

# Universal Communications Platform (UCP)

## Commercial Industry Case Study

Logging, mining or utility operations in remote or limited locations require reliable and safe communications. However, installations in these areas often become expensive due to Federal, State, and local environmental requirements. The UCP design creates the interoperable and seamless communications network by filling in the infrastructure gaps with much lower-cost systems.

### Situation

A utility company must maintain its system in remote, mountainous and coastal areas. The present communications infrastructure is a challenge to maintain and is not always reliable which can pose a safety risk to crews deployed for maintenance or outages...

### Solution

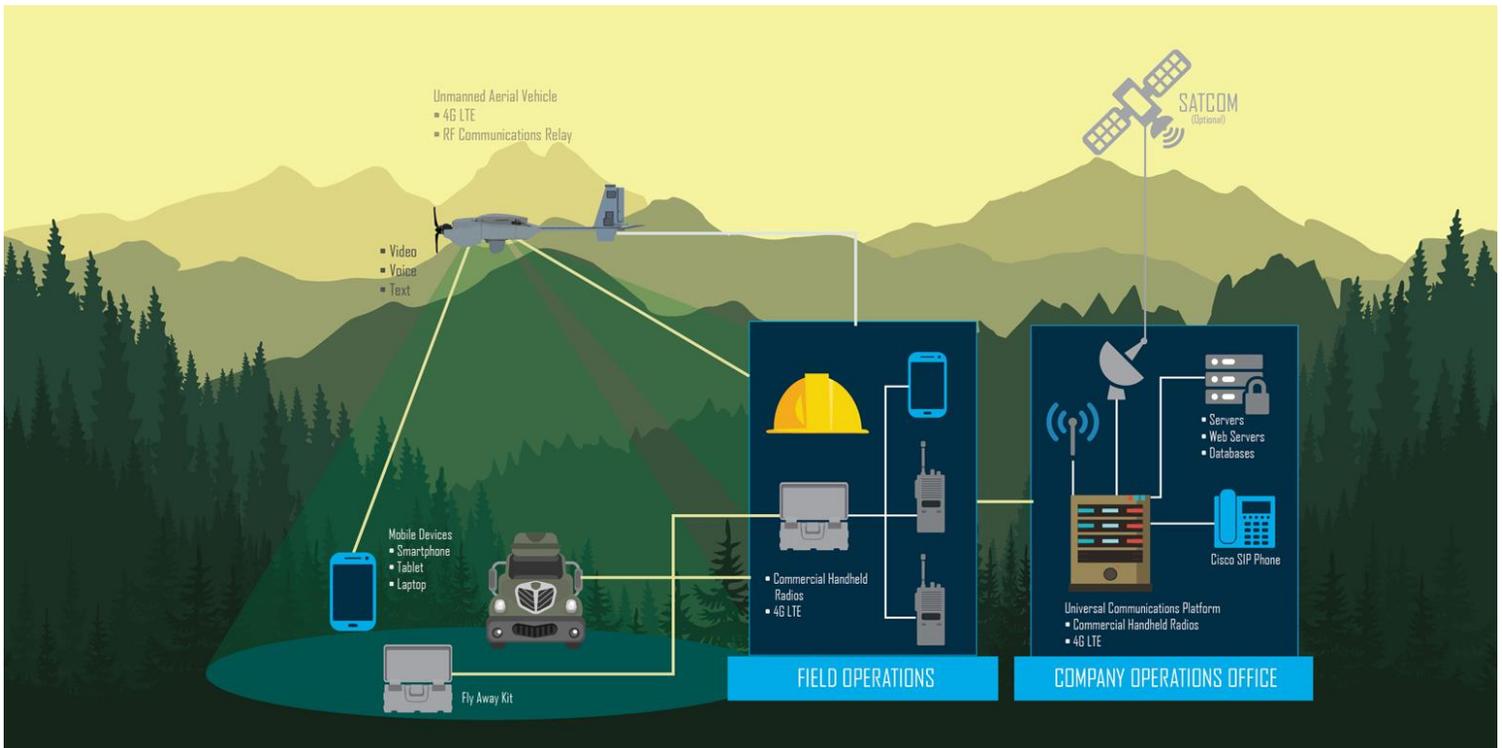
With the UCP capability, companies and crews have the ability to install mobile devices, increase communications coverage and conduct safe operations in remote areas without investing in costly infrastructures.

- Using the UCP Communicator application, crews have the ability to use mobile devices in areas of poor RF coverage and be tied to other crews using radios. The users of either a radio or a mobile device have the same communications capability.
- In areas of poor cellular coverage, a private cellular network (PCN) is deployed to fill in the gaps. The PCN can be placed on existing towers or in stand-alone positions depending upon the coverage requirements at a fraction of the cost of a commercial cellular system.
- If permanent coverage is not required, but only coverage during crew deployments, a TDU can be used to provide the translation communications by connecting radio and mobile devices together through its base station capabilities.
- The TDU equipped with a Software Defined Radio (SDR) can support up to 128 cellular users or many more UCP cellular radio users as well as utility radio users. Each user experiences seamless communications.

### Benefits

- The UCP design leverages the existing communications infrastructure without adding the expense of more radios or radio supporting infrastructure and provides a private dispatch capability to tie users together as required for operations.
- The TDU provides very flexible communications capability to meet the wide variety of operational and environmental requirements avoid large additional expenses.
- Leveraging the TDU's SDR technology, commercial operations increase their operational communications at a fraction of the cost by using the UCP Communicator cellular radio and the PCN.

- The PCN allows the utility company to increase the communications coverage without having to invest in expensive infrastructure such as radio towers, which face environmental challenges and prohibitive costs.
- In particularly mountainous areas, TDUs can be used as relay stations to remote points through their ability to mesh communications within range of one another. This allows the utility to safely conduct operations in remote areas without investing in permanent and costly infrastructure.



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