

Euro1080 Technics Explained

Display format

The display format Euro1080 has chosen to use for HDTV is 1920 pixels x 1080 lines @ 50 hertz interlaced format. This format is also known as 1080i (hence: "Euro1080") and all major suppliers of display have it in their catalogue.

Technical Process

The central play-out and post-production will soon be located in Lint Media Center (Belgium).

1. The post-production & play-out centre for Main & Event Channel

Euro1080 has chosen to use Panasonic D5 HD and DVCPRO-HD as a tape format for production, post-production and recording of content. Other HD technical equipment such as cameras, vision-mixers, video-servers, are delivered by Thomson and used in the postproduction area and the master play-out room.

Programs (content) will be ingested (loaded) into a central data storage connected to a network of different video servers, ingest server, postproduction server, play-out servers.

Program rights, acquired by acquisition department and produced to a play list by the program department will be loaded into the station automation.

An automatic transfer of the program file from the central data storage will be sent to play-out servers in the Master Control Room. The program will be aired on time and additional graphics and the logo will be added.

The installation is prepared for multilingual voice and subtitling.

2. Encoding and Transport:

- The output signal of the master control room is connected to Tandberg High Definition DVB encoders.
- The ASI output of these HD DVB encoders is connected to the ASI input on the fiber network (connection) from Hove to the Astra1H satellite.
- The ASI signal is collected and made available to a multiplex input, where a capacity is made available for 2 possible HDTV channels on the transponder.
- Data space is also available to a carousel to carry additional services like world standard text (WST), EPG, DVB subtitling, etc.

3. Uplink & Satellite:

The SES-Astra satellite provider will uplink the signal for DTH reception. The signal is available for DTH viewers on a 60 cm antenna and adequate HD set-top box (STB). This HD STB is a satellite receiver and allows the user to get HDTV signals from Euro1080 with a user-friendly on-screen display unit. Other outputs in lower quality are also available for 720 x 576 and 720P displays.

This will give you the best picture quality on an adequate HD type display - 1920 pixels on 1080 lines, named 1080i. Displays are available at the market, and produced by many manufacturers, like Pioneer, Panasonic, Thomson, Sony, Samsung and many others. Sound is available in Stereo and Dolby Digital format.

The necessary Fec will be added to guarantee an error-free reception in difficult receiving conditions.

4. Cable Network Operators:

The satellite signal is available for cable operators as a transport stream from the satellite. To be able to receive the HDTV quality, cable operators who have upgraded the network to carry DVB-digital television can multiplex the transport stream in an HDTV channel. Turnaround equipment is available on the market.

The HD signal is received: e.g. 18Mbps, multiplexed with another HDTV and other services, to occupy 40Mbps in a single 7Mhz channel with QAM 256.

For cable, an adapted STB with cable tuner and QAM demodulator is available with the same basic outputs as the satellite version.