NEWS RELEASE

NTT

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Japan, US, UK and Korea Carriers - Interoperability Test: Globally and Simultaneously by Multiple Sites

Global effort to implement NGN - Evaluating business level feasibility

Nippon Telegraph and Telephone Corporation(NTT, headquartered in Chiyoda-ku, Tokyo. President and CEO is Norio Wada)will carry out an Interoperability Test called GMI2004 (*2) from October 4 through 16 at multiple network connecting sites in Japan, North America, Europe and Korea. This test is hosted by the MSF (*1). MSF is an international forum whose goal is to standardize the implementation specifications for NGN (Next Generation Network).
NTT is currently proposing "RENA"(*3) - Resonant Network Architecture--one of NGN's implementation representations. NTT is developing RENA globally in an open environment. NTT tests research and development results for operability and connectivity in a multivendor environment. A test scenario is used that emphasizes IPv6 base visual communication. The ultimate goal of the test is to "globalize" telecommunications by connecting overseas carriers.
No longer a future research subject, NGN is already concretely defining the implementation specifications at the business level and is ready for incorporation into products. NTT is verifying the RENA architecture technology using this test to offer a global demonstration of the sophistication and reliability of research and development results.

1.Interoperability test - Background

The information and communication market is currently in the midst of a full-scale broadband/ubiquitous era--the keywords being "fast/wide bandwidth", "always connected", "bidirectional", and "voice/data integration". We are experiencing a revolutionary change from narrow-band to wide-band, with the explosive increase of Internet usage in both the fixed line and mobile communications.
Such turbulent changes have brought the international development of discussions to implement NGN and the establishment of MSF. MSF's goal has been to implement NGN, thus providing a wide range of flexible services in an open environment. Since its establishment, MSF has been actively pursuing a definition for the implementation specifications for NGN, not just the standard specifications. In November 2002, MSF carried out its first interoperability test, "GMI 2002", in the multivendor network environment and connected sites in Japan, US and UK.
NTT has joined GMI2002 as the representative of Japanese carriers. Along with participation in GMI 2002 and active involvement in MSF, NTT has also proposed RENA, believing that RENA is one of the implementation formats of NGN. In developing RENA, NTT has been researching and developing the implementation of the IPv6 base network (which integrates the "high-quality and reliability" of the telephone network and the "flexibility and low price" of the IP network), RENA-related network infrastructure technologies and a platform technology that supports

various advanced services.
In the MSF, NTT has been involved in main activities: "alignment of the MSF architecture and RENA architecture" and "active incorporation of specifications". In 2004, as a way to emphasize research and development results, NTT is participating in GMI 2004 with a goal of verifying research results as the standard interface.
The GMI 2004 is the second interoperability test; based on verification results from the multivendor environment in GMI 2002, NTT has performed successfully on a higher-level interoperability test, with evaluations on the possibility of feasible business opportunities.

2.Interoperability test - Overview

(1)Test sites
The interoperability test will be carried out in a network connecting four sites (carriers) in Asia, Europe and North America:
-Asia: Japan (NTT), Korea (KT)
-Europe: UK (BT)
-North America: USA (Qwest)

(2)Test scenario
Carriers and vendors in Europe and North America plan the test mainly on VoIP. However, since NTT has already completed the technology verification in GMI 2002, NTT plans the test on mainly IPv6 based visual-communication. IPv6 has seen increased use in the business environment in Japan-preceding the rest of the world.

(3)Major tests
The major test items are QoS, Security, Application environment, and IPv6. The operations of the products related to the SIP (*4) server and bandwidth management technology will be tested in a multivendor environment. Connectivity complying with the implementation specifications defined by MSF will also be verified.

3.Future plans

In order to develop new products and technologies that the customers can use, it is critical to select research themes that match global and market trends for the technologies involved.
Based on GMI 2004 test results, NTT will promote more reliable research results worldwide and further stimulate its research and development efforts to contribute to and support the economic implementation of an NGN which can offer a wide range of services in a flexible manner.

<Terminology>

*1 MSF(Multiservice Switching Forum)
MSF was established in November 1998 by carriers (such as NTT), service providers and system suppliers. There are currently more than 30 member companies. Its emphasis is on multimedia and various activities such as defining architectures, implementation agreements (IA), and interoperability testing, it aims to link services and integrate operations. MSF serves as an effective bridge among diverse industry sectors.

*2 GMI(Global MSF Interoperability)
GMI is a global interoperability test hosted by MSF. MSF performed its first interoperability test, GMI 2002, in November 2002 in a multivendor environment in a

variety of locations throughout Japan, US and Europe. The GMI 2004 is the second interoperability test.

*3 RENA(REsonant communication Network Architecture)
RENA is a next-generation network architecture that NTT has proposed as the core of the "Vision for a new optical generation". NTT defines RENA as a new generation communication environment using optics that helps stimulate research and development to implement "Resonant" communication environment. "Resonant" is an adjective form of "resonate", that is, NTT hopes to promote "cooperatively"--*resonantly*--advancement of all things--people and corporations.

*4 SIP(Session Initiation Protocol)
SIP is one of the communication protocols used in the VoIP service. It is suitable for linking Internet applications and has high adaptability in multimedia services. It is expected that a protocol can be applied in the next generation multimedia services.

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