Standardization Activities on ICT

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"Very primitive questions"

（Q1） What is "Standard" ?

- "Something established by authority, custom, or general consent as a model or example"

    (Merriam-Webster Online Dictionary)

- "Some arrangement for simplification and unification among concerned people in order to fairly share a maximized profit and utility" (Some university professor in Japan)
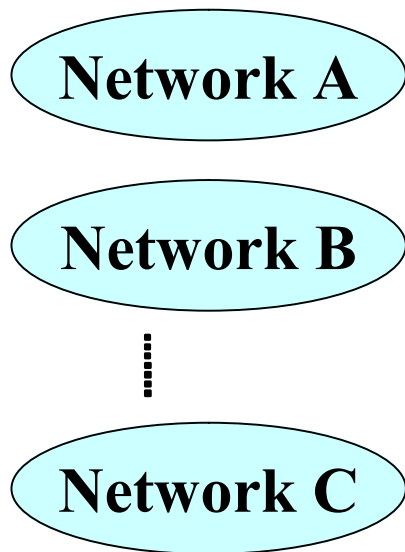
（Q2） Then, what is "Standardization" ?

- "Organized activities to set up "Standards" and put them to practical use" (Some university professor in Japan)

Interconnectivity and Interoperability ensured through Standardization
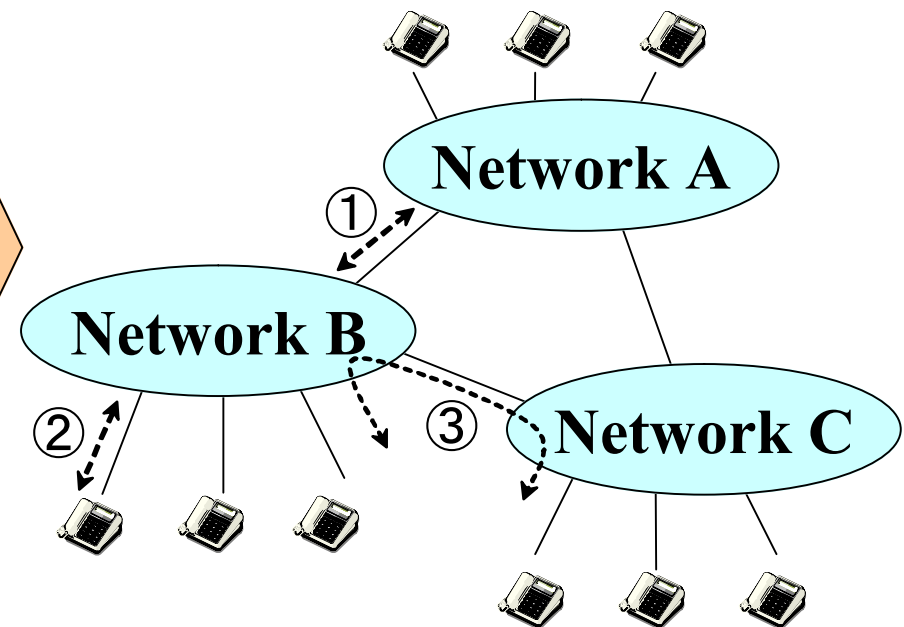
Different networks

Network A

Network B

Network C

Standardization, such as on
- Coding,
- Signaling and
- Protocol,
is required for Interconnectivity and Interoperability.

Network A

Network B

①

②

③ Network C

• A variety of services
• A variety of terminals

① between Networks
② between Network and Terminal
③ between Terminals

Merits of Standardization

1 Efficient provision of telecommunications services

(1) Generalizing network facilities, terminal equipment, associated parts, etc.
(2) Assuring interconnectivity (to make more open access to networks)
(3) Assuring security, proper quality, etc.
(4) Reducing costs due to mass production
(5) Facilitating international procurement
(6) Utilizing telecommunication resources such as radio waves and telecommunication circuits, with efficiency.

