

1080 Lines

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▲ The main entrance of the Euro1080 Building is modern and enhanced with sculptures. On the right side a restaurant is being added to be used for TV recordings (talkshows, etc.). The offices are located in the front side of the building while the TV studios can be found in the rear. An additional building contains even more studios plus the staging area for Alfacam's 29 transmission trucks.

The picture resolution associated with high definition TV was incorporated into the Euro1080 name: HDTV is made up of 1080 lines of resolution. Euro1080 started its programming services back on January 1, 2004. The idea back then was to demonstrate to everyone that it was possible to technically create high quality TV with only minimal expense.



Corporate Affairs & Media Relations
Manager Yves Panneels ▶



▲ Technical Director Jacques Schepers in front of Euro1080's playout. The upper row of monitors display the signal of the HD1 channel in MPEG-2 via Astra 23.5° east. The middle row shows the HD1 signal in MPEG-4 via Eutelsat at 7° east while the monitor to the right displays the Re transmission of HD1 via Sirius, the signal for which is transmitted via Astra to an earth station in Stockholm that then beams it to Sirius. The bottom row of monitors displays the reception of HD1 in MPEG-4 via Astra at 23.5° east, the middle monitor the HD2 channel via Eutelsat at 7° east and the right-side monitor the EXQI channel on Astra at 23.5° east.

The idea came into being largely due to the company Alfacam that has since 2001 recorded and archived HDTV-quality programming. "We have already archived several thousand hours worth of material", explains Technical Director Jacques Schepers proudly, "our hard drives now measure into the terabytes."

Alfacam was founded in 1985 and is a tv facilities provider especially for outdoor events such as sports or concerts. "We estimate that we have one of the largest pools of HD recording equipment at our disposal", comments Yves Panneels, "Alfacam was and still is the leader in HDTV technology." Shareholders in Alfacam include roughly 75% owned by the founder Gabriel Fehervari and his wife. The remaining shares are held by the venture capitalist firm "Flemish Regional Investment Company". Both of them have a similar stake in Euro1080 that was founded towards the end of 2003.

A single HDTV channel was started with less than 10 employees. Today there are 42 employees putting together the HD1 channel along with an offshoot channel, HD1-NL, for the Dutch market as well as the EXQI culture channel for the Flemish section of Belgium. There's also the HD5 channel with select special programs such as those for presentation in theaters or B2B programming. The HD2 channel with some HDTV programming is slowly being phased out since there is really no need for it anymore. "We are in the process of transitioning to a programming provider", explains Yves Panneels. Euro1080 sees the sale of HDTV programs to package providers as



▲ The playouts runs automatically: the computers operate on one programming section after the other. The monitor to the left shows the old MPEG-2 system from EVS while the monitor to the right operates in MPEG-4 with a system from the manufacturer Grass Valley.



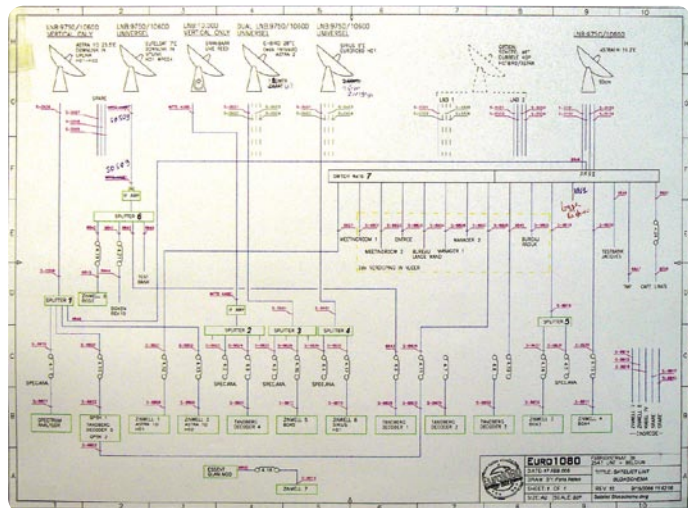
▲ Technical Director Jacques Schepers demonstrates the heart of the playout: signals can be routed to the two Astra transponders, the Eutelsat transponder or into the cable network with the click of a mouse.

part of its future by offering them language-specific programs. "We recently hired two Network Managers for our HD1 and EXQI channels. Their job will be to make these channels more attractive and also to adapt the program offer to different European markets", reveals Yves Panneels as he provides a look into the future.

The current programs are transmitted in an automatic 24-hour rotation. MPEG-2 will be in use only up until the end of 2007 at which point it will come to an end. "Instead of only two MPEG-2 channels, we can put five MPEG-4 channels on the same transponder", explains Jacques



▲ Close-up of the Matrix Control with which all uplink signals can be controlled.



▲ Euro1080 antenna block diagram with the send and receive antennas.

Schepers, "In MPEG-4 we can transmit at 8.8 Mbit/s in 8PSK and DVB-S2. In MPEG-2 we would need 16 Mbit/s to achieve the same quality."

What else should we expect from Euro1080? "We are also in the process of converting the audio to AC3 and we will soon be able to expand the EPG to 14 days," comments Jacques Schepers. Adds Yves Panneels, "This would enable us to make longer-term programming information available to the public." This would be an important step in making the Euro1080 channels more attractive!



▲ Programs are processed here in MPEG-4 and routed to Uplink.



▲ The transmission signal is controlled with the help of standard HDTV receivers such as from Humax.