The significance of standardization

December 13, 2011

Digital Signage Consortium
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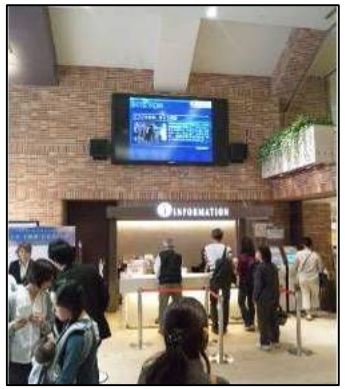
Use Case in Japan

Use case 1: At stations

Use case 2: Office and shopping buildings

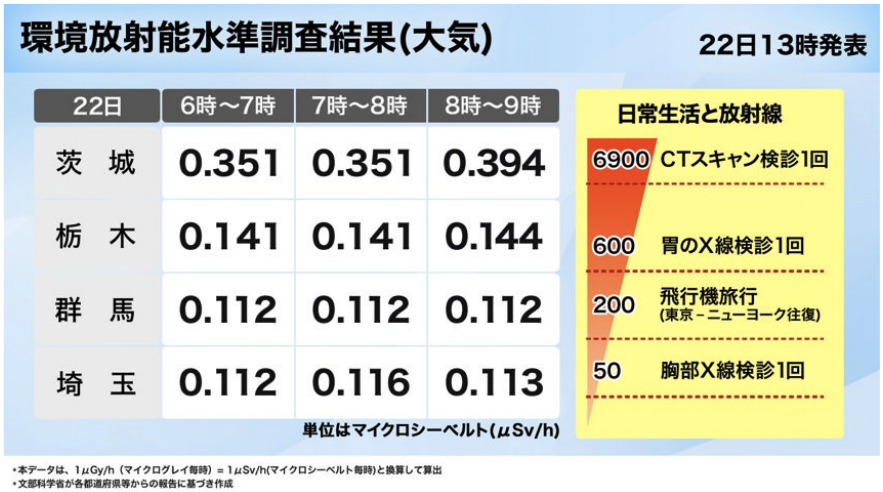


Use case 3: shops

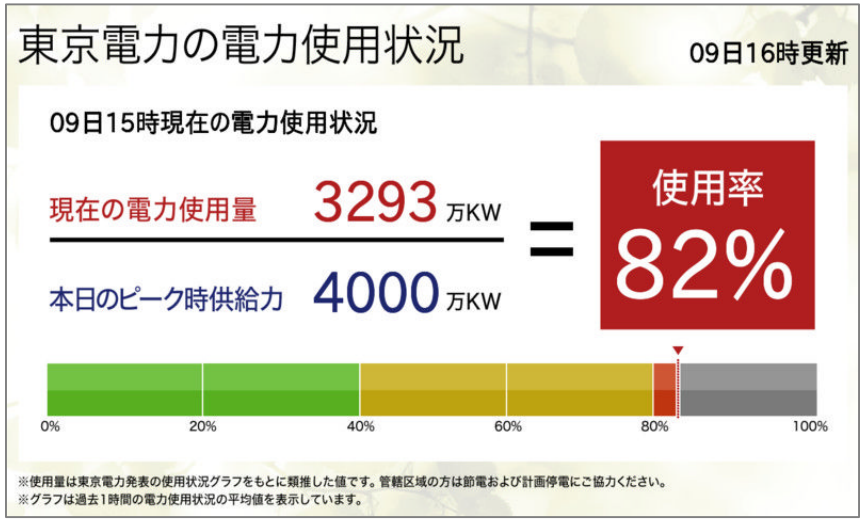
An example of the contents distributed at the time of a disaster

＜Safety information＞

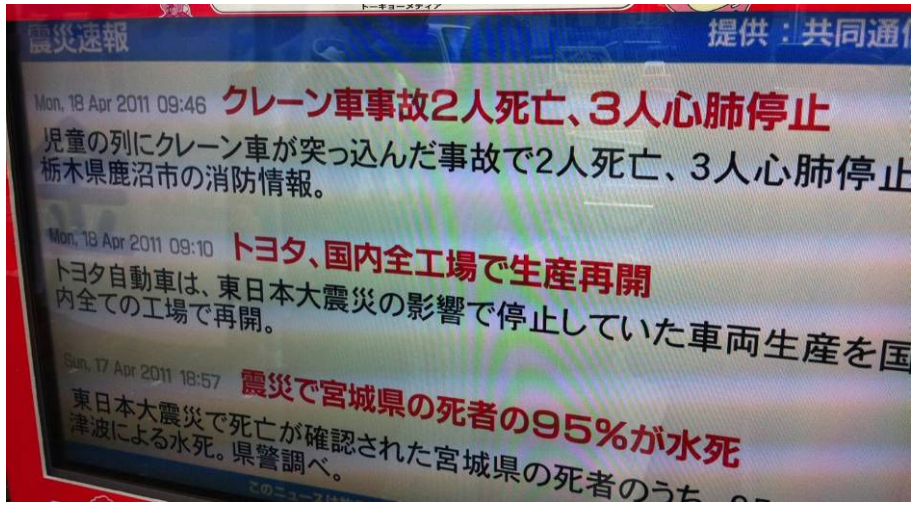
＜Radiation level information＞



＜Electric power information＞



＜News＞



Contents required at the time of a disaster

	Before a disaster	At the time of a disaster	Early stages of recovery	The second half of recovery
Stricken area	Disaster forecast	Evacuation area information Evacuation directive Disaster information (Local area) Disaster information (Entire country)	Safety information The needs in a stricken area are not reported Life adhesion information	Information and notices for the local community Information from the stricken area, information exchange between the stricken and safe areas (Including advertisements for industries in the stricken area)
Semi-stricken area		Information for getting home Operation information (transportation) Disaster information (Entire country) Disaster information (Local area)	Operation information (transportation) Power failure plan Radiation level information Measures to counter panic and rumors Contents not related to the disaster and safe areas Appeal for assistance Public service advertising Condolences, encouragement advertisements Safety information	Information stating that the signage is being used for disaster response
Safety zone		Disaster information (Entire country)		

