



DUNDEE

ONE CITY, MANY DISCOVERIES

Dundee City Council are one of Scotland's thirty two unitary authorities providing much needed essential and lifeline services to the population of around 153,000 citizens in the City of Dundee, which covers an area of some 21 square miles.

The council area is bordered by Angus to the north, Perth & Kinross to the west and has the River Tay and Fife to the south. Dundee is known as the 'City of Discovery' being the location of many of today's leading computer game and multimedia developers, biomedical science companies and two universities and is also the home to the famous 'Scott of the Antarctic' expedition ship RRS Discovery. The authority already relies upon wireless technology for its entire wide area network connectivity and is still the largest user of the technology for such purposes in Scotland.

A major and continuing investment in the waterfront area of Dundee presented the council with an opportunity to decommission its ageing Headquarters building known as Tayside House, however the building housed the council's CCTV monitoring station and also gave the council a lofty position with which to place some CCTV camera's used for road traffic management and general monitoring, so the challenge for the council was to find new locations for both the monitoring station and camera's.

The monitoring station location was easy, as the council were moving to a new HQ a short distance away; however the new building did not afford the council the same height as the old location, so new camera locations needed to be found. Locations were identified, but the next problem was that of connectivity back to the monitoring station. The council investigated the cost of dark fibre / leased line provisioning, but as the costs seemed prohibitive, they turned to the technology they had already placed their trust in for wide area connectivity around the city, that being wireless.

Rapier Systems proposed a MESH WI-FI solution to connect 4 camera sites on the ring road, around the Tay Bridge feed roads & the mainline train station to allow for the constant monitoring of traffic flows as originally conducted using cameras on Tayside House. Also an additional remote site was designated for traffic flow cameras monitoring the Tay Bridge itself. We specified, surveyed & installed a solution to provide connectivity for all cameras with an emphasis on CCTV IP video transmission, allowing for all camera's specified in the brief to be connected via the wireless medium and operate without jitter or pixellation and give seamless PTZ functionality.

In addition to the MESH system we also installed a PtP link, again with an emphasis on the application (i.e. IP video Transmission) to connect multiple camera's monitoring the Tay Bridge area – this was installed at the same time as the MESH system & was commissioned simultaneously. The system proposed & installed is capable of meeting the needs of the council with room to grow the IP CCTV coverage to 50 camera's around the city or to serve as a central controller for Internal/external Wi-Fi coverage for council premises. During the installation we also acted as consultants to advise on other Wireless camera installations & placements using alternate manufacturer's equipment to be installed & maintained by their incumbent IT provider.

The council were able to have the camera's up and working without the need to dig up the city streets across very busy routes into & out of the city centre, reducing the overall cost & time for the deployment of the system with the added advantage of having the ability "Grow" the system when or if required in the future to connect any UTC device (Such as VMW/Matrix signs, active managed Traffic light solutions – SCOOT etc, as well as more UTC CCTV). With the main deployment being MESH – a single outage does not prevent the system from working as the available unit's route around the outage issue to keep continuous operation – so no more fibre outages!



"We continually look at ways to enhance our systems and provide a high level of service to our customers and the citizens of Dundee. Investing in our wireless broadband network is an essential part of this process. Rapier Systems provide a cost effective solution that meets our current needs, while providing a scalable platform for the future,"

Graeme Quinn - IT Network Manager, Dundee City Council.

About Rapier Systems

Formed in 2003 Rapier has unrivalled expertise in the design, delivery and support of wireless (including WiFi) networks and systems; the company is a value added integrator of best-in-class wireless products.

Whether within or between buildings, upgrading or replacing existing networks, or designing and installing new wireless systems, Rapier's experience in environmental analysis and network design ensures complete coverage and optimal performance.

Rapier works with world leading wireless system vendors, including Ruckus, Alvarion, Airtight, Cambium/Motorola, Ceragon, SAF Technika and several more. The company has reached the highest level of accreditation with each of its partners and understands which vendor and product is best suited for each environment.

Rapier has grown dramatically on the back of a surge in demand for wireless networks, which it has designed and installed in a wide variety of challenging environments from colleges and oil rigs to business parks and theatres.

Rapier maintains Scotland's largest Wireless Network, covering Dundee City, Angus and Perth & Kinross Councils, which comprises around 250 sites.

The company has designed and delivered some of the most innovative wireless solutions in the UK, including the largest metropolitan area wireless network in Scotland and one of the largest county-wide wireless networks in England. Rapier delivered the 1st fully licensed Gigabit wireless link in the UK.

The company's headquarters is located in Fife, Scotland and it has offices in St Neots, Cambridgeshire, England.

Rapier has a UK wide customer base in sectors that include Local Government; Transport, Renewables, Oil and Gas, Retail and Leisure.

For further information please visit www.rapiersystems.com

