

4th IAP NORTH AMERICAN AND CARIBBEAN REGIONAL  
CONFERENCE

Montego Bay, Jamaica W.I.

2 – 4 November 2016

“Digital Forensic Evidence - The  
New Frontier”

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# Most Digital Evidence is Circumstantial

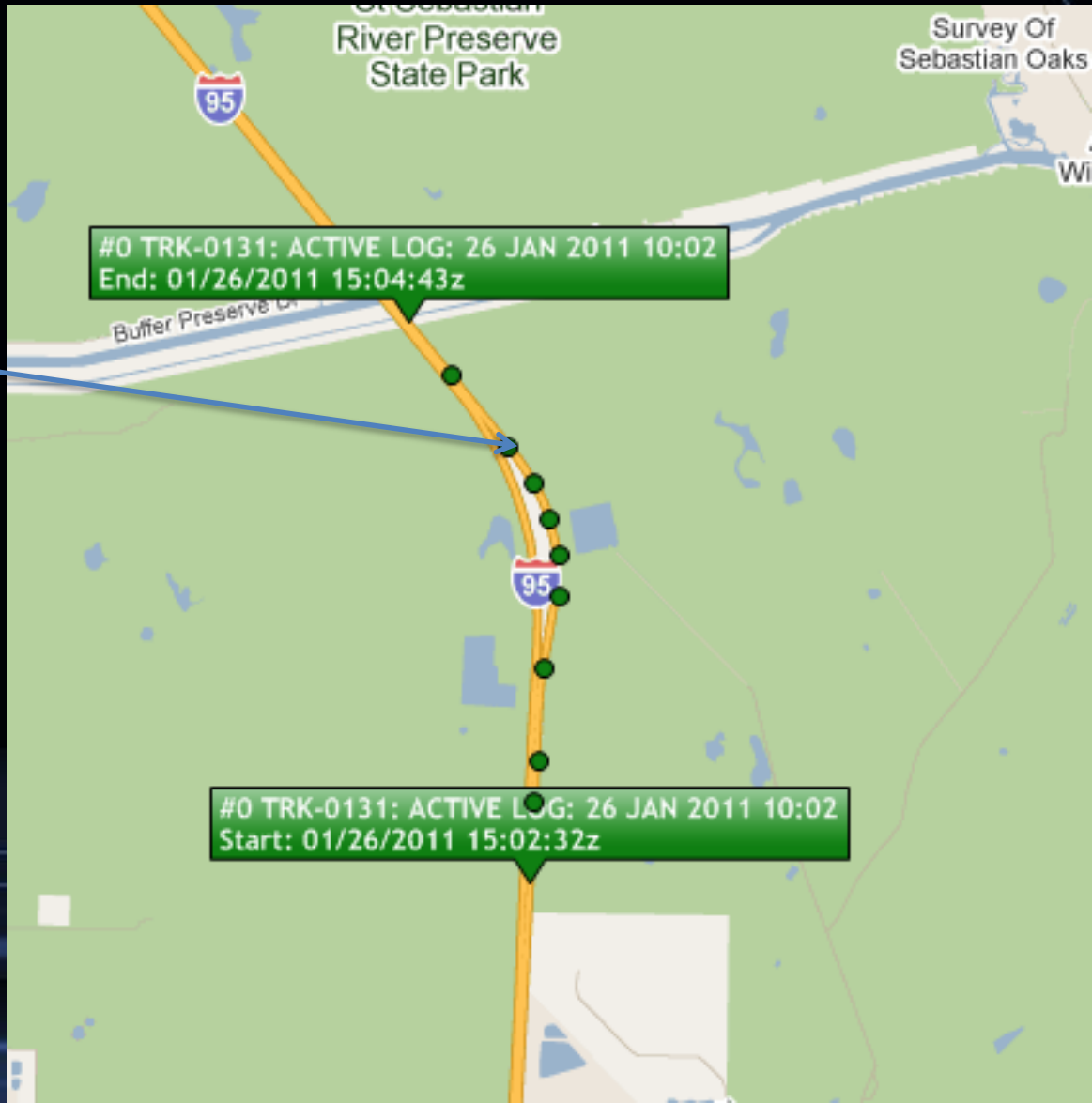
- Forensics tells you what the device was used for
- Forensics tells you where the device was
- Properly supported it gives the Court the ability to infer who was using the device
- Chronological proximity to personally identifying data equals compelling evidence of criminal activity

# Locations of Messages

	Handheld Devices	Computers	Service Provider Servers	Car computers	Cloud Storage
SMS	Yes	Unusual	No	If the car acts as a hub	Possibly
Apps	Yes	Yes	Yes	Yes	Yes
Social Networking	Yes, but retention is rare	Yes	Yes	Yes	Yes
Email	Yes	Yes	Yes	Possibly	Yes

# Digital Footprints: GPS Data

Trackpoints



# Example: Android Operating System

Date and time original image was generated: **2011:06:07 18:06:00**

Camera model: **T-Mobile G1**

X Resolution: **72/1**

Y Resolution: **72/1**

Units: **2**

YCbCrPositioning: **Centered**

Exif version: **0220**

ComponentsConfiguration: **YCbCr**

Colorspace: **1**

PixelXDimension: **1536**

PixelYDimension: **2048**

FlashPix Version: **0100**

Compression: **6**

InteroperabilityVersion: **0100**

GPS

GPSVersionID: **2.2.0.0**

GPSLatitude: **43° 39' 14.93"** ←

GPSLongitude: **70° 15' 57.38"**

GPSAltitudeRef: **Above sea level**

GPSAltitude: **26 m**

GPSTimeStamp: **18:09:31**

GPSMapDatum: **WGS-84**



# Apple Carplay



# Planning the Crime

- Communications about upcoming events related to the offence
- Searches regarding the intended victim
- Searches for flights and car rentals
- Arrangements for weapons
- Simultaneous use of social media, text, and other personalized accounts to prove identity



# The Commission of the Offence

- Communications sent from the crime scene
- GPS shows arrival at crime scene at the relevant time
- GPS data departure from the crime scene after commission of the offence
- Photographs taken at or near the scene
- Correlate GPS data with found security video



# After the Fact Digital Evidence

- Confirming by digital communications that the job is done
- Financial Compensation for the offence
- Web searches for travel away
- Car data to the airport
- Communicating about leaving the country