

Dear Ingrid

The Loop and our partners have given your ROI serious consideration. Our investigation concludes that conventional commercial solutions will struggle to provide the specifications the Council is seeking within the budget allocated.

If that proves to be the case the Council may find the Loop's community network-based approach to service provision to be of considerable interest.

Through the benefits of collaboration, the Loop offers its users an impressive high spec CCTV facility more than capable of satisfying the Council's requirements. The Loop has established for critical elements for an advanced CCTV facility:

- Fibre and wireless connectivity
- Corporate grade CCTV monitoring and recording software
- Extensive storage and backup facilities
- Access to expertise in each of these key areas and in the provision of appropriate cameras

This is a powerful platform capable of meeting sophisticated user requirements. Furthermore, it provides a future proofed solution with almost unlimited capacity for expansion.

Finally, because of its aggregated approach that combines demand and resources, the Loop is able to offer highly cost-effective services.

However, by its very nature this collaborative approach does not lend itself to the traditional commercial response to an ROI.

Rather, this proposal offers the opportunity to enter into discussions exploring a quite different approach to CCTV service provision but one that has the potential to provide the Council with a cost-effective solution tailored to your particular requirements.

This response does not aim to "win the contract", but rather to encourage the Council to consider talking to the loop about how by working collaboratively we could design a solution that benefits both the Councils and a wide range of community users.

We look forward to your response and are more than happy to answer any questions you might have.

Charles Newton (Loop Chair)
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The Nelson Loop's submission for the supply of the Nelson City Council's Closed Circuit Television Camera Upgrade.

The Nelson City Council (the Council) is planning to implement a phased upgrade of its closed circuit television camera system(CCTV).

As it may not be possible for conventional offerings to meet the Council's expectations within the limited budget available, the potential of the Loop's collaborative and community-focussed proposal will be of considerable interest.

Introducing the Loop

The Loop is a high speed network across the top of the South Island serving an aggregation of 30 schools and NMIT. Utilising fibre provided by our major benefactor, Network Tasman Limited (NTL), the network runs from Collingwood to Picton and includes Blenheim and Nelson urban areas. The Loop is a cooperative organisation operated for member schools by Nayland College. The Loop is now in its fifth year of providing a robust and reliable service to its 20,000 users and has received two significant national top awards recognising its groundbreaking innovation and quality of service.

The Loop supplies a hi-spec CCTV service to schools which NMIT and NTL are also considering accessing as and when appropriate. For this service CCTV cameras and Milestone Corporate software are provided by 'Online Communications' a nation-wide consultancy that specialise in the provision and installation of high grade CCTV hardware and software. Online Communications have a strong background in this type of CCTV environment and their supply partner (Channel Ten Security Imports Limited) was a major consultant in the recent Christchurch City CCTV project.

The CCTV traffic is transported through a secure VLAN over the Loop's infrastructure to the recording location. Recording can be done at any location on the Loop's CCTV network and all or any part of the CCTV data stream can be securely viewed from any networked location.

The Loop currently records onto a sophisticated virtual server farm operated by Nayland College and Nelson Girls. This data centre ("EdSerf") meets the server needs of these two big colleges, the Loop and several smaller schools. Other schools are poised to join EdSerf in 2010. Currently the Loop is investigating a national failover and archiving regime.

Normally the Loop is only allowed to provide services to schools and education but in this situation Network Tasman Limited are prepared to grant a dispensation that allows the LOOP to offer this community service to the Nelson City Council.

The Proposal

This proposal aims to utilise both the considerable capacity of the Loop in providing and managing virtual networks and our partner consultants proven expertise and experience in the provision of CCTV equipment (Online communications), network and wireless design (Steve Webb B2B solutions) and network transport (NTL) .

Cameras: There is an expectation that users install good quality cameras to take advantage of the superior Milestone software and enable the CCTV system to enjoy high quality recording both day and night. Most recognised industry standard cameras are compatible with this software.

The Loop would look to Online Communications for assistance. The matrix of different camera and mounting choices available is considerable so Online Communications has suggested one scenario (see Appendix). However, they feel that it would be much more beneficial to make a presentation to the Council's CCTV group so informed decisions about the most appropriate equipment can be made.

Connectivity: As noted in the EIO the cabling aspects have been classified as 'difficult' and in-house engineers have been unable to find a solution. However, the Loop, NTL and Online Communications are all very familiar with managing 'difficult' cabling environments. This consortium has worked together to build an ideal mix of experience and ingenuity. We propose the following options:

- The best option is fibre - which the Loop would contract Network Tasman Limited to install.
- The second option is radio/IR/wireless. Here the Loop would contract Steve Webb (B2Bsolutions / WAND and the Loop's architect). B2Bsolutions specialises in providing innovative and economic solutions.

