Mine Site Automation & Communication

Implementation & Integration of new Communication & Automation Systems to Improve Safety & Productivity

30 & 31 August 2011 • Duxton Hotel, Perth, WA

Featuring presentations by:

Dave Goddard, Global Director, Mining System Solutions, NEWMONT (USA)
Joe Cronin, LHD Automation Project Manager, Northparkes Mines, RIO TINTO
Simon Blears, Process Control & Automation Superintendent, Argyle Underground Project, RIO TINTO TECHNOLOGY & INNOVATION, PERTH
Jatin Kalra, Electrical Systems Technician, COOK COLLIERY - CALEDON
John Massey, Section Executive, Systems & Communications, PARSONS BRINCKERHOFF

With an Expert Speaker Line-Up:

Mal Harwood, IT Manager, CROSSLANDS RESOURCES
Jock Cunningham, Theme Leader, CSIRO
Andrew Watkinson, Business Manager for Surface Communications, MINE SITE TECHNOLOGIES
Grant Wilmot, Technical Director, MINETEC COMMUNICATIONS
Matt Hanlon, Project Manager, M5 NETWORKS SECURITY
Mal Jones, Manager Asia Pacific Region, 3D-P
Con Caris, CEM’s Mining Automation - 3D Visualisation coordinator, CSIRO
Patrick Glynn, Research Engineer, CSIRO
Kerrie Unsworth, Professor Management & Organisation, UNIVERSITY OF WESTERN AUSTRALIA / CRC MINING
Senior Representative, CSC Australia

Why is Mine Site Automation & Communication so important for the future of the mining industry?

“Mine Site Automation & Communication is very important for the future of mining, as it brings out the best technology and practices to be implemented in the near future.

With the discussion of topics related to mining, mines can share their experiences with particular product and technology. This helps in decision making while introducing new technology.”

Jatin Kalra, Electrical Systems Technician, COOK COLLIERY - CALEDON

Maximise your time out of the office by attending the interactive workshop: Exploring the Benefits of Wireless – Communication and Tracking

Visit the FREE Download Centre for speaker interviews, articles, podcasts, white papers and much more at www.mineautomation.com.au

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Exploring the Benefits of Wireless – Communication and Tracking

This interactive workshop will look at current wireless communication systems that are available for employment on your mine site. Furthermore it will focus on assessing problems & potential solutions with current wireless communication technologies. This session will also touch on “back up” communication options that can be installed to provide a more full proof communication infrastructure.

Session 1: Wireless Communications: What is Available? And What Can it Do for You?
- Reviewing past wireless communication systems and current systems available on the market
- Assessing new wireless communication systems and their higher levels of reliability
- Choosing a wireless system that suits the terrain and environment of your mine site

Session 2: Applying Wireless Technologies and Tracking
- Analysing the risk associated to applying wireless technology to particular systems
- Delivering a contingency plan that can provide security to wireless technology used on site
- The benefits of wireless tracking

Session 3: Interactive Feedback and Discussion
- Outlining workshop participant problems and work done to date
- Applying the principles of the workshop: would they be applicable and if not, why?
- Ensuring collaborative feedback from participants to assist each other in solutions

Facilitator:
Mark Hedley, Principal Research Scientist – ICT Centre, CSIRO

About Our Sponsors

Associate Partner
MINETEC
Minetec has been designing, supplying and installing cutting-edge technical communications to the Mining and Oil & Gas Industries for ten years.
Existing clients include Rio Tinto, BHP Billiton, FMG, Thiese and Newcrest in Australia, Barrick Gold and Lycopodium in Tanzania and Grande Cache Coal Canada.
Deliverables include Wi-Fi and Wi-Max solutions, Tracking, Tagging, Proximity Awareness and Messaging systems, Digital Radio, Ethernet over Leaky Feeder, Fibre Optic & Microwave solutions as well as Mining Camp Facilities all backed by on-site maintenance.
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www.minetec.com.au

