

Presentation 2

tv asahi



ISDB-T, the Future of Digital Television in the Philippines

ISDB-T Applications

***27th February, 2008
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TV Asahi***

DiBEG

Digital Broadcasting Expert Group

Contents

- *Introduction of Applications*
 - *HDTV*
 - *Data broadcasting*
 - *Interactive internet contents*
 - *EPG*
 - *One-Seg service*
 - *Mobile HD*

Powerful applications

HDTV



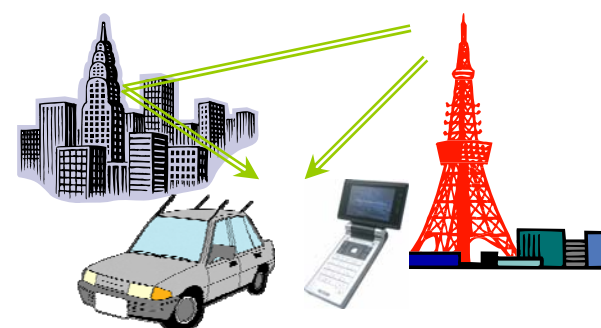
- High quality image on wide screen and CD quality sound.

Data broadcasting



- Local news and weather forecast for viewers at any time.

Mobile Reception



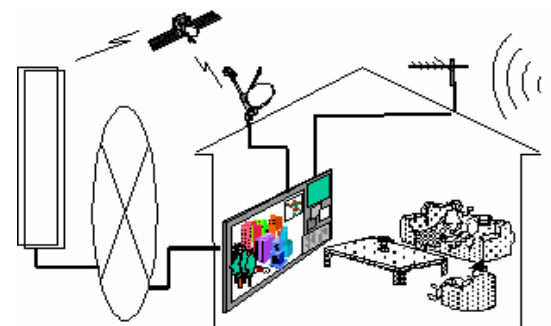
- Transmission service to Mobile accesses

Multi-channel program



- Standard quality multi-channel service

Interactive TV



- Offers Interactive service

HDTV(1)

□ *High Definition Television Program*

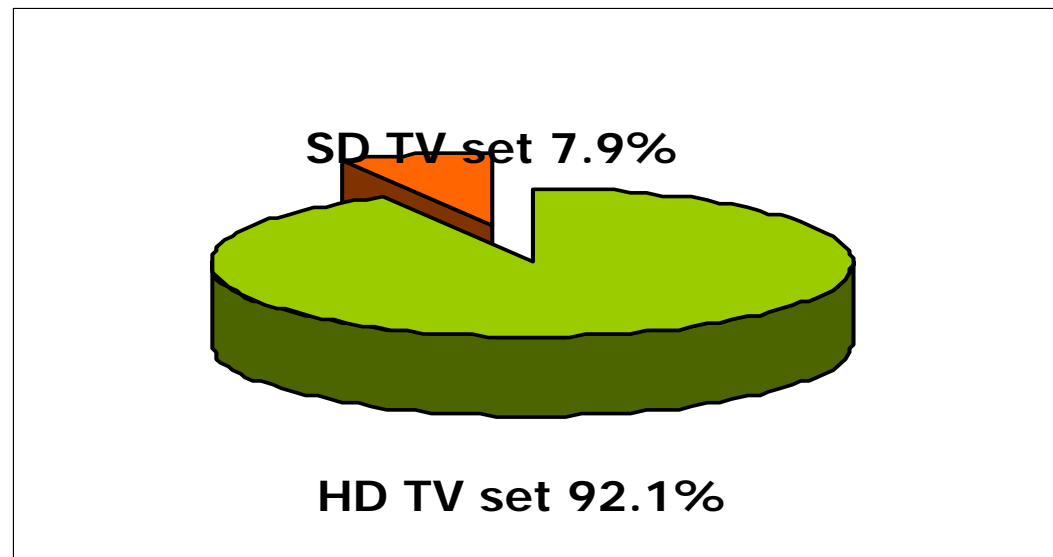
- ✓ *The high quality images on a 16x9 wide screen and CD-quality sound make you feel as if you were at the theater.*
- ✓ *HDTV is most powerful killer application, therefore HDTV is thought to be the most effective way to promote DTTB to the home.*



HDTV (2)

