LOGIC EASTERN
A Triple Play Company

IPTV Ready DVBC Solution

Cable Operators

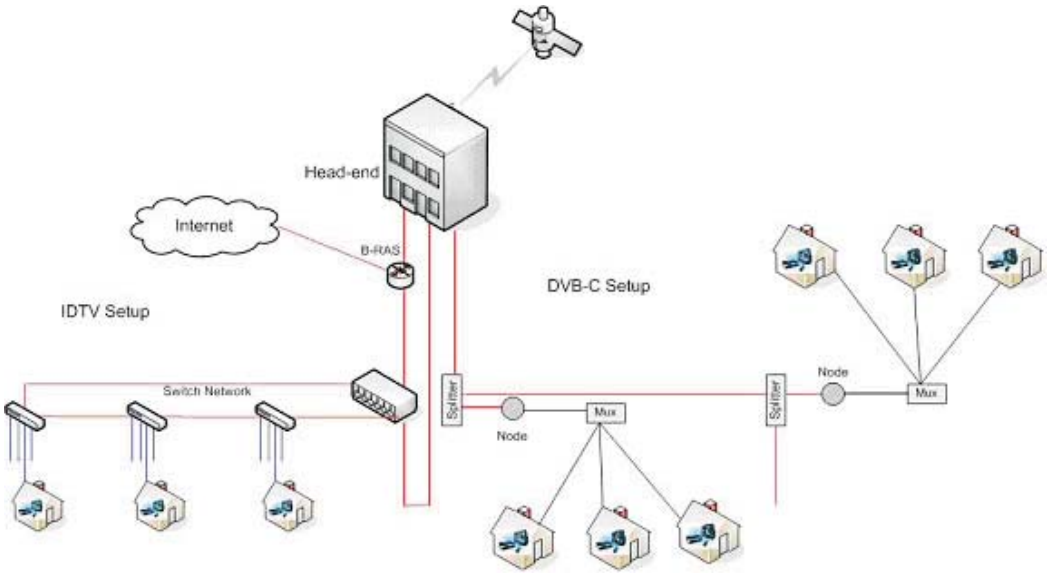
The solution accurately fits into the cable operators requirement. The current scenario shows the movement towards the DVBC technology due to the recent regulatory notifications issued by the government. The cable operator realizes the futuristic vision of the IPTV technology because it could only provide the means and ways to increase their revenue and lower down the subscriber churn by providing quality vanilla services like Video on Demand, Video conferencing, gaming, Voice over IP and other innovative services. VoIBRENT is the solution tailored for the cable operators which provides the DVB-C technology on their existing infrastructure and is also ready for the IPTV rollout. The shift between the two technologies is very smooth and economical with no hardware changes in the infrastructure. The solution enables the cable operator to run both the IPTV services and digital broadcast service(DVB-C) simultaneously on the same infrastructure. So, the cable operator can always enjoy a win-win situation.

VoIBRENT solution comprises of the Video Head-end by TANDBERG, Network infrastructure, and the Customer Premise Equipment (CPE) manufactured by Logic Eastern.The CPE could be a DVB-C and IPTV Set top box or ATA device for VoIP. The Customer Premise Equipments are manufactured at a very low cost with easily available support.

Head-end | CPE

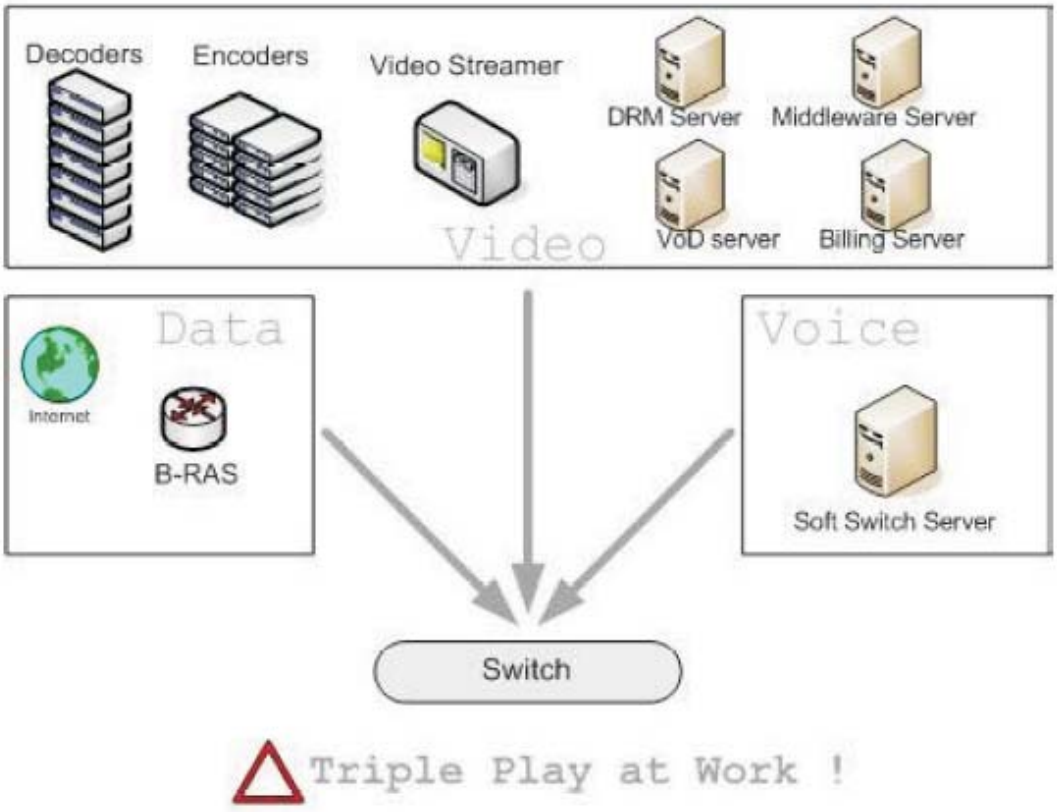
TANDBERG | LOGIC EASTERN A Triple Play Company