Event Partner
MINE SITE TECHNOLOGIES is a global leader in mining communications.
Our technologies have been installed in over 500 underground & surface mines around the world and include:
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VoIP MinePhone – for two-way voice & texting underground via the digital network
Proximity Detection – underground & surface
PED Emergency Warning System
BlastPED – remote blast initiation
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Spotlight Partners
A global leader in providing technology-enabled business solutions and services.
CSC is a $16.7 billion global IT services company with 50 years experience and over 92,000 employees worldwide, and revenues of $1.3 billion and 3,500 employees in Australia.
We currently deliver mission-critical services to natural resources clients including BHP Billiton, Rio Tinto, Woodside Petroleum, Vale and Newmont Mining. Our expertise spans mine IT planning, end-to-end plan and execute, logistics, equipment tracking, technical data management, remote communications, and information management.
Contact Details:
CSC Australia Pty Limited
26 Talavera Rd
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www.csc.com.au

3D-P has been a provider of mining solutions for over 15 years and has current deployments in the largest mining companies in the world on every continent.
Known for their expertise in integration of virtually any application and any interface technology, 3D-P now pave the way in providing intelligent solutions that enable the reliable and effective integration and management of autonomous applications onto the mobile wireless network.

3D-P consists of an international team of mining engineers, electrical engineers and software engineers and developers with decades of experience developing advanced customer driven technology solutions for the mining industry.

M5 Network Security is a fully Australian-owned company established in 2003. M5 Network Security’s Secure Communications System, on display at our booth, addresses communication requirements for mining environments utilising our network security expertise. Most recently, we have applied our experience with high-level secure communications to SCADA environments, particularly for the energy, mining and large manufacturing industries. Visit our booth to learn more about M5 Network Security’s latest enterprise-grade SCADA network security solution.
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Sourcefire, Inc. (Nasdaq: FIRE), Snort® creator and open source innovator, is a world leader in intelligent Cybersecurity solutions.
Sourcefire transforms the way organizations and government agencies manage and minimize network security risks.
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Comscentre is Australian owned with global reach providing corporate grade IP telephony, data, video, LAN and WAN managed communications services across Australia and the Asian region. Comscentre provides businesses with the unique One Touch Communication solution - the amalgamation of voice, video and data into one centralised, affordable and fully managed service that enables collaborative networking. One Touch Communications put simply is the ability to make a video or voice call, or data transaction with one click and know it will work.
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Contact Details:
CSIRO
Mark Hedley,
Principal Research Scientist – ICT Centre, CSIRO

Tuesday 30 August 2011, 17.30 – 20.30
INTERACTIVE WORKSHOP
Dear mining professional,

I am proud to present Mining IQ’s 3rd annual Mine Site Automation & Communication 2011 conference agenda.

This event has been created for, and responds to the immediate needs of, instrumentation, control, automation and electrical engineers in charge of improving the communication and automation systems employed on their mine site. The focus will be on the methods, strategies and technologies that can be implemented on your mine site to increase overall mine productivity, as well as improve levels of safety.

Why attend Mine Site Automation & Communication 2011?
A: Hear case studies presented by Australia’s top mining companies
B: Being Mining IQ’s 3rd Mine Site Automation & Communication conference, we understand your challenges and have created a program tailored to your needs
C: Hear about current communication and automation technologies that are changing the mining industry

Mine Site Automation & Communication 2011 has been developed to provide you with an interactive and quality learning environment. Over the two days you will be exposed to a variety of presentations ranging from case studies, panel discussions and round tables to enhance your experience as well as answer your immediate concerns.

Book by 21 June 2011 to take advantage of the $400 early bird discount! Simply call 02 0229 1000, email registration@iqpc.com.au or book online at www.mineautomation.com.au.

I look forward to meeting you at this distinctive and critical conference.

