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

April 24, 2012

17 - GPS Factual Report

by Bill Tuccio

A.   EVENT

Location:	Bloomfield, Indiana
Date:	March 23, 2012, 2100 Eastern Daylight Time (EDT)
Aircraft:	Mooney M20J
Registration:	N201QB
Operator:	Private
NTSB Number:	CEN12LA198

B.   GROUP - No Group

C.   SUMMARY

On March 23, 2012, at 2100 eastern daylight time, N201QB, a Mooney M20J airplane, was substantially damaged when it collided with an embankment during an aborted landing on runway 18 at Shawnee Airport (1I3), Bloomfield, Indiana. The commercial rated pilot and the passenger were seriously injured. The airplane was co-registered to and operated by the pilot. No flight plan was filed for the flight that originated at Sullivan County Airport (SIV), Sullivan, Indiana, about 2040, and destined for airport 1I3. Visual meteorological conditions prevailed for the repositioning flight conducted under 14 Code of Federal Regulations Part 91.

D.   DETAILS OF INVESTIGATION

On April 3, 2012, the NTSB Vehicle Recorder Laboratory received the following device(s):

GPS Manufacturer/Model:	Hewlett Packard iPAQ Travel Companion
Serial Number:	AW180C31

Hewlett Packard iPAQ Travel Companion Device Description

This Hewlett Packard IPAQ Travel Companion is sold by Control Vision as the Anywhere Travel Companion (ATC). It is a handheld, touchscreen device for mobile navigation in aircraft and ground vehicles. The device is capable of providing XM weather and Bluetooth communications capability. Software for the device is in part

provided by a removable SD card. The Control Vision Anywhere Map software provides air navigation features. Optional instrument approach charts are provided by the Control Vision Pocket Plates application. The device stores most, but not all information, in non-volatile memory[1]. The navigational databases are updated via PC-based Control Vision proprietary software using a USB cable. While the USB cable supplies external power, Control Vision warns full charging capabilities are only achieved when the unit is connected to the iPAQ provided external charging device. The unit allows the user to create and store custom flight plans and user waypoints. While track information can be displayed on the device, according to Control Vision, it is not retained when the device is powered off nor is it downloadable.

Hewlett Packard iPAQ Travel Companion Data Recovery

Upon arrival at the Vehicle Recorder Laboratory, an exterior examination revealed the unit had sustained minor damage (figure 1). Initially, the unit would not start using external power supplied by a USB connection. After consultation with Control Vision technical support, the battery was removed and found to have zero charge. The unit was then powered by using an external power supply (figure 2) and the reset button on the side of the unit was pressed. The unit then powered on, screens were navigated, and the memory contents were copied via a USB cable without difficulty.

Figure 1. Photo of damaged iPAQ.

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[1] Non-volatile memory is semiconductor memory that does not require external power for data retention.

Figure 2. IPAQ connected to external power supply.

**Hewlett Packard iPAQ Travel Companion Data Description**
When the device first started, it displayed the owner's name and address on a locked screen. The screen was unlocked using the touch screen. After being unlocked, the device presented the screen shown in figure 3, with a date of "9/5/2007 1:01PM."

Figure 3. Photo of IPAQ main menu on startup.

The Anywhere Map application was started and the position depicted is shown in figure 4. The position shows the aircraft just south of the V243/V221 intersection, approximately 7 nautical miles west of the 1I3 airport.

