Canon Comments to the US Access Board on the Proposed Information and Communication Technology (ICT) Standards and Guidelines:

E201.1 Scope.

< Sec. 1194.2 Application >

(a) Products covered by this part shall comply with all applicable provisions of this part. When developing, procuring, maintaining, or using electronic and information technology, each agency shall ensure that the products comply with the applicable provisions of this part,

< Sec. 1194.3 General exceptions >

(d) When agencies provide access to the public to information or data through electronic and information technology, agencies are not required to make products owned by the agency available for access and use by individuals with disabilities at a location other than that where the electronic and information technology is provided to the public, or to purchase products for access and use by individuals with disabilities at a location other than that where the electronic and information technology is provided to the public.

< Comments >

1. What is the scope of 'ICT products'? Does Section 508 also apply to high volume, professional production printers?

We have a wide portfolio, ranging from low volume printers to high volume production cutsheet of continuous feed printers. High volume printers are not walk-up printers in office environments, but they print volumes of over 1 million sheets per month, which the operators need trainings to operate these machines. (The operators do not print their own documents, it is their work to print for other people.)

Although they could have disabilities like low vision, hard hearing or they might be using wheelchair users, it is hard to imagine that an operator of such a machine, whose task it is to judge print quality, is blind, or has problems in lifting weight more than 22.2N.

2. On page 70 of the NPRM, it is written "We are proposing to remove this exception because there is nothing in the proposed 508 Standards that would require an agency to provide accessible ICT at a specific location, or that would require public access to locations not open to the public."
What is meant by 'public access' and 'not open to the public'? Does this imply that for production printers in non-public areas Section 508 does not imply?

E203 Access to Functionality

< Requirement >

E203.1 General. Agencies shall ensure that all functionality of ICT is accessible to and usable by individuals with disabilities, either directly or by supporting the use of assistive technology, and shall comply with E203.

< Comments >

1. What is the idea for the minimal required abilities of operating specific functions of a certain product? When an operator or other user of a production color printer needs to check, to fine tune of print quality, or to calibrate the engine, it would be very difficult (almost impossible) tasks if the operator or user is blind.

2. On page 23 of the NPRM, it is written "applicable technical requirements".   What is the definition of 'applicable'? Does it imply that certain abilities are required to operate the ICT system?(Concerned to 302 Functional Performance Criteria, in some cases, the operation of an ICT device requires some minimal abilities How does the act address these aspects?)

E203.2 Agency Business Needs

< Requirement >

When agencies procure, develop, maintain or use ICT they shall identify the business needs of users with disabilities affecting vision, hearing, color perception, speech, dexterity, strength, or reach to determine:

a. How users with disabilities will perform the functions supported by the ICT; and

b. How the ICT will be installed, configured, and maintained to support users with disabilities.

Advisory E203.2 Agency Business Needs. An assistive technology needs assessment is an example of how an agency might analyze how a user performs the functions supported by the ICT. Set-up of assistive technology is an example of installation and configuration to support use by people with disabilities. User training is an example of a resource that helps maintain the ability of users with disabilities to use ICT.

< Comments >

1. What are the user tasks that fall under Section 508? What are 'normal daily operation' tasks under Section 508? It is helpful if some specific tasks were given.

For multi-function printers, used by everyone in workplaces or schools, the examples of tasks are:

For operation :

- Copying using major functions (almost every time of walk-up operation.)
- Changing the operation mode (almost every time of walk-up operation.)
- Copying or printing to irregular size paper, which is not in the paper drawers.

    (do not happen very often, for the frequently used paper size papers are in the drawers.)

For maintenance and repair:

- Replacing toner cartridge / Removing paper jam (Encounters casually)
- Replacing waste toner recovery vessel (Encounters casually)
- Placing new papers (When the specific size paper is emptied.)

For installation and switching the power:

- Recovery from eco-mode. (Almost every time of walk-up operation.)
- Daily start-up and shutdown operation (Once each in a day.)
- Installation (Once when the machine is installed at the place.)

Please clarify for the new Standards, which tasks are intended to be the scope of the Section 508.

It should be very preferable if every part of the MFP is accessible and safe for everybody with disability.

