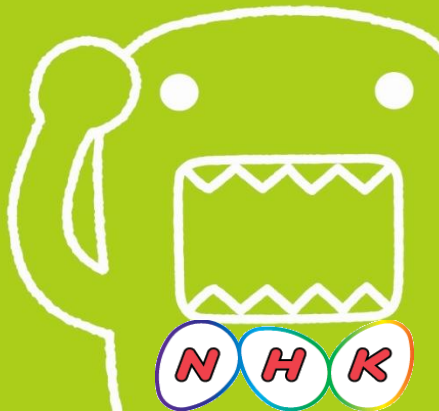
Efforts toward Fully Digital TV Broadcasting in Japan

Oct. 27 2011

NHK
Kenji NAGAI



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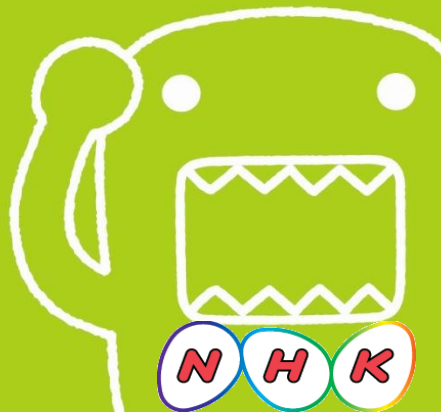
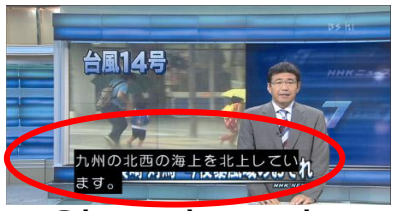


Objectives of Full Digital TV Broadcasting in Japan

High quality broadcasting services

- HDTV
- Mobile TV service (One-Seg)
- Data broadcasts
- 5.1-channel surround audio
- Closed-captions



Closed-captions

Effective frequency use

Analog TV bandwidth 370 MHz
↓
Digital TV bandwidth 240 MHz

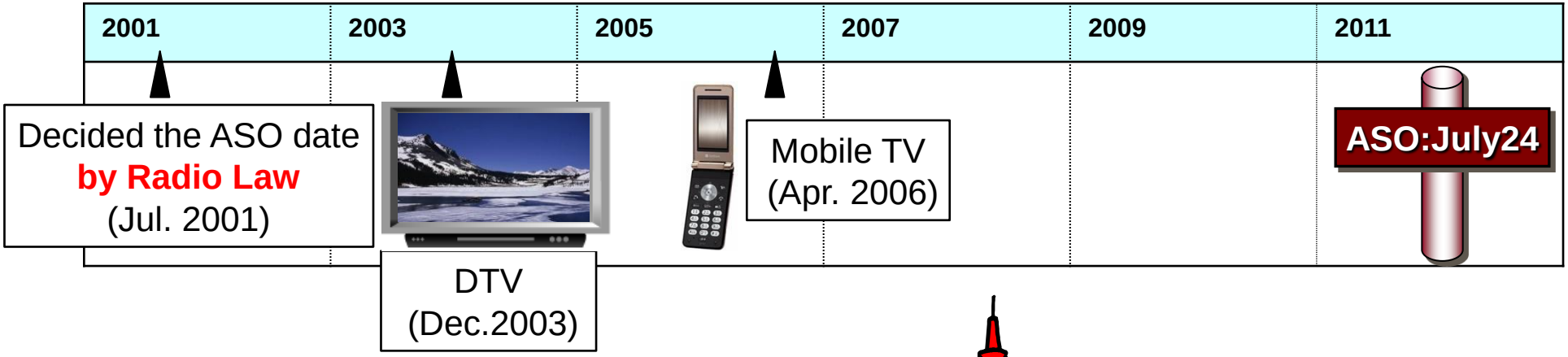
130 MHz Released to be used for new services

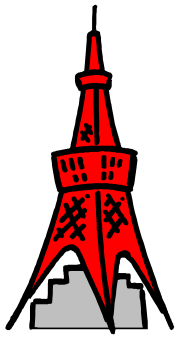
- Multimedia Broadcasting
- Applications for disaster control
- Mobile phones
- Intelligent Transport (ITS)

Positive impact on other industries

- TV manufactures
- Retailer
  Electronic commerce
- Content
  (Digital content commerce)
  (archives)
- Internet and mobile
  (Connection with TV)
- Local government
  (Broadband infrastructure)

