



## **ISO/IEC JTC 1 N 9911**

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# **UPDATED BUSINESS PLAN FOR ISO/IEC JTC 1/SC 28 OFFICE EQUIPMENT**

**PERIOD COVERED:** June 2009 – May 2010

**SUBMITTED BY:** SC28 Chairman and Secretary

## **1.0 MANAGEMENT SUMMARY**

### **1.1 CHAIRMAN'S REMARKS**

SC28 is one of the few product or hardware oriented subcommittees in the JTC 1 community. As such fundamental output of this group has been standards on product specification descriptors, methods for measurement of productivity of hardcopy devices, quality of hardcopy output and yield of consumables (ink and toner cartridges).

One of the focus areas of SC28 in this plan period and beyond will be a multi-part standards on printer cartridges characterization which aroused growing enthusiasm of SC28 members. The reason for the project being popular is because the standards will satisfy growing market demands of all stake holders including refillers and remanufacturers.

It should be noted that SC28 has now inventory of both environmental and accessibility related standards as a result of work done in the past few years.

Projects on productivity measurement of digital printers and copying machines whose timelines were extended for one year were finally completed as IS published.

SC28 considers that there is room for expansion of office equipment standardization frontier in the following two areas, one being (a) management of color consistency between office equipment and the other being (b) high level office applications including compatibility of file formats and metadata tags in printing jobs. In order to squarely address these two areas SC28 established PWG5 for (a) and PWG6 for (b) each as an Other Working Group (as defined in 2.6.2 of JTC 1 Directives) under AWG. With the successful introduction of a new program of work associated with CIE Division 8 PWG5 turned from a Preparatory WG to full-fledged WG5. NWIP which can upgrade PWG6 to WG6 is not yet visible on the horizon although some potential projects including Print Ticket are being discussed.

SC28 has 14 P members and 17 O members as of August 2009. It should be noted that an NP will pass in SC28 if 4 instead of 5 P members commit their participation in the project because JTC 1 changed the threshold to pass an NP as follows.

*“For SCs with 16 P-members or fewer, at least four instead of five P-members committed to*

*active participation are needed.*

## **1.2 JTC 1/SC 28 STATEMENT OF SCOPE**

**Title:** Office Equipment

**Scope:**

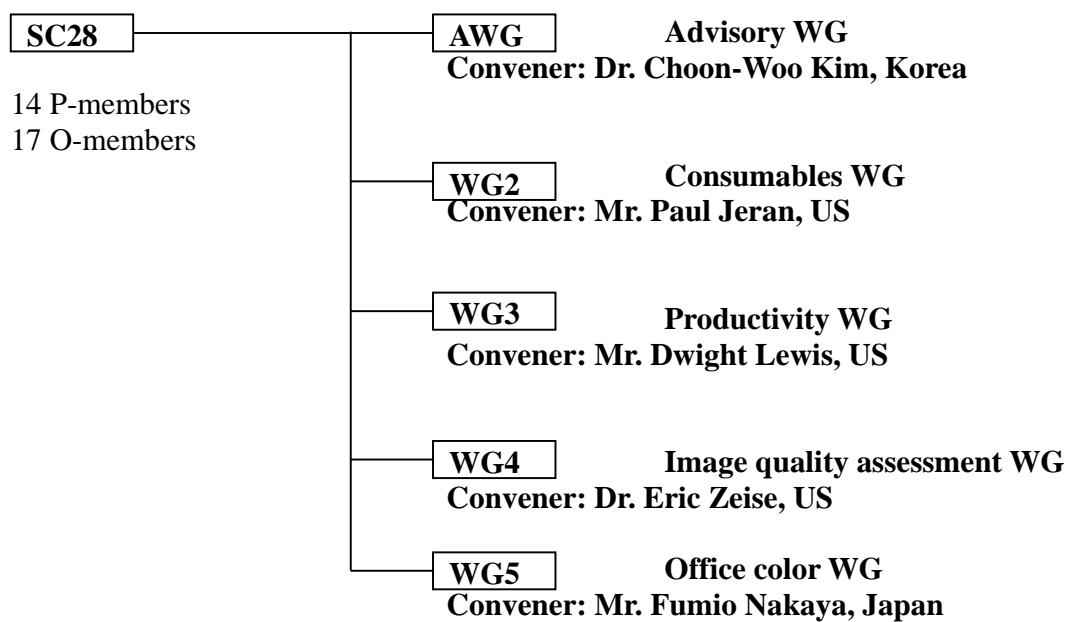
Standardization of basic characteristics, test methods and other related items, excluding such interfaces as user system interfaces, communication interfaces and protocols, of office equipment and products such as Printers, Copying Equipments, Digital scanners, Facsimile equipment and systems composed of combinations of office equipment.

