
Next Generation IP Network Promotion Forum

March 23rd 2006

“The Next Generation IP Network Promotion Forum” was established on Dec. 16, 2005, to promote the transition to IP-based network in Japan, based on a report from an MIC study group. This paper presents the background, target, structure and issues for investigation of the Forum.

Establishment of “the Next Generation IP Network Promotion Forum”

- “The Next Generation IP Network Promotion Forum” was established on Dec. 16, 2005, to promote the transition to IP-based network in Japan, under a close link between industry, government and academia.
- This was an action taken based on a report from an MIC study group.

Next Generation IP Network Forum

Chairman: Tadao Saito, Professor emeritus, the University of Tokyo

- The forum consists of various operators, vendors and academics. (Currently 211 companies/institutions are participating.)
- It investigates the technical standards for the next generation IP networks, verifies them through the experimental and interoperability tests, and also promotes R&D and standardization.

Recent Situation

- With developments in technical innovation and broadband networks, there has been a sharp growth in IP-related services (E.g: IP telephone services, corporate-oriented IP services (IP-VPN etc.))
- In response to this, carriers have also clarified plans to move communications infrastructure to an IP basis
- There has been a strong move towards IP in other countries (E.g.: Announcement of UK BT's plan to move to IP, debate on NGN standardization etc.)

Objective

***Become the world's leading ICT nation by 2010
=> Rapid move to all-IP communications networks***

Important requirement

- If the current telephone network is replaced by IP-based network, it should be expected
1. to maintain security, reliability and interoperability, and
 2. to prove safe and convenient services.



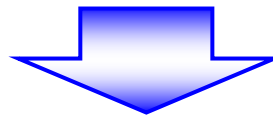
Action plan

To promote a smooth transition to IP networks, it is vital

1. to clarify steps to realizing all-IP network, and
2. to have a common understanding among related parties.

Concrete steps:

- Establish a venue to debate how to achieve a smooth transition to take into account all of the opinions and requests of related parties towards all-IP.
- Create a structure to promote tests to verify interconnectivity in order to realize a variety of services on the IP network during 2005.
- Connectivity rules for the promotion of IP (by 2007)
- Review of rules on the technical level (by 2007)
- Promote international standardization activity.
- Promote R&D into next generation IP networks



Realization of Next Generation Networks(NGN)
early realization of ubiquitous network society

Two actions based on the report

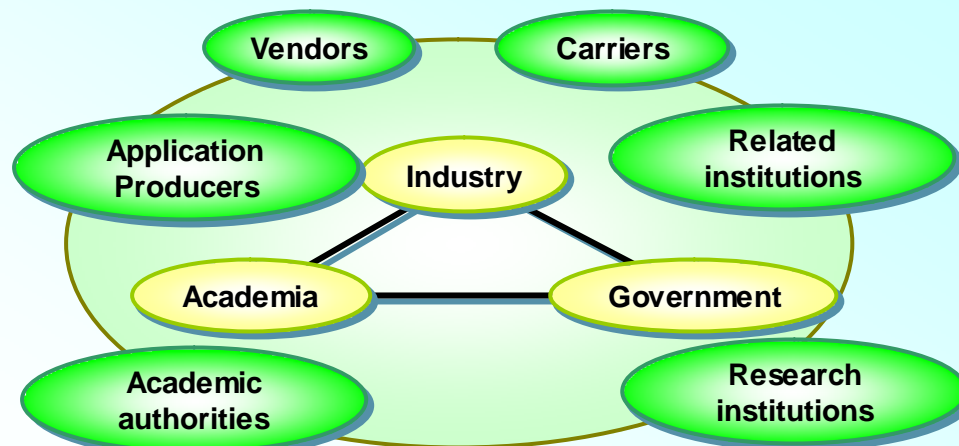
From an analog telephone network to an IP network

