
From: Donald Gilroy [dgilroy@cebridge.net]
Sent: Wednesday, February 01, 2006 11:13 PM
To: zzMSHA-Standards - Comments to Fed Reg Group
Subject: comments to requestion

To whom this may concern.

Relevant to underground mine rescue equipment and technology.

This is presentation of technology the we have to offer in the communications side of mine rescue and personnel locating

Donald Gilroy

Hannah Engineering

1-304-636-7777

**MSHA Docket No.
AB44-Comm-12**



HANNAH
ENGINEERING

Elkins, WV

- **Mine Safety Systems**

- **Minesuite**

dhannah@cebridge.net

Phone 1-304-636-7777

P.O Box 2058 Elkins, WV, 26241

Presenting

- Dewayne Hannah, P.E.
- President & Sr. Engineer

- Donald Gilroy
- Senior IT Specialist

Mine Safety Systems

- Communications
- Gas Monitoring
- Proximity Protection
- Vehicle Alert / Collision Awareness
- Real Time Data Reporting
- Equipment And Personal Tracking
- Preventive Maintenance Equipment
lockout

Communications

- Wi-Fi
- Hard Wired Phone
- Leaky Feeder System
- Redundancy
- Data Logger

Digital Video For visual monitoring of critical operations and areas

- Voice over IP For voice communication over Internet Protocol networks

5GHz Structured Mesh™

WI-FI Wireless Mesh Network

features

5GHz Structured Mesh™ backhaul

Self-Healing, Self-Forming

Session-persistent roaming

Integrated 802.11 a/b/g access

AES-CCMP encrypted backhaul

WPA (Personal and Enterprise) security

Multiple-SSIDs with 802.1q VLAN support

Independent Security profile per SSID

Remote Management and Monitoring

Power over Ethernet

NEMA rated outdoor enclosure

Self-Forming – Plug and Play

No tedious point-and-configure procedure needed. Units automatically form the network upon power up. Network can be extended simply by powering up more units.



WI-FI Transmitter



Solar Power Backup power

Machine Positioning without GPS

FlexAlert features –

- **Low Cost**

Mines of ALL sizes can afford it

- **Positive Action**

One alarm, warns ALL personnel

- **Easy to install**

Only requires 50 to 150 meter surface loop

- **Safe**

Low power 50 to 450 watts, dependant on size of mine

- **Miniature receiver**

Surface mount components enable installation inside most cap lamp batteries.

