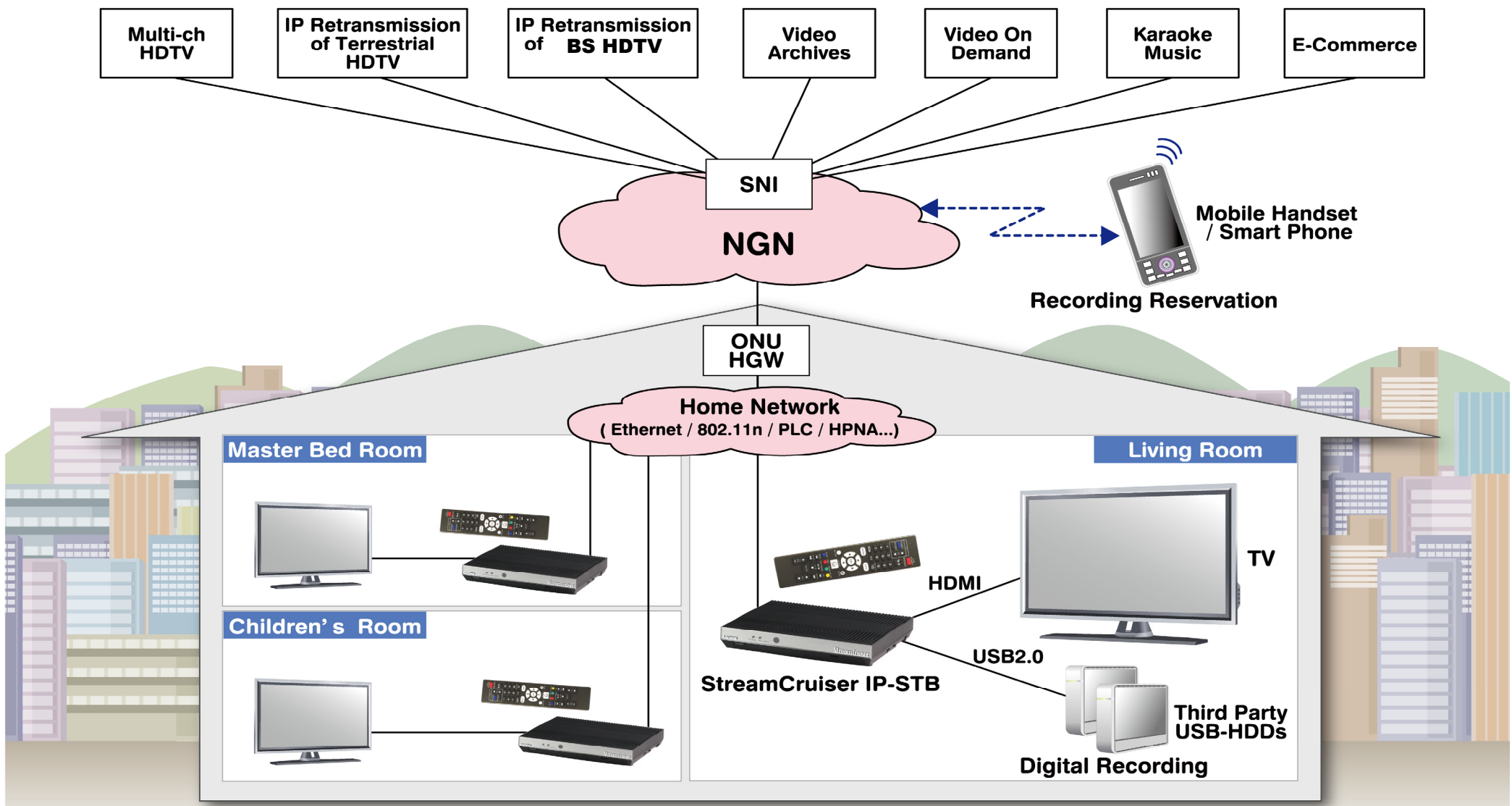


ITU-T H.700 series compliant IP-STB

IPTV Workshop on 17th Dec, 2010
ITU-T IPTV-GSI
3rd IPTV Interop & Showcase in Pune, India

Hiroaki Nishimoto, Director, Sumitomo Electric Networks, Inc.
Sumitomo Electric Industries, Ltd.

A Typical IPTV Service Image with Using ITU-T H.721 Compliant IP-STB



Sumitomo StreamCruiser ST1700 series IP-STB

ST1700 series IP-STB is an integrated IPTV Terminal Devices which is compliant with **ITU-T H.721** "IPTV Terminal Device : BASIC MODEL".



