

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

AGIS SOFTWARE DEVELOPMENT LLC,	§	Case No.
	§	
Plaintiff,	§	<u>JURY TRIAL DEMANDED</u>
	§	
v.	§	
	§	
BOOZ ALLEN HAMILTON, INC.,	§	
	§	
Defendant.	§	
	§	

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff AGIS Software Development LLC (“AGIS Software” or “Plaintiff”) files this Complaint against Defendant Booz Allen Hamilton, Inc. (“Booz” or “Defendant”) for patent infringement under 35 U.S.C. § 271 and alleges as follows:

THE PARTIES

1. Plaintiff AGIS Software is a limited liability company, organized and existing under the laws of the State of Texas, and maintains its principal place of business at 100 W. Houston Street, Marshall, Texas 75670. AGIS Software is the owner of all right, title, and interest in and to U.S. Patent Nos. 7,031,728, 8,213,970, 9,445,251, 9,467,838, 9,820,123, and 9,749,829 (the “Patents-in-Suit”).

2. On information and belief, Defendant Booz is a corporation organized and existing under the laws of the Delaware, with its principal place of business at 8283 Greensboro Drive, Hamilton Building, McLean, VA 22102. Booz is registered to do business in the State of Texas and can be served with process through its registered agent, CT Corp. System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201.

3. On information and belief, Defendant directly and/or indirectly develops, designs, manufactures, distributes, markets, offers for sale, and/or sells infringing products and services in the United States, including in the Eastern District of Texas, and otherwise directs infringing activities to this District in connection with its products and services.

JURISDICTION

4. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.* This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331, 1338(a), and 1367.

5. This Court has specific and personal jurisdiction over Defendant in this action because Defendant has committed acts within this Judicial District giving rise to this action and has established minimum contacts with this forum, such that the exercise of jurisdiction over Defendant would not offend traditional notions of fair play and substantial justice. Defendant conducts business and has committed acts of patent infringement and/or has induced acts of patent infringement by others in this Judicial District and/or has contributed to patent infringement by others in this Judicial District, the State of Texas, and elsewhere in the United States by, among other things, offering to sell and selling products and/or services that infringe the Patents-in-Suit. Defendant has purposefully and voluntarily availed itself of the privileges of conducting business in the United States, the State of Texas, and this District by continuously and systematically placing goods into the stream of commerce through an established distribution channel with the expectation that they will be purchased by consumers in this District. Defendant, directly and/or through intermediaries (including distributors, sales agents, and others) ships, distributes, sells, offers to sell, imports, advertises, makes, and/or uses its products (including, but not limited to,

the products accused of infringement here) in the United States, the State of Texas, and this District.

6. Venue is proper in this Judicial District pursuant to 28 U.S.C. §§ 1391 and 1400(b) because Defendant has regular and established places of business in this Judicial District. On information and belief, Booz maintains regular and established places of business in Plano, Texas and McKinney, Texas. For example, Defendant has an office location at 7700 Windrose Avenue, Plano, Texas 75024. Defendant, through its own acts and/or through the acts of others, makes, uses, sells, distributes, exports from, imports, and/or offers to sell infringing products within this Judicial District, regularly does and solicits business in this Judicial District, and has the requisite minimum contacts with this Judicial District, such that this venue is a fair and reasonable one.

PATENTS-IN-SUIT

7. On April 18, 2006, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,031,728 (the “’728 Patent”) entitled “Cellular Phone/PDA Communication System.” On April 18, 2023, the United States Patent and Trademark office issued an Ex Parte Reexamination Certificate for the ’728 Patent determining claim 7 to be valid and patentable. A true and correct copy of the ’728 Patent, which includes the April 18, 2023 Ex Parte Reexamination Certificate, is attached hereto as Exhibit A.

8. On July 3, 2012, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,213,970 (the “’970 Patent”) entitled “Method of Utilizing Forced Alerts for Interactive Remote Communications.” On September 1, 2021, the United States Patent and Trademark Office issued an *Inter Partes* Review Certificate for the ’970 Patent cancelling claims 1 and 3-9. On December 9, 2021, the United States Patent and Trademark Office issued an Ex Parte Reexamination Certificate for the ’970 Patent determining claims 2 and 10 (as amended)

and claims 11-13 to be valid and patentable. A true and correct copy of the '970 Patent, which includes the September 1, 2021 *Inter Partes* Review Certificate and the December 9, 2021 Ex Parte Reexamination Certificate, is attached hereto as Exhibit B.

