Fiscal Year:	FY 2010	**Task Last Updated:**	FY 11/15/2010
PI Name:	Thompson, John Ph.D.		
Project Title:	Behavior Tracking Software Enhancement and Integration of a Feedback Module		
Division Name:	Human Research		
Program/Discipline:	HUMAN RESEARCH		
Program/Discipline--Element/Subdiscipline:	HUMAN RESEARCH--Behavior and performance		
Joint Agency Name:		**TechPort:**	No
Human Research Program Elements:	(1) **BHP**:Behavioral Health & Performance (archival in 2017)		
Human Research Program Risks:	(1) **Team**:Risk of Performance and Behavioral Health Decrements Due to Inadequate Cooperation, Coordination, Communication, and Psychosocial Adaptation within a Team		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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Zip Code:	27511-6490	**Congressional District:**	4
Comments:			
Project Type:	Ground	**Solicitation / Funding Source:**	SBIR Phase II
Start Date:	07/09/2010	**End Date:**	07/08/2012
No. of Post Docs:		**No. of PhD Degrees:**	
No. of PhD Candidates:		**No. of Master' Degrees:**	
No. of Master's Candidates:		**No. of Bachelor's Degrees:**	
No. of Bachelor's Candidates:		**Monitoring Center:**	NASA JSC
Contact Monitor:	Leveton, Lauren	**Contact Phone:**	
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Flight Program:			
Flight Assignment:			
Key Personnel Changes/Previous PI:			
COI Name (Institution):			
Grant/Contract No.:	NNX10CB02C		
Performance Goal No.:			
Performance Goal Text:			
	Horizon Performance designed a Behavior Tracking Software System to collect crew member behavior throughout a mission, giving NASA the capability to monitor behavioral patterns that may identify if crews are at increased risk related to interpersonal or psychosocial problems. Building upon the alpha version of the software developed as a part of the Phase I SBIR, the proposed software will allow crewmembers and/or personnel watching video footage to periodically document salient crewmember behaviors which will then be used to identify behavioral patterns. When a behavioral pattern is identified and deemed important to investigate, users would be able to review all collected data. Furthermore, this software includes an integrated feedback module that offers automated reports based on identified behavioral patterns. Flight surgeons can create a knowledge base of feedback based on specific attributes or behavioral patterns, and the software will then generate automated feedback reports based upon identified attributes or behavioral		

Task Description:	patterns. Flight surgeons will be able to: 1) generate a variety of reports that describe crew member behavioral patterns; 2) use the behavioral timestamps to view incidents of behaviors on video footage; 3) compare behaviors with other data (e.g., performance reports); and, 4) generate feedback reports. POTENTIAL NASA COMMERCIAL APPLICATIONS: The Behavior Tracking Software System is designed to monitor flight crew behavior and behavioral patterns for the purpose of identifying potential interpersonal and psychosocial issues (e.g., team cohesion) and automatically generating appropriate feedback. In addition to the needs of the Human Research Program ISS Medical Operations Constellation Program (Lander and Lunar Habitat Projects), the Behavior Tracking Software System has several potential NASA applications in the Exploration Systems Directorate, Space Operations Directorate, and NASA Agency Training and Development Office. These applications include personnel selection, personnel training, tracking employee and team performance, team selection, assessment centers, human behavior research, and leadership development.
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	Several organizations have expressed interest in the ability to record occurrences of behavior, identify behavioral patterns, easily view video of when behaviors occurred, and generate automated feedback based on the occurrences of behaviors. The Behavior Tracking Software System could be used by the U.S. military and law enforcement groups for monitoring human performance for personnel selection and training, as well as assisting with the identification and treatment of Post Traumatic Stress Disorder. Horizon Performance currently is under contract with U.S. Army Special Forces to assist with the monitoring of student performance during training. Horizon Performance recognizes the increased demand for tools that can help trainers monitor and evaluate performance in austere environments. Other industries plagued by monitoring people working in austere environments, such as mines, could also use this software. For health care, doctors could monitor outpatient recovery by allowing patients and their caretakers to assess a patient during recovery or after an intervention. In athletics, coaches and trainers could use this software to monitor an athlete's performance by connecting behavioral assessments to video footage. Coaches could generate performance reports that show behavioral patterns which would guide coaches and trainers to specific points during a performance. They could then review video footage at these points and use them to further enhance an athlete's performance.
Task Progress:	New project for FY2010. Reporting not required for this SBIR Phase 2 project.
Bibliography Type:	Description: (Last Updated:)