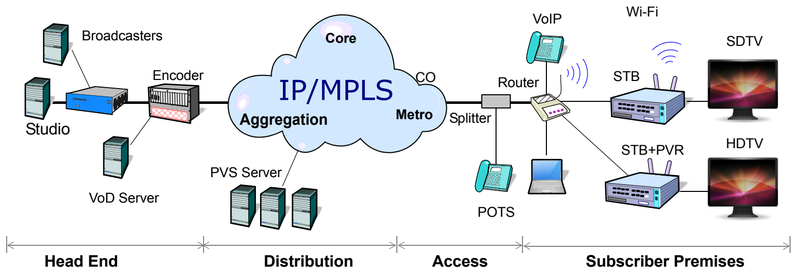
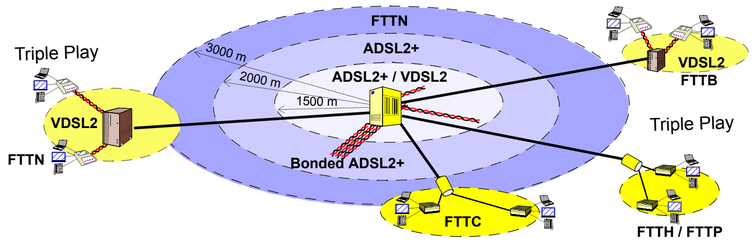
IPTV & Network Access Architectures

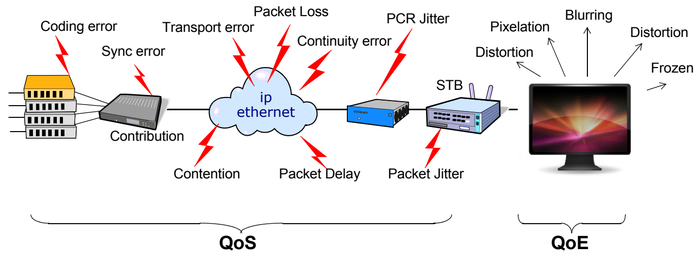
IP Video Service



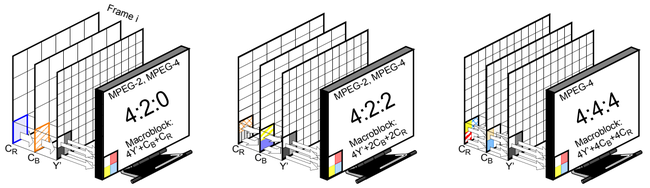
Triple Play Access Network

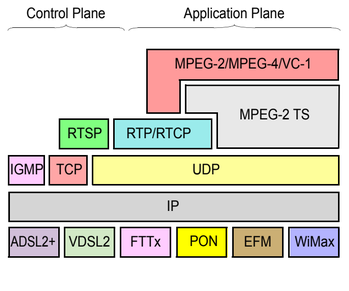


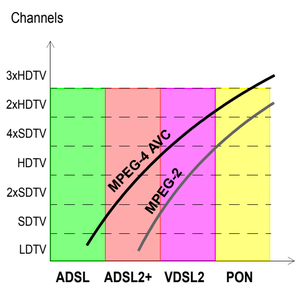
Quality of Service and Experience



MPEG standards





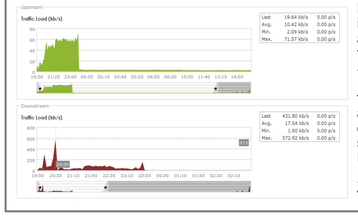


ALBEDO telecom is an international manufacturer of tools to help design and maintain PTP clocks, GbE, SyncE, VoIP, IPTV, E1, SDH infrastructures that support voice, video & data applications:

- QoS&SLA: assurance, 1-way measurements
- Labs: EMC, VoIP, IPTV, GPON, xDSL
- Testers: Ethernet, E1, Datacom, POLQA
- PTP clocks: GrandMaster, Boundary, Slave
- Timing test: SyncE, PTP, Jitter/Wander
- Taps: field GbE hand-held taps
- Packet Capture: stream to disk appliances
- WAN emulator: hand-held at wirespeed
- Insulation Multimeter: IEC61010 CATIII 600V.