Efforts for Fully Digital TV Broadcasting





1. Transmission

- **Responsibility: Broadcasters**

2. Reception Infrastructures

- **Responsibility: Viewers (NHK and MIC supported)**

3. Notification to viewers

- **Through broadcast programs**

ASO notificate open-captions on the analog TV

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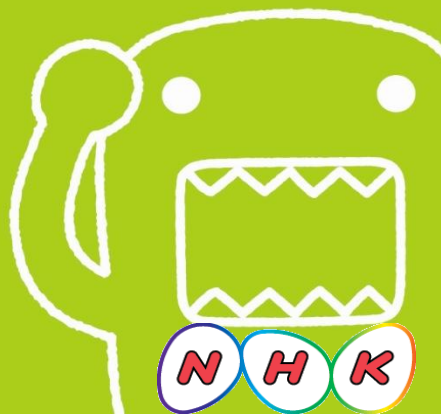


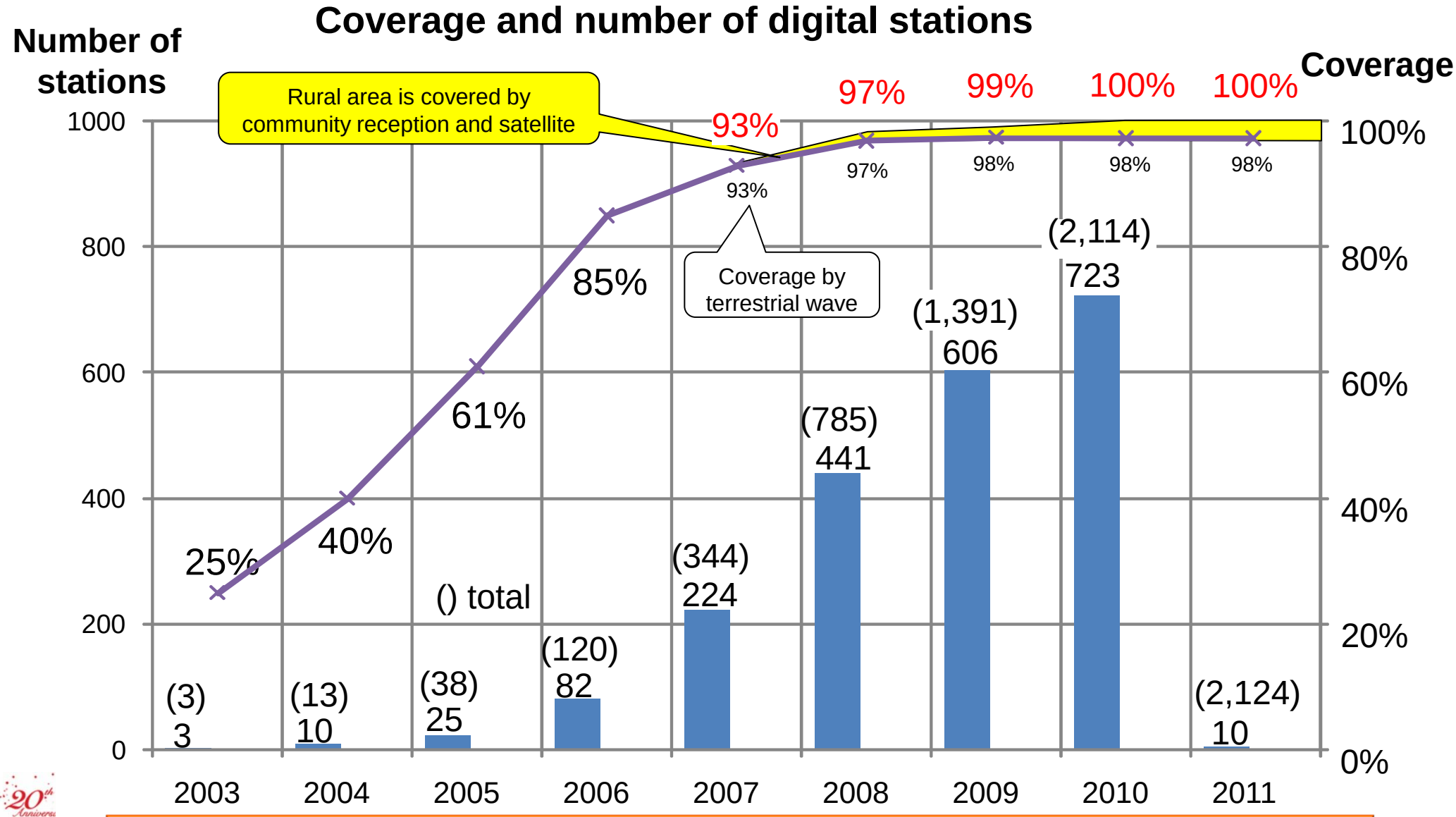
Frequency Density in Japan

	Digital Transmitters	Relative Geographical Area	Relative Frequency Density, Accounting for Relative Geographical Area
Japan	**11,749**	**1**	**80**
USA	**4,296**	**24.8**	**1**

Frequency density in Japan is very high.

