TLS - Request for Proposals June 17, 2009

516 Beth Bartel February 5, 2014 Terrestrial Laser Scanning (TLS) 3052

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REQUEST FOR PROPOSALS:

Terrestrial Laser Scanning Systems

UNAVCO, Inc. intends to procure a suite of Terrestrial Laser Scanning (TLS) instrument systems optimized to support a wide spectrum of Earth science research applications. UNAVCO is issuing this Request for Proposals (RFP) in order to identify and gather essential information about TLS systems that meet our requirements. UNAVCO is a non-profit, membership-governed consortium that supports and promotes Earth science by advancing high-precision techniques for the measurement and understanding of deformation. UNAVCO also supports education to meet the needs of the community and the public. UNAVCO is funded by the National Science Foundation (NSF) and the National Aeronautics and Space Administration (NASA).

System Components and Performance Specifications

UNAVCO intends to procure a suite of 3 to 5 TLS instrument systems to support a wide range of research projects. For the purposes of this RFP we are only interested in instrument deployments via fixed platforms (e.g. tripod) and not mobile platforms (e.g. moving vehicle). Typical projects require subcentimeter resolution, include measurement ranges from tens of meters to thousands of meters, and are often conducted in remote and extreme environments in all weather conditions. Long range, high accuracy pulsed (time of flight) scanners are most commonly used by researchers in our community. We also seek information on short range, high accuracy phase based scanners as well as very long range, pulse based profiling scanners. Examples of TLS instruments currently used/endorsed by members of our community, which we know to be well suited to our envisioned applications, include the following: Optech Ilris 3D, Ilris HD; Riegl Z620i, Z420i, VZ-400, LPM-321; and Leica HDS 6100. We seek information regarding these and other comparable systems.

Minimum Required System Components (all systems)

- Laser scanner
- Cables to support equipment configuration and/or data output/download
- Any required adaptor(s) for standard survey tripod mounting (i.e. 5/8 x 11 thread)
- Batteries and associated cables for power supply during remote deployments
- Scanner control device(s) (i.e. handheld devices, tablet or laptop computers)

- Operating software
- Processing software
- Transport cases for scanner and required peripheral equipment
- Warranty and maintenance plan

Minimum Required Performance Specifications (all systems)

- Sub-centimeter measurement accuracy
- Sufficiently portable for remote deployments
- Operable outdoors in all weather conditions
- Minimum operating temperature range: 0oC to +40oC
- Dust and splash resistance
- Integration with calibrated digital SLR camera and lens(es)
- Established data processing workflow to deliver georeferenced point clouds in a variety of coordinate systems

Desired Performance Specifications

- Long range measurements (greater than 1,000 meters)
- Very long range measurements (up to 6,000 meters)
- High data acquisition rate (laser pulse repetition rate of 10,000 points per second or greater)
- Very high data acquisition rate (laser pulse repetition rate of 100,000 points per second or greater)
- Waveform analysis
- Operation in temperatures below 0oC
- Optimized data acquisition workflow capable of providing visual inspection of data right after acquisition as well as georeferencing in the field

- Integration with IMU (Inertial Measurement Unit)/POS (Position and Orientation System) Minimum Required Data Output Specifications (all systems)
- ASCII X,Y,Z point cloud in delimited text file
- LAS format

Configuration and Pricing Information

We seek configuration descriptions and fixed prices for TLS systems (priced by system components if applicable) that meet or exceed the above specifications and special features. Submitted information should include an itemized description of system components, configuration options, as well as services such as training and extended warranty options.

Submitted price proposals should indicate if any additional discounts might be available. For example, discounts due to non-profit status, educational institution affiliation status, federal government affiliation status, existing customer status, multiple system purchases, etc.

Submission Instructions & Contact Information

This RFP is being issued on June 17, 2009. Vendors are requested to provide information as soon after this date as possible, and no later than June 24, 2009. Advantageous late proposals may be considered by UNAVCO.

Electronic submittals (e.g. PDF files by email) are preferred. Information should be submitted to Dr. David Phillips, Geodetic Imaging Project Manager, by email at phillips@unavco.org. Inquiries may be directed to Dr. Phillips by email as indicated above, or by telephone at 303-381-7471. Questions of a contractual nature should be directed to David Wilson, UNAVCO Contracts and Sponsored Agreements Director, by email at Wilson@unavco.org or by telephone at 303-381-7513.

Awards are expected to me made based upon best value and suitability to anticipated applications, including instrument technical capabilities and price, and include a variety of measurement techniques. UNAVCO reserves the right to award multiple awards or to not make any award in response to submitted proposals. Nothing in this RFP should be construed as UNAVCO offering to pay for or reimburse proposers for the cost of responding to this RFP. UNAVCO reserves the right to negotiate any and all aspect of any resultant purchase to obtain the best value to UNAVCO, our community and our sponsors.

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