Best Technical Advancement – Winner

Technical Services Field Office - Identity Activities Branch
Naval Criminal Investigative Service

The Naval Criminal Investigative Service Technical Services Field Office - Identity Activities Branch (TSFO-IA) developed government-off-the-shelf (GOTS) software for rapid ingestion of biometric data from fingerprint cards. The RISER Suite has advanced U.S. government (USG) card scanning operations through custom software development, prototyping, operational pilots, and collaboration across government organizations and industry. The TSFO-IA team included Booz Allen Hamilton, Novetta, and multiple USG organizations, including Office of the Secretary of Defense for Acquisitions, Technology, and Logistics, CDM, Defense Forensics Science Center BoD, and the Combating Terrorism Technology Support Office.

Over the last 18 months, TSFO-IA has developed capabilities that have turned an expensive, manual, and time-consuming procedure into a streamlined semi-automated process. The Rapid Fingerprint Digitization tool scans cards into digital images. RISER identifies fingerprint locations within scanned images, crops fingerprint images to eliminate blank space, performs image adjustments, checks quality, and creates EBTS v1.2-compliant files. Every one of those steps was previously performed manually. The SWIPE tool was developed for on-site review and includes tools to manually adjust files. After manual review, EBTS files are submitted to biometric repositories for matching and storage in real time. Missions, previously split between on-site activities and off-site processing, are now performed 100 percent on-site thanks to innovations introduced by TSFO-IA. RISER technology, workflow integration between tools, and network connectivity to biometrics databases have reduced the time to ingest biometric records from months or years to days. RISER provided:

- Data Capture: Prior to RISER, a card digitization mission to Ghana for ~120,000 cards required 21 personnel for approximately 3,525 days. A similar mission to Guatemala using RISER required just seven personnel approximately 48 hours to digitize ~57,000 cards, with 90 percent of the data ready for submission into USG databases two days after scanning was completed.

- Near Real-Time Ingestion: Images scanned in Ghana took more than 365 days to manually adjust, process, and submit for biometric matching. Guatemala cards were processed and ingested on-site in five days.

- Reduction in Hardware: Ghana scanning hardware took over $70K to ship in a dozen shipping containers, while Guatemala hardware was reduced to two containers weighing 150 lbs.

- Time Saved: Technologies developed by TSFO-IA have saved over 9,022 hours to date.

TSFO-IA has advanced card scanning technology to efficiently make hundreds of thousands of previously archived biometric records available for automated biometric matching. The technology has been made available as GOTS software and utilized by other USG agencies.