- **Two Visual Warnings**

Cap lamp 'flashes' indicating evacuation. Plus a Hi Intensity LED as a back up

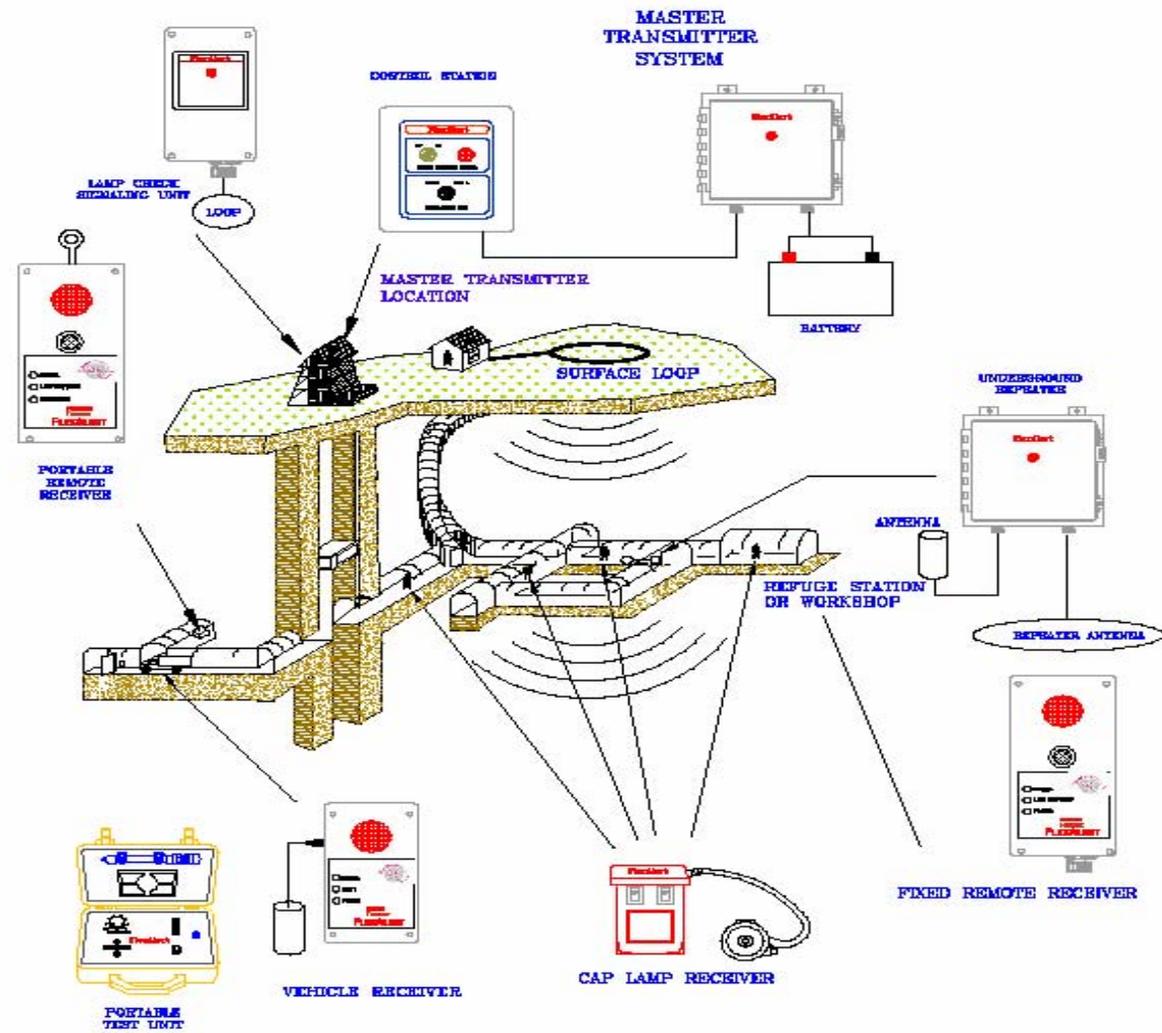
- **Three models**

Cap Lamp, Fixed (wall mounted) and Portable, loud sounding audio-visual versions

- **Easy to operate**

- **Virtually maintenance free**

FlexAlert Evacuation System



Swipe Card Electronic Tag Boards

The swipe card solution provides a flexible base for a variety of functions such as

On-Site Fuel Dispensing and Control

Payroll

Site Access and Security

Electronic Tag Board



Gas Monitoring



**Transmitter IR Ex Inline
CH4**



Transmitter IR CO2



O2 LS Measuring Head

Tracker Tagging System



Mine Site Technologies - Tracker Viewer

File View Tools Help

Map List History Search Details Events Print...