For example, to ensure providing product safety for persons with disabilities, it would be ideas to provide guards inside of the machine, or remove the edges and burrs for every part. The 'every part accessible' idea is a refined notion, however we cannot ignore its raise in cost. (That means the more expensive products. As a manufacture, we wish to keep providing inexpensive mainstream products.)

2. For professional, high-volume printing machines, used only by trained operators (which their mis-operation can cost for huge amount of papers, and its recovery from an urgent failure is far more difficult):

It is true there are tasks like MFP as above, and we understand it is more preferable if everyone regardless of the disability can use the machine.

    However, the operator should be able to check the printing quality, which fundamentally requires the operator to see and judge, not just operating the machine itself. Furthermore, the impact of mis-operation and the burden from recovery are very heavy, that cannot be regarded as the same as normal office-use MFP. (On the other hand, some of the professional high-volume printing machines even provide the emergency stopping means for product safety reason. This type of products is naturally different from the normal office-use MFP.)

302.5 With Limited Hearing.

< Requirement >

Where an auditory mode of operation is provided, ICT shall provide at least one mode of operation which improves clarity, one mode that reduces background noise, and one mode that allows user control of volume.

< Comments >

1. It requires modes of operation which improve clarity, reduce background noise, and allow user control of volume. 'A mode of operation which reduces background noise' is ambiguous. If examples or explanations are added, it would help much.

402 Closed Functionality

< Requirement >

Advisory 402.1 General. Self-service machines, information kiosks, set-top boxes, and devices like most copiers, fax machines, and calculators have closed functionality because, by design, these products preclude the user from adding peripherals or software. ICT also may have closed functionality in practice even though the manufacturer did not design or develop it to be closed. Computers with security restrictions that prevent end users from adjusting settings or adding assistive technology have closed functionality.

< Comments >

1. The examples in Advisory 402.1 all refer to public and personal use of ICT accessibility. Is the Section 508 applied to the ICT equipment which is used by any kinds of users, to achieve their own jobs or personal needs? There is also ICT equipment to be operated for normal daily operation by trained operators for non-personal activities. Can such professional product be considered as an exception?

2. In the advisory it states:
- If some devices are considered 'closed' by design and hence the rules of 402 apply.
- If the ICT does provide means to connect assistive technologies, it is no longer considered as a 'closed' system.
So, does it mean it is required to comply with 502 'Interoperability with AT', and has no need to comply with 402?

402.2.1 User Control.

< Requirement >

402.2.1 User Control. Speech output for any single function shall be automatically interrupted when a transaction is selected. Speech output shall be capable of being repeated and paused.

< Comments >

1. Is the language of the speech output the same as selected on the user interface?   Or can/must they be selectable independently, or not selectable at all?   Being an US act, is only the US English required by 402.2.1?

402.2.2 Braille Instructions.

< Requirement >

Where speech output is required by 402.2, braille instructions for initiating the speech mode of operation shall be provided.

< Comments >

1. We request to accept tactile indications other than brailles.

   It requires braille instructions for initiating a speech mode. We understand Section 508 is an US act, however for global manufactures, it is often difficult to put brailles on their machines, as brailles differ for each language. (Besides, the European Accessibility Standards EN301549, requires tactile indications to activate speech mode.)

402.3.2 Non-private Listening.

< Requirement >

Where ICT provides non-private listening, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.

< Comments >

1. It requires a volume gain of at least 20 dB above the ambient level, when the ambient noise level is above 45 dB. We request to clarify the numeric upper limit for the volume gain. Otherwise, the manufactures should design for unlimitedly loud voice guidance with efficient quality, which causes corresponding expense.

2. Define 'use' in the last sentence: '.. after every use'. When does 'use' start and when does it end? Is this scope defined by the 'speech mode of operation' mentioned in 402.2.2

402.4 Characters.

< Requirement >

At least one mode of characters displayed on the screen shall be in a sans serif font. Where ICT does not provide a screen enlargement feature, characters shall be 3/16 inch (4.8 mm) high minimum based on the uppercase letter "I". Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

< Comments >

1. Clarification: Does this mean that if the capital 'I' is at least 4.8mm, 402.4 is satisfied?

Reading the sentences of this requirement, there was an interpretation that only the capital 'I' needs to be 4.8mm to meet this requirement (even if the other characters are much smaller than it). If it is not the intention of the requirement, it would be preferable to add some explanation.

