

Recent Topics on Digital Terrestrial TV Broadcasting in Japan

Sep. 3, 2003

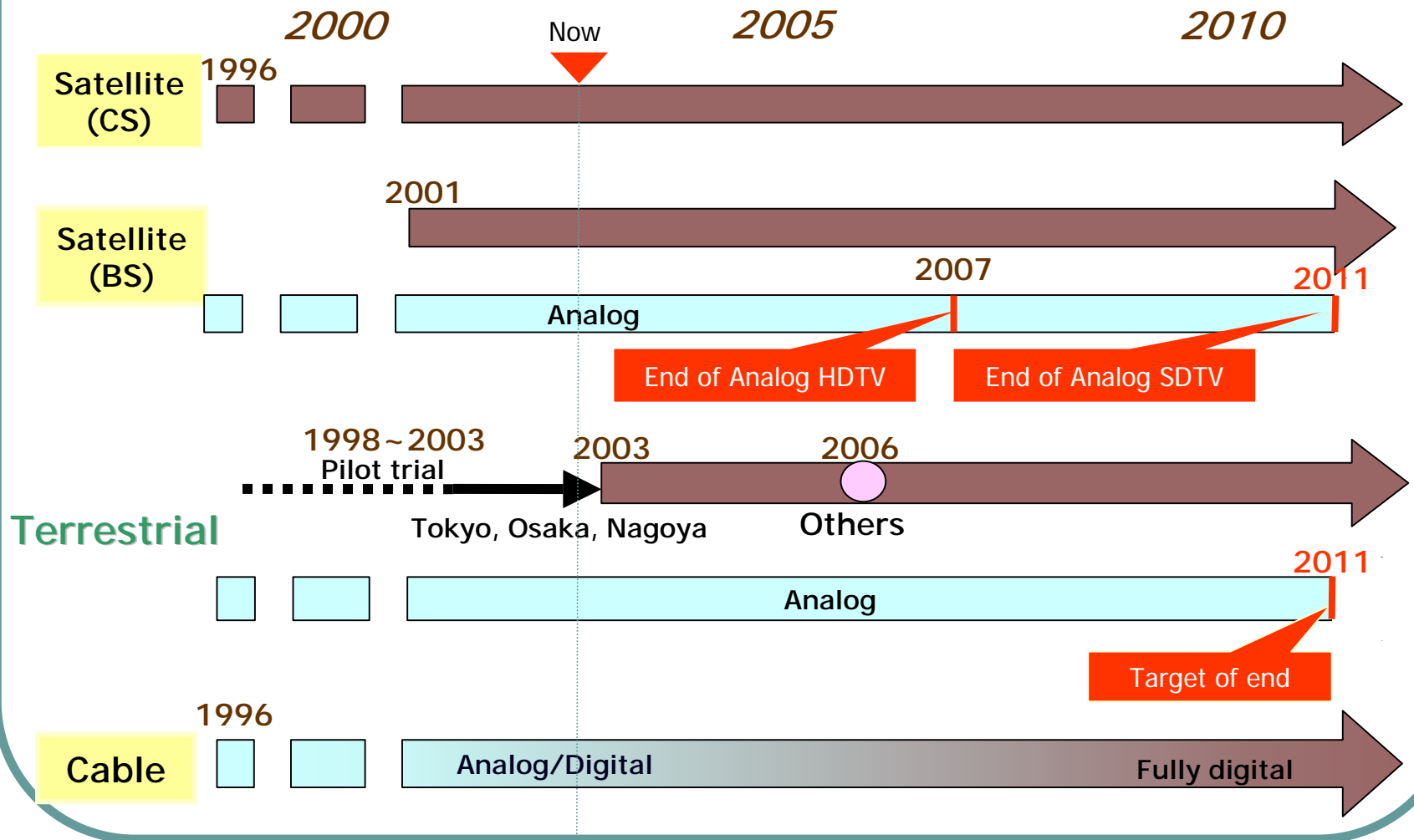
Makoto KAIJIMA

Toshiba Corporation

Chairman of DiBEG

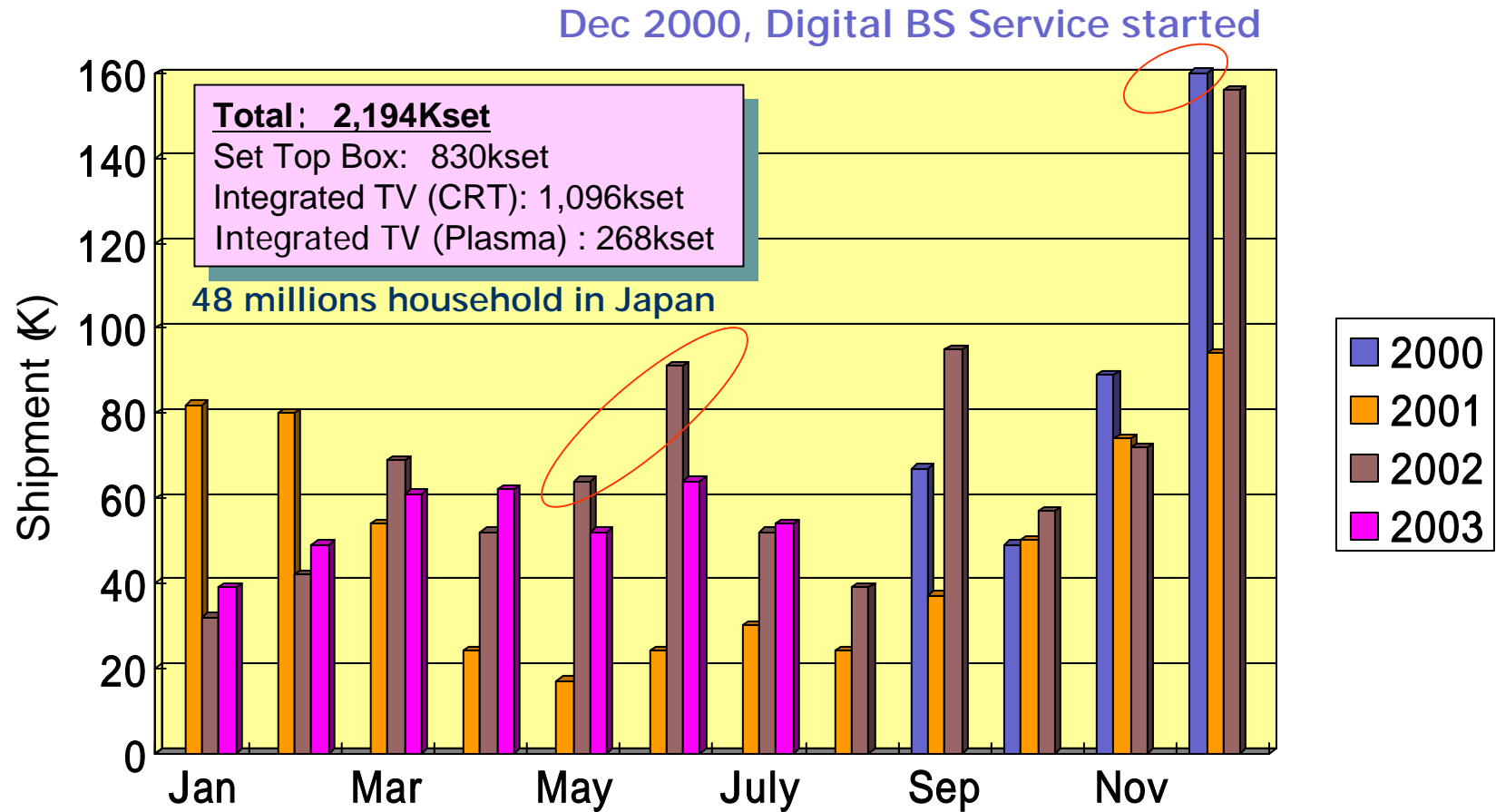
<http://www.dibeg.org/>

Schedule of Digital Broadcasting in Japan



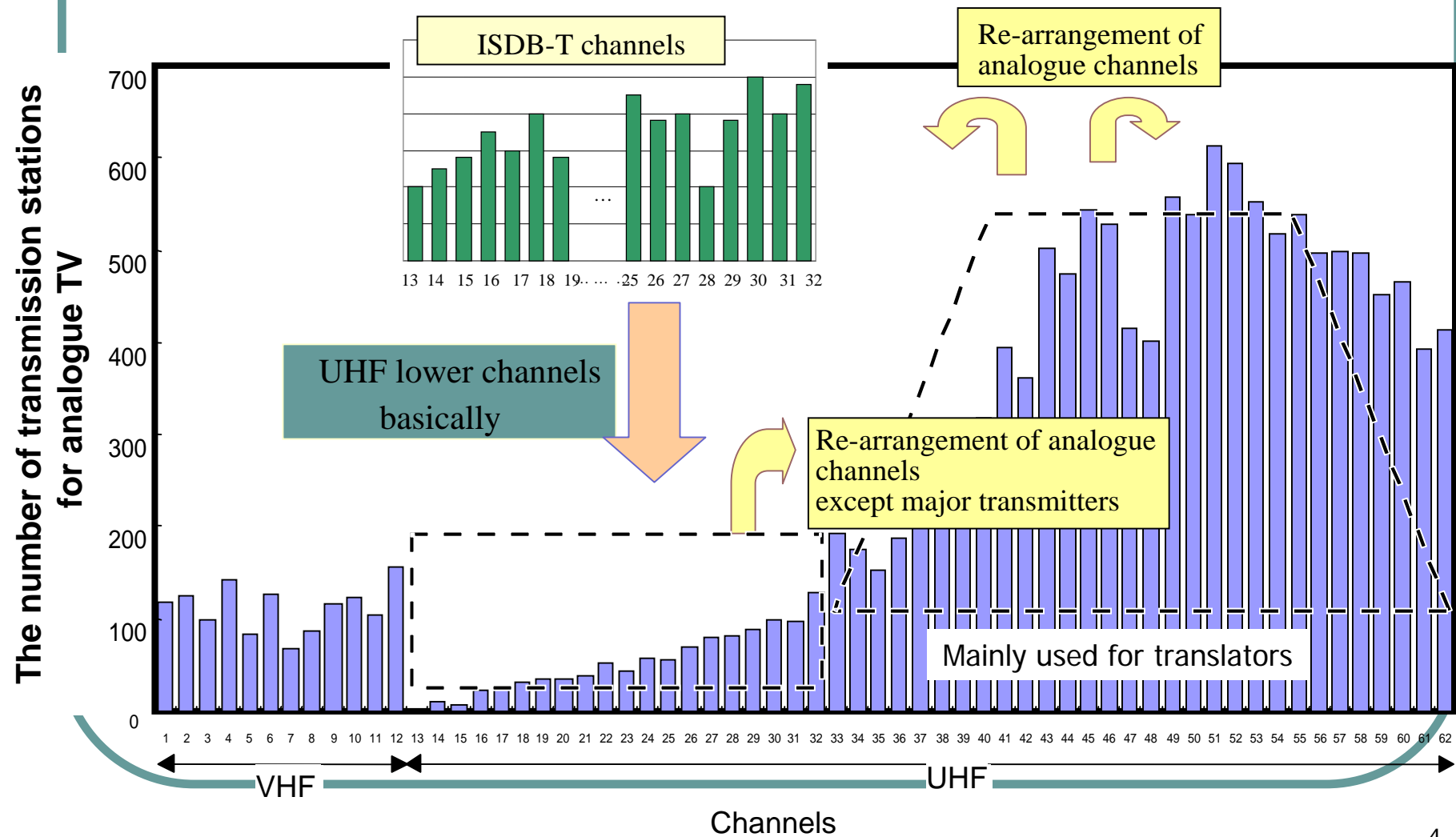
More than 2millions Digital TV receivers

Sales of Digital TV(I SDB-S)



June 2003, FIFA World Cup was held in Korea and Japan

Frequency Circumstance in Japan and Analogue Channel Re-arrangement



Schedule for Roll-Out of Digital Terrestrial Broadcasting



