



Portable Travel Time Data Collection

Intelligent Transportation Systems





General Description

- Device collects Bluetooth MAC addresses.
- Stores the data and presents it with a web interface.
- ODOT database collects the MAC addresses from the web interface.
- ODOT database subtracts timestamps to determine travel time.
- TripCheck displays the calculated travel time in terms of delay time.





Solar Powered Trailer #1

- Solar panels charge batteries during day.
- Batteries supply power during the night.
- Trailers have 1-2 weeks of reserve power.





Solar Powered Trailer #2

- There is a camera attached to each trailer.
- Camera and Bluetooth DCU connect to DIGI and report wirelessly.
- Trailers are modified for Bluetooth collection by installing DCU and adding an external antenna.





Trailer DCU Installation

Internal Components:

- Solar Regulator
- AC Battery Charger
- Camera Video Encoder
- Power Terminal
- Trailer Hitch Power Bus
- DIGI Wireless Transceiver
- Bluetooth DCU





Utilizing Existing ITS Equipment in Zone



➤ Additional DCUs can be added within the route for greater accuracy.

➤ Temporary DCUs can be added to existing ITS equipment, such as:

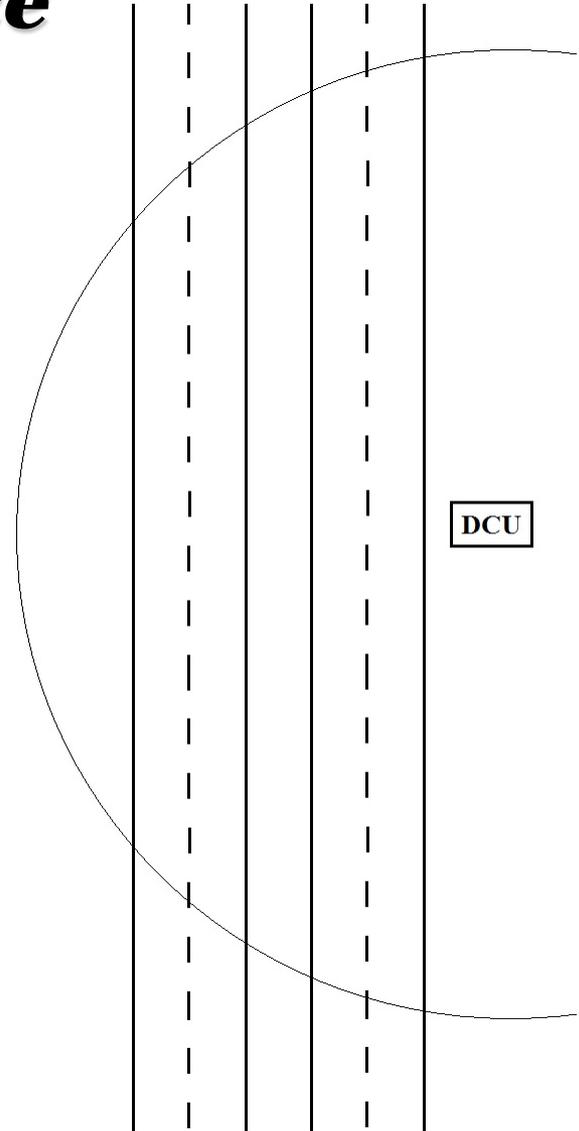
- VMS Signs
- RWIS Stations
- Cameras





Bluetooth Collection Device

- The larger gain antenna provides a collection radius of 600 feet.
- The DCU will ask for MAC addresses every few seconds.
- Multiple MAC address will be reduced to best RSSI.





Public Security/Privacy

- DCUs transmit hashed Bluetooth MAC Addresses and signal strength.
- Hashed MAC Addresses are halved when received.

2014/07/01 12:05:11

3e8f4d4d21f6746aa31cbd9d0b5000fd,	2014-07-01 11:05:51,	1,	-67,	0:1:95:1D:93:FB
65d4681a7fdc720bd07b517fdaa287ed	2014-07-01 11:06:12,	1,	-61,	0:1:95:1D:93:FB
c61eada0ce92bfb3d3a1dcea81a2aebf,	2014-07-01 11:06:31,	4,	-54,	0:1:95:1D:93:FB
20652040d6f01c3fbde8ee9269a05c4f,	2014-07-01 11:07:28,	1,	-77,	0:1:95:1D:93:FB
dffa5df8faf016c2b9e44b9e6b7f87de,	2014-07-01 11:08:15,	1,	-67,	0:1:95:1D:93:FB
e37511e49694390cd42cd61981e6d308,	2014-07-01 11:08:15,	3,	-55,	0:1:95:1D:93:FB
1eab6056e808c48cb6a42acc3715755d,	2014-07-01 11:08:32,	2,	-57,	0:1:95:1D:93:FB
907f9ddb1d24bd1c1883d4298ffc9916,	2014-07-01 11:09:41,	2,	-70,	0:1:95:1D:93:FB
c05db3d7b64a0feafa392108618ac044,	2014-07-01 11:09:45,	1,	-76,	0:1:95:1D:93:FB



TripCheck Travel Delay

OREGON DEPARTMENT OF TRANSPORTATION

TripCheck

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West Oregon

View Road Conditions | View Weather Outlook | View Travel Services

Street Incidents in: Lane County

Minimum Chain Requirements
Learn the Law

I-5
MP 160 - 171
I-5, 14 miles South of Cottage Grove

NB Estimated Delay 2 minutes
SB Estimated Delay 2 minutes

Construction Work

Lanes Affected: (Southbound) 2 Lanes
Comments: All I-5 travel lanes, both directions, will be open for the Independence day Weekend. Expect slow NB traffic on Sunday afternoon. From July 7 to July 31, watch for intermittent single-lane closures through the work zone (MP 162-170). Watch for congestion and delays during peak travel times, including Sunday afternoons and evenings. Consider alternate routes. The SB Exit 170 on-ramp is

Road Conditions | NOAA Forecasts | Weather Stations | Cameras | ODOT/OSP Report



TripCheck Trailer Camera 1

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Street Incidents in: Lane County

Minimum Chain Requirements

Statewide Map | Map Legend | Road cameras

- Road closed
- > 2hr delay
- 20mn-2hr delay
- < 20mn delay
- No to Min. delay
- Unconfirmed
- Informational
- Weather hazard
- Weather warning
- Snow zone
- Weather stations
- Construction
- Truck restrictions

CLICK HERE for Eugene Map

TripCheck-Road Camera - Windows Inte...

http://www.tripcheck.com/popups/Cam.asp?curRegion=

I-5 Near E Whiteaker Rd.
Updated: Jul 03 2014 9:09 AM

ODOT
Elevation 0 | TripCheck.com | Milepost 174.18

Road Conditions | NOAA Forecasts | Weather Stations | Camera



TripCheck Trailer Camera 2

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CLICK HERE for Eugene Map

15 Near Curtis Creek Rd.
Updated: Jul 03 2014 9:12 AM

2014-07-03 09:12:00
ODOT

Elevation 0 | TripCheck.com | Milepost 157.00

Road Conditions | NOAA Forecasts | Weather Stations | Cameras



Travel Time Comparison

Travel Time System vs. PORTAL vs. BT Trailers
December 18th-24th
Greenburg to Sagert St