9. On September 13, 2016, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,445,251 (the "'251 Patent") entitled "Method to Provide Ad Hoc and Password Protected Digital and Voice Networks." On June 8, 2021, the United States Patent and Trademark Office issued an Ex Parte Reexamination Certificate of the '251 Patent determining claims 1-35 to be valid and patentable. A true and correct copy of the '251 Patent, which includes the June 8, 2021 Ex Parte Reexamination Certificate, is attached hereto as Exhibit C.

10. On October 11, 2016, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,467,838 (the "'838 Patent") entitled "Method to Provide Ad Hoc and Password Protected Digital and Voice Networks." On May 27, 2021, the United States Patent and Trademark Office issued an Ex Parte Reexamination Certificate of the '838 Patent determining claims 1-84 to be valid and patentable. A true and correct copy of the '838 Patent, which includes the May 27, 2021 Ex Parte Reexamination Certificate, is attached hereto as Exhibit D.

11. On November 14, 2017, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,820,123 (the "'123 Patent") entitled "Method to Provide Ad Hoc and Password Protected Digital and Voice Networks." On September 24, 2021, the United States Patent and Trademark Office issued an Ex Parte Reexamination Certificate for the '123 Patent confirming the validity and patentability of claims 1-48. A true and correct copy of the '123 Patent, which includes the September 24, 2021 Ex Parte Reexamination Certificate, is attached hereto as Exhibit E.

12. On August 29, 2017, the United States and Trademark Office duly and legally issued U.S. Patent No. 9,749,829 (the “’829 Patent”) entitled “Method to Provide Ad Hoc and Password Protected Digital and Voice Networks.” On August 16, 2021, the United States Patent and Trademark Office issued an Ex Parte Reexamination Certificate for the ’829 Patent confirming the validity and patentability of claims 1-68. A true and correct copy of the ’829 Patent, which includes the August 16, 2021 Ex Parte Reexamination Certificate, is attached hereto as Exhibit F.

13. AGIS Software is the sole and exclusive owner of all right, title, and interest in the Patents-in-Suit, and holds the exclusive right to take all actions necessary to enforce its rights to the Patents-in-Suit, including the filing of this patent infringement lawsuit. AGIS Software also has the right to recover all damages for past, present, and future infringement of the Patents-in-Suit and to seek injunctive relief as appropriate under the law.

FACTUAL ALLEGATIONS

14. Malcolm K. “Cap” Beyer, Jr., a graduate of the United States Naval Academy and a former U.S. Marine, is the CEO of AGIS Software and a named inventor of the AGIS Software patent portfolio. Mr. Beyer founded Advanced Ground Information Systems, Inc. (“AGIS, Inc.”) shortly after the September 11, 2001 terrorist attacks because he believed that many first responder and civilian lives could have been saved through the implementation of a better communication system. He envisioned and developed a new communication system that would use integrated software and hardware components on mobile devices to give users situational awareness superior to systems provided by conventional military and first responder radio systems.

15. AGIS, Inc. developed prototypes that matured into its LifeRing system. LifeRing provides first responders, law enforcement, and military personnel with what is essentially a tactical operations center built into hand-held mobile devices. Using GPS-based location

technology and existing or special-purpose cellular communication networks, LifeRing users can exchange location, heading, speed, and other information with other members of a group, view each other's locations on maps and satellite images, and rapidly communicate and coordinate their efforts.

16. AGIS Software was formed in 2017 and maintains two offices located in the State of Texas, at 100 W. Houston Street, Marshall, Texas 75670 and 2226 Washington Avenue, #2, Waco, Texas 76702. AGIS Software also maintains a data center in Marshall, Texas.

17. Mr. Beyer has maintained longstanding ties to Texas and the Eastern District. In 1987, Mr. Beyer founded Advanced Programming Concepts, an Austin-based company focused on real-time tactical command and control systems. Advanced Programming Concepts was later acquired by Ultra Electronics, Inc. and is now the Advanced Tactical Systems unit of Ultra Electronics, Inc., which is still based in Austin, Texas.