2 Promotion of competition in the telecommunications field

(1) Reducing entry barriers by assuring interconnectivity
(2) Expanding global markets through easily setting up international networks
(3) Increasing multi-carriers and multi-vendors of telecommunication systems,

etc.

Categories of Standards

- "mandatory" / "voluntary"

- "de jure" / "de facto"

- "global" / "regional" / "domestic"

"mandatory" / "voluntary"

"mandatory" standards

- Necessary and lowermost conditions for some viewpoints, such as "No harm to networks" and effective use of resources

- Enforced in the form of laws and regulations

"voluntary" standards

- Not enforced but accepted
- Convenient for practical reasons

For example,

#1: Output voltage of telephone terminals … "mandatory"

- Too much output voltage of terminal would damage network.

#2: Assignment of telephone numbers … "mandatory"

- to avoid the "double" assignment to different telephones
to utilize the numbering resources most

#3: Protocols for FAX … "voluntary"

#4: Mobile phone systems … "mandatory"

- to avoid interference
to utilize the radio frequency resources most

#5: Mobile internet access … "voluntary"

ITU

ITU-R   ITU-T

For domestic standards

Up stream
Contributions to ITU

Down stream

Voluntary Standards

MIC of Japan

Sectional meetings

Participation

SDOs

for ITU－R   for ITU－T   Other Committees

TTC   ARIB   JCTEA

Information and Communications Council

Mandatory Standards

TTC Standards   ARIB Standards   JCTEA Standards

Participation

HATS Conference   JCL

Interoperability tests

Operators, Manufacturers, Universities, Research Institutes, etc.
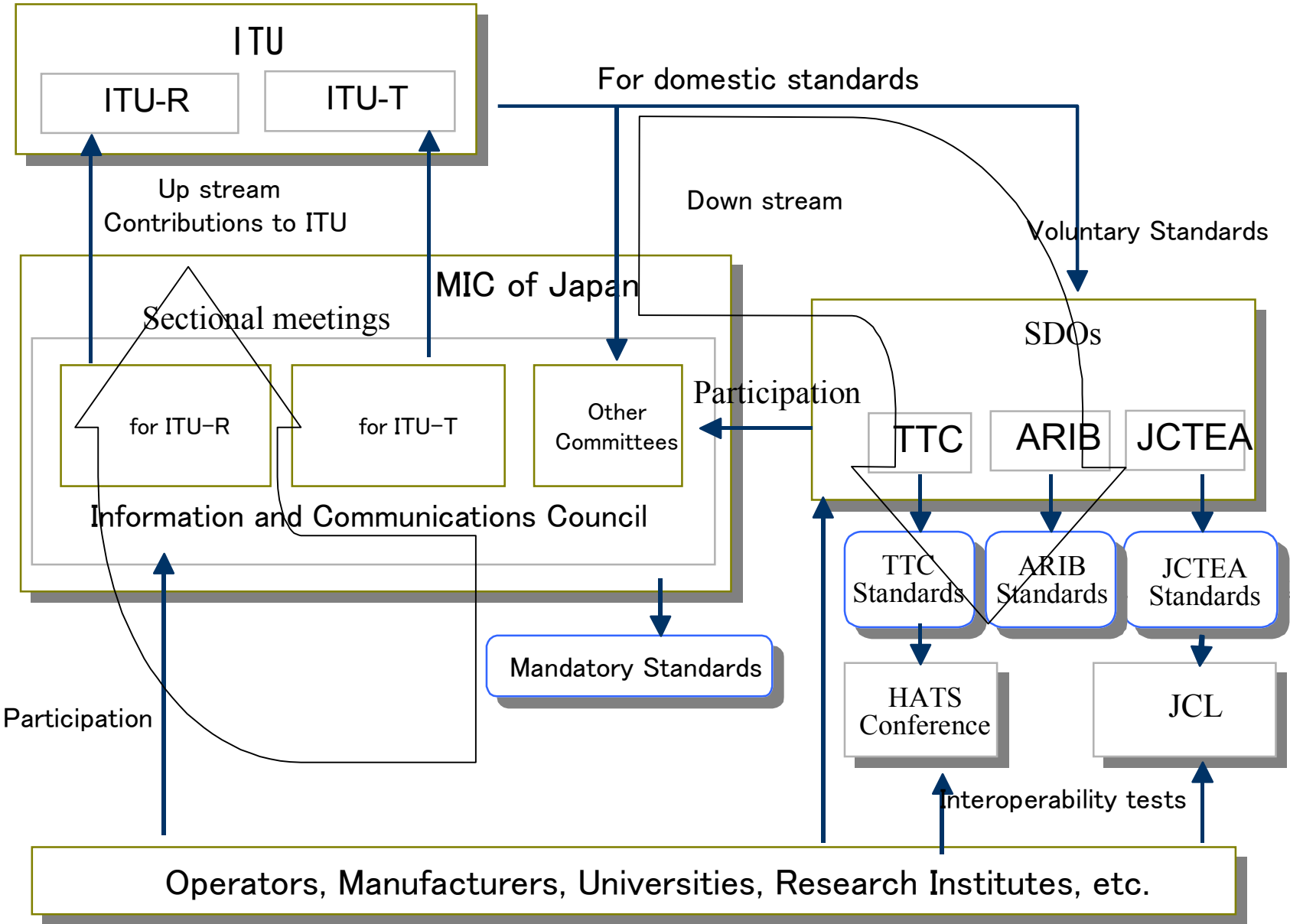
Due process for establishing mandatory standards

