

Contract: HR0011-09-C-0006

## Individual Force Protection System (IFPS) Generation I / Generation II Research and Development Program

The IFPS Generation I / Generation II contract is a 24 month advanced research and development contract with options to perform additional experimentation and provide engineering support for an additional 36 months. The contracting and funding agency is the Defense Advanced Research Projects Agency (DARPA) and the end user of the prototype Gen I and Gen II IFPS system will be the Marine Corps.

SAIC has developed a very low probability of detection (LPD) signaling device based on time difference of arrival localization technology. The DARPA Individual Force Protection System (IFPS) program IFPS uses rf tag signals to provide alerts when a person is in duress. The IFPS Gen I or Gen II tag only transmits its signal when activated by the person carrying it. The signal is a spread spectrum signal that is coded and transmitted as a pulse once per second. Multiple ground receivers, a single airborne receiver or a combination of ground and airborne receivers provide the identity and location of the tag that has been activated.

The Marine Corps and DARPA established a Memorandum of Agreement that specifies 3,000 tags, 12 receivers, 4 localizers and other ancillary equipment will be provided. The quantities required by the Marine Corps were to permit sufficient assets to perform limited user testing and CONOPS development by the Marine Corps. 200 Gen I tags, 5 receivers, 3 localizers and associated ancillary equipment have been delivered to the Marine Corps between 29 June 2009 and 7 May 2010, with full delivery of 3,000 tags, 12 receivers, 3 localizers and additional ancillary equipment completed by 31 July 2010.

SAIC is also developing, building and testing a prototype Gen II IFPS system that eliminates tag synchronization, provides receiver self-calibration capability, and investigates the feasibility of a low-cost receiver. The primary difference between the Gen I and Gen II systems is the waveform. The Gen II waveform has a narrower bandwidth and different coding than the Gen I waveform. The Gen II tags may be programmed by the User to implement either waveform. The Gen II experimental systems will be delivered to DARPA on 30 June 2010.