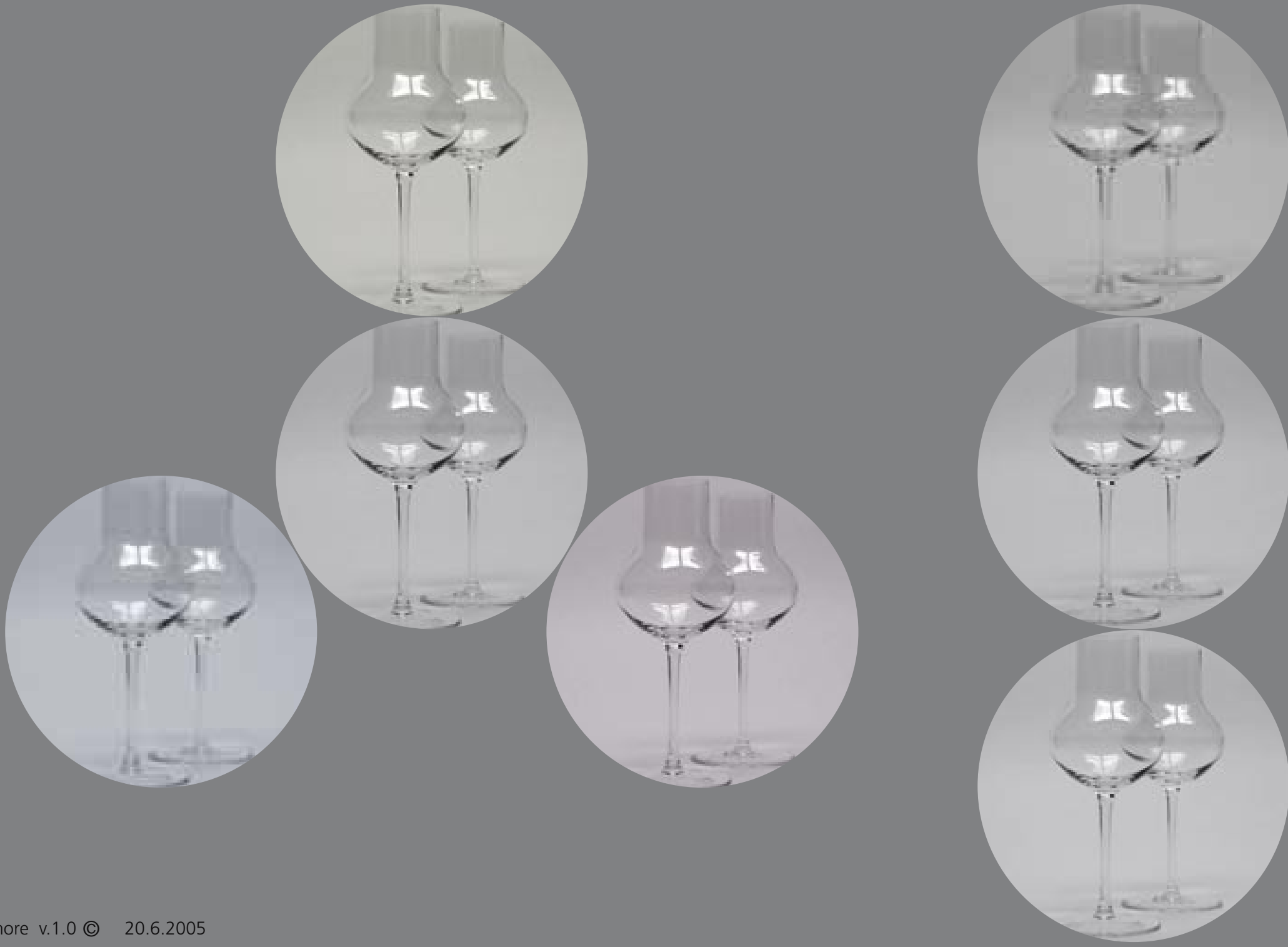
Graubalance

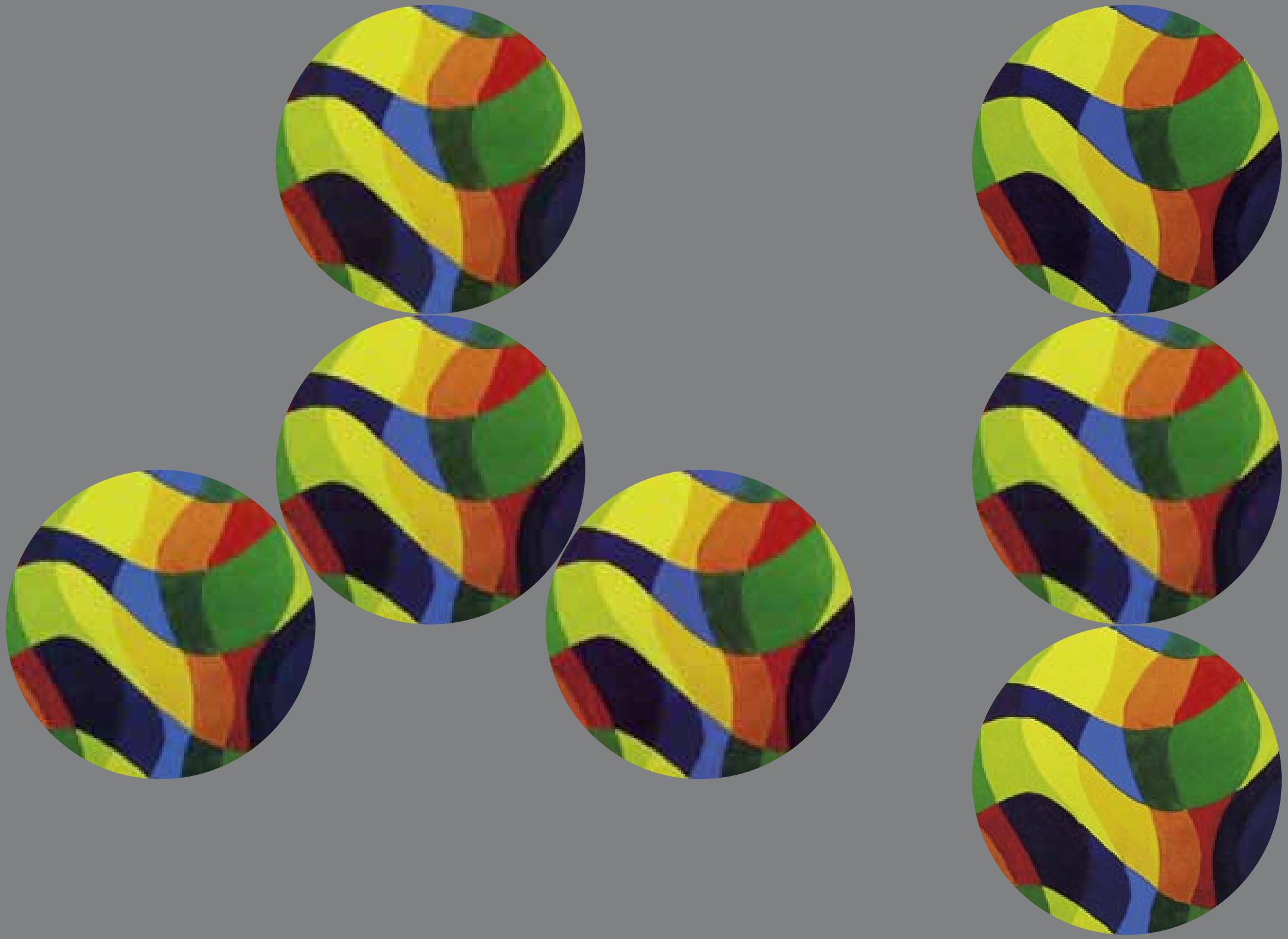
bei identischen Volltondichten

designed by quality&more

Konvergierende
Abweichungen
+/- 4%