403 Biometrics

< Requirement >

Biometrics shall not be the only means for user identification or control.

> EXCEPTION: Where at least two biometric options that use different biological characteristics are provided, ICT shall be permitted to use biometrics as the only means for user identification or control.

< Comments >

1. Is this required only if user identification is demanded for operation of the ICT?

If an ICT system can be operated by anyone, and doesn't need to know who is operating the device, is this rule considered 'not applicable'.

404 Preservation of Information Provided for Accessibility

< Requirement >

ICT that transmits or converts information or communication shall not remove non-proprietary information provided for accessibility or shall restore it upon delivery.

Advisory 404.1 General. This provision applies to conversion techniques, such as encoding, signal compression, and format transformation. Examples of ICT that might encode, compress, or transform information include firewalls, routers, and gateways. This provision does not require the addition or translation of information, simply its preservation. For example, this provision would not require an agency to change voice mail into text.

< Comments >

1. With an ICT capable of printing, there is also a conversion of information (from digital to paper). While the digital format may contain non-visible accessibility information, this will not be printed. Is such printer ICT device an exception?

407.3 Tactilely Discernible

< Requirement >

At least one tactilely discernible input control shall be provided for each function and shall conform to 407.3.

407.3.1 Identification. Input controls shall be tactilely discernible without activation and operable by touch. Where provided, key surfaces outside active areas of the display screen shall be raised above surrounding surfaces.

< Comments >

1. If the functions of a hard-key change according to the mode of product, and its functions are displayed on the display which bound the hard-key, does this key meet the requirement as long as the hard-key is tactilely discernible?

2. We request to accept tactile features other than raising keys above surrounding surfaces.

For example, the keys are tactilely discernible by the taste of touch, for the difference of their materials or surface texture (whether they are slick or rough, etc.). Or, the keys can be distinguished tactilely for their concave shape or their raised rims, too. By limiting the methods to recognize the keys tactilely, the improvement of technologies and product designs may be prevented fundamentally. It is not beneficial for the users, too.

407.3.2 Alphabetic Keys.

< Requirement >

Where provided, individual alphabetic keys shall be arranged in a QWERTY keyboard layout and the "F" and "J" keys shall be tactilely distinct from the other keys.

< Comments >

1. It seems that the Spanish keyboard layout (which you may also encounter in the US) is slightly different. Does the act account for different culture-dependent layouts, or is it restricted to the QWERTY layout ?

407.6 Status Indicators.

< Requirement >

Status indicators, including all locking or toggle controls or keys (e.g., Caps Lock and Num Lock keys), shall be discernible visually and by touch or sound.

< Comments >

1. Should the discernability be continuously present, or only when changing a state? E.g. there are keyboards showing on screen when e.g. the num lock status is changed. Do they comply?

407.12.2 Side Reach.

< Requirement >

407.12.2 Side Reach.

Operable parts of ICT providing a side reach shall conform to 407.12.2.1 or 407.12.2.2. The vertical reference plane shall be centered on the operable part and placed at the leading edge of the maximum protrusion of the ICT within the length of the vertical reference plane. Where a side reach requires a reach over a portion of the ICT, the height of that portion of the ICT shall be 34 inches (865 mm) maximum.

407.12.2.1 Unobstructed high side reach

Where the operable part is located 10 inches (255 mm) or less beyond the vertical reference plane, the operable part shall be 48 inches (1220 mm) high maximum and 15 inches (380 mm) high minimum above the floor.

407.12.2.2 Obstructed side reach

Where the operable part is located more than 10 inches (255 mm), but not more than 24 inches (610 mm), beyond the vertical reference plane, the height of the operable part shall be 46 inches (1170 mm) high maximum and 15 inches (380 mm) high minimum above the floor. The operable part shall not be located more than 24 inches (610 mm) beyond the vertical reference plane.

< Comments >
1. For 407.12.2 Side Reach, there are requirements of '407.12.2.1 Unobstructed high side reach' and '407.12.2.2 Obstructed side reach'. Actually, there are obstructing objects in both 407.12.2.1 and 407.12.2.2, and only their distances from the vertical reference plane are different. We request to change their titles appropriate to the requirements. (Otherwise, it is confusing.)

