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**Downs et al.**

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(54) **DETECTING ANOMALOUS ROAD TRAFFIC CONDITIONS**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 859 days.

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(57) **ABSTRACT**

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**Related U.S. Application Data**

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(51) **Int. Cl.**  
**G06G 7/76** (2006.01)

(52) **U.S. Cl.** ..... 701/117; 701/119

(58) **Field of Classification Search** ..... 701/117,  
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See application file for complete search history.

Techniques are described for automatically detecting anomalous road traffic conditions and for providing information about the detected anomalies, such as for use in facilitating travel on roads of interest. Anomalous road traffic conditions may be identified using target traffic conditions for a particular road segment at a particular selected time, such as target traffic conditions that reflect actual traffic conditions for a current or past selected time, and/or target traffic conditions that reflect predicted future traffic conditions for a future selected time. Target traffic conditions may be compared to distinct expected road traffic conditions for a road segment at a selected time, with the expected conditions reflecting road traffic conditions that are typical or normal for the road segment at the selected time. Anomalous conditions may be identified based on sufficiently large differences from the expected conditions, and information about the anomalous conditions may be provided in various ways.

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**46 Claims, 28 Drawing Sheets**