### **Formation of SC28**

SC28 is organized as follows as of August 1, 2009.

**Chair:** Mr. Akira Saito, Japan

**Secretary:** Mr. Kazumasa Kumakura ( - September 2009)  
Mr. Motokuni Sugiyama (October 2009 - )



**Note:** The new Working Group WG5 – Office Color was established in June 2009 Busan plenary, according to Japan's proposal (j281268) with the approval of AWG.

## 1.3 PROJECT REPORT

### 1.3.1 Ongoing projects of SC28.

Project ref	Project title		Reg. Date	Stage date	Target date
ISO/IEC CD24790 (id 41560)	Revision of ISO/IEC 13660: Measurement of Image quality attributes for hardcopy output - Binary monochrome text and graphic images		2007-05-11	2008-09-01	IS 2012-05-11 (12 months extended)
ISO/IEC WD29102 (id 45125)	Method for the determination of ink cartridge yield for color photo printing with inkjet printers and multi-function devices that contain inkjet printer components		2007-05-11	2008-05-16	IS 2012-05-11 (12 months extended)
ISO/IEC NP29103 (id45126 )	Color photo test pages for measurement of ink cartridge yield for color photo printing		2007-05-11	2007-05-11	IS 2012-05-11 (12 months extended)
ISO/IEC NP 29112 (id 45135)	Test chart and method for measuring printer resolutions of monochrome laser printers		2006-12-26	2006-12-26	IS 2011-12-26
ISO/IEC NP 29142-1 (id 45165)	Cartridge Characterization Standard	Part 1: General : terms, symbols and notations	2007-12-26	2007-12-26	IS 2012-12-26 (12 months extended)
ISO/IEC NP 29142-2 (id 51950)		Part 2: Labeling	2008-06-06	2008-06-06	IS 2013-06-06 (12 months extended)
ISO/IEC NP 29142-3 (id51951)		Part 3: Environment	2008-06-06	2008-06-06	IS 2013-06-06 (12 months extended)
ISO/IEC NP 29142-4 (id51952)		Part 4: Ink cartridge attributes	2008-06-06	2008-06-06	IS 2013-06-06 (12 months extended)

ISO/IEC NP 29142-5 (id51953)	Part 5: Toner cartridge attributes	2008-06-06	2008-06-06	IS 2013-06-06 (12 months extended)
ISO/IEC WD29183 (id45262)	Digital Copying Productivity of a Single, One Sided Original	2009-01-15	2009-06-26	IS 2012-01-15
ISO/IEC NP TR29186 (id45265)	Test Method of Color Gamut Mapping Algorithm for Office Color Equipment	2009-02-28	2009-02-28	IS 2012-02-29

### 1.3.2 (Reference): Inventory of published standards

The following table indicates inventory of standards published by SC28 *in 1995 onward*. As for standards released before 1995 classified as those under the responsibility of SC28, they can be viewed at Catalogue of ISO Livelink.

ISO/IEC Numbers	Titles
24735:2009	Method for measuring digital copying machine productivity
24734:2009 Cor 1:2009	Method for measuring digital printer productivity
10779:2008	Office equipment accessibility guidelines for elderly persons and persons with disabilities
28360:2007	Cor 1:2008
28360:2007	Determination of chemical emission rates from electronic equipment
19799:2007	Method of measuring gloss uniformity on printed pages
24712:2007	Color test pages for measurement of office equipment consumable yield
24711:2007	Method for the determination of ink cartridge yield for color ink jet printers and multi-function devices that contain printer components
19798:2007	Method for the determination of toner cartridge yield for color electrophotographic printers and multi-function devices that contain printer components
18050:2006	Print Quality Attributes for Machine Readable Digital Postage Marks
21117:2005	Copying machines and Multi-function devices -- Information to be included in specification sheets and related test methods
24700:2005	Quality and performance of office equipment that contains reused components
TR24705: 2005	Machines for color image reproduction -- Method of specifying image reproduction of colour devices by digital and analog test charts
21118: 2005	Information to be included in specification sheets -- Data projectors
15775:1999 Amd 1: 2005	Method of specifying image reproduction of color copying machines by analog test charts -- Realization and application