List View

zdc Filter

Tag ID	Batt	Type	First Name	Last Name	Job Title	Latest	Date	Time
239			Donny	Silho		Sub Brace Out	29/06/2003	2:55:24 PM
240			Therico	Swift		4 Level Hot	30/06/2003	2:17:23 PM
241			Mark	Maxon		Sub Brace Out	27/06/2003	2:30:55 PM
243			Craig	Tremaine		8 Level Sale	30/06/2003	1:59:44 PM
246			Neville	Gardner		Portal Out	30/06/2003	2:15:38 PM
250			Joe	Fitzpatrick		Portal Out	30/06/2003	4:00:04 AM
254			Dave	Barnett		7 Level Hot	30/06/2003	1:28:04 PM
257			Deek	Scott		6 Level Sale	30/06/2003	2:18:50 PM
259			Steve	Bunce		Portal Out	30/06/2003	6:35:40 AM
263			Byn	Sargeant		Sub Brace Out	27/06/2003	9:22:33 AM
264			Mark	Lambert		6 Level Sale	7/07/2003	2:39:50 AM
268			Mal	Stirling	Field Tech	Sub Brace Out	27/06/2003	6:18:15 PM
271			D	Baly		7 Level Hot	30/06/2003	1:28:07 PM
272			Zac	Darch		Portal Sale	30/06/2003	12:58:10 PM
275			T	Vier/Viet		Sub Brace Sale	30/06/2003	2:02:46 PM
282			Jeff	Daniels		Portal Out	29/06/2003	6:38:59 PM
285			V	Williams		Portal Out	30/06/2003	6:28:39 AM
288			Kim	McGagh		Portal Sale	30/06/2003	8:39:34 AM
290			Phil	Riddle		Portal Out	30/06/2003	5:00:26 AM
294			V	Diapella		Portal Out	30/06/2003	11:32:12 AM
295			Gevin	Schuback		4 Level Hot	30/06/2003	9:50:19 AM
298			Dale	Chaplin		Portal Out	30/06/2003	6:28:39 AM
300			Ivan	Carstensen		Portal Out	30/06/2003	7:56:56 AM
303			Brent	Scoble		Portal Sale	30/06/2003	2:16:24 PM
307			Brett	Dorman		Portal Sale	30/06/2003	6:50:03 AM
311			Chris	Stone		Portal Out	28/06/2003	1:00:46 PM
312			Mike	Werner		4 Level Sale	28/06/2003	1:01:07 PM
316			Paul	Sewell		Portal Out	30/06/2003	11:13:41 AM

Details

Zac Darch
272
MST

Short Name: Z.Darch

Last Post: Portal Sale
Last Time: 12:58:10 PM
30/06/2003

Previously: 4 Level Sale

Contact:

Administrator 156 Tags

start

Zac Paint Shop Pro MST Tracker Viewer

TRACKER

2:26 AM
Monday
30/06/2003

Vehicle Alert System

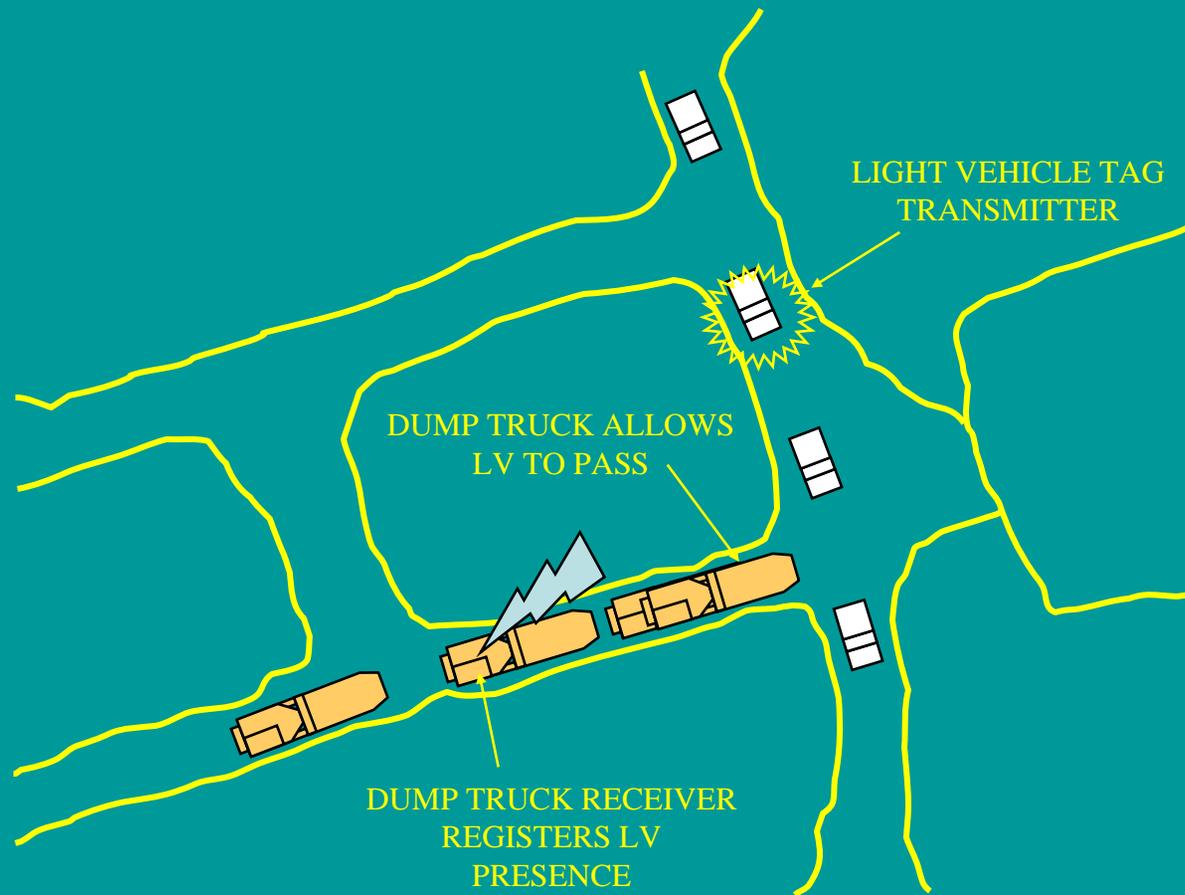
System consists of:

