HotelTV/VOD Server
Solution for Hotels

Problem:

Hotel operator is looking for IPTV and VOD solution that can be integrated with his PMS system to allow hotel guest to watch and be billed for IPTV and VOD services. The operator wants to use a single server that has integrated all required advanced VOD/IPTV functionality, and at the same time provide interface to the existing PMS system.

Solution:

Sysmaster Corporation offers an all-in-one server that integrates IPTV, VOD, Billing functionality. The HotelTV/VOD server can also be interfaces to Fidelio PMS system using a specialized optional module. The server controls all IPTV/VOD streams in real-time, and allows easy authentication, authorization, and accounting of all subscriber sessions.
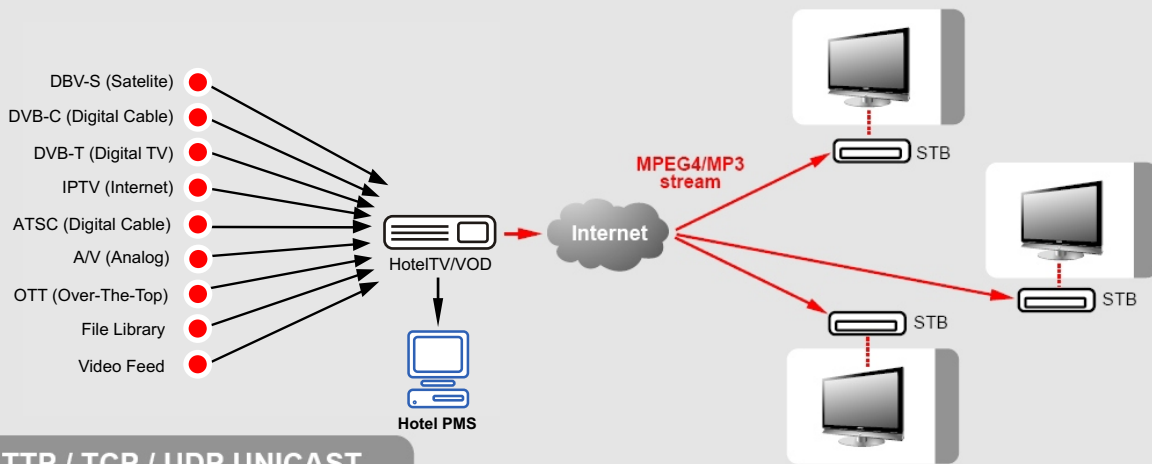
Analysis of the Network Data:

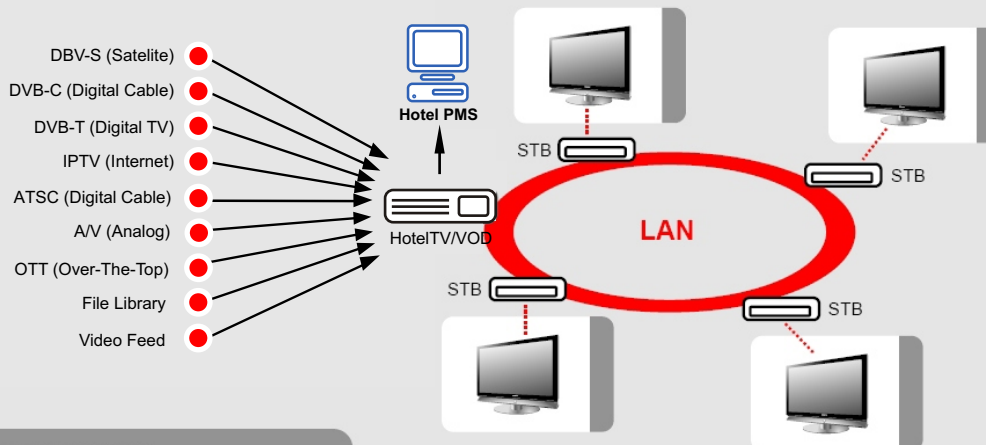| Network Type	Advantages	Disadvantages
1GBps Ethernet	The big advantage of this network type is the fact that it offers a channel capacity in multicast implementations and subscriber support. The providers using such networks can deploy multicast channel distribution without limitations.	This network requires special and expensive Ethernet cables with short lengths. In addition, it needs intelligent and expensive IGMP switches to interface to STB and CPE devices that do not support Gigabit Ethernet interfaces. The overall network cost is very high.
100MBps Ethernet	The big advantages of this network type are that it is the most popular LAN network available today. The network has some multicast channel limitations but can easily accommodate unicast services to limited number of subscribers and large number of channels. The network cost is very low.	The big disadvantage of this network is its limitation in terms of multicast channel distribution traffic. That is why in such environments, unicast IPTV is recommended. The limitation can be overcome by using topology splitting strategy, whereas the subscribers are using unicast that is split in groups by inexpensive switches.
Coax-to-Ethernet	The big advantage of this network is that is relatively low cost and is pre-existing in most hotels. The same coaxial cable that is already used for cable TV services can be used to distribute Ethernet signal. Overall this is a very simple to build network.	This network can not accommodate multicast because it has low channel capacity. It can accommodate unicast using topology splitting (64 clients). The network requires special EOC devices that interface directly using the existing the coaxial cable.
Wireless 802.11n/AS	The big advantage of this network is that it does not require wires. The 802.11n Wi-Fi network in AirStream mode that accommodate large number of channels to unlimited subscribers. This network requires low cost 802.11n equipment. The overall cost to build the network is low.	The big disadvantage of the network is that it does not accommodate multicast well. The network requires IPTV distribution using unicast. The implementation requires special 802.11n CellNode and CPE devices. The radio signal coverage may be a problem in large hotels, or hotels with a lot of radio interference.

