Android Team Awareness Kit (ATAK) and ArcGIS

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Agenda
Connecting Intel and Operations in Real Time

- Esri - PAR collaboration
- What is ATAK (Android Team Awareness Kit)
- ArcGIS Plugin for TAK
- The Road Ahead
- Q&A
Esri – PAR Collaboration
Esri – PAR Collaboration

Past

• PAR has been providing solutions and essential services to our nations defense, intelligence, and public safety for 35 years

• Esri and PAR have collaborated successfully at a software engineering level for a number of years. PAR has been an Esri Business Partner for 20 years.

• Esri and PAR have a strong relationship and a solid history including implementing ISR solutions across the ArcGIS platform (ArcGIS Full Motion Video 2011-present)
Esri – PAR Collaboration
Present and Future

- Leveraging PAR’s experience as the lead developer and integrator of the AFRL Android Tactical Assault Kit (ATAK) / Team Awareness Kit (TAK) application suite.

- Customers have been consistently asking to ingest and visualize content on TAK devices from ArcGIS, and in particular ArcGIS Enterprise. This plugin meets that need.
What is ATAK?
Team Awareness Kit (TAK)

- TAK is a mission planning, situational awareness and call for fires solution that uses off-the-shelf mobile computing devices that interoperates with operational networks (tactical radios, mesh net radios, WiFi and broadband).

- TAK is a software and hardware integration for Android, iOS, and Windows platforms.

- TAK is a Government owned solution with growing set of specialized plug-in augmentations.

Current Releases

- ATAK 3.7
- WinTAK 1.7
- iTAK 1.0
TAK Overview

- Operations Planning
- Situational Awareness
- Mission Execution

*TAK is the integration of commercial mobile computing, custom and open source software, and DoD operational peripherals.*
What is ATAK?

- The Android Team Awareness Kit (ATAK) is an extensible moving map display with an open Application Programming Interface (API) for Android devices.

- It supports multiple Department of Defense (DoD), Department of Justice (DoJ) and other Government Agencies (OGA).

- Provides imagery data, map overlays and information sharing to provide enhanced collaboration and Situational Awareness (SA) operating in tactical network environments.
ArcGIS Plugin for TAK
ArcGIS Plugin for TAK

Introduction

• ATAK is an extensible moving map display with a broad user base across the DOD, IC, and Public Safety communities. Many of these users have robust ArcGIS deployments. The goal of the ArcGIS Plugin for TAK is to help users gain greater access to their ArcGIS data holdings, and ultimately help them better achieve their mission.

• The ArcGIS Plugin for TAK utilizes the plugin framework of ATAK, and can be added to a base ATAK deployment

• The plugin allows ATAK users to use their ArcGIS identity to authenticate against ArcGIS Online, or ArcGIS Enterprise, and access their ArcGIS content inside of ATAK.
ArcGIS Plugin for TAK
Key Capabilities of the v1.0 Release

- Users will be able to access content from:
  - ArcGIS Online
  - Portal for ArcGIS
  - ArcGIS Server

- Content that can be consumed includes feature and map services, OGC services (WMS, WFS, WMTS), and a variety of file based data sources (shapefile, KML, GPX, CSV, and GeoPackage)
Users accessing content from ArcGIS Online or their ArcGIS Enterprise portal will be able to:
- Authenticate against their portal via built-in authentication
- Query registered portal items for supported data types
- Inspect item details of the returned results
- Add and consume supported items to ATAK
• Users accessing content from their ArcGIS Servers will be able to:

  - Authenticate against their ArcGIS Server via built-in authentication

  - Browse the REST endpoint

  - Add and consume supported service types – feature, and map services, as well as WMS, WFS, and WMTS services
• Once authenticated to ArcGIS Online, an ArcGIS Enterprise portal or ArcGIS Server, users consuming Esri services will be able to:

- Render the service will the same symbology as it was published

- Identify features

- Cache features locally for offline use
ArcGIS Plugin for TAK
Demonstration
Release Schedule

- Version 1.0 – April
  - Coincident with the 3.8 release of ATAK

- Version 1.1 – ~July Esri International UC

- Version 1.2 – ~September
The Road Ahead
The Road Ahead

• Version 1.1
  - Support for additional authentication mechanisms
    - IWA, PKI, and SAML
  - Ability to view content via portal groups
  - Feature service editing

• Version 1.2
  - Stream tracks to ArcGIS Enterprise
Situational Awareness
The need for real-time Situational Awareness spans across…

Industries
- Humanitarian Aid / Disaster Relief
- Fire & Emergency Services
- Law Enforcement
- Homeland Security / Border Security
- Safe Communities
- Military Command & Control
- Cyber Security

Organizational boundaries
- Individual
- Team
- Operation
- Organization / Agency
- Multi-Agency
- Multi-National
Common Requirements for Real-Time Situational Awareness

- High performance
- Decluttered view of information
  - Real-time analysis
  - Real-time alerts
  - Intelligent entities / objects
- Collaboration
  - Geo-chat
  - Simple markup and share
- 2D / 3D
- Sensor Integration
  - Full motion video
- Flexible Access to Network comms
  - Peer-to-peer & mesh networks
- Data persistence
  - Mission logging & playback
  - Temporal and trend analysis
Q&A

Android Team Awareness Kit (ATAK) and ArcGIS
Print Your Certificate of Attendance
Print stations located in the 140 Concourse

**Tuesday**
12:30 pm - 6:30 pm
GIS Solutions Expo
Hall B

5:00 pm - 6:30 pm
GIS Solutions Expo Social
Hall B

**Wednesday**
10:30 am - 5:15 pm
GIS Solutions Expo
Hall B

6:30 pm - 9:00 pm
Networking Reception
Smithsonian National Portrait Gallery
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