tip&cue

Title: *Providing a Signal Source of Truth for Safe and Aware Navigation*

TECHNOLOGY OVERVIEW

Problem Statement:
- The increasing prevalence of Radio Frequency spoofing and jamming undermines the reliability of GNSS dependent navigational systems for the transportation industry. This impacts critical operations in national security, public safety, and commercial sectors reliant on secure and accurate location data. Currently, this multibillion-dollar issue is insufficiently addressed by expensive, multimillion dollar hardware that is tailored for defense-only use.

Overview of Solution Offering:
- Tip & Cue offers a comprehensive solution for managing GNSS inference through its RF Spectrum Intelligence & Resilience software. Harnessing data from millions of points across multiple domains, Tip & Cue enables global wireless connectivity monitoring, precise GNSS interference geolocation, and GNSS forecasting, creating GNSS awareness and transparency for all those reliant on GNSS connectivity
- Through its sensor-agnostic approach, this platform is the first to offer highly-precise and cost-effective ***detection and geolocation of interference emitters anywhere, globally***
- Enables users to quickly detect and respond to threats, forecast trends, and mitigate RFIs.
- provides spectrum awareness via **a $100 device instead of a $100M satellite system**, highlighting an extreme cost advantage and potential for further cost reduction at scale

PROJECT INFORMATION

Commercialization & Transition Plan:
- The project has an 18-month plan with objectives:
  1. Finalize system architecture (M0-6)
  2. Stage a real-world simulation for testing (M6-10)
  3. Expand system reach and optimize architecture (M10-14)
  4. Prepare for deployment through final red-team and commercialization strategy (M14-18),
- **The Overarching Project Objective:** Re-engineer Scout for scalable commercial deployment and open doors for everyday civilian use and DOT oversight.
- Transition risks like algorithm performance and processing limits will be mitigated through testing/refinement and implementing 1.25x the recommended processing resources
- **Impact**: Scout will revolutionize civilian operations by enabling safe navigation in signal-degraded environments, facilitating easy mission control without loss of communication or navigational capabilities, and providing actionable intelligence for threat management, effectively exposing bad actors who attempt to spoof GPS

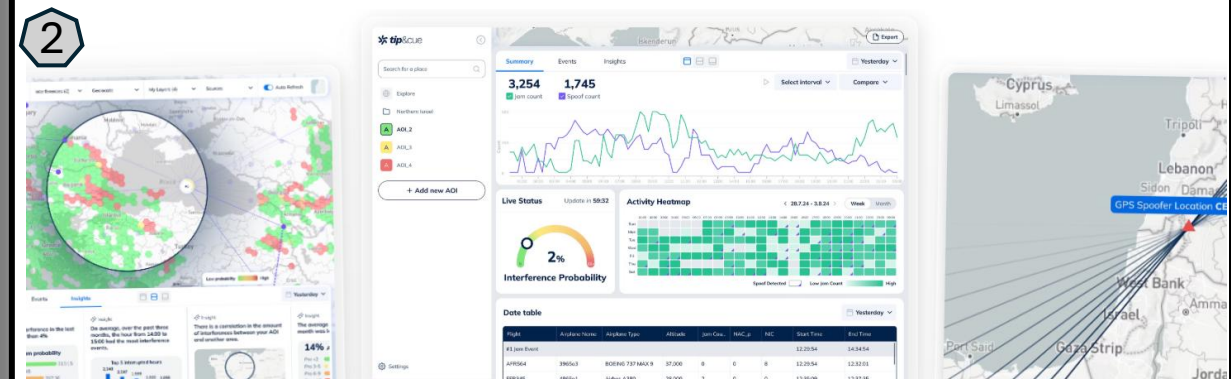# VALIDATION & COMMERCIALIZATION

Extensive Testing
- The system's RFI detection and geolocation features have been validated in relevant contested military environments using commercially-available data.
- Tip & Cue's product was advanced through work with the Italian coast guard, the US Army, and Israeli Defense Forces; core principles were successfully demonstrated.
- Tip & Cue has successfully tested its GNSS spoofing geolocation system with unprecedented accuracy (<50m CEP).

Recognition
- Tip & Cue is the recipient of US Army and US Air Force SBIRs
- Tip & Cue has secured commercial commitments and interest from big players in the transportation industry including Boeing, EuroControl, and El Al Airlines
- Tip & Cue has received key support from Army's C5ISR, AFSOC, and other DoD teams.
- Tip & Cue recently raised $11.5M in its seed round, led by Costanoa
- Tip & Cue generated ~$1M in revenue in 2024 from private customers such as Airwayz, Percepto, ImageSat International (ISI), and more.

VISUAL DEMO

1: Demonstration of GNSS interference emitter detection and geolocation using commercial satellite telemetry data

2: System's GUI and operational displays