Source: DSC Production Meeting

The proposal about contents required at the time of a disaster

1 Local information utilizing the local characteristics of digital signage is indispensable.

2 In urban areas, there is a need for information on train and bus operation.

3 NHK is a useful source of information immediately after a disaster.

4 Advertisements to be broadcast at the time of a disaster should be prepared in advance.

5 Contents and operation are provided as a set.

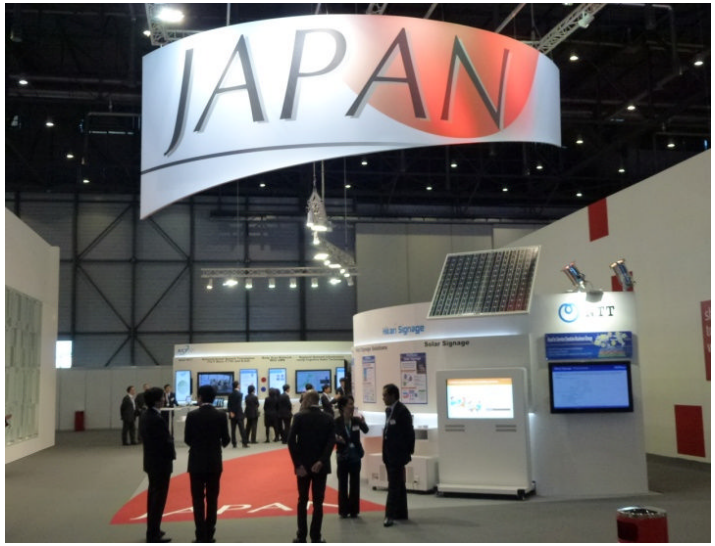
Source: DSC Production Meeting

ITU TELECOM WORLD 2011

Time: October 24-27, 2011
Place: Geneva (Switzerland)

○ Soler Signage

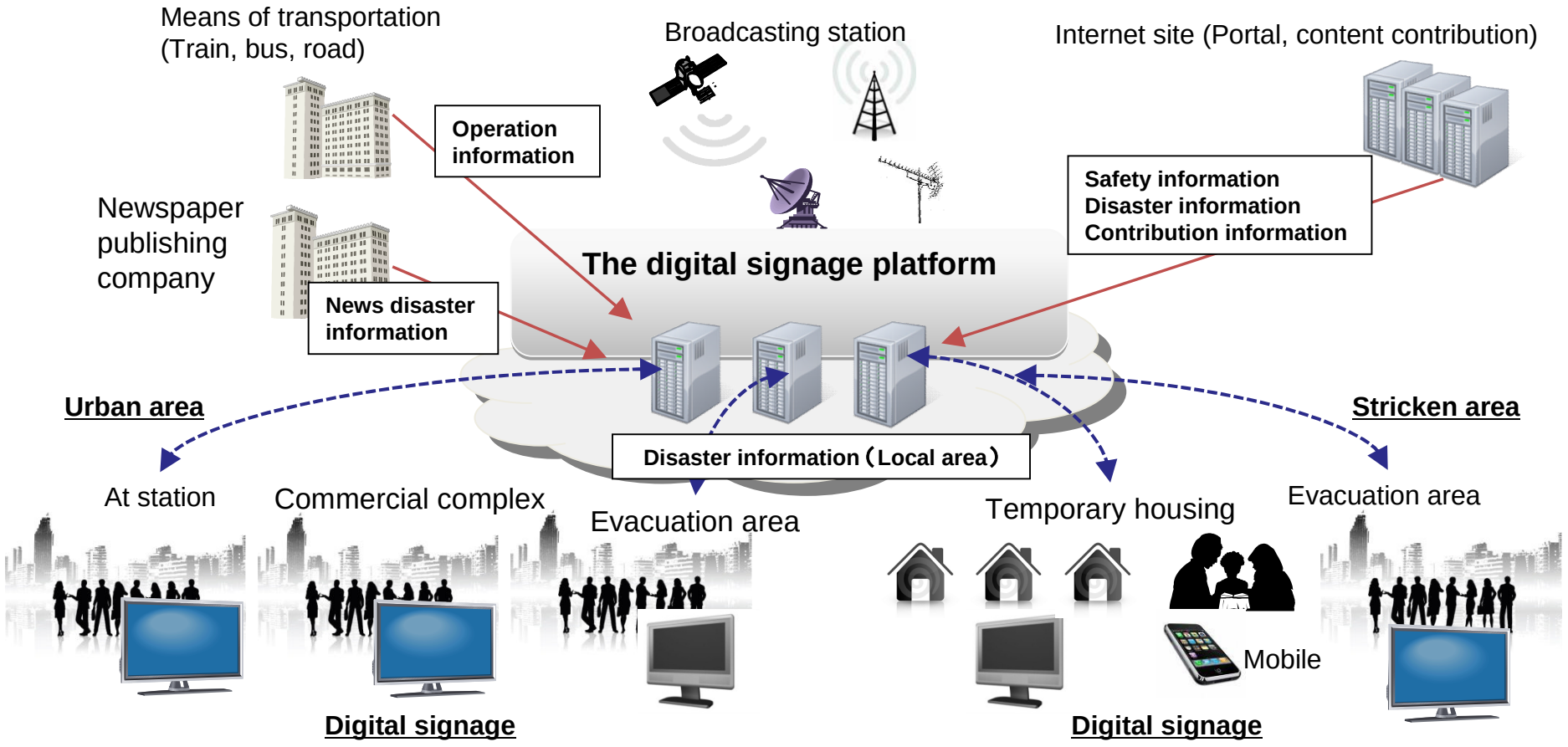
The digital signage system corresponding to a power failure and power conservation by combining an efficient solar cell and a highly efficient lithium ion storage battery



