SHRP 2 Pre-Bid Conference for
Data Acquisition System Procurement
(Safety Project S12)

Conference: September 16, 2008
Keck Center of the National Academies
500 5th St NW Washington, DC 20001
Room 101
Noon – 3:00 pm

Register for the Conference

There is no cost to attend the conference, but registration is required for access to the building. Please email Kizzy Anderson (keanderson@nas.edu). Title the subject line "Registration for Pre-Bid Conference." Please include your name, organization, address, telephone number, fax number, and email address in the email. Registration emails will be accepted until 5:00 pm Eastern Daylight Saving Time on September 15, 2008.

Register for the Webinar

You can also participate in the conference by joining a live webinar. There is no cost for the webinar, but you must register at the following URL: https://www1.gotomeeting.com/register/131954538.

The Pre-Bid Conference

The Transportation Research Board's (TRB) 2nd Strategic Highway Research Program (SHRP 2) is conducting a pre-bid conference pertaining to the procurement of the data acquisition system (DAS) for the SHRP 2 Naturalistic Driving Study. The pre-bid conference will provide essential information for those interested in submitting their qualifications to provide the DAS components.

The conference will begin at noon on Tuesday, September 16, with a brief overview of the program. Then information will be provided regarding the DAS specifications and the current procurement plans. A general question and answer session will follow.

A request for qualifications and quotations is expected to be released in late October 2008, with proposals due early December 2008. Approximately 2,600 DAS units are required with delivery to be completed by December 2009.

Specifications for the DAS are being developed by the contractor for SHRP 2 Project S05, Virginia Tech Transportation Institute (VTTI). In general each DAS unit consists of:

- On-board data storage for at least 6 months.
- Continuous data collection at 10 Hz, including compressed video.

- Buffered, uncompressed video collected at 30 Hz, capable of being saved for 10-second intervals when triggered (e.g., for crash events).
- Four cameras: 2 forward-views, driver face plus left-side view, rear-window view, right-side view.
- First forward view: Machine-vision supportive color camera with anti-blooming technology and low-light capability. May be utilized to detect traffic signal state.
- Second forward view: Color camera zoomed view to facilitate traffic signal detection.
- Remaining three cameras: Low-cost, small-form-factor black-and-white cameras that are sensitive to IR illumination.
- Machine-vision lane tracker that also can tell road type and estimate vertical and horizontal curvature.
- Machine-vision eyes-forward monitor capable of estimating general glance location from face-view camera.
- Primary driver ID via machine vision from face camera.
- Passenger detection via rear video view. Passenger ID removal post hoc via machine vision. (Potential privacy issues).
- Vehicle networks information. Includes the retrieval of a variety of "new" vehicle network variables including ABS, ESC, brake assist, traction control, driver control interaction, etc. (Requires OEM cooperation).
- Wide FOV forward radar capable of assessing oncoming traffic. Must be small and lightweight enough to mount to the license plate holder.
- Accelerometers collecting X, Y, Z acceleration continuously at 10 Hz.
- Buffered accelerometer data collected at 1000 Hz for 10-second intervals; capable of being saved when triggered (e.g., for crash events).
- Yaw rate gyro collected continuously at 10 Hz.
- Low-cost illuminance sensor.
- Lost-cost RF sensor.
- Low-cost passive alcohol sensor.

For background information on the project please see: http://www.trb.org/shrp2/SHRPII_Safety.asp. For specific questions concerning the DAS and procurement please contact Walter Diewald at wdiewald@nas.edu or Charles Fay at cfay@nas.edu.