- **RF transmitter unit or active tags for smaller LV**
- **RF receiver or tag reader unit for larger Truck or LHD vehicle**
- **RF receiver or tag reader unit at 3 level and 21 fuel bay.**

The system works by:

- **The transmitter transmits encoded message to receiver if a LV is within defined distance containing vehicle number**
- **The receiver gives a warning alarm and displays and identified PV vehicle number on LCD display and stored in the system**
- **Alarm is acknowledged by large vehicle operator.**

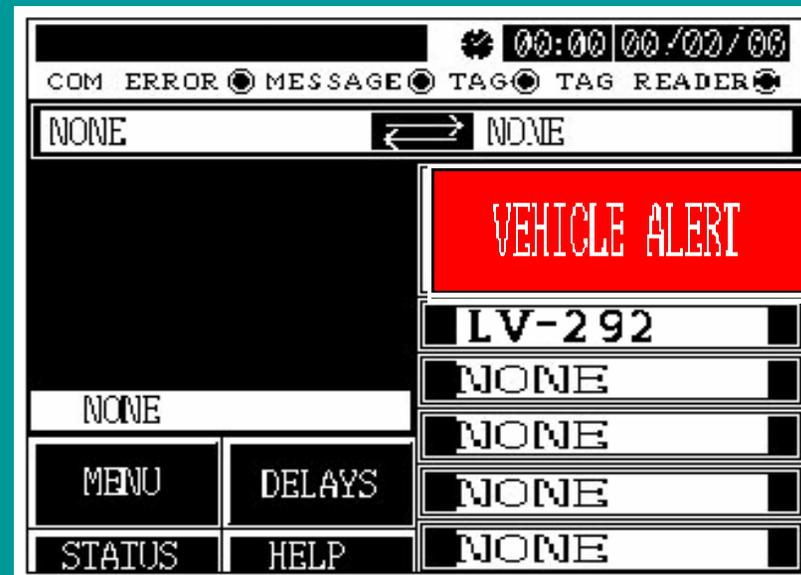
Vehicle Alert System

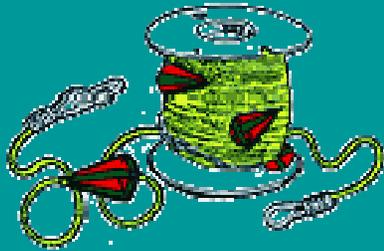


Vehicle Alert System

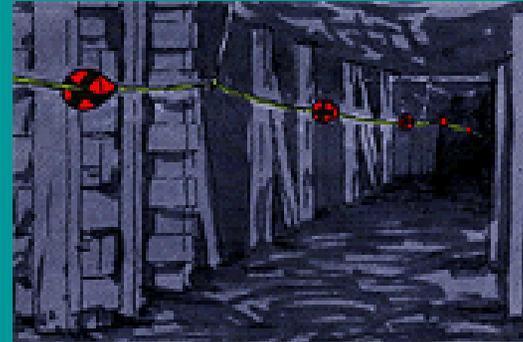
LHD's / Trucks:

- RF receiver or tag reader unit for larger Truck /LHD vehicles





CAB Lifeline



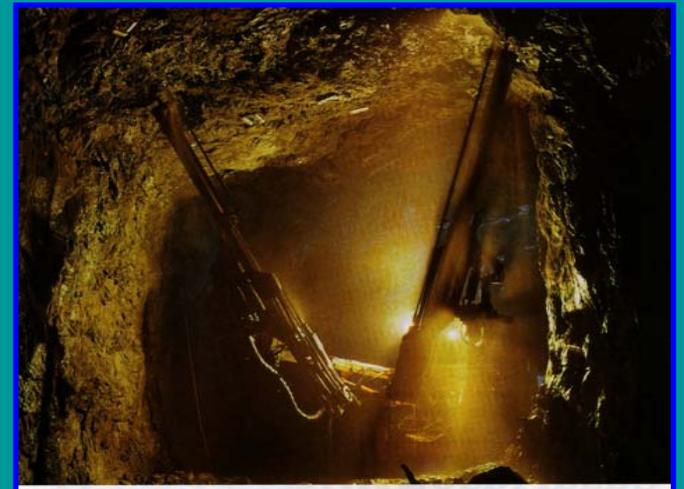
The CAB Lifeline is an escape rope designed to help evacuate an underground mine in the event of a fire or explosion. Research by the U.S. Bureau of Mines has shown that the presence of a rope guide in dense smoke can improve the chances for a successful escape when a fire breaks out in an underground mine. The CAB Lifeline, with its sturdy directional cones, will help lead employees to the slope and shaft rather than getting lost or confused in an actual emergency situation. Each spool contains 300 metres of 6mm yellow polypropylene with directional indicators installed at 30 metre intervals. Corrosion resistant thimbles, oval sleeves and quick links are installed on each end for the quick and secure attachment of sections. Can be custom made to an individual mine specification.

