Case Study

Sedona Fire District, USA

SAF powered emergency service network

Introduction

Sedona Fire District serves and protects 168 square miles in the mountains of northern Arizona. Sedona is a city that straddles the county line between Coconino and Yavapai counties in the northern Verde Valley region of Arizona. Sedona's main attraction is its array of red sandstone formations. The formations appear to glow in brilliant orange and red when illuminated by the rising or setting sun. The red rocks form a popular backdrop for many activities, ranging from spiritual pursuits to the hundreds of hiking and mountain biking trails.

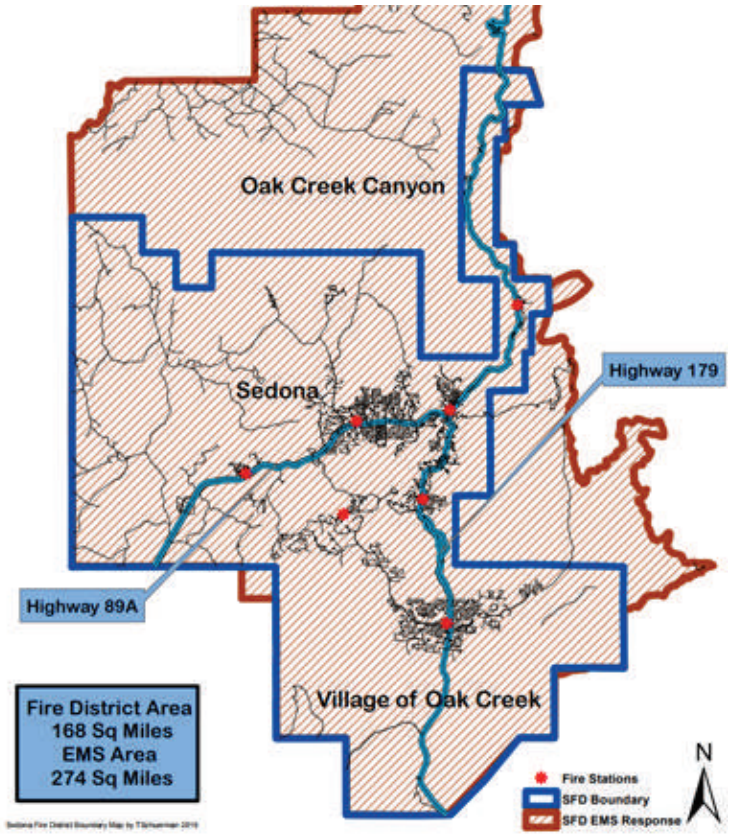
For more than 60 years SFD has been constantly evolving. The previous 20 years have brought rapid growth and expansion more than doubling the number of calls responded to. Throughout the continuous changes and upgrades in equipment, facilities and technology the “constant” has always been the dedicated professionals making the organization thrive. SFD provides 24/7 service 365 days per year for:

- Fire Suppression
- Emergency Medical Services
- Hazmat
- Special Operations rescue services (swift water, high-angle/rope, helicopter)

Challenges

Providing these services requires a public safety grade/mission-critical communications network. Legacy microwave radio equipment installed over a decade ago has been reaching end-of-life. Concerns about spare parts, repairs and serviceability have reached the point where upgrading has become a necessity. The existing equipment provided a maximum of 45mbps which was starting to limit operational capacity. It wasn’t possible to obtain additional licensed spectrum.

In 2014 the National Public Safety Telecommunications Council (NPSTC) published its final report for Public Safety Grade Systems and Facilities. The report outlines best practices and guidelines for public safety broadband networks to insure reliable communications for first responders Land Mobile Radio (LMR) systems. Sedona Fire District's goal was to choose equipment that substantially improved adherence to the new guidelines.



When evaluating new microwave backhaul radios SFD defined the following as requirements:

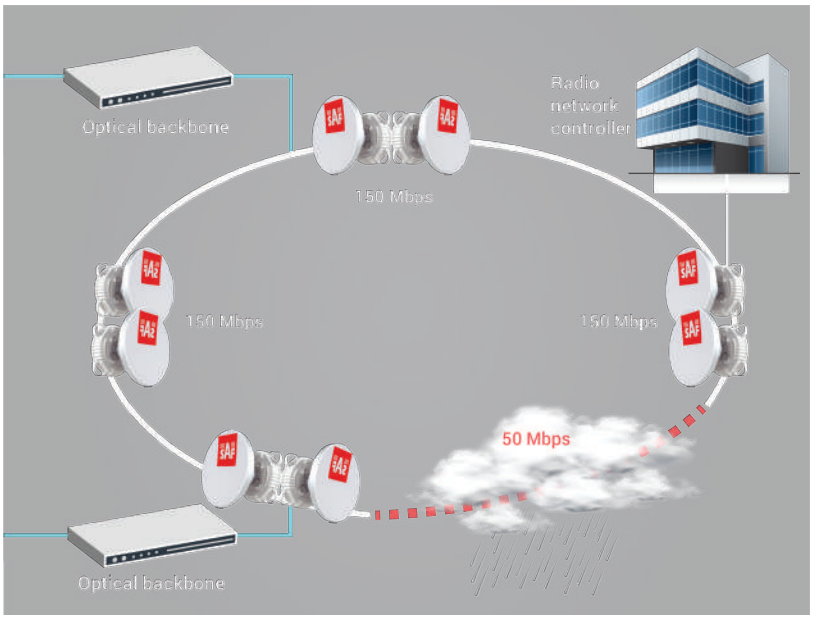
- Best effort adherence to reliability and resilience guidelines for Public Safety Grade Systems
- Increased Capacity to provide sufficient overhead supporting future network expansion
- Flexibility to handle legacy interfaces used for analog two-way radio traffic
- Ability for both TDM and IP traffic
- Improved operational costs with lower power consumption and rack space

"It's very intuitive and quick to configure and deploy SAF radios, the form factor and low power consumption save operating costs. SAF's support, service and equipment reliability are serving the needs of the fire district."

- Bob Motz, Communications Manager | Sedona Fire District

Solution

Over the years SFD and Merit have evaluated numerous radio manufacturers against such crucial factors as company reputation, product range, reliability, features, power consumption, warranty, price and availability. SAF is our vendor of choice because of their long-term reputation for quality, technical support and cost to performance to ratio. The decision to deploy SAF Phoenix split-mount radios provides the Sedona Fire District with a redundant PSG (Public Safety Grade) network with high capacity hybrid-TDM/IP flexibility for future network upgrades.



The Phoenix radios are providing:

- PSG reliability and resilience level performance
- Increased capacity with room for growth
- Seamless two-way radio communications backhaul with the native TDM/T1 circuits
- Reduced operating costs with highly efficient low power consumption
- Space saving 1RU form factor and front facing connections for improved wire management
- Time saving user-friendly configuration GUI

About customer

- SFD and Merit Technology Partners have designed a multi-ring network topology providing many redundant paths. This insures continued communications protection against a radio failure. Traffic in the network includes VHF two-way radio communications over TDM/T1 circuits, high-speed IP traffic for file transfer and broadband between stations and dispatch center along with radio simulcast. The network is designed to handle future inter-department backhaul sharing.

- Merit Technology Partners – providing enterprise-level IT consulting and support services in Arizona, southern Nevada, southern California and southern Colorado since 2003. MerIT excels at building microwave systems across rough terrain for organizations with advanced reliability needs.

To learn more about SAF Tehnika, our products and solutions, please visit our website www.saftehnika.com or subscribe to our newsletter: https://saftehnika.com#subscribe.