

Progress of Digital Broadcasting in Japan and Features of ISDB-T

August 21, 2000

Sao Paulo

Atsumi SUGIMOTO

DiBEG

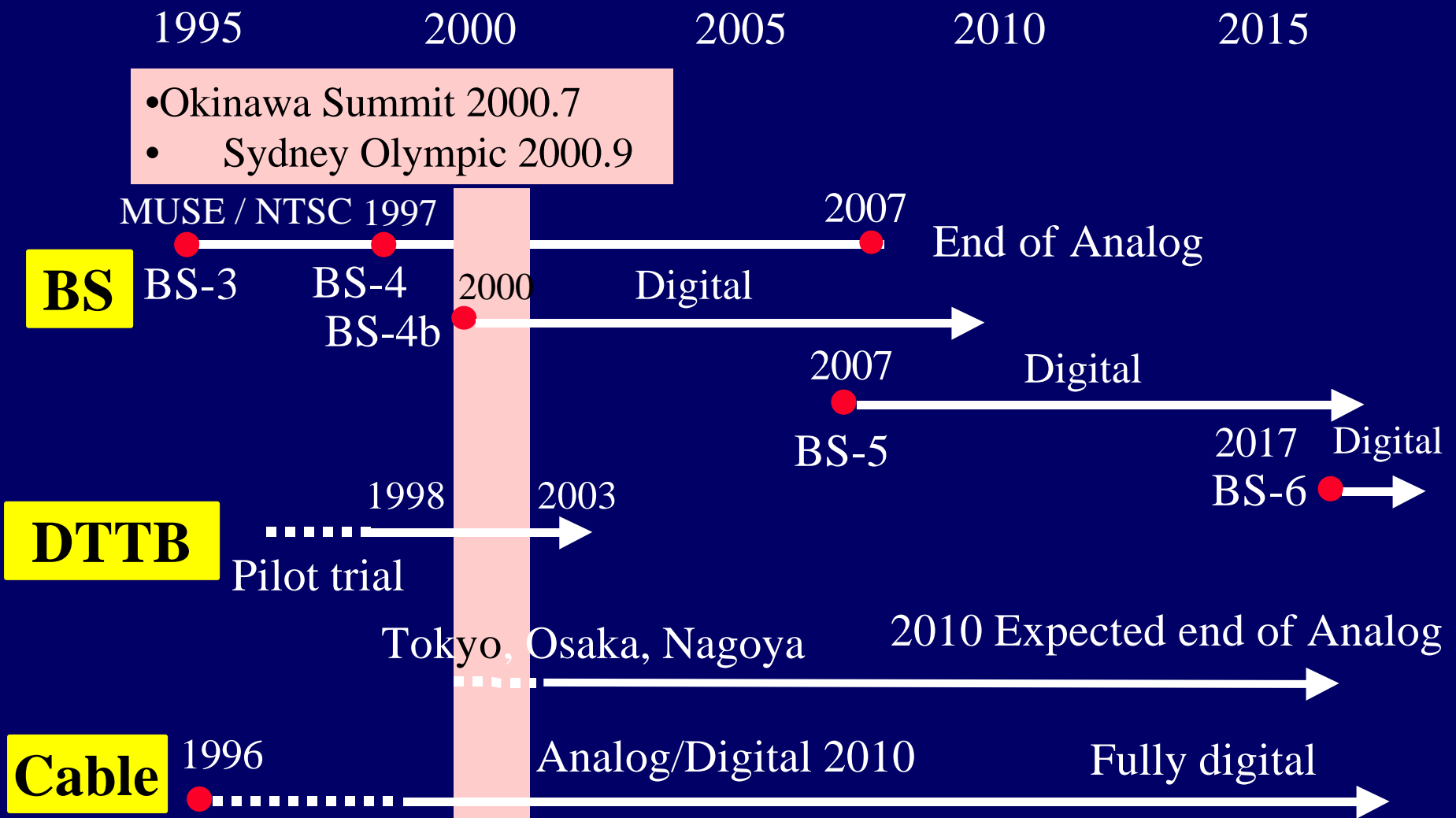
Takao SHIMIZU

TOKYO BROADCASTING SYSTEM INC.

