Control device

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Instructions for use

Ugra/FOGRA Media Wedge CMYK V2.0

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Software Licence Agreement

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"FOGRA Forschungsgesellschaft Druck e.V.",
(Graphic Technology Research Association,
a registered non-profit association),
Streitfeldstraße 19,
81673 Munich, Germany

– *referred to hereinafter as the licenser –*
– *on the one hand –*
and the purchaser of the software
– *referred to hereinafter as the licensee*
– *on the other hand:*

Article 1
Subject of the contract
The subject of the present software licence agreement is the computer program (the software) recorded on the data carrier (the diskette). This also includes all updates of this software which the licenser subsequently makes available to the licensee. The licenser is entitled, but not obliged, to produce updates of the software at his own discretion.

Article 2
Licence
The licenser grants to the licensee, for the duration of the present contract, a simple licence to use the software on a single computer system at a location of his choice. If this single computer system is a multi-user system, this right of use applies to all the users of this one system. The licensee is permitted to transfer the software in physical form (i. e. stored on a data carrier) from one computer system to another, provided that the software is always used only on a single computer system.

On the other hand, the licensee is not permitted to transfer the software from one computer system to another via a network or a data channel. The licensee is not permitted to alter, translate, or – by reverse engineering – develop the software, or to produce packages derived from the software. In addition, the licensee is prohibited from copying, or from otherwise reproducing, the software either wholly or partially, whether in its original or in an altered form, or in a form which is mixed together with, or included in, other software. The licensee is permitted to create a single backup copy.

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The licensee is not authorised to transfer the licence to third parties, to issue sub-licences, or in any other way to render the software to be used by third parties, unless the licenser gives his express permission for the software to be transferred to the third party.

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Article 5
Accompanying documentation
The licenser makes available to the licensee a set of accompanying documentation in the form of a user's guide to the software which forms the subject of the contract. The licensee is not authorised to reproduce – in any way – either the entire accompanying documentation or any extract from it.

Article 6
Right of inspection
The licensee grants to the licenser the right either himself to carry out an inspection, or to cause third parties to carry out an inspection, of whether the licensee's contractual obligations are being observed at the licensee's premises.

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Should the data carrier which carries the licensed software be faulty, the licensee may, during a guarantee period of 6 months from the time of delivery, demand that a replacement delivery be made. For this purpose he must return to the licenser, or to the dealer from whom the software was obtained, the diskette, as well as any backup copy that may have been made, the accompanying documentation which was supplied to him, and a copy of the invoice or of the receipt. If a fault is not eliminated within an appropriate period by means of a replacement, the purchaser may, in accordance with his own choice, demand either that pecuniary remuneration be made or that the contract be cancelled.

Article 8
Limitations of liability
1. The licensed software is a standard package. Consequently, the licenser cannot guarantee that the licensed software meets the licensee's requirements. Moreover, he cannot in the nature of the matter be liable for ensuring that the licensed software is free of faults or that any faults that may exist can be corrected. As a result, the licenser is not liable for indirect damage or consequential damage arising from faults in the licensed software.
   The licenser's liability is limited to liability for fraudulently withholding information concerning deficiencies.
2. The licenser does not know of any third parties' rights which would impair the licensee from using the software. However, the licenser is not liable for the question of whether the licensed software is free of third parties' rights. If – with the licensed software being used in accordance with the agreement – any third parties assert rights against the licensee, the licenser will grant to the licensee, at the licensee's request and the licensee's expense, every possible assistance in defence against the claims being made against the licensee.

Article 9
Period of duration of the agreement
The agreement is concluded for an indefinite period. The licensee may at any time give notice to terminate the contractual relationship, there being a six months' period of notice ending at the end of a calendar year.

Article 10
Contractual conditions
Both contractual partners may terminate the contract for specific reasons, particularly
1. if the licensee is using the licensed software on more than one computer system,
2. if the licensee inadmissibly copies the licensed software in any other way or
3. if a contracting party commits other breaches of an essential contractual obligation and a period of 10 days has elapsed after the issuing of a notice by the other party without effect.

Article 11
Rights after the termination of the agreement
1. All the licensee's rights to use the software which has been made available to him end when the contractual relationship ends.
2. The licensee undertakes – within one week of the contractual relationship coming to an end – to destroy the software which has been made available to him, to destroy any backup copy which may have been created, and also to destroy all the documents concerning the software, especially the documentation included in the delivery.