407.12.3.2 Obstructed Forward Reach.

< Requirement >

Where the operable part is located beyond the leading edge of the maximum protrusion within the length of the vertical reference plane, the operable part shall conform to 407.12.3.2. The maximum allowable forward reach to an operable part shall be 25 inches (635 mm).

< Comments >

1. It is not very clearly recognizable whether 'vertical reference plane (407.12.1)' or 'leading edge of the maximum protrusion (407.12.3.2)' is appropriate to apply. E.g. For a printer with a paper tray which sticks out to the front of the machine, should the vertical reference plane be its operational panel (with keys and display) or the paper tray? OR, should the Obstructed Forward Reach requirement be applied, and 'the leading edge' is the end of the paper tray??.

411 Closed Caption Processing Technologies
412 Audio Description Processing Technology
413 User Controls for Captions and Audio Description

411 Closed Caption Processing Technologies
  411.1.1 Decoding of Closed Captions.
  411.1.2 Pass-Through of Closed Caption Data.
412 Audio Description Processing Technology
  412.1.1 Digital Television Tuners.
413 User Controls for Captions and Audio Description
  413.1.1 Caption Controls.
  413.1.2 Audio Description Controls.

< Comments >

Do these rules also apply for non-daily, non-primary function of the ICT?

For example: For the instruction video for maintenance personnel, which is embedded in the ICT, should this requirement be applied?

502 Interoperability with Assistive Technology

< Requirement >

EXCEPTION: Platforms and applications that have closed functionality and that conform to 402 shall not be required to conform to 502.

On page43 of the NPRM:

The Task Force's report also notes that applying the success criteria in WCAG 2.0 to non-Web ICT with closed functionality proves problematic when a success criterion assumes the presence of assistive technologies, since closed functionality—by definition—does not allow attachment or use of assistive technology. This might occur, for example, when an eBook allows assistive technologies to access all of the user interface controls of the eBook program (open functionality), but does not allow such technologies to access the actual content of books (closed functionality). The Task Force identified 14 success criteria for which compliance might prove challenging for developers of ICT products with closed functionality. We propose to resolve this issue by exempting ICT with closed functionality from certain WCAG 2.0 Success Criteria, in conjunction with the addition of requirements specific to such products in Chapter 402, Closed Functionality.

1. The exception says 'Platforms and applications that have closed functionality and that conform to 402 shall not be required to conform to 502'. On the other hand, on the page 42 of the NPRM draft, it says 14 success criteria of WCAG 2.0 can be applied to firmware.

Those 14 success criteria (also picked up by European Accessibility Standards, EN 301549) are mostly included to 402 and 502, so it would be very confusing to apply both WCAG and 402/502. We recommend to require '402 or 502' alone.

502.1 Interoperability with Assistive Technology
(E103.4 Defined Terms Closed Functionality.)

< Requirement >

502.1 EXCEPTION: Platforms and application that have closed functionality and that conform 402 shall not be required to conform 502'.
]
E103.4 Defined Terms. Closed Functionality. Characteristics that limit functionality or prevent a user from attaching or installing assistive technology. Examples of ICT with closed functionality are self-service machines, information kiosks, set-top boxes, fax machines, calculators, and computers that are locked down so that users may not adjust settings due to a policy such as Desktop Core Configuration.

From ANPRM2 draft (2011)
Closed Functionality. Characteristics that prevent a user from attaching or installing assistive technology. Examples of ICT with closed functionality are self-service machines, information kiosks, set-top boxes, and devices like printers, copiers, fax machines, and calculator

< Comments >

1. 502.1 Check question: A printer is a closed functionality product and therefore does not need to offer the platform features?
On the definition of the ANPRM2(2011), printers were stated as 'closed functionality', but it was removed in the NPRM, so it is not clear for us whether printers are closed or non-closed. Besides, 501.1 states that 'firmware is a kind of software', and 502.1EXCEPTION says 'Platforms and application that have closed functionality and that conform 402 shall not be required to conform 502'. These are making confusion, and it is preferable to add some examples of explanations to be more specific.

503.2 User Preferences.
< Requirement >

Advisory 503.2 User Preferences. This provision applies to applications that are platforms. One example of an application that is also a platform is a web browser.

EXCEPTION: Applications that are designed to be isolated from their underlying platforms, including Web applications, shall not be required to conform to 503.2.