Yours faithfully,

Francesca De Michele
Conference Director
Mining IQ

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DAY 1  Tuesday 30 August 2011

08.30 Registration and Welcome Coffee

09:00 Opening Remarks from the Conference Chair
Dave Goddard, Global Director, Mining System Solutions, NEWMONT (USA)

9.10 INTERNATIONAL KEYNOTE: Underground Automation Systems
Dave joins us from Newmont over in the USA with over a decade’s experience in communications technology, having worked for several mining companies in this space. In this presentation session, Dave will be focusing on the underground systems Newmont are currently implementing across their mines.
Dave Goddard, Global Director, Mining System Solutions, NEWMONT (USA)

10:00 Associate Partner: Minetec Communications
Minetec has been working in the Mining and Oil & Gas industry for 10 years. Their services involve the design, supply and installation of cutting-edge technical communications. They have extensive experience with leading Australian and global mining companies.
Grant Wilmot, Technical Director, MINETEC COMMUNICATIONS

10.40 Morning Networking Refreshments

11.10 CASE STUDY: The Argyle Underground Mine & its Communication Infrastructure Backbone
Delivered by Simon Blears, this session will examine the communications infrastructure employed on-site. In particular this session will focus on:
- The various Communication Processes used on site
- The Communication Infrastructure necessary to support LHD Automation
- Extraction level layout for automation
- Integrating analogue CCTV with your IP network
- Future possibilities
Simon Blears, Process Control & Automation Superintendent, RIO TINTO

11.50 CASE STUDY: Northparkes: LHD Automation & Change Management
Delivered by Joe Cronin, this session will focus on LHD Automation and its ability to increase safety & productivity. In particular this session will examine:
- Managing Automation Projects
- Challenges regarding implementation
- Optimisation of mine productivity
- Identifying hazards and the importance of functional safety
Joe Cronin, LHD Automation Project Manager, Northparkes Mines, RIO TINTO

12.30 Lunch and Networking

1.30 Utilising Automation to Overcome the Major Challenges in the Mining Industry
Delivered by Jock Cunningham the Theme leader for Transforming the Future Mine, this session will focus on how automation can be employed on your mine site in order to reduce the challenges faced by the mining industry. This session will focus on:
- The latest developments in mining automation and what they can do for your operations
- The safety benefits of utilising automation
- How automated mining technologies are being used to increase levels of productivity
- Maximising the productivity of your automation technologies
Jock Cunningham, Theme Leader – Mine of the Future, CSIRO

14.10 Securing Operations Networks in Challenging Environments
This presentation will discuss challenges and issues associated with establishing & maintaining secure operations networks in the Mining and Resources sectors.
Operations Management:
- Site Safety: Ensuring trusted access and control of autonomous systems
- Maintaining production and operational availability and business continuity
- Risk Management
Network Security:
> Protection and Prevention without impacting network performance
> Incident Detection, Response and Resolution
Matt Hanlon, Project Manager, **MS NETWORKS SECURITY**

14.40 Afternoon Networking Refreshments

15.10 **PANEL DISCUSSION:** Implementing a Change Management Structure to Improve Acceptance of Automation
Discussion themes:
> Considering staffing needs and change management practices
> Assessing staff inadequacies in order to minimise negative impacts
> Organising a skills program to improve acceptance of automation
Panellists:
Kerrie Unsworth, Professor Management & Organisation, UNIVERSITY OF WESTERN AUSTRALIA/CRC MINING
Joe Cronin, LHD Automation Project Manager, Northparkes Mines, RIO TINTO
Mal Harwood, IT Manager, CROSSLANDS RESOURCES

16.30 Closing Remarks from the Chair and End of Day 1

**DAY 2** Wednesday 31 August 2011

08.30 Registration and Welcome Coffee

09:00 Opening Remarks from the Conference Chair
David Goddard, Global Director, Mining System Solutions, NEWMONT (USA)

09.10 **CASE STUDY:** Using Automation to Minimise Dust Emission & Increase Safety in Coal Mines
This session will focus on the automation of Caledon's Cook Colliery coal mine. In particular it will examine the implementation of their automated continuous haulage system.
> Implementing a continuous haulage system to increase safety levels
> Using automation to minimise dust emission
> Challenges regarding the compatibility of automotive systems
> Understanding the technology that is available to the market
Panellists:
Jatin Kalra, Electrical Systems Technician, **COOK COLLIERY - CALEDON**

09.50 Event Partner: Mine Site Technologies
Mine Site Technologies is a global leader in the field of mining communications. The company has technologies installed over 500 underground & surface mines around the world. In particular they have significant experience in Wireless communication and ensuring the reliability and robustness of these systems.
Andrew Watkinson, Business Manager for Surface Communications, **MINE SITE TECHNOLOGIES**

