

# Action for installation of UHDTV in Japan (political aspect)

March 2014

Toru Igarashi

Ministry of Internal Affairs and Communications  
Japan

# Contents

- I. Roadmap for the 4K/8K installation
- II. Budget for the 4K/8K installation
- III. Promoting Formation for the 4K/8K installation in Japan
- IV. 4K/8K installation activities in Japan
- V. Legal preparation of the technical condition for UHDTV
- VI. the requirement for UHDTV satellite broadcasting system



- Establish the Roadmap for commercial viability and familiarizing of 4K/8K in Japan. (result from the Study Group on Upgrading of Broadcasting Service in May 2013)

【On the Satellite broadcasting service】

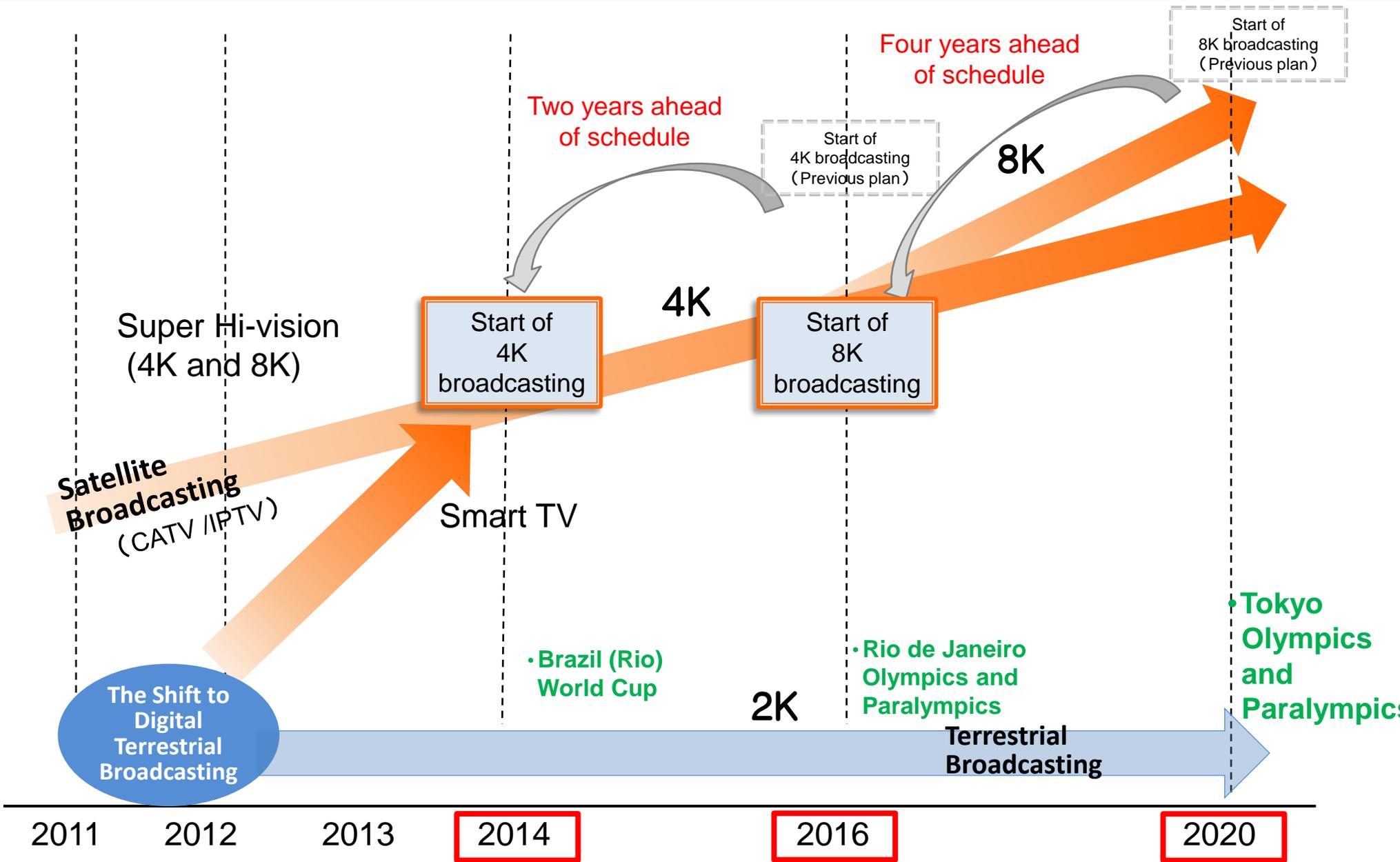
- “4K” pilot broadcasting will launch in 2014 (previous plan: in 2016)
- “8K” pilot broadcasting will launch in 2016 (previous plan: in 2020)

