

Exploring alternatives for networked based video recording



© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D

Overview of USC

- Opened 1996
- 500 staff 7000 students
- 40 staff in IT Dept
- 15% growth in students 2010

The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



History

- Counselling rooms
 - DVD recorder
 - Sony Camera
 - LCD TV
 - Kramer switches
- Harmony Remote (Macro functions)



The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



Project

- The faculties of science and Arts seek a video recording, storing and archiving, streaming and viewing technology solution to carry out activities such as
 - Paramedics
 - Occupational Therapy demonstrations
 - Sports and Exercise recording of athletes
 - Counselling sessions for teaching and learning purposes.
- The solution is expected to be funded with approx \$250,000

The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



Requirements

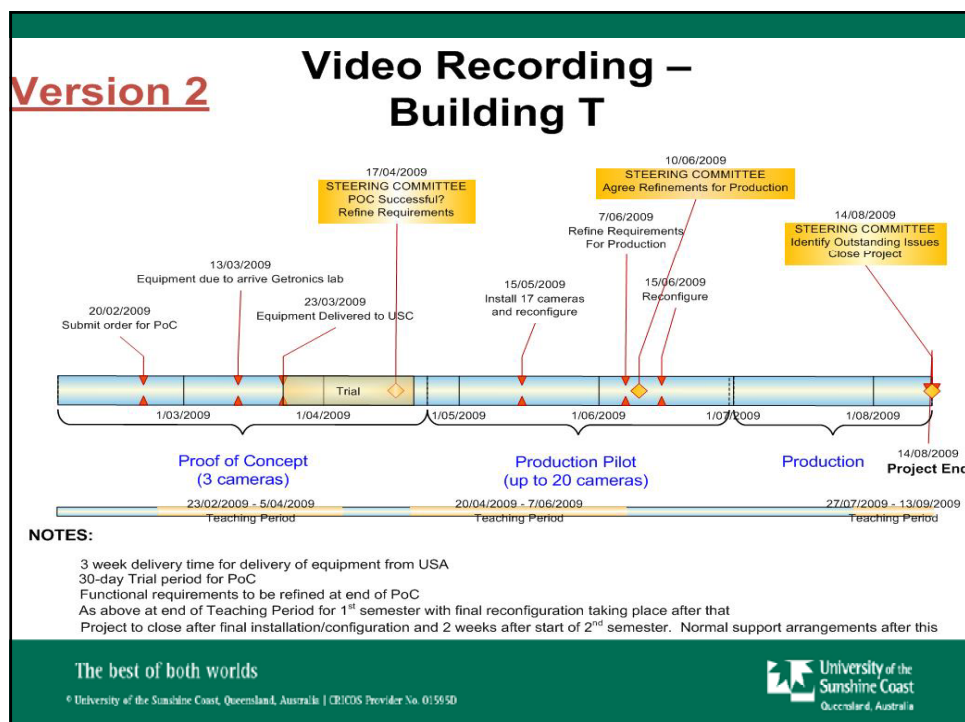
- Find a solution that will allow users (staff/students) to control the recording of 20 cameras located in 15 designated areas
 - Choose the destination of the recording, i.e. secured and private location on the network
 - Send live streaming into an adjacent viewing area
 - Record and stream simultaneously
 - Post-recording management of data e.g. make available to other users or groups

The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



Requirement	Description	Indigo Visio Compliance	Test Verified
Video Quality	At least VGA quality - able to clearly identify facial expressions, etc.	yes	
Audio Quality	Lip synchronised and able to clearly follow a conversation	yes	
Security and Privacy	Recordings or Live streams cannot be accessed by unauthorised users	yes	
PC to Camera relationship	PC can only record from designated camera	yes	
File storage	Files to be recorded to user accessible secure and private location	yes	
User Controls	Start, Pause, Stop, view previous recordings, delete	yes	
Camera Controls	PTZ (at least some), auto focus	yes	
Bandwidth friendly	2Mbps is acceptable = around 1GB per 1 hour of recording	yes	
Live Streaming	Admin user can enable live streaming from camera to Viewing area	yes	
Stream and Record	Record session while live streaming to viewing area	yes	
Scalability, Robustness	Must be scalable and perform to acceptable HCI standards	yes	
Metadata	Searchable contextual user defined data	yes	
Overlays	Metadata on video screen	yes	