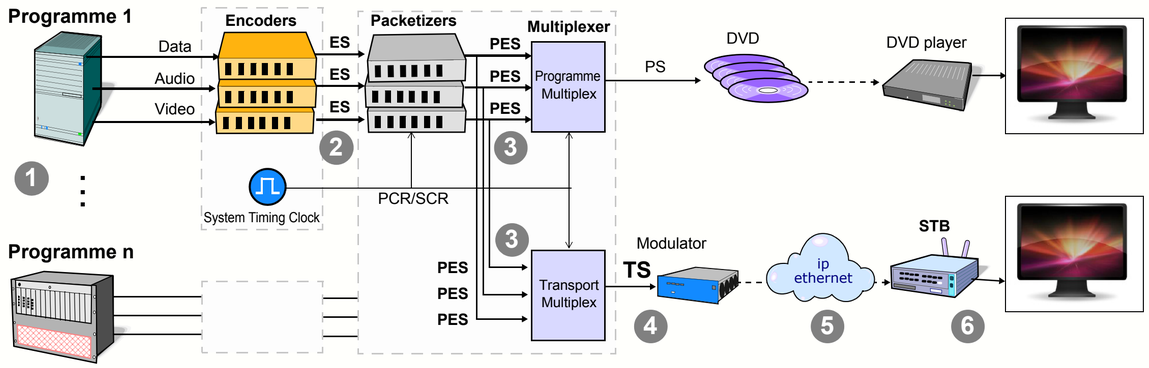
Ether.Genius: ALBEDO Ether.Genius is a multitechnology tester equipped with the features you need install and maintain IPTV telecom networks based on Gigabit Ethernet (GbE), Synchronous Ethernet (SyncE), E1, Datacom, Precision Time Protocol (PTP IEEE 1588), Jitter/Wander, C37.94 and One-way-delay test.

Net.Audit: is a ONE-WAY and IN-SERVICE Test System, intended to get a permanent and real-time verification of the SLA & QoS parameters of IPTV networks from 10Mbit/s up to 100Gbit/s, independently of the PHY layer. Net.Audit is based on Active Probes and distributed Measurements using the OWAMP standard (RFC 3763) therefore it does not rely on Routers or Switches MIBs.

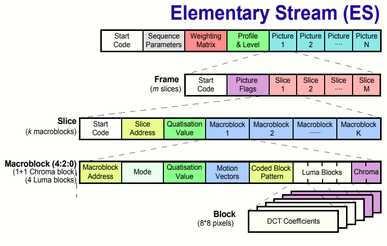


Net.Hunter: This Packet Capture Device is ideal for IPTV experts that require real-time analysis of 100% of the IP packets transmitted through an Ethernet Link. Troubleshooting, Security and Forensic are typical applications. Interestingly it includes an embedded TAP that forwards those packets that are compliant with any of the 16+16 programmable filters. Suspicious packets can either be saved, at wire-speed, in the internal SSD disk, or tapped to a LAN. Net.Hunter is undetectable as it has no IP or MAC address, with ZERO delay and ZERO loss of customer' traffic.