Online Communications and Channel Ten Security Imports Limited with their experience in providing IP CCTV solutions for a wide range of applications, in particular Channel 10's experience with the Christchurch project and the usual traffic and security cameras environment also are very experienced to providing effective connectivity solutions.

Software: The CCTV software to be used is the Milestone's top of the range **XProtect Corporate** product.

Key software points:

- The software meets the Privacy guidelines as referenced in the EOI.
- The Milestone system and fibre network is infinitely scaleable to hundreds of cameras.
- Recording can be done under licence from any location on the CCTV network, including the NCC IT centre.
- Although all members are using the same software and a common transport media the system can be securely configured so that users can view only selected cameras.
- The secured viewing locations can be located anywhere on the CCTV network.
- There are many operating example of Milestone software in action including the Christchurch City CCTV system, and on the Loop.

More information can be gained by reading the linked [website](#) .

Transport: The transport of the camera data streams would be over the Loop CCTV VLAN with the data stream accessed from a Loop POP (peering point or school) where the camera data streams could join the Loop's network. It is envisaged that the proposed CBD wireless system would be tied into the CCTV network.

When other CCTV initiatives want to join this service the most simple and elegant way to manage the interconnection between all the different Nelson, Tasman and Marlborough CCTV networks would be to meet at a peering point (aka the Nelson Internet Exchange – NIX – about to be under the management of NTL).

Monitoring: Nelson like many other centres operates a 'nighthawk' community service where community members assist from providing a real-time service. The flexibility of this solution will greatly increase the flexibility and efficiency of this service. Furthermore, the Loop is very interested in supporting this service to help with the prevention for arson and graffiti attacks in our schools.

Recording and storage: This submission envisages that the Council's CCTV local (main) storage will be managed by the COUNCIL'S IT system although it is a good practice to have failover and archiving done elsewhere. This failover and archiving could be done by EdSerf.

Costing Model for this proposal

It is very difficult to provide a concrete quote as to the connectivity and cabling solution as an effective solution requires considerable dialogue with the Council and suppliers to ascertain exactly what is required before we could design a solution and undertake a detailed analysis of all the options.

- **Camera costs - Axis Communications Q6032-E PTZ network camera.** Price Guide \$6500.00 plus GST each - this does not include installation etc. The specifications for this unit are detailed below.
- **Axis Communications AXIS Q7401 Video Encoder to allow for a phased approach to migrating from the current system to the new infrastructure** - Price Guide \$1120.00 plus GST each. The specifications for this unit are detailed below. These units are analogue to IP video encoders that will convert the analogue feed and PTZ commands for an existing camera to an IP video stream, allowing existing cameras to be integrated into the new recording solution without needing to replace the camera itself.
- **CCTV data stream management**
 - \$1000/annum
- **Software**
 - Initial setup software cost (one time only):
 - Service setup: \$2000

- Camera licence: \$530/camera
 - Annual Loop cost for software upgrade and management: \$1000
 - Annual camera software assurance cost: \$100/camera
- **Transport** (Assuming the NIX model described above)
 - Internal Loop transport costs will be covered by NTL's 'community networks' commitment.
- **Storage:**
 - The calculated storage required is dependant on the number of cameras integrated into the new solution, based upon our understanding that constant recording is required for 8 weeks of storage at 5 frames per second, approximately 150 gigabytes of storage would be required per camera. With this in mind, and assuming that all cameras detailed on the EOI are accommodated for then at least 1.5 terabytes of storage would be required.
 - Local storage would be provided by the Council's IT Department.
 - Archive and failover cost (EdSerf): EdSerf charges \$100/500 gig/month for storage.

The parties would need to negotiate the various parameters (as described above) in order to arrive at the most effective and yet affordable solution.

Conclusion:

The Loop's CCTV service has been running for two years. It utilises the best available software and transport tools while benefiting from a co-operative environment. The resulting aggregation generates the best economic model possible for Top of South community entities.

There are substantial benefits from growth in the service. As membership expands costs are shared. Furthermore, the cost of fibre transport and server software remains fixed and the only 'cost' factors that rise with size are the camera licences and storage. The effective cost of each additional camera installed reduces. In effect the greater membership the greater the advantage for the all CCTV membership.

We believe that, given the obvious financial and technical constraints facing the Council, this proposal offers the opportunity to broker a high quality yet affordable solution that will benefit all concerned. This situation is tailor-made for an aggregated and collaborative solution as has been outlined above.

As this collaborative approach is a departure from the traditional offerings for such services we would value an opportunity to meet to discuss this concept in greater detail, outline what is on offer and answer the questions this proposal will have raised. We would also like to start fostering the type of cooperative community network environment where a number of different groups can benefit from services offered to users across the Top of the South.

We look forward to the opportunity to discuss this concept in greater detail.