TR19797: 2004	Device output of 16 color scales, output linearization method (LM) and specification of the reproduction properties
19752: 2004	Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi-function devices that contain printer components
13660: 2001	Measurement of image quality attributes for hardcopy output -- Binary monochrome text and graphic images
15404: 2000	Minimum information to be included in specification sheets -- Facsimile equipment
14473: 1999	Minimum information to be specified for image scanners
10561: 1999	Printing devices -- Method for measuring throughput -- Class 1 and Class 2 printers
14545: 1998	Method for measuring copying machine productivity
11160-1: 1996	Minimum information to be included in specification sheets -- Printers -- Part 1: Class 1 and Class 2 printers
11160-2: 1996	Minimum information to be included in specification sheets -- Printers -- Part 2: Class 3 and Class 4 printers
11159: 1996	Minimum information to be included in specification sheets -- Copying machines

### 1.3.3.(Reference): Stage 0 items

The following item is being evaluated as possible project to be added to SC28 program of work

#### ● Print Ticket

A print ticket is generally defined as:

1. A means for user / application control of custom printer feature and behavior options.
2. A consistent interface with means for user / application control of generally available printer features and behaviors.

Note: Efforts to create road map of SC28 continue with a newly agreed-on format of road map table

## 1.4 COOPERATION AND COMPETITION

### 1.4.1 Liaisons-to/from SC28 are as follows.

<b>Liaison Group</b>	<b>Title</b>	<b>Category</b>	<b>Representative from SC28</b>	<b>Representative to SC28</b>
TC42	Photography	(Internal)	Mr. Nobuaki Usui (WG18) Mr. Toshihiko Inagaki (WG18) Dr. Eric Zeise (WG18) Ms. Ann McCarthy (WG5)	Dr. Klaus Richter
CIE TC1-57	International Commission on Illumination TC1-57	A	Dr. Klaus Richter	Dr. Klaus Richter
CIE Division 8	International Commission on Illumination Division 8	A	Dr. Klaus Richter Ms. Ann MacCarthy	Dr. Klaus Richter
IEC/TC 100 /TA 2	Audio, video and multimedia systems and equipment	(Internal)	Mr. Fumio Nakaya	Dr. Hiroaki Ikeda
ISO/TC 130	Graphic technology	(Internal)	Mr. Nobuaki Usui Dr. Eric Zeise	Mr. Friedrich Dolezalek
ISO/TC 171	Document management applications	(Internal)	Mr. Nobuaki Usui	Mr. Alan Shipman Mr. Paul Leadbeater
Ecma International TC38	Product-related environmental attributes	A	Mr. Paul Menard	Mr. Onno Elizinga
Ecma International TC46	XPS Document Standard	A	Ms. Ann McCarthy	Ms. Ann McCarthy
ICC	International Color Consortium	C	Ms. Ann McCarthy Mr. Fumio Nakaya	Ms. Ann McCarthy

#### **1.4.2 Potential areas of cooperation or competition**

- Establishment of complementary relationship with CIE Division 8 is indispensable for SC28/WG5 to successfully develop NP TR29186 Test Method of Color Gamut Mapping Algorithm for Office Color Equipment
- Cooperation with ISO/TC42, TC130 and TC171 is imperative for SC28 to be able to generate viable NPs in the area of file formats and metadata tags in office printing applications for which AWG/PWG6 is responsible.

## **2.0 PERIODIC REVIEW**

### **2.1 MARKET REQUIREMENTS**

*Major types of equipment in the current market subject to SC28 undertaking are classified as follows.*

- Copying machines
- Printers
  - Inkjet printers - color
  - Laser (electrophotographic) printers - monochrome and color
- Image scanners
- Facsimiles
- Data projectors
- MFP (Multi-function Peripherals: scanner + copier + printer + facsimile + email)

*General trend of the market for those equipment learned from various free and paid reports is observed as follows.*

- Inkjet printer takes up roughly 80% in unit and 50% in sales in terms of stock. However, growth rate in flows of color laser printer is considerably faster than inkjet printer in single function machines and multi-function peripherals combined.
- Sales of toner and ink cartridges for copying machines and printers continues to grow robustly.
- Shift from single inkjet printers and single laser printers to inkjet based or laser based multi-function peripherals is noticeable.