- Digital terrestrial broadcasting will begin in the three major metropolitan areas of Tokyo, Osaka, and Nagoya in **December 2003**.
- The government's plan describes a schedule for broadcasting to have started in all major cities by the **end of 2006**, and for current analog broadcasts to have been completely replaced with digital broadcasting by **July 2011**.
- In view of the launch of digital terrestrial broadcasting, an analog-to-analog shift (Re-arrangement of analogue TV channels) has already started last February. This shift changes the frequencies used by analog terrestrial broadcasting to secure the channels needed for digital broadcasting.

Reference: <http://www.nhk.or.jp/strl/open2003/en/tenji/011.html>



A VOCÊ, QUE RECEBE A TRANSMISSÃO DAS ESTAÇÕES TRANSMISSORAS DA ÁREA DE TYUNO

中国テレビ中継局の放送を視聴されている皆様へ

Os atuais canais de transmissão de televisão vão mudar a partir do final do mês de setembro.

現在のテレビ放送チャンネルは9月末に新しいチャンネルに移行します。

Solicitação お願い

Por favor, efetue a alteração de ajuste dos canais dos aparelhos de televisão e de vídeo que estão sendo utilizados atualmente NA SUA CASA. 今、ご家庭でご利用いただいているテレビ放送機や録画機等のチャンネル設定の変更が必要です。



Como se efetua a alteração dos canais?