Who we compared

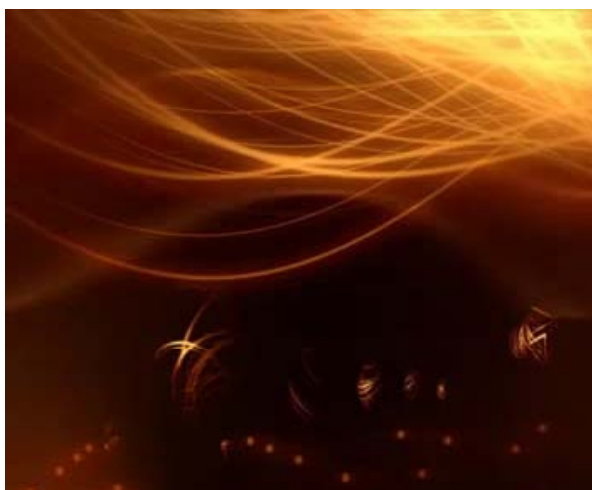
- Cisco\Getronics
- Tandberg\Didata
- Digital Rapids cards
- Mediasite
- Starbak\AVI
- Naskam\IndigoVision (VideoPro)

The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D

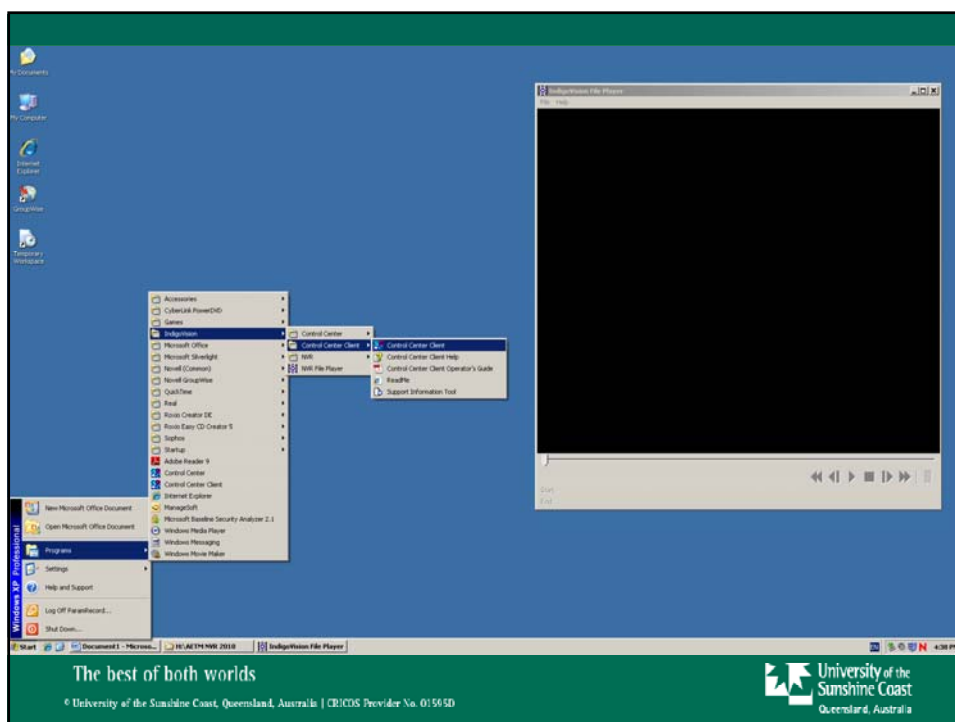
University of the
Sunshine Coast
Queensland, Australia

