



1. Reason for submitting the PTA: New PTA

The Science and Technology Directorate (S&T) is the lead coordinator of research and development (R&D) efforts for DHS. The Data Analytics Technology Center (DATC) within S&T has contracted with the University of Alabama at Birmingham (UAB), who submitted a proposal that was accepted through S&T's Long-Range Broad Agency Announcement (LRBAA). The LRBAA is a standing, open invitation to the scientific and technical communities to fund R&D projects for homeland security missions. UAB will conduct open source and social media (OSSM), which involves the collection of publicly available information including social media. Social media pages may include handles, account names, emails, pictures, phone numbers, and posted content that are accessible to anyone with an internet connection.

UAB has deep past experience in OSSM identifying online content on terrorism, transnational crime (e.g., MS-13), financial fraud, and illegal substances supply chain for both private sector and government stakeholders. S&T's UAB effort will conduct R&D to understand these methods and further develop capabilities for DHS missions.

Phase 1 (present – December 2019): While S&T may request subject matter experts' input and feedback throughout all phases, the work will remain in the UAB and S&T DATC laboratories until methods/capabilities are ready for testing/use in an operational environment. At that time, PTAs will be drafted and/or updated. S&T DATC will continue to work closely with the S&T Privacy Office, as R&D efforts have varying degrees of uncertainty and success and findings that are unpredictable.

- S&T-UAB will develop methods and tools to identify information of interest regarding terrorism, opioid supply chain, and transnational crime. S&T will work with CBP, ICE, TSA, and USCIS to provide cross-mission operational context to inform research. Phase I will produce and refine the methods for finding relevant content and show some automation of tools.
- S&T-UAB will develop methods that attempt to identify and characterize foreign influence online, such as studying bot detection. Phase I will produce a paper/brief/proof-of-concept that shows how influence might be happening to inform policy and practices or identifies gaps that require additional R&D.
- S&T-UAB will develop methods, such as key words, for identifying location absent GPS metadata. Phase I will produce a paper/brief/proof-of-concept that discusses various methods or that identifies gaps that require additional R&D.
- S&T-UAB will study possible ways to track threats that evolve over time to "lesser social media communities" (e.g., not Facebook or Twitter). Phase I will produce a paper/brief/proof-of-concept that discusses various methods for tracking evolving threats or that identifies gaps that require additional R&D.
- S&T-UAB may test the methods and tools developed under this project against live events that are unfolding in real-time, if appropriate, to evaluate performance. For example, non-GPS methods may be helpful in a hurricane scenario for help calls.

Phase 2 (January 2020 – December 2020): Phase II depends on the findings in Phase I. Phase II may include further maturing the capabilities in Phase I; increased automation and performance; testing in an operational environment; applying the methods developed in Phase I to other domains.

Phase 3 (January 2021 – September 2021): Phase III is dependent on the findings of the previous phases