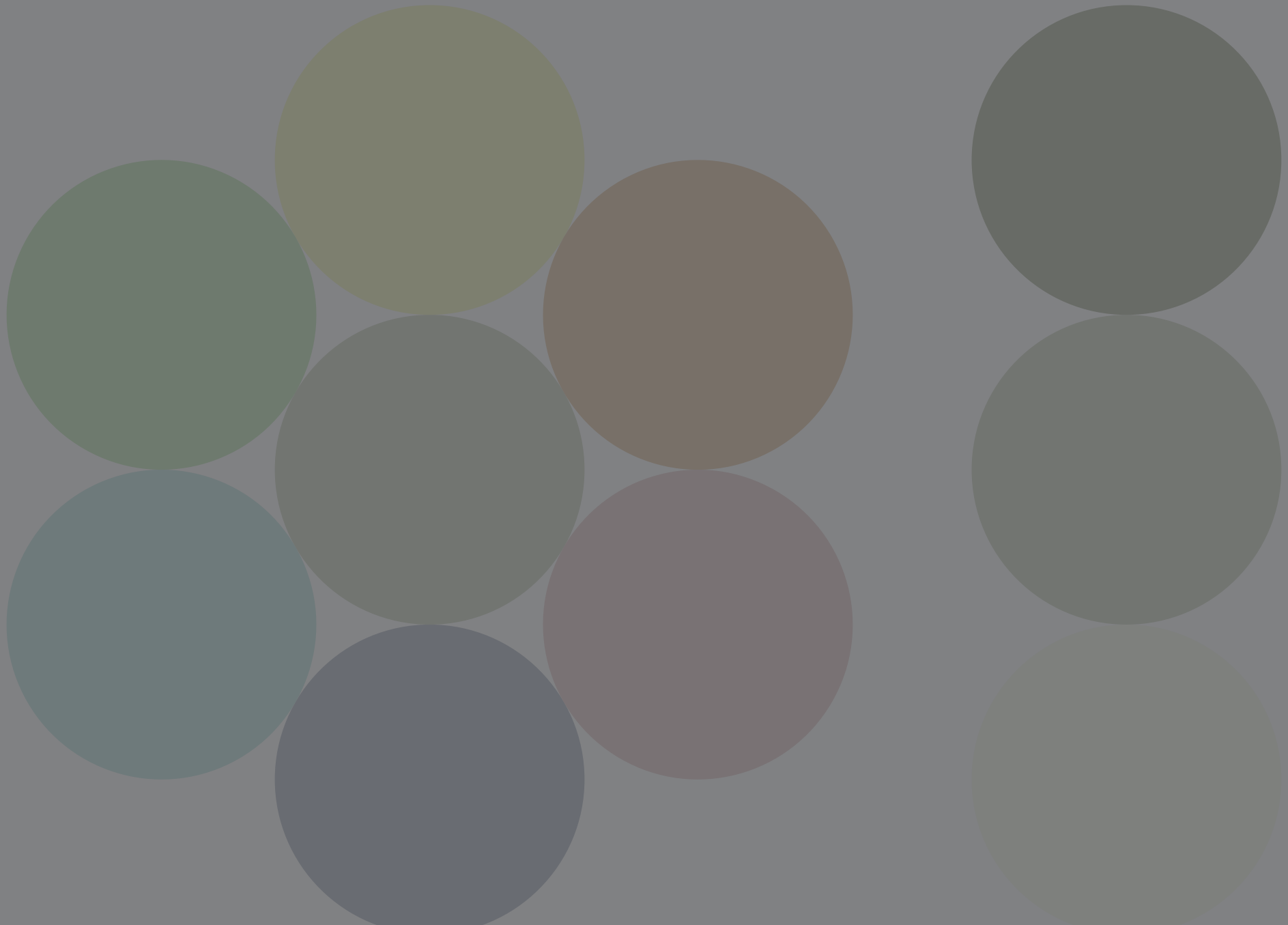
Divergierende
Abweichungen
+/- 4%

Graubalance

bei identischen Volltondichten

designed by quality&more

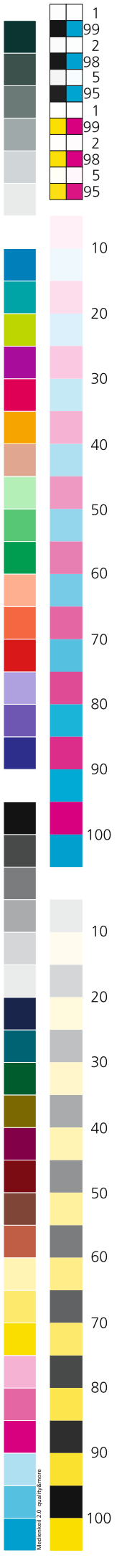
Konvergierende
Abweichungen
+/- 4%



Farbkontrast

Hoher Farbkontrast / leuchtende Farben

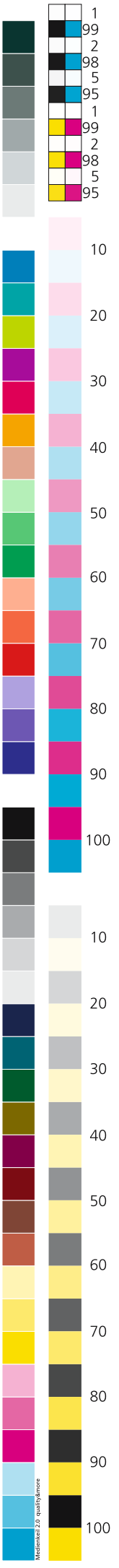
3 Kontrastarten: Farben-, hell/dunkel-, formaler Kontrast



