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2005   3   22

hanarotelecom

(thyoun@hanaro.com)

honorotelecom

·

- **Interactive Personal TV**
- **Intelligent Personal TV**
- **Internet Protocol TV**

Market View

	• ·
	• (,)
	• TV
	• TV Dummy /
	• ,
	• PC/ TV , One-Source, Multi-Use

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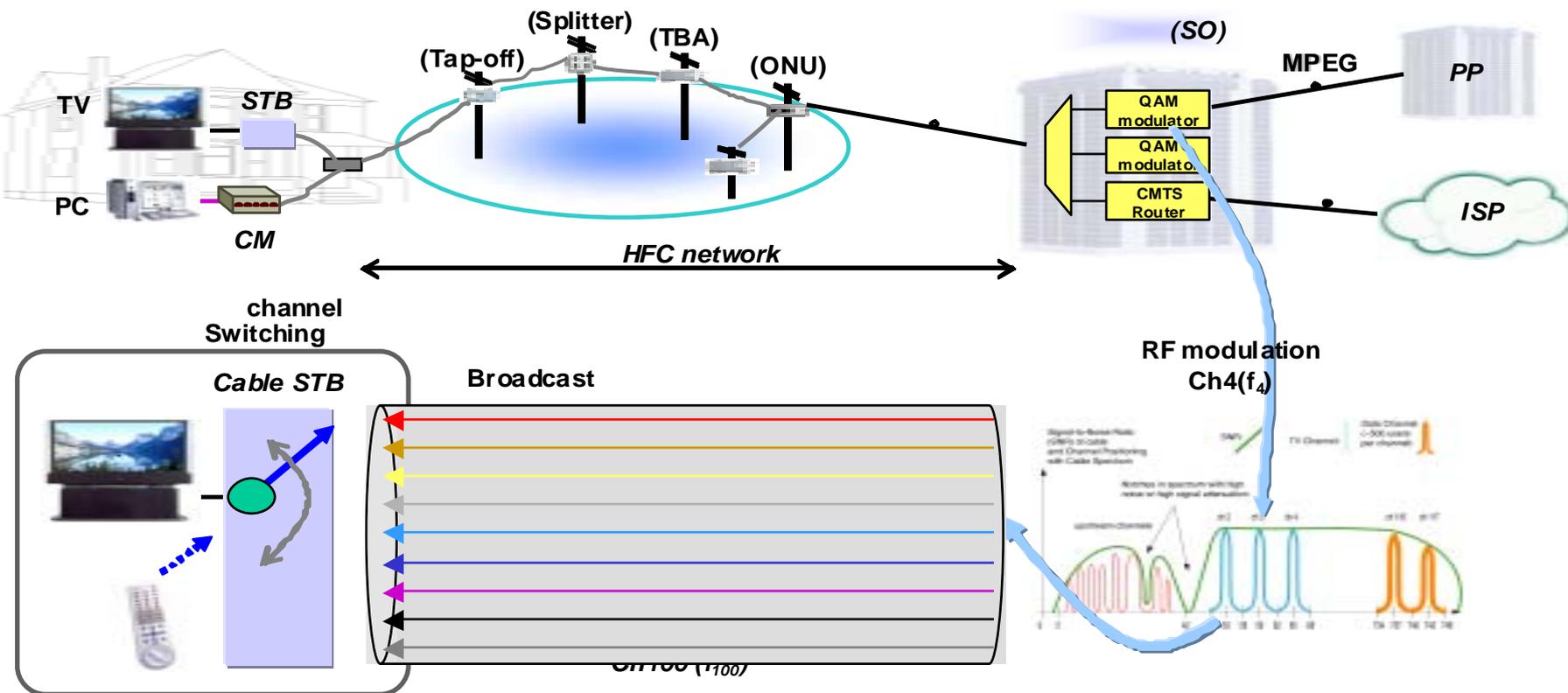- **Creation**

  - **Simple Interactive Service : PPV, VOD**

  - **Advanced Interactive Service :**   **, T-Commerce, TV-Banking**

-

  - **   TV**

  - **TV**

- **(   )**

-

  - **   :   ,   ,**

  - **   :   ,   ,**

- **(   )**

(,   )

(CAS)

(CATV)

(Splitter)
(Tap-off)   **(TBA)**   **(ONU)**   *(SO)*

TV   *STB*   **MPEG**   *PP*

PC

CM   QAM modulator   QAM modulator   CMTS Router   *ISP*

HFC network

channel Switching

Cable STB   **Broadcast**   **RF modulation Ch4(f₄)**

Ch100 (f₁₀₀)

