Best in Print 2011
Submission Guidelines & Instructions

The Best in Print awards will be presented to newspapers deserving recognition for their excellence in standardised printing. The focus of the award is to show the ability of newspapers to print consistently high quality according to international standards (ISO 12647). This competition is open to newspapers.

Award Categories
Coldset-offset printing on newsprint

1A. Weekday circulation below 150,000 copies

1B. Weekday circulation over 150,000 copies

Evaluation Criteria

The competition will evaluate the following parameters:

- Colour of newsprint (=Newsshade)
- Black Ink
- Dot gain and mid-tone spread CMY and CMYK
- Grey balance
- Conformity of the printed colour gamut with ISO 12647-3
- Colour register
- General printing quality

Participating newspapers are required to print a specific test target, the "IFRA-Cuboid" two times, in the month of February 2011. The printed samples are to reach WAN-IFRA headquarter in Germany before 26 Feb 2011.

The two printing deadlines are:

1st Print test run: latest 09 February 2011

- Please make use of the file "Cuboid_AMA_No_01.pdf"

2nd Print test run: latest 23 February 2011

- Please make use of the file "Cuboid_AMA_No_02.pdf"

There are no specific days, inside the given time frame, when the targets have to be printed. Please ship both printed samples together to WAN-IFRA headquarter in Germany.

Submission Criteria

- To print the WAN-IFRA Cuboids in the regular production by avoiding any extra treatment, no resizing allowed, no blank areas neither on the front nor on the rear side.
- To pack 10 samples per test run and shipped at one time to WAN-IFRA headquarter in Germany by 26 February 2011.
- Each publishing or printing company can register one or more newspaper titles for the competition. Only one registration per title will be accepted.
- Entries received after the stipulated dates will be disqualified.
- Entries will not be returned to sender.
- Entry form/s must first be fax to WAN-IFRA Asia Pacific (Singapore office) at +65 6562 8441 or email to awardsasia@wan-ifra.org, followed by attaching the faxed form/s to the printed samples.
- An invoice will be generated, which will serve simultaneously as a confirmation of registration.
- Payment must be received in total net amount for each submitted entry by 28 February 2011. Any bank charges to be borne by entrant companies. Incomplete payments will disqualify entrants from the evaluation.
- All registration, payment and material must be received by the stipulated dates. There will be no extension granted on the deadlines.

Participants must accord WAN-IFRA the full rights to retain and use free-of-charge multiple selected images from the contest for sole exclusive publication in any future books, exhibitions, publications, websites, educational and promotional purposes.

Participating companies will receive both test runs reports with detailed measuring results, via email by end March 2011. Entries that score after the two rounds with overall highest points will win. Final results will be communicated on 01 April 2011 to all participants. The awards ceremony will be held during Publish Asia 2011 Conference in Bangkok on 28 April 2011.

All samples must be sent to the address below:

WAN-IFRA
Mr Roland Thees
Washingtonplatz 1
64287 Darmstadt
Germany

Please make a note "Samples for Best in Print 2011"

In every competition week (twice in February 2011) print at least once the "IFRA Cuboid" test element under standardized printing conditions as part of a regular issue of your newspaper. If you do not wish the test element to appear in the distributed daily issue, you can exchange the plates of any color page after a production run for the plates of the competition page that includes the IFRA Cuboid, in newspaper appearance and fully printed on both sides, without any blank areas.

For evaluation we will need a typical newspaper product with at least 16 pages. Please send in ten samples from each of the two test runs and make sure that the samples will arrive at WAN-IFRA headquarter, Germany on time.

Important Note:

Please find on the following pages the detailed instructions.

The IFRA Cuboid Test Element

The "IFRA Cuboid" digital test element is available as a PDF in CMYK. This print target does not require color separation. The IFRA Cuboid is single column filler ad (1 column only) and can be used in normal production copies of the newspaper. Treat the IFRA Cuboid test element like a supplied color ad! Position the IFRA Cuboid on any page of your newspaper title registered for the competition. The IFRA Cuboid may not be scaled under any circumstances, neither downwards nor upwards! To do so would make the printed sample unsuitable for evaluation and cause you to lose the achievable points.

The IFRA Cuboid is a test element. Its square shape recalls that of a cube. It is 45 mm wide and therefore corresponds to the standard column width. The above figure shows the original size. Colors are not to be taken as references.

The marked color positions are measured in the competition.