Article 12
Saving clause
Should a provision of the present contract be or become invalid, or should the contract contain a hiatus, the legal validity of the remaining provisions remains unaffected by this. Instead of the invalid or missing provision, a valid provision which, in terms of economics, comes the closest to the provision desired by the parties is deemed to have been agreed upon.

Article 13
Amendment of the Agreement
Any amendment to the present agreement must take written form in order to be valid. No oral agreements have been reached or will be regarding the present agreement.

Article 14
Place of jurisdiction, and applicable law
For purchasers residing outside Switzerland, it is agreed that the Patent Litigation Chamber of the "Munich I Landgericht I" (Regional Court) is competent for all disputes arising from the present agreement. For this purpose the law of the Federal Republic of Germany is applied.

1 Introduction

In an effort to enhance a secure and efficient print production, the German Printing and Media Industries Federation (Bundesverband Druck und Medien e.V.) established an industry standard for the delivery of digital data and proofs, the "MedienStandard Druck 2001" [1], which extended the existing ISO standards [3]. FOGRA developed the associated control device, the Ugra/FOGRA Media Wedge CMYK. In its version 2.0 of June 2003, a number of layouts are now available in TIFF and EPS format. Figures 1 and 2 show typical examples. The TIFF file has become the standard version for use in contract proofing because some application programs still do not apply colour management to an EPS file. The Ugra/FOGRA Media Wedge CMYK is primarily intended for the control of digital proofing. However, it may also be applied for observing the effects of image editing and other prepress operations while working in CMYK. The printer should only accept such digital data and proofs that conform to the current edition of "MediaStandard Druck 200x" [1]. According to ths standard, a digital proof can only be regarded as a contract proof if it bears a Ugra/FOGRA Media Wedge CMYK and the measured values of the colour patches are within the specified tolerances [1]. The CMYK values of the Media Wedge are based on ISO 12642 (formerly IT8/7.3) [4]. The CIELAB target values of the Media Wedge are based on print conditions as stated in ISO 12647-2 to 12647-5 [3]. Characterisation tables for colour management can be downloaded from the FOGRA web site (www.fogra.org).

2 Description of the Ugra/ FOGRA Media Wedge CMYK

2.1 What is new in Version 2.0?

- many layouts available, automatic instruments are accommodated
- the number and tone values of the grey balance patches have been changed
- target values for the grey balance are now available

Version 2.0:

This variation of the Ugra/ FOGRA Media Wedge CMYK, designated 2.0 is similar to the previous versions. It consists of two rows of control patches (6 mm x 6 mm).The patch sequence is mostly unchanged. The upper row contains the tone values 10 %, 20 %, 40 %, 60 %,80 % and 100 % in black ink only. Below these patches composed grey patches have been placed which were suitably selected from those of ISO 12642 [4]. the text below the two rows defines the pertinent data format, version number, licence number and user name. holder the wedge name and the versionnumber, the user name, and the licence number. Highlight areas with 3 % dots are provided for visual inspection.

Version 2.0a:

The layout designated 2.0a uses the same sequence and two row design as used in layout 1. However, the patch size is 10 mm by 8.5 mm. Patch separators of 1 mm width were introduced in accordance with the requirements of some automatic instruments.

The evaluation of results can be done with the aid of software provided by the instrument vendors or by means of an Excel file provided by FOGRA. Please note: Current Excel files (MKCheck) and their regular updates are only available for registered licencees of the Ugra/ FOGRA Media Wedge CMYK. FOGRA cannot provide hotline services for vendor software.

2.2 Layouts of the Ugra/FOGRA Media Wedge CMYK V2.0

A number of automatic measuring instruments is presently available for the evaluation of digital proofs. A list of useful instruments and their associated Media Wedge layouts is available on the FOGRA web site, www.fogra.org, services. Currently, the following layout bundles are available in MAC and Windows or TIFF and EPS versions, respectively:

Two rows

- Media Wedge CMYK V2.0, 6 mm patch size,
- Media Wedge CMYK V2.0a, 10 mm patch size,
- Media Wedge CMYK V2.0g, 6 mm patch size (Gretag),
- Media Wedge CMYK V2.0x, 10 mm patch size (X-Rite).

