TITLE – TECHNICALLY SAVVY SOLDIER

Type: **6.2**
CC: **E&PH**
Sub: **Assessing**
Exe: **Integrated**
Size: **Large**

The Challenge

Soldiers and squads will be teamed with increasingly sophisticated and evolving technologies. Soldiers and leaders will require increased technological aptitudes and skills in order to adapt emerging technologies to evolving mission sets and avoid being overmatched by AI-enabled "smart" technologies.

- *Research Question/Technical Goal:* Can the ability of Soldiers and units to use and rapidly adapt novel and intelligent technologies without formal training on specific technologies ("Technological Fluency") be modeled, assessed, and enhanced?

Collaborators: Army Research Institute, ColumbiaU, GWU, DCS Corp
Area Leaders: AFRL, ARI, MIT Media Lab, ColumbiaU, Rice

Methodology

- There are no known approaches for systematically assessing, developing, and tracking technological fluency in a workforce.
- Leveraging previous research: E.g., cognitive science (TF Modeling); human psychometrics (TF Personnel Assessment); and human education, training, and cueing (Maximizing TF).
- Leveraging ongoing research efforts to support all TF efforts: holistic personnel assessment and leader development; opportunistic data interpretation; human-autonomy teaming.

Expected outcomes

- *Expected impact at completion of project:* Enable the creation of a "technologically fluent" Force by developing models of technological fluency (TF), methods to assess and develop the TF of Soldiers, and technologies to maximize TF resilience and performance in Soldiers and units.
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- *Impactful results to date:* FY23 New Start

Expected deliverable types	
Knowledge Products	X
Methods and techniques	X
Design Guidance:	
-Software	
-Hardware	
-Algorithms	
Models	X
Other	

Milestones & Progress

- FY23 New Start Effort
- *Planned Milestones-*
  - Validated TF testing battery (FY26)
  - Validated TF training methods (FY27)
  - next-generation TF assessment methods that update individual testing data (FY29)
  - next-generation TF aiding methods that maximize TF in individuals (FY30).

Notables:
- Leveraging STRONG CRA collaborations to jumpstart development of assessment platforms
- Ongoing discussion with AF labs working in the training, education, and personnel assessment space
- Identification of intramural and extramural platforms suitable for early evaluation as TF assessment platforms.
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