	1	2	3	4	5	6	7	8
A	C 0% M 100% Y 100% K 0%			C 0% M 0% Y 0% K 100%	C 0% M 0% Y 40% K 0%		C 100% M 100% Y 0% K 0%	
B		C 0% M 0% Y 0% K 40%	C 0% M 0% Y 0% K 0%	C 0% M 0% Y 100% K 0%		C 10% M 8% Y 8% K 0%	C 0% M 0% Y 0% K 0%	C 30% M 24% Y 24% K 0%
C	C 0% M 100% Y 0% K 0%	C 52% M 44% Y 44% K 100%						C 0% M 40% Y 0% K 0%
D		C 100% M 0% Y 0% K 0%				C 50% M 42% Y 42% K 0%	C 40% M 0% Y 0% K 0%	
E		C 100% M 0% Y 100% K 0%				C 0% M 40% Y 0% K 0%		
F	C 30% M 24% Y 24% K 0%		C 50% M 42% Y 42% K 0%	C 0% M 0% Y 40% K 0%	C 100% M 0% Y 0% K 0%		C 10% M 8% Y 8% K 0%	C 0% M 0% Y 0% K 40%
G	C 0% M 0% Y 100% K 0%				C 40% M 0% Y 0% K 0%	C 52% M 44% Y 44% K 100%	C 0% M 100% Y 0% K 0%	C 0% M 100% Y 100% K 0%
H		C 100% M 100% Y 0% K 0%					C 100% M 0% Y 100% K 0%	C 0% M 0% Y 0% K 100%

The CMYK values of the IFRA Cuboid test element for information purposes.

Explanations Concerning the Evaluation Process

The evaluation process is divided into two parts:

- The measurement of the printed IFRA Cuboid test element in two different weeks
- A visual quality analysis of one newspaper copy of each participating title, carried out by experts.

A maximum total of 360 points can be awarded for the evaluation of the printed IFRA Cuboid test element and a maximum 240 points for the quality analysis of the newspaper copy. Highest scoring counts for being awarded at AMA 2011.

No.	*Categories*	*No. of achievable points*
1	Newsshade	60
2	Black ink	60
3.1	Mid-tone spread CMY	40
3.2	Mid-tone spread CMYK	20
4	Gray balance	60
5	Color space	60
6	Color register	60
7	General printing quality	240
Total max. points		600

Measuring Procedure and Measuring Instruments

All color measurements are carried out using a spectrophotometer in accordance with ISO 12647-1, paragraph 5.6. That means: angle of observation 2°, light source D50, measuring geometry 45°/0° or 0°/45°, black backing.

The software used calculates the CIELAB color values (L*a*b*) as well as the color density values (density status E). Dot gain is calculated by the Murray-Davies formula.

The color measurement of the IFRA Cuboid test element is done using the X-Rite automatic "Eye One iO" measuring instrument and the software basICColor catch pro (spectral and density). Because each color patch is included twice in the test element and two printed samples are measured in every competition week, four sets of measured data per participating title are produced. The obtained values are then averaged following a plausibility check. In this way, one set of average values per competition week is obtained for evaluation.

Color register measurement is done using an image analysis-based measuring instrument. This instrument, a Techkon "RMS 910" (Setting: Crop Image 156 Pixel), is used to twice measure three printed copies per competition week and participating title. This produces six sets of measured data, the results of which are averaged following a plausibility check. In this way, one set of average color register values per competition week is obtained for evaluation.

Evaluation of Results

The tables of results listed in the evaluation reports show your results compared to the best, poorest and average result of all participants of the evaluation.

1. Newsshade

The color of the newsprint (newsshade) should be sufficiently light to permit a good contrast in print. The color cast of the paper should be low and within the permitted tolerance range. But the paper should also have sufficient opacity in order to minimize show-through.

The paper shade is measured on non-printed areas of the IFRA Cuboid (patches B3 and B7). Points are awarded based on the following criteria:

Color values	*Points per week*	*Total points*
L* = 79 or higher	10	20
L* = less than 79	0	0
a* = between -1 and 1	10	20
a* = less than -1 or more than 1	0	0
b* = between 0 and 4	10	20
b* = less than 0 or more than 4	0	0
Maximum number of points	30	60

2. Black Ink

The black ink should have a sufficiently high print density to permit good black, white and color printing results. This is especially important because news photos, due to the GCR, usually have a relatively high share of black in the color separation. However, the color density may also not be too high in order to avoid over inking. Points are awarded based on the following criteria:

Color values	*Points per week*	*Total points*
L* = 38 or lower	10	20
L* = higher than 38	0	0
a* = between 0 and 2	10	20
a* = lower than 0 or higher than 2	0	0
b* = between 0 and 5	10	20
b* = lower than 0 or higher than 5	0	0
Maximum number of points	30	60

3. Mid-Tone Spread

A consistent dot gain in printing is critical for good color balance. Often the so-called "mid-tone spread", the difference in dot gain between the process inks in the mid-tones, is not sufficiently controlled despite its importance The mid-tone spread of the CMY inks should have a small tolerance and be smaller than the mid-tone spread of all four process inks, including black.