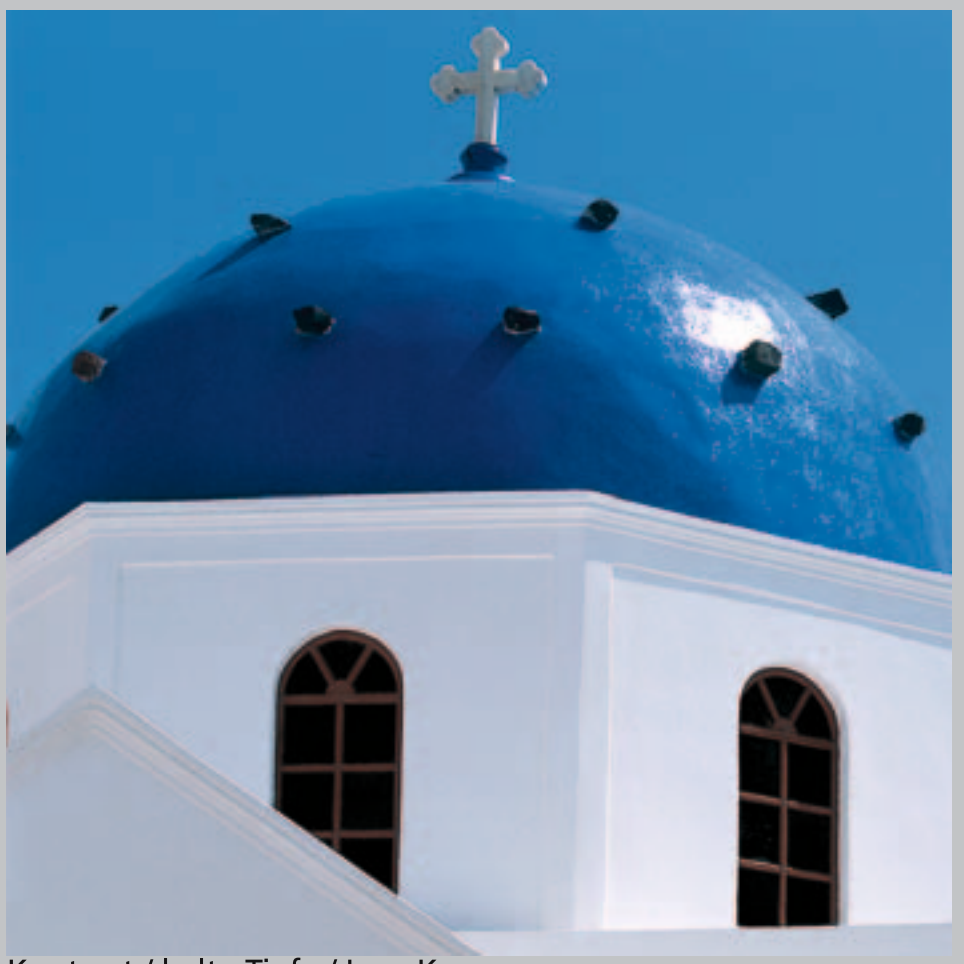
Farbkontrast

Grün

Orange

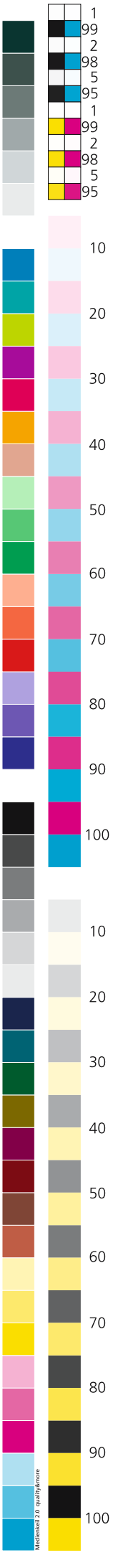


Farbkontrast



Kontrast / kalte Tiefe / Low Key

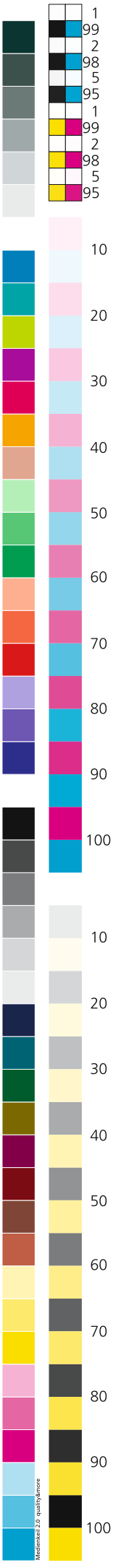
Rot



Farbkontrast / Lichter-/Tiefenzeichnung

Tertiärfarben / viel Kontrast