How it works



The best of both worlds

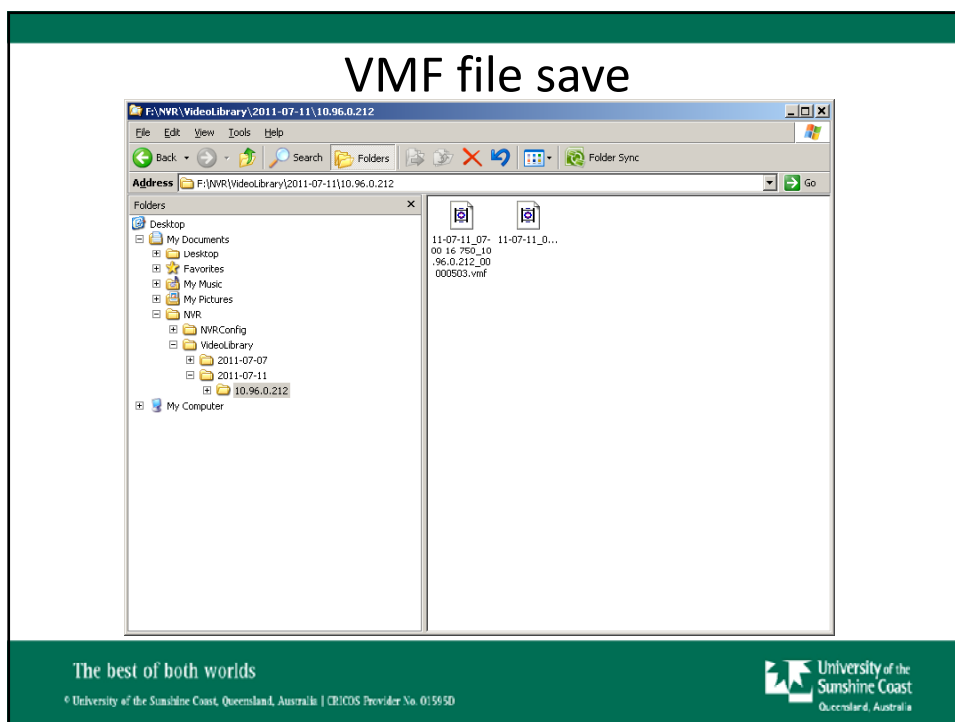
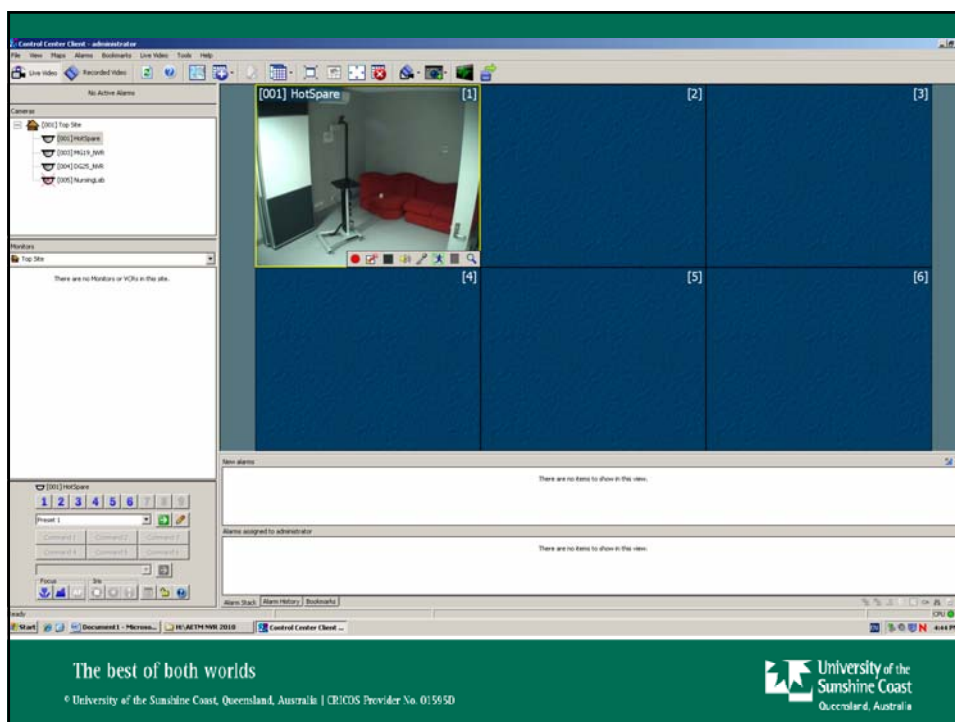
© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01565D