Channel planning in Japan is very difficult.

Plan for building digital stations (NHK)



Digital TV coverage ratio has been reached 100% by 2010.

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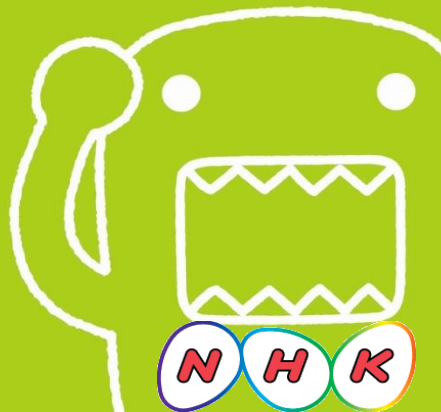


Effectively Preparing Receiving Parties

MIC DTV Support Center

Overview: MIC established the DTV Support Center nationwide to help viewers with any problems due to the ASO

How: Publicity activities and notification from the DTV Center

Main participating organizations:
Local governments, Retailers, and Broadcasters

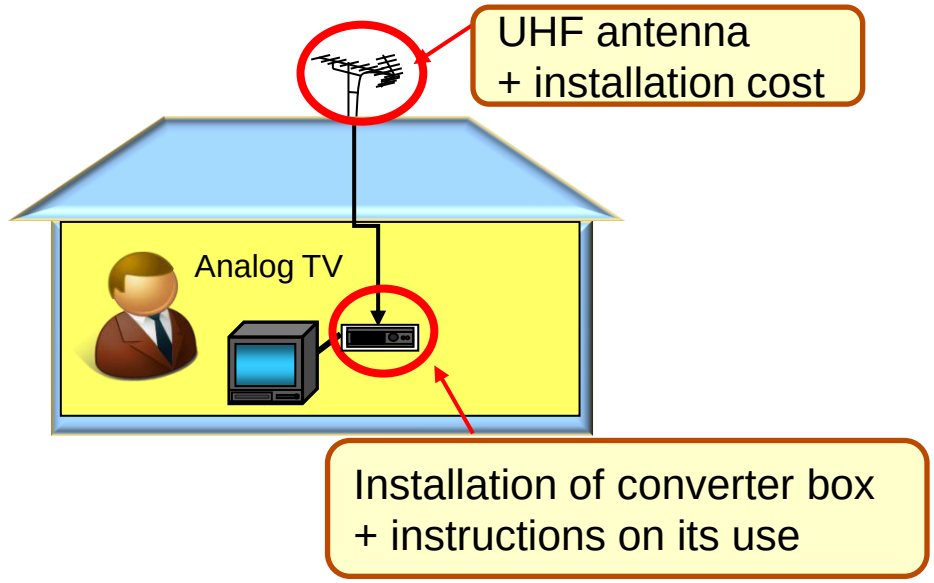
NHK supplied more than 100 engineers who took team-leader roles for the “MIC DTV Support Center”

Government Assistance for Purchase of Receivers

Free Converter Boxes

Support for the economically disadvantaged

2.6 million households



"Eco-Point" Program

- Anti-global warming (CO_2 reduction)
- Economic stimulus
- Widespread ownership of digital TV

Air conditioner

Refrigerator

Digital TV set

From May 2009 to March 2011.