CB945 300 metres CAB Lifeline with reflectorised cones each 30 metres 10kg

Minesuite Applications

Underground :

- Underground Fleet Management
- Anti Collision Systems
- Maintenance Management
- Equipment Tracking
- Product Quantity and Quality Tracking
- Fuel Monitoring systems
- Reporting
- Gas and Ventilation monitoring
- Personnel Tracking
- Redundant Communication Systems
- WI-FI, Hardwire, & Wireless



Minesuite Applications

Open Pit :

- Open Pit Fleet Management Systems
- High Precision GPS Bucket Guidance
- High Precision GPS Dozer Guidance
- High Precision GPS Drill Guidance
- Fuel Monitoring systems
- Down time delay recording
- Maintenance Management
- Equipment and Personnel Tracking
- Stockpile Management



Minesuite Applications

Process Plants :

- Wash Plants, Mineral Processing and Materials Handling
- Stockpile Management
- Plant Performance Monitoring
- Interface to Plant control Systems



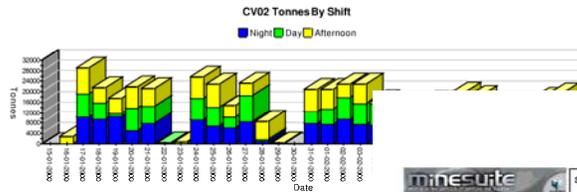
Features Of MineSuite

- Interfaces to other mine systems
- Automatic Alarms and environment set points
- Fully integrated reporting tool, user can create own reports
- Rugged military tested hardware
- All functions of MineSuite are user configurable, Minesuite, Touch Screens, Reports, KPI's.