Charles Newton (Loop Chair)

Geoff Scrimgeour (Loop Manager)

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The owners pledge:
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'Online Communications' statement

Online Communications Ltd

17 January 2010

Nelson City Council
P.O. Box 645
Nelson

attn: Ingrid Beach

re: Proposed Surveillance cameras for Nelson City Council CCTV upgrade project

Dear Ingrid,

Thank you for this opportunity. This camera system proposal is most interesting as it provides many challenges, therefore opportunities, to create a solid reliable surveillance system.

As an ex Nelsonian, I understand the locations and the challenges involved, including the movement of vehicular and pedestrian traffic. Not only this, but the terrain, lighting conditions and potential activities that occur in Nelson, especially after dark and how this can change dramatically with the seasons and times of year (such as Christmas and new year).

Online Communications, are considered experts in Cabling systems, Telephone systems, Wireless systems and not least IP Camera Surveillance systems. Online does not involve themselves in analogue camera systems as we strongly believe that this is old technology. The IP technology works extremely well with our other facets of business especially the cabling and wireless systems. IP cameras and systems provide far greater image quality, features and sophistication that the analogue systems could never match.

Online has installed many camera systems for many different types of clients. Our clients camera systems have assisted with reducing crime & vandalism & have instances where their camera system has paid for it's self in savings.

Match our camera systems and management software with the incredible infrastructure that the Loop provides and you have a system that Nelson City could not overlook.

Our proposal is different and sensible, it will give flexibility, a long term growth path and reliability that is second to none. It has the potential to be the system that other city councils use as a template for their own.

I encourage you to discuss this further and allow us to show you what we can achieve for your benefit. I look forward to discussing this further and assisting you with your surveillance system.

Yours sincerely,

Online

Clark Meister RCDD
Director

About Online Communications

Online Communications is a specialist cabling and communications company, which provides brand independent installation and support of cabling systems, telephone systems, wireless systems and IP surveillance camera systems.

Online has a large team of skilled and experienced technicians who design, install and maintain these systems.

Online has been in operation since 1987 and over the years has enjoyed an enviable reputation in the market place for quality, professionalism, dependability and excellent client support.

Based in the Wellington business district, Online's Wellington team covers the greater Wellington region and with the enhancement of a Palmerston North office, covers the lower north island.

Nation-wide installations are managed by the Wellington team and are installed by Online's local representation who perpetuate the Online approach to business and have similar philosophies to Online, ensuring one point of contact for the client.

Online's goal is to meet and exceed the client's needs and expectations. The Online team constantly strives to anticipate those needs and provide the services their client's desire through analysis of their contribution to the clients business and by identifying ways to improve their service through adding value to their client's activities.

With a history of successful business operation spanning more than twenty years Online is confident of it's formula for success. Online is committed to future growth of the business and excellence of service, with the qualification that Online will temper the rate of growth to maintain quality standards and service levels.

Online's strategy is for measured growth and ongoing enhancement of professionally designed and installed systems and services.

What's different about Online Communications?

Owner Operated: Owners are fully involved in the business.

Employees Not Subcontractors: We have 30 full time employees.

Longevity: Online has been in successful operation for over 20 years, by the same owners.

Project / Account Managers that know what they are talking about!:

All of our Project / Account Managers have been promoted from installers. These guys are experienced in the field and are now excellent Project Managers.

Accessible: Available 24 hours. **Nation-wide:** We cover the whole country.

Knowledge: Online staff are fully trained and experienced, their knowledge in this industry is second to none. Our qualifications include certification from cabling, telephone system, wireless and camera system manufacturers and we have 2 qualified RCDD on staff.

Wide Range Of Services And Products: Cabling, telephone systems, IP surveillance camera systems, wireless systems, products and a whole lot more.

Design: We don't just install; we design, install and maintain your systems.

Brand Independent: Range of quality brands, we choose the right one for each installation.

Quality Focused: Online's focus is only completing quality installations.

Our Solution Overview

The following product proposal is based upon the assumption that the proposed solution will utilise an 'IP' based video recording solution provided by the Nelson loop project and that IP connectivity to cameras is provided via pre-installed network infrastructure (likely a combination of fibre-optic and wireless connectivity).

Additional to this, the proposal has taken into account the current cameras in use in the existing system and the following camera requirements detailed in the EOI:

- ✓ The best possible quality night time images allowing for city variables such as lighting.
- ✓ Each camera must be controlled with pan tilt, zoom (PTZ) capability. Police need to be able to zoom into recorded images for identification purposes.
- ✓ Infrastructure must allow for camera locations to be changed.