Os canais de transmissão da Estação Transmissora de Tyuno mudarão. Conseqüentemente, será necessário efetuar obras para a mudança de ajuste dos canais dos aparelhos receptores de televisão e de vídeo. Nas residências comuns, essas obras serão efetuadas gratuitamente através do subsídio do governo. Por favor, envie-nos de volta, sem falta, o "Requerimento de Obras, etc." e o "Questionário sobre Desejo de Realização das Obras" distribuídos. Contamos com a compreensão e a colaboração de todos. Outrassim, o reajuste dos canais pode ser feito também por conta própria.



チャンネル変更は どうすればいいの？

中国テレビ中継局の放送チャンネルが変更になります。これに伴い、テレビ放送機や録画機等のチャンネル設定変更の工事が必要となります。一般ご家庭の場合、チャンネル変更の改修工事は国が費用を負担し無料で行います。戻すための工事は申請書と工事希望の希望書に基づきお返しく下さい。皆様のご理解とご協力をお願いいたします。なおチャンネル変更はご自分ですることも可能です。



A área de transmissão dos canais de televisão compreenderá as cidades de Gifu, Tajimi, Mino, Minokamo, Kani, Seki, e as vilas de Sakahogi, Tomika, Kawabe, Yaotsu, Mitake, e uma parte da vila de Kaneyama. Esses canais mudarão conforme indicados à direita.



岐阜市、多治見市、美濃市、美濃高良市、可児市、関市、坂田町、宮川町、川辺町、八百津町、御坂町、池田町の一部を放送エリアとしております。これらのチャンネルは右の上々に変わります。

Transmissão 電波	Canal atual 現在のチャンネル	Novo canal 新しいチャンネル
TV Educativa NHK NHK Eテレ	29ch	→ 60ch
CBC CBC	31ch	→ 62ch
THK THK	27ch	→ 65ch
NBN NBN	23ch	→ 60ch

Transmissão prevista para o final do mês de setembro
9月30日頃からの放送予定

Transmissão desde 16 de abril
4月16日より放送開始

Faça os trâmites sem falta até o dia 15 de junho.

6月15日以前に必ずお手続きください。

No período de 16 de abril ao final de mês de setembro, a transmissão será efetuada tanto no canal atual como no novo canal.
O reajuste dos canais de recepção deverá ser feito nesse período.
4月16日～9月30日までの期間、旧チャンネルと新しいチャンネルの両方で放送が行われます。チャンネル変更の手続きは、この期間中に必ず行ってください。

Informações:

○Centro de Serviços de Emergência da Região de Tóquio - Escritório de Atendimento dos Centros de Televisão Satélite
Tóquio de um Centro de Serviço Local de Prefeitura (Subsídio para Instalação das Antenas e Instalação dos Equipamentos) da Região de Tóquio (Subsídio para Instalação das Antenas)
Endereço: 1-44-1 Chiyoda, Tóquio 100-8015 Tel: 03-2222-1000
Tel. para pedidos de televisores portáteis: 03-2222-1000 (horário de atendimento: das 10h00 às 17h00)
e para informações: 03-2222-1000 (horário de atendimento: das 10h00 às 17h00)
○Comunidade dos Instaladores e Engenheiros de Radiodifusão
Associação dos Engenheiros e Instaladores de Rádio - Associação para Instalação de Antenas Satélite, Rádio, Cábel e Televisão por Cabo
1-44 Nishitoshima, Chiyoda-ku, Tóquio 100-8015 Tel: 03-2222-1000
É um órgão que presta serviços, atendendo solicitações do Serviço de Administração Pública, Interior, Comunicação e Radiodifusão. 03-2222-1000

Outras informações:

○Comunidade de Transmissão de Transmissão Multidirecional por Serviço Fixo do Ministério de TIC, DBO, TV Total, TV Premium, TV Digital, TV Area, 3D Home, TV 3D Digital, Atendimento, Divisão de Transmissão Fixa do Total 1-15-1 Shinjuku, Nishi-Shinjuku, Nishi-Shinjuku 163-0298 Tel: 03-321-0292

Endereço:

〒507-8502
岐阜県岐阜市大井町2丁目1番地
〒507-8502 岐阜県岐阜市大井町2丁目1番地
岐阜県庁 1F-1001 TEL: 058-242-2200
〒507-8502 岐阜県岐阜市大井町2丁目1番地
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TEL: 058-242-2200

Nome:

岐阜県庁 1F-1001 TEL: 058-242-2200
TEL: 058-242-2200

Este plano foi produzido em 2007. O conteúdo das imagens deverá ser feito nesse período.
© 2007 岐阜県庁 TEL: 058-242-2200

