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Data Broadcasting Summary

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Data Broadcasting Summary

1 Concept of Data Broadcasting

Data broadcasting is referred to as broadcasting which mainly transmits data, for example characters, shapes, still pictures, images, sounds etc., and differs from television broadcasting which mainly transmits movies or radio broadcasting which mainly transmits sounds. The content of data broadcasting is made of a combination of these characters, shapes, and etc. Viewers who receive data broadcasting and store contents in a receiver machine temporarily, by using a remote controller, can select what they want to see from among the contents, for instance shopping, mail-order business, news, Electronic Program Guide (EPG), etc.

Data broadcasting can be classified, from the viewpoint of type of programs, into independent data broadcasting, and linked/supplementary data broadcasting. Independent data broadcasting consists of only data. Data broadcasters provide independent data broadcasting, contents such as weather forecasts and games (Figure 1). On the other hand, linked/supplementary data broadcasting transmits information on the main television programs as data where television broadcasting is a main program. Quiz programs in which viewers can join and information on players and matches during live broadcasts are classic examples of the contents of linked/supplementary data broadcasting (Figure 2).

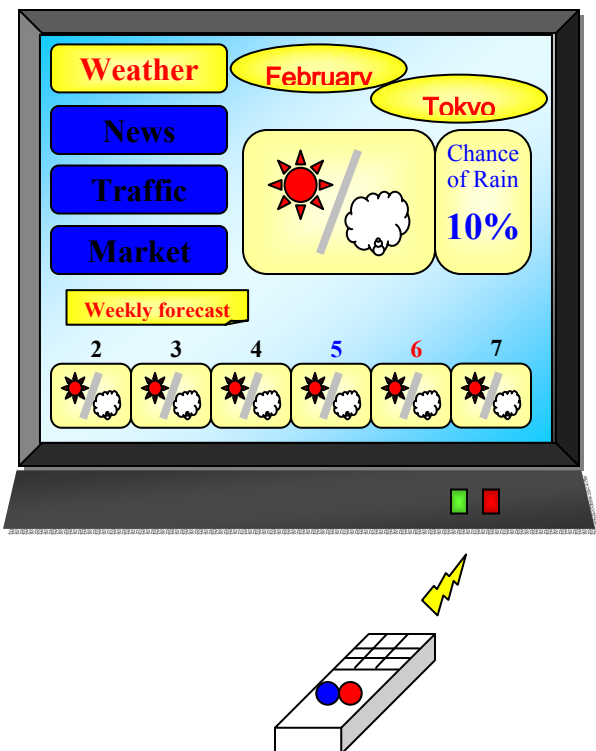


Figure 1 Example of independent data broadcasting (Weather Forecasts)

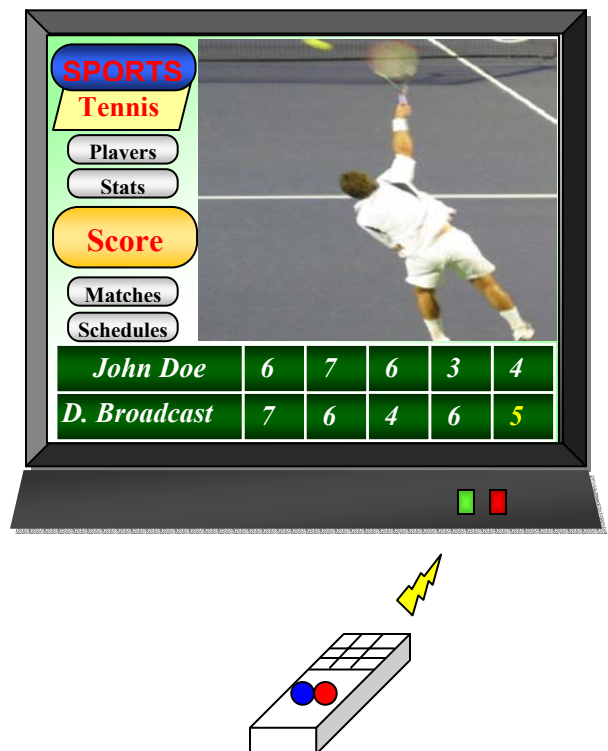


Figure 2 Example of linked/supplementary data broadcasting (information on players and matches during live broadcasts)

Data broadcasting also includes the interactive service. Viewers receive the contents of data broadcasting via terrestrial broadcasting, satellite broadcasting or Cable TV (CATV), and can answer quiz questions on the contents and reply to questionnaires via the communications line by using a remote controller. Some new services are put on the air as a result of ideas provided by viewers. Broadcasters use the information received from viewers in the programs, and send viewers via communications lines more detail contents to complement the programs broadcasted.