2005

2010

Action 2

Next generation IP network promotion forum



Interoperability tests

R&D, standardization

Verification tests

Promotion / information exchange

ITU standardization activities

MIC

Action 1

Research technical conditions

(2005.10.31 Telecommunications Council Inquiry)

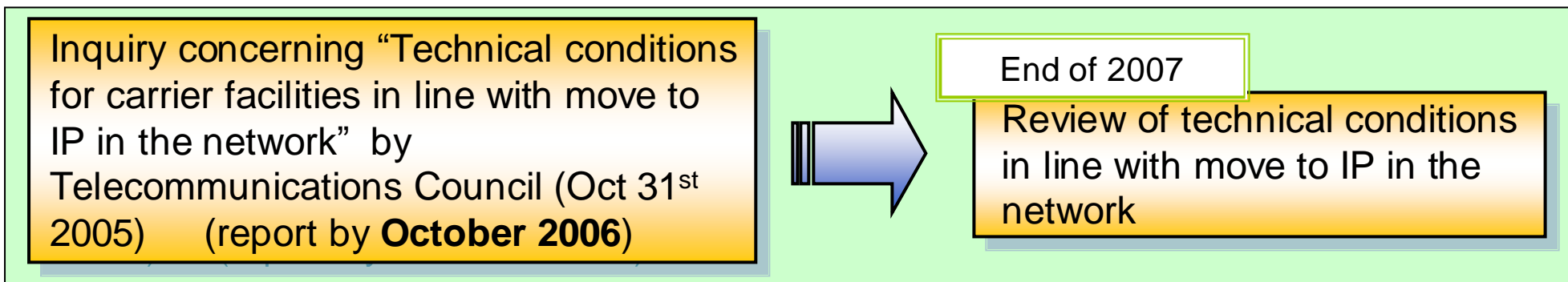
(Report planned for Oct 2006)