Japan's Profile

- Population *127million (81% of brazil)*
- Number of households *45million*
- Area of Japan *378,000km² (1/23 of brazil)*
- TV receiver *100millions*
 - *Including 841,000 HDTV receivers and 700,000 digital-ready TV receivers*
- TV receiver sales per year *9-10millions*

Schedule of Digital Broadcasting in Japan



Digital Satellite Broadcasting

- BS Digital Broadcasting -

- Launch of BS digital broadcasting services (Dec. 2000)
 - 7 HDTVs, 3 SDTVs, 8 DATAs and 23 Audios
- Sales of STB and TV set were announced by several manufacturers in this summer

Toshiba's Receivers



TOSHIBA

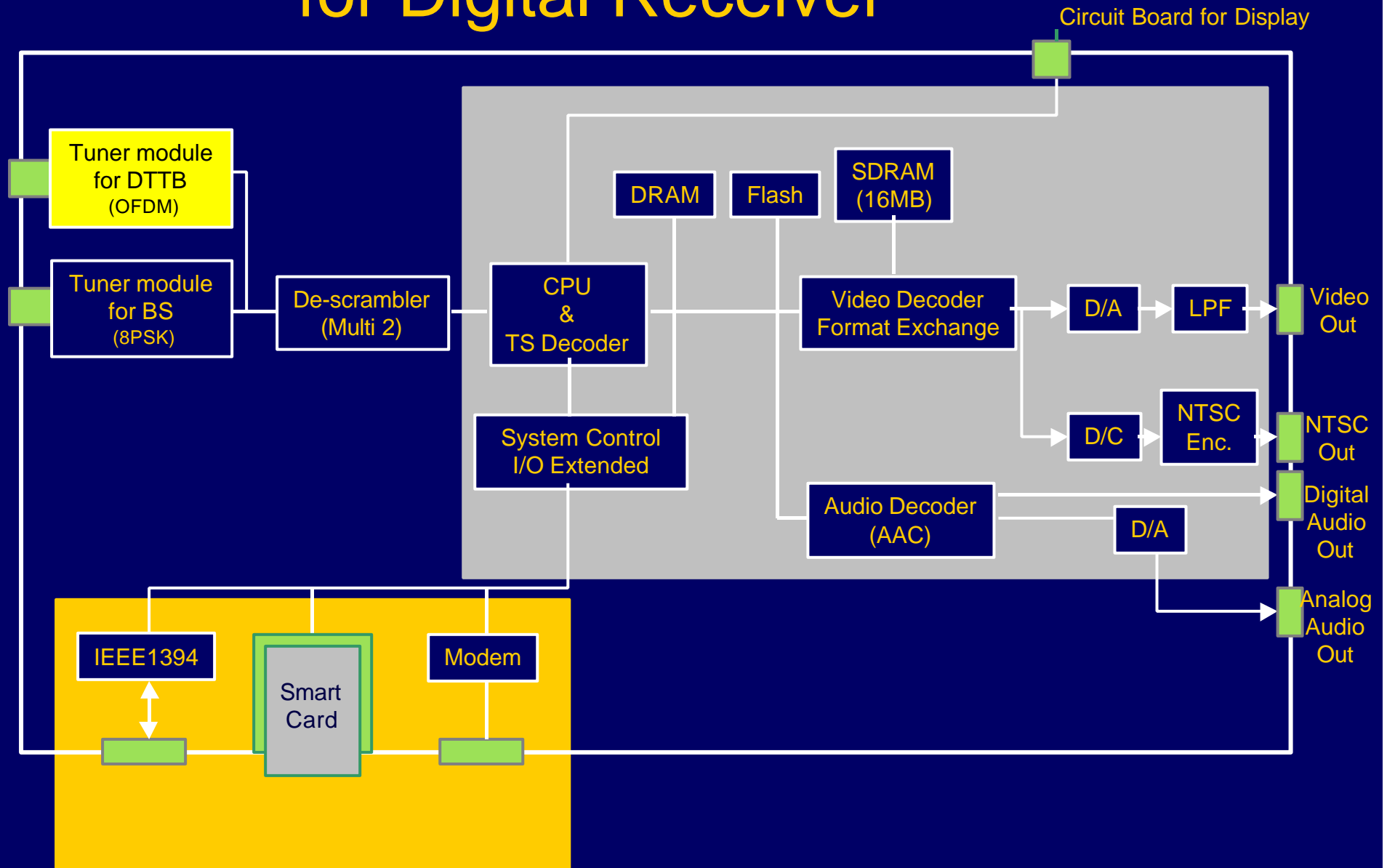
BSデジタルハイビジョンチューナー [TT-D2000] (左)

