Cars in the Cloud

Presented by

BITBREW and PEAK TELEMATICS
Connecting Cars, Saving Lives

A Case Study from Peak Telematics
The Distracted Driving Epidemic

- Increased Accident Frequency
- Unnecessary Loss of Life
- Injuries
- Property Damage
Halting the Distracted Driving Epidemic

Opportunity to harvest driving behavior data from vehicle OBD-II port and/or mobile devices in order to:

• Measure
• Analyze
• Provide Feedback
• Improve Consumer Driving Traits
Darby is an interactive device that quietly plugs in your car’s data port and drives along with you. Safe and thoughtful driving yields a better score and can lead to savings.

Let Darby help. Drive smarter. Drive your potential.
Holistic Solution for Insurance Cos.

- Data Analytics & Scoring (7)
- Strategic & Tactical Consulting (1)
- Hardware / Platform Solutions (2)
- White Labeled Customer Apps (6)
- Flexible Integration w/ Policy Systems (5)
- Customer Acquisition Solutions (3)
- Back Office, Logistics & Support (4)
- Nimble & flexible to adapt program to customer/market needs

Holistic Customized Package
(Concierge Service End to End - Starting Day 1)

Customer Centric Focus

Industry Leading Speed To Market
Launched in 30 days or less
Connecting Cars, Saving Lives

BitBrew Case Study

The Result: Win for Consumers

When consumers use tools like Darby to improve their driving habits:

1. Fewer accidents will occur
2. Fewer injuries and traffic-related deaths
3. Lower insurance costs for everyone
The Result: Win for Insurance Co’s.

By adopting Usage Based Insurance (UBI) ahead of their industry peers, insurance companies will:

1. Create adverse selection to gain higher market share of “good” drivers.
2. Lower overall costs due to reduced accident frequencies and severities.
3. Enhance their brand equity and overall consumer satisfaction by associating with the positive Darby improved driving messaging.
Connected Car Data

BitBrew
WHAT IS A CONNECTED VEHICLE PLATFORM?

Data Ingestion, Filtering, and Delivery

- Low Latency
- Scalable
- Reliable Delivery Over AMQP or Webhook
- Device-Agnostic: OBD-II, Mobile, OEM
- Custom Integrations Available
DANLAW DEVICE INTEGRATION

Ingests Raw Device and Vehicle Data and Formats as JSON

Examples

- Trip Start/Stop
- Connect/Disconnect
- Standard OBD-II PIDs
- VIN Change
- Accelerometer
- GPS
- Speed Metrics
- Vehicle Diagnostics

Mode $01$ PID $03$

```json
{
    "FuelStatus": {
        "closedLoopO2SensorFault": false,
        "openLoopSystemFault": false,
        "openLoopDrivingConditions": false,
        "closedLoopO2SensorFuelControl": true,
        "openLoopNotYetSatisfied": false
    }
}
```

Harsh Braking

```json
{
    "obdSpeedEventData": {
        "thresholdValue": 25.0,
        "maxValue": 6.0,
        "type": "BrakingWithAccelerationConfirmation"
    }
}
```

GPS Data

```json
{
    "GpsReading": {
        "gps": {
            "heading": 133,
            "horizontalDilutionOfPrecision": 0,
            "latitude": 42.000455566406,
            "longitude": -83.74847412109375,
            "numberOfSatellites": 7,
            "hemisphere": "NorthWest",
            "fixQuality": "Standard"
        }
    }
}
```
FILTERING IN RULES ENGINE

Raw Event

```
{
  "header": {
    "tags": [],
    "messageId": "22fe1b05-e13-33e-16d-535898c4c16b",
    "brokerType": "DanlawTcp",
    "ingestionTimestamp": "2017-02-13T20:04:50.922",
    "tenantId": "telematikal",
    "deviceId": "0031181918"
  },
  "body": {
    "timestamp": "2017-02-13T15:04:49-05:00",
    "odometer": 8,
    "gps": {
      "heading": 132,
      "horizontalDilutionOfPrecision": 0,
      "latitude": 42.28884555566486,
      "longitude": -83.74847412109375,
      "numberOfSatellites": 7,
      "hemisphere": "NorthWest",
      "fixQuality": "Standard"
    },
    "vehicleProtocol": "CAN11Bit",
    "validity": {
      "gpsRecent": true,
      "kmUnits": false,
      "non010TripStart": false,
      "vehicleOdometer": false
    },
    "type": "TripStartAbsoluteTimandGps",
    "tripNumber": 46
  }
}
```

Your Rule

```
Rule TripStart

Using body =
{ 'name' = 'Trip Start',
  message = {
    serialNumber = header.deviceId,
    time = body.timestamp,
    gps = body.gps,
    tripNumber = body.tripNumber}
}
```

Filtered Event

```
{
  "name": "Trip Start",
  "serialNumber": "0031181918",
  "time": "2017-02-13T15:04:49-05:00",
  "gps": {
    "heading": 132,
    "horizontalDilutionOfPrecision": 0,
    "latitude": 42.28884555566486,
    "longitude": -83.74847412109375,
    "numberOfSatellites": 7,
    "hemisphere": "NorthWest",
    "fixQuality": "Standard"
  },
  "tripNumber": 46
}
```

Get only the data you want, formatted for your app.
APPs AND SERVICES WE ENABLE

- Auto Insurance Programs
- Preventative Maintenance
- Dealership Inventory Management
- GPS Tracking Safety and Emergency Services
- Mobility and Car Sharing Apps
- Fleet Management
- Dept. of Transportation Services
- New Ideas
WE’RE LOOKING FOR...

- Customers who want to avoid the heavy lifting of data processing.
- OEMs that have an interest in integrating their APIs.
- Device manufacturers that want to work with a reliable data platform.