

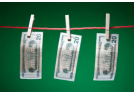
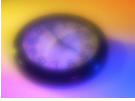
 **Verisk Insurance Solutions™**

Vehicle Telematics – Too Little or Too Much?


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1

Effective Roadblocks

What is the greatest obstacle to effectively utilizing vehicle telematics data?

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Dream Big



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Enter Reality

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Obs.	Date (UTC)	Time (UTC)	Degrees Latitude (Decimal)	Degrees Longitude (Decimal)	Cumul. Time (sec.)	Cumul. Distance (Mil.)	Cumul. Fuel (Gal.)	Speed (MPH)	Accel. or Decel. (g-force)
1	4/8/2012	14:45:30	-27.117	-109.367	0.00.00	0.000	0.000	0	0.000
2	4/8/2012	14:46:30	-27.118	-109.364	0.01.00	0.000	0.050	0	0.000
3	4/8/2012	14:47:30	-27.117	-109.371	0.02.00	0.080	0.055	20	0.030
4	4/8/2012	14:48:30	-27.150	-109.379	0.03.00	0.552	0.060	50	0.060
5	4/8/2012	14:49:30	-27.109	-109.388	0.04.00	1.499	0.078	65	-0.100
6	4/8/2012	14:50:30	-27.098	-109.398	0.05.00	2.538	0.091	59	0.010
7	4/8/2012	14:51:30	-27.093	-109.410	0.06.00	3.234	0.105	40	-0.070
8	4/8/2012	14:52:30	-27.084	-109.409	0.07.00	3.916	0.124	35	-0.015
9	4/8/2012	14:53:30	-27.076	-109.409	0.08.00	4.445	0.143	0	0.000

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Start Close to Home

Image Credit: ©iStockphoto.com/Luca Di Filippo

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Make Room for Telematics

Source: *Personal Automobile: Cost Drivers, Pricing, and Public Policy* (Conners and Feldblum)
Casualty Actuarial Society (CAS) Forum, Winter 1997, page 317-341

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Go Outside the Box

- Roads and Traffic
- Demography
- Weather
- Laws and Regulations





Image Credit: ©iStockphoto.com/Walter Galt

Be Aware of Difficulties Establishing Linkage

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Less = More



- Less Controversial
- More Standardized
- Less Costly
- More Straightforward

Image Credit: ©iStockphoto.com/Tony L. Alcorn

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Minimize the Pain

- Clearly-Defined Objectives
- Field Selection
- Cost-Effective Technologies
- Eliminate Redundancy
- Strategic Licensing or Partnerships



Image Credit: ©iStockphoto.com/Michael Pettigrew

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Preserve Location Privacy

$\{ (\$50 \times 0.5 \text{ mi}) + (\$25 \times 1.0 \text{ mi}) + (\$75 \times 2.0 \text{ mi}) + (\$100 \times 0.5 \text{ mi}) \} 4.0 \text{ mi} = \62.50

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Get Large Numbers

- Independent but Highly Similar Obs.
- Units of Driving
- Conditions and Events
- Shared or Publicly Available Databases

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More Familiar Terrain

Raw Data, Observation #4:

<u>Vehicle</u> John's Car	<u>Term</u> Apr - Oct, 2011	<u>Status</u> Driving	<u>Date</u> Weekday	<u>Time</u> AM Peak
<u>LC Band</u> 3	<u>Road Type</u> Freeway	<u>From Garage</u> 0 - 5 Mil.	<u>Weather</u> Overcast	<u>Visibility</u> Good
<u>Speed (mph)</u> 47.5 - 52.5	<u>vs. Limit</u> (2.5) - 2.5	<u>vs. Flow</u> (7.5) - (2.5)	<u>Fatigue</u> 0 - 5 mins.	<u>Fuel Econ.</u> 30 - 40 mpg
<u>Mileage</u> 177	<u>Time (mins.)</u> 250	<u>Fuel (gals.)</u> 2.88	<u>Harsh Accel.</u> 3	<u>Harsh Brake</u> 5

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Model the Effects

- Associate Insurance Data
- Frequency and Severity Modeling
- Pure Premium or Loss Ratio Modeling
- Unearth Interactions

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Go Live




- Score, Classify, or Tier?
- Those Other Cost Drivers
- Legal and Regulatory Issues

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14

Demystify Telematics

- Fit Telematics into the Puzzle
- Invest for the Future
- Find Optimal Granularity
- Standardize *and* Differentiate
- Get Your Head in the Game



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Questions and Comments



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