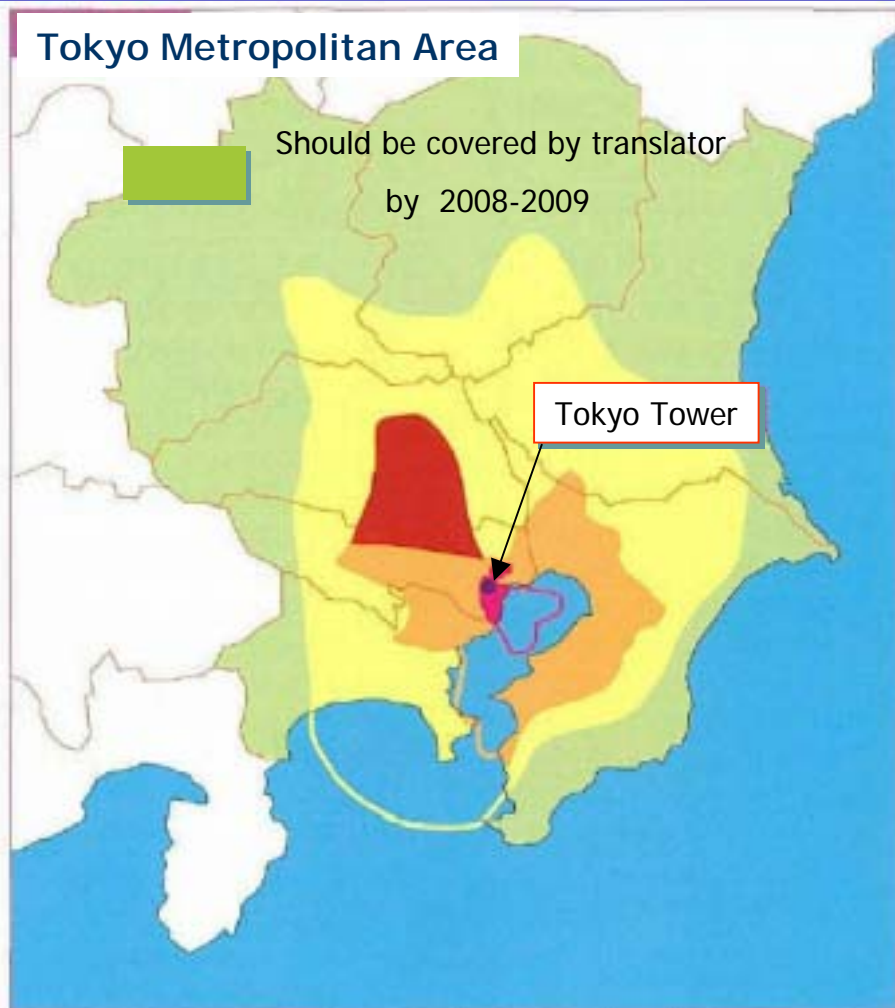
Divisão Administrativa
総務課

Requirements for DTTV license

August, 1, 2002

- Examples of DTTV service
 - HDTV + one-segment
 - Multi-SDTV + one segment
 - one segment is usable as a complement of main program
- **2/3** of DTTV programs are same with programs of analog TV broadcasting a day.
- HDTV programs should be televised at more than **50%** of broadcasting hours a week.
- Broadcasters must televise more than 10% educational programs and more than 20% cultural programs.
- Broadcasters build relay stations without hesitating.
- Broadcasters positively televise programs for sight and hearing handicapped persons.
- Broadcasters are able to make engineering services.

Stage by Stage Enlargement of DTTB Service Area



Dec. 1st, 2003

- NHK General
- NHK Educational Private Network (6)