18. AGIS Software licenses its patent portfolio, including the '728, '970, '251, '838, '123, and '829 Patents, to AGIS, Inc. AGIS, Inc. has marked its products accordingly. AGIS Software and all previous assignees of the Patents-in-Suit have complied with the requirements of 35 U.S.C. § 287(a). On information and belief, Defendant has known about and has been on notice of its infringement of AGIS Software's patents, including the Patents-in-Suit, since at least January 20, 2009 or the issuance date of the Patents-in-Suit.





19. Defendant has infringed and continues to infringe the Patents-in-Suit by using and/or manufacturing applications, products, and/or services that infringe the Patents-in-Suit. Such applications, products, and/or services include at least TAK, ATAK, CivTAK, WinTAK, ATAK-CIV, WinTAK-CIV, TE-Enabler, SU-Enabler, GV, Sit(x), and any implementation of

situational awareness applications, products, and/or services (collectively, the “Accused Products”).¹ The Accused Products infringe each of the Asserted Patents.

20. The Accused Products include functionalities that allow users to form and/or join networks or groups, share and view locations with other users, display symbols corresponding to locations (including locations of other users) on a map, and communicate with other users via text, voice, and multimedia-based communication. Additionally, the Accused Products include functionalities to allow users to form and/or join networks or groups. The Accused Products include the functionalities to display map information, including symbols corresponding with users, entities, and locations. Additionally, the Accused Products include functionalities to form groups that include their own devices in order to track and/or communicate with other users’ devices.

¹ See, e.g., <https://tak.gov/products>




 **ATAK Products**

 ATAK-CIV Android Team Awareness Kit (ATAK-CIV)	 ATAK-GOV TAK for Government	 ATAK-MIL Android Tactical Assault Kit for Military
 ATAK-Plugins See ATAK plugins available for download.		

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² <https://tak.gov/products>

WinTAK Products

 WinTAK-CIV Windows OS Team Awareness Kit for Civilians	 WinTAK-MIL The Windows Tactical Assault Kit (WinTAK) is a software application and mapping framework for Windows devices.	 WinTAK-Plugins See WinTAK plugins available for download.
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AFRL