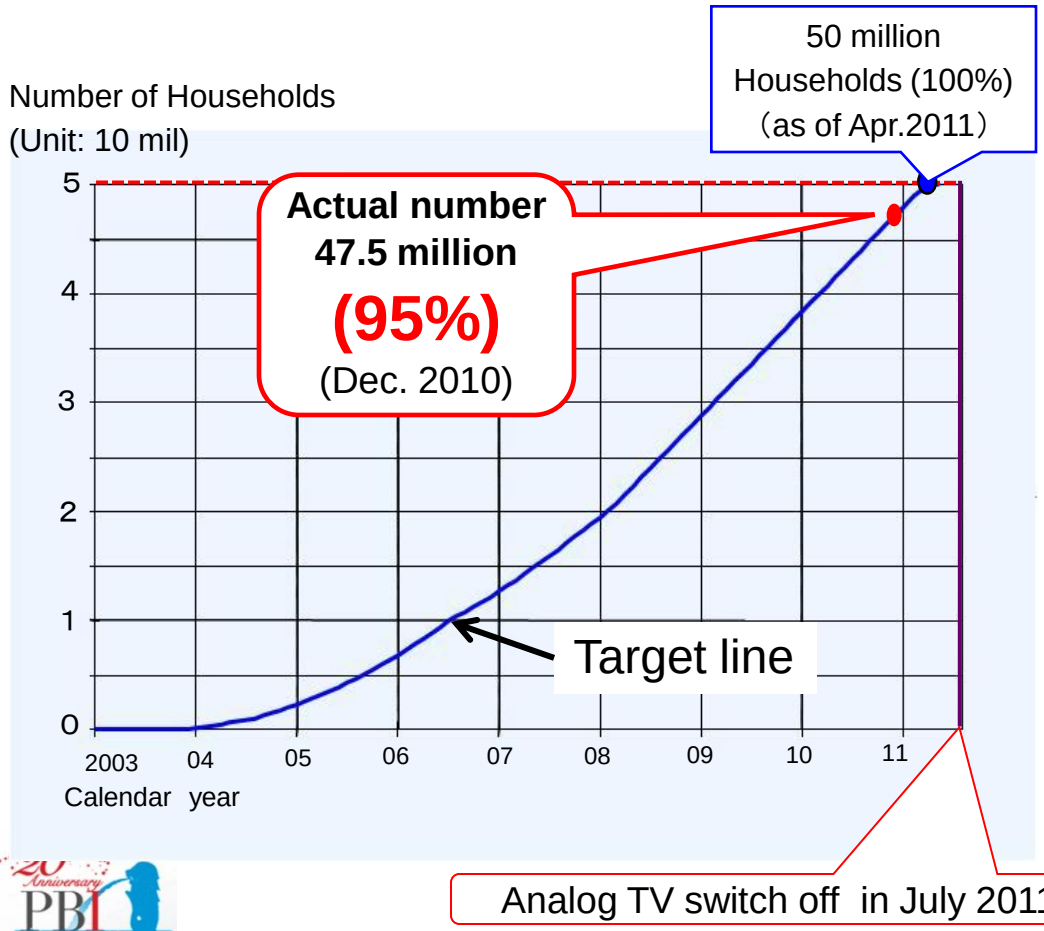
Receive "eco-points" (cash back) on purchase of energy-efficiency products

<Example of cash-back for Digital TV>

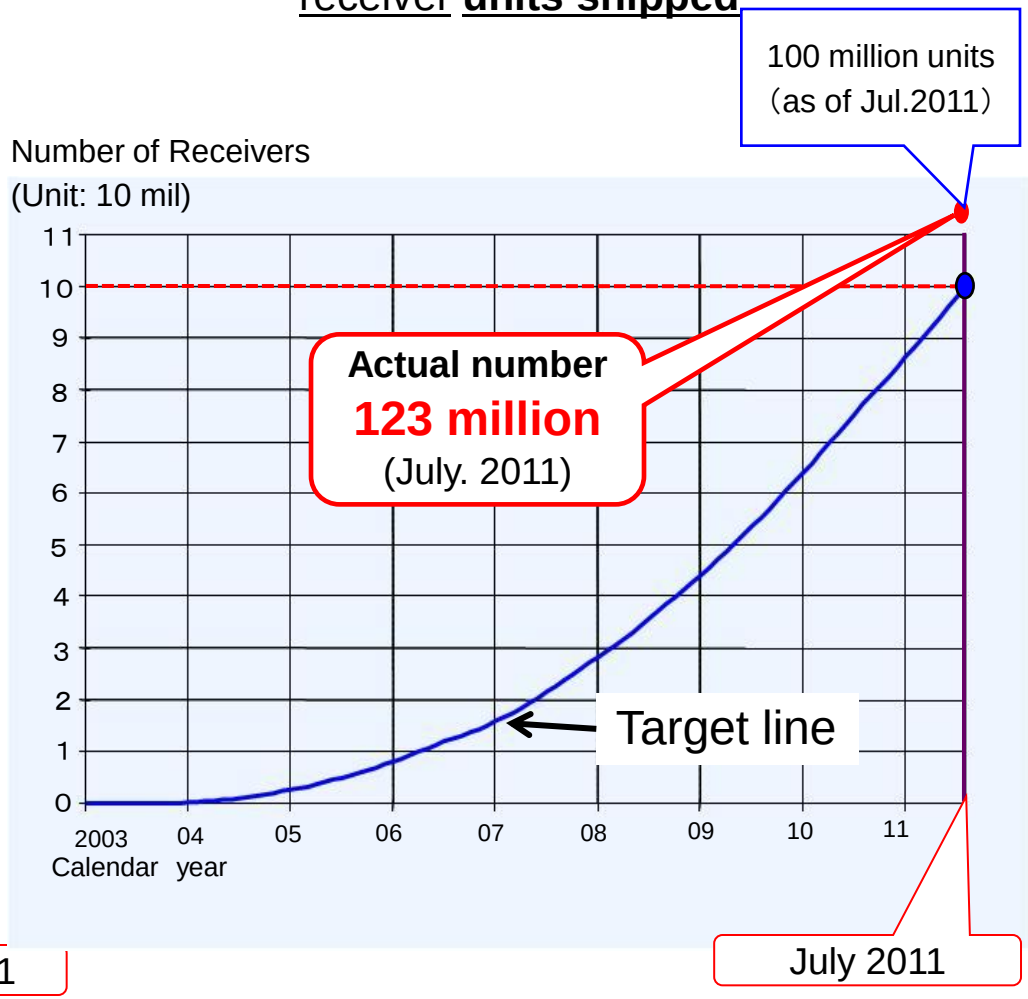
TV size	Eco-point (US $)
46V and above	450$
42V, 40V	287$
37V	212$
32V, 26V	150$
Under 26V	88$