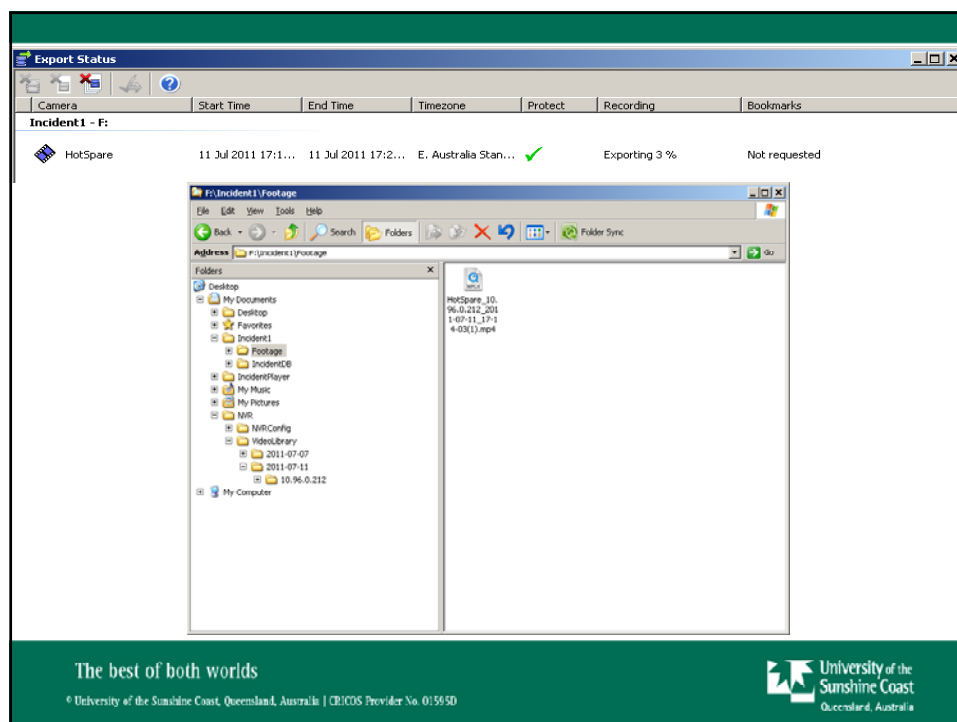
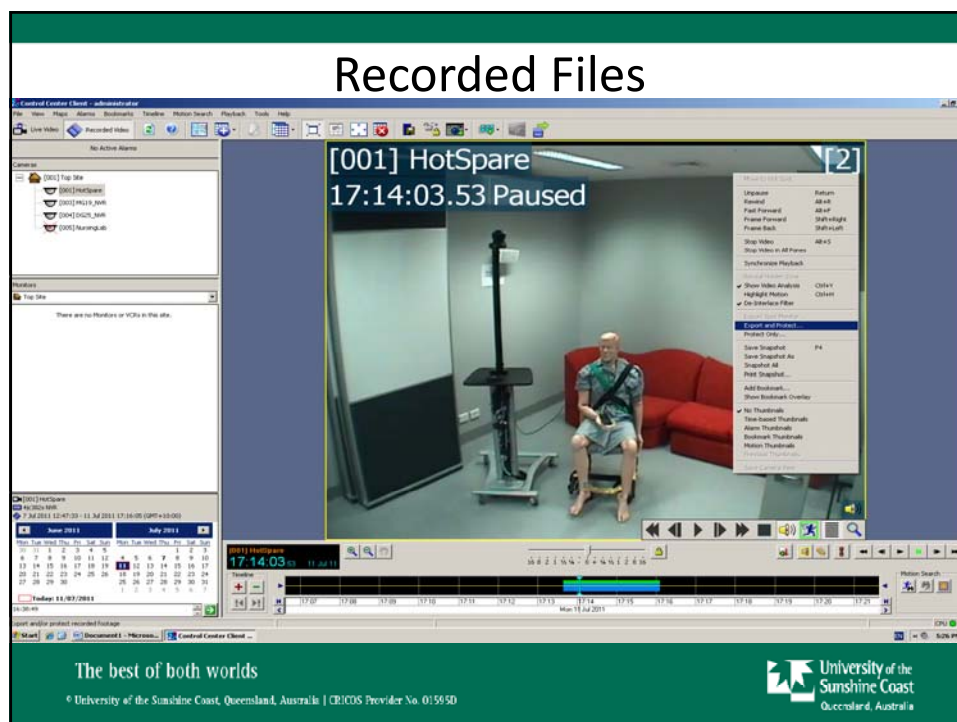