Gelb / Orange / Grün



Balancen

Graubalace / Spitzlichter / Bildrand

Graubalace / Brillanz / starker formaler Kontrast / Bildrand

Graubalance

Graubalance Mittelton

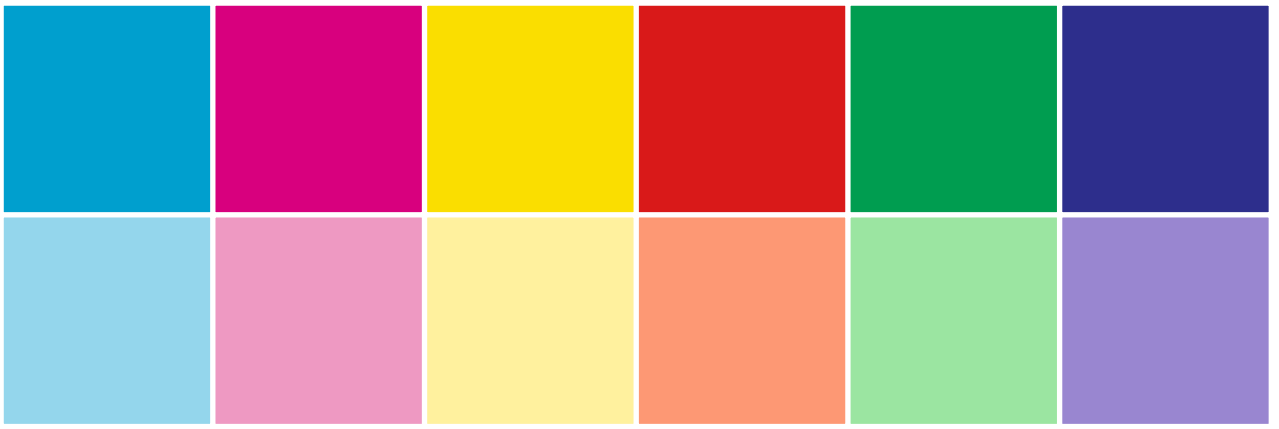
Graubalace Tiefenton / kalte Tiefe / Low Key