·   **Head-End**   **"Join"**

                            Link   **Multicasting**

·

IP-TV Head-End

Internet

VoIP/PSTN

Encoder

VoD

VDSL

1Gbps

1Gbps

Ethernet

1Gbps

Channel switching

User   **Ch**   **STB**

Ch1 Join

(   )

CH1 stream

TV   **STB**

Contents / Service	Platform	Network	User Device

Portal

-
  (DVD)
- Window Gap
  (   )

-
  -                          (PC:TV)
    DRM

- QoS :
- Bandwidth : 1.5M~4Mbps
  - Constant Bit rate(CBR)

-
- OS : Linux, WinCE, Wi
- CPU : 350MIPS ~ 1 GHz
- Memory : 64M ~ 356M
- Option : HDD(push)

TV-Portal
- VOD(Unicasting)
  - ,
- VAS
  -
  -

CODEC
- MPEG-2
  - SD:4Mbps/HD:15Mbps
- WMT9
  - SD:1.5Mbps/HD:4Mbps
- H.264
  - SD:1.5Mbps/HD:6Mbps

QoS
- Best Effort
- QoS
  - VDSL, LAN

OS
- Liunx
- WinCE embedded
- WinXP embedded

Bandwidth
- ADSL/HFC:3~8Mbps
- VDSL:10~15Mbps
- LAN: 10~46Mbps

Memory/HDD
- Live Decoding
- Store&Decoding
  - HDD
  DDR : 64M~256MB

-
  - Linear Channel
  - Near-VOD
- PVR/Time Shifting

DRM/CAS
-
-
- TV-Portal

Multicast
- VDSL,LAN:
- ADSL, HFC:

Multicast
- IGMP Snooping

-
  (50ch   )
- Window Gap
  -    , Ani

- Codec
  - WMT9, H.264
- Live-DRM
  - coretrust, markany

- QoS
  - Back bone QoS
  -              QoS(Multi-PVC)
- Multicast routing, IGMP
- Bandwidth
  - 1.5Mbps(CBR)

- Multicast join
- OS : Liunx, WinCE
- CPU : 350MIPS
- Memory : 64M
- Option : PVR(HDD)

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TV **TV-Portal**

- **:** **(** **)**

(**, PPC : Pay Per Channel)**

- TV-Portal **:** **(VOD,** **,** **,** **)** **TV**

(**TV** **)**

TV-Portal

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| Transaction (, T-Commerce) | Interactive (, ,) | Enhanced (PVR,) |

| R(Real) – VOD (Unicasting) / STB | N(Near) – VOD (Multicasting) |

| (Multi Channel Service) ( ) |
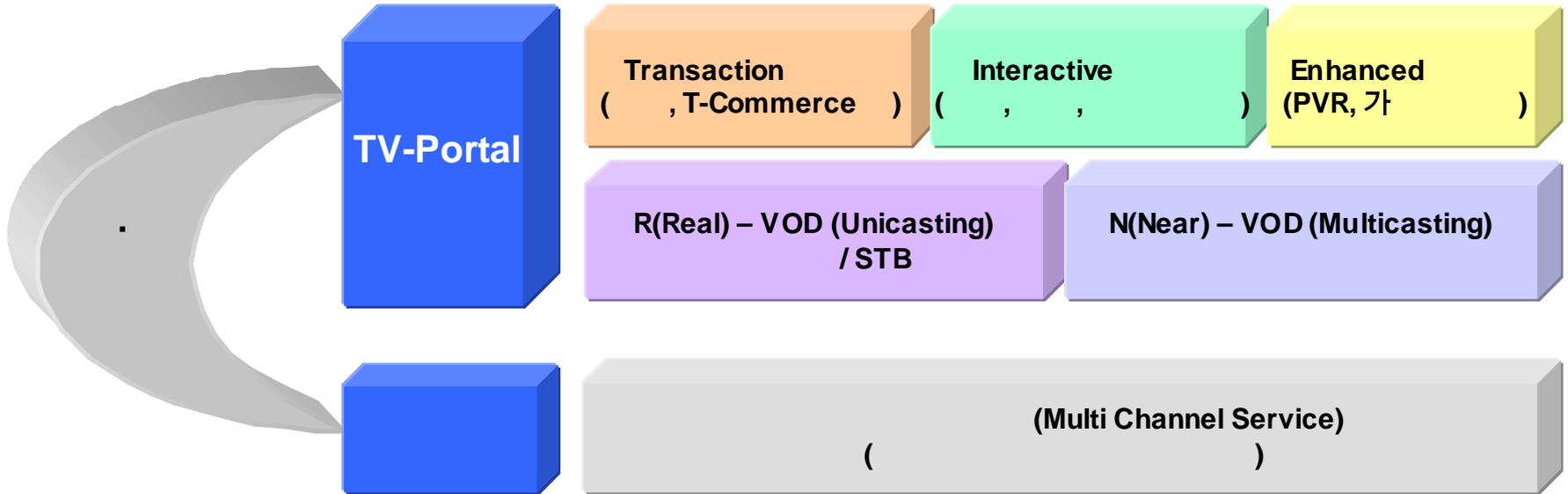
TPS(Triple-Play Service, Data+　　+　　)

