Linkage between Future Combat Systems and Human Exploration of Planetary Surfaces

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The purpose of this project is to identify the overlapping technologies needs of NASA and those technologies developed on the Future Combat Systems (FCS) program. The Future Combat Systems (FCS) program is an Army modernization initiative designed to link soldiers to a wide range of weapons, sensors, and information systems by means of a mobile ad hoc network architecture that will enable unprecedented levels of joint interoperability, shared situational awareness and the ability to execute highly synchronized mission operations.

FCS uses advanced communications and technologies to link soldiers with both manned and unmanned ground and air platforms and sensors. Soldiers who are linked to these platforms and sensors have access to data that can provide a much more accurate picture of what's going on around them.

The FCS program, considered the core building block of the Army's future force, consists of the following elements:

1) The network (information and communications)
2) 14 individual manned and unmanned combat systems
3) The soldier

Central to FCS' power is the fact that it is a networked system of systems – all designed to maximize the strength of each individual system by linking it to all other systems in the network – including systems that are part of the FCS family and those considered "complementary systems" that work with FCS. This project focuses on the relationships between the soldier and astronaut: the soldier/astronaut and everything they wear, carry, and consume -- embodying the concept of the "soldier (astronaut) as a system" (SaaS).

Some key focus areas of the project are:
1) Systems that could be deployed in the suit taking careful consideration of suit volume and system ergonomics
2) Systems that would support field work for an astronaut explorer
3) Surface Operations Management

(Presentation pending required final approvals)