Broadcaster

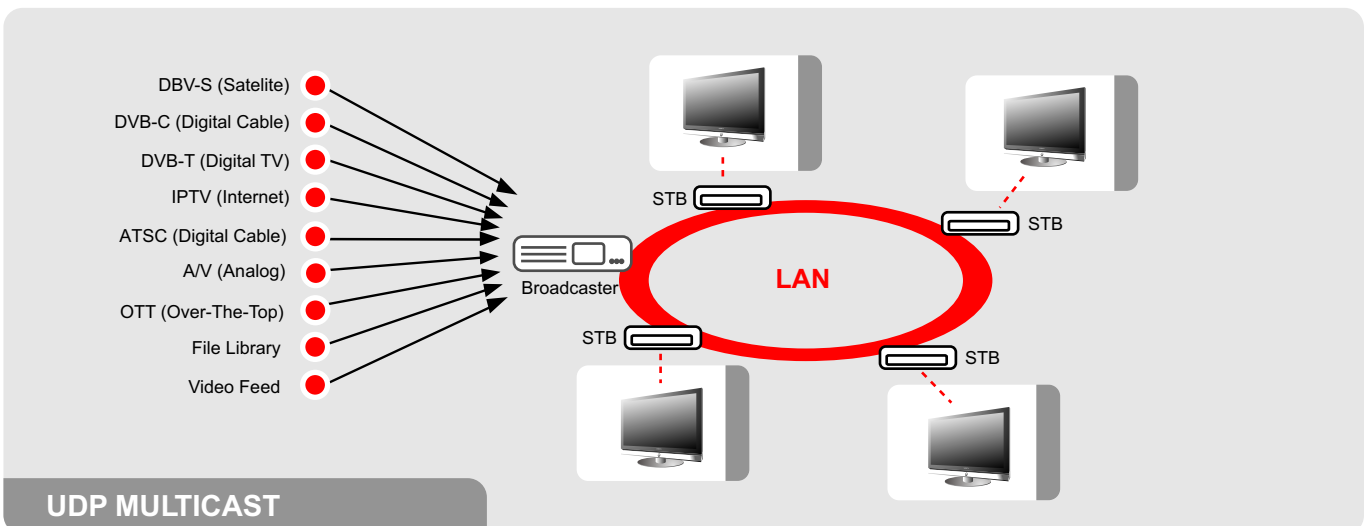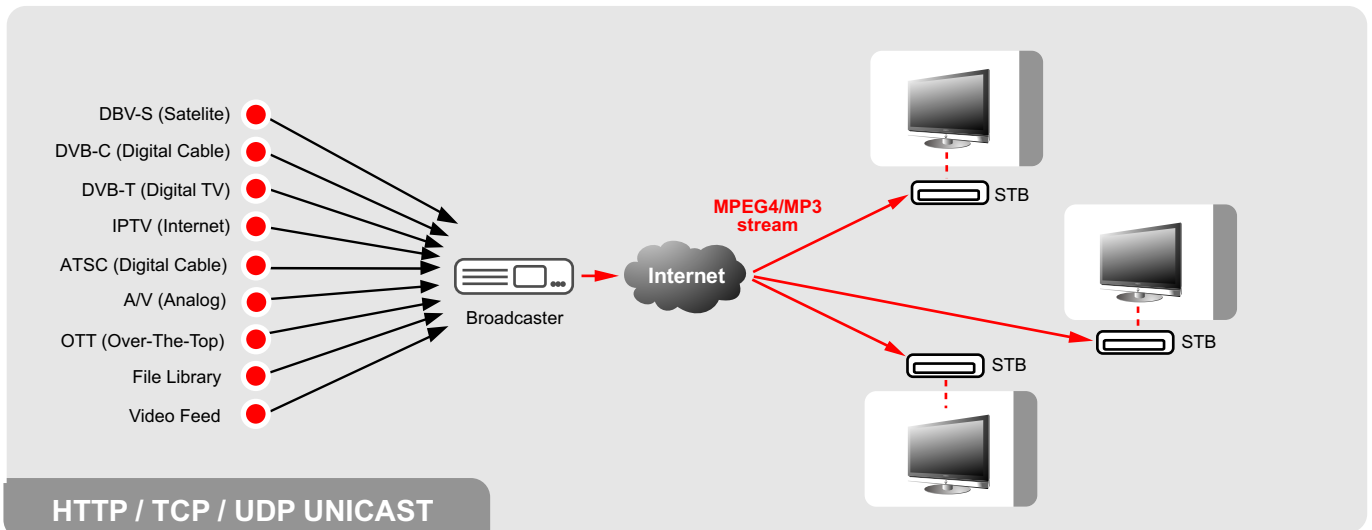## Universal Multicast and Unicast IPTV Solution

Features

- ■ **Turn-key IPTV Solution with Embedded Media Encoder and Streamer**
- ■ **Conditional Access for Subscribers**
- ■ **High-Volume Multicast and Unicast Streaming**
- ■ **Limited Subscriber Billing Support**
- ■ **Remote API interface to Third-party Billing and Middleware Servers**
- ■ **Multiple Video/Audio Codec Support**
- ■ **Flash Player Streaming Support**
- ■ **Advanced Hardware Configuration**

Problem

Educational institutions, small-to-medium size companies, hospitals, hotels, apartment complexes and many more enterprises require IPTV service that will allow its subscribers to watch channels over the Internet, and also supply digital IPTV signal in multicast format. The IPTV system captures media feed from a satellite connection and requires limited subscriber authentication and billing functionality.