□ *More than 92% of LC TV sets are 16x9 wide panel.*

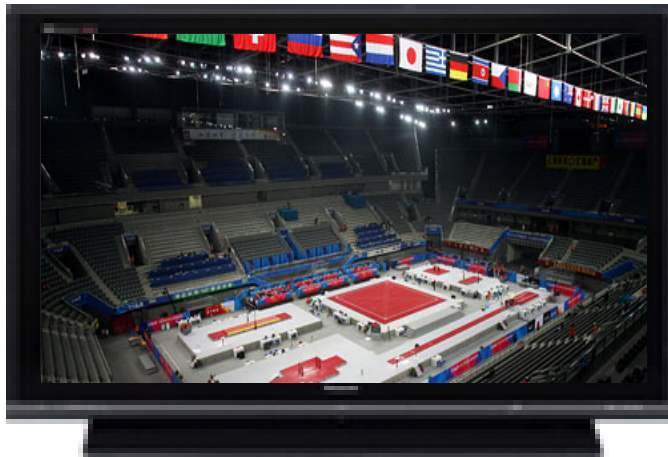
□ According to JEITA data of 2007 Domestic Shipments of Major Consumer Electronic Equipment



□ *The latest trend is HDTV.*

HDTV (3)

- *TV program such as 2008 Beijing Olympic game, 2010 World Cup South Africa will be sent with HD program to all over the world.*
- *Are you fully satisfied with only SD TV programs despite you have full HD TV set ?*



Which is your favorite ?

Side panel

Multi channel programs

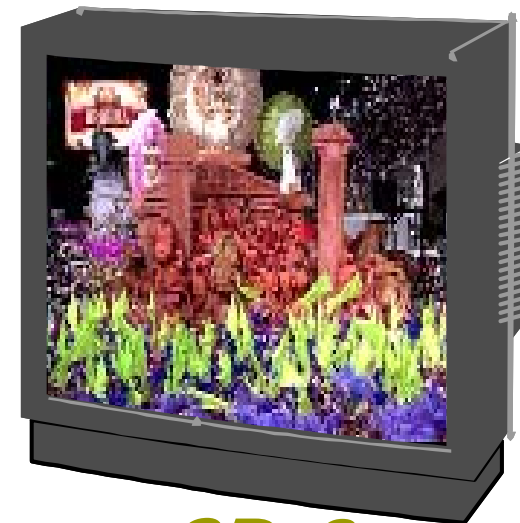
- *ISDB-T can transmit multiple SD programs up to eight simultaneously within a single digital spectrum.*



SD-1



SD-2



SD-3

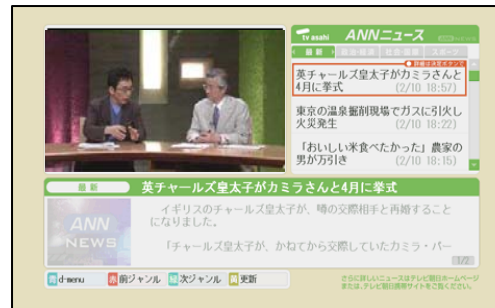
Data broadcasting (1)

□ *Data broadcasting is an additional service.*

■ *By clicking on-screen d-button with a remote control unit, you can access and draw out your favorite information such as local weather forecast, 24H news and information linked to on-air program.*



Local weather forecast



Local news



Program-linked information

Data broadcasting (2)

tv asahi

□ Basic page format

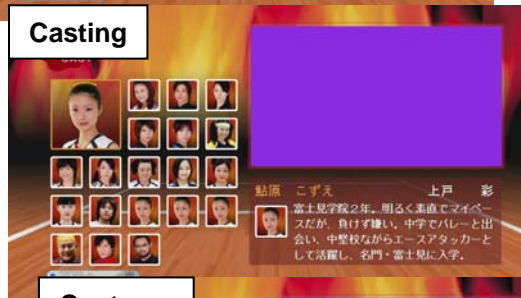
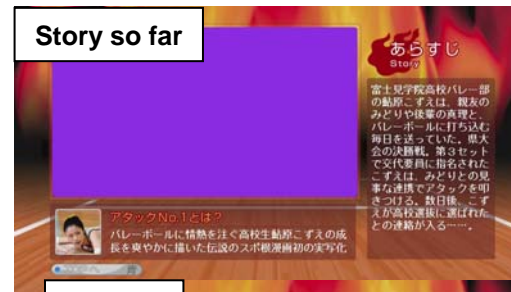
The screenshot shows the tv asahi d-menu interface. It features a main video window on the left showing two men at a table. To the right is a vertical menu with various options. At the bottom, there is a local weather information banner and a news banner. Arrows point from text labels to specific elements in the interface:

- Present time and date: Points to the top right of the menu showing "09月05日 (月) 18:00".
- Weather forecast banner: Points to the "お天気情報" (Weather Information) option in the menu.
- News banner: Points to the "ANNニュース" (ANN News) option in the menu.
- Fortune-telling Service: Points to the "やじプラ占い" (Yaji Plaza Fortune-telling) option in the menu.
- TV station ad banner: Points to the "報道 STATION" (Report Station) banner at the bottom right.
- Local weather information: Points to the "今日の天気" (Today's Weather) banner at the bottom left, which displays weather for Tokyo Port District (東京都港区) with a high of 12°C and a 30% chance of rain.

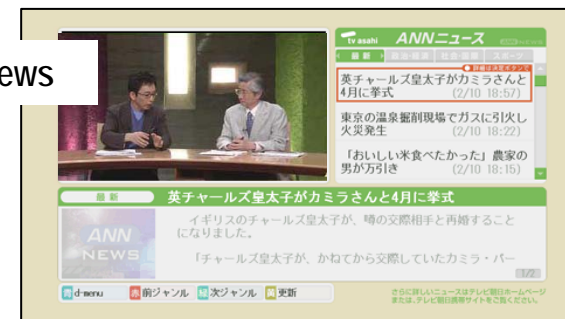
Data broadcasting (3)

tv asahi

□ Program-linked data contents



□ *Non-linked contents*



Data broadcasting (5)

tv asahi

Weather forecast contents

Basic page



Top of Weather forecast



Weekly forecast



East Japan



West Japan



Weekly at local



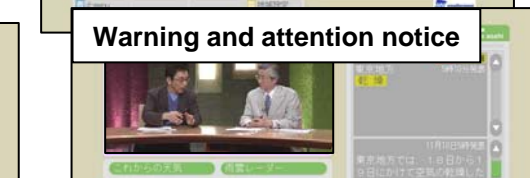
Radar image



Information for daily life



Warning and attention notice



Prediction of typhoon movement



EPG

- *EPG provides a lot of program information, and you can book recording programs with remote control unit easily.*



Interactive internet contents(1)

□ Interactive Shopping Contents

On-air program

data broadcasting content



The button to connect to the internet contents

Interactive internet contents(2)

Interactive Shopping Contents

On-air program

Internet Contents

ishop powered by TBS

おすすめ ドラマ バラエティ アニメ その他

BooBo／クリップマーカー
○○○○○○○○○○●○○○
¥1,260 (税込)

BooBo／ゴルフカバー
○○○○○○○○○○●○○○
¥1,100 (税込)

アスリートBooBo／タオル
○○○○○○○○○○●○○○
¥1,900 (税込)

BooBo／メガホンTシャツ
○○○○○○○○○○●○○○
¥1,900 (税込)

1 / 5 次のページ

カートの中身
番組グッズトップ
利用規約
黄：終了

おすすめ!
BooBo
ハンドパペット
¥1,470 (税込)
大人気TBSキャラクター「BooBo」
の新オリジナルグッズ新登場!
大きな鼻にくるっとした目で
愛嬌をふりまく楽しい人形です!

goods

Interactive internet contents(3)

□ You can buy goods directly!!

On-air program

Input personal data

ishop powered by TBS

基本情報入力 1/3

姓* あいうえおかきくけこ

名* *

性別* ☐ 男性 ☐ 女性

生年月日* 年 月 日

※印は必須項目です。

上下左右ボタンで
入力する文字を選
んで決定ボタンを
押してください。

入力後は確定ボタ
ンを押してください。

や わ ら や ま は な た さ か あ 1 2 3
ゆ り み ひ に ち し き い 4 5 6
よ を る ゆ む ふ め つ す く う 7 8 9
っ れ め へ ね て せ け え ー 0
ー ん ろ よ も ほ の と そ こ お
クリア " ° 英小字 クリア