Single row

- Media Wedge CMYK V2.0b, 6 mm patch size,
- Media Wedge CMYK V2.0c, 4 mm patch size,
- Media Wedge CMYK V2.0d, 3 mm patch size,
- Media Wedge CMYK V2.0e, 10 mm patch size.

The Ugra/FOGRA Media Wedge CMYK can be evaluated with practically all graphic arts coloorimetry instruments on the market provided the aperture diametre is 1 mm less than the minimum patch dimension.

Special layouts can be produced on request, please contact FOGRA (info@fogra.org) for a quotation.

3 Application of the Ugra/ FOGRA Media Wedge CMYK V2.0

3.1 General

The Ugra/FOGRA Media Wedge CMYK is intended primarily for the control of digital colour proofi ng. If a proof print is to be regarded as a contract proof for the production printer, the colour co-ordinates of all patches should agree with the target values provided within the tolerances specified. Both can be found in the Excel file named "MKCHECKxx.xls" that was provided with the shipment.

it is not recommended to use the Wedge for the control of production printing because the tolerances do not apply here. Instead, the Ugra/FOGRA print control strip or that of the press vendor should be used.

Please note: The Ugra/ FOGRA Media Wedge CMYK should not be opened or altered in any way. Do not double click on the icon representing one of the files. The control device should only be imported by using the appropriate functions of application programs which can handle EPS or TIFF files. Though it was mainly developed for proof control, the Ugra/FOGRA Media Wedge can also be used for tracking changes affecting the colour information during the prepress production process. For this purpose, the Ugra/ FOGRA Media Wedge CMYK is used starting from digital input to physical output (as with paper).

The TIFF file has become the standard version for use in contract proofing because some application programs still do not apply colour management to an EPS file.

3.2 Non-periodic screens

The Ugra/FOGRA Media Wedge CMYK-TIFF may also be used in conjunction with all types of non-periodic screens. this is also true for the EPS file with the exception of the Ugra/ FOGRA Velvet Screen program.

3.3 Evaluation of digital proofs

3.3.1 General

A digital proof can only be regarded as a contract proof if it bears a Ugra/FOGRA Media Wedge CMYK and the measured values of the colour patches are within the specified tolerances [1]. For all major printing conditions, these values are available in the Excel file MKCheck which is shipped with the devices. The values conform to ISO 12647-2 [6] for commercial and publication offset, to ISO 12647- 3 [7] for newspaper printing, to ISO 12647-4 [12] for publication gravure and to ISO 12647-5 for screen printing [13]. All measured values are compared to the target values of the Excel file. If colorimetric measurements are not possible at least the tone value increase of the primary colours should be evaluated with the aid of a densitometer and compared with aim values. These can be found in the pertinent international standard. A visual approximation of an output of the Ugra/FOGRA Media Wedge CMYK can be achieved through the use of the pertinent reference print [9] of the „Altona Test Suite Application Kit" [14]. For evaluation, the proof is compared with the reference prints. It is important that both prints are placed on a white backing and that a light source with 5000 K (according to ISO 3664 [15]) is used. Please note that this requirement has now changed (it used to be black background). Any in fluence of the surround should be minimized by placing a grey cardboard mask over the margin areas around the Ugra/ FOGRA Media Wedge CMYK. If there are visible deviations, the proof and the data used to achieve the output are in doubt. In certain cases it is possible to apply colour management and thereby adjust the data to the required printing condition, see section 4.

3.3.2 Measurement procedure

The proof print is placed on a white backing (opaque, matt, C* <3, L* >92) and measured with a colorimeter (spectrophotometric or tristimulus type). The instrument shall conform to ISO 13655 [16], that means it needs to comply to the conditions "45/0" or "0/45" geometry, D50 illuminant, 2° observer, CIELAB system". The instruments mechanical aperture should be at least 1 mm smaller than the patch dimensions. The obtained values are compared with the CIELAB aim values of the Excel file or equivalent data. A black backing is only to be used when measuring non-opaque production printing material. The CIELAB deviation for the primary colours should not exceed ΔE of 5 . The Δ E average deviation for all colour patches (including all grey balance patches) shall not exceed 4 and no individual patch should deviate from target values by more than 10. For the paper simulation the ΔE is 3. If the above conditions are not met, the proof does not qualify as a contract proof for the intended printing condition.