Advantages and Disadvantages of Different Network Implementations in Hotels

Implementation Features	1Gbps Ethernet	100Mbps Ethernet	Ethernet-over-Coaxial	Wireless 802.11n/AS
Price	High	Low	Low	Low
Requires Smart IGMP Switch	Yes	No	No	No
Requires Expensive Cables	Yes	No	No	No
Requires Short Cable Length	Yes	No	No	No
Requires Additional CPE Devices	No	No	Yes	Yes
High-Capacity MPEG2 Channel Support	Yes	Yes	No	No
High-Capacity H.264 Support	Yes	Yes	Yes	Yes
VOD Support	Yes	Yes	Yes	Yes
UNICAST: Subscriber Capacity H.264 600Kbps	2000	200	120	Unlimited
UNICAST: Subscriber Capacity MPEG2 4Mbps	220	22	15	Unlimited
UNICAST: Channel Capacity MPEG2 4Mbps	220	22	15	15
UNICAST: Channel Capacity H.264 600Kbps	2000	200	120	120
MULTICAST: Subscriber Capacity MPEG2 4MBps	IGMP Ports	IGMP Ports	Unlimited	Unlimited
MULTICAST: Subscriber Capacity H.264 600Kbps	IGMP Ports	IGMP Ports	Unlimited	Unlimited
MULTICAST: Channel Capacity MPEG2 4Mbps	220	22	15	15
MULTICAST: Channel Capacity H.264 600Kbps	2000	22	120	120

HOTEL TV/VOD IPTV SOLUTION

HTTP / TCP / UDP UNICAST

UDP MULTICAST

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HotelTV / VOD IPTV SOLUTION

Conclusion:

The above Analysis of network data shows that the IPTV/VOD distribution in hotel environments require properly planned network buildup. If the network buildup is 1Gbps Ethernet network, then any type of device can be used. However, if the network type is 100Mbps, Coaxial-to-Ethernet (EOC), or Wireless 802.11n, then the only feasible option (if the desire is to provide more than IPTV/VOD 22 channels) is to use unicast signal distribution in H.264 mode. Using unicast with H.264 codec allows 200 channels with 200 concurrent subscribers that can be multiplied easily by topology network splitting. That is why operators that are looking for hotel deployments should consider IPTV/VOD streaming solutions that offer higher number of unicast streams. The final goal is to allow more channels to higher number of unicast subscribers.

Features	HotelTV/VOD	VODware Standard	3Play Hotel PMS	3rd Party Hotel IPTV
Integrated DVB Tuners	2DVB-S/4DVB-T	No	No	4
Number of Unicast Streams	300	50	50	50
Real-Time IPTV Channels	24 Enc/30 FTA	Unlimited Encoders	Unlimited Encoders	40 Enc/50 FTA
Maxmum Number of Subscribers	2,000	2,000,000	5,000,000	1,000
Wireless Distribution Support	Yes	Yes	Yes	No
Ethernet-over-Coaxial (EOC) Support	Yes	Yes	Yes	No
Advanced Hotel PMS Billing	No	Yes/Limited	Yes/Full PMS	No
Optional PMS Interface	Yes	Yes	Yes	Yes
Basic IPT/VOD Billing	Yes	Yes	Yes	Yes
Content Management	Yes	Yes/Advanced	Yes/Advanced	Yes
Content Plan Management	Yes	Yes/Advanced	Yes/Advanced	Yes
VOIP Billing (optional)	No	Yes	Yes	No
ISP Billing (optional)	No	Yes	Yes	No
Integrated Streamer	Yes	Yes	Yes	Yes
Multicast Support	Yes	Yes	Yes	Yes
Unicast Support	Yes	Yes	Yes	Yes
OTT Channel Support	Yes	Yes	Yes	No
Codec Conversion	No	Yes/Encoders	Yes/Encoders	No
Progressive Download	Yes	Yes	Yes	No
Adjustable Bit rate Support	Yes	Yes	Yes	No
RTMP Support	Yes	Yes	Yes	No
RTSP Support	Yes	Yes	Yes	No
FLV/Flash Support	Yes	Yes	Yes	No
MMS Support	Yes	Yes	Yes	No
HTTP Support	Yes	Yes	Yes	Yes
STB Integration	Yes	Yes	Yes	Yes
Middleware Integration	Yes	Yes	Yes	Yes
Hotel Services Integration	Yes	Yes	Yes	Yes
Remote STB Management	Yes	Yes	Yes	No
Emergency Services Support	Yes	Yes	Yes	No
Interface to TV sets (RS232)	Yes	Yes	Yes	No
Micros-Fidelio Interface	Yes	Yes	Yes	Yes
HTP Live Stream (HLS) Support	Yes	Yes	Yes	No
Integrated VOD Space	1TB HDD	500GB HDD	500GB HDD	1TB HDD
Hardware Integration	Yes	Yes	No/Requires VM	Yes
Additional IPTV GW Support	Yes	Yes	Yes	Yes
Large Number of File Formats	Yes	Yes	Yes	No
Integrated IPTV Gateway	Yes	No	No	Yes
Price	**Lowest**	**Low**	**Medium**	**Low**

HotelTV / VOD IPTV SOLUTION