Japan pavilion

Digital signage platform for disaster response

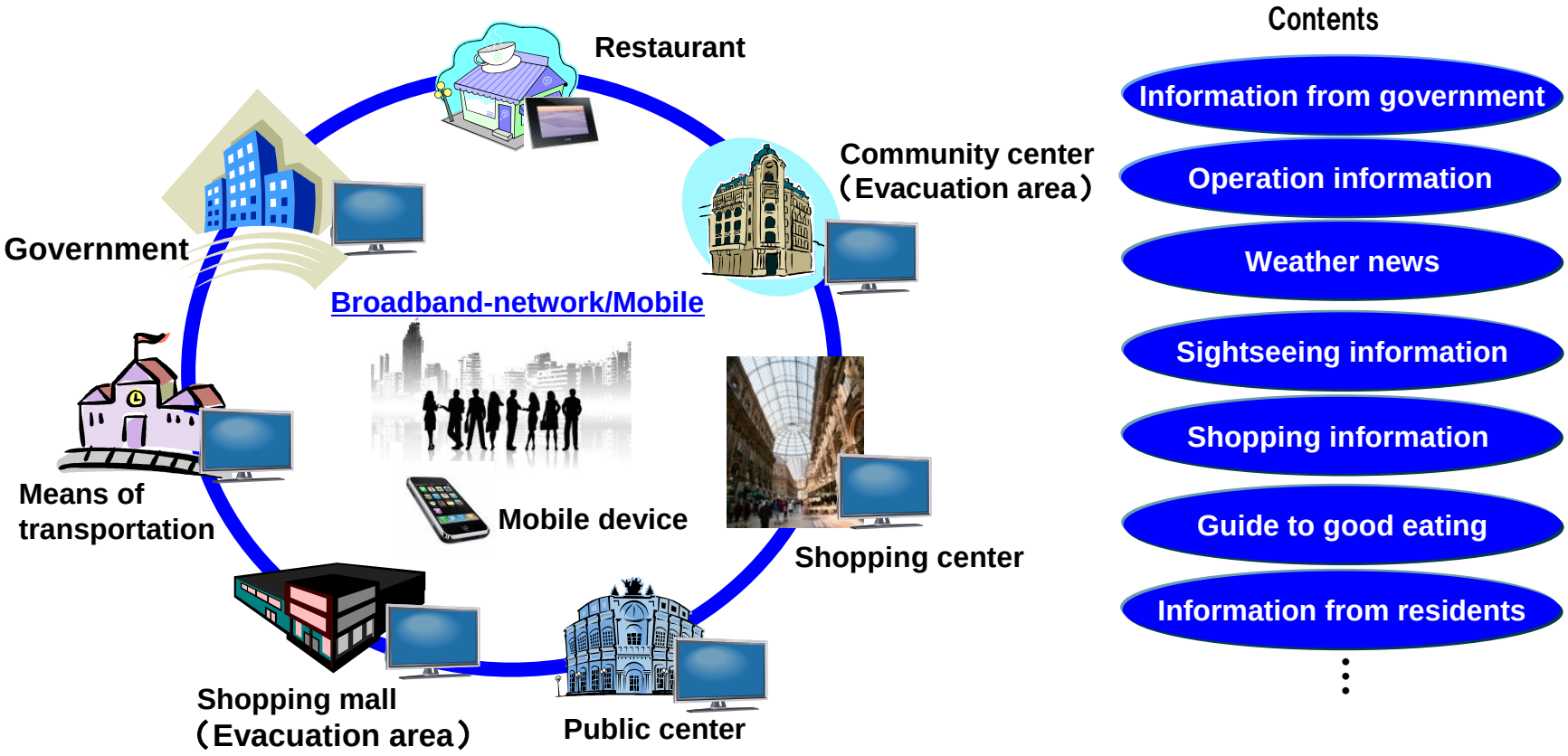
- Using digital signage is very effective since it is important to widely and simultaneously provide information to disaster victims after a disaster occurs and to provide accurate information that is suitable for each location.
- To achieve this, the ideal is for joint public and private sector initiatives to build and manager a platform that bundles reliable news, disaster information, traffic information, etc., and distributes the information to digital signage.
- Standardization of the platform operation rules and the interface specifications for connecting with various information sources are necessary.



