

## PROJECT CRID AKASAKA Mobile Digital Terrestrial Broadcasting Solution



NEWS RELEASE  
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### Tokyo Broadcasting System, HAKUHODO, NTT Data and EXPWAY have joined forces to develop the first end-to-end Mobile Digital Terrestrial Broadcasting Solution

Lead by the leading Japanese broadcaster **Tokyo Broadcasting System (TBS)**, a group of partners including **HAKUHODO**, the second largest advertising company in Japan, **NTT Data**, the largest systems-integrator company in Japan and **EXPWAY**, one of the leading providers of XML parsing software solutions, have implemented the first end-to-end Mobile Digital Terrestrial Broadcasting Solution.

TBS's main goal is to develop an open platform for mobile DTT in Japan in order to provide video, sound & data services to mobile receivers in parallel with HDTV services to stationary receivers or PVRs, by taking advantage of the existing Digital Terrestrial infrastructure and by implementing the latest TV-Anytime and ARIB (Association of Radio Industries and Businesses) standards and technologies.

This ambitious project is made possible thanks to the reliable mobile reception of Digital Terrestrial Broadcasting in Japan (ISDB-T), making broadcasters more competent in the wireless world. **Hybrid mobile** receivers will be able to capture both the **communication and the broadcast signals**, therefore offering unprecedented services to mobile users and new business models to the broadcaster and to content providers.



The underlying idea is to enrich the user experience by combining broadcast scheduled content and on-demand internet content at a reasonable cost, therefore providing a full interactivity. Mobile broadcasting will allow a whole new range of **original services** by enabling to synchronize services with TV programs, insert tailored commercials, and provide intelligent EPG (Electronic Program Guide) to mobile users.

On the back stage, these advanced services are made possible thanks to three main technologies developed and standardized by the TV-Anytime Forum and ARIB:









1. **CRID** (Content Reference Identifier) allows the user to locate and refer to content regardless of its location, whether on a particular broadcast channel at a specific date and time, or on a file server connected to the Internet.
2. **Metadata** allows to enrich the user experience by adding up description information about the content thus allowing the consumer, or intelligent agents to search and select content available from a variety of internal and external sources, by adding up

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user preferences, and segmented content enabling to navigate within a piece of segmented content.

3. **BiM** (MPEG-7 Binary format) allows to encode and transport in a compressed manner all XML-based data and metadata that are broadcasted, thus enabling a large amount of data to be processed by low footprint devices, while greatly reducing bandwidth consumed.

TBS and its partners (to which NTT Research Laboratories and Waseda University have also contributed) will demonstrate at IBC (Hall 3, Booth #3.218) a first implementation of tailored advertising, geo-dependant information and triggered EPG services to mobile users. TBS considers these mobile DTT services as a new way to reach customers during their long commuting journeys and to reinforce their loyalty to the broadcaster's programs.

| Akasaka pinpoint weather                     |   |        |
|--|---|--------|
| Tonight                                      |   |        |
| 18:00  |  | sunny  |
| 21:00  |  | sunny  |
| Tomorrow                                     |   |        |
| 00:00  |  | sunny  |
| 03:00  |  | sunny  |
| 06:00  |  | cloudy |
| 09:00  |  | cloudy |
| 12:00  |  | snow   |
| 15:00  |  | snow   |
| Forecast                                     | Satellite   |        |
| <a href="#">Super Weather Guide top page</a> |   |        |

### PROJECT CRID AKASAKA PARTNERS:



Tokyo Broadcasting System, Inc. (TBS) became the first commercial station to provide radio broadcasting in Japan when it was established in 1951, and TV broadcasting followed four years later.

As the leading radio and television broadcaster, TBS built two nationwide networks, the Japan News Network (JNN) and the Japan Radio Network (JRN). The mission of TBS is to provide as many people as possible with access to the best programs and high-quality content. [www.tbs.co.jp](http://www.tbs.co.jp)



Hakuhodo Incorporated is a brand-management specialist offering a full range of marketing, advertising and media buying services to thousands of clients around the world. Hakuhodo views the client-agency relationship as partnership. We know well that each client requires a unique approach. While you may need a particular creative or new media solution to a branding problem, another client may need help identify a problem. By working in partnership with you, we can uncover the right solution for your brand or product. [www.hakuhodo.co.jp](http://www.hakuhodo.co.jp)



NTT DATA is Japan's top systems-integrator company. We have engineered much of Japan's public IT infrastructure and vast number of corporate network systems. NTT DATA is a Nippon Telegraph and Telephone Corporation (NTT) Group company and spun off from NTT in May 1988. Our business concept is to create and expand IT markets by establishing "business value chain" which is made up of the three areas; IT partner, service provider, and system integrator. [www.nttdata.co.jp](http://www.nttdata.co.jp)