3.1 Mid-Tone Spread CMY

The patches D7 and G5, C8 and E6, as well as A5 and F4 of the IFRA Cuboid will be used for the measurement of the CMY mid-tone spread. The achievable points in competition are awarded based on the deviation of the individual colors from the 26% dot gain reference curve specified by the ISO 12647–3 standard:

Difference of dot gain between the CMY colors	*Points*
Mid-tone spread between the CMY colors max. 6% and dot gain within the 5% tolerance (+/-) of the 26% dot gain curve per competition week	20
Mid-tone spread between the CMY colors > 6% or dot gain outside the 5% tolerance (+/-) of the 26% dot gain curve per competition week	0
Maximum achievable number of points (2 x 20)	40

3.2 Mid-Tone Spread CMYK

The patches D7 and G5, C8 and E6, A5 and F4, as well as B2 and F8 of the IFRA Cuboid will be used for the measurement of the CMYK mid-tone spread. The achievable points in competition are awarded based on the following criteria:

Difference of dot gain between the CMYK colors	*Points*
Mid-tone spread between the CMYK colors max. 8% and dot gain within the 5% tolerance (+/-) of the 26% dot gain curve per competition week	10
Mid-tone spread between the CMYK colors > 8% or dot gain outside the 5% tolerance (+/-) of the 26% dot gain curve per competition week	0
Maximum achievable number of points (2 x 10)	20

4. Gray Balance

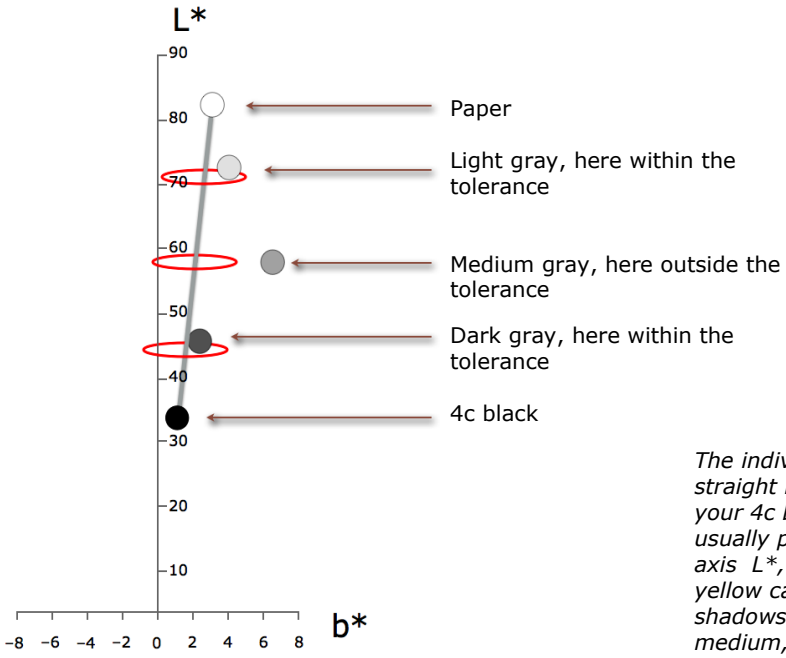
The ability to print neutral gray tones is of fundamental importance for the color reproduction process. If the gray balance is correct, the print result will be neutral and free of color casts. This is especially important for process control that, with the gray balance, has an essential control procedure at its disposal.

