NASA SBIR 2007 Phase I Solicitation

O3.01  Crew Health and Safety Including Medical Operations

Lead Center: JSC

Participating Center(s): ARC, GRC

Medical Operations is responsible for all operational activities related to crew health issues during all mission phases, with the specific purpose to optimize crew health and performance and prevent negative health consequences from space flight.

This subtopic seeks innovative technologies for procedure management. In each crew, a crewmember is designated as a crew medical officer. This person is responsible for managing in-flight medical issues with the support of a ground-based flight surgeon as well as reference materials that reside onboard an operational vehicle. The medical checklist is the main in-flight resource for medical procedures. It is a large document with many references to medical hardware and interconnections between procedures. Currently the default form of the document is paper with an electronic version also being available to the crew. Current procedure construction, validation, and maintenance is accomplished through a word processing program. Procedures must comply with a standard format. Software is sought that will enable easy construction and maintenance of the procedures, including changes to procedures, changes to hardware, changes to resulting format of the procedures, and validation of the procedures. The ultimate goal is to be able to merge this software with other elements to create an in-flight medical decision support system, including medical data display that supports decision making and just-in-time training.