Although a variety of different names are used for data broadcasting including "Enhanced Broadcasting" and "Interactive Broadcasting," the service is already being aired in some countries. It is anticipated that data broadcasting will develop more along with the standardization of technical terms and development of digitization of terrestrial broadcasting.

2 Data Broadcasting Now

2-1 Media of data broadcasting

Since the middle 1990s former to the digitization of broadcasting, broadcasting services, which were multiplexed and mainly forward on television broadcasting and radio broadcasting had been provided. Recently, however, data broadcasting services have rapidly developed due to the digitization of broadcasting and the receiving machines' links with communications lines. In Japan, following the digitization of BS (Broadcasting Satellite) in 2000, the contents of data broadcasting particularly by means of satellite broadcasting became much more varied and had more depth, and the market expanded as a consequence. Data broadcasting services are being promoted widely due to the digitization of terrestrial broadcasting, and it is also considered that this type of broadcasting will be on-going. CATV started digitization in 1996 and CATV operators transmit data broadcasting by means of retransmission of terrestrial and satellite broadcasting.

2-2 receipt of data broadcasting

To receive data broadcasting, a receiving machine, antenna for each medium, and tuner to receive digital broadcasting is usually required. However, data broadcasting multiplexed on analog broadcasting often requires a specific machine or software.

In addition, with respect to interactive services, it is necessary to connect the receiving machine for digital broadcasting with the communication line or the Internet (Figure 3). This is a system that when viewers receive data broadcasting and answer quiz questions and reply to questionnaires by using a remote controller, the

broadcasters' servers receive the information via the communication line or the Internet.