We also understand that the proposal should allow for a phased approach to migrating from the current system to the new infrastructure. **With this in mind we would also like to suggest the use of analogue to IP video encoders that will convert the analogue feed and PTZ commands for an existing camera to an IP video stream, allowing existing cameras to be integrated into the new recording solution without needing to replace the camera itself.**

With these requirements and assumptions in mind, we are please to propose the following product/s on the following pages:

Price Guide:

We have included pricing as a guide for the individual components as detailed above. As indicated this pricing is a guide and does not include installation etc. Once the complete number of cameras and potential cameras is known we negotiate better pricing with our supplier and pass this on.

Axis Communications Q6032-E PTZ network camera

Price Guide \$6500.00+GST Each

AXIS Q6032-E is an outdoor-ready PTZ dome network camera for cost-efficient and reliable installation in demanding surveillance applications. It is ideal for use at airports and seaports, as well as for city and perimeter surveillance. The camera is powered through High Power over Ethernet. This simplifies installation since only one cable is needed.



Arctic Temperature Control allows the camera to not only function at -40°C (-40°F) but also power up at that temperature following a power failure. AXIS Q6032-E can operate in temperatures from -40°C to 50°C (-40°F to 122°F). It has an IP66-rated protection against dust and water.

AXIS Q6032-E has a fast and precise pan/tilt response. In addition, it can tilt 20° above the horizon for a total tilt range of 220°, enabling better views, especially over uneven terrain. It has 35x optical and 12x digital zoom. License plates can be read from a distance of 160 m (525 ft.) The camera has an auto-tracking functionality that can automatically detect and follow a moving object within the camera's field of view.

The Axis Q6032-E is an excellent choice for the requirements detailed in the EOI and matches or improves on the specifications of the Panasonic cameras currently in use.

Key features relevant to the EOI include:

- ✓ PTZ control. – 450 degrees per second rotation. (Panasonic cameras are 300 degrees/s)
- ✓ Day/Night operation - Minimum illumination levels of 0.008 Lux (Panasonic minimum is 0.03)
- ✓ Optical zoom – 35x optical zoom with 12 x digital zoom (Panasonic 22 x optical 10 times digital)
- ✓ Image Resolution - PAL: 704x576
- ✓ Image settings – Wide Dynamic Range, Electronic Image Stabilization (EIS), manual shutter time, compression, colour, brightness, contrast, sharpness, rotation, aspect ratio correction Text and image overlay, privacy mask, image freeze on PTZ
- ✓ Local storage - stores images to cameras internal memory if IP connection is lost.
- ✓ All in one unit – extremely fast installation time.

[LINK TO PRODUCT WEBSITE](#)

The Q6032-E can also be used with a variety of off-the shelf mounting solutions, making it ideal for a wide range of fixing surfaces.



AXIS T91A61 Wall Bracket

Wall Bracket for AXIS Q6032-E PTZ Dome Network Camera.
Includes mounting plate and wall bracket.
Part no: 5017-611



AXIS T91A64 Corner Bracket

Corner Bracket for AXIS Q6032-E PTZ Dome Network Camera.
Requires AXIS T91A61 Wall Bracket.
Part no: 5017-641



AXIS T91A67 Pole Bracket

Pole Bracket for AXIS Q6032-E PTZ Dome Network Camera.
Include steel pole straps. Recommended mounting tool.
Part no: 5017-671



Pendant Kit for AXIS Q6032-E

1.5 inch NPT thread adaptor for pendant mount. For connecting to ceiling mountings with 1,5 inch NPT thread.
Part no: 5502-43

Notes on low-light and night time operation.

We note the requirement for any new cameras to have an improved low-light performance, to improve the identification of individuals and object of interest during the night. Although the camera has an extremely sensitive infrared sensor allowing for superb day/night performance, low light situations will always decrease the image quality that a camera will produce.

This can be in some part remediate by strategic placement of infrared floodlights in areas of particular interest. This allows for the infrared sensor to collect more infrared wavelength light and consequently improve the low-light image quality.

Axis Communications AXIS Q7401 Video Encoder

AXIS Q7401 Video Encoder is a high performance, single channel solution that integrates an analog camera into an IP-based video surveillance system. With outstanding video processing capabilities, AXIS Q7401 delivers superb video quality and significant savings in bandwidth and storage.



AXIS Q7401 offers the highly efficient H.264 video compression, which drastically reduces bandwidth and storage requirements without compromising image quality. Motion JPEG is also supported for increased flexibility.

All Axis video encoders connect to analog pan/tilt/zoom (PTZ) cameras to allow for easy operation of these PTZ cameras across the IP network. Axis' open policy ensures simple and fast integration with most analog PTZ cameras on the market by including software drivers for more than 25 different analog cameras, including products from American Dynamics, Bosch, Canon, **Panasonic**, Pelco, Philips, Samsung, Sensomatic and Sony.

[LINK TO PRODUCT WEBSITE](#)