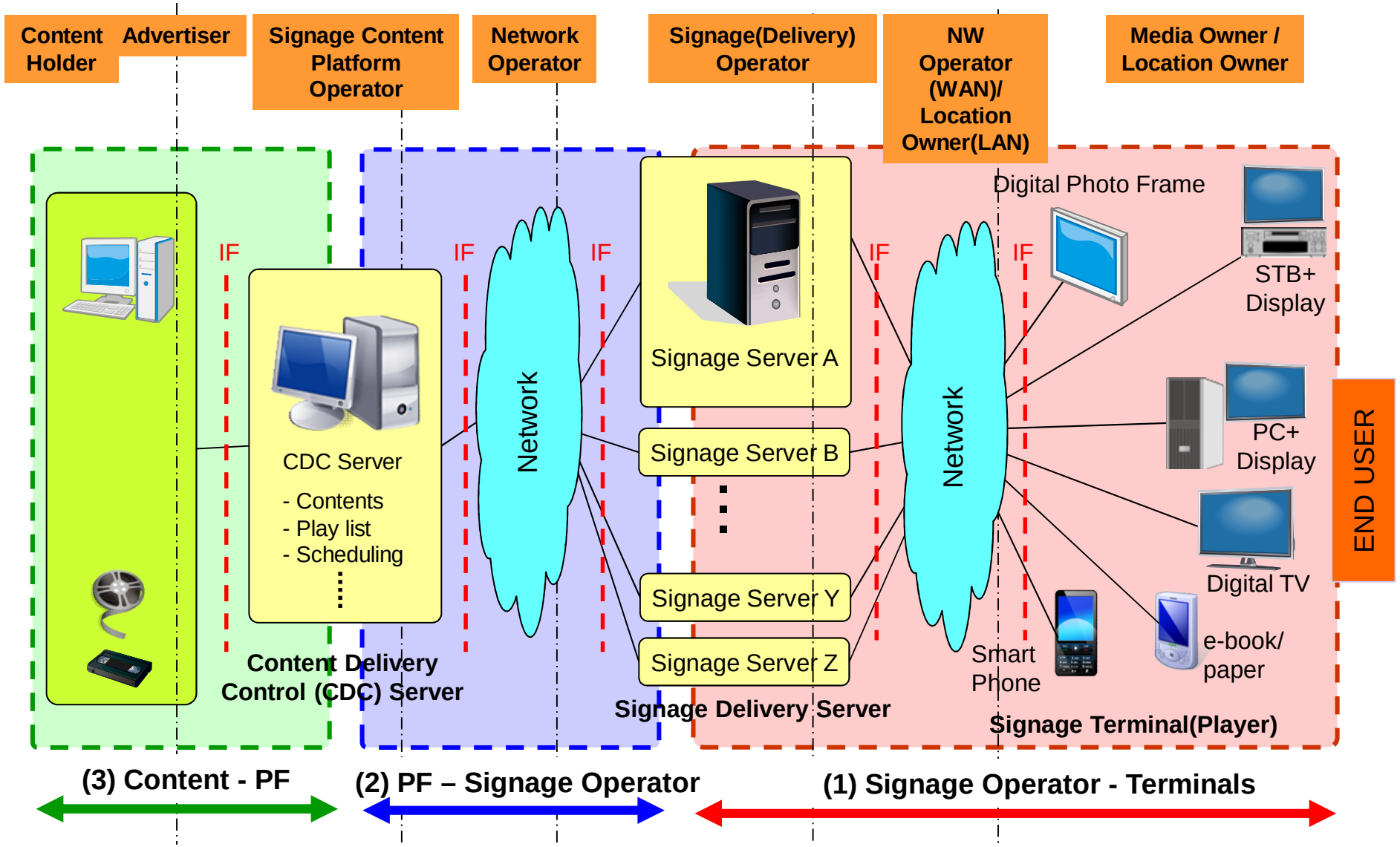
Uses of digital signage during normal times

- In addition to conventional advertising, digital signage along routes taken by people during their daily lives can be connected to broadband networks and mobile devices to create an environment for joint public and private sector use to be used as a familiar community tool.
- Usage guidelines need to be established for operating this type of joint use platform.

Digital signage as a community tool during normal times



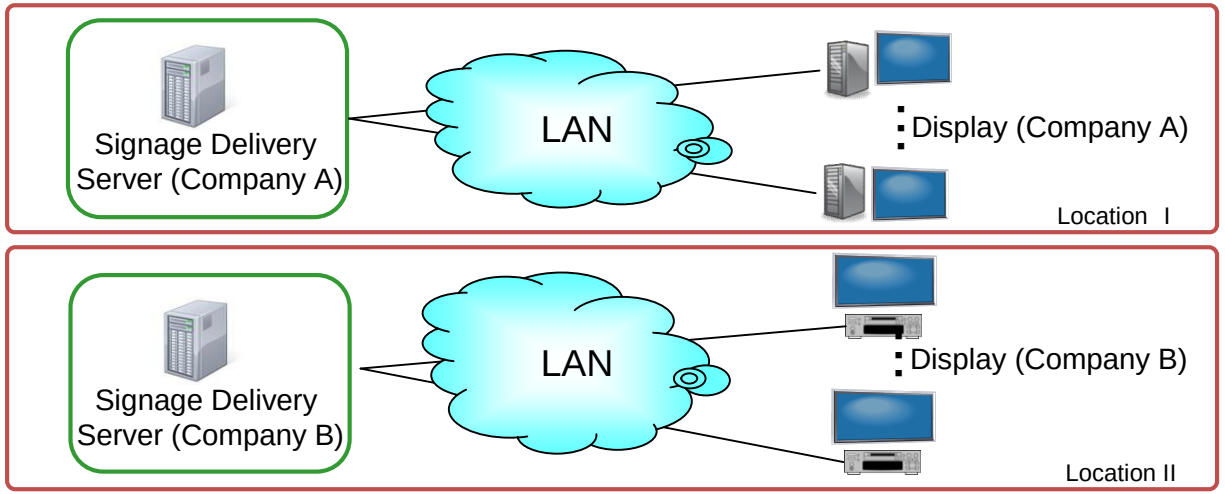
System Architecture for Network-based Digital Signage