BSデジタルハイビジョンテレビ デジタルFACE [3202000] (中) [3602000] (右)

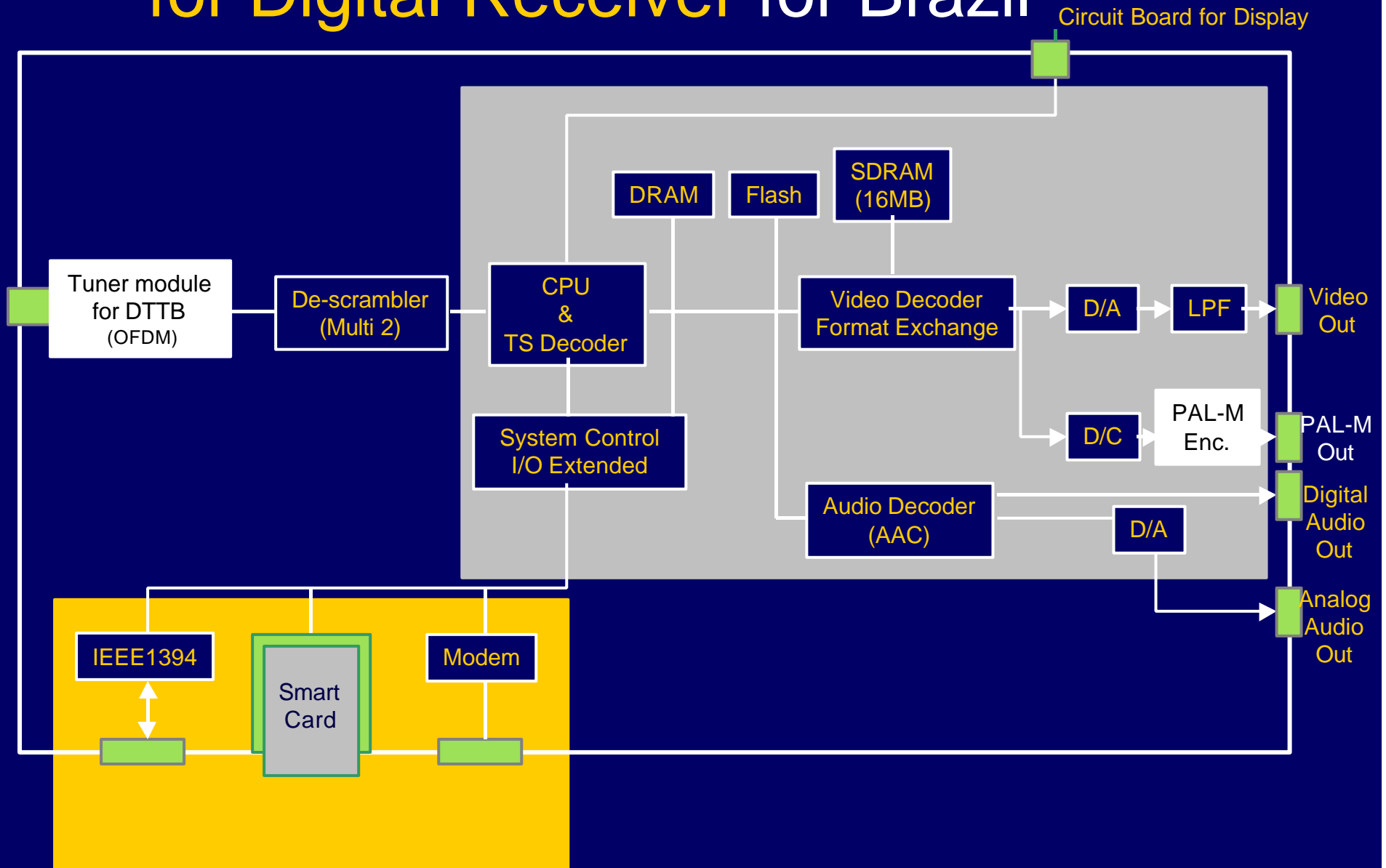
Panasonic's Receiver



Example of Basic System for Digital Receiver

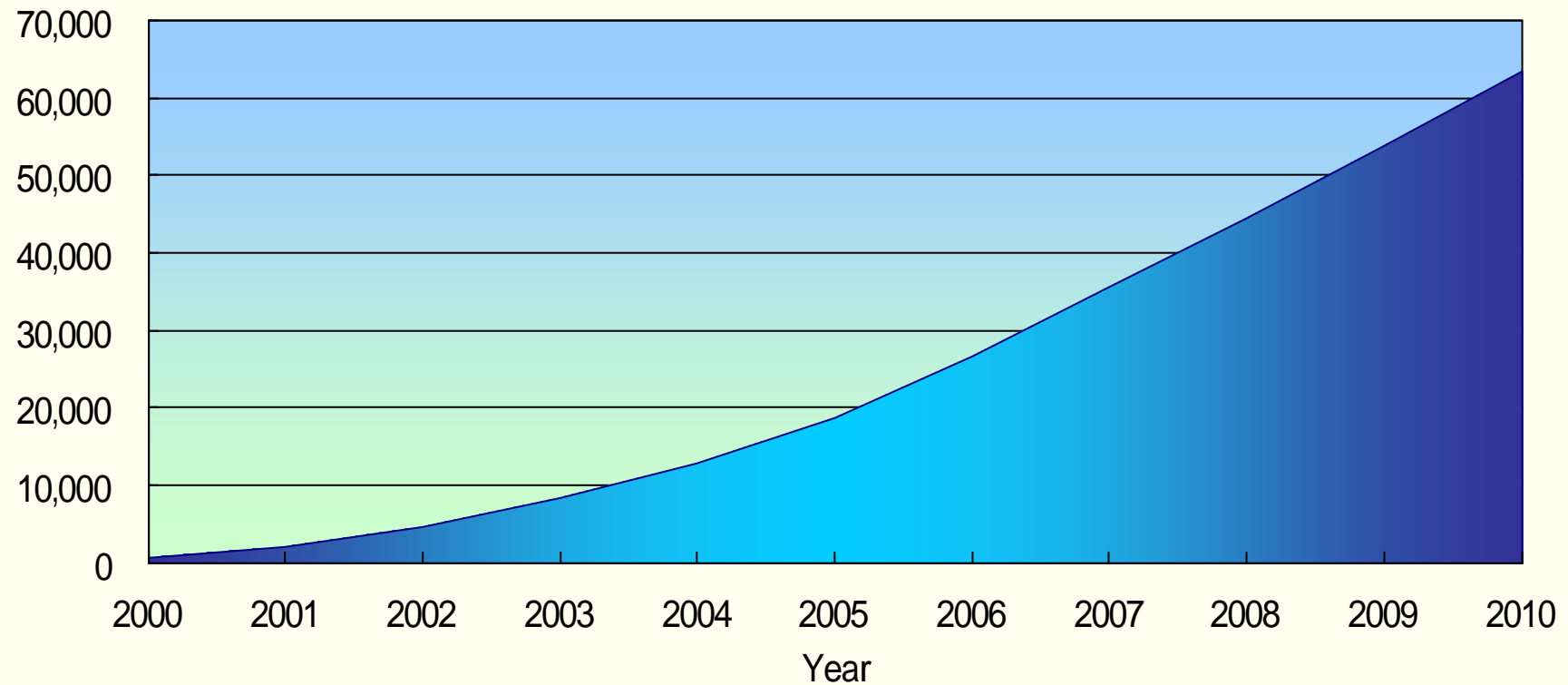


Example of Basic System for Digital Receiver for Brazil



Estimated Diffusion of ISDB-S/T Receivers

(Unit: thousands)



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User Requirements

- **System Requirements**
- **Broadcast Quality**
- **Technical Specifications**
- **Receivers**

System Requirements

- **HDTV/ Multi-SDTV**
- **Data Broadcasting**
- **Sound broadcasting**
- **Mobile Service**
- **Effective Spectrum Utilisation**
- **Commonality with Intl STD.**

System Requirements

- **Flexible**
- **Extensible**
- **Versatile**
- **Mobile**
- **Robust**
- **Cost effective**
- **Scalable**

