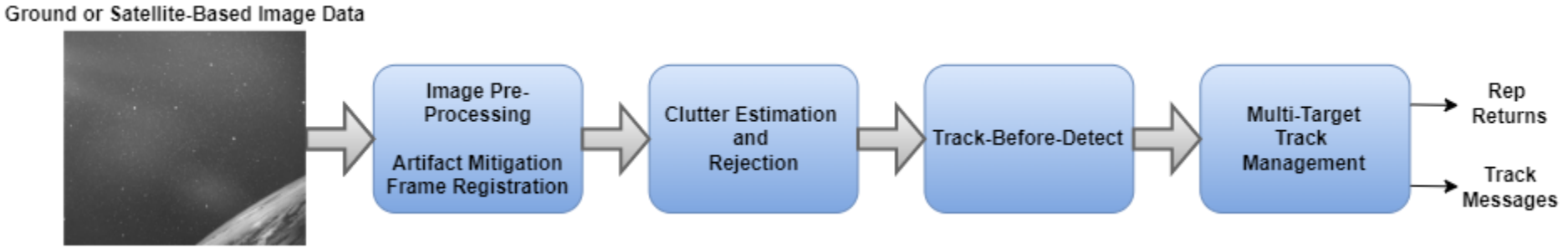
Overview

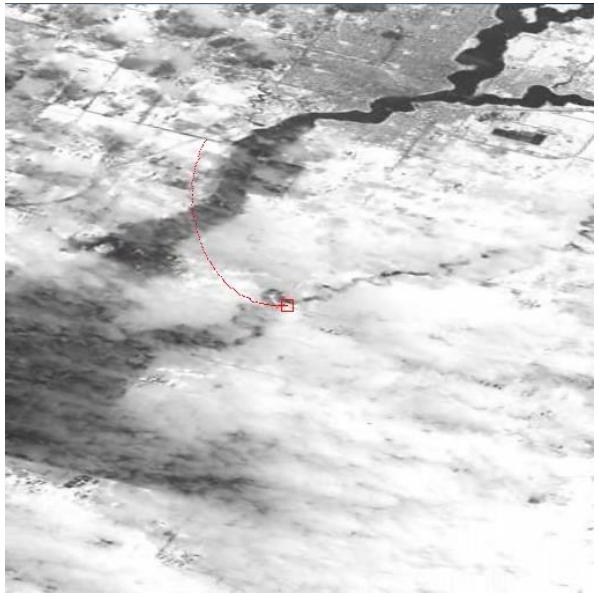
- Toyon Research Corp.
  - Small Business (200 employees) defense contractor
  - 90% technical staff all with TS or Secret clearances
- Looking to join or form a team for the IARPA SINTRA Program *as a subcontractor*
- Capabilities specifically relevant to SINTRA:
  - Track-Before-Detect (TrBD) algorithm chain for dim target tracking
  - Solution optimized for satellite-based and ground-based sensor images
  - Allows multi-target tracking within a scene
  - Software application leverages multi-core and GPU architectures for accelerated processing
- Additional related capabilities:
  - Background clutter suppression for increased target SNR
  - AI/ML-based target/clutter classification for enhanced clutter suppression
  - Algorithms amenable for on-orbit processing in the case of satellite-based sensing

Toyon Office Locations

Contact: Dr. Christopher Agh, cagh@toyon.com, 805.968.6787 x186

Track-Before-Detect





Novel algorithms:

- Bayesian Track-Before-Detect
  - Near-optimal remote sensing image processing
  - Dim moving target tracking (space-to-ground, space-to-space, ground-to-space)
- Spatial / temporal clutter suppression

Proven capabilities:

- Successful experience with deployed space-based sensors: SBIRS (GEO/HEO), CHIRP, EAGEL HTI Space Experiment, other OPIR sensors in GEO and LEO
- Toyon-developed software application for *real-time* end-to-end TrBD processing
- Software integration at MDA ESL, SSC TAP Lab, and NASIC (Opticks plug-in)

Customers:

- MDA, AFRL Kirtland, Space Force's SSC, SDA, NASIC (ATEP I/II), Navy (NAVAIR and NUWC)

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Thank You

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