< Comments >

1. It says a web browser is a platform. It is helpful to understand if some explanation about 'a web application isolated from the browser' are given.

Question 17

Some commenters raised concerns with proposed 302.2 With Limited Vision. They recommended that the Board establish thresholds for how much magnification, reduction, or contrast is sufficient to meet the provision. Should proposed 302.2 be more specific, and if so, what should the thresholds be? Please cite a scientific basis for threshold recommendations.

< Comments >

FPC should be FPC, like the other disabilities. Detailed requirements are to be written at the technical requirement chapters such as Chapter 4 & 5. Otherwise, FPSs cannot be handled consistently, and that causes confusion.

Question 19

Does the proposed exception to the requirement for tactilely discernible input controls strike the appropriate balance so that it permits innovative accessibility approaches for individuals with visual impairments without being overbroad? Should there be additional requirements for touchscreens? For example, should the Board require touchscreens to be compatible with prosthetic devices?

< Requirement >

407.3 Tactilely Discernible. At least one tactilely discernible input control shall be provided for each function and shall conform to 407.3.

EXCEPTION: Devices for personal use with input controls that are audibly discernable without activation and operable by touch shall not be required to be tactilely discernible.

< Comments >

It is appropriate to exclude touch panels for this requirement for it is not devices to discern tactilely. If needed, another requirement for touch panels should be provided. (So that, the compliance of the operable parts other than touch panels would not be missed out, too.) As the question of touch panel accessibility is one of a subject in nowadays, an independent requirement is more appropriate.

Question 20

Some industry commenters to the 2011 ANPRM suggested that the Board permit concave—as well as raised—key surfaces. What would be the impact on accessibility if proposed 407.3.1 instead prohibited key surfaces outside the active area of the display screen from being flush with surrounding surfaces?

< Comments >

The convex marks and keys are convenient for persons with sight and low vision, and the concave keys are useful for persons with dexterity problems. Because the objective disabilities are different, it definitely causes confusion while reflecting to the FPCs. We do not assent to mix those factors together.

Question 23

In addition to the proposed requirements above, the Board is considering establishing a requirement for the angle of the display screen to be adjustable, so that a person using a wheelchair or other mobility aid could see the entire viewable area of the display screen and minimize the effect of glare.

Question 23. Should the Board add a requirement that the viewing angle of display screens be adjustable to permit wheelchair users or persons of small stature to see the entire viewable area of such screens and minimize glare? Are there other characteristics of display screens that would make them more viewable to persons who use wheelchairs or other mobility aids?

< Comments >

A display should be visible from the position of a user with wheel chairs. If the display tilting is required addition to the visibility requirement (408 Display Screens. .. shall be visible from a point located 40 inches (1015 mm) above the floor space ..) , it would be useful not only for the persons with disability, but also for the people without disability. This seems to be a subject of usability rather than accessibility. It is questionable to include a requirement of display's adjustable angle to the standards, while requiring the visibility already.

Question 25
Are there requirements in proposed Exception 3 to 409.1 sufficiently clear?

< Requirement >
409 Transactional Outputs. Where transactional outputs are provided by ICT with speech output, the speech output shall audibly provide all information necessary to complete or verify a transaction.

EXCEPTIONS: 1. Machine location, date and time of transaction, customer account number, and the machine identifier shall not be required to be audible.
2. Duplicative information shall not be required to be repeated where such information has already been presented audibly.
3. Itineraries, maps, checks, and other visual images shall not be required to be audible.

< Comments >
The objective equipments are clear than the previous draft, however more examples or explanations would help. As a printer manufacture, what should we take into consideration?
Is MFP scope of this requirement?

Question 35
The Board seeks comment on its proposed approach to making its revised 508 Standards effective six months after publication in the Federal Register, with the exception of federal ICT-related procurements. The Board also seeks comment on deferring to the FAR Council to establish the effective date for application of the revised 508 Standards to "new" ICT contracts (i.e., contracts awarded after publication the FAR Council's final rule), as well as existing ICT contracts.

< Comments >
Some of our machines need 3 years to reflect new standards. (So, we have been trying to cope the gap by checking the drafts since the TEITAC. However, the drafts are proposals, and not the new standards.). A longer period than 6 months is desired for the effective date. We will attempt to catch up the new standards and follow the intention of US government, please understand the position of manufactures.