A. Purpose:

To acquire data from infotainment/telematics systems previously removed from vehicles. Refer to CC SOP-51 for the on-scene vehicle retrieval guidance.

Many of the newer vehicles encountered today are equipped with an Infotainment and or a Telematics system. The Infotainment system is a combination of information and entertainment for use within the vehicle. Pairing to this system occurs through Bluetooth® or USB connection to the vehicle system and data is transferred or streamed. Other information contained may also include vehicle performance, maintenance and status. The telematics system is a combination of the telecommunication and information for interaction of the vehicle to exterior sources. This interaction can occur via wireless connectivity by utilizing a paired mobile device or onboard cellular connectivity to the internet or a dedicated service. Depending on the vehicle, these may be one hardware system or separate modules.

The vehicle's manufacturer and OEM (original equipment manufacturer) will determine how much data and the type of data that is contained in these systems. The following data may be present:

- Global Positioning System events and possible locations (not available is navigation is not included in the vehicle model). List of entered addresses, routes or track points captured at various intervals including possible velocity.
- Vehicle information such as serial/part number of infotainment/telematics system, software version of the operating system and original vehicle identification number (VIN).
- Loaded entertainment files such as audio, video or images.
- Connected devices such as media players, USB devices, SD cards with some containing unique serial numbers or identification numbers.
- Bluetooth or Wifi connections with names of connected devices that may be personalized along with MAC address.
- Call logs, contacts and SMS messages with possible time stamps included.
- Vehicle events such as gear shifting, lights on/off, doors opening/closing, odometer readings, pairings and attachments and system reboots.

In cases in which the data cannot be downloaded via USB or through the diagnostic system onboard the vehicle, but must be downloaded directly from the Infotainment system. In these cases, the system is removed and the submitting agency will be provided the removed system to submit directly to the Laboratory.

B. Responsibility:

Forensic Science Examiners assigned to the Multimedia and Image Enhancement and/or Computer Crimes Unit or performing casework in the Unit.

C. Procedure:

1. The request type for this analysis will be "Vehicle Data Acquisition/Analysis". The entire

infotainment/telematic system will be transferred to the examiner to begin working on this request.

2. The examiner will attempt the data extraction from the infotainment/telematic system by accessing the internal components as instructed in the iVE Berla Software. If successful, the data will be analyzed in the iVE software and a report will be generated providing the data information requested by the requesting agency.

3. In some cases, the unit may need to be disassembled to connect to the internal components using the DIB (device interface board). In these cases, if the power is supplied to the various components, the analysis is to take measures to prevent electrocution or compromising the system with excess voltage.

4. Once the connection is successfully made, the analyst can proceed to perform a logical or physical acquisition to extract the data into the software. The physical extraction is the preferred method. Depending on the vehicle, sometimes only a logical acquisition can be performed.

5. In some cases, the infotainment/telematic system may need a "chip off". Prior to conducting this process, the submitting agency will be notified that this is a destructive process and that they are giving us consent to move forward with this procedure. In this case, the analyst will add the "Chip-Off Analysis" request to this submission.

D. References:

iVE Vehicle Forensics Certification Coursework Book, Version 2.0, May 2018