Nippon Telegraph and Telephone Corporation Tokyo News Service, Ltd.

Joint Experiment of Next-Generation Programming Guide Service with Map-like Navigation for Fast-growing Broadband Broadcast Programs

- Hikari Market Creation through a new form of displaying video content -

Nippon Telegraph and Telephone Corporation (NTT, Head Office: Chiyoda-ku, Tokyo; President: Jun-ichiro Miyazu) and Tokyo News Service, Ltd. (hereafter referred to Tokyo News Service, Head Office: Chuo-ku, Tokyo; President: Tadashi Okuyama) will undertake a joint experiment, beginning February 22 and lasting roughly four months, to create a new navigation service model for broadband broadcast programs that aims to offer a highly convenient program browsing, as a part of Hikari Market Creation Activities^{*1}.

From this experiment, the two organizations hope to achieve a new program navigation service model for broadband broadcast programs, which would benefit both viewers, who have a difficult time locating the programs they want, and content providers, who want to offer program information in a flexible manner.

The joint experiment will result in the creation of a business model for the new program navigation service that will prove useful when broadband broadcast become widely used. Soon, there will be too much video content available on the network to be listed in conventional programming guides. NTT Laboratories will offer a navigation technology that maps video items by their relationship and enables users to move freely about the map in order to efficiently search for the video item that interests them. Next, the Laboratories will evaluate serviceability of such a navigation service and verify the technical aspects, including, system performance.

Drawing on know-how accumulated through its program information distribution service, Tokyo News Service will collect and compile content information provided by contracted content holders, and cooperate in designing user interfaces that focus on helpful categorization and filtering features. Through these activities, Tokyo News Service will be able to create a program guide service model that is convenient for viewers of broadband broadcast programs on the Internet.

For one month, beginning December 26, the two organizations will invite broadband broadcasting companies to participate and offer content to be used in the experiment. We will also invite program viewers from among broadband users to be monitors, including Flet's broadband users. Details of the invitations are described in the <u>attachment</u>.

<Origination of this Joint Experiment>

NTT Laboratories collaborates with various industries or companies in Hikari Market Creation Activities to arouse new types of consumer demands in order to create new markets over the photonic network. As part of these activities, the Laboratories have developed user-friendly navigation systems to guide viewers, on a screen, through various content items available on the Internet, such as, live broadcast programs and on-demand content. Recognizing the fast-growing availability of live or on-demand broadcast on the Internet, Tokyo News Service, which is the largest broadcast program information provider in Japan, is seeking a new form of program navigation service on neutral ground for the coming years when broadband broadcast will be widespread. This has led the two companies to join hands in an experiment to seek a new model of a program navigation service for broadband broadcast.

<Overview of the Service Offered in the Experiment>

The technical base of the experiment is the "AssociaGuide," developed by NTT Cyber Solutions Laboratories. This technology classifies various content items into some

categories such as documentary, sports, and music according to their metadata,^{*2} then identifies the affinity of content items from the vocabulary distribution in their summaries. The content items that contain similarities are automatically placed closely to each other on a map-like browsing space on a screen. This enables users to efficiently search similar content items (program browsing) starting from one content item.

In this experiment, video content provided on the Internet by contracted content holders is placed on the content browsing map. The following navigation functions are provided. (See figures.)

- "Map-like User Interface"

This user interface offers intuitive usability to enable users to easily select preferred categories, narrow down content items, and preview and watch the content.

- "Content Filtering Function"

This function highlights a sort of content focused by filters such as "New Arrival Mode," which displays live broadcast that will start soon, or "Ranking Mode," which displays weekly or monthly highly-rated programs.

In addition, there is also a plan to provide a program lineup or programs arranged in categories using the supplementary functions of "AssociaGuide," a "Publicizing Screen," which would display links to programs recommended by broadcasting companies or to advertisements drawing on the know-how of Tokyo News Services, and also provide abstractions of highlighted scenes from previews.

After the experiment is completed, the know-how obtained will aid the development of a new information sharing business using data attached to contents items (metadata), $\frac{*2}{}$ including copyright information or summary of the content, which will play an important role in future content distribution.

<Glossary>

*1 Hikari Market Creation Activities

These activities allow NTT to create new markets by arousing demand on the photonic network in partnership with various industries. Specifically, NTT offers new information sharing services (Hikari-Soft services) that make the most of characteristics of the photonic network: high-speed and broadband, interactive and convergence of different media and, in turn, allows customers to evaluate them. These activities were announced in November, 2000.

(http://www.ntt.co.jp/news/news00e/0011/001128.html)

*2 Metadata

Metadata is attached to the content and contains descriptions of the content and information on its author, copyright and so on. More specifically, metadata also contains its title, outline, date and time of distribution, cast and much more.

- <u>Attachment</u>

- Figure-1 Navigation Service System Configuration
- Figure-2 Screen Sample
- Figure-3 Example of Navigation Function

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