Technical Specifications

- **TMCC**
Flexible, Versatile
- **Segmented**
Extensible, Partial Reception
- **OFDM**
Robust, SFN
- **T-domain Interleave**
Mobile Reception

Any Combinations

TMCC make change the mode in any time and any combinations

	MODE1	MODE2	MODE3
DQPSK	Mobile SD	Mobile & Stationary HD/SDTV	Stationary HD/SDTV
QPSK			
16QAM			
64QAM			

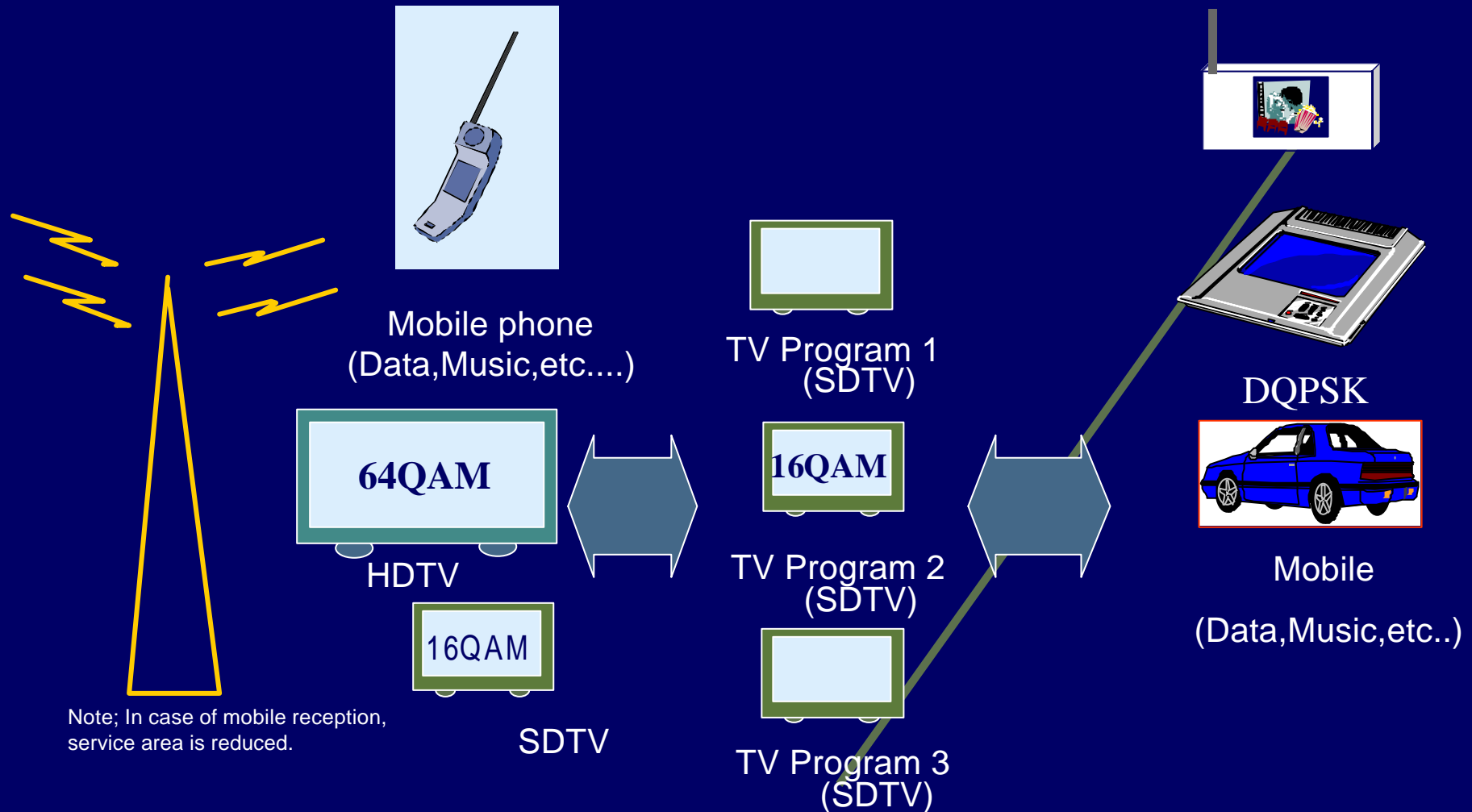
The features of ISDB-T

Mobile Reception and Flexibility of services

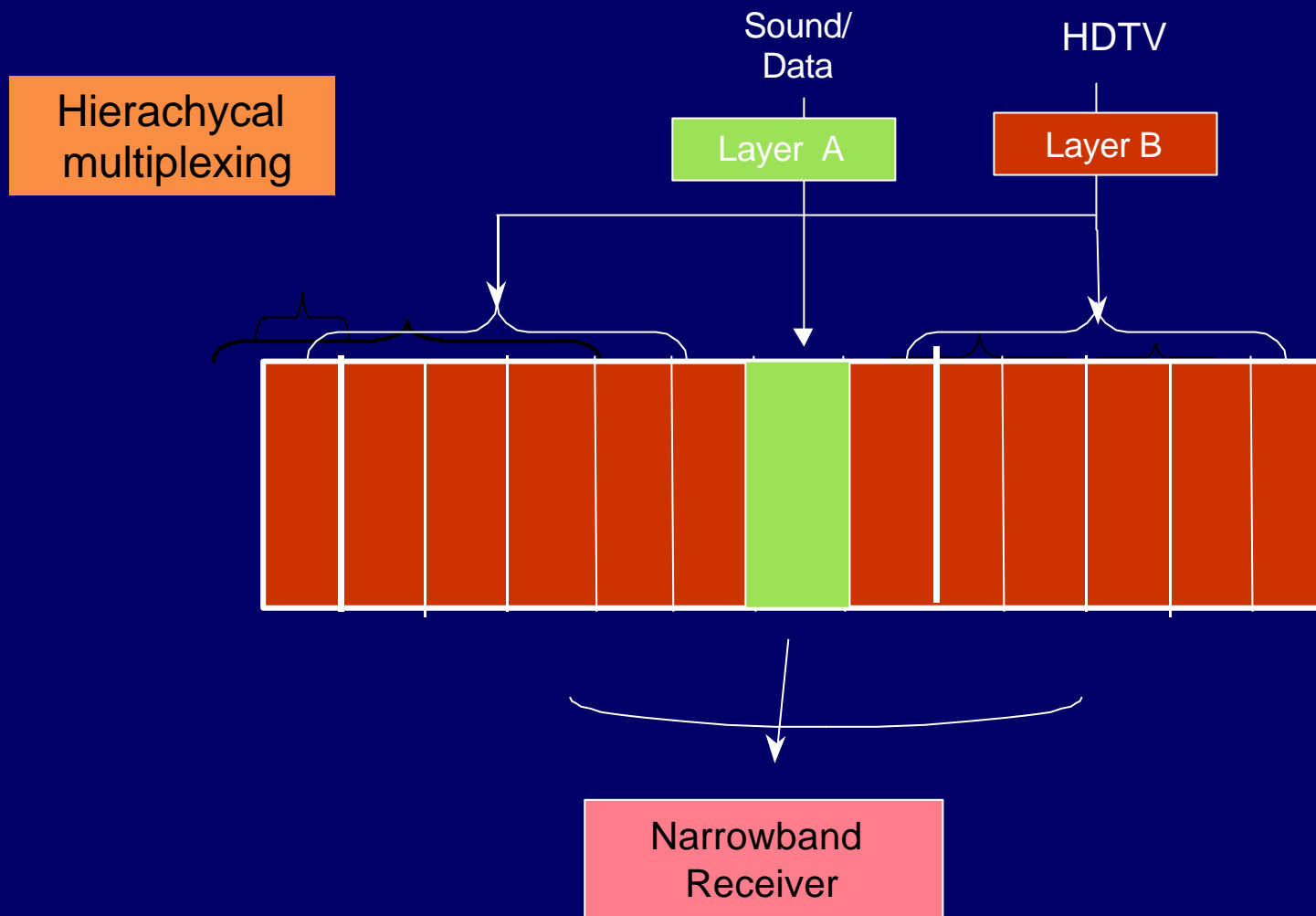
- Transmission mode
 - 8k, 2k and 4k
- ISDB Family ISDB-Tn
 - Sound and data broadcasting for mobile reception

