(Press Release)

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Nippon Telegraph And Telephone Corp.
Kiryu Area Intelligence Network

P2P consortium is established for regional collaboration of industry, government, and academia to achieve community formation on area and personal levels
- NTT and KAIN begin joint tests related to operation of autonomous distributed collaborative network using advanced P2P technology "SIONet" -

Nippon Telegraph And Telephone Corp. ("NTT"; Head Office: Chiyoda-ku, Tokyo; President: Norio Wada) and Kiryu Area Intelligence Network ("KAIN"; Secretariat: Kiryu City, Gunma Prefecture; Director: Yasuo Shiozaki) will begin joint tests on May 1 related to operation of an autonomous distributed collaborative network for promoting flexible regional activities and regional IT applications on a global scale using NTT's P2P[*1] technology "SIONet" (Semantic Information Oriented Network). Participants in these tests included regular users registered as KAIN Joint Test Committee members and experts developing services on SIONet. SIONet operating units (PCs, etc.) are installed in locations (operating sites) provided by KAIN, and "community spaces" are provided to users (see Fig. 1). General-purpose Internet protocol (http) is used for the interfaces between SIONet and the user terminals, and the users install application software, including access applications, to participate in the community.

In the operation of the communities, the KAIN-P2P Consortium[*2] (Fig. 2) - a regional collaboration of industry, government, and academia established by KAIN - is in charge of processes ranging from content planning to application development, verification testing, and evaluation of test results. The Consortium also conducts tests and evaluations regarding the formation of autonomous distributed collaborative community models in regions that have incorporated P2P systems.

1 Background and purpose of joint tests

Since its establishment, KAIN has conducted activities under the slogan of "Helping and developing communities and individuals through IT." Based on the practical application of this philosophy and on related research KAIN has espoused the philosophy of a "New Neighborhood Association"[*3] that combines human networks with information technologies that will form the social infrastructures of the 21st century. At the same time, it has proposed the concepts of "Community Platforms" that will embody this philosophy and of "Community Archives" for storing the "cultural DNA of the region" that is fostered through these platforms, and has established the KAIN-P2P Consortium as a part of its activities aimed at making these two concepts a reality.

NTT Laboratories, meanwhile, has developed "SIONet," the world's first P2P technology to give concrete form to people's social activities in the form of information technologies that anticipate the newest trends in 21st-century information systems and

organizations, such as the shift away from centralization and toward autonomous organizations. Identifying features of these systems include smooth connections, self-proliferation, the elimination of "brokers," autonomous distributed collaboration, localization, and chain reactions. In this way, NTT Laboratories has promoted research and development targeting the creation of new information transmission systems.
NTT and KAIN have decided to combine their efforts in conducting these joint tests, based on an awareness that SIONet will be an extremely effective communication tool for achieving KAIN's goal of creating communities (Fig. 3).
The goal of these tests is to create true "human network technologies" through the effective use of the SIONet platform and other applications, using as a foundation the human networks cultivated so far based on the KAIN-P2P Consortium operated by KAIN. Through experimental operations of the newly developed functions and systems in actual application fields, KAIN and NTT will conduct research on improvements aimed at further extensions of these functions and systems.

2 Details of joint tests

In these tests, examples of specific community spaces will be provided, and verification tests of the following two projects will be conducted, targeting full-scale operation of autonomous distributed collaborative P2P networks.

(1) Ad Hoc Mall
The Ad Hoc Mall is a community created and operated through the voluntary and autonomous participation of unique and diverse artists. Each of these artists has his or her own shop space, and can create a "shop member community" that buyers (mall users) can access from PCs or even mobile phones. The goal of this project is to achieve a system in which the opinions and impressions of users are reflected in the makeup of the mall. In this way, it becomes possible to create a community that truly unites the users with the artists who have created the shops. Because this project also has the potential to contribute the formation of community business models, there are high expectations that it will be useful in adding vitality to the entire Kiryu region.

(2) Wine Diary
The Wine Diary Project, which will be initiated before the Ad Hoc Mall gets underway, will be developed and operated through the voluntary and autonomous participation of a wide range of members, including consumers and producers, as well as wineries, distributors, liquor store owners, and wine critics. In this Project, how communities are formed using P2P networks in keeping with various wine-related trends and preferences will be investigated.