End of 2007

Review of technical conditions in line with move to IP in the network

From MIC documentation

Action 1: Review of technical conditions for telecommunication



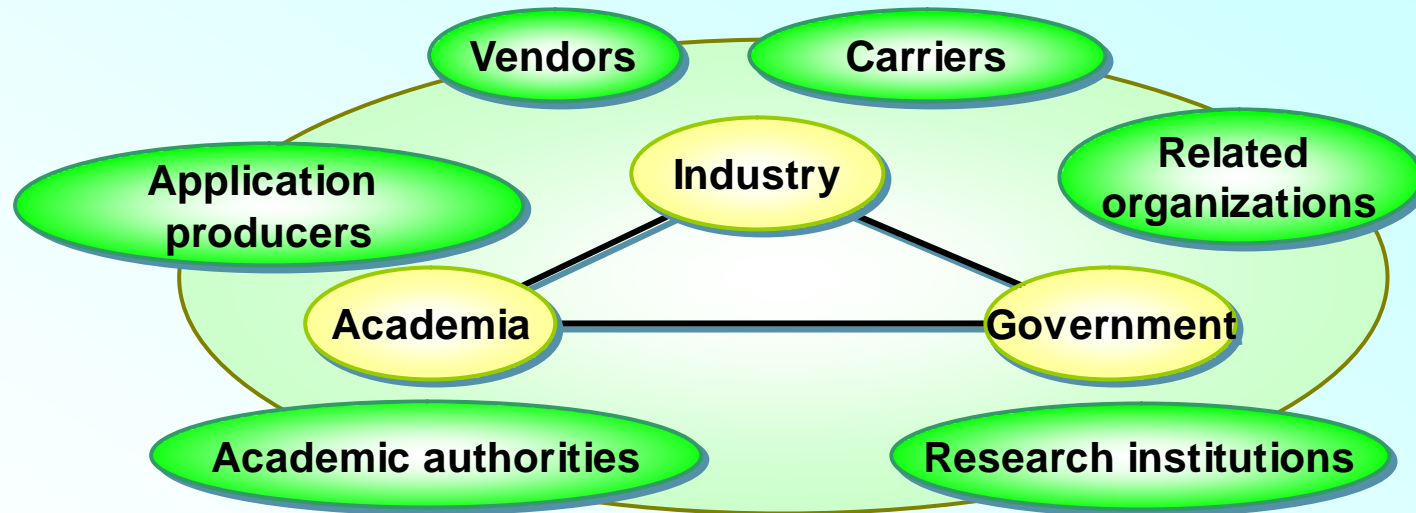
Main issues for review

<p style="text-align: center;"><u>Quality and functionality</u></p> <ul style="list-style-type: none"> ■ Functions requested for securing voice communication quality ■ Extent of functionality and services for voice communications ■ Quality and functionality for non-voice services 	<p style="text-align: center;"><u>Safety and reliability</u></p> <ul style="list-style-type: none"> ■ Safety and reliability against cyber attacks ■ Safety and reliability against facility damage ■ Function distribution between network/terminal
<p style="text-align: center;"><u>Interconnectivity and interoperability</u></p> <ul style="list-style-type: none"> ■ Response to congestion and damage to equipment ■ Monitoring and control of traffic ■ Identification and priority control for emergency communications 	<p style="text-align: center;"><u>Other main issues</u></p> <ul style="list-style-type: none"> ■ IP network platform functionality ■ Issues concerning fixed/mobile seamless use

Action 2: Establishment of the Next Generation IP Network Promotion Forum

Next Generation IP Network Forum

Chairman: Tadao Saito, Professor emeritus, the University of Tokyo
Office: National Institute of Information and Communications Technology
Currently 211 companies/institutions participating



Interoperability tests

R&D/standardization

Verification tests

Promotion and information exchange

Structure of the Next Generation IP Network Promotion Forum

Next Generation IP Network Promotion Forum

Chairman: Tadao Saito (Professor Emeritus, the University of Tokyo)

Deputy Chairman: Ryuji Yamada (NTT), Yasuhiko Ito (KDDI)

Office
(NICT)

NICT: National Institute of Information
and Communications Technology

Technology Group

Chairman: Shigeki Goto
(Professor, Waseda University)

- Research into technical standards for next generation IP networks and promote interoperability testing
 - (1) Planning and promotion of interoperability testing and negotiation with related institutions
 - (2) Planning verification testing and research into technical standards

R&D/Standardization Group

Chairman: Koichi Asatani
(Professor, Kogakuin University)

- Promotion of R&D and standardization for next generation IP networks
 - (1) Research basic strategies for R&D/standardization
 - (2) Research method of promoting R&D/standardization

