NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER

RECOMMENDATION AND DETERMINATION TO SOLICIT FROM ONE SOURCE

Membership
Center for Highly-Reconfigurable Computing (CHREC)

NASA KSC Avionics Engineering has a requirement for a one (1) year membership plus Options for two (2) additional years membership in Center for Highly-Reconfigurable Computing (CHREC). The CHREC is a research center and consortium. CHREC is a national research center focused on high performance and reconfigurable computing and is comprised of 4 research sites, each a major university with a leading research group in this field. The major universities are: University of Florida, Brigham Young University, George Washington University, and Virginia Tech University. The University of Florida is the leading university. The universities are coupled with approx. 30 leading organizations in the high performance and reconfigurable computing field from academic, industry, and government sectors that all have synergistic interests and goals in reconfigurable adaptive computing for broad range of missions from satellite and supercomputers.

Membership to CHREC will allow NASA KSC Avionics Engineering to enhance our expertise in the latest avionics technology development arenas. It will also help us to develop new technologies that can be used for current (e.g. Launch Control System (LCS) and future NASA programs and projects. Membership to CHREC will also allow collaboration that can also be beneficial in the resource development and implementation of the KSC CAIDA (Customer Avionics Interface Development and Analysis) Lab. This CAIDA Lab is intended to be a reconfigurable lab to support early development, verification, test, and analysis for Launch Control System (LCS) interfaces with space vehicle Avionics and architectures, and prepare for future launch vehicle and spacecraft processing. Through the CHREC membership and the NASA KSC Avionics partnership, the University of Florida will provide research and technology to aid our KSC Avionics engineers in performing tasks for NASA KSC projects and programs. Updates to this project will be provided to all CHREC members. Any data gathered from other CHREC research projects is available to all members which can also be beneficial to NASA KSC projects and programs.

Pursuant to FAR 13.106-1(b) and 13.106-3(b)(3)(i), the acquisition for CHREC Membership are determined to be available from only one source. Competition is impractical for as this is a one of a kind research organization. CHREC is an organization that allows academia, industry, and government to collaborate on research and development of new technology in the field of reconfigurable computing. Based on past history and previous membership with CHREC, this is the only organization of its kind

that will meet NASA's requirements. The information exchanged will be invaluable to current and future NASA programs and projects as well as establishing relationships with future NASA employees/innovators.

Based upon the above, the required services are only available through membership in CHREC. There are no other known memberships that offer the required services. I certify that the supporting data presented in this justification are accurate and complete.

Signed:

Dean Orr
Branch Chief, Avionics Engineering

11-20-15
Date

Jan Pirkle, OP-ES
Contracting Officer

11 20 15
Date