3 Sharing of responsibilities in joint tests

(1) NTT
NTT will mainly provide P2P platform software, and will promote research into new community formation technologies and service creation technologies. Specific tasks to be undertaken by NTT include:

- Provision of SIONet software to be used in the joint tests
- Technical support in the construction and operation of systems for the joint tests, and in the creation of communities
- Gathering of technical data on joint test configuration systems, and analysis and evaluation of this data

(2) KAIN

KAIN will utilize the knowledge it has cultivated in relation to "developing communities and individuals," and will further promote these activities by undertaking the following tasks:

- Creating services and providing know-how in the creation of communities, as required for system construction
- System construction and service operation
- Conducting evaluations of services and systems in terms of operation and applications by users

4 Outline of joint tests

(1) Term of joint tests
May 1, 2004, to March 31, 2005

(2) User terminal conditions when accessing from PC (ref. Fig. 1)
Machine types: PC/AT compatible machines
Operating system: Windows XP/Windows2000 (Japanese version)
CPU: Intel Pentium 500MHz or higher
Memory: 128 MB or more (256 MB or more recommended)
Hard disk: 70 MB usable memory space
Network interface: requires network interface card
(Modem or Ethernet 10/100M)
Screen size: 1024 x 768 or larger

(3) Homepage
An outline of the joint tests is provided on the following homepage:
http://www.p2p-conso.jp

5 Features of SIONet

SIONet, developed by NTT Laboratories, is the world's first P2P Platform. It utilizes information technologies to embody a wide range of human social activities, with features that include smooth connections, self-proliferation, the elimination of "brokers," autonomous distributed collaboration, localization, and chain reactions. When the user sets a keyword for each item according to the format and sends a message, the system finds items that contain the relevant keyword among published digest information, and sends a notification of that message to only the users that have published those digests. The system thus achieves autonomously developed community models in which the users can freely create and operate communities based on their preferred contents, without being concerned about what others might think. SIONet, the world's first P2P platform, can be used for a diverse range of P2P services, including distributed computing, collaborative business support systems for companies, and services that provide support enabling individual users to send and receive various types of information.

6 Plans for the future

After the completion of these tests, NTT will endeavor to achieve further innovations in P2P technologies, and will promote further efforts targeting the creation of new information transmission systems.
Based on the results of these tests, KAIN plans to introduce SIONet into numerous community-building organizations, and to conduct research aimed at increasing the number of application scenarios and improving on application methods.

Glossary

*1: P2P

P2P refers to communications in which users or terminals communicate as equals or "peers." P2P systems are expected to gain popularity as a form of "volunteer network" that does not require any central authority. As such, this technology is said to be ideally suited to "flat" organizations that avoid "top-down" hierarchies, and has gained attention as a new method of Internet application that eliminates the need for server intervention. P2P is thus used in contrast to "client/server" systems in which the server is central and the clients are subordinate to the server.

*2: KAIN-P2P Consortium

A P2P consortium promoting regional collaboration among industry, government, and academia, in which the community and organizations representing industry, government, and academia play a central role. Participants include universities such as Gunma University, Waseda University, Tokyo University of Agriculture and Technology, Tama University) and government agencies such as the Gunma Prefectural government and the Kiryu municipal government, as well as volunteer organizations (e.g., the IEICE CoA Technical Group) and cooperating companies (Bitmedia K.K., Uncle K.K., etc.). Operated by KAIN, and with a Steering Committee at the core of these operations, the Consortium conducts its activities in the following divisions: an Evaluation Subcommittee, a Community Operation Subcommittee, a Developers' Subcommittee, a Site Operation Division, a Planning and PR Division, and the P2P Consortium Secretariat.

*3: New Neighborhood Association

A municipal community platform based on the smallest possible units, established when conventional "Regions" are divided into fine units within municipalities. Regional networks are formed through the autonomous activities of these "New Neighborhood Associations" which at the same time work in harmony with one another.

Fig. 1: Outline of Joint Test System
Fig. 2: Consortium Organization
Fig. 3: Sharing of Responsibilities related to Joint Tests

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