System Architecture for Digital Signage

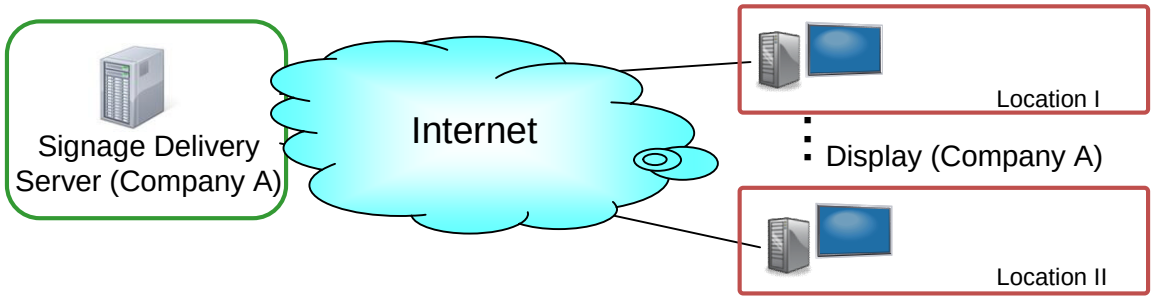
1st generation

- Different specifications for each vendor/maker
- Operated in the same location
- Mainly SI type



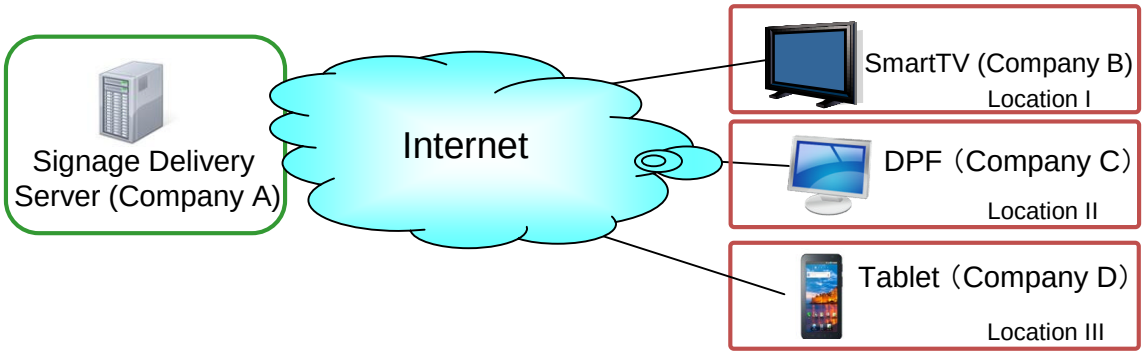
2nd generation

- Different specifications for each vendor/maker
- Remote operation via the Internet
- Emergence of SaaS type