But what is gray? The human eye adapts to the shade of the print substrate and takes this for gray in the sense of a neutral color reference. This is why we are not aiming for an absolute gray, but will take the a* and b* values measured on your paper (newsshade) as the gray reference. The patches B6 and F7, B8 and F1, as well as D6 and F3 of the IFRA Cuboid will be taken for the measurement of the gray balance. The reference gray (a* and b*) will be calculated as follows:

The lightest and darkest measured values (color gamuts of the paper and of the 4c black) are connected via a straight line. This produces a reference gray axis in the color space that is used as an individual scale for the evaluation. Based on the individually measured brightness value L* of bright, medium and dark grey on the IFRA Cuboid concerned in each case, the "ideal" colour values a* and b* are now mathematically calculated on the reference grey axis. These serve as targets (=reference) for the measured a* and b*values of bright, medium and dark grey. We refer to the thus-calculated colour difference as "Delta C* absolute".

Points are awarded for all categories in accordance with the following criteria:

The deviation from the individual reference gray should not be higher than 3 "Delta C absolute"*				*Points*
Light gray balance	Cyan 10%	Magenta 8%	Yellow 8%	10
Medium gray balance	Cyan 30%	Magenta 24%	Yellow 24%	10
Dark gray balance	Cyan 50%	Magenta 42%	Yellow 42%	10
Maximum number of points per competition week				30
Total maximum points for all competition weeks				60



The individual reference gray axis is the straight line between your newsshade and your 4c black (240% CMYK). It is not usually positioned parallel to the lightness axis L, but at an angle as the typical yellow cast of the newsprint is lower in the shadows. The printed CMY gray tones (light, medium, dark) are compared with the reference gray axis ("Delta C* absolute").*

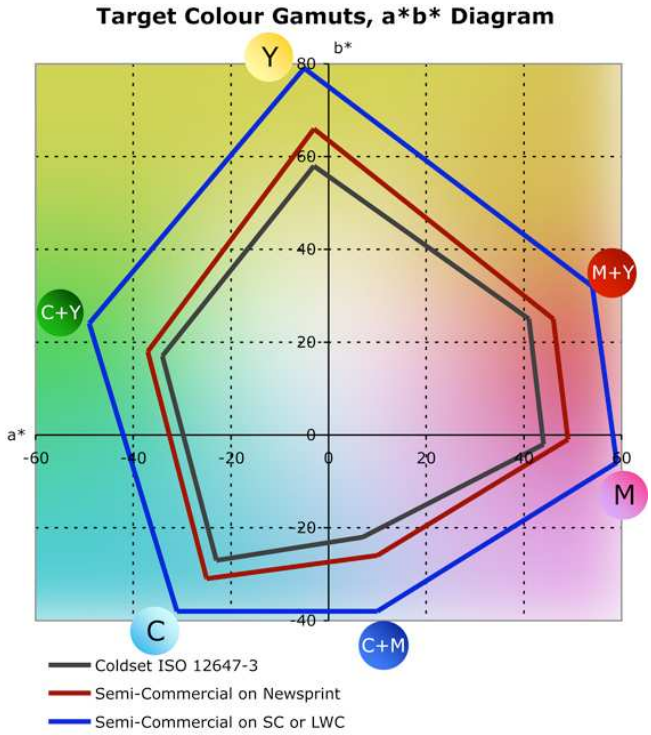
5. Color Space

The larger the printable color space, the more colorful you can print. The color range should have a minimum size as well as a certain geometry in order to satisfy international standards. This is especially important for high-quality ad printing. The following patches of the IFRA Cuboid test element are used for measuring the printable color space (L*a*b*):

Color	*Patches*	*Color*	*Patches*	*Color*	*Patches*
Cyan	D2 / F5	Red	A1 / G8	White (paper)	B3 / B7
Magenta	C1 / G7	Green	E2 / H7	4c black	C2 / G6
Yellow	B4 / G1	Blue	A7 / H2		

If your measured color space covers at least 85% of the reference color space concerned, 30 points per week will be awarded. If the measured volume of your color space covers less than 85% of the target color space, no points will be awarded. A maximum total of 60 points can be achieved.