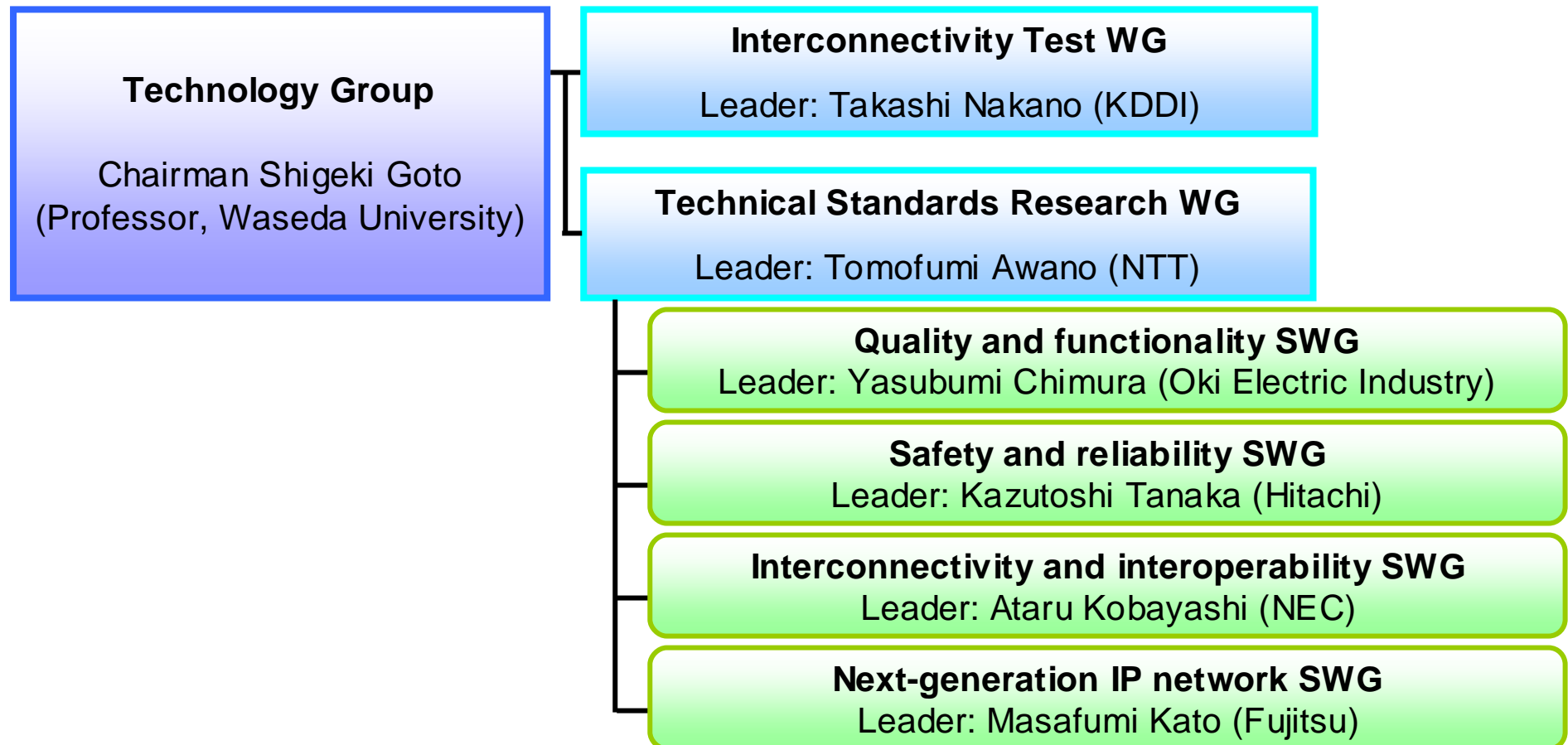
Planning Promotion Group

Chairman: Yuichi Matsushima
(Telecommunications Dept. Chief, NICT)

- Spread of next generation IP networks and information exchange
 - (1) Research strategies for publication, including marketing activities and holding of symposiums etc.
 - (2) Surveys in domestic and international R&D trends and provision of information to members.

Structure of Technology Group

- Promote research issues mainly for IP telephony (OAB-J, 050) in regard to quality of service, functionality, safety & reliability, interconnectivity & interoperability.
- Issues for other high functionality services (video telephony, video distribution, high quality voice etc.) are studied in next-generation IP network SWG.
- Technical conditions investigated in each SWG are verified through experimental tests, if necessary.



Issues for investigation of SWGs

SWG	Issues for investigation
Quality / functionality SWG	Voice quality
	Additional functionality/ services
Safety / reliability SWG	Safety and reliability in terms of cyber attacks, etc.
	Safety and reliability against facility damage
	Communications in times of disasters etc.
Interconnectivity / interoperability SWG	C-plane interface
	Service control functionality
	U-plane interface
	Transport functionality
	Operation/billing
	Telephone service specifications
	Requirements for user terminal
Next-generation IP Network SWG	Values of Next-generation network
	Network model for high functionality services
	Requirements for Service and functionality
	Technical conditions for high functionality services