(WICHITA, Kan.) For the second time in four months, WeatherData, Inc., the nation’s leading provider of weather risk management solutions, has been awarded a patent for its innovative weather forecasting and technology systems. StormVision® with Lightning (U.S. Patent #6,405,134 B1) predicts where lightning strikes are likely to occur with a high degree of accuracy.

"For more than 20 years, WeatherData has consistently led the industry in developing innovative solutions that minimize risks and maximize opportunities surrounding severe weather occurrences," said WeatherData Founder and CEO Michael R. Smith, who co-developed the patent with WeatherData’s Manager of Technology Development Bill Vincent.

"One variation of the invention can even superimpose the lightning’s predicted path over a display of power lines, factories, highways and railways, to help clients activate severe weather and emergency response procedures as much as 30 minutes in advance of the actual lightning threat," Smith said. "In the future, StormVision with Lightning will be able to predict the location of lightning hours in advance. That kind of lead-time gives businesses a huge advantage when it comes to implementing safety procedures or mobilizing their emergency operating plans."

How It Works... And Why It's Different

StormVision with Lightning predicts where lightning strikes are likely to occur by evaluating radar and temperature data over wide geographic locations. It is based on an algorithm which analyzes radar data to locate areas where cloud tops extend above a predetermined temperature threshold and have sufficient radar reflectivity (i.e. density) to create cloud particles with high electrical charge. These are designated as "electrified" areas with great lightning potential.

The radar data is tracked across at least two time periods, and the algorithm predicts the location of the potential lightning areas at 10 minutes, 20 minutes and 30 minutes into the future. As the science of computer modeling of thunderstorms advances, it will eventually be possible for the system to predict lightning hours in advance.

continued on next page
The algorithmic analysis of StormVision with Lightning differs significantly from existing products offered by the National Lightning Detection Network (NLDN) or other commercially available systems: These existing systems try to plot a future path for lightning either by measuring electrical activity in the atmosphere over a particular point or by tracking where lightning strikes have previously occurred. Such methods lack the geographical breadth and "lead time" to be useful to businesses (i.e., the interval from when the forecast is made until the time lightning occurs). Trying to predict future lightning strikes based on the prior existence of lightning is particularly ineffectual with newly developing storms that have yet to spawn lightning at all.

"StormVision with Lightning is truly the first lightning forecasting system," explained Smith. "Other systems do not activate until a lightning strike has occurred or is about to occur. Our system looks at the atmosphere and cloud characteristics to locate areas where lightning will develop. As the science of meteorology improves, it will be possible to forecast lightning hours ahead, using this methodology."

According to Contingency Planning and Management, lightning is the most common cause of power outages, and 34 percent of U.S. businesses have suffered costly, power-related downtime. Smith says the advance weather warnings provided by StormVision with Lightning will allow companies to reliably predict future retail performance.

"Utility companies, manufacturing plants, airlines and other businesses can - and should - be proactive in their approach to weather-related risks. This technology allows them to increase safety, protect their property, deploy emergency crews in advance of a storm, and dramatically minimize productivity and service interruptions," Smith said.

continued on next page
WeatherData delivers, installs and trains users on StormVision with Lightning, and provides 24x7x365 meteorologists and support personnel to all its users. WeatherData’s first patent was awarded in March 2002 for SelectWarn™, an intelligent warning system that monitors multiple threats simultaneously and lets public safety managers warn only in those areas threatened.

WeatherData is a commercial weather company that provides weather risk management consulting and state-of-the-art weather forecasting products and services to more than 200 utility, transportation, manufacturing, educational and governmental clients throughout the U.S., Canada and Mexico. Clients include Nokia, Toyota, General Motors, Daimler-Chrysler, Burlington Northern Santa Fe, U.S. Department of Energy, Boeing and Experian.

For more information, visit www.weatherdata.com.

Contact:
sales@weatherdata.com
(316) 265-9127

StormVision is a registered trademark of WeatherData. SelectWarn is a trademark of WeatherData.