SHARP / NEC

Customer Installation Command & Control / Surveillance

Motorway Traffic Control Centre, Dublin
From monitoring to managing – critical control of transport networks

Operational 24/7, the Motorway Traffic Control Centre receives multiple live data feeds from Dublin's road and tunnel network. A vast 15 metre long NEC video wall provides operators with instant access to information as they maintain safe and efficient traffic management.

Operated by Egis Road & Tunnel Operation Ireland (ERTO), the Motorway Traffic Control Centre (MTCC) is responsible for the safe and efficient management of the national motorway network and Ireland's tunnels. Located near the Port Tunnel entrance in Dublin, the control centre monitors and manages over 65 million vehicle journeys a year. The centre operates several services, including variable message signs to motorists, emergency road telephones, advanced traffic management systems, as well as monitoring Dublin city centre traffic.

SITE INFORMATION

Sector
- Command & Control / Surveillance

Client Information
- Egis Road & Tunnel Operation Ireland (ERTO)
  www.erto.ie

Integration Partner
- Digicom
  www.digicom.ie

Installation date
- Installed summer 2020

EQUIPMENT

- 58 x MultiSync® UN551S HD ultra-narrow video wall displays
- 57 x OPS-Sky-i7 embedded PCs
- 12 x Hiperwall v6 HiperOperator licenses
- 372 x Hiperwall v6 HiperSource licenses
- 26 x Hiperwall v6 HiperView HD licenses
- 1 x Hiperwall v6 premium suite license

The Challenge

Dublin's Port Tunnel which opened in 2006 was conceived in order to relieve traffic congestion suffered by Dublin city centre, by diverting HGVs from the Dublin Port directly onto the motorway network. Handling two-thirds of Ireland's seaport trade by value, Dublin is an incredibly important and busy port, fully operational 24/7. ERTO first upgraded its control room facilities in 2011, working with AV specialist Digicom to install a 4x2 NEC video wall to provide the screen estate needed to monitor traffic passing through the Dublin tunnel.

Today, with a €60 million investment from Transport Infrastructure Ireland (TII), a new state of the art control centre in Dublin's docklands is commissioned to take the safety of Dublin's road network into the future. Now also incorporating coverage of the M50, the most heavily used road in the country carrying nearly 145,000 vehicles daily, the MTCC monitors

and manages the entire Dublin road and tunnel network, future proofed for ever increasing usage. ERTO again chose to partner with Sharp/NEC and Digicom to upgrade its control room facilities in line with its wider and more complex remit.

The Solution

Thought to be the largest video wall of its kind in Europe, standing 3 metres high, and 15 metres wide, the 4.2-million pixel video wall comprising 52 x NEC MultiSync® UN551S displays, receives multiple data feeds coming from every inch of Dublin's traffic routes.

"People in this room are getting information from incident detectors in the road, automatic number-plate recognition systems, emergency response telephones, CCTVs and weather stations, among others," says Andrew O'Sullivan, senior operations manager for TII network projects. *"We are able to measure the level of surface water and wind speed, close lanes and reduce speed depending on what we see here."*

The integration of NEC displays driven by the Hiperwall content management system provides a highly flexible solution for managing multiple and varied data sources. Capable of expanding to welcome unlimited input sources and any number of output displays, Hiperwall is incredibly versatile. As an IP-based solution there are no physical controllers requiring space-consuming racking equipment; Hiperwall is seamless and endlessly adaptable to changing needs, without additional hardware.

As the ambient light within the control room changes throughout the day and night, the brightness of the video wall automatically adjusts accordingly to provide just the right level for eye-pleasing readability.

"The NEC with Hiperwall solution was an easy choice for the client and for Digicom. Its agile functionality is aligned with expectation in today's IT world." says Peter Fox, commercial director at Digicom. *"The client wanted flexibility and resilience and Sharp/NEC proved to have the best software solution to match this."*

The 52 x 55" MultiSync® UN551S ultra-narrow bezel displays configure to create a video wall 13 screens wide by 4 high, with only the smallest image gap at just 1.8mm. *"The NEC display has an extremely narrow frame which gives us maximum screen area for the video wall with minimal interruption to the image,"* explains Darren Byrne, project director at ERTO. *"Image quality and reliability is essential for our operations and we are very confident in the NEC displays."*

Designed for operation within harsh environments, the unique NEC heat management system was an important feature, since heat build-up can be a major concern for large video walls. The robust metal cabinet also supports efficient heat dissipation.

An additional 2 x 2 MultiSync® UN551S video wall is located in a separate incident room with the same access to all data feeds as the larger overview video wall.

The Result

The upgraded system marks a transition from monitoring roads to actively managing them. By monitoring incoming data, the purpose of the control centre is to get information back out to road users to help them travel safely. Cutting speeds and reducing congestion is the ultimate objective, ensuring motorists complete their journey without incident.

The visualisation and manipulation of data afforded by the vast NEC video wall system means operators are able to continuously monitor the road network, controlling the efficiency of traffic through-put and anticipating and responding to incidents immediately. Receiving data from every inch of the road network, Dublin's road users can travel safely in the knowledge that help is at hand should it be required.

Darren Byrne concludes: *"The NEC video wall gives us incredible visualisation and is highly reliable. Digicom managed the installation from start to finish and continue to provide us with excellent support."*