The features of ISDB-T

Mobile Reception and Flexibility of services

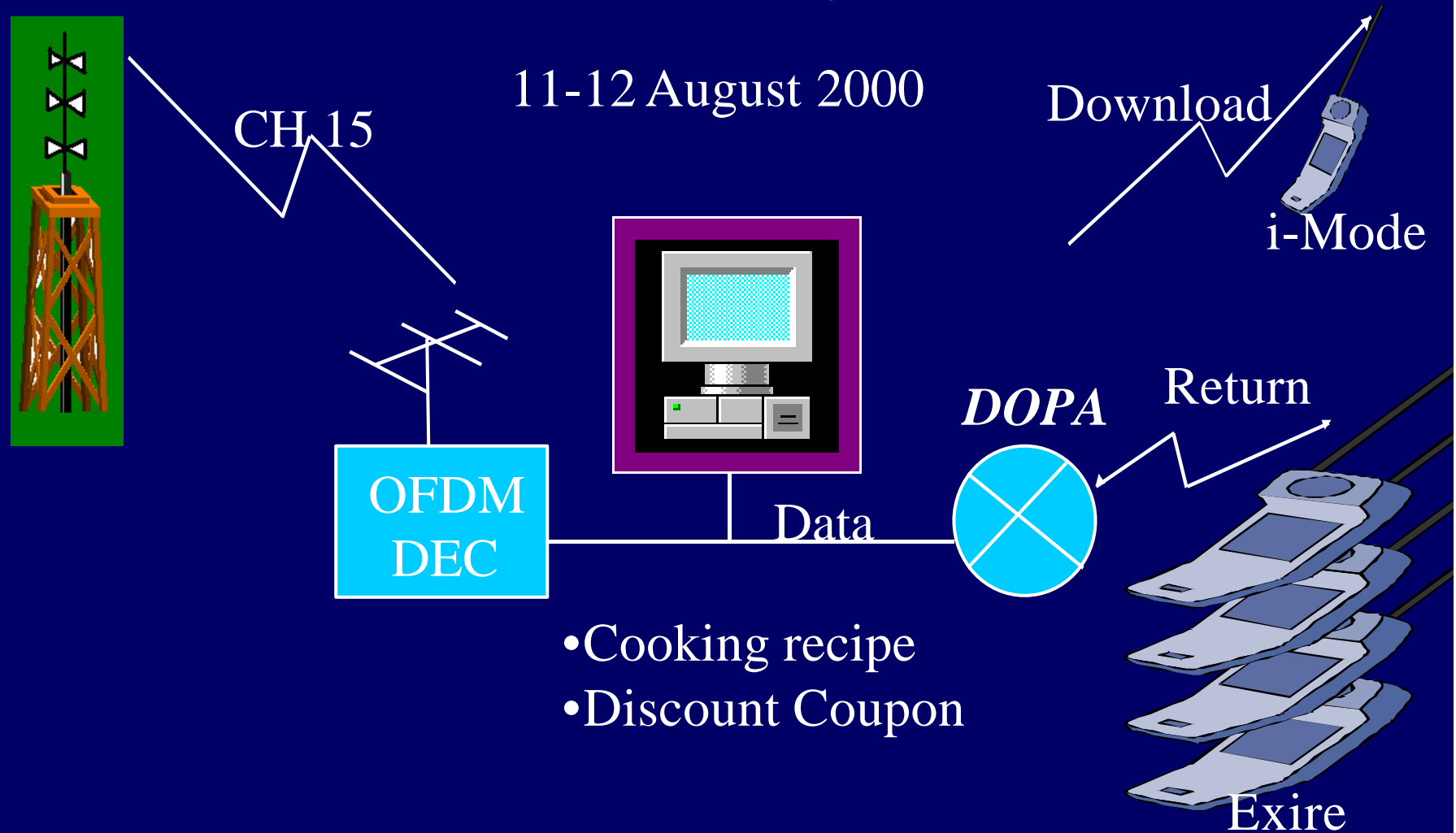


Partial Reception



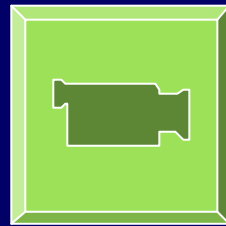
Latest Trial

Wireless Interactive in Tokyo Pilot Project



NTT-DOCOMO/ NTT-DATA/ MATSUSHITA/ TBS

PLAY DEMO VIDEO



Obrigado !