The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01565D







Example of Recording

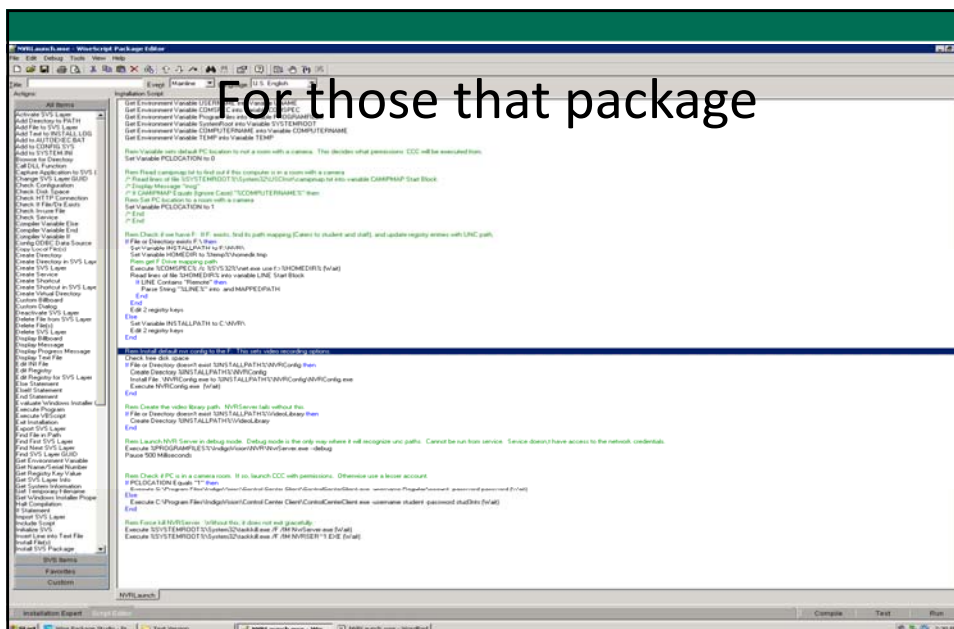


The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



For those that package



The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



- **Installation**
- NVR 3.19 (MST to remove NVR Admin.exe, this allows silent install)
- Control Centre Client 3.18
 - Delivers Custom
 - NVR cccdb Configtool.exe
 - NVR Launch.exe
 - Calls NVR cccdb Configtool.exe
- Control Centre 3.18
 - Delivers custom ControlLaunch.exe
- **Launch/Run Control Centre Client**
- Start menu item “Control Centre Client” actually launches “NVR Launch.exe
- **Launch Control Centre**
- Start menu: ten “Control Centre” runs ControlLauncher.exe
- **F:\ is network share**
- NVR Launch.exe
- Set registry entries to student F:\ ([UNC Path](#))
- Install NVR Config files to student F:\
- Create Video Library folder student F:\
- Execute NVR server.exe – debug
- Execute Control Centre Client.exe –username: XXXXX –password
- Execute taskkill.exe /F/IM NvrServer.exe
- **Control Launch.exe**
- Set registry to Staff F:\
- Run “NvrServer.exe” as user with **–debug**
- Run ControlCentre.exe prompt for password

