

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

May 8, 2012

Smartphone Device

Specialist's Factual Report By Ben Xu

1. EVENT

Location: Green Cove Springs, Florida
Date: December 26, 2011 / 0554 EST
Aircraft: Bell 206B / N5016M
Operator: SK Logistics, d.b.a. SK Jets
NTSB Number: ERA12MA122

2. ACCIDENT SUMMARY

On December 26, 2011, at 0554 Eastern Standard Time (EST), a Bell 206B, N5016M, operated by SK Logistics, d.b.a. SK Jets, collided with terrain while maneuvering near Green Cove Springs, Florida. The certificated airline transport pilot and 2 passengers (a doctor and a medical technician) were fatally injured. The on-demand air taxi flight was conducted under the provisions of 14 Code of Federal Regulations Part 135. Night instrument meteorological conditions prevailed along the route and no flight plan was filed for the planned flight to Shands Cair Heliport (63FL), Gainesville, Florida. The flight originated from Mayo Clinic Heliport (6FL1), Jacksonville, Florida, about 0537.

3. DETAILS OF DEVICE INVESTIGATION

The Safety Board's Vehicle Recorder Division received the following smartphone devices:

Device 1: Apple iPhone 4
Device 1 Serial Number: C8PGT9F1DT9V
Device 2: Apple iPhone 4
Device 2 Serial Number: Unknown
Device 3: HTC EVO 4G
Device 3 Serial Number: Unknown

Device 1 sustained minor damage from impact and fire during the accident (Figure 1). Power was applied using laboratory equipment and the device start-up was consistent with normal operation. Data was extracted using laboratory software.

Devices 2 and 3 sustained major damage from impact and fire during the accident (Figure 2). The devices were damaged beyond repair and data could not be extracted from them.

3.1. Smartphone Device Description

A smartphone is a mobile phone combined with a mobile computing device. These devices are typically capable of voice calls, text messaging, email, internet access, photo/video recording, and many other functions depending on the specific application(s) loaded. Data is stored on *non-volatile*¹ memory and may include call logs, text messaging logs, photos, videos, and location information. The amount and types of data stored varies based on the device's software version and configuration.

3.2. Smartphone Device Time Correlation

Smartphone clocks are synchronized to a highly-accurate central timekeeping server.

3.3. Device 1 Data Description

The device was downloaded using laboratory software and hardware. Physical features and identifying information on the phone indicated that this device belonged to the pilot of the aircraft.

An examination of the call logs on the device showed several incoming and outgoing calls on the day of the accident. These calls are summarized in Table 1.

No other relevant information was found on the device.

Time (EST)	Call Direction	Duration (hh:mm:ss)	Phone Number	Label
03:35:54	Incoming	00:01:33	[Redacted]	[SK Jets Charter Scheduler]
04:19:04	Outgoing	00:00:50	(352) 335-8672	GNV AWOS
05:04:42	Outgoing	00:00:24	(800) 342-5365	Shands Cair Dispatch (Hospital)
05:05:30	Outgoing	00:00:26	[Redacted]	[SK Jets Charter Scheduler]
05:37:07	Incoming (Missed)	00:00:00	[Redacted]	[SK Jets Charter Scheduler]

Legend: [] = Redacted Information

Table 1: Summary of call log downloaded from Device 1

3.4. Device 2 Data Description

No data could be recovered from this device.

3.5. Device 3 Data Description

No data could be recovered from this device.

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



Figure 1: Device 1 - Apple iPhone 4 (S/N C8PGT9F1DT9V)



Figure 2: Left: Device 2 - Apple iPhone 4 (S/N Unknown)

Right: Device 3 - HTC EVO 4G (S/N Unknown)