REQUEST FOR INFORMATION

CELLULAR TECHNOLOGY ENABLED FOR TRAFFIC MANAGEMENT

The Traffic Operations and Safety (TOPS) Laboratory at the University of Wisconsin-Madison in conjunction with the Wisconsin Department of Transportation is soliciting a Request for Information (RFI) that will be used as a basis to develop future engineering services solicitations. Information is being requested on previous or on-going development of cellular technology used to support a variety of traffic operations and management functions such as:

- **Roadway Link Speeds** – Monitoring of key interstate and expressway facilities.
- **Traffic Incident Identification** – Algorithm that produces rapid identification of deteriorating travel conditions.
- **Support Traveler Information** – Provide real-time, critical travel time information to fixed and portable dynamic message signs, 511, web pages and other traveler information services.
- **Alternate Route Operations** – Provide transportation and public safety professionals with travel condition information on parallel arterial streets during major traffic incidents.
- **Connected Vehicle and/or Vehicle Infrastructure Integration (VII)** – Provide cellular based information to assist with vehicle to vehicle and vehicle to roadside safety and/or mobility enhancements.
- **Other Emerging Needs** – Functions or services you are providing in other parts of North America or the world that may be of interest to Wisconsin.

Other issues for which we are seeking information related to using mobile phone data to support traffic management activities include:

- **Reliability** – Compared to traditional traffic monitoring devices, how accurate is your cellular technology enabled solution for traffic management?
- **Coverage** – Describe your methodology for assigning cellular signals to specific roadway segments. How do you deal with complicated, high volume, system to system interchanges?
- **Privacy and Data Security Concerns** – How does your company ensure data is secure and there are no long-term privacy and legal issues? What are the contracting methods to receive the data from the mobile telecommunication providers? Are these requests for data easily developed or are the providers reluctant to enter into such contracts for fear of privacy concerns, data accuracy, etc.? In your opinion, are there any statues in Wisconsin that would make a project more difficult than other parts of North America?
- **Business Models** – How does your company prefer to establish contracts with clients? How have you evolved to meet the needs of your customers? Have you been involved with any public/private partnerships? If so, what were the terms of the partnership?

- **Data Ownership Issues** – Under typical circumstances, who retains the rights to the data?

- **Data Packaging Options** – What options do you offer for receiving data (time increments, FTP, SFTP, other)?

- **Licensing Issues** – Do you require clients to enter into any software or server licensing agreements?

- **Costs** – Describe options for developing a costs basis for working with State DOTs. One time up front costs versus re-curring costs?

- **Typical Commissioning Timeframes** – After you receive contract authorization, how long does it take to commission a 90-mile segment of roadway (engineering, system built-out, systems integration, and testing)?

- **Archiving Capabilities** - Do you offer the capability to allow partners to view historical data for engineering studies? Have you developed any specific tools that enable easy data mining?

- **Use of Standards** – What standards do you use for data formatting (e.g., SAE, IEEE, ITE, etc.). Provide examples of central control systems you have been integrated into (e.g., freeway management system).

- **Physical and Logical Architecture Overview** – Describe the physical and or logical architectures of your solution(s)

- **Current of Future Projects** – Brief overview of current or projects currently being deployed or negotiated. For current projects, describe lessons learned and offer suggestions of how to overcome issues in the future.

The intent is to develop a Request for Proposals (RFP) in collaboration with WisDOT by the end of 2006 in an effort to have a pilot demonstration of various functions sometime in 2007.

Information on any or all areas of interest can be shared through several methods:

1) Send hard copies of material (reports, design documentation, maps, agreements, etc.) by **August 1, 2006** to:

   Todd Szymkowski  
   2205 Engineering Hall  
   1415 Engineering Drive  
   Madison, WI  53706-1691
Any written material that summarizes the submittal should be limited to 5 pages.

2) Send electronic copies of material by **August 1, 2006** to:

   Todd Szymkowski  
   szymkowski@engr.wisc.edu

3) Meet with WisDOT and TOPS staff on **THURSDAY, August 10, 2006** to collectively discuss project ideas. **To sign up for a 90 minute time slot, contact Todd Szymkowski at 608-263-2684 or szymkowski@engr.wisc.edu by August 1, 2006.** The discussions will be held at the Wisconsin Department of Transportation Statewide Traffic Operations Center (STOC) located at 633 W. Wisconsin Avenue, Suite 1200, Milwaukee, WI. Please note the date is one day after the Institute of Transportation Engineers (ITE) Annual Meeting and Exhibit being held in Milwaukee from August 6-9, 2006.

Responses to written questions received by August 1, 2006 will be posted at [www.topslab.wisc.edu](http://www.topslab.wisc.edu).

For additional information or questions, contact:

   Todd Szymkowski  
   TOPS Laboratory  
   2205 Engineering Hall  
   1415 Engineering Drive  
   Madison, WI  53706-1691  
   608.263.2684  
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**This Request for Information is independent of any future possible service provider solicitations.**