ATAK - Android

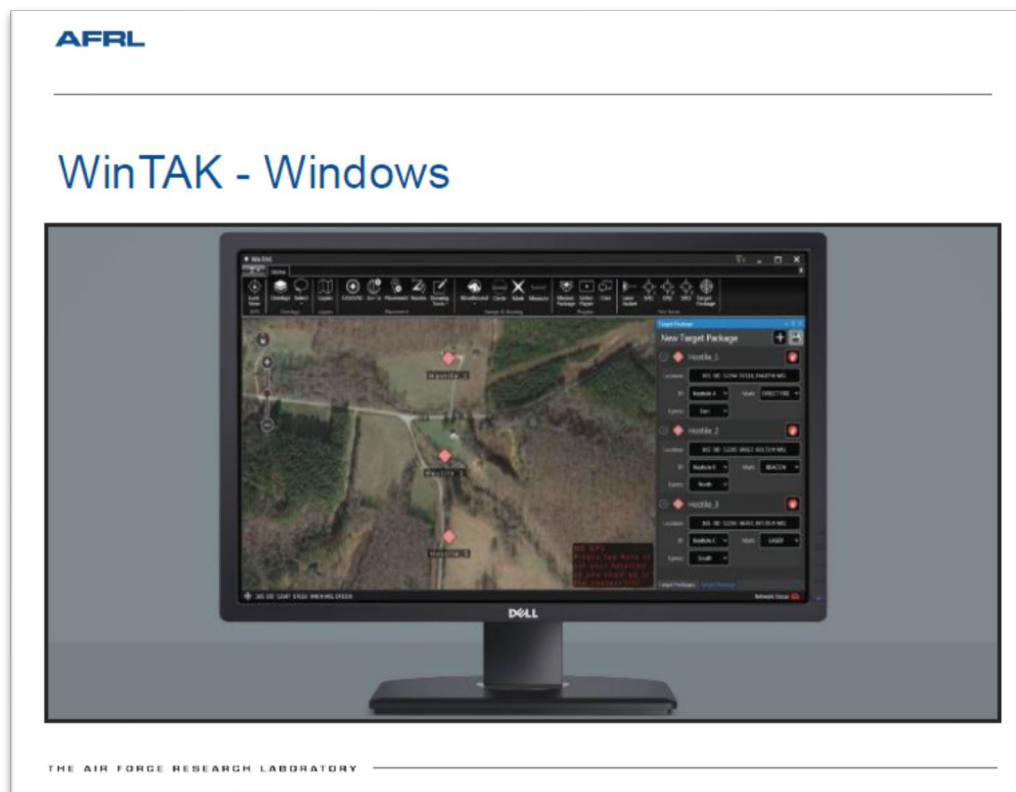


THE AIR FORCE RESEARCH LABORATORY

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³ <https://tak.gov/products>

⁴ https://drive.google.com/file/d/1h8WjJFnY5jqMGDgzXjpJnLHEEnbr4_TE/view



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COUNT I
(Infringement of the '728 Patent)

21. Paragraphs 1 through 20 are incorporated herein by reference as if fully set forth in their entireties.

22. AGIS Software has not licensed or otherwise licensed Defendant to make, use, offer for sale, sell, distribute, export from, or import any Accused Products and/or products that embody the inventions of the '728 Patent.

23. Defendant infringes, contributes to the infringement of, and/or induces infringement of the '728 Patent by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States products and/or methods covered by one or more claims of the '728 Patent including, but not limited to, the Accused Products.

⁵ https://drive.google.com/file/d/1h8WjJFnY5jqMGDgzXjpJnLHEEnbr4_TE/view

24. Defendant has and continues to indirectly infringe at least claim 7 of the '728 Patent by actively, knowingly, and intentionally inducing others to directly infringe, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products and by instructing users of the Accused Products to perform methods claimed in the '728 Patent. For example, Defendant, with knowledge that the Accused Products infringe the '728 Patent at least as of the date of this Complaint, actively, knowingly, and intentionally induced, and continues to knowingly and intentionally induce direct infringement of the '728 Patent in violation of 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '728 Patent but remained willfully blind to the infringing nature of others' actions.

25. For example, Defendant has indirectly infringed and continues to indirectly infringe at least claim 7 of the '728 Patent in the United States because Defendant's customers use the Accused Products, including at least the Accused Products of applications, products, and/or services, alone or in conjunction with additional Accused Products, in accordance with Defendant's instructions and thereby infringe at least claim 7 of the '728 Patent in violation of 35 U.S.C. § 271. Defendant directly and/or indirectly intentionally instructs its customers to infringe through training videos, demonstrations, brochures, installations and/or user guides, such as those located at one or more of the following: <https://www.civtak.org/atak-about/>; <https://www.civtak.org/documentation/>; https://wiki.civtak.org/index.php?title=ATAK_Manual; https://www.pargovernment.com/tactical-sa/docs/S20_brochure.pdf; <https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>; <https://www.boozallen.com/expertise/products/tactical-situational-awareness-kits.html>; <https://www.boozallen.com/expertise/products/gv-solutions-full-motion-video-tools.html>;

<https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>;
<https://www.boozallen.com/expertise/products/edgeaware.html>;
<https://www.boozallen.com/expertise/products/sitx-situational-awareness-in-real-time.html>;
<https://blog.pargovernment.com/interoperability>; <https://blog.pargovernment.com/all-about-gv>;
<https://blog.pargovernment.com/sitxguideteams>; <https://blog.pargovernment.com/all-about-sitx>;
<https://blog.pargovernment.com/how-crisis-response-software-enhances-situational-awareness>;
<https://blog.pargovernment.com/the-right-public-safety-software>;
<https://blog.pargovernment.com/using-first-responder-app>; <https://blog.pargovernment.com/all-about-sitx>; https://blog.pargovernment.com/simplifying_situational_awareness; and Defendant's agents and representatives located within this Judicial District. Defendant is thereby liable for infringement of the '728 Patent under 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '728 Patent but remained willfully blind to the infringing nature of others' actions.

