



OEM/OTM Position Themes

Communications Networking

Objective: Major mining equipment should be configured by the OEM/OTM to be a natural extension of the mine operators Local Area Network

Perceived OEM OTM view:

- Most OEM's and OTM's have moved to being network agnostic
- Proprietary inconsistent radio technology still marketed by manufacturers
- Unnecessary "Certification" of communications technologies for use by OEM applications
- Bandwidth reservation

Hardware & OSS

Objective: Hardware technology should be designed to be “plug & play” regardless of its intrinsic proprietary nature

Perceived OEM OTM View:

- Progress with IREDES/Other versus Proprietary protocol
 - > Drill manufacturers positive movement forward
- OEMs do not consider in their best interest – their benefit vs customer success
- OEM certified Hardware required for safety and robustness
- Operator Displays a huge issue, most vendors have not integrated 3rd party application to their display. Issue remains
- Resistance due to technology, software and hardware changing too rapidly to adopt “standard”

Third Party Software

Objective: Third-party applications can be readily integrated and cohabitate with, OEM software and application architecture

Perceived OEM OTM View:

- ◉ Some OEM's favor if it adds value to customer
- ◉ Biggest issue is perception that OEM will be responsible for performance of 3rd party system
- ◉ Agree as long as it "my" display
- ◉ Non-cooperative attitude - OTM's find it difficult to work with OEM's without major operating partner – negative towards generic capability

Data Accessibility

Objective: Accessibility to the data will be freely provided without the need for additional interface programming

Perceived OEM OTM view:

- IP/Liability – operator wants full access, particularly to control components and/or ECM's that generate data for control
- "Extortion" requirement to purchase OEM interface to access data – operator has to buy his own data
- OEM's concerned about marketing of "their" information through 3rd party software without benefit (machine health for example)- won't/can't separate data and application

Data Ownership

Objective: In all cases, data generated by an application is the sole property of the owner/operators while respecting the confidential nature thereof

Perceived OEM OTM view:

- ◉ Most OEM's state they support this statement, yet some actions do not support the position
- ◉ A number of applications do not allow access to the data without the proprietary interface