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Omiya Ardija Nippon Telegraph and Telephone Corp. (NTT)

Joint Trials Begin toward a Rich Sports Community using IT

-- Enables key match scenes to be viewed as desired and even soccer clinics to be held over the network --

Omiya Ardija, a member team of Japan's J2 professional soccer league (Operating Company: NTT Sports Community Corporation; Head Office: Saitama-shi, Saitamaken; President: Kazuo Oki) and Nippon Telegraph and Telephone Corporation (NTT; Head Office: Chiyoda-ku, Tokyo; President: Norio Wada) will hold joint trials on achieving a rich sports community through the use of advanced IT (<u>*1</u>). This IT-based sports community will feature, for example, a video delivery system enabling team fans to view key scenes of a match over an optical network and a mechanism for holding soccer clinics. The trials will be held over a roughly nine-month period from July 2002 to March 2003 in Saitama City, Saitama Prefecture.

Background to Joint Trials

In past years, Omiya Ardija has been promoting various regional activities such as soccer clinics as a part of club activities to promote the "J-League Long-term Vision" (*2) and to put into practice its club philosophy of "promoting the region and the health of young people through sports and operating the club in close contact with the region." Looking to the future, Omiya Ardija aims to incorporate IT into these regional sports-community activities to enhance club operations.

Purpose of Joint Trials

With these trials, Omiya Ardija aims to improve fan services by capitalizing on IT, improve soccer techniques in children, the soccer players of the next generation, and establish video analysis techniques for analyzing the tactics and strategy of opposing teams.

At the same time, NTT Laboratories aims to apply metadata $(\underline{*3})$ technology to video used in this trial, provide newly developed technologies such as "Editing Tool" $(\underline{*4})$ for editing video, and to test the interactivity of the user interface.

Overview of Joint Trials

1. Contents of Joint Trials

(1) Metadata video delivery

This is a video delivery trial targeting soccer fans. It aims to make it easy for fans to view video scenes of their choice from Omiya Ardija matches.

Participants for this trial will be recruited from members of Omiya Ardija's support shop and fan club with a focus on those living in Saitama City. The trial will examine the level of interactivity obtained with optical broadband characteristics and will test the interface for viewer ease of use.

The plan at present is to use Omiya Ardija's friendly matches and youth matches for this video delivery trial.

(2) Web soccer clinic

Targeting primary school and junior high school students, this is a Web-based soccer clinic that enables students to view video of model plays (passing, dribbling, feinting, etc.) and upload videos of their own plays to obtain advise from the clinic coach. This is accomplished through the use of CyberBook (*5) and CyberPedia (*6) technologies developed by NTT Laboratories that provide students with the sensation of using actual books and encyclopedias over the network.

(3) Metadata video analysis/editing technologies

This trial will evaluate how well the Omiya Ardija's coaching and technical staff make use of the "Editing Tool" that applies metadata generation and editing technology. It will check, in particular, whether this tool can cut video editing time in half as expected and whether it can analyze the strategy and tactics of opposing teams efficiently and quickly.

The technology used by the Editing Tool makes it easy to group scenes into desired categories (shots, corner kicks, free kicks, etc.) from a huge volume of video data using a procedure that simulates the simple act of attaching labels.

2. Joint Trials Schedule

- (1) Phase 1 (July to September 2002)
 - * Test the effectiveness of metadata video analysis and editing
- (2) Phase 2 (October 2002 to March 2003)
 - Metadata video delivery
 - Web soccer clinic

3. Joints Trials System

The metadata trial system will connect a metadata delivery server (B-Flets Office Service <u>*7</u>) installed in NTT East offices with fan club members, soccer clinic students, and the support shop via the B-Flets service.

4. Recruitment of Trial Participants

Monitors for the "metadata video delivery" and "Web soccer clinic" trials will be

recruited. Conditions for participation and a monitor application will be provided on the Omiya Ardija's home page. The site can be visited at the following URL (recruitment information is scheduled to be released at the end of August.)

Omiya Ardija's home page: http://www.ardija.co.jp/

Future Directions

As a result of these trials, Omiya Ardija hopes to make a significant contribution to the development and spread of regional sports and to help create a "new sports culture." Furthermore, the team intends to make effective use of "metadata video analysis and editing technologies" to not only analyze the strategy of opposing teams but to improve its own potential with the aim of being promoted to the J1 (first division) league as early as possible.

NTT will evaluate the reactions of trial participants as a basis for improving video analysis techniques that incorporate metadata technology and for improving the user interface in the video delivery system. NTT will also promote R&D for expanding these technologies beyond soccer to other competitive sports.

Figures

Figure 1: System configuration of joint trials

Figure 2: Metadata video delivery

Figure 3: Web soccer clinic

Glossary

*1: IT (Information Technology)

This word may refer to information-related technologies on the whole or to technologies that use computers and the Internet in particular. Here, we use IT in reference to technologies that mark soccer video scenes to enable flexible searching of desired scenes and to technologies that enable video and home pages to be viewed in a manner similar to using a book.

*2: J-League Long-term Vision

Japan's J-League promotes a long-term vision that aims to create a sporting culture in which "sports become an integral part of daily life bringing joy and enrichment to people, and places are provided where an even broader range and greater number of people can enjoy sports."

*3: Metadata

Metadata is content-related information attached to content itself. It may describe the content, its creator(s), copyright holder(s), etc. In the case of a soccer video, metadata provides considerable information on video content, such as date and time of recording, names of athletes appearing in the video, key match action like shots and corner kicks, etc.

*4: "Editing Tool" for metadata

This tool applies metadata technology to simplify the editing of desired scenes (shots, corner kicks, free kicks, etc.) from a huge volume of video data using a procedure that simulates the sticking of labels onto objects.

*5: CyberBook

CyberBook is a computer interface designed with book-like features that anyone can use. Users can quickly browse through its pages much like turning the pages of an actual catalog or album.

*6: CyberPedia

This tool makes effective use of the bi-directional properties of the Internet to allow even users to provide content and register it in a digital-encyclopedia database.

*7: B-Flets Office Service

This is a "best-effort" type of network service that enables an inexpensive, fixedrate private network to be constructed by connecting a corporate network or similar to a regional IP network.

For further information, please contact:

NTT Sports Community Corporation Kodama (business manager) TEL: 048-658-5511 E-mail: info@ardija.co.jp

NTT Information Sharing Laboratory Group Planning Division Izuka, Sano, and Ikeda (in charge of PR activities) TEL: 0422-59-3663 E-mail: koho@mail.rdc.ntt.co.jp

