

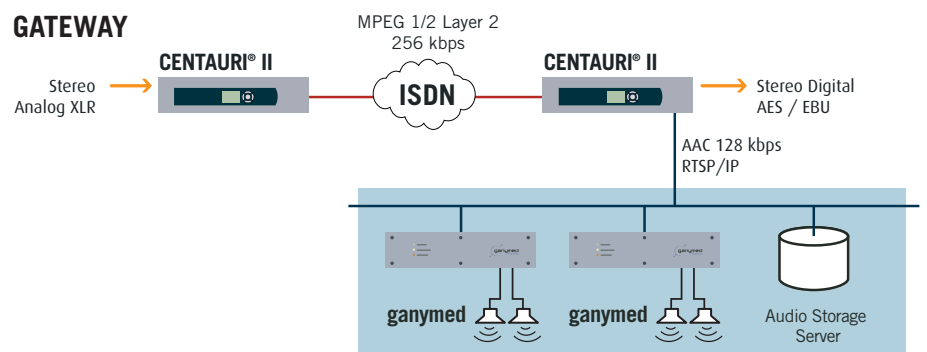
Imagine being able to **easily convert** from ISDN to IP, X.21 to ISDN, changing formats, bit rates, quality.



## 03 Solutions



Realtime/Live Broadcasting means the use of various networks, such as E1, ISDN, X.21 and IT infrastructures, i.e. IP networks. The send/received audio needs to be converted from one network to the other. Similar environments are typically found in government infrastructures.



**Background** The number of networks and formats used in governmental broadcasting is very high. Typical networks/interfaces are ISDN, X.21, IP, E1 and audio formats such as MPEG 1 and 2 Layer 2 and 3, MPEG 4 AAC and aacPlus (AAC HE), apt-X, Eapt-X, G.711, G.722, ADPCM4SB and many others. Standard equipment handles just a sub-set of these interfaces and formats, leaving traditional solutions requiring a multitude of hardware in order to handle just the audio formats. This results in an expensive and unnecessarily high investment. MAYAHs CENTAURI® II can handle all these networks and audio formats for the main transmission, as well as for the gateway operation; this results in a dramatic cost reduction.

Technically, the gateway function corresponds with the backup function because both control two network interfaces at the same time. See our datasheet "Backup Solution".



**Requirement** A typical combination of applications is live reporting and studio storage or live contribution and access to an archive. A major part of all live transmissions today is still handled by ISDN Audio Codec equipment. The alternatives are satellites or dedicated, terrestrial links. In all cases a particular audio format is used for the transmission, with generally another format being used for storage and archiving. This requires an additional process of conversion and a gateway operation.

**Idea** Use the new, 2nd generation CENTAURI® II Audio Gateway codec. With its two integrated and fully independent stereo codecs, the CENTAURI® II Audio Gateway codec can handle two completely separate networks simultaneously. Both codecs are constantly monitored in order to react instantly in alarm situations, building a bridge between them for conversion or for backup.

**Solution** Together with systems houses, government IT specialists and archiving software developers, MAYAH is in a position to build a new solution for Audio Gateway applications. The setup is as simple as performing a regular audio codec transmission. A CENTAURI® II 3000/3001 is used for bi-directional transmission to another CENTAURI® 3000/3001 via ISDN, e.g. via 3 BRIs using MPEG 1 Layer 2 384kbps stereo. The receiving CENTAURI decodes the signal and encodes it again for another network, e.g. the Ethernet interface with the parameters MPEG 4 AAC, 128 kbps, stereo with RTSP/UDP to feed the stream into the existing IT infrastructure; the LAN/WAN environment. An archiving software grabs the stream and stores it on a server for later retrieval by administration software to find and access audio by time, content, etc.

CENTAURI®s can run automatically or be controlled by a browser, Windows Remote software or SNMP management software.

**Event/Partner** In preparation for new government audio transmission and storage infrastructures, MAYAH was able to supply the perfect solution. The use of CENTAURI® was recognised as the most efficient means of attaining the required functionality but avoiding the excessive amount of equipment required by a conventional solution.



### Installation

- MAYAH CENTAURI® II 3001 for sending audio, with Ethernet and ISDN Interface, ISDN to be used as main interface, Ethernet to be used for remote control, Audio Codec set to Layer 2, 256 kbps, stereo
- ISDN network
- MAYAH CENTAURI® II 3001 for receiving audio and converting it to an RTSP/UDP stream to feed into the LAN/WAN environment
- Audio stream grabber software and an audio archive server for storage of the streamed audio.