Presentation - Reporting

Examples of User configured reports from other sites

CV02 Report

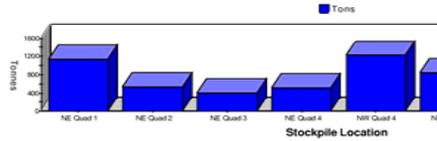


CV02 Tonnes - Table		
Date	Night	Day
15-01-2000		
16-01-2000		
17-01-2000		8773
18-01-2000	9242	
19-01-2000	9575	6112
20-01-2000	9472	1102
21-01-2000	5149	8597
22-01-2000	7795	6945
23-01-2000		299
24-01-2000	3231	8146
25-01-2000	6675	6972

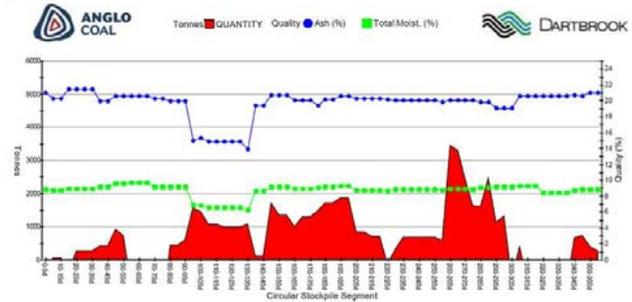
11 Nov 2004

minesuite Stockpile Report By Quadrant 23/Sep/2004 - 30/Sep/2004

Barge	Product	Tons
NE Quad 1	High Sulphur Coal	1120
NE Quad 2	High Sulphur Coal	
NE Quad 3	High Sulphur Coal	
NE Quad 4	High Sulphur Coal	
NW Quad 4	Low Moisture Coal	
NE Quad 1	Low Moisture Coal	
NW Quad 3	Low Moisture Coal	
NW Quad 1	Low Sulphur Coal	
NW Quad 2	Low Sulphur Coal	



11 Nov 2004



CHPP Circular Stockpile - Parameters for Location			
Location	Tonnes on SIP	Ash (%)	Total Moist. (%)
Circular-SIP	4555	19.9	8.1

06 Mar 2004

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Who Uses MineSuite

Underground :

- BHP Billiton
- Anglo Coal
- Xstrata
- Assmang
- Pasminco
- Centennial Coal



This Package Can Be Customized To Fit Any Underground Or Surface Mine

The Main Advantages Of This Package Is That All of the Items Mentioned Can Be Linked To A Centralized Computer Accessed From Anywhere In The World

This Package Can Be Added To Or Upgraded At Any Given Time

Support For These Products Is Readily Available

We Will Be Happy To Discuss All Aspects And Questions

Minesuite & Maptek



- Geological Modeling
- Mine Design
- Scheduling
- Survey
- Optimization
- Consulting
- Software Development



- Laser Scanning
- Software Development
- Scanner Development
- Consulting/Surveying
- Services



- Production Monitoring Reporting
- Fleet Management
- Plant Reporting
- Real-Time Systems
- Software Development
- Database Management

Minesuite & Maptek



- 2001 Maptek Purchased Advanced Systems Integration (Product is Minesuite)
- 2002 Maptek Establishes Minesuite North America

minesuite

North America / Europe

Luke Chorley – Minesuite Technical Manager North America

Dewayne Hannah Eastern Representative

Hannah Engineering

Donald Gilroy Senior IT Specialist

Hannah Engineering

dhannah@cebridge.net

- End Of Presentation -