確定

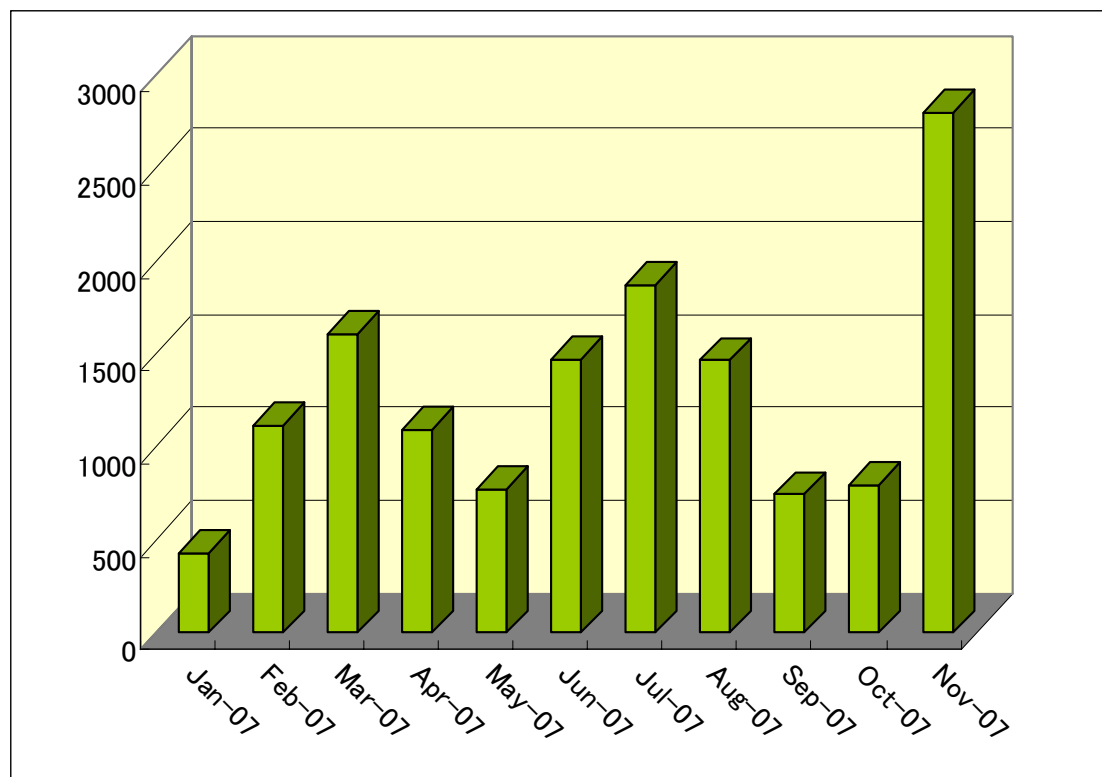
黄: 終了

Software Keyboard

One-Seg Service (1)

- More than 17million one-Seg Mobile phones were shipped in the Japan market according to JEITA statistics of Feb.2008.

(Unit: thousand)



One-Seg Service (2)

- ❑ *The One-Seg service is transmitting moving images to cell phones, car TVs, personal computers etc , so that you can enjoy One-Seg programs anytime anywhere.*
- ❑ *Merits*
 - ✓ *Stable reception in a mobile environment.*
 - ✓ *High quality video & audio in a mobile environment.*
 - ✓ *Robustness against noise and multi-pass.*

One-Seg Service (3)



- Video (H.264)
approx. 180-256kbps
- Audio (AAC-SBR)
approx. 32-64kbps
- Data-cast (BML)
approx. 20-80kbps

One-Seg Service (4)



On-air program

Example parameter

Modulation QPSK

Code Ratio 2/3

Guard Interval 1/8

Bit Rate 416 Kb/s

Display Image

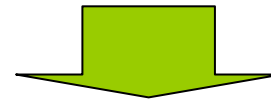


Data service

One-Seg Service (5)



***No subscription fee
and
Powerful terrestrial
television contents***



***Unique & Unparalleled
Feature in the world !***



One-Seg service (6)

Example of business model

□ *Additional information service*

The service can show additional information linked to on-air programs such as information on athletes and celebrities, recipes, questionnaire and quiz.

□ *TV shopping*

The service enables viewers to purchase commercial goods shown on shopping program.

□ *Local service*

The service can provide local information such as emergency alerts, local events, notice from local government or hospital.

