At right, Bob Baron of Baron Services, Inc., Huntsville, Alabama is monitoring a weather display, part of a severe weather advisory service he provides on a commercial basis. Baron Services is a spinoff company whose weather advisories are based on data originating at the Marshall Space Flight Center (MSFC), also located in Huntsville.

In 1988, Bob Baron, chief meteorologist of Huntsville's NBC affiliate WAFF-TV, learned that MSFC had developed a lightning detection and location network that provides real-time information. Intended as an aid to NASA research operations at MSFC, the Marshall system uses a central processor to collect raw data from strategically placed antennas in Alabama and Tennessee; the data is transmitted to users by telephone lines.

Baron proposed and concluded an arrangement with MSFC whereby the center would provide him the data and he would refine and enhance the MSFC real-time display software. He formed Baron Services to commercialize the system and acquired his first two clients, Huntsville Utilities and the Huntsville division of space rocket manufacturer Thiokol Inc.

A 1989 tornado that caused extensive damage in the Huntsville area prompted Baron to modify his service to allow quicker and more accurate dissemination of severe weather information to the public. Baron Services developed a means of changing the computer data to audio data for transmission by radio station subcarrier, reception by clients through an antenna, and decoding by computer for display.

In 1991-92, Baron further improved the service. He developed software to combine on-screen data from the Lightning Detection Service with a conventional weather display showing clouds and rain intensity. Later, he advanced the system to combine real-time lightning data with Doppler radar, broadening the range of storm data and enabling client companies to monitor the approach and departure of significant storms and schedule their operations accordingly.

The latest development is storm projection, which gives utilities, emergency management officials and others affected the ability to plot a dangerous storm's projected movement, instantly identify all communities in the storm's path, and estimate the time the storm will arrive at each community.