



# UPGRADING GREEK STYLE

**Philip Stevens** finds out more about a major project in Athens

**E**RT – Ellinikí Radiofonía Tileórasi, the Hellenic Broadcasting Corporation – is the public radio and television broadcaster of Greece. It was one of 23 founding organisations of the European Broadcasting Union in 1950. Radio broadcasting services began in Greece in 1938, while TV coverage started in 1966. Today, ERT broadcasts four national and one international TV and radio services, as well as local radio services from its 19 regional stations. It also operates online and HbbTV (Hybrid broadcast broadband TV) platforms and is home to a national symphony orchestra, a contemporary music orchestra and a choir.

“We are based in Athens from where we operate one main news TV studio and five general purpose studios as well as two TV studios from ERT-3, our regional base in Thessaloniki,” explains Mike Nugent, ERT’s head of technology. “Currently we are undergoing an HD upgrade on all TV studio areas as well as the playout facilities.

The playout infrastructure upgrade, handled by systems integrator Pierides TechnoSystems, began in March 2020 and its migration was completed recently.”

## **STUDIO OPERATIONS**

Nugent says that the studio HD upgrade was completed with the purchase of a number of Panasonic AK-HC5000 HD Broadcast Studio Cameras equipped with the 3MOS sensor. In the main production galleries, Kahuna 9600 and 6400 vision mixers have been installed from Grass Valley’s Greek sales partner Telmaco. On the audio side, Telmaco was awarded the contract to supply ERT with two mc<sup>2</sup>56 broadcast production consoles, DALLIS I/O systems and V\_\_pro8 video processing units from Lawo for two of their TV studio control rooms, complementing similar units in the rest of the studios. The Lawo 48-faders mc<sup>2</sup>56 consoles are equipped with HD cores providing a DSP power of 192 DSP channels with redundancy for DSP and PSU, and a



**PICTURED ABOVE:**  
Mike Nugent





routing capacity of 8,192x8,192 crosspoints.

Other gallery upgrades include graphic suites from RT Software. This solution consists of three Swift graphics edit stations with the ability to ingest live video, which will be used for the creation of flexible graphics templates by designers. “The key benefits of Swift are the ease with which templates can be created and the flexibility that can be built into them for when they are being used by the operators live on air,” explains RTSW commercial director, Mike Fredriksen.

The project also includes seven dual channel Swift-Live graphics systems with WebControl. These are the live on-air rendering engines, and feature two independent graphics channels per PC. The operators use WebControl (one of RTSW’s command and control solutions) to select, manipulate and populate templates and put them to air as needed.

Fredriksen adds, “RT Software’s ‘Repository’ product will be used to facilitate synchronisation and distribution of graphics projects to ensure the correct and latest style of graphics are used by the operators on a daily basis. We are

also conducting on-site training with Graphics Workshop.”

The project was designed and completed with the close cooperation of RTSW and their partners in Greece, broadcast IT and media projects specialists, AmyDV.

## PLAYOUT PERFORMANCE

Another major element of the upgrade involved ERT’s playout capacity. “We wanted to upgrade the 15-year-old infrastructure that would revolutionise playout for a national multi-site delivery,” explains Nugent. “Pebble Beach’s Marina system was the outcome of a tender process and will enable ERT to utilise resources over multiple servers, and to serve the agility of its users across the country.”

Nugent continues, “The main equipment to be installed are Pebble’s Marina for playout automation, Harmonic Virtual SpectrumX for playout servers and 96TB Media Grid for near-line-storage, ROSS MC1 Master Control Switch and Xpression on-air graphics and finally EVS – AXON conversion gear.”

Two Marina playout systems will be deployed. One system will be situated at the Athens HQ, which will facilitate up to five channels, and the other will transform the regional playout of ERT-3 which is based in Thessaloniki. “We decided to keep ERT-3 as a separate operational unit, maintaining its own continuity and autonomy servicing the regions.”