26. For example, Defendant directly infringes and/or indirectly infringes by instructing its customers to infringe by performing claim 7 of the '728 Patent, including: a method of establishing a cellular phone communication network for designating participants, each having a similarly equipped cellular phone that includes voice communication, free and operator selected text messages, photograph and video, a CPU, a GPS navigation system and a touch screen display, comprising the steps of: a) generating one or more symbols on the touch display screen, each representing a different participant that has a cellular phone that includes said voice communication, free and operator selected text messages, photograph and video, a CPU, said GPS system and a touch screen display; b) providing and storing in each of the participant cellular phones one or more cellular phone telephone numbers, each cellular phone number of which

relates to a different symbol of each of the participants in the communication network; c) providing initiating cellular phone calling software in each cellular phone that is activated by touching a symbol on the touch display that automatically initiates a cellular phone call using the stored cellular phone number to the participant represented by the symbol; and d) generating a geographical location chart on said display screen to shown the geographical location of each of the symbols representing the participants in the communication network by latitude and longitude.

27. For example, the Accused Products run on mobile devices which include voice communications, free and operator selected text messages, photograph and video, a CPU, a GPS navigation system, and a touch screen display.

28. For example, the Accused Products enable generating one or more symbols on a touch screen display corresponding with the location of a mobile device running the Accused Products. Each symbol has a corresponding longitude and latitude.

Unclassified

Placement



The user can enter locations of interest using the Point Dropper tool. Select the **[Point Dropper]** icon to place internationally standardized markers and other icons on the map, edit the data and share the markers with other network members.

Self-Marker



The Self-Marker is displayed as a blue arrowhead at the user's current location. The options available on the Self-Marker radial are: Compass Rose, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, GPS Error, Range & Bearing Line, GPS Lock to Self, Tracking Breadcrumbs, Place a Marker at the user's current location and Details. Other TAK users appear on the display as a colored circle. The color of the circle represents the user's Team affiliation, with additional lettering inside the circle to identify the role the user on the team.

Team Member markers that include a diagonal line indicate that the GPS location is not available. A solid icon indicated that the team member has GPS reception.

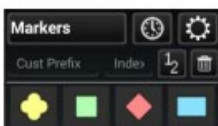


Available roles include: Team Member, Team Lead (designated by a TL in the center of the marker), Headquarters (HQ in center), Sniper (S), Medic (+), Forward Observer (FO), RTO (R) or K9 (K9). The options available when another user's Self-Marker is selected are: Inner Ring – Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, GPS Lock on Friendly, Video Player (if available), Communication Options (if configured by that user), Custom Threat Rings, Tracking Breadcrumbs and Details.

Outer Ring (Communication Options) – Data Package, Email, SMS Messaging, GeoChat, VOIP and Cellular Phone, when available.

Unclassified

Point Dropper

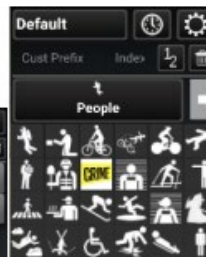


Selecting the **[Point Dropper]** icon will open the Point Dropper menu, containing marker symbology with one or more icon sets, a Recently Added button and an Iconset Manager button.

The Markers symbology affiliations are: Unknown, Neutral, Red and Friendly. Select the affiliation, then a location on the map interface to drop the marker. To add a marker by manually entering coordinates, long press on the map interface and enter the MGRS location. Change the standard naming convention by entering values into the custom prefix and index fields or leave blank to use the defaults. If values are entered, the next marker will be dropped with the prefix name and starting number(s) or letter(s) and every subsequent marker will be assigned the next consecutive number(s) or letter(s).

The user can select the mission specific pallet to open point options including Waypoint (WP), Sensor or Observation Point (OP).

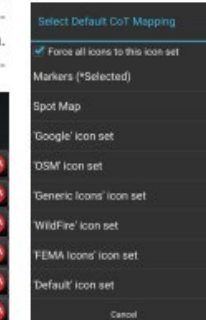
The user can move between icon sets by either swiping in the icon set area or selecting on the **[Iconset Name]** field to bring up the Icon Pallet drop-down.