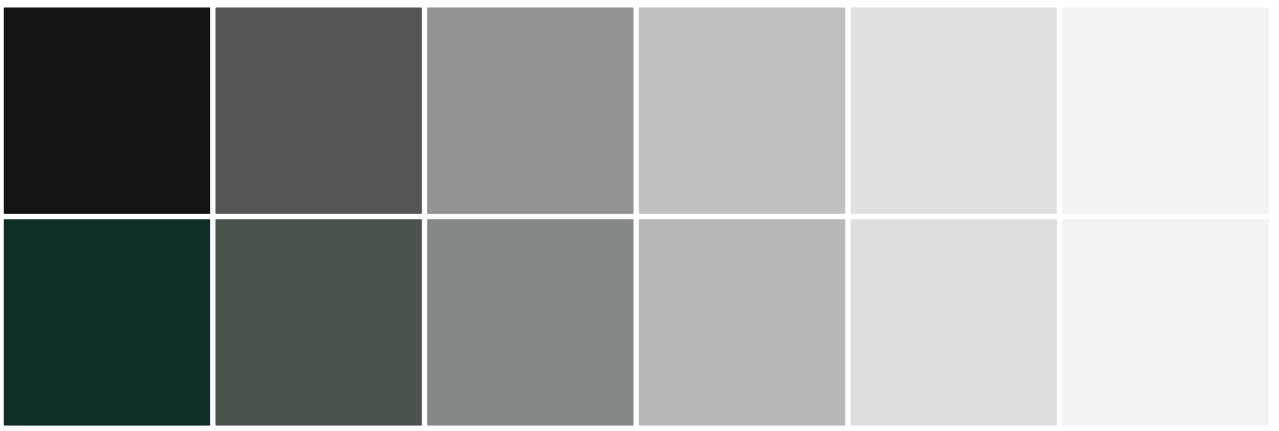
Hauttonbalance

Hautton hell

Hautton dunkel

Bildschirmkalibration „Monitor Checker“



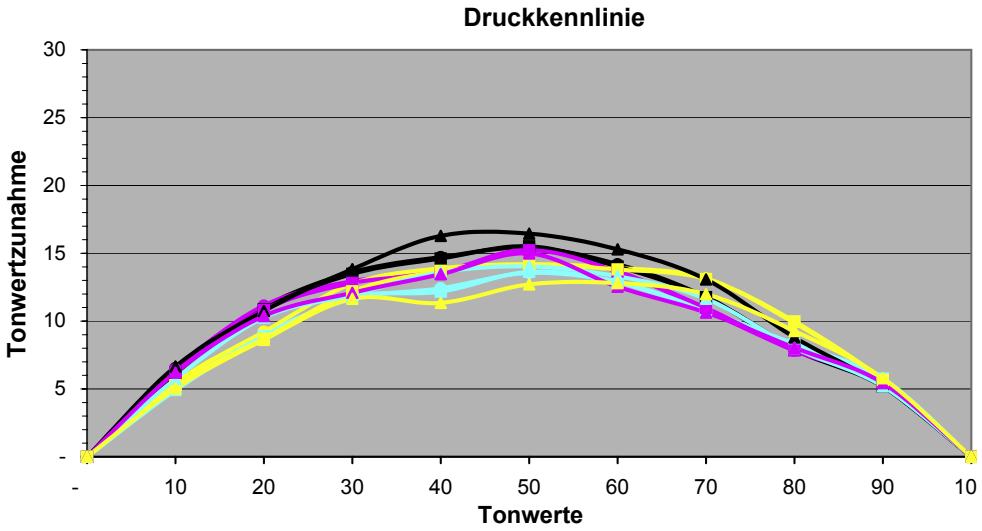


Einhalten von Normen und Standards!

Prioritäten:

1. Tonwertübertragung

Spreizung



2. Volltondichte

1.80 **1.40** **1.45** **1.35**

3. Farbort