Mississippi State University  
Notice of Proposed Sole Source Purchase

223-48

Mississippi State University anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. Commodity or commodities to be purchased (make, model, description):

Motek Gait Real-time Analysis Interactive Lab (GRAIL) system.

1. Explanation of the need to be fulfilled by this item(s), how is it unique from all other options, and why it is the only one that can meet the specific needs of the department:

The grant was written for this specific system. We will use the Grail system to expand SRS-based smart sock prototyping by collecting large, accurate datasets for many nuances of gait and slip-trip-fall assessments for the support of older adult and at-risk populations inside the lab for validation and outside of the lab. This system will also help us expand the SRS solution to wearables that can capture all elements of lower body joints and limb segments, effectively creating a complete pair of “smart pants” that to be used outside the lab. The force plate-embedded treadmills, motion capture, virtual reality, audio, and video simultaneously and rapidly, while also being medically certified according to the Medical Device Regulations EU/2017/745 to serve the need for clinical applications of rehabilitation and research and development for those with prosthetic limbs as well as abnormal gait pathologies.

The GRAIL system has dynamic treadmill movements (pitch and sway), belt projections that integrate the VR image from a screen onto a treadmill belt to create a continuous optical flow, and full integration of all devices through their proprietary software called D-Flow. Other systems do not have dynamic treadmill movements, and don’t have belt projections, so the visuals are confined to the screen only, and all the integration would require independent work in other software, adding cost and time to developing a comparable system. Having to integrate devices through third-party coding software and not having dynamic movements of the treadmill means that this system would not suit the needs of advanced gait, sports science, and wearables-based research. Other systems are also not designed for clinical applications which would not sufficiently serve all needs of the research project.

1. Name of company/individual selling the item and why that source is the only possible source that can provide the required item(s):

DIH Technology, Inc. The GRAIL has dynamic treadmill movements (pitch and sway), belt projections that integrate the VR image from a screen onto a treadmill belt to create a continuous optical flow, and full integration of all devices through their proprietary software called D-Flow.

1. Estimated cost of item(s) and an explanation why the amount to be expended is considered reasonable:

$630,657.00 This is the only system that includes all equipment needed to perform data collection for gait analysis for a range of scenarios, including AR/VR-based environments where pitch and sway perturbations can be executed in tandem with the simulated environment.

1. Explanation of the efforts taken by the department to determine this is the only source and the efforts used to obtain the best possible price:

We have done extensive research to find other alternatives to this system and have not been able to find any that will fit the needs of the grant.

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Don Buffum, CPPO  
Director of Procurement & Contracts  
[dbuffum@procurement.msstate.edu](mailto:dbuffum@procurement.msstate.edu)  
**Subject Line must read “Sole Source Objection”**

The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, MSU determines that the commodity in the proposed sole source request can be provided by another person or entity, then MSU will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If MSU determines after review that there is only one (1) source for the required commodity, then MSU will appeal to the Public Procurement Review Board. MSU will have the burden of proving that the commodity is only provided by one (1) source.