The last point placed is shown at the bottom of the Point Dropper window. The information for all recently placed points can be accessed by selecting the **[Clock]** icon. This displays the marker icon, name, coordinates, elevation and range & bearing information. The user can send, rename or remove any recently added markers by selecting the **[Arrows]** next to the marker to reveal **[SEND]**, **[RENAME]** or **[DEL]** buttons.

Select the **[Iconset Manager]** (gear) button to add or delete icon sets or to set the default Marker Mapping.

Add Iconset	Default Mapping	Count
Default	340e1613-964	821
FEMA Icons	f87f966-892	42
Generic Icons	ed78ae0b-83a	657
Google	77f71686-862	66
OSM	ed781e1b-89	347
WMFrc	83198b4672a8	36



Unclassified

Contacts

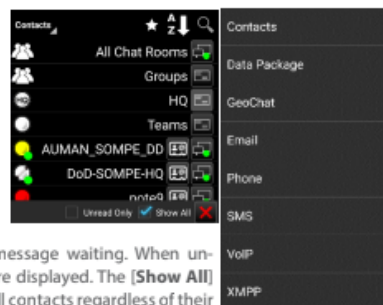


The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK Civilian's built in Chat capability), Data Packages, Email, Phone, SMS, VoIP and XMPP.

A default communication type (shown in the last column) may be selected and used until another type of communication is selected.



The Contacts list has two filters available at the bottom of the screen. The Unread Only box, when checked, will display only contacts with whom there are unread messages waiting. When unchecked (default), all available contacts are displayed. The **[Show All]** box, when checked (default), will display all contacts regardless of their location. When unchecked, only contacts that are visible on the current map screen will be displayed.



If a contact is no longer online, it will be indicated by changing the contact listing to a yellow color and the marker changes to gray both in the list and on the map.

Profile cards are accessed by selecting the second to last column in the Contacts list and are available for each contact. These contain additional information about that contact including: 1) role, software type and version installed, node type, default connector, last reported time, battery life; 2) location information, and 3) available types of communication.

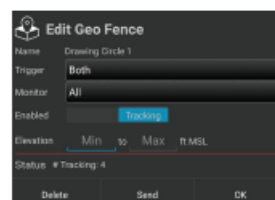


Geofencing



The Geo Fence tool allows users to create a virtual fence that triggers entry/exit notifications if map items of interest cross the virtual boundary lines. The Geo Fence options are added to the existing drawing tools. After a shape has been added, the Geo Fence Tool can be accessed either by selecting the **[Geo Fence]** icon from the menu items or selecting it from the radial.

The Enabled Field slider will move to Tracking by default when a new Geo Fence window is created. Toggle the slider between Tracking and Off to enable/disable the Geo Fence. Use the Trigger field to define which types of Geo Fence breach to monitor. Choose between Entry, Exit or Both. Use the Monitor field to define which entities the Geo Fence will track.



Choose between TAK Users, Friendly, Hostile, Custom or All. Check the **[Specify Elevation]** box to enable the Elevation field, where elevation boundaries for the entities being tracked can be defined. Select the **[OK]** button to finish creating the fence. Select the **[Send]** button to create the fence and send it to another user. Select **[Delete]** to close the Create Geo Fence window and discard changes.



Alerts appear on the map interface. Selecting the **[Alert Notification]** will open the alerts menu, detailing the activity monitored in the user defined region. The default radius for monitoring users (filtered within the "Monitor" field) outside the Geo Fence is set at 75 km. This means the total area monitored begins at the farthest point from the center of the shape plus 75 km. If the user wishes to keep the Geo Fence, but disable tracking, the user can set the tracking **[Enabled]** to off in the Edit Window.

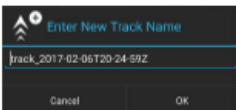


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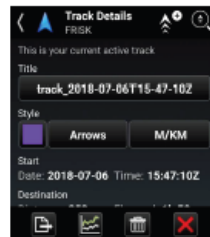
Track History



The device's GPS can be used to track movements with the Track History tool. These tracked paths can be exported to a TAK server, to a route or to a KML, KMZ, GPX or CSV file. A GPS position must be established before tracking can begin.