End of Dec, 2004

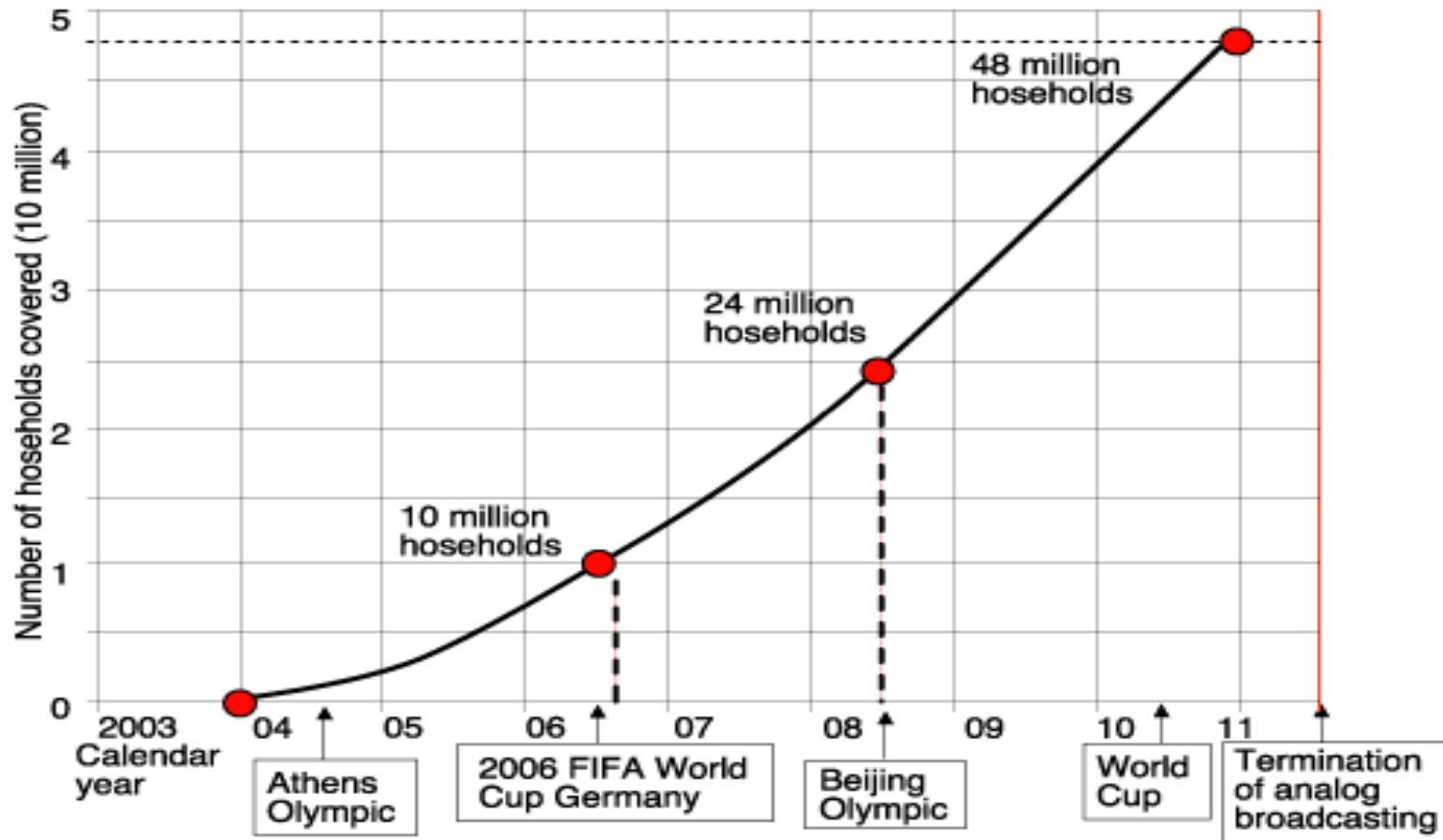
- NHK General
- NHK Educational Private Network (6)