Figure 4. Photo of Anywhere Map application startup position.
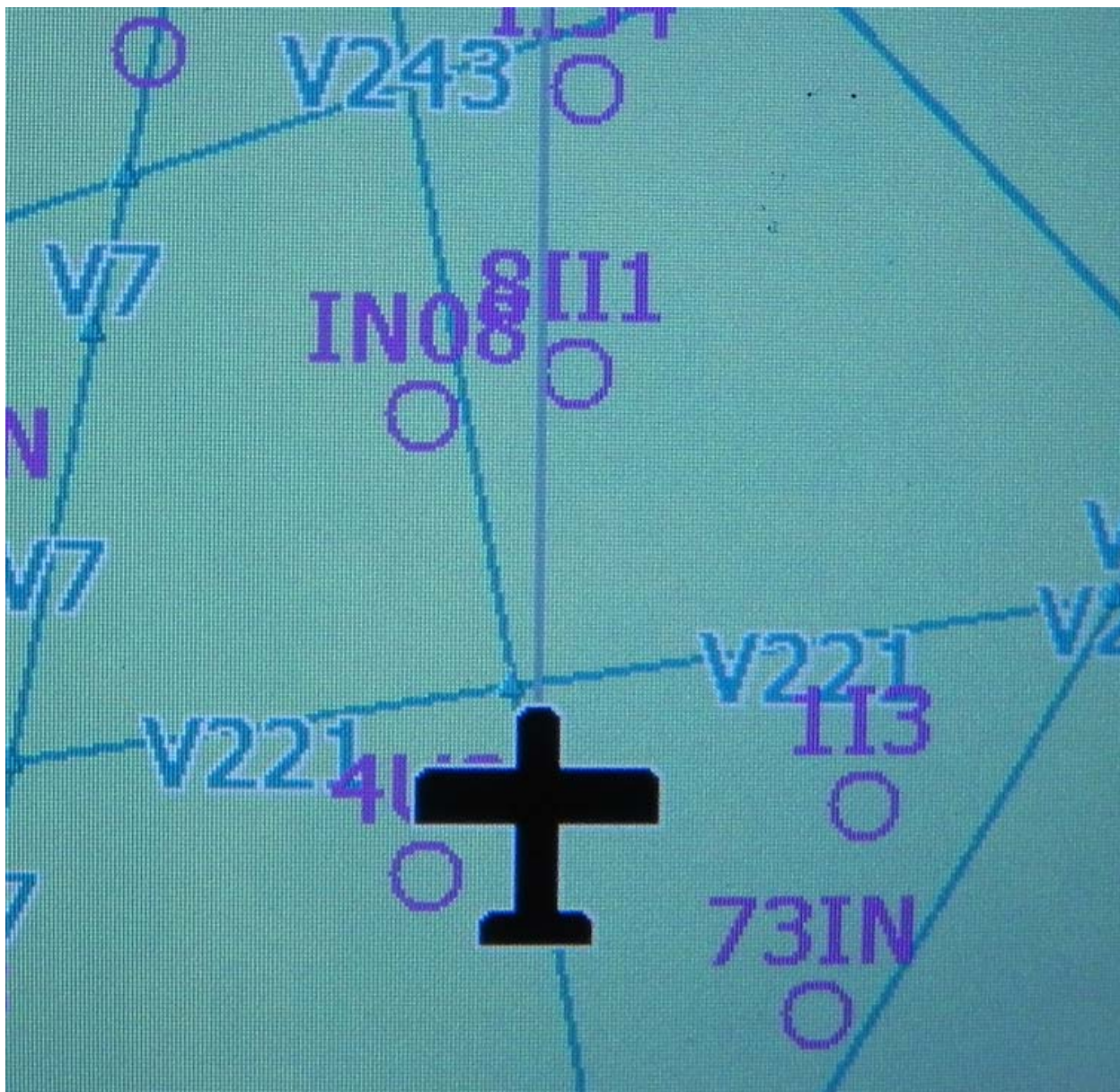
The Anywhere Map flight plans page had no stored flight plans. The database screens for both Anywhere Map and Pocket Plates indicated the last database update for both applications was April 8, 2010.

The Pocket Plates application was started. The startup screen is shown in figure 5, displaying the RNAV/GPS RWY 30 approach at Appleton/Outagamie County Regional Airport.

Figure 5. Pocket Plates startup screen.