ST1700 Series



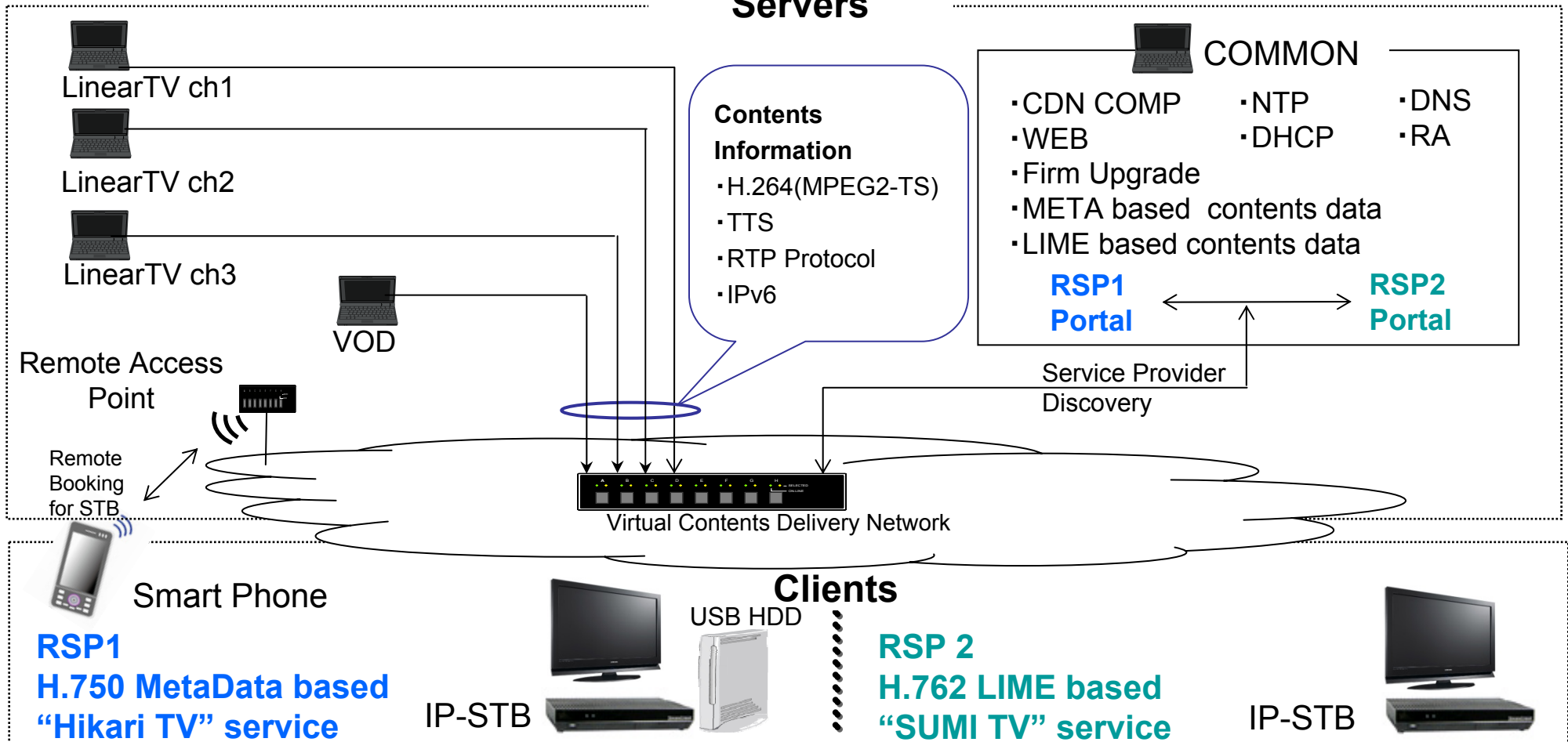
- Supports Service and Provider Discovery (**ITU-T H.770**)
- Supports multiple UI Middlewares
 - TVAnytime MetaData (**ITU-T H.750**) compliant resident applications provides supreme QoE
 - LIME (**ITU-T H.762**) compliant browser type middleware provides high interoperability
- Realizes supreme QoS with using Application Layer FEC (**ITU-T H.701**)
- Supports IP Re-transmission of Digital Terrestrial TV and 1080i Full HD (**H.721**, **H.264**)
- Provides Contents Protection with using IPTV Forum standard DRM (Marlin)
- Stable performance by using Realtime-OS and MetaDB Engine
- Supports NGN (New Generation Network) and IPv6 Multicast MLDv2
- Service expansion provided by reliable STB Management Server : STManager

System Diagram for the 3rd ITU-T IPTV Interop Event & Showcase in India, Dec 2010

H.770 Operator and Service Discovery
H.721 IPTV Basic Terminal Device

H.750 TV Anytime Metadata
H.762 LIME Middleware

System Diagram for Showcase



IPTV Service in Japan

1st Gen IPTV Before Standardization (IP re-transmission of DTT not permitted => numbers of subscribers are limited)

Group		NTT			KDDI	Softbank
Servicer		NTT-COM/OCN-Theater	Plala/4 th MEDIA	OnDemand TV	Hikari Plus TV	BBTV
Network		IPv6 FTTH			IPv4 FTTH/DSL	
Codec		MPEG2TS	MPEG2PS 6Mbps	MPEG2	MPEG2	MPEG2
Service	Multicast TV	61ch	61ch	35ch	30ch	43ch
	VOD	6,000 titles	12,000 titles	5,000 titles	5,000 titles	5,000 titles
	Karaoke	○	○	○	○	○
	Game	○		○		○



New Service “**Hikari TV**” has been launched in March 2008 with using **ITU-T H.721 Compliant IP-STB and IPTV embedded TV sets**

2nd Gen IPTV After Standardization

Service	(1) IP re-transmission of DTT (Digital Terrestrial TV), (2) Multicast TV, (3) VOD, (4) Karaoke, (5) Archives On Demand, (6) USB-HDD Digital Recording.....
Terminal Device	IP-STB & IPTV embedded TV (ITU-T H.264, H.701, H.721, H.750, H.762, H.770 Compliant)
Network	NGN or FTTH Service
Codec	H.264(AVC) / MPEG2, TS/TTS, 10Mbps to 14Mbps(HD), 4 to 6Mbps(SD)
DRM	Marlin

Number of “Hikari TV” subscriber has exceeded 1M in March 2010 within 2 years !