Dissemination of Digital TV in Japan

Target and Achievement in terms of **number of households equipped with receivers**



Targets and Achievement in terms of receiver **units shipped**



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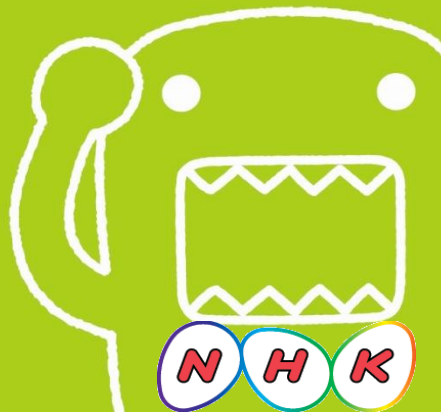
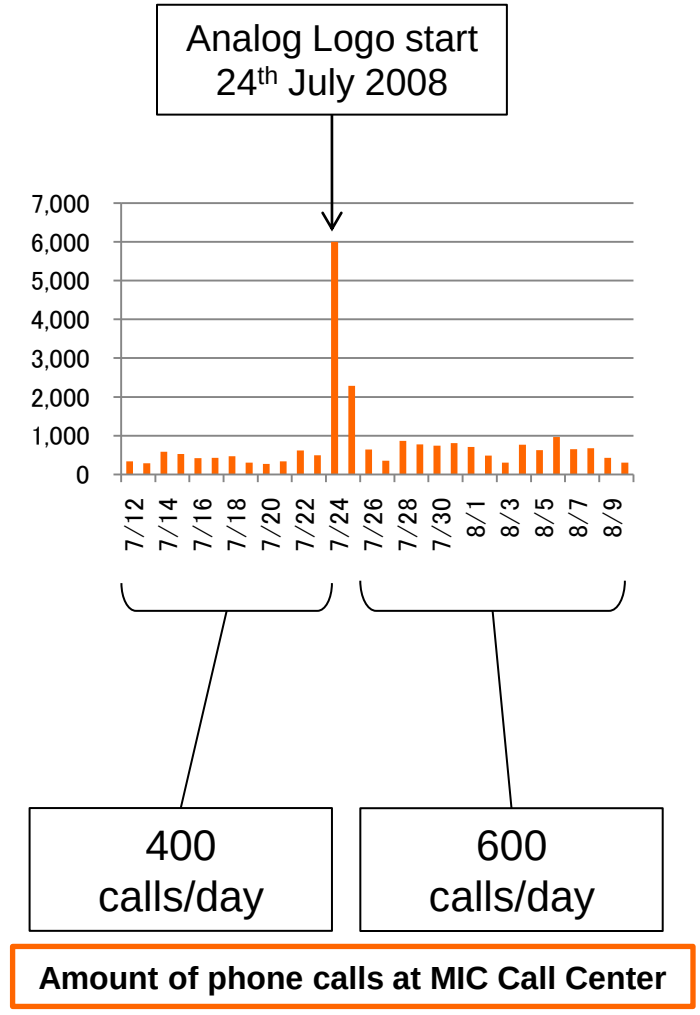