**End of Dec, 2005
(maximum output)**

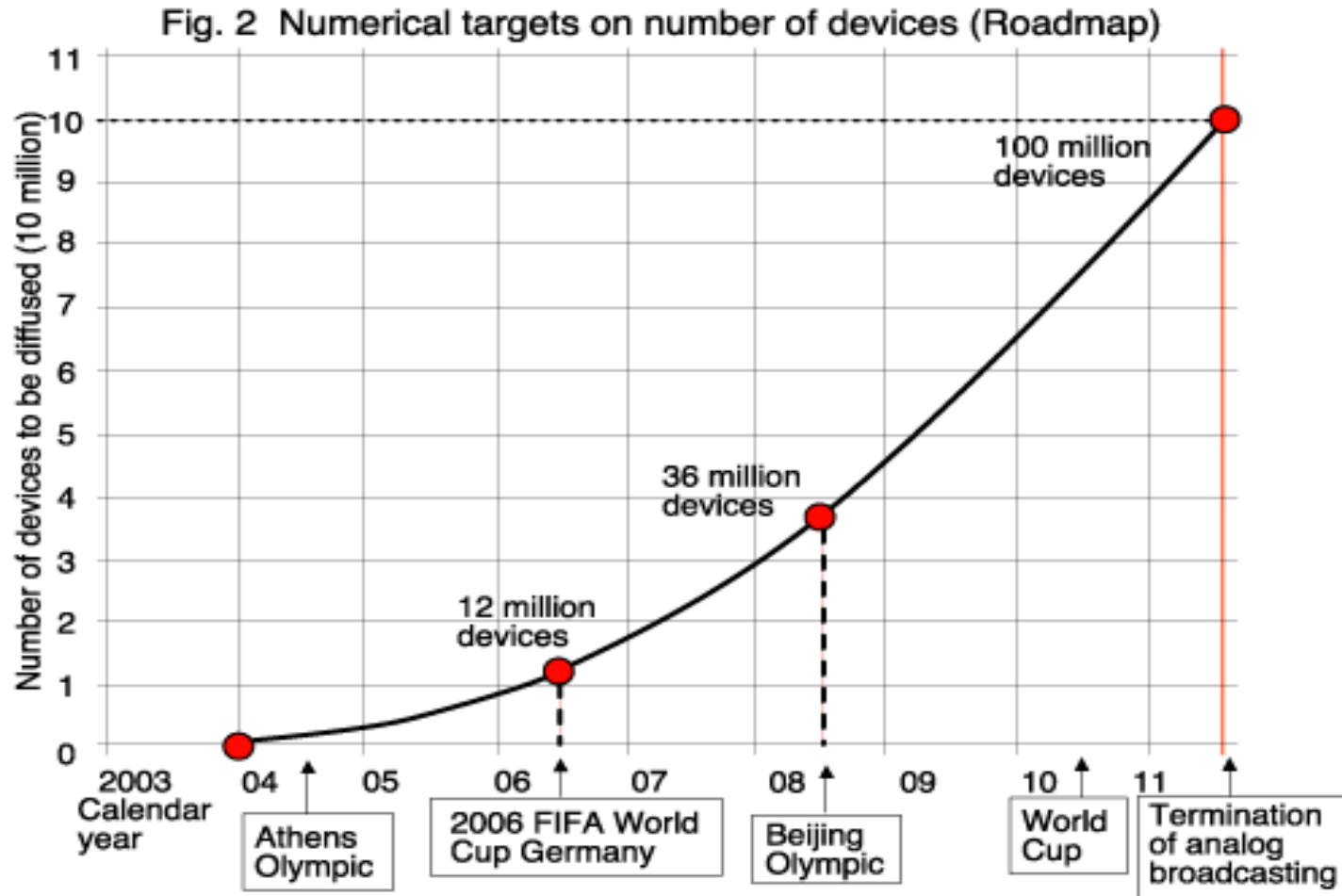
- All Broadcasters

Spread Prediction of DTTB Householders

Fig. 1 Numerical targets on number of households (Roadmap)



Spread Prediction of DTTB Receivers number



11-Mbps HDTV Compression

Nov. 2002

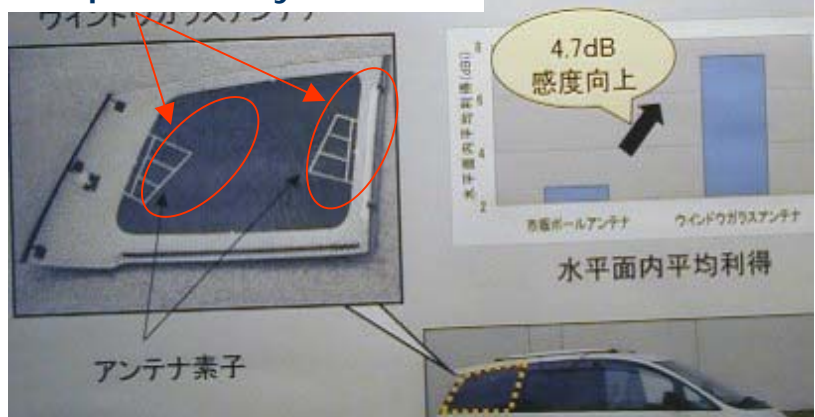
- InterBEE2002 was held on 20-22 November , 2002
- High performance encoders for HDTV using new compression technology has exhibited, that can compress HDTV as far as 11 Mbps without major artifacts.
- Even with the difficult-pictures, the degradation of picture-quality could not be noticeable with these encoders.
- These 11-Mbps encoders are being developed by NEC Corporation and Mitsubishi Electric Corporation.

Toyota Central Lab demonstrated HDTV Mobile Reception using Adaptive Array Antenna

Jan, 29, 2003



Adaptive Array Antenna



Pole type antenna (conventional)

Adaptive Array Antenna attached on wind shield

UHF 15ch (whole segment reception)
 Mode 3, 64QAM, 3/4
 Guard interval: 1/8(128 μs)

Threshold C/N=20.1dB

家庭向けハイビジョン放送の自動車での受信率



Pole type antenna

Adaptive Array Antenna

Toshiba Announced Sales about New TV Sets

April, 21, 2003

- ISDB-T and ISDB-S tuners are installed.
 - Upgrade software can be installed by a customer.
- Equips LAN terminal for interactive TV
- Sales has commenced on June 5 and got off to a good start(open price).