- 　　　　　　(SO)　MSO　　　　　　　　　TPS

- 　　　　　　　　SO　　TPS　　　　　　　　　　,

-

			(SO)		
HFC		Video	Video	**TPS**	-
		Data	Data/VoIP		Data/VoIP
DSL		Voice	-		Voice
		Data	-		Data
License	TPS				
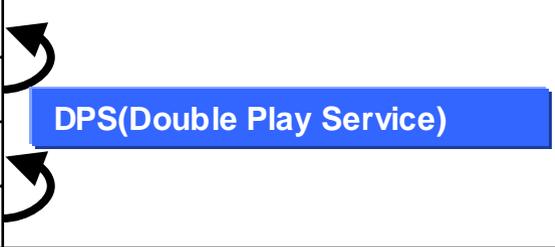
DPS(Double Play Service)

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FTTH

IT   **BcN(Ultra High-Speed, Guaranteed QoS, Multicast)**   **,   .**

- •

  - -   **ARPU**

  - **- Value   Access   P/F   Content**

- •   **ARPU**

- •

  - **- Infotainment   : VOD/MOD,   ,   , T-Commerce,   TV**

  - **- Control   :   , Gas   ,**

  - **- Security   :   ,   ,**

  - **-   : Care(Child, Pet), Communication(VoIP, SMS   )**

- **• Infotainment   TV**

- •   **,   .**

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	FastWeb ( )	• **Cable** • • ( ) •	• 20 ( ) • VOD PVR • VoIP TPS
	PCCW ( )	• (PPC) • **ISP** **(Multicast QoS, FTTx+ADSL)** • **STB**	• 49 15 • VOD
	Yahoo BB Cable ( )	• • Cable • Cable • ('03.3)	• 23 VOD

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,   ,

TV-Portal

-   **KSF**

- TV-Portal

-   **TV-Portal**

Content	Platform	Network	Terminal

KSF

- Windows Sourcing
- Killer Content

- P/P

- Cost Leadership ( )
- Stability
- (Global Standard)

- Cable in TV

·   ,

	· **(IP Network)**
TV	· **TV**
	· **TV** **( )**
	· **TV-Portal** **1 TV**

2001

○ **'01. 3 ~ '01. 6(4   )**

-                             **:**   **39**

-                  **: VOD(   )**

○ **'02. 6 ~ '02. 12(7   )**   **ADSL**

-                              **:**   **,**   **173**

-                  **: VOD(**   **,   ,   ,   ,   )**

○ **'02. 12 ~ '03. 5(6   )**   **IP Multicasting**

-                              **:**   **20**

-                  **: IP Multicasting(**   **), VOD**

○ **'04. 12**   **IP Multicasting   QoS**

-                              **:**   **30**

Interactive-TV

iCOD (TV-Portal) , . .

	iCOD(TV-Portal)	.
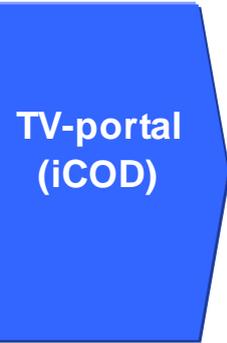
TV-portal (iCOD)

- **Killer   TV**

Info-tainment

-
- **TV**
  High-End   ARPU

T-Commerce
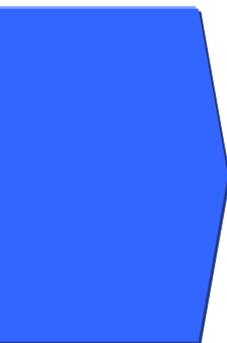
- **TV**
-
- **(Head-End)**

50~70   + 10

2005   4   ,   ,

	1 ('05 4)	2
	- TV Portal	- TV Portal - Multicasting(PP Channel, NVOD)
	- VDSL, E-Valley, HFC	- VDSL, E-Valley, HFC
	-	-
	-	-