Termination of Analog TV, Step-by-Step

Termination of Analog TV, Step-by-Step 1st Stage

- 3 years before, an analog logo was placed on the screen

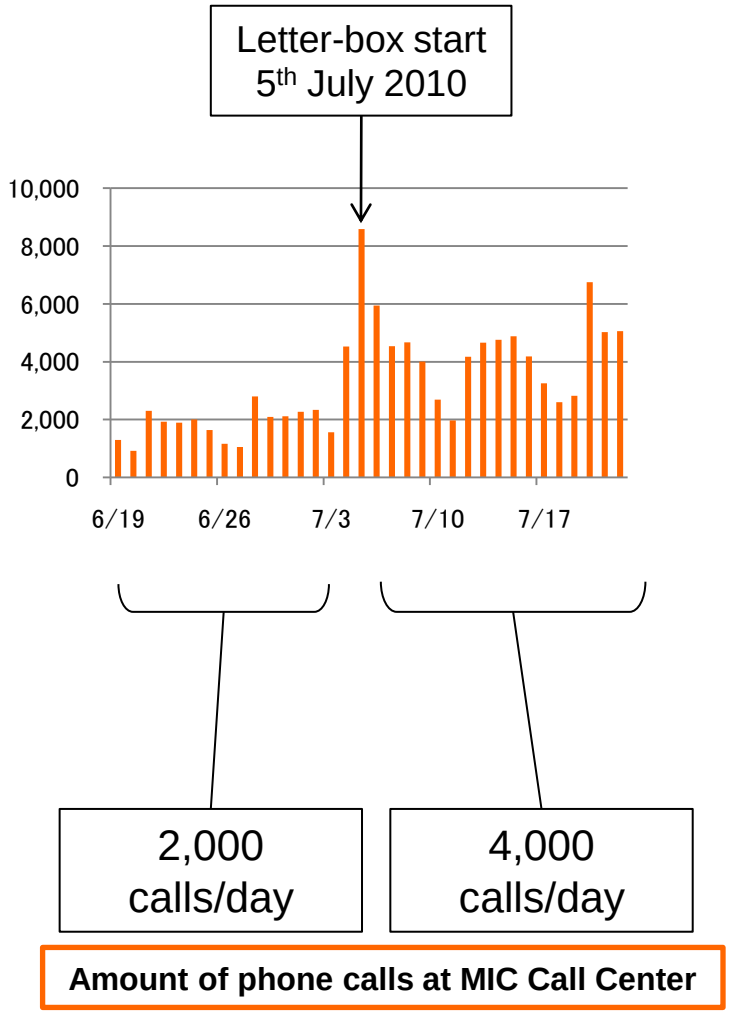
24th July 2008



Termination of Analog TV, Step-by-Step 2nd Stage

- 1 year before, Conversion to a letter-boxed shape

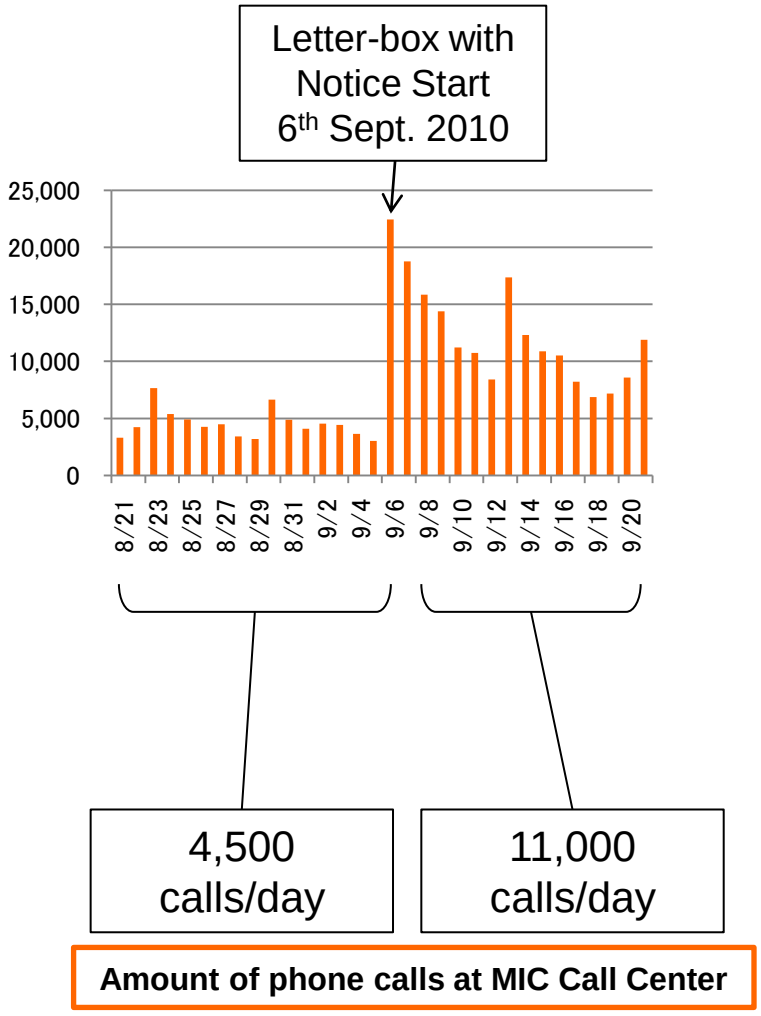
5th July 2010



Termination of Analog TV, Step-by-Step 3rd Stage