VoIBRENT solution developed, serviced and supported by LOGIC EASTERN



Video Head-end

The Video Headend equipment and the IDC Server farms would feed the entire IP network on a redundant and highly available fiber optic backbone. The placement of the Video Head–end should be at a highly secured area where only senior or technically trained personnel could access. It need not be, actually should not be in a very publicly accessible location.



The IP Headend is made up of the following components :

Antenna Farm

It captures all the Free to air and scrambled signals being beamed in the skies. The signals are then sent to the Video headend.

IRD decoders

Decode the streams being received preferably in ASI format or otherwise through component video. Many of these decoders might be already in place and unless specifically asked by the video Head–end vendor, need not be purchased again. Many decoders are provided directly by the broadcaster.

MPEG-2 / MPEG-4 Encoders

TANDBERG | SkyStream

Encode the decoded programs into low bandwidth MPEG–4 format or cost effective MPEG–2 format that we would use for IPTV transmission.
MPEG–2 format can also be used if required say for sports channels.

Multiplexers and streamers

Scramble and multiplex Single Program Transport Streams ideal for IPTV transmission.

DRM systems

These are servers provided by Digital Rights Management technology vendors that work with the Multiplexers and streamers to scramble the signal to avoid content pilferage. This is optional.

Middleware Servers

These are servers that provide the billing, customer services, CPE management, content management features to the network.

Video on Demand Server

These are high throughput servers designed for providing unicast VoD streams for VoD services. Normally the VoD server feeds a tree of smaller VoD servers deployed at Major PoP locations that cache the VoD content. These are optional for the first phase.

Headend Switch

High performance Ethernet switch that would provide 1Gbps to each Major PoP location to start with. It would be possible to upgrade these links to 10 Gbps at a later date. As an intermediate measure, it would be possible to aggregate multiple links of 1 Gbps that would be sent over the same fiber using CWDM technology. This switch could also provide the Peering functionality required to peer with our uplink ISP. Alternatively peering functionality could be provided using another smaller router.

Broadband Remote Access Server

The point in the network where subscribe identity is terminated and services are generated. Provides functions like rate control, Network address translation, Routing, PPPoE termination etc.

Billing Server

The billing software by Infozech manages the billing transaction for the subscribers for the consumed services. The subscribers can even see the billing details of the services consumed on the TV itself.

Network Infrastructure

Micro PoP

Micro PoPs help us to reduce the amount of fiber (compared to an ideal FTTH architecture)that would need to be deployed in connecting a large number of subscribers and hence brings scalability in the network scheme. The micro PoP switches are fed with 1Gbps links from the Major PoP(Head–end) that brings to this point the multicast traffic carrying video signals as well as voice and data traffic. The Micro PoPs also are responsible for respecting the traffic tagged by the BRAS. These Micro PoPs would take very little space. The only criterion to house them is secure, cool, dry space. Spaces under stair cases in professionally maintained buildings provide excellent location for Micro PoPs. In manier cases, one of the MxUs itself would also serve as Micro PoP location. The power for Micro PoP could come from the MxU itself. MxU chosen to house Micro PoP should be

carefully selected since it should have continuous power available. Alternatively the Power can be brought from Mega PoP or a nearby location but that is an expensive proposition.

Access Switch

Access switch is the point nearest to the subscriber where the optical fiber ends and CAT–5 starts. Access Switch unit assembly houses the following:

1) One 100 Mbps optical uplink with copper downlinks : Provides fiber uplink, downlink and copper ports for connecting four or eight homes. The copper ports can carry Ethernet for up to a distance of 100 Mts.

2) CAT–5 Cable : Connects the MxU switch to the IP STB and other CPE equipment at home.

Customer Premise Equipment

Set Top Box

Both DVB–C and IPTV Set top Box are provided at a very low cost. The Set top Box are manufactured at LOGIC EASTERN. The STBs are efficient and provides high performance. DVBC STB comply to the required standards set. Whereas IPTV STB enable the customer to enjoy all the services of IPTV Technology. Either of STBs would be placed at the customers place. The STBs provides feature like video decoding and rendering. The STBs would enable Video on demand, Video conferencing with an externally attached camera, Voice over IP,Gaming,Personal Viewing and Recording / Time shifting (TIVO) at the customers place.

Services

- Engineering Procurement & Construct Service
- Build Operate Transfer Service
- Guidance for Financial models structuring for Banks
- Fiber layout and deployment guidance
- Network Design Consultancy
- Procurement Support Service
- Content Procurement Consultancy
- Post Deployment Training Service
- Annual Maintenance Contracts

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