

**NATIONAL TRANSPORTATION SAFETY BOARD**  
Vehicle Recorder Division  
Washington, D.C. 20594

August 30, 2012

## **17 – Electronic Device Factual Report**

by **Bill Tuccio**

### **1. EVENT**

Location: Moscow, Tennessee  
Date: July 11, 2012  
Aircraft: Cirrus SR20  
Registration: N764RV  
Operator: Private  
NTSB Number: ERA12FA438

### **2. GROUP - No Group**

### **3. SUMMARY**

On July 11, 2012, about 0907 central daylight time (CDT), a Cirrus SR20, N764RV, registered to Vaughn Aviation LLC and operated by an individual, sustained substantial damaged from tree and terrain impact near Moscow, Tennessee. The pilot was fatally injured. Instrument meteorological conditions prevailed at the time and no flight plan was filed for the Title 14 Code of Federal Regulations, Part 91 personal flight. The flight originated from Millington Regional Jetport Airport (NQA), Millington, Tennessee, about 0825, for an intended destination of Panama City, Florida.

### **4. DETAILS OF INVESTIGATION**

On July 16, 2012, the NTSB Vehicle Recorder Laboratory received the following device:

GPS Manufacturer/Model:	Apple iPhone 4S
Serial Number:	DNPGH226DSDK

#### **4.1. Apple iPhone 4S Device Description**

The Apple iPhone is a touch-screen smart-phone capable of voice calling, text messaging, email, photo/video recording, audio (music) playback, and numerous other specialized functions depending on configuration. Specialized functions are supported by additional user-installed program applications (Apps). Application data is stored in

non-volatile memory<sup>1</sup> and may include call logs, text messaging logs, image, video, and position location information. In addition, the specialized application data may be stored in a proprietary file structure using numerous file formats. The amount and type of data stored varies based on the software version and configuration of the specific device.

#### **4.1.1. Apple iPhone Data Recovery**

Upon arrival at the Vehicle Recorder Laboratory, an exterior examination revealed the iPhone had sustained substantial damage (see figures 1 and 2); however information was extracted using forensic software.

**Figure 1. Damaged iPhone - front.**



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<sup>1</sup> Non-volatile memory is semiconductor memory that does not require external power for data retention.

**Figure 2. Damaged iPhone - rear.**



#### **4.1.2. Apple iPhone Data Description**

The phone iOS version was 5.1.1. There were 32 applications installed, 7 of which were aviation related, mostly weather related applications. One of the applications was AOPA's FlyQ flight planning software.

The last recorded, user-related activity on the phone was on July 11, 2012 at 08:29:49 CDT. This activity was a web browser cached image from [www.airnav.com](http://www.airnav.com) showing the Panama City, Florida airport information page (ECP). The activity prior to this cached image was on July 11, 2012 at 08:04 CDT, and was a web browser history to the same [www.airnav.com](http://www.airnav.com), ECP airport information page.

The night before the accident, the last recorded activity on the phone was on July 11, 2012 at 00:34:59 CDT consisting of the editing of a note related to a rental car at the ECP airport. The next iPhone recorded activity was on July 11, 2012 at 07:07:16 CDT, consisting of a 58 second inbound phone call.

The iPhone FlyQ application also recorded a number of weather radar images of the southeastern United States the day and night before the accident. The images indicated numerous areas of precipitation of varying intensity.