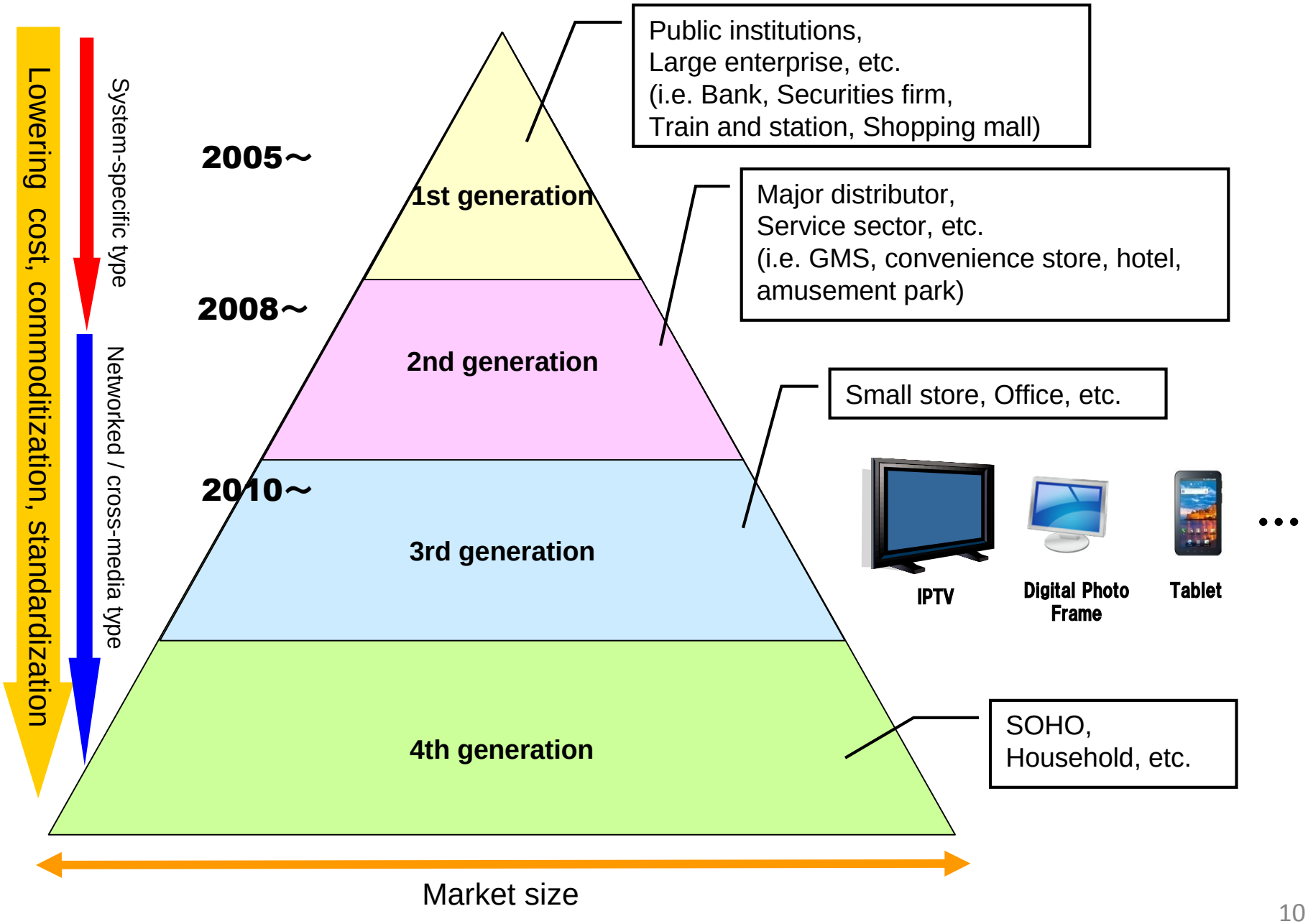


3rd generation ～

- Multi-device based on international standards
- Remote operation via the Internet
- Cloud type utilizing SmartTV, etc.



Target Segment



Digital Signage System Standardization

Objective

- Standardize the basic functions, basic interface, data format, etc, for digital signage systems to provide compatibility and mutual connectivity among different makers to lower the system implementation cost for signage operators while also increasing system versatility and reducing vendor product development cost and business operating expenses, etc.
- To achieve this requires a standardized signage system that is suitable for using Internet technology supporting consumer TVs and tablet type information terminals as signage display terminals. Therefore, international standardization will be pursued at ITU, W3C, etc.

Study Framework and Envisioned Standardization Organizations

Digital Signage Consortium (DSC)

- International-Standards Strategy Meeting
- System Meeting
- Indicators Committee
- WG1: Standardization
- WG2: Overseas trends survey

・Specific documentation
・Overseas trend assessment and standardization support

160 participating companies

Digital Signage User's Forum (DSUF)

Seeks technical requirements from the user's perspective

User companies (12 companies)

East Japan Marketing & Communications, Inc., TOKYU CORPORATION, MITSUBISHI ESTATE CO., LTD., MORI BUILDING CO., LTD., Tokyo Midtown Management Co., Ltd., NTT Urban Development Co., Shibuya Television, AEON Co., Ltd., Cross Ocean Media, Inc., ID's Co., Ltd., JACLA, Inc., Media Contents Factory

Requests from users

・**Reduce cost (system expense, operation expense)**

・System development, etc., through cooperation with outside device makers

Achieve using WWW related technology

Places for International Standardization

- De jure (ITU-T)
- Forum (W3C)
- De facto (DPAA, etc.)

Overseas Cooperation

- Workshops, etc.

Digital signage related companies (Approx. 3,500 worldwide)

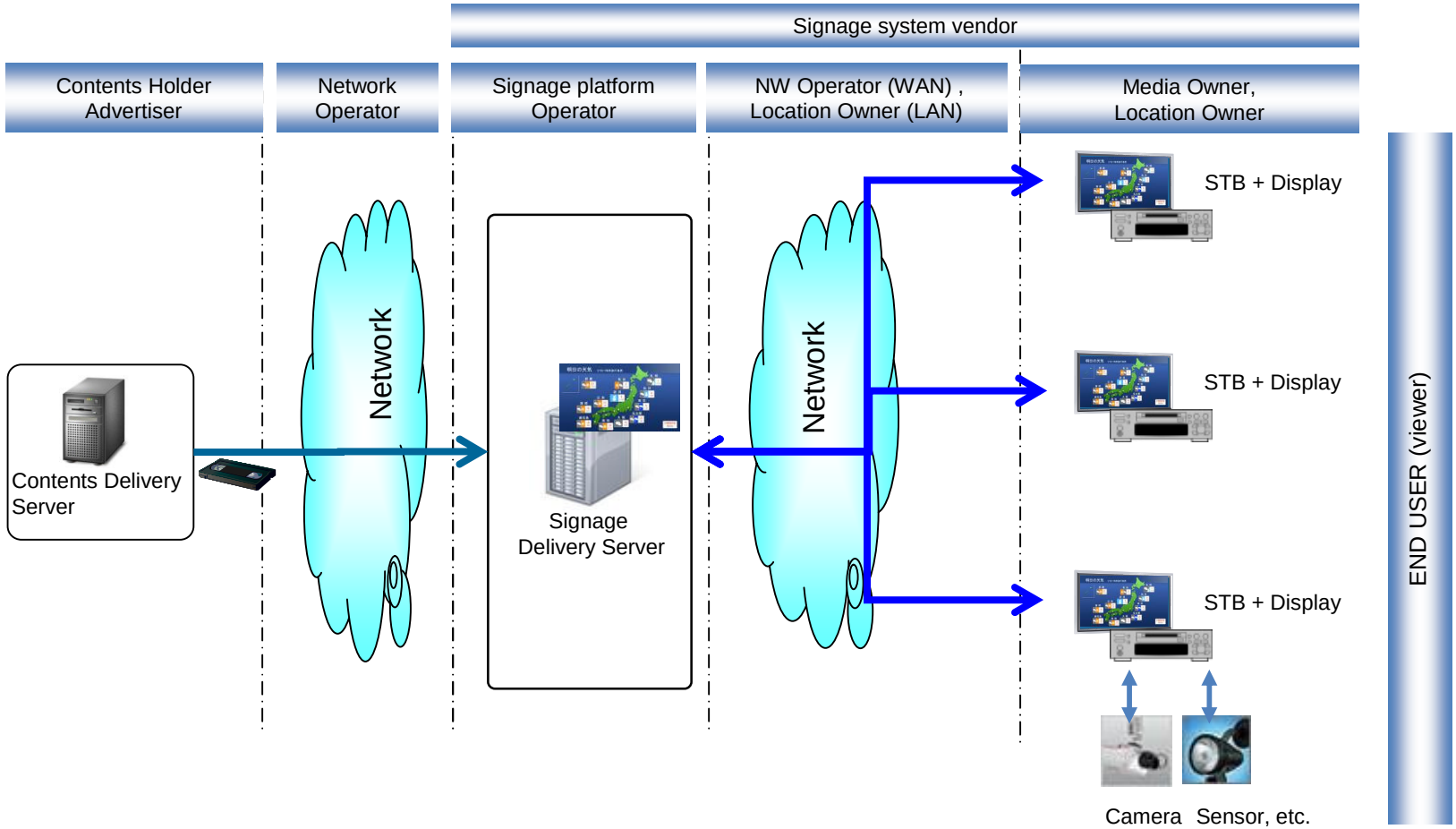
The standardization plan and progress of digital signage