- Environment conscious and energy efficient design of office equipment is getting increasingly important for the low-carbon society.
- Accessibility is more than a nice-to-have feature. It is getting increasingly important for countries whose society becomes aged .

*Standards required by the market are those to facilitate or enable:*

- Comparison of functional specifications (descriptors) in product catalogues
- Measurement of yield of ink and toner cartridges of printers
- Comparison of characteristics of toner and ink cartridges
- Evaluation and comparison of printed output image quality and resolutions
- Measurement of productivity and performance of copying machines and printers
- Displaying and printing images in consistent colors across different hardware
- Printing in a consistent manner across different file formats
- Design of equipment in an environment conscience manner
- Accessibility for disabled and aged persons

## **2.2 ACHIEVEMENTS**

### **(1) Project progression**

#### Published as IS or TR

- ISO/IEC 24734:2009 Method for measuring digital printer productivity
- ISO/IEC 24735:2009 Method for measuring copying machine productivity

#### Registered as CD

- ISO/IEC 24790(id41560) Measurement of image quality attributes for hardcopy output – Binary monochrome text and graphic images

#### New Project Approved

- ISO/IEC WD 29183 Digital Copying Productivity of a Single, One Sided Original
- ISO/IEC NP TR29186 Test Method of Color Gamut Mapping Algorithm for Office Color Equipment

### **(2) Other achievements**

- Contributed an article titled “Comparing apples to apples” to ISO Focus magazine Volume 6, No.4, April 2009 featuring “ISO and the Media” (by Mr. Akira Saito)

## **2.3 RESOURCES**

It is an inherent and chronic problem with SC28 that national bodies which can afford to provide experts in SC28 technical work are generally limited to few countries with office equipment industries. However, SC28 with 14 P members can enjoy a recent JTC 1 decision to change its Directives regarding the NP threshold lowered to “4 NBs” from “5NBs” for SCs with 16 P members or less.

## **2.4 ENVIRONMENTAL ISSUES**

Recognizing that SC28 should squarely address environment issues relating to office equipment, SC28 published the following two standards.

- ISO/IEC 24700:2005 Quality and performance of office equipment that contains reused components
- ISO/IEC 28360:2007 Determination of chemical emission rates from electronic equipment.

## 2.5 PARTICIPATION METRICS

The following tables present ratios of P-members' attendance to plenary meetings and participation in official letter ballots.

### Plenary attendance

For the past five Plenary meetings

Attendance ratio: # Participated P-members/# all P-members

Plenary meetings	Sept. 2005 Beijing	May 2006 Lexington	May 2007 Matsumoto	June 2008 Boeblingen	Jun 2009 Busan
Attendance ratio	7/15	7/11	7/12	8/14	7/14

### Voting participation

For the previous plan period June 2008 - May 2009

Month	Jan 2008	Jan 2008	Jan 2009	Feb 2009
Vote on	FCD	FCD	NP	NP
# of P-members that voted	11	11	13	12
% against all P-members	78%	78%	93%	86%

## **3.0 THE FOCUS OF THE NEXT WORK PERIOD (June 2009 – May 2010)**

### **3.1 DELIVERABLES**

(Business as usual)

### **3.1 STRATEGIES**

- Strive to keep additionally extended timelines (subject to JTC 1 approval) for projects on image quality (24790) photo yield (29102/29103), and printer cartridge characterization (29142-1 to 5)
- AWG/PWG6 to make maximum efforts to come up with viable NPs in this plan period.
- Revisit 10779:2008 “Office equipment accessibility guidelines for elderly persons and persons with disabilities” in accordance with the supplementary condition for publication of the standard – revisit after two years from publication

#### **3.1.1 RISKS**

Risks, if there is any, are considered to come from inaction on our part. We may lose our grips on some important requirements in office equipment industry if we do not proactively define our work. This is because in many of our fronts are crowded with groups in ISO, IEC and consortia actively engaged in such areas as photography, graphic technology and document management. They become competitive at times while they are basically complementary to SC28.

#### **3.2.2 OPPORTUNITIES**

Opportunity identification will be a crucial task of SC28 throughout the plan period (see bullet 2 of 3.1 Strategies above). Positive contribution from NBs on stage 0 projects is expected to crowd the road map table.

### **3.3 WORK PROGRAM PRIORITIES**

SC28’ s priority is on four projects whose timelines are additionally extended for one year (see bullet 1 of 3.1 Strategies above).