The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D

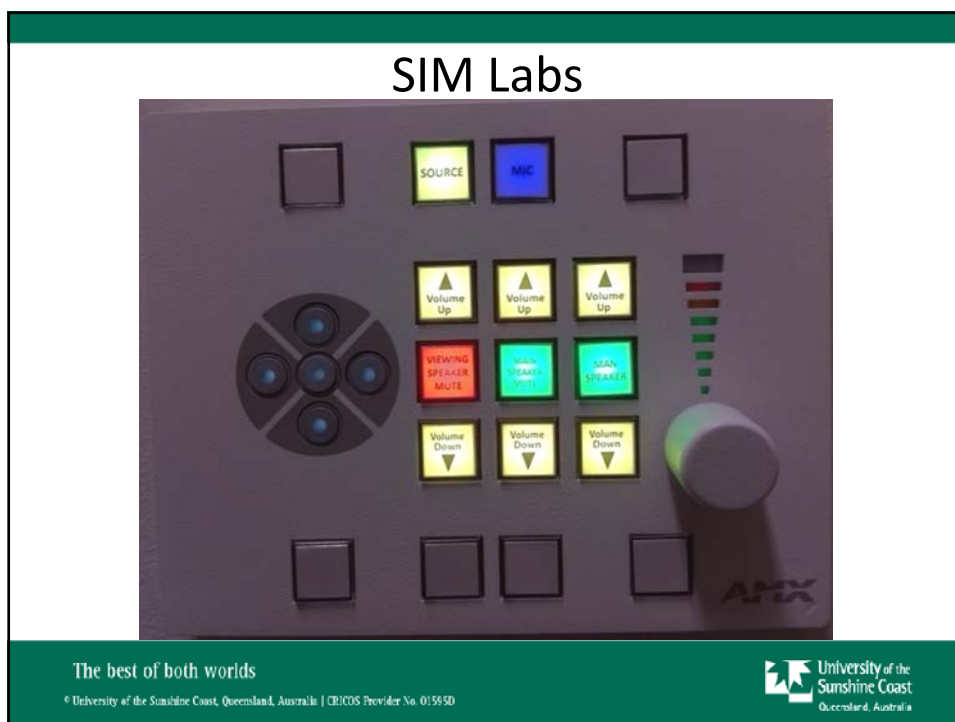


The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D









NVR Unit



IndigoVision

- Home
- Network
- Date & Time
- Video
- Profiles
- Encoder 1
- Encoder 2
- Analytics
- Audio**
- PTZ (Serial)
- Binary IO
- Events
- Advanced Network Configuration
- Network Security
- Firmware Upgrade
- Diagnostics

IP Address	10.72.2.214	Host Name	1_37
Location	USC_Tower	Date-Time	12 Jul 2011 13:47:41

Audio Configuration Submit

Audio Output Gain: (Range: 0 to 100)

Input Type:
☐ Line In
☐ Dynamic Microphone
☐ Condenser/Electret Microphone

Audio Input Gain: (Range: 0 to 100)

Audio Bit Rate: kbps

The best of both worlds
© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



Who was involved

Ben Johnson: Network Administrator (Phone number: 0754594667, Email: BJohnso1@usc.edu.au)

- Ben manages the network (LAN and WAN). Ben is responsible for VPN connectivity, IP addressing, switches, load balancing (BigIP), routers, certificates, and any other network related requests.

Ben Johnston: System Administrator (Phone number: 0754594787, Email: BJohnsto@usc.edu.au)

- Ben is responsible for the installation and configuration of the servers. File and share access and authentication. He will be the contact person for Storage, access to the folders and files, and quota management.

Barry Pollard: Infrastructure Analyst (0754302817, Email: bpollard@usc.edu.au)

- Vast experience and knowledge

Bret Parkinson: Senior Information Technology Officer (0754594824, bparkins@usc.edu.au)

Jesse Harris: IT Officer (Phone: 0754594692, Email: JParris@usc.edu.au)

- Please contact Jesse if you have any questions regarding desktop management and configuration.

Rob De Marco: TechOfficer – ICTSystems Phone: 07 5459 4663 Email: RDeMarco@usc.edu.au

- Central to the overall testing, installation, and liaison with all parties (His baby)






The best of both worlds
© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



Questions



The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



NVR Unit

Standalone Transmitters & Receivers

A family of IP Video Transmitters and Receivers incorporating IndigoVision's class-leading compression technology

IndigoVision's range of Standalone Transmitter and Receiver products are designed to be used with the company's complete end-to-end IP Video solution and have class-leading MPEG-4 or H.264 compression technology built-in.

The units allow traditional analog CCTV cameras and video monitors to be integrated into an IP network. The standalone unit is available as either a Transmitter only or as a Transmitter/Receiver. Two levels of compression technology are available - the 8000 Series provides H.264 and the 8000 Series provides MPEG-4.

Full duplex audio is available as an order option on all Transmitter/Receiver products.

All products have a range of digital I/O for PTZ control and alarm integration.

IndigoVision's IP Video solution allows advanced features such as Activity Controlled Frame Rate (ACFR) and real-time analytics, available as an order option, to be deployed on the Transmitters. These features reduce the bandwidth and NVR storage requirements during periods of scene inactivity and allow the user to deploy advanced analytics to identify events as they occur in real-time.



- ☐ Class-leading MPEG-4 or H.264 compression
- ☐ Full frame rate, full colour, 25/30fps guaranteed
- ☐ Optional full duplex audio
- ☐ Optional built-in real time analytics
- ☐ Extended Temperature Option
- ☐ Power-over-Ethernet for lower installation costs



Datasheet

The best of both worlds

© University of the Sunshine Coast, Queensland, Australia | CRICOS Provider No. 01595D



Naskam

Regards,

Zoltan Eory
Adv.Dip.Eng(Elec)
CCTV / IP Video Engineer

Naskam Security
Ph : +61 7 5493 5494
Mob: 0414 708 269
www.naskam.com