36D4000

32D4000

28D4000



Smart-media™

Reference: http://www.toshiba.co.jp/about/press/2003_04/pr_j2101.htm

Panasonic started selling I SDB-T STB by subscription

June 4, 2003

- Customers who have or will buy Panasonic TV set can buy it.
- This STB can be connected to only Panasonic TV set.
- For I SDB-T and I SDB-S
- The price is 380\$.
- Delivery starts from December 2003.



SONY announced DST-TX1

Aug. 7, 2003



- This Tuner is able to be connected to D4 connector (HDTV) TV set and recordable via i-LINK i/F.
- For ISDB-T and ISDB-S (BS +CS110)
- The price is open (~660\$).
- **Delivery start 21 October.**

Prototype of Cellular Phone with a ISDB-T one-segment receiver

Aug, 8, 2003

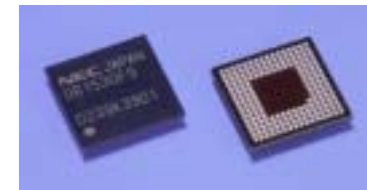
- Sanyo announced one-segment receiver installed on the 3G cellular phone.
- Specifications;
 - Diversity reception
 - UHF13 ~ 53ch
 - Multiplexing; MPEG-2 TS
 - Video Coding ; MPEG-4 Simple Profile * QVGA 15f/s
 - Audio Coding; MPEG-2 AAC LC Profile
 - Recordable on Flash memory.
128MB=30min
- Sanyo has a plan to demonstrate at CEATEC JAPN2003 next Oct.



* Video coding system for ISDB-T one-segment broadcasting has not been decided yet. Sanyo temporarily used MPEG-4 SP for this demonstration.

Prototype of Cellular Phone with a ISDB-T one-segment receiver

- NEC announced and demonstrated on June 10.
- One-segment demodulator LSI announced last Oct. is installed on the 3G cellular phone.
- Specifications;
 - UHF13 ~ 62ch
 - Multiplexing; MPEG-2 TS
 - Video Coding ; MPEG-4 Simple Profile *
SQVGA(160x120pix), 15f/s
 - Audio Coding; MPEG-2 AAC LC Profile
 - Software for EPG and Data broadcasting is not installed yet.
- **NEC has a plan to demonstrate at Telecom2003 next Oct.**



* Video coding system for ISDB-T one-segment broadcasting has not been decided yet. NEC temporarily used MPEG-4 SP for this demonstration.

Promoting National Organizations

Organization	Setup	Representative	Members	Functions
Terrestrial Digital Broadcasting Promotion Headquarters, MPHPT	Aug 2003	Mr. Katayama Minister, MPHPT (Head)	Minister, MPHPT Vice-Minister, MPHPT Secretary General, MPHPT Executives, MPHPT	the smooth implementation of DTTB
The association for promotion of digital broadcasting (D-PA)	Aug 2003	Mr. Kitagawa (Chairman)	NHK 127 Commercial TV B/C 153 Receiver - Manufacturers etc.	Enforcement of RX/TX std. Operation of ES RMP
National Conference for promotion of terrestrial digital broadcasting	May 2003	Mr. Yamaguchi (Chairman)	NHK 127 Commercial TV B/C Government (MPHPT) Manufacturers, Retailers Consumers society	Follow-up of Action plan for digital migration
National Council for Promotion of digital terrestrial broadcasting	July 2001	Mr. Kitagawa (President)	NHK 127 Commercial TV B/C Government (MPHPT)	Analogue ch. Shifts & Publicity

Latest News

- In order to verify the function of the transmitter/Ant., Measurement of field strength with in Service area and the interference by digital to existing analogue channel, digital full power has transmitted at Tokyo and Osaka on 6-8 August in midnight.
- In Tokyo, Max 10kW: In Osaka, Max 3kW
- Almost all results are good. No severe problem found out.

Near Future

- National wide frequency assignment for digital broadcasting except Tokyo, Osaka and Nagoya will be done in September 2003 for 2006 launching of DTTB.
- In some area (2Areas=7Prefectures) , it may be done in December 2003.

Welcome to DiBEG
Digital Broadcasting Experts Group

<http://www.dibeg.org/>

A world map with a light blue background. The map shows the continents in a light beige color. Overlaid on the map are several concentric, semi-transparent circles in a light blue color, centered on Japan. These circles represent the coverage area of ISDB-T. The text 'ISDB-T' is written in a bold, black, serif font across the center of the map, overlapping the circles.

ISDB-T

Thank you!

Japan DTB is about to take off and
will be a first country in success.