4 Colour management according to ICC

Colour management is used in modular image processing environments. It helps to ensure that the colours of the original are rendered on the output system with minimal losses and in a reproducible way. It is also used for adjusting the rendering of digital off-press proofing systems so that the output of a particular printing process is simulated. The following procedure should be implemented for that purpose. The print-ready CMYK data is fi rst complemented by the TIFF version of the Ugra/FOGRA Media Wedge. The combination is subjected to a reverse transformation into CIE colour space. This is achieved by using the absolute colorimetric rendering intent of the colour management output profile which generated generated the subject data in the fi rst place. If the profi le is not available, another must be used that pertains to the printing condition for which the subject data was originally generated. The CIE data is then transformed with the absolute colorimetric rendering intent into CMYK by using the output profi le of the proof printer. The proof print of the transformed data is measured by colorimetry in the patches of the Ugra/FOGRA Media Wedge. The values should now agree with the pertinent tables, not only for the solids, but also for the half-tone patches.

5 What can be found on the data carrier?

The data carrier supplied (CD-ROM) contains the files of the Ugra/FOGRA Media Wedge CMYK, the Excel evaluation file with the target values and a documentation in PDF. Depending on the order, files with the extension "EPS" or "TIFF" will be found. When the data carrier is received, please make sure that the correct files are present and that the user name is correct. If there are any errors or omissions, please contact your supplier or FOGRA immediately. The Ugra/FOGRA Media Wedge CMYK will be supplied either formated for Macintosh or Windows operating systems.

6 Legal terms

In conjunction with this documentation, the contract terms (licence agreement) for the legal use of the Ugra/FOGRA Media Wedge CMYK are presented. Please note the following: The supplied version of the Ugra/FOGRA Media Wedge CMYK is solely a single user version. Therefore, it's use is not permitted simultaneously in a computer network, or on more than one computer system at the same time. In large corporations where several persons need to use the Ugra/ FOGRA Media Wedge CMYK at the same time, a licence must be obtained for each user. For corporations where service personal, sales people and technicians require this wedge for demonstration purposes or for fi eld services, each user must also be supplied with a personalized, individual licence for the Ugra/ FOGRA Media Wedge CMYK. It must be made clear to all users that the passing on of the Ugra/ FOGRA Media Wedge CMYK is not permitted and constitutes a violation of the licence agreement.

7 Literature

[1] N. N.:
MedienStandard Druck 2004 – Technische Richtlinie für Daten und Prüfdrucke.
Wiesbaden: Bundesverband Druck und Medien e.V., 2004 – Art. Nr. 86034
– in German language –

[2] DOLEZALEK, F.:
ProzessStandard Offsetdruck
Wiesbaden: Bundesverband Druck und Medien e.V., 2001/2003
– in German language –

[3] Standard series ISO 12647.
Graphic technology - Process control for the production of half-tone colour separations, proof and production prints
ISO Geneva, Switzerland

[4] Standard ISO 12642 : 1996.
Graphic technology - Prepress digital data exchange - Input data for characterization of 4-colour process printing
ISO Geneva, Switzerland

[5] N. N.:
Ugra/FOGRA Velvet Screen Version 2.0
St. Gallen/Munich: Ugra/FOGRA, 2001 – Gebrauchsanleitung
– in German language –

[6] Standard ISO/DIS 12647-2 : 2004.
Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 2: Offset printing processes
ISO Geneva, Switzerland

[7] Standard ISO/DIS 12647-3 : 2004.
Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 3: Newspaper printing
ISO Geneva, Switzerland

[8] Standard ISO/DIS 12647-4 : 2004.
Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 4: Publication gravure printing
ISO Geneva, Switzerland

[9] Standard ISO 12647-5: 2001.
Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 5: Screen Printing
ISO Geneva, Switzerland

[10] N. N.:
„Altona Test Suite"-Anwendungspaket
Wiesbaden: Bundesverband Druck und Medien e.V. 2004,
www.altonatestsuite.com

[11] Standard ISO 3664 : 2000.
Viewing conditions for graphic technology and photography
ISO Geneva, Switzerland

[12] Standard ISO 13655 : 2000.
Graphic technology - Spectral measurement and computation for graphic arts images
ISO Geneva, Switzerland

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Layouts of Ugra/FOGRA Media Wedge CMYK V2.0

Left side: Two-line

Right side: One-line