- In ITU-T, the framework for digital signage is standardized based on the standard system guideline of DSC.
- In W3C, it promotes development of the new digital signage system from Japan supposing new uses, and promotes the business of system vendors or new companies.

System	The purpose of standardization	Standardization organization	Proposal contents	The work situation in DSC
High-end/ Middle-end system (Existing)	Market revitalization	ITU-T	•"H.FDSS(Framework of Digital Signage Service)" -Definition -Uses(during disasters) -System architecture •May, 2012	•The proposal document was drawn up based on the "DS standard system guideline 1.0" and "DS guidebook." •The proposal document was recognized at several ITU-T meetings (Jul, Sep, Nov).
Low-end system (New)	Market cultivation	W3C	•"Web-based Digital Signage" -Work flow standardization, common format -Delivery server to device interface, communications protocol -Device to external terminal interface, etc. •From 2012	•Begin examining the uses, required conditions, requirement specifications, etc., for Web-based Digital Signage.

Hi/Middle-end system: Existing Digital Signage

・It has functions for providing a basic workflow (contents registration, play list/schedule registration, contents distribution, display check/operation monitoring) for network type digital signage.



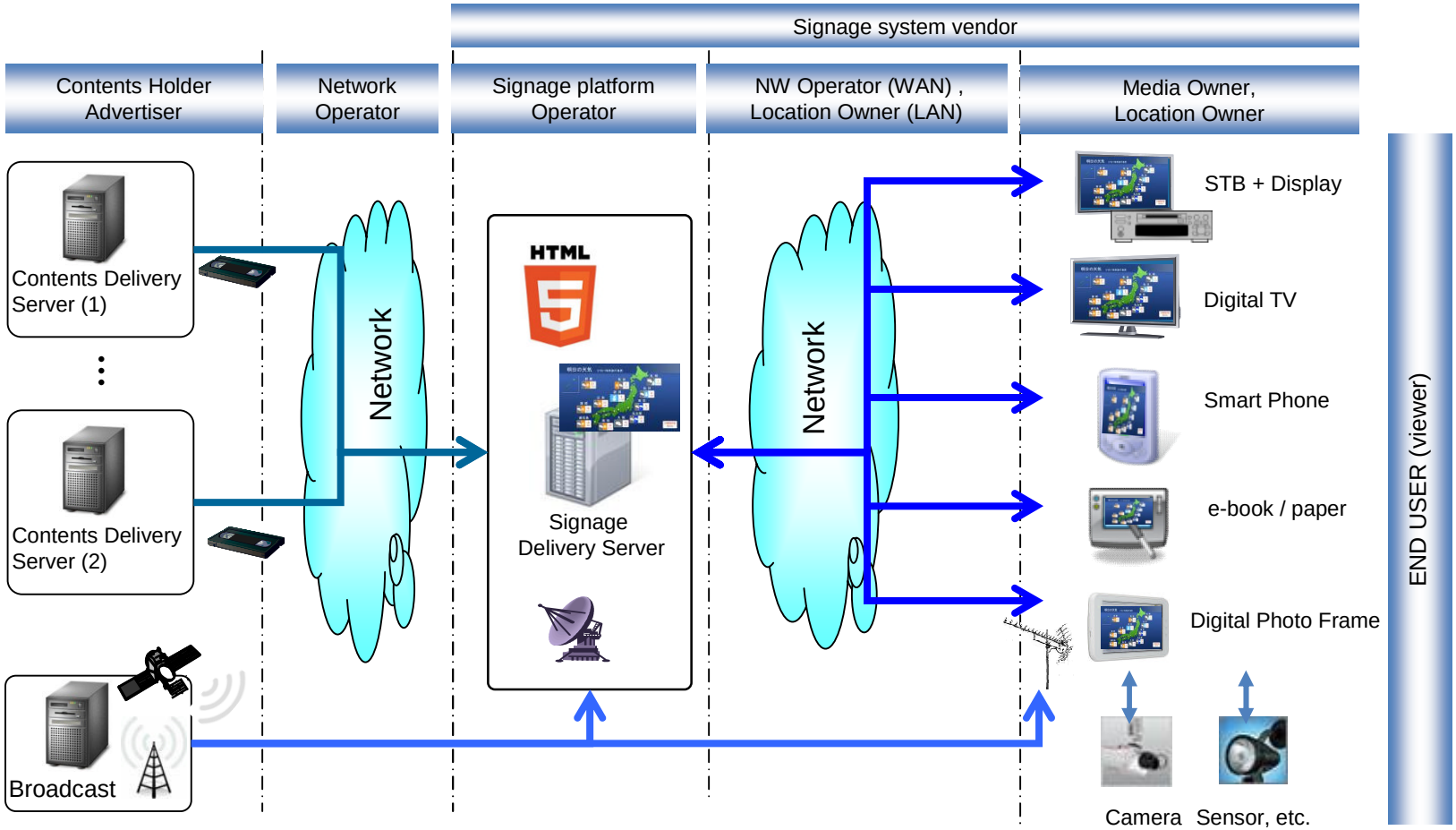
Low-end system: Web-based Digital Signage

