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U.S. Forest Service Uses Geotechnology to Reduce Critical Time Delays and Increase Response Time during Natural Disasters



Online Exclusive

For more than a century now, the U.S. Forest Service (USFS) has been fighting wildfires and other natural disasters throughout the United States and American territories. During these times of action, USFS men and women congregate from all across the nation to serve together in the field, battling fires, hurricanes and tornadoes for up to several weeks at a time.

To prepare for these unfortunate events, fire fighters were typically given map packets with up to 20 pages of 11- by 17-inch paper maps, bundled together. These map packets were printed and assembled the night prior and distributed among several hundred fire fighters the next morning.

A Real Need for Geotechnology

Responding with Southern California Interagency Incident Management Team One with 53 personal, Chris Brenzel, Situational Unit leader and Fire Engine captain, explained the need for an efficient, digital mapping solution in hopes of improving overall situational awareness as well as reducing their environmental footprint.



"Oftentimes, the natural disasters we come across span thousands of acres, and they move quickly," says Brenzel. "When these fires move rapidly and cover so much ground, our firefighters must stay fully aware of the current status—this was getting difficult to achieve with paper maps due to the lack of ability to update them. And the amount of paper we were using was just getting out of control."

Brenzel found that his team could use Avenza's PDF Maps app, which offer crystal-clear, interactive digital maps, and he was interested and eager to test it out in a real-world setting.

"When I found Avenza's PDF Maps app in the iTunes App Store, I was so excited," notes Brenzel. "It's easy, powerful and free. With this app, I can have several maps on my phone and can access them anywhere I am—even if I am offline."

About the App

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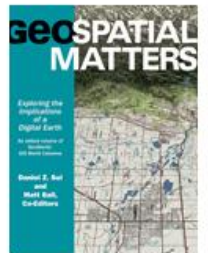


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About the App

Avenza Systems Inc. recently created a mobile app, Avenza PDF Maps, for the iOS (iPhones and iPads) platform so map publishers and individual cartographers could upload, distribute and sell or provide digital versions of their paper maps. Now in digital format, maps could easily be downloaded onto an iPad or iPhone. Paired together with mobile devices that use GPS, the PDF Maps app provided the ability to read details clearly like a paper map, find your location with GPS, and add placemarks and data points.

"Because of the nature of our job, the technology behind this app is crucial to what we do, since the situation can change quickly and suddenly," adds Brenzel. "With the map packets we utilized before discovering Avenza's PDF Maps app, we were never able to update them after 11:00 p.m. the night prior—so much can change overnight when it comes to a wildfire or hurricane. Now that we have the PDF Maps app, we can update our maps throughout the day to keep everyone fully informed of the situation."

With the use of Avenza's PDF Maps app, Brenzel was able to transfer large traditional paper maps to digitized, interactive PDFs for his team to utilize. This simple transfer of data from traditional maps to digitized PDFs gained approval from Brenzel's team with USFS in just a couple of months.



"When you're out there fighting a huge wildfire, a packet of paper maps can easily tear or rip and quickly becomes a burden," says Brenzel. "The beauty of accessing maps through the PDF Maps app is that my team and I can view the maps on our iPhones or iPads anytime and see the most current status. I just have my team download the newest update, and they can view the most current map. This was the biggest issue we had with our map packets—we were never able to update them as the status of the fire was constantly changing."

Disasters Happen

Because USFS firefighters must travel regularly throughout the United States as well as its territories to battle natural disasters, the conditions frequently vary.

"Disasters happen everywhere—even where there may not be an Internet connection," explains Brenzel. "But with the Avenza PDF Maps app, I don't have to worry about losing reception. I can be in any remote area—even in the air—and still view all the maps on my iPhone without fail."

Brenzel and his team now can provide situational awareness to all those involved in fighting natural disasters on U.S. soil. By using the PDF Maps app vs. the previous paper-map packets, Brenzel and his team can eliminate time delays as well as reduce the amount of paper waste.

The PDF Maps app allows downloading/updating maps through the Avenza Map Store 24 hours a day as well as downloading custom maps with QR codes—another benefit to using digital maps. Through this technology, USFS men and women can easily prepare well in advance, quickly and conveniently before facing any natural disaster. In addition, USFS is using the application to build maps of fuel reduction projects and community defense zones to help define boundaries and aid in their work.

The USFS implemented Avenza's PDF Maps app mid-summer 2012, and Brenzel predicts that by 2013, all incident-management teams in the U.S. west and southwest will have adopted the Avenza PDF Maps app.