UDOT uses radar, loops, bluetooth and probe samples to collect traffic data. This document describes these data sources and current applications.

**Traffic Data and Applications**

**Bluetooth**
- **Requirements:**
  - Sensors in the field
  - Data must be purchased from third party
  - Bluetooth/Wi-Fi must be activated
- **Benefits:**
  - Higher penetration rate
  - Can be installed for specific projects
  - Collects travel time & origin-destination
- **Description:** Data is collected at Point A and Point B only
- **Limitations:**
  - Cannot measure volume
  - Travel time updates lag behind real-time
  - Parallel corridors are hard to differentiate (I-15 and frontage roads)

**Probe**
- **Requirements:**
  - Vehicle navigation system or app activated
  - Data must be purchased from third party
- **Benefits:**
  - Does not require field equipment
  - Collects speed and travel times
- **Description:** Data is collected at multiple points along vehicle path
- **Limitations:**
  - Lower penetration rate
  - Cannot measure volume or determine origin/destination
  - Travel times are unreliable for low volume roads and mountainous geography

**Point**
- **Requirements:**
  - Radar or loop equipment in the field
- **Benefits:**
  - Collects volumes and speed
  - Data does not need to be purchased from third party
- **Description:** Data is collected at equipment location
- **Limitations:** Can only collect data at equipment locations
  - Can not collect travel times or origin-destination

**Applications**

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**Sample Size Comparison**

- **Bluetooth:** 20-40% of vehicles
- **Point:** 100% of vehicles
- **Probe:** 2-15% of vehicles

**2019 HERE Data Validation Study performed by RSG:** 95% of routes studied were not significantly different from Google data.

**Example of Google, Bluetooth, and Probe data for the same route**

- Probe travel time may be less reliable with fewer samples
- Bluetooth may collect data for adjacent routes

**Date Modified:** May 10, 2019