



## GIS on BlackBerry® Increases Accuracy and Efficiency of Field Operations for US National Weather Service

*“I saved five hours of data collection and reporting time on a single survey of a tornado event by virtue of having Freeance Mobile software on my BlackBerry.”*

- Keith Stellman,  
Warning Coordination Meteorologist



### Breakthrough Freeance™ Mobile software streamlines storm damage survey field work for federal government agency

**Organization Description:** The US National Weather Service (NWS) is an agency of the National Oceanic and Atmospheric Agency (NOAA). Surveying damage from severe storms is an important mission of the NWS. Collected data is used by government agency scientists, insurance companies and other parties across the country.

#### Challenge

Surveying storm damage is a labor and paper-intensive operation. It involves mobilizing people and equipment, which requires planning, preparation and considerable time. One major challenge of these field operations is maximizing the accuracy of collected data.

Keith Stellman, Warning Coordination Meteorologist with NWS explains, saying, “We’re used to recording data on a notepad. Surveying a 15-mile tornado track can involve pages of handwritten notes, GPS coordinates, and calculations. Then, surveyors must travel back to the office to enter all of that data manually.” Naturally, slippage occurs, in terms of the amount of data ultimately recorded. Detailed notes made at the scene are summarized, and any details that weren’t written down immediately can be forgotten. That’s why, when Stellman discovered an innovative mobile technology that promised to increase data accuracy and field efficiency, he jumped at it.

#### Solution

Stellman’s regional office is the first NWS office to use Freeance Mobile on the BlackBerry platform to replace pen, paper and

standalone digital cameras for post-weather event survey collection.

Using the Freeance application, NWS built a custom form, within one hour, to collect the survey data. On the form, surveyors use drop-down and list menus for selectable data items like damage indicator type and wind speed range, as well as free form comment fields for entering notes. All data is uploaded to NWS’s ESRI server virtually instantly. After witnessing Freeance Mobile in action, the Chief Information Officer from NOAA and the Head of Science and Technology supported plans to deploy Freeance Mobile to all 123 NWS office locations.

#### Results

##### Significant Time Savings

Freeance Mobile has streamlined the data collection process and eliminates the need for surveyors to transcribe notes into a report. Says Stellman, “I saved five hours of data collection and reporting time on a single survey of a tornado event by virtue of having the Freeance Mobile software on my BlackBerry.”

Scalable, Versatile Technology for Government Agencies  
Stellman believes Freeance Mobile is a technology that shows

significant potential for broad application. “I see where Freeance Mobile can be used elsewhere in the agency for other field operations. In most instances, when you use Freeance Mobile, once you leave the event site, your collection and reporting tasks are done.” he says.

#### Technology Profile

Freeance Software	Freeance Mobile 2.4 - Pro Edition
BlackBerry Solution	BlackBerry Enterprise Server v. 4.1 20 BlackBerry Storm, Storm2, Tour, Curve smartphones
ESRI Software	ArcGIS Server 9.3 Standard - Enterprise Edition
Wireless Carrier(s)	AT&T, Sprint, T-Mobile, Verizon
Database Software	PostgreSQL 8.3, SQL Server 2000

For a more detailed explanation of the Freeance Mobile solution in place at NWS, request the complete Case Study Article at [http://www.freeance.com/product\\_mobile\\_info.php](http://www.freeance.com/product_mobile_info.php)