



## REACHING PATIENTS FAR AND WIDE

WE DELIVERED AN MEF CERTIFIED CARRIER ETHERNET NETWORK DELIVERED OVER HYBRID FIXED WIRELESS/FIBRE CORE ARCHITECTURE CONNECTING SWARH'S SMALL, MEDIUM AND LARGE HOSPITALS ACROSS REGIONAL VICTORIA.

The South West Alliance Of Rural Health (SWARH) is an Alliance of public health agencies in the South West of Victoria covering an area of approximately 60,000 square kilometres connecting all public acute hospitals and associated health services in a region extending from west of Melbourne to the South Australian Border.

SWARH was formed in late 1997 to focus on the development of IT for the Acute Public Hospitals in the South West Region of Victoria. The alliance has invested in communications technology to improve service delivery and health care services within the region.

### THE CHALLENGE

SWARH had a TDM circuit based transmission network for their voice, video and data applications throughout these hospital locations. Due to a lack of fibre infrastructure in these areas, these services were delivered over copper and PDH microwave and were limited to 2xE1 (4Mbps) and 4x E1 (8Mbps).



SWARH WANTED TO UPGRADE ITS NETWORK FROM A TDM CIRCUIT BASED TRANSMISSION NETWORK TO A HIGH QUALITY REDUNDANT NETWORK THAT CAN SCALE.



SWARH required a network that would:

Provide high quality and redundant broadband coverage over a large area.

- Enable on-demand scalability to meet individual site requirements.
- Improve clinical and administration operations whilst containing costs.
- Be fully managed and adhere to strict SLA's and QoS standards.

## OUR APPROACH

Our design team worked with SWARH and their system integrator to develop an MEF compliant Carrier Ethernet network delivered over Vertel's unique and world first hybrid wireless access/fibre core architecture. The network would provide 20Mbps, 50Mbps and 100Mbps services for SWARH's small, medium and large hospitals.

We were able to build this network in a fraction of the time it would have taken to install an equivalent fibre solution and within a budget that was acceptable to SWARH. The network design allowed for the seamless addition of new sites as well as providing an interconnect with AARNet for access to research and education functions and programs associated with the connected hospitals and health agencies.

““ VERTEL PROVIDED US WITH AN IDEAL SOLUTION THAT PERFORMS TO THE SAME STANDARDS AS THE NBN'S "PREMIUM GRADE" ENTERPRISE OFFERING. IT IS A FULLY REDUNDANT SERVICE THAT IS ESSENTIAL FOR OUR LIFE CRITICAL APPLICATIONS WITH THE ABILITY TO INCREMENTALLY INCREASE BANDWIDTH CAPACITY AS AND WHEN THE NEED ARISES.””

**Garry Druitt**  
CIO  
SWARH

## THE SOLUTION

Having invested in our own network infrastructure over the past 40 years, we were uniquely positioned to provide SWARH with a fully managed, Layer 2 carrier grade Ethernet service to each of its 30+ geographically diverse locations. The fully redundant network was designed utilising a ring topology with 1+1 microwave connections backhauled into an MPLS based core.

We were also able to provide 24/7/365 support and work in proactive collaboration with SWARH's Layer 3 system integration partner in ensuring full conformance with SLA and CoS commitments.

VERTEL WAS ABLE TO BUILD THIS NETWORK IN A FRACTION OF THE TIME IT WOULD HAVE TAKEN TO INSTALL AN EQUIVALENT FIBRE SOLUTION AND WITHIN THE BUDGET.

- A FULL NETWORK UPGRADE DELIVERING UPTO 100MBPS CARRIER ETHERNET ACCESS OVER LICENSED MICROWAVE CONNECTIONS INTO EVERY MEDICAL FACILITY.
- OVER 1GBPS OF CAPACITY ACROSS THE NETWORK.
- NETWORK REDUNDANCY BY UTILISING RING NETWORK TOPOLOGY OVER AN MPLS CORE AND 1+1 MICROWAVE LINKS.
- INTERCONNECT WITH AARNET SUPPORTING RESEARCH AND EDUCATION PROGRAMS.
- MEF CE 2.0 CERTIFIED CARRIER ETHERNET SERVICE.
- 24/7/365 SUPPORT.



## THE RESULTS

Vertel's certified Carrier Ethernet service has proved to be the ideal solution for SWARH. The delivery of standard voice and data services has been greatly enhanced and the previously challenging task of network management has been significantly simplified.

The network has enabled the introduction of high quality video conferences and the ability to transfer large files that are generated by ultrasound, CAT scans, MRI and other medical imaging.

The architecture provides for the seamless provision of additional sites and delivers guaranteed, scalable bandwidth with quality of service to support SWARH's current and future business and life critical applications.

## ABOUT US

We are an Australian licensed telecommunications carrier specialising in the design, build and operation of next generation critical communications network infrastructure and associated services. We have over 40 years' of experience delivering critical network services to Government, Enterprise and Service Provider organisations. We specialise in delivering carrier grade and alternate telecommunications infrastructure in non-metro, regional and remote Australia.

We have offices across the country with a national network operations centre (NOC) in NSW that proactively monitors our networks 24/7/365.

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