10.30 Morning Networking Refreshments

11.00 Spotlight Presenter: 3D-P
3D-P has been a provider of mining solutions for over 15 years. Known for their expertise in integration of virtually any application and any interface technology, 3D-P now pave the way in providing intelligent solutions that enable the reliable and effective integration and management of autonomous applications onto the mobile wireless network.
Mal Jones, Manager Asia Pacific Region, **3D-P**

11.20 Spotlight Presenter: CSC Australia
CSC is a $16.7 billion global IT services company with 50 years experience and over 92,000 employees worldwide. They deliver mission-critical services to Natural Resources clients including BHP Billiton, Rio Tinto, Woodside Petroleum, Vale and Newmont Mining. Their expertise spans mine IT planning, end-to-end plan and execute, logistics, equipment tracking, technical data management, remote communications, and information management.
Senior Representative, **CSC AUSTRALIA**

11.40 **CASE STUDY:** Defining Objectives for Automation to reduce Implementation Issues
A crucial part of reducing implementation issues is to ensure you clearly define the objectives for your automation systems. This session will focus on:
> Analysing current legacy systems in order to determine which new systems will work best on your site
> Working with vendors and OEMs to develop a product that suits your signature site
> Determining what you want to achieve on your site through automation
> Outlining specific objectives that are a requirement to your automotive system
John Massey, Section Executive, Systems & Communications, **PARSONS BRINCKERHOFF**

12.20 Lunch and Networking

13.20 Remote Operation Control through Multi-Vision Data and Display
Multi-vision data and display play a major role in being able to remotely control operations. The visual representation of your mine site is an essential element of your automation system. This session will focus on:
> Creating consistency in your representations in order to ensure successful automation
> Developing a representation that is succinct and mimics your mine site
> Considering critical features that are essential to include in your representation
> Utilising a format that is operator friendly
Panellists:
Con Caris, CEM's Mining Automation - 3D Visualisation coordinator, **CSIRO**

14.00 **PANEL DISCUSSION:** The Installation and Benefits of Using Wireless Systems
Discussion themes:
> Assessing wireless options for underground mining environments
> Employing back-up communication technology to ensure “real-time” data is provided
> Servicing your wireless communication systems to maintain availability and reliability
> Monitoring your wireless spectrum from potential threats and obstructions
Panellists:
Jatin Kalra, Electrical Systems Technician, **COOK COLLIERY - CALEDON**
Mal Harwood, IT Manager, CROSSLANDS RESOURCES

14.40 Afternoon Networking Refreshments

15.10 Collision Avoidance Systems in Order to Track Personnel and Equipment
This session will examine using adaptive cruise control on mine haul trucks for increased safety. Being able to track the location of your personnel and equipment is a safety strategy that can help avoid collisions on your automated mine site. This session will look at:
> Developing a safer environment for your workers
> Implementing advanced warning systems for automatic object detection and classification
> Utilising collision avoidance systems in underground mining
Patrick Glynn, Research Engineer, **CSIRO**

15.50 **ROUNDTABLE:** Improving “Bottlenecks” through Process Control Systems
Discussion themes:
> Analysing historical reports in order to identify process “bottlenecks”
> Developing new process procedures in order to counteract blockages
> Testing new procedures to determine best methods of practice
Facilitated by conference chair

16.30 Closing Remarks from the Chair and End of Day 2

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![Registration Form](C*PDFW)

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**Registerations received without payment or a Government PO will incur a processing fee of $99 + GST = $108.90 per registration.**

*Payment must be received by IQPC prior to 5pm AEST on the cut-off date.*

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Please note: Only one discount applies

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The Lido Group are the official booking agent for the Mine Site Automation and Communication WA 2011 event. The Lido Group have negotiated event rates at a range of hotels for all attendees of this event. To take advantage of these rates & book direct on the website, please go to [www.mineautomation.com.au](http://www.mineautomation.com.au) and click on the Venue & Accommodation page.

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