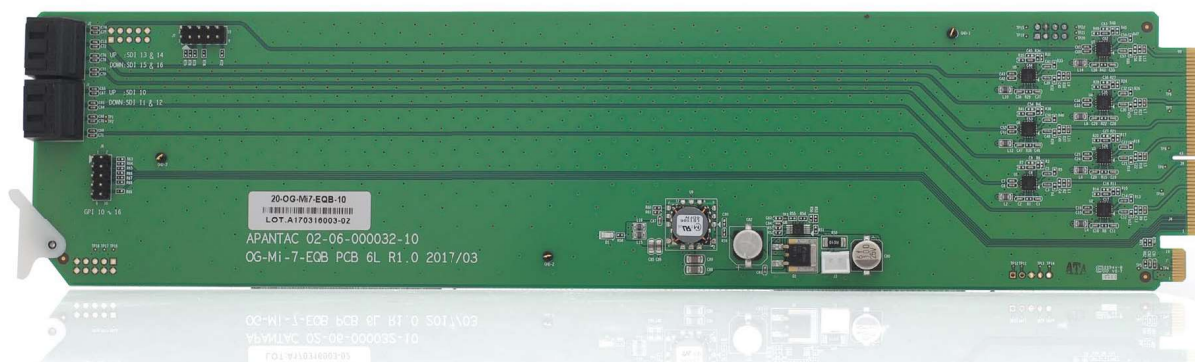
## QUICK ANSWER

Nugent goes on, “What is new and really interesting for us is the introduction of a Skype Professional server from Quicklink. We are also exploring the platform’s use of cloud technologies in relation to remote journalist connections, which allows for multiple journalists to work in a virtual environment. The pandemic has shown that we need to explore remote cloud production to be able to remain fully operational under such demanding circumstances. Again, AmyDV, as the local Quicklink partner for Greece, was involved.”

David Chalkidis from AmyDV adds some more detail. “During the first phase of the Covid-19 pandemic, ERT reached out to us to provide a solution which would support their remote production capabilities. The volatile conditions presented to them at the time meant that they had to prepare for remote presenters using high-quality signals.”

The flexible and configurable Quicklink solution suite starts with a choice of servers from simple single channel rack units up to high-availability ‘broadcast’ class servers, and simple to use high-quality studio links with remote contributors and advanced virtual waiting rooms.

“With the help of the experienced team at Quicklink HQ we were able to demonstrate these advantages and



*'The list of equipment supplied included 21 openGear frames and 70 OG-Mi-16#-SET-1s, which are Apantac's 16 input multiviewers for the openGear platform that support 3G/HD/SD-SDI inputs.'*

since studio operators were already familiar with Skype it was decided to begin with a pair of Quicklink TX (Skype TX) servers to support two of their studios with a plan to add ST55 (Quicklink Studio) and Distribution (virtual waiting room) and possibly a fully remote Studio-in-a-box (ST500) at a second phase."

Chalkidis says the advantages include high broadcast quality HD to SDI outputs for Skype clients, a simple licence upgrade to full-duplex 'studio quality links' with any good quality smartphone or notebook simply by sending a time-slotted SMS, WhatsApp or email link which opens in a regular browser, and a licence upgrade to virtual waiting rooms.

### MONITORING THE SITUATION

The upgrade also called for multiviewers for which Apantac was awarded the tender. The list of equipment supplied included 21 openGear frames and 70 OG-Mi-16#-SET-1, which are Apantac's 16 input multiviewers for the openGear platform that support 3G/HD/SD-SDI inputs. They will be used in the studio galleries, master control galleries and a couple of OB vans. Twelve of the OG-Mi-16#-SET-1 multiviewers are equipped with the "Utah-RTR-License" over IP, which allows the facility to update the window labels of the inputs fed by the Utah router dynamically.

The tender requirement asked for 16x1 multiviewers, but the OG-Mi-16#-SET-1 comprises 16x2 multiviewers; one output is HDMI and another one is SDI. This means either can be configured as 16x1 with identical HDMI and SDI outputs or as 16x2 with independent layouts on the HDMI and the SDI outputs.

Also included in the tender were two Moxa serial > IP

converters that allows the user to drive the OG-Mi-16#-SET-1 multiviewer using the TSL protocol over IP for the Tally and Labels management system. All multiviewer hardware is identical and can be swapped out easily, which reduces the necessary spares parts and training needs.

### OB OPPORTUNITIES

Nugent adds that the outside broadcast operation is also part of the upgrade programme. "Our main OB truck will take on board the same Panasonic cameras as the studio. But what is more interesting for us is the plan for a completely new vehicle that is part of a competitive dialogue process."

This is a public-sector tendering option that enables bidders to develop alternative proposals in response to a client's outline requirements. It is only when these proposals are developed into sufficient detail that the tenderers are invited to submit competitive bids. At the time of writing, that process is still underway.

"This new van will be our first IP venture," explains Nugent. "In effect, it will be an IP studio on wheels! We will use it to become more experienced with the internet protocol technology before introducing it into the studio operation. For the time being, the main station will still be SDI-based."

He concludes, "This upgrade project was planned and is being executed in an extremely tight schedule and through the challenging restrictions imposed by the Covid-19 pandemic which affected the delivery of equipment and the access to our facilities. Currently, we are on track and should be able to migrate to the new systems on schedule. This will enable ERT to go forward with its plans to move into an agile HD environment!" ■