ITU

Making coordination and keeping consistency

Needs in market

IP-based network

Broadband facilities

A variety of services

etc.

Inquiry by Minister

Request from operator

Information and Communications Council

Study technical conditions （open to the public）

Asking for Public comments

report

Study technical conditions （open to the public）

Asking for Public comments

report

MIC

Drafting

Asking for Public comments

authorize
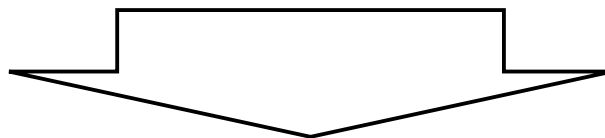
MIC ordinance/ notice

Operator's tariff

9

(Q3) Does "Standard" guarantee interoperability?

Sorry,…but maybe not, because

> "Standard" does not include every detail of technical condition.
> "Standard" will allow interpretation on implementation.

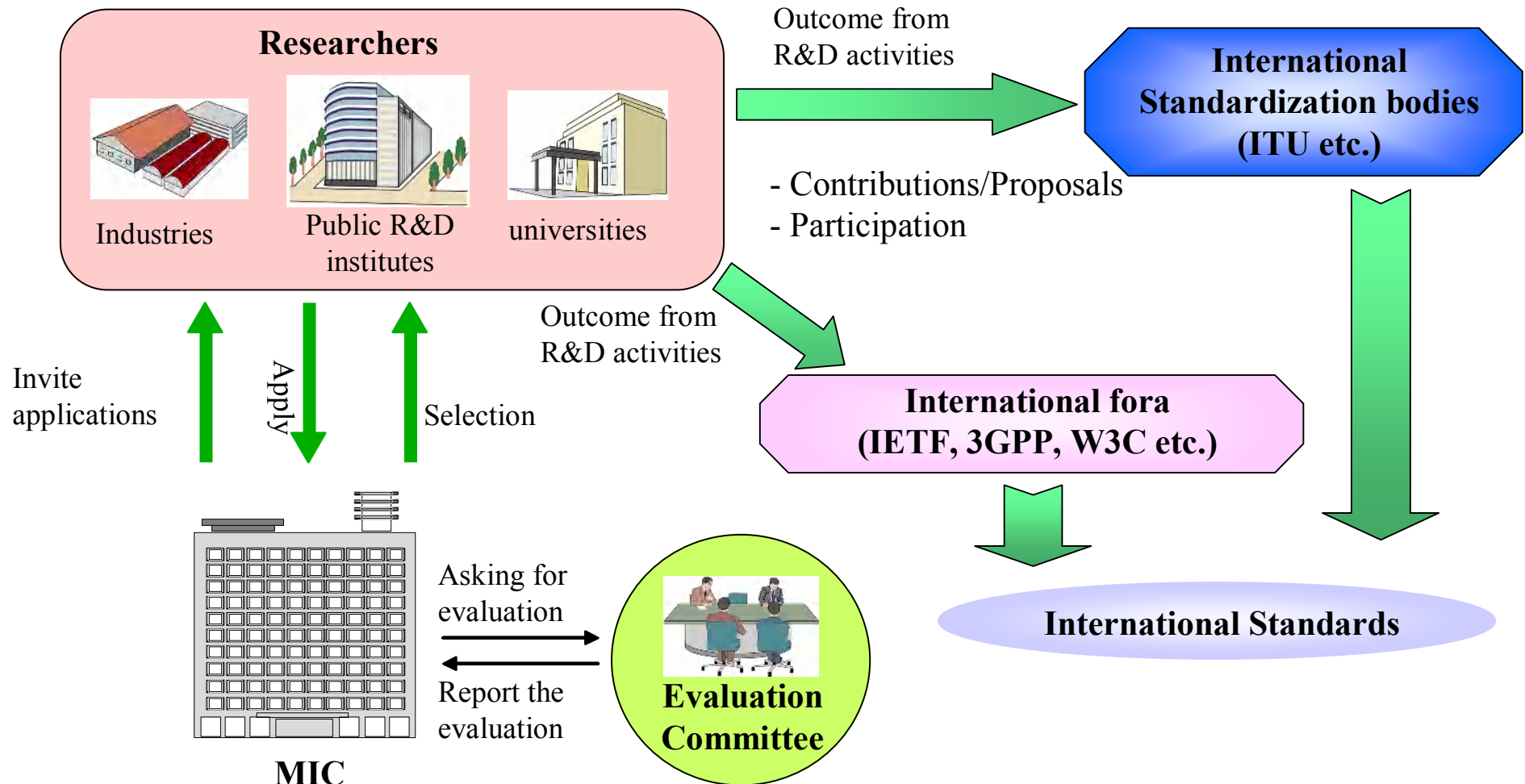Interoperability tests are required in the product development stage.

(1) Identify the target: standards, functions, products, etc.

(2) Study the details of technical conditions and avoid misunderstanding and misinterpretation.

(3) Confirm the specific procedures of tests.

(4) Run a trial interconnection of products manufactured in accordance with the standards and make the necessary adjustments.

R&D Promotion Program for international Standardization

MIC
Ministry of Internal Affairs and Communications

SCOPE:
Strategic Information and Communications R&D Promotion Programme

Researchers

Industries

Public R&D institutes

universities

Outcome from R&D activities

International Standardization bodies (ITU etc.)

- Contributions/Proposals
- Participation

Outcome from R&D activities

International fora (IETF, 3GPP, W3C etc.)

Invite applications

Apply

Selection

Asking for evaluation

Report the evaluation

Evaluation Committee

International Standards

MIC

Policy for Intellectual Property Right (IPR) in ITU

MIC
Ministry of Internal Affairs and Communications

The ITU requires the submittal of an oath declaration concerning patent approval from those holding patent rights necessary for implementation as ITU standards.

This oath declaration displays intent (license) for display of will by the owner of the patent in question.

No ← **Does a draft Recommendation include IPR?**

Yes ↓

Oath declaration by IPR holder

- Free of charge where use of the patent is allowed indiscriminately
or
- Not free of charge, where under logical conditions use of the patent is allowed indiscriminately

Where choosing any condition other than mentioned in the left (where use of the patent is not necessarily guaranteed)

Implemented as ITU Standard

Not implemented as ITU Standard