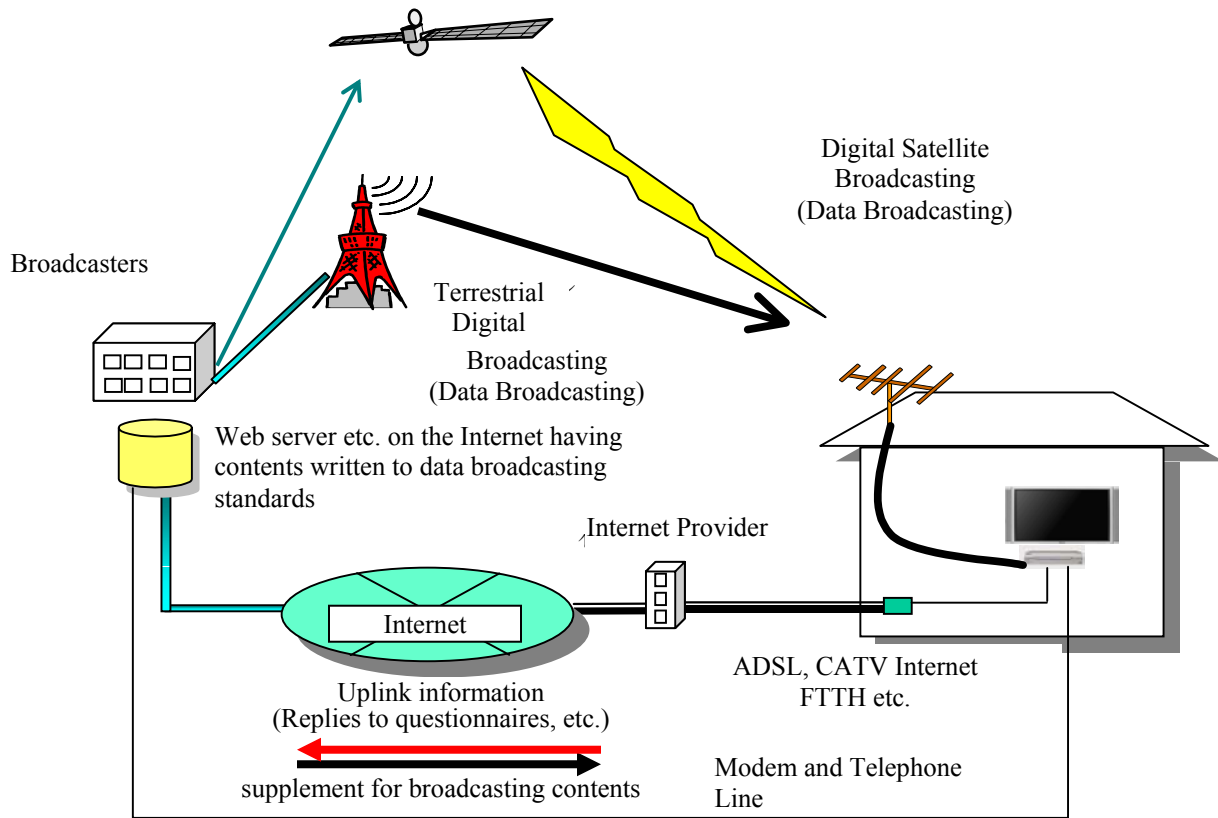


Figure 3 system of interactive service

2-3 Data broadcasting's prevalence in Japan Now

Satellite broadcasting in Japan can be classified into BS broadcasting as a quasi basic medium and CS (Communications Satellite) broadcasting which consists of specific channels. On one hand, with regard to data broadcasting by digital BS broadcasting, there were 7 companies operating 7 channels as of December 2004. In addition to the number of shipments of receiving machine for digital BS broadcasting, 4.82 million, 2.83 million households watch data broadcasting by digital BS broadcasting via CATV. The benefits to data broadcasters in 2003 was 1.5 billion yen. On the other hand, with regard to data broadcasting by digital CS broadcasting, there were 5 companies providing 41 channels as of December 2004. The number of subscriptions to digital CS broadcasting was 4.11 million at the time. (Ministry of Internal Affairs and Communications, *Major Aspects of Satellite Broadcasting* (http://www.soumu.go.jp/joho_tsusin/eisei/eisei.html))

As for digital terrestrial broadcasting, no statistics on benefits have been published as the service only began in December 2003. The number of shipments of receiving

machines for digital terrestrial broadcasting was 2.16 million as of December 2004. (Japan Electronics and Information Technology Industries Association (JEITA) (<http://www.jeita.or.jp/japanese/stat/digital/2004/index.htm>)).

3 international situations of data broadcasting

As of September 2004, data broadcasting services had begun operating in the UK, Finland, Germany, Italy, South Korea, Spain, Sweden, and the U.S. in addition to Japan. Broadcasters provide data broadcasting services in the U.S. for example EPG in satellite broadcasting and CATV. In the UK, Sky Digital, which is a digital satellite broadcasting service, provides interactive services called Sky Active. Freeview, digital terrestrial broadcasting service, also provides interactive services, for instance BBCi, etc. The number of subscriptions to Sky Digital was approximately 7.6 million as of the end of 2004 (Sky Digital (http://media.corporate-ir.net/media_files/lse/bsy.uk/Press_release.pdf)).

Regarding other countries, DVB Project (<http://www.dvb.org/>), which is a project to develop and help expand common standards for digital broadcasting, made an announcement concerning the diffusion of services. According to the announcement as of September 2004, for instance, “a total of around 385,000 MHP boxes active in Italian homes” as of August 15th, 2004 (MHP box means set top box (STB) for one standard of data broadcasting, DVB-MHP). In South Korea, the digital satellite operator, SkyLife, provides weather forecasts, news, horoscopes, traffic information and so on and is called Skytouch. About 650 thousand MHP box were in use as of July 2004. In addition, other countries, i.e. Australia and Belgium etc., are preparing to manufacture STB to MHP and trial services are being conducted. With regard to data broadcasting standards, the original ones have been adopted in Japan and the U.S., DVB-MHP has been adopted mainly in Europe and South Korea. At present a standard based on the Globally Executable MHP and the U.S.’s domestic standards is being discussed.

Data broadcasting services are taking hold in some countries, and standards are being developed. It is anticipated that data broadcasting services will expand more as each country decides on standards and digitization of terrestrial broadcasting is promoted.