EXPWAY is one of the leading providers of software components for managing XML transfer and processing, based on its Binary XML Technology. BinXML™ is a proven and world-class technology already adopted as the Binary XML transport format by MPEG-7, TV-Anytime and ARIB international Standards. EXPWAY serves customers in Broadcast, Telecom and XML-Enabled Applications Industries. Headquartered in Paris, EXPWAY sells its products worldwide through a direct force, OEM & system integrators. [www.expway.com](http://www.expway.com)

For further information, please contact:

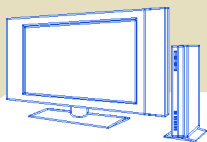
EXPWAY Public Relations      Tel: +33 (0)1 44 54 29 28  
E-mail: [com@expway.com](mailto:com@expway.com)

# MOBILE DIGITAL TERRESTRIAL BROADCASTING IN JAPAN



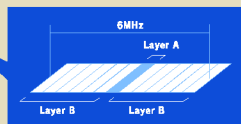
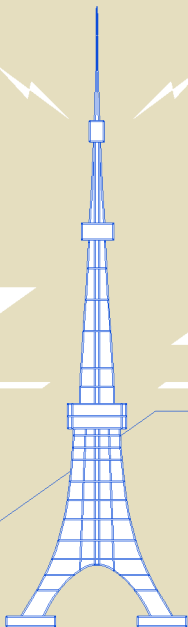
**For Home on Layer B**

HDTV



**For Mobile on Layer A**

SMALLER SCREEN TV



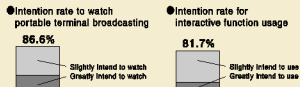
## Overview

The system flexibility and the reliable mobile reception of Digital Terrestrial Broadcasting (ISDB-T) make broadcasters more competent in the new wireless world. Generally, mobile reception from satellite is difficult. One predominance point of digital terrestrial broadcast is the mobile reception. We can provide video, sound, and data services to mobile receivers by robust modulation in parallel with HDTV video and audio services to stationary receivers or personal video recorders.

## Merit

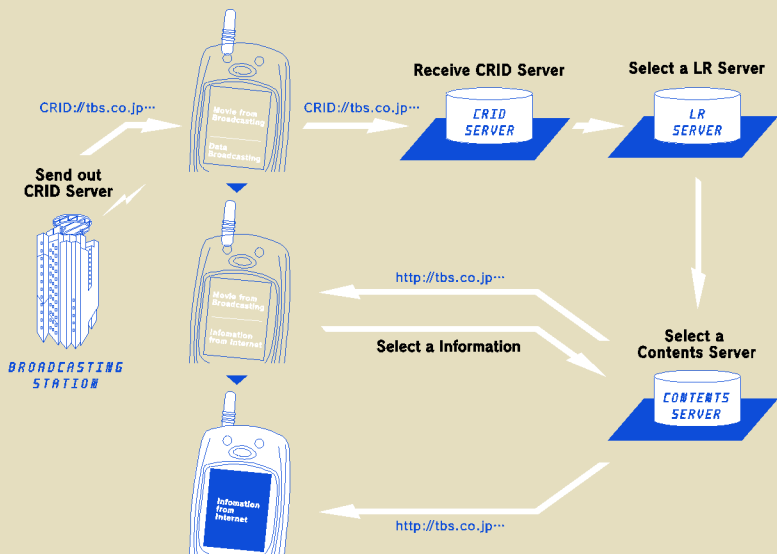
|                                 |                    |
|---------------------------------|--------------------|
| <b>Mobile Phone Subscribers</b> | <b>83,195,700</b>  |
| <b>Mobile IP Subscribers</b>    | <b>65,174,100</b>  |
|                                 | (As of July, 2009) |

Expectations for portable terminal broadcasting is very high. Intention rate for watching is 86.6%, 81.7% for interactive function usage.



(As of Oct. 2002)

# CRID/MD SERVER ON TV CONTENT REFERENCING TECHNOLOGY



CRID://TBS.CO.JP/20021211161530/...

broadcaster

real sending-out time

## Overview

TV Anytime's Content Referencing technology enables content distributors to make their content "seamlessly" available to the audience via broadcasting as well as communication channels. CRID/MD Server is a generalpurpose implementation of this important technology and can provide efficient means to publish, announce, and acquire content.

## Features

- Separation of the reference to content and the content location.
- Dynamic context adaptability in content acquisition.
- Integration of web technology and broadcasting.
- Applicable to both uni-directional and bi-directional content delivery.

## Merit

- LR server can change content locations anytime as needed.
- Optimal and adaptive information can be provided at the moment of user access.
- Communication channels can be accessed regardless of broadcast time.
- Effective linkage between broadcast content and internet content.