Solution

Sysmaster Broadcaster supports satellite feed streaming and then streams the channels to multicast and unicast subscribers. The subscribers are authenticated based on MAC address or IP address. In addition, the broadcaster provides limited billing functionality with session recording.

DBV-S (Satelite)
DVB-C (Digital Cable)
DVB-T (Digital TV)
IPTV (Internet)
ATSC (Digital Cable)
A/V (Analog)
OTT (Over-The-Top)
File Library
Video Feed

Broadcaster → Internet → MPEG4/MP3 stream → STB

HTTP / TCP / UDP UNICAST

DBV-S (Satelite)
DVB-C (Digital Cable)
DVB-T (Digital TV)
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Video Feed

Broadcaster → LAN → STB

UDP MULTICAST

Turn-key IPTV Solution with Embedded Media Encoder and Streamer

Broadcaster is the only device in the industry that is a turn-key IPTV solution including an encoder and a streamer. The encoder is used to capture IPTV media and the streamer is used to send the data feed to the end subscriber. This allows Broadcaster to be used as a stand-alone server in IPTV projects that do not require complex billing or user management functionality.

Conditional Access for Subscribers

Broadcaster includes a Conditional Access for subscribers to simplify IPTV implementation. The server can filter our subscribers based on MAC address, IP address, and Subscriber balance. The system can also block subscribers from accessing the media content. In addition, the server includes a DoS (Denial of Service) prevention to ensure that malicious DoS attacks are prevented.

High-Volume Multicast and Unicast Streaming

Broadcaster is the only IPTV gateway in the industry that supports both multicast and unicast streaming to allow LAN and WAN customers to be serviced concurrently. The server will accept individual subscriber Internet connections as well as local area network connections. It supports TCP protocol for unmatched service quality and reliability that is accomplished by the utilization of error correction mechanism. In addition, the server has a built-in stream cache that will recover from temporary feed failures. In unicast channel streaming, Broadcaster can service up to 200 concurrent subscribers, while in multicast mode the number of concurrent subscribers is much higher.

Limited Subscriber Billing Support

Broadcaster includes a limited billing functionality for simple IPTV implementation. Administrators can specify channel cost and then deduct this cost from the Subscribers' balances. Once the subscriber's balance is depleted, he does not have access to paid content until his balance is restored. The system allows billing based on every access, daily, and monthly basis to facilitate simple paid content billing. In addition, all sessions are recorded for future export or review by the administrator.

Multiple Video/Audio Codec Support (with Transcoding)

Broadcaster provides support for a large number of codecs. The server can accept MPEG2, MPEG4, H.264, WMV, MP3, FLV, ASF, MMS and other formats and can output to MPEG2, MPEG4, H.264, WMV, MP3, FLV. Generally the Broadcaster is not intended to do transcoding (codec conversion), but if required it can do conversion for Standard Definition Video format. Unfortunately, for High Definition Video formats trancoding is not possible, so the Broadcaster will only capture and re-transmit HD video from satellite or cable feed. The use of Broadcaster Carrier is required for codec conversion and transcoding.

Remote API interface to Third-party Billing and Middleware Servers

Broadcaster includes an advanced API interface to remote middleware or billing servers. The server can be configured to send billing information before and/or after each channel access utilizing a simple HTTP request to the remote third-party server in real-time. In addition, the server stores locally all information to allow easy export and subsequent import into third-party systems. The API includes supports for a number of billing parameters such as client_id, session_id, duration, start_time, end-time, cost, client_name, channel_id, and others. The remote URL can be customized to provide easy interface for all types of third-party systems.

Flash Player Streaming Support

The server provides advanced Flash Streaming support to allow Flash players to play H264/MP3 streams. This makes streaming environment independent and allows all advanced HTML browsers to play the stream in real-time.

Advanced Hardware Configuration

Broadcaster has three hardware versions. The hardware is specifically designed to provide optimal performance for IPTV purposes and video streaming. The supported types of Broadcasters are: Broadcaster; Broadcaster Carrier; Broadcaster Blade. Broadcaster is a basic unit that will only to protocol conversion but will not perform any transcoding. Broadcaster Carrier is a high-performance unit that will do transcoding of up to four (4) SD channels or up to two (2) HD channels. Broadcaster Blade will accept up to 16 analog video/audio feeds and encode them into H.264 codec.

Broadcaster:
 1U Case, 120W Auto-Switching Power
 Dual Atom CPU, 1GB RAM, 4GB Flash
 1x DVB Card, 1x Smart Card Reader