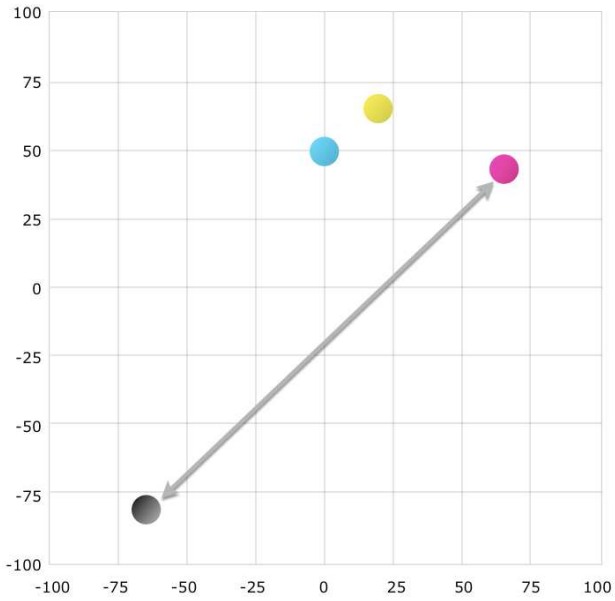
Colors	*Reference color value*		
	*L**	*a**	*b**
Cyan	57	-23	-27
Magenta	54	44	-2
Yellow	78	-3	58
Green, Y + C	53	-34	17
Blue, C + M	41	7	-22
Red, M + Y	52	41	25
4c black, CMYK	34	1	2
White, paper color	82	0	3



The a/b* diagram shows the different target color spaces. The black color space corresponds to the standard coldset newspaper offset process in accordance with ISO 12647-3. With the aid of drying or UV-curing, it is possible to print a larger color space range on the same paper (red). If in addition a higher-quality paper (SC or LWC) is used, the color space is again enlarged (blue).*

6. Color Register

Good color register is the basis of four-color printing. Therefore the IFRA Cuboid test element contains six small color points (patch D4) for color register measurement. Three copies will be measured per competition week and participating title.



The assessment method applies for all categories. The greatest distance between two colors is evaluated. This distance is calculated from the circumferential and lateral register precision. Up to 30 points per competition week can be achieved, a total of 60 points. The points are awarded in accordance with the following rules:

Color register deviation	*Points*
Maximum 150 µm (0.15 mm) per competition week	30
300 µm (0.3 mm) or more per competition week	0
Maximum achievable points (4 x 30)	60
For color register deviations between 150 µm and 300 µm (0.15 and 0.3 mm), between 30 and 0 points will be awarded on a linear proportional basis.	

7. General Printing Quality

It is the Best in Print award of the competition to honor consistently high standards of printing quality in a cleanly printed newspaper. For this reason, the evaluation of the general printing quality plays a major role in the competition. The assessment method for this part of the evaluation applies for all competition categories. A randomly selected copy is chosen from the entered sample copies of a participating title. The first 16 pages are subjected to an expert visual assessment.

Each participating title starts out with a maximum 240 points. Theoretically, it can lose 15 points per page, which means that in an extreme case it could lose all points, as 16 x 15 = 240. Points are deducted where deficiencies are detected. Each deficiency criterion is applied only once per page. For example, this means that "show-through" results in a loss of points only once on a page, even if it is visible in three places on the page.

Evaluation is carried out based on the guidelines listed in the following table.

Criteria for point subtraction			*Points deducted*	
Category	*No.*	*Detected deficiency*	*Per page*	*All pages*
Color	1a	Deduction for a monochrome page	1.0	16
	1b	**Or:** deduction for a two-color page	0.5	8
Quality of print process	2	Show-through	0.5	8
	3	Density fluctuations	0.5	8
	4	Overinking or underinking	0.5	8
	5	Missed areas	0.5	8
Color register	6	Disturbing misregister	1.0	16
Mechanical print quality	7	Set-off or smearing	1.0	16
	8	Impressions of draw rollers, rings, marks	0.5	8
	9	Hickies, picking	0.5	8
	10	Poor ribbon register (longitudinal cut paper web)	0.5	8
	11	Wrinkles, creasing	0.5	8
	12	Ghosting, doubling	0.5	8
	13	Disturbing printing plate scratches	1.0	16
	14	Disturbing printing plate edges	1.0	16
	15	Pin holes pulled -out or pin holes in image area	0.5	8
	16	Dirt stains	0.5	8
	17	Poor page register (lateral)	0.5	8
	18	Stripes, breaks in screen gradations	0.5	8
	19	Toning	1.0	16
	20	Cloudy print-out, mottling	0.5	8
Image and graphic quality	21	Ink piling in the image, filled-in image areas	0.5	8
	22	Color cast	0.5	8
	23	Insufficient screen quality (e.g. moiré)	0.5	8
	24	Fuzziness (without rating)	0,0	0,0
	25	Loss of detail (tonal reproduction)	0.5	8
Maximum points deduction			15.0	240

This concludes the instructions. We wish you a lot of success.

Yours sincerely,
WAN-IFRA Team
Jen Teo (Singapore), Roland Thees (Germany)