

REQUIRES GREATER COLLABORATION

By Bill Campbell

he beginning of this year's wildfire season foreshadowed what has been an above-average year of battling U.S. blazes. The first big fires of the season, in Texas and Oklahoma back in February, burned more than a million acres.

By late July, with blazes burning in California, the Pacific Northwest, the Great Basin and the Northern Rockies, more than 3.8 million acres and counting in the U.S. had been consumed by wildfires. The annual average over the past decade has been 3.4 million acres.

Battling these type of out-of-control blazes takes multiple agencies — local firefighters, state and federal land management and park services, aerial brigades, volunteers,

and more. Coordinating all of these agencies across thousands of miles is a challenge better planned for in advance than during wildfire season.

An additional challenge is that agencies tend to operate in silos with different protocols and different equipment, which can hinder a coordinated response. Until recently, much of the coordination has been done with radios and physical command centers. Today, technology has advanced to the point where

leaders don't necessarily have to be in the same place. A cloud-based collaboration platform allows them to see the same maps and resources in real time.

With the advent of cloud-based collaboration portals, every involved agency, not just fire brigades, can be on the same page. The chief coordinating agency can invite any stakeholder necessary — hospitals, utility companies and transportation officials in charge of evacuation routes — just by sending an email link to the collaboration interface.

Every participating agency can see real-time maps of the affected areas, representations of deployed forces and alerts highlighting aerial suppression efforts. The weather bureau's alerts go out to everyone, and the water utility can share the location of hydrants or other available water sources. Power companies can advise when poles are down and service is out. The transportation department can let everyone know when roads are closed. As the flames advance and people are displaced, the emergency operations center can loop in the Red Cross, alerting them to set up evacuation centers to meet those fleeing the fires.

In the midst of a raging, multi-day fire, overworked public safety telecommunicators and commanders can use an extra set of eyes. That's where assistive artificial intelligence (AI) comes in.

In the background, AI is monitoring every call and report, taking in all available data. The prevailing wind is shifting to the south, but most of the firefighters are on the ground to the west. With an alert from assistive AI, commanders can call in aerial fire suppression to keep the fire from getting out of hand in the south while more ground forces are deployed.

The AI could also pick up on a report of a traffic jam on an evacuation route and alert transportation officials to open more lanes or

an alternate route or deploy more assistance vehicles to clear the scene.

Cloud-based collaboration isn't just for wildfire response. With climate change there are more emergency situations than ever — more hurricanes, tornadoes and flooding, all of which are becoming more intense.

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In all these scenarios, collaboration is the key to effective response from emergency personnel and their civic counterparts. It's unlikely that all these agencies across multiple local, state and federal jurisdictions can use the same communications systems, and these days a scramble of email, radio and telephone is inefficient and frustrating.

With cloud-based collaboration, everyone doesn't have to be on the same system. All that's required is a computer with a web browser, and each agency that's been linked to the interface can communicate and collaborate.

Accidentally sharing proprietary data isn't a concern, either. The user can share as much data as needed, and access by other collaborating agencies is restricted and temporary.

When the fires die down, the coordinating agency will have tons of data to analyze to determine what went right and what went wrong with this emergency, so the next time is more efficient for all.

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REFERENCE

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