One-Seg service (7)

One-seg receiver



Cell phone



Car TV



E-Dictionary



USB Tuner

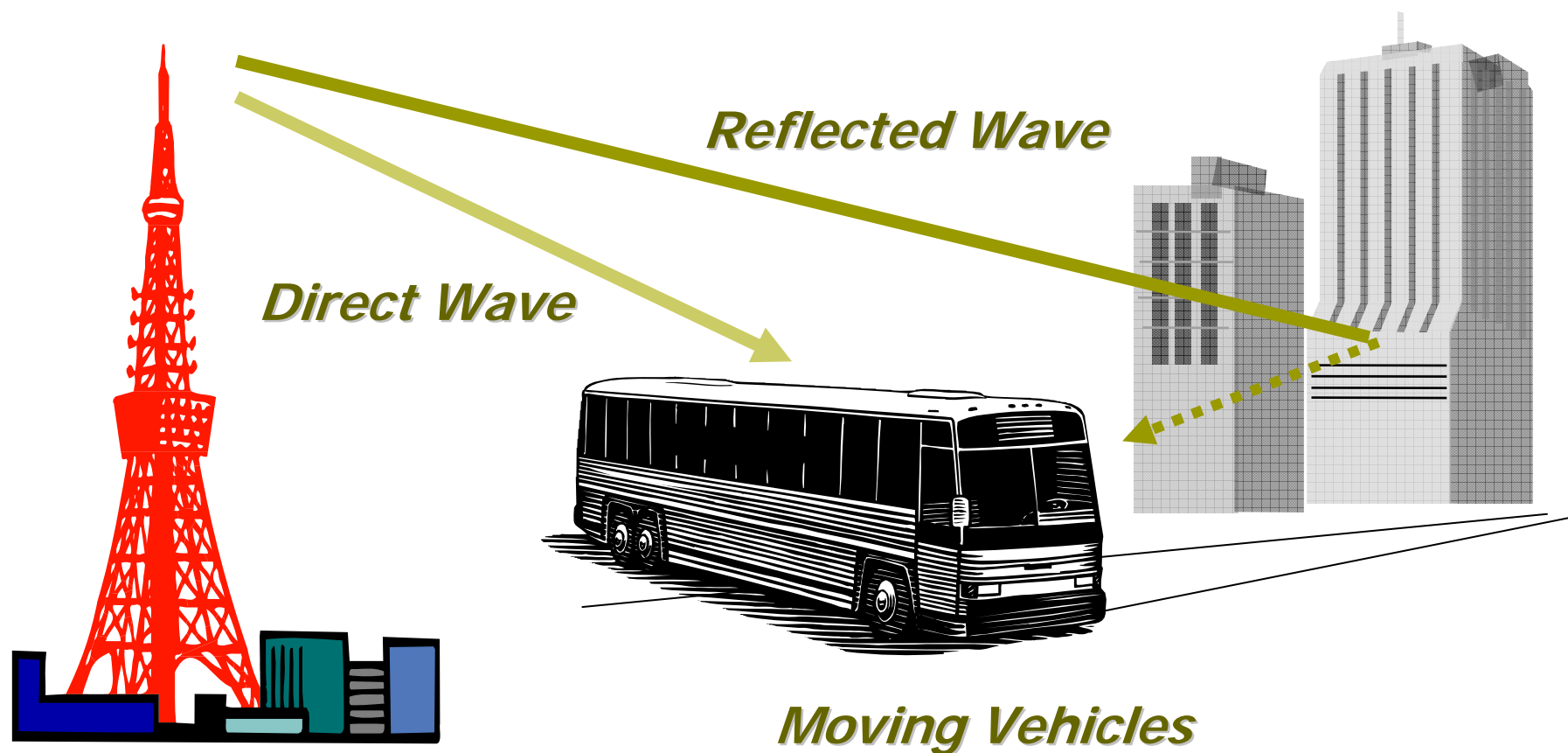


Audio player



PC

Mobile HD(1)

