MULTIBAND REGENERATOR FOR COMMUNICATION SYSTEMS IN UNDERGROUND MINES

UQAT – 003

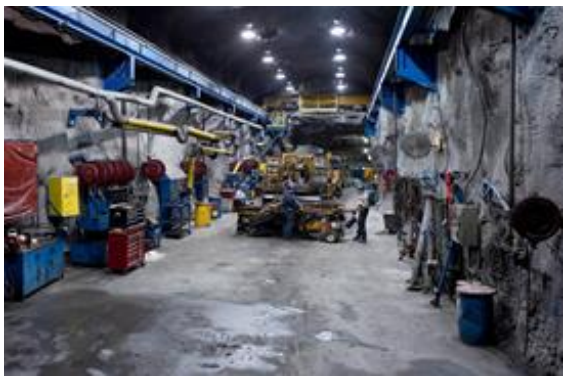
Partner institution:

UQAT

BACKGROUND

Underground communication systems used by mining companies are usually based on using a backbone based on leaky feeder cable technology. This provides voice access using walkie-talkie channels and data access using cable modem based technology. In essence, there is no proven broadband wireless technology available that has both high data rates and high coverage.

Through a deep understanding of the requirements of the mining industry, UQAT's LRTCS laboratory undertook a multi-year development project to bring modern communication technology to the harsh underground environment. The result is a patent-pending breakthrough technology based on using next generation leaky feeder technology to its full potential.



TECHNOLOGY

The invention was prototyped in the CANMET underground teaching mine and will be verified in a full scale commercial mine soon.

COMPETITIVE ADVANTAGES

- Uses leaky cable infrastructure
- Backward compatible with existing equipment
- WiFi access in whole mine
- Cellular & 3G access

APPLICATIONS

- Communication systems for underground mines and tunnels.
- Communication infrastructure for automation.
- Security enhancements.

TECHNOLOGY DEVELOPMENTAL STAGE

Functional prototype done.

PATENT STATUS

Pending Patent: US 61/244,585

BUSINESS OPPORTUNITY

Licenses available.

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