

# Juggling a Backbone Mandate While Integrating with a Midstream Radio System Migration

## Case Study

### Challenge

Mandated communications network upgrade in parallel with radio system upgrade

An airfield was mandated to upgrade its existing copper backbone to fiber, resulting in the need to upgrade their communications network. In addition, the base was performing an upgrade of their airfield radio system which needed to integrate with the proposed communications network solution.

The client sought a single vendor that could integrate a variety of communications devices and support migration of the entire communications system to fiber. They received a recommendation from another airfield who previously had a similar successful migration using TC Communications.

### Solution

Proof of concept at headquarters, adding resiliency features and a flexible topology

TC Communications worked side by side with the client's engineers from solutions ideation to training and deployment. TC Communications' engineers built a proof of concept network at their headquarters in Irvine, CA utilizing their flagship JumboSwitch® platform and their TC8800 series fiber optic multiplexer. Upon completion of testing and training, TC Communications assisted in migrating the entire airfield communications network including communications between ground to air transmit receive (GATR), air traffic control (ATC), and the weather command post. In addition, glide slope, localizer and tactical air navigation data, and telephony were integrated with the communications headend.

All data was integrated for transport between multiple airfield locations, radar approach control (RAPCON) and the client's public branch exchange (PBX).

### Results

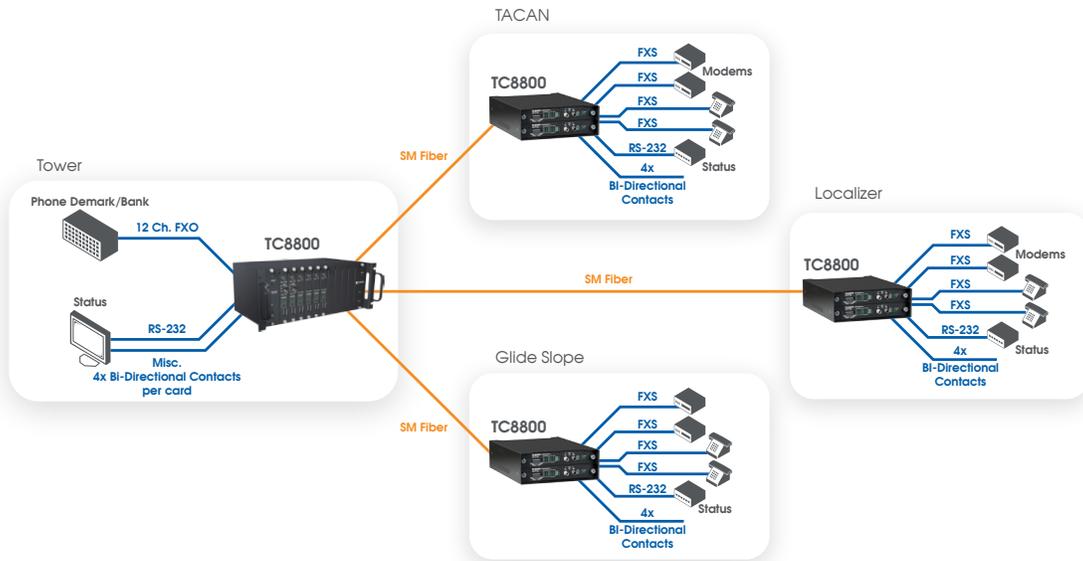
Improved operational reliability and options for future growth

TC Communications' network solution offered several value-added components including additional resiliency via a self-healing ring, flexible topology options to accommodate airfield site configurations, and availability for future expansion for hot line and other future applications. In addition, product features not previously available, like dry contacts, could be utilized to incorporate water and weather sensing functions to aid in facility operations and maintenance.

The base found working with a single vendor, who could meet all their critical communications needs, to be efficient and effective.

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# Juggling a Backbone Mandate While Integrating with an Ongoing Upgrade



Above: The 8800 fiber optic multiplexer series integrates glide slope, tactical navigation and localizer data, as well as multi-site telephony.



Above: The JumboSwitch platform migrates the entire airfield to a fiber backbone, including radio communications, command post weather, air traffic control, ground to air transmit/receive (GATR) and the tower.

## About TC Communications

TC Communications designs industry focused communications products in Power, Public Safety, Rail, Military, Aviation, and Oil & Gas. Our products assist in the evolution of legacy networks and specialize in bridging the gap in the transition to IP networks. Our mission is to design products that are easy to use and won't break. All TC products are designed, tested, and supported in Irvine, California since 1991.



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