<Target>

- “4K” and “8K” broadcasting will start in full swing in 2020.
- General public will be able to watch “4K” and “8K” broadcasting programs on TV in the marketplace.

- Acceleration of the 4K/8K broadcasting beginning period and driving the 4K/8K installation coupled with smart TV will be able to
  - Upgrade of Broadcasting Service,
  - Activate in the national equipment manufactures,
  - and Strengthen international industrial competitiveness.

# Roadmap for the 4K/8K installation



- MIC keeps the approx. 4.7 billion yen (45 million dollar) budget for the acceleration of the 4K/8K installation in recent 2 years.

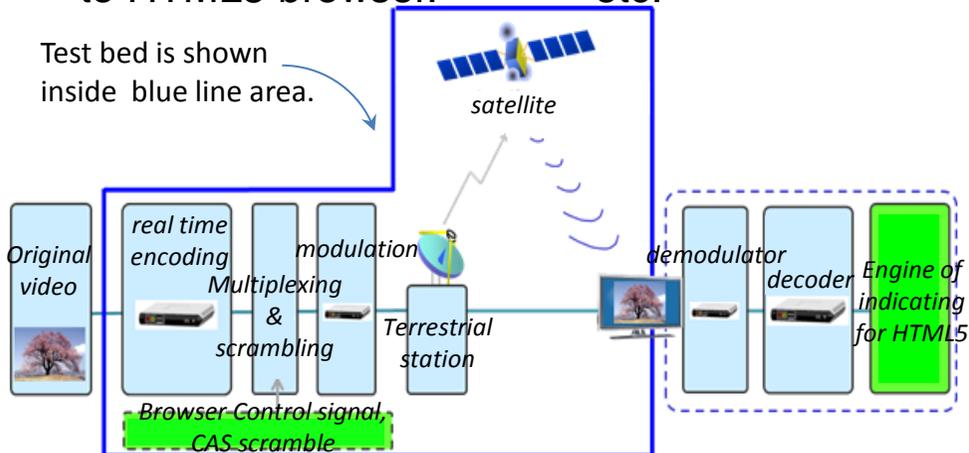
## FY2012 supplemental budget

### Budget: 3.1 billion yen (30 million dollar)

Construct a test bed to verify the 4K/8K broadcasting technology through the satellite broadcasting

To verify

- the operation standard for 4K/8K broadcasting using advanced video coding(HEVC etc.)
- the signal multiplexing method corresponding to HTML5 browser. etc.



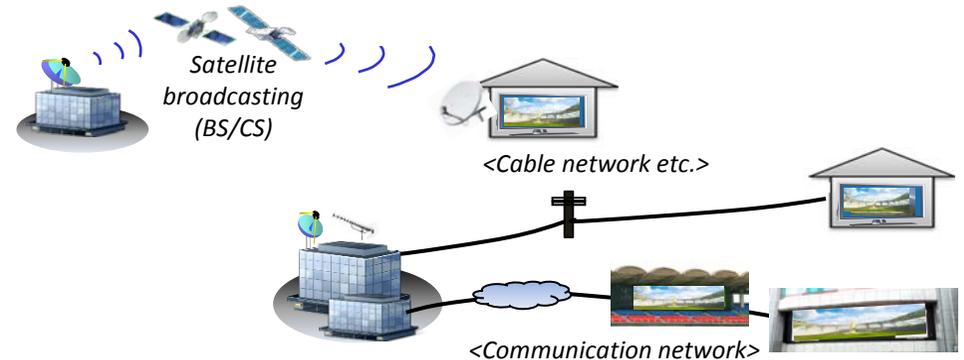
## FY2013 supplemental budget

### Budget: 1.55 billion yen (15 million dollar)

Develop and verify the necessary technology to accelerate 4K/8K installation.