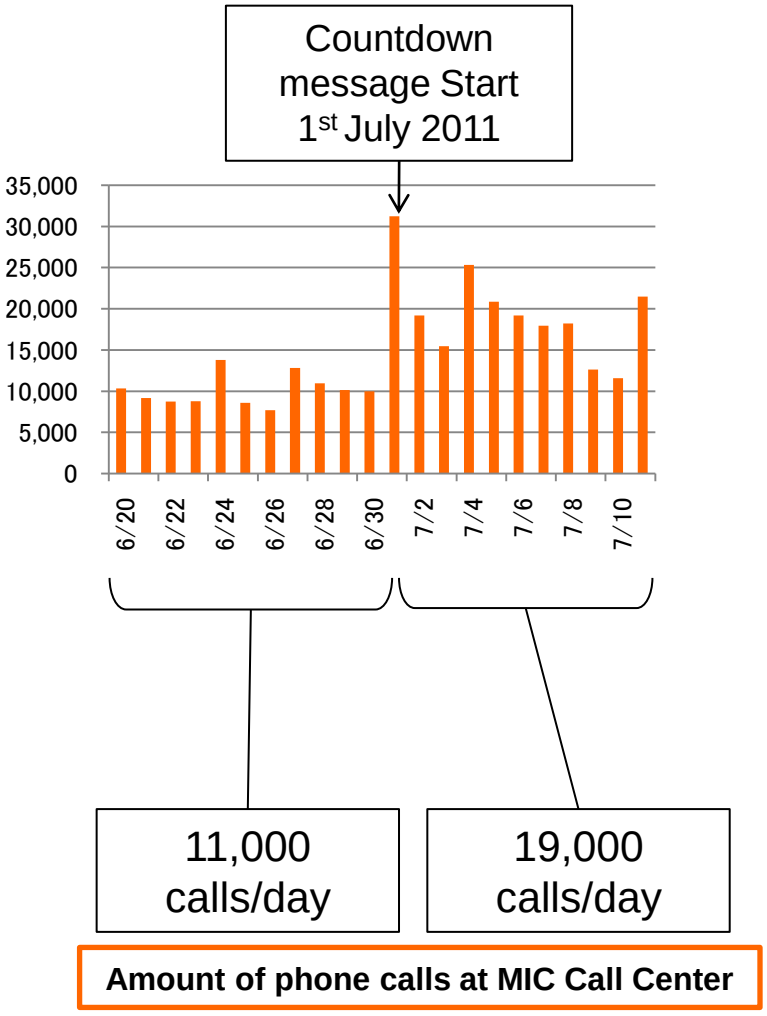
- 10 months before, Notice added to the letter-box image

6th Sept. 2010



Termination of Analog TV, Step-by-Step 4th Stage

- 4 weeks before, A countdown message on the program



1st July 2011

Termination of Analog TV, Step-by-Step 5th Stage

- At noon on the last day

This analog broadcast will terminate on
July 24, 2011.
Please make arrangements for
digital TV reception.