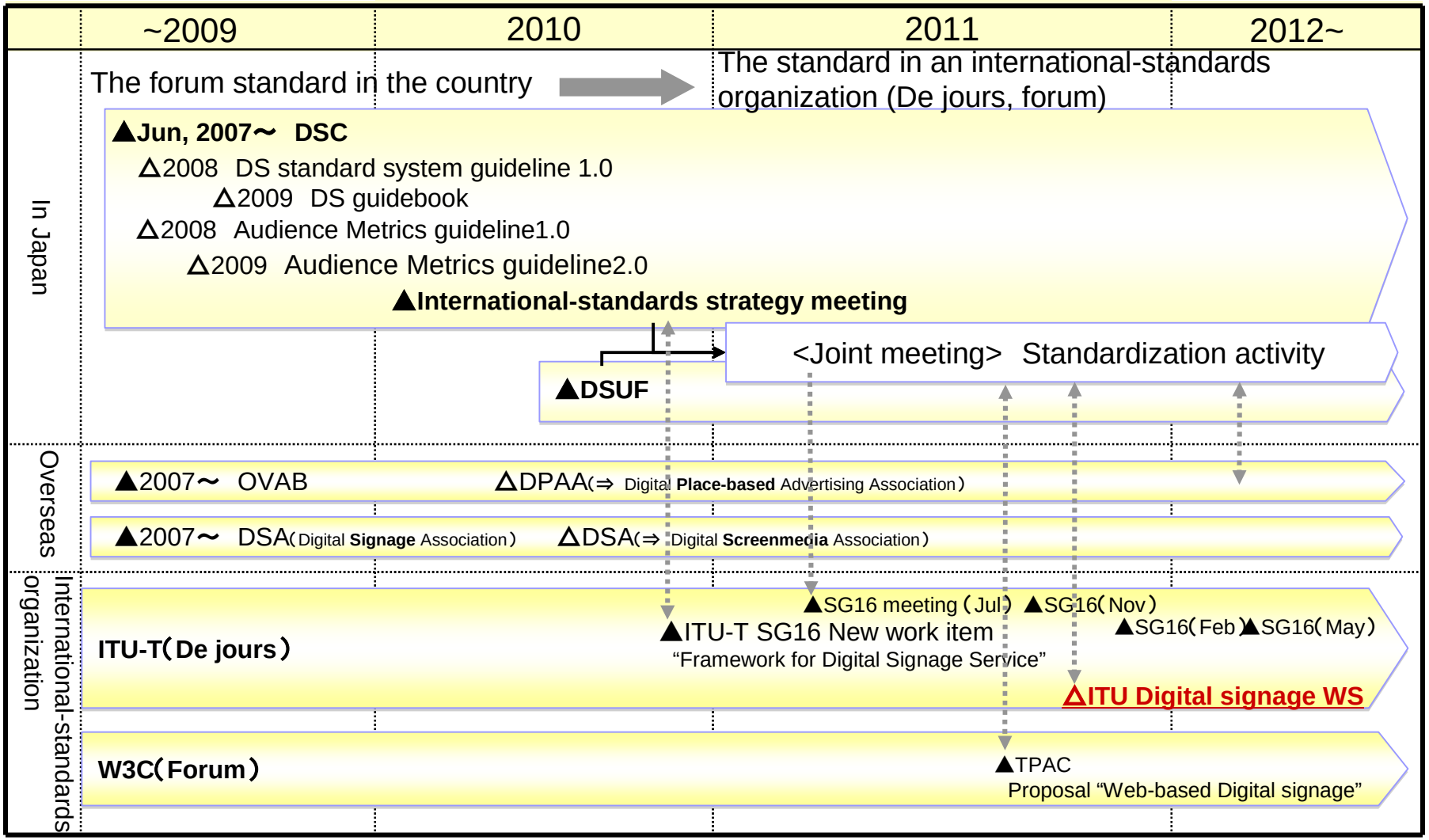
- The following standardization is required to realize the basic workflow of digital signage through Web functions.

  ①Work flow standardization , common format

  ②Delivery server to device interface/communication protocol

  ③Device to external terminal interface



Schedule

- In DSC, start a joint sectional meeting with DSUF, which is a user organization, and vigorously promote the standardization activity.