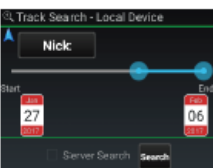
Selecting the [Track History] icon will open Track Details for the current active track. The track title, color and style can be modified. Initiate a new track by selecting the [Add Track] icon. Accept or edit the default track name and select the [OK] button to begin the new track. User location data is recorded as breadcrumbs in a new track file.



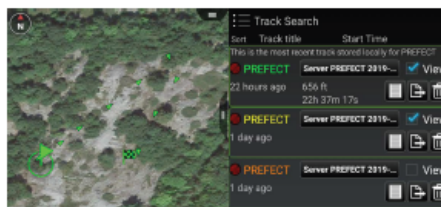
Track Search



Use the Track Search function to view track information that has been previously saved locally or on a TAK Server. The tool searches the track database for matches against the specified time range and by user callsign. Matching tracks are displayed as a list, and can be selected to view on the map interface.



Select the [Track Search] icon to access the function. Specify callsign and time frame, check the box for Server Search (if desired), then select [Search]. The track list will appear. The query results can be sorted by Track Name or Start Time. Select any of the query results to move to that track. Once selected, the name, color, and style of a selected track can be modified or the track can be cleared. Convert a track to a TAK route or export it as a



KML, KMZ, GPX or CSV file by selecting the desired track and then [Export]. Enter a file name then select [Next] and choose the export format. Select [Done] or [Send] when the export completes.



When viewing the track list, the Track History Toolbar will appear at the top of the screen. The options include [Add a Track], [Multi-select], [Track Search], [Clear Tracks] and [Exit]. The Track History List allows the user to select tracks of other users that have been saved on their device. The Track Search - Local Device allows the user to perform a tailored search for tracks meeting their criteria. The searching option allows the user to retrieve all the tracks on the device.

The Track History Breadcrumb and Settings can be configured in the Settings > Tools Preferences > Track History Preferences.

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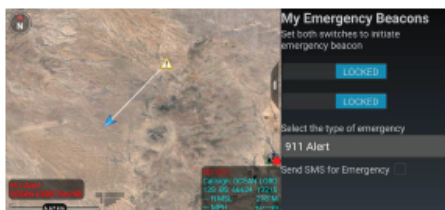
Unclassified

Emergency Beacon



Select the [Emergency Beacon] icon to open the Emergency Beacon Tool.

The Emergency Beacon allows the user to indicate their need for assistance, the type of emergency and their location on the map. The type of emergency can be selected from the drop-down menu, before activation, and includes options for an Alert, Ring the Bell, Geo Fence Breached or In Contact.



Once the Emergency type has been selected and both switches have been enabled, the TAK Server broadcasts the announcements to all network contacts. Even if the user's device is turned off, the beacon will continue. Only when the user returns to the Emergency Beacon tool and turns off the switches will the beacon be canceled and removed. If the SMS for Emergency option has been configured, the alert will be sent via text message to the configured numbers.

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⁶ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLx1mn3McqEJzvgrK/view>

The Team Awareness Kit (TAK), for civilian uses, or Tactical Assault Kit (also TAK) for military uses is a suite of software that provides geospatial information and allows user collaboration over geography. There are numerous TAK Products in the TAK family, all developed at government expense

The Team Awareness Kit for Android (ATAK, also known as CivTAK) was originally developed by the Air Force Research Laboratory (AFRL) and is now maintained by a Joint Product Center.

ATAK (including CivTAK) is an Android smartphone geospatial infrastructure and situational awareness app. It allows for precision targeting, surrounding land formation intelligence, situational awareness, navigation, and data sharing.

All the Android variants of TAK are virtually identical and all are interoperable with each other and with other TAK products. There are small, military-specific additions in military versions of ATAK.

Features

Industry/civilian capabilities of ATAK/CivTAK include:

- Online and offline mapping (most standard formats), with a blazing fast rendering engine
- Support for very high-resolution imagery (sub 1 cm resolution)
- Collaborative mapping, including points, drawings, locations of interest
- Extensive and customizable set of [Icons](#)
- [Overlay Manager](#) which allows the Import and display of KML, KMZ, GPX overlays and maps, including online