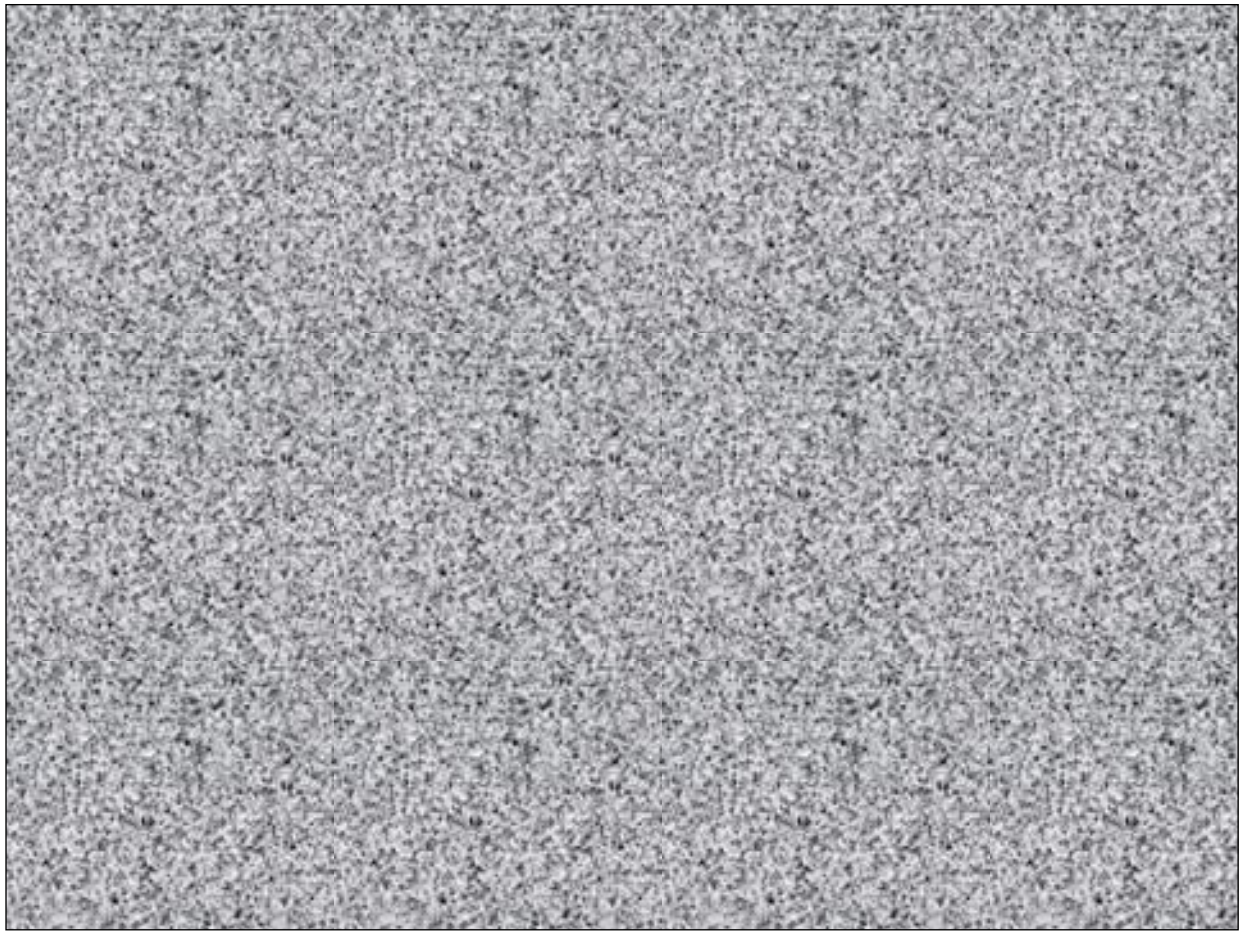
<Inquiries>

Please contact:
AAAA TV support center
Tel: XXXX-XXX-XXX
MIC DTV support center
Tel: 0570-07-0101
9am-9pm (9am-6pm Weekends/Holidays)

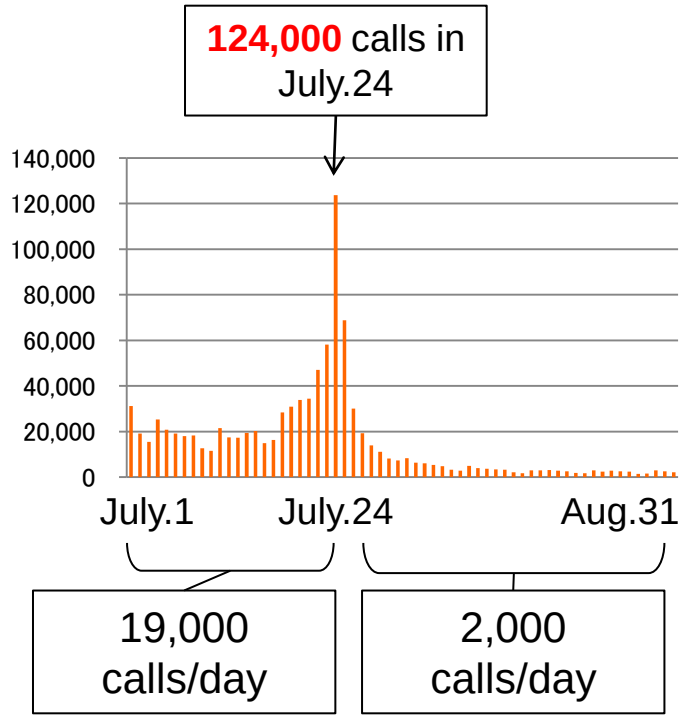
24th July 2011

Termination of Analog TV, Step-by-Step *6th (Final) Stage*

- Analog TV Shut-down At 0:00 on July 25



25th July 2011



Amount of phone calls at MIC Call Center

20 Years and beyond

3DTV **based on Spatial Imaging**

10 Years

Now and the Future

Access Technologies

2 Years

Thank You Very Much

for Your Attention…