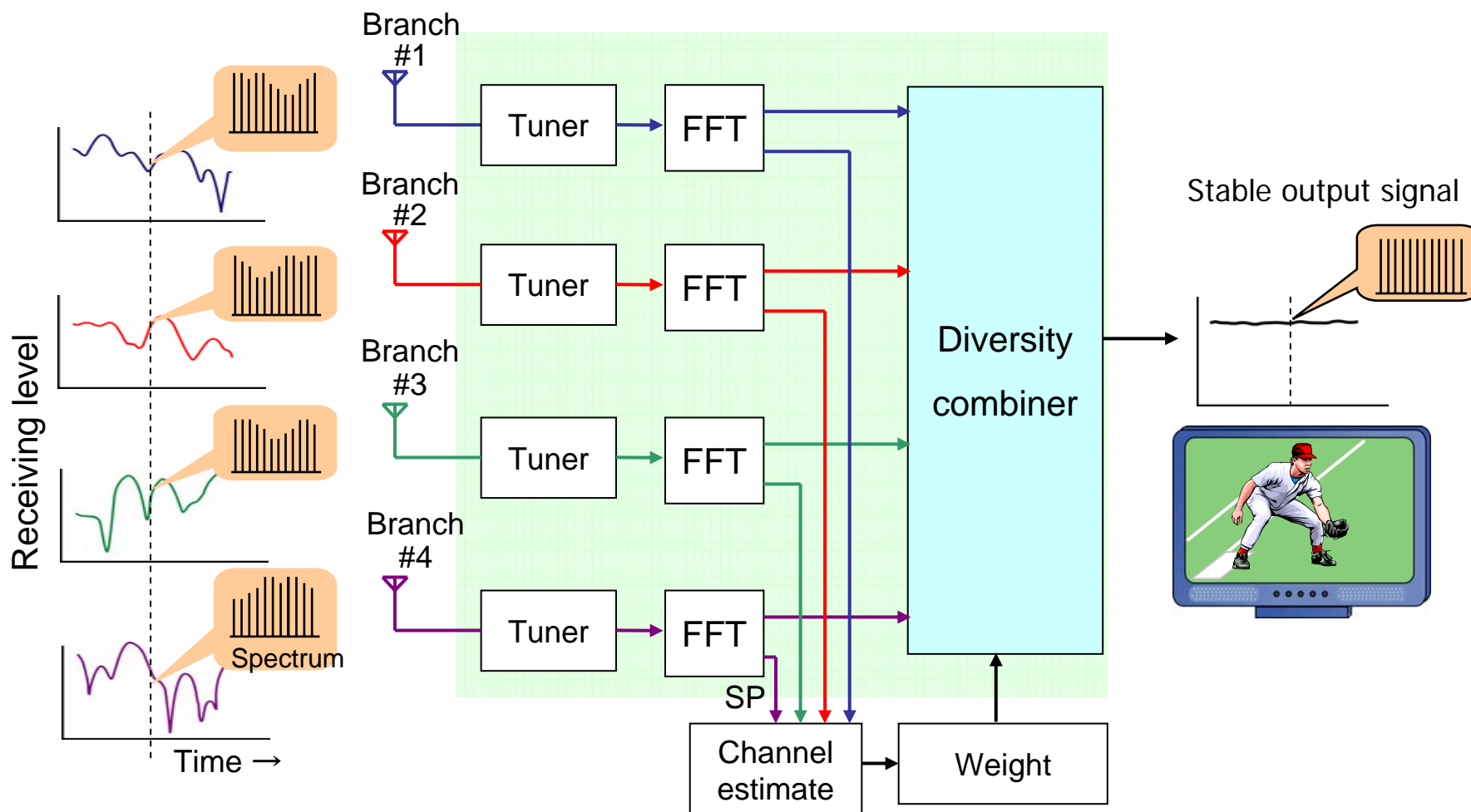


*HDTV can be watched even in a moving vehicle
by using space diversity technology.*

Mobile HD(2)

Diversity reception system

Maximal Ratio Combining with carrier by carrier of OFDM signal



Mobile HD(3)

Comparison between Digital and Analog

Comparison experiment between digital and analog TV on a mobile environment.

Digital Broadcasting

Analog Broadcasting



Mobile HD(4)

Mobile HD receivers

HDTV tuner for automobiles is now on sale.



**ISDB-T TV tuner
for automobiles**



LCD for automobiles

**High quality image wide-LCD panel.
Faithful reproduction of DVD and digital
terrestrial television broadcasting image**

Mobile HD(5)

Mobile HD Receivers

SANYO NVP-DTA10



Panasonic TU-DTV100, TU-DTV20



車載用地上・BS・110度CS
デジタルチューナー
TU-DTV100



Mitsubishi TU-100D



Fujitsu Ten DTV105



Pioneer GEX-P7DTV



Alpine TUE-T300



Conclusion

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**ISDB-T
is filled with
leading-edge technologies
to make your dreams come
true !**

ISDB-T, the Future of Digital Television in the Philippines



*Thank you
for your attention !*

END

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