V2P & V2X Systems Communications with Smart Phones & Wearables

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Communication Types

INFRASTRUCTURE **VEHICLES** **PEDESTRIANS**

- ▶ Cars & Infrastructure:
  - ▶ Smart Cars & Smart Intersections – Cameras, Wifi, Bluetooh, & RFID.
- ▶ Pedestrians:
  - ▶ Smartphones – Phones with RFID, Bluetooth, & Wifi capabilities.
  - ▶ Wearables –
    - ▶ Smartwatches – Bluetooth, Wifi, Near Field Communication (NFC), & Cellular networks capabilities.
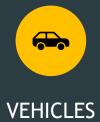   - ▶ Tags & Bands – RFID, NFC, & Lower Power Bluetooth.

Application

INFRASTRUCTURE

Crosswalks
Intersections
Midblock Crossings
Pedestrian Hybrid Beacons

VEHICLES

PEDESTRIANS

Communication Types

INFRASTRUCTURE **VEHICLES** **PEDESTRIANS**

► V2P- Vehicle to Pedestrian via Smart phones/wearables.

　► https://www.youtube.com/watch?v=u9oIqPDqwYE

► V2X – Vehicle to everything via any available communication methods.

　► Emergency Vehicle Prioritization.

　► Communicating Emergency Situations.

　　► Devices on highways communicating with vehicles:

　　　► Inclement weather conditions.

　　　► Road hazards & Slow downs.

　　　► GPS route prioritization.

　　　　► Navigating arterial weaves.

　　　　► Reduce close calls.

Questions & Comments