

(Press release)

Nippon Telegraph and Telephone Corp.

NTT-X Inc.

NTT begins joint tests of comprehensive Web search engine combining "goo" portal site and "InfoLead" Net space cruising technology

Providing a revolutionary Web browser that displays large-volume search results in real time in a 3D space

Nippon Telegraph and Telephone Corporation (NTT; Head Office: Chiyoda-ku, Tokyo; President: Norio Wada) and NTT-X Inc. (NTT-X; Head Office: Chiyoda-ku, Tokyo; President: Takao Nakajima) today began joint tests of a comprehensive Web search service using "InfoLead" (*1), a Net space cruising technology developed by NTT Laboratories. In order to verify and evaluate the new service in actual commercial environments, the tests will be conducted in collaboration with the "goo" (*2) portal site operated by NTT-X.

In these tests, a comprehensive 3D Web search service will be offered free of charge as one of the menu items on the "goo" top page, enabling keyword search results to be displayed in a 3D space, with 50 or more pages being displayed simultaneously (Fig. 1). The service requires no expert knowledge on the part of the user; any Internet user with access to a broadband environment (equivalent of ADSL 8 Mbps or more) can download and use the specialized terminal software from the test site.

Concurrent with the start of these tests, NTT and NTT-X will open "goo Lab" on the "goo" site, the goal of which will be to present to companies the potential offered by cutting-edge services using new technologies developed by NTT Laboratories. The current tests will represent the first step in tests of "goo Lab."

1. Background and goals of joint tests

When looking for information on the Internet using search engines, search results often number in the tens or even hundreds, making it very difficult to locate the desired information. Considerable time and effort is also required to view the search results themselves by displaying one page at a time on the Web browser. To resolve these issues, NTT's Information Sharing Platform Laboratory Group has developed "InfoLead" - a revolutionary high-speed Net space cruising technology that enables visualization of between 50 and 300 Web page images at once, and provides a comprehensive 3D display of the search results in real time.

In 2002, the operability and other basic functions of InfoLead were verified through service tests conducted at NTT Laboratories with a limited number of test users.

Usability (*3) was also improved based on comments and suggestions from these users.

The joint tests in combination with "goo" are designed to propose comprehensive 3D Web search services that combine InfoLead and search engines as a new Web browsing method suited to the era of "Resonant Communication" (*4), which is being advocated by NTT. The tests will involve verification and evaluation of usefulness targeting the

development of platform businesses that would be achieved through the proliferation of this concept and its implementation in portal sites ([Fig.2](#)).

2. Role of each company

(1) NTT

NTT will propose the concept of the InfoLead Net space cruising technology, and will test this technology in large-scale commercial environments with 10,000 to 100,000 users or more. Tests will focus mainly on:

- System responsiveness, stability, and operability
- User access traffic models and facility design guidelines
- Usability of 3D interfaces

NTT will identify the conditions required to achieve practical applications, and will reflect the results of these tests in commercial development in the future.

(2) NTT-X

NTT-X will undertake activities presupposing the initiation of new business operations following the completion of these tests, aiming to achieve the following goals:

- Provision of services as the first stage of testing in the "goo Lab" corner
- Verification of service effectiveness and increasing the rate of usage for search sites and portal sites through links with InfoLead
- Promoting greater awareness of the innovative characteristics of the NTT Group's broadband services by providing comprehensive 3D Web search services.

3. Outline of joint tests

(1) Term of tests

October 7, 2003 - March 31, 2004

(2) Assumed system requirements

OS: Windows2000, WindowsXP

CPU: Intel Pentium (R) III, equivalent of 500 MHz or more

Main memory: 128 Mbyte or more

V-RAM: 16Mbyte (32 Mbyte or more recommended)

Internet connection: ADSL 8 Mbps or other broadband connection (recommended actual speed = 1 Mbps or more)

Other: Requires installation of Internet Explorer 6 or higher

4. Features of InfoLead

InfoLead is a revolutionary Web browsing technology that enables visualization of between 50 and 300 Web page images at once, thus achieving the world's first 3D real-time comprehensive display of Internet search results ([Fig.3](#)).

InfoLead enables "cruising navigation," in which the user can freely control the viewing perspective within the 3D space using simple mouse operations. At the same time, the system analyzes factors such as the unique qualities of each Web page and the interrelationship between pages, and controls the positioning of pages in the 3D space based on the results of this analysis. In this way, the system achieves highly intuitive and efficient Web searches.

If the system is used on an Internet e-commerce site, for example, ten or more types of product information can be introduced on the same screen, and the user can instantly

magnify one display by simply clicking on a product of particular interest to view relevant details. Furthermore, the system can promote an understanding of the positioning of individual pieces of information within the whole while making comparisons from a variety of perspectives, by assigning meaning to x, y, and z axes in a 3D space. Concentric ring display, tile patterns, and a wide variety of other 3D layouts can also be utilized.

By offering these unique features, in addition to Web information searches, InfoLead offers the potential for applications in Web site viewing, access status analysis (marketing analysis), and a wide range of other information distribution services.

5. Future developments

After verification through joint tests, the NTT Group plans to expand formal services on its Portal sites. NTT-X also plans to undertake further tests of "goo Lab" in the future, utilizing InfoLead and a variety of other cutting-edge technologies.

Glossary

***1 InfoLead**

A new Web browsing technology developed by NTT's Information Sharing Platform Laboratory Group for the Resonant Communication era. By adopting original distributed processing methods that take advantage of the power of broadband, it achieves the world's first 3D real-time comprehensive display of Internet search results. With this technology, Web browsing has evolved from the era of "Net surfing" to that of "Net space cruising."

***2 goo**

The most highly recognized portal site in Japan, operated by NTT-X. The search engine, which is the core service of the site, offers not only a Web page search service, but also searches of extensive and diverse databases dictionaries, maps, and other useful information.

***3 Usability**

"Usability" refers to the level of effectiveness, efficiency, and user satisfaction when specified users use a given product under specified usage conditions.

***4 Resonant Communication**

A new-generation communication environment, based on optical technologies, that evolves in "resonance" with the world. It enables parties throughout the world, whether individuals, companies, or organizations, to be connected through ubiquitous networks that offer access anytime, anywhere, for anyone, using interactive broadband connections. This environment provides exceptional usability, as well as safety, accuracy, and simplicity.

-[Fig. 1:Comprehensive 3D Web search service screen image](#)

-[Fig. 2:Overall joint test configuration](#)

-[Fig. 3:Outline of "InfoLead" Net space cruising technology.](#)

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