



Mobile TV in Japan

ROA Group White Paper

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Introduction

Terrestrial digital broadcasting for mobile phones and devices called 1seg or “One Seg”, was launched in Japan in April this year. The broadcast area is currently limited to 29 regions, including major cities such as Tokyo and Osaka. The service is expected to spread nation wide by the end of 2006.

The name One Seg comes from 13 segments in TV broadcasting that are utilizing a frequency of 6MHz and one of these segments is used for mobile TV, therefore called as One Seg. One Seg is offered for free in Japan and the number of subscribers is projected to increase steadily during 2006.

Service, Devices and Usage

1) Service in Brief

Broadcasting companies, including TBS, are providing free data broadcasting for the consumers on such contents as news, weather and earthquakes. NHK is preparing contents providing info on upcoming soap operas and cooking recipes for the program viewers. TV Asahi and KDDI are planning to attract users by providing such services as paid music download and online shopping.

Following the trend, SONY launched its VAIO PC model equipped with One Seg tuner. In car navigation, Matsushita and Pioneer launched a service providing software download for using One Seg. In portable game consoles, Nintendo is planning to launch a One Seg receiver card for Nintendo-DS model by the end of this year.

2) One Seg Handsets in Brief

Currently, One Seg handsets available in the Japanese market are provided by KDDI (Sanyo W33SA and Hitachi W41H models) and NTT DoCoMo (Panasonic P901iTV). Vodafone is to launch 905HS by Sharp during June, 2006.

KDDI W41H is equipped with Time Shift play back function comparable to digital recorders. When a call is received while watching a TV program, the program can be recorded for 2 minutes during the call. In NTT DoCoMo P901iTV, the TV function can be activated by twisting the main screen 90 degrees or pressing a button.

In One Seg handsets, the TV viewing time has been extended. The average viewing time in handsets enabling analog broadcasting is about one hour but for viewing terrestrial digital broadcasting, the Japanese vendors have succeeded in extending the battery life. For KDDI W33SA, the viewing time is 2 hours and 45 minutes, for W41H 3 hours and 45 minutes. NTT DoCoMo P901iTV has 3 hours viewing time and Vodafone 905SH enables 4 hours viewing time. To prevent the full consumption of the battery, KDDI and NTT DoCoMo have installed a function which automatically turns off the TV receiving function when the battery has only 20-30 minutes talk time left. This is to enable the users to receive and make calls and send messages with the remaining talk time.

3) One Seg Usage

According to a survey, 53% of the Japanese consumers are familiar with the word, "One Seg". The rate appeared very high especially among male consumers, 70%. However, when asked about the details of One Seg service and the launching time, the percentage reached only at 50%.

On the other hand, the survey participants showed a high interest in the service with a percentage of 89.9%. Reasons for wanting to use the service included such as immediate viewing, portability and free service. As conditions for using One Seg service, the continuous usage of batteries showed a high percentage at 54.5% among the participants and also high interest was shown in hardware as well.

When asked about where the survey participants would use One Seg service, 63.1% answered that they would use it while waiting for the subway or bus, 54.4% of the participants answered that they would use it while waiting for a friend, etc. and 51.5% answered that they would use it when they have a little time off during the day. The participants picked news, weather and music as the most viewable contents.

The participants were also asked that what kind of device they would prefer for viewing One Seg broadcasting and 86.4% picked mobile phone as the most preferable device. Laptops and in-car navigation devices followed mobile phones in the survey.

NTT DoCoMo P901iTV reached at 16%, KDDI W41H 7.5%, W33SA 2.6% when asked

about the user preferences among the mobile phones currently available in the Japanese market.

[Table-1] One Seg

Category	Description
Video/Audio/Still image encoding	<ul style="list-style-type: none"> ● H.264 ● AAC LC for audio(Support spectral band replication as an option) ● JPEG, GIF, animated GIF for still image
Copyright protection	<ul style="list-style-type: none"> ● Copy control based on Copy Control Information (CCI)
NVRAM (nonvolatile random access memory)	<ul style="list-style-type: none"> ● Restrict access to personal information transformation with servers ● Accessible server information is managed by individual relevant stations
Style Sheet	<ul style="list-style-type: none"> ● Data broadcasting is delivered on the 240x480 pixel virtual frame ● Use scroll and scheduling based on screen pixel number to place a virtual frame
Simultaneous display of broadcasting and mobile contents	<ul style="list-style-type: none"> ● Prohibited in principle ● Mandatory to indicate explicitly that displayed contents are not relevant to each other
Extend BML (broadcast markup language)	<ul style="list-style-type: none"> ● Connected with E-mail ● Connected with scheduler ● Connected with Location Based Services (LBS)

Source: ROA Group

Conclusion

Currently, mobile TV phones are attracting many consumers world wide. In Japan, One Seg service was launched in April and it is expected to be popular especially among the young consumers. Mobile phone replacement cycle in Japan is counted as 18 months and mobile TV phone use is expected to spread from the middle-aged to the senior consumers.

However, as a business model, One Seg does not look that attractive at the moment. An increase in the users who use mobile phones for viewing TV programs, might have

a positive effect for broadcasters in terms of advertisement revenues but in case of mobile carriers, the increase in mobile TV viewing might cause a decrease in wireless internet and other contents usage. To prevent this from happening, the mobile carriers need to link One Seg usage as part of the contents they are providing and create a model in which One Seg is provided as a value added service, included in the existing Data Usage Fee.

One Seg is expected to remain as a small scale service market reaching only to 500 million JPY until the end of 2006 but it is projected to grow rapidly starting from 2007 when various value added services will be available in the market.

One Seg service is identical to DMB already commercialized in Korea and the problems that the mobile carriers are facing in these two countries are similar. But when looking at the market size (the number of handsets purchased and service market size), the market prospects in Japan seem to be much better than in Korea. This is because carriers and broadcasters work closely together for contents and value added service strategies.

This white paper is published by **Research On Asia (ROA) Group, Inc.** For more information on **ROA Group**, please visit www.researchonasia.com.

Thank You.

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