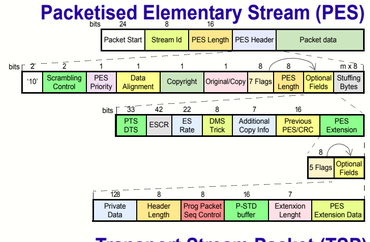
The Transport Stream



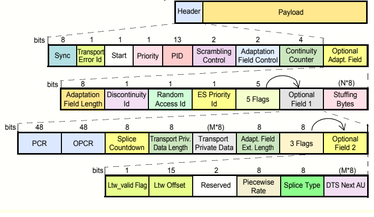
Elementary Stream (ES)

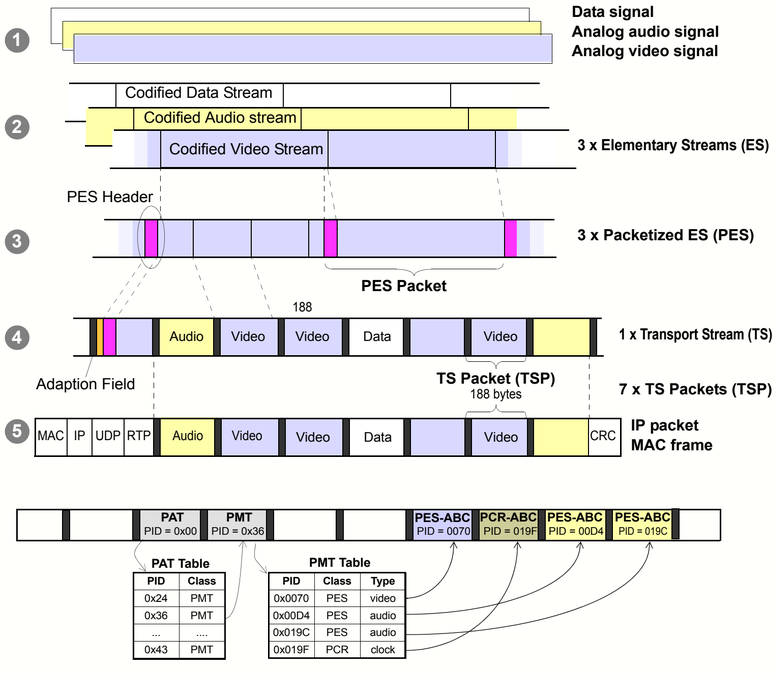


Packetised Elementary Stream (PES)



Transport Stream Packet (TSP)





Acronyms

AAC	Advanced Audio Coding
AVC	Advanced Video Compression
B-frame	Bidirectional Frame
BIFS	Binary Format For Scenes
CAT	Conditional Access Table
CELP	Code Excited Linear Prediction
DCT	Discrete Cosine Transform
DTS AU	Decoding Time Stamp Next Access Unit
EFM	Ethernet In The First Mile
ESCR	Elementary Stream Clock Reference
FTTB	Fibre-To-The-Building
FTTH	Fibre-To-The-Home
FTTN	Fibre-To-The-Neighborhood
HDTV	High-Definition Television
HVXC	Harmonic Vector Excitation
I-frame	Intra frame
IGMP	Internet Group Management Protocol
IPMP	Intellectual Property Mgmt Protection
IPTV	Internet Protocol TV
MPEG	Moving Pictures Experts Group
MPLS	Multi-Protocol Label Switching
NIT	Network Information Table
PAT	Programme Association Table
PCR	Programme Clock Reference
PES	Packetized Elementary Stream
P-frame	Prediction Frame
PID	Packet Identifier
PMT	Program Map Table
PON	Passive Optical Network
PS	Programme Stream
PSI	Program Specific Information
P-STD	Scaling factor for System Target Buffer
PTS/DTS	Presentation/Decoding Time Stamp
PVS	Personal Video Recorder
QoE	Quality Of Experience
RTCP	Real-Time Control Protocol
RTP	Real-Time Protocol
RTSP	Real-Time Streaming Protocol
SDP	Session Description Protocol
SDTV	Standard Definition Television
STB	Set-Top Box
TS	Transport Stream
TSDT	Transport Stream Description Table
VC-1	Video Codec (Microsoft Windows Media)
VDSL2	Very High Bit Rate Digital Subscriber Line2
VLC	Variable-Length Code
YUV	Color (Y: luminance. U,V: Chrominance)
WiFi	Wireless Fidelity