To verify

- transmitting and receiving technology for 4K/8K
- Ultra high definition display technology
- Integrated broadcast-broadband technology applying 4K/8K
- Broadband transmission for 4K/8K via IP network



## NexTV Forum

*(Next Generation Television & Broadcasting Promotion Forum)*

*<established in May 2013>*

### 1. Purpose

- Achieving the advanced broadcasting service (4K/8K, Smart TV etc.) ahead of schedule
- Spurring demand and encouraging the spread of advanced broadcasting service.

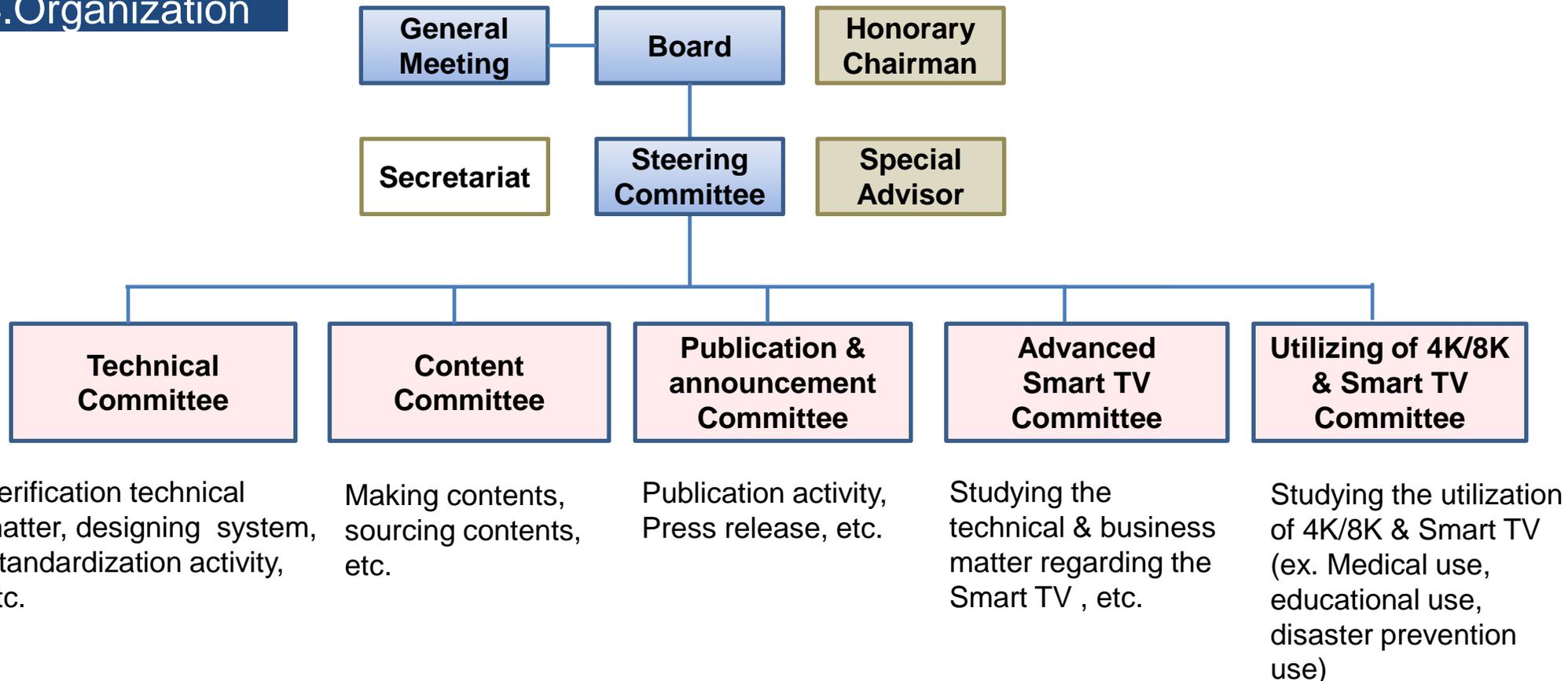
### 2. Activity

- Implementation of the advanced broadcasting service on trial
- Equipment of their service
- Development of the technical standard for their service
- Announcement to the public and sending information about the advanced broadcasting across the world

## 3. Member

- Broadcasting companies (terrestrial broadcasting, satellite broadcasting and CATV), Telecommunication companies, industrial manufacture companies, and Academic etc.

## 4. Organization



# Example of 4K/8K installation activities in Japan

- 4K/8K trial transmission via Satellite network and Cable network etc.

(After 2012)

## 【4K】

|                               |          |   |
|-------------------------------|----------|---|
| <b>SKY Perfect JSAT Corp.</b> | Oct 2012 | Trial transmission of 4K live program (via satellite network)   |
|                               | Mar 2013 | <ul style="list-style-type: none"> <li>Public viewing (Football game (J-league)) @H.264(MPEG-4 AVC) coding</li> </ul>   |
| <b>NexTV Forum</b>            | Nov 2013 | Trial transmission of 4K live program (via satellite network) <ul style="list-style-type: none"> <li>Public viewing (Music concert) @H.264(MPEG-4 AVC) coding</li> </ul>        |
|                               | Dec 2013 | Trial transmission of 4K program (via satellite network) <ul style="list-style-type: none"> <li>4K/60P real time transmission @H.265(HEVC) coding</li> </ul>                    |
| <b>K-Opticom Corp.</b>        | Oct 2013 | Trial transmission of 4K program (via optical fiber network) <ul style="list-style-type: none"> <li>Public viewing (Marathon event) · real time encoding@H.265(HEVC)</li> </ul> |

## 【8K】

|   |          |  |
|---|----------|--|
| <b>NHK Science &amp; Technology Research Laboratories</b> | Jul 2012 | Trial transmission of 8K program (via IP network) <ul style="list-style-type: none"> <li>Public viewing (Olympic Games in London) (cooperate with BBC) @H.264(MPEG-4 AVC)</li> </ul> |
|   | Feb 2013 | Trial transmission of 8K program (via Cable Network)   |
|   | Jan 2014 | Trial long distance transmission of 8K program (via terrestrial broadcasting network) <ul style="list-style-type: none"> <li>approx. 27km distance using 1ch in UHF band</li> </ul>  |
| <b>KDDI, KDDI Lab, Jupiter Telecommunication Corp.</b>    | Feb 2013 | Trial transmission of 2K/4K/8K (via Cable Network)   |

## Up to now

- **May 2013**: started to study “the technical condition for UHDTV Broadcasting systems” in the information and communications Council.
- **31<sup>st</sup> Jan 2014**: made up the draft report of result of study for following item under the council.  
“the technical condition for **UHDTV satellite broadcasting**” in the part of “the technical condition for UHDTV Broadcasting systems”
- **Feb 2014**: appeal for opinions on this draft report during a month.

## Future plan

- **25<sup>th</sup> Mar 2014 (planned)**: will be reported (not draft) from the information and communications Council on “the technical condition for **UHDTV satellite broadcasting**”
- **After Apr 2014**: will revise the relevant provisions such as the ministerial ordinance; Ordinance Regulating Radio Equipment.
- **Jun 2014 (planned)**: These relevant provisions will be in force.

## Fundamental Consideration

UHD TV satellite broadcasting system should be able to

- Provide High-quality images of UHD TV, multiple functions, variety and flexible services.
- Considering of the future technical trend, adopt the feasible technique and have scalability corresponding to future additional functions.
- Ensure interoperability with present broadcasting service and other digital broadcasting media as far as possible.
- Accept new service of the integrated broadcasting service working with communication networks.

etc.

*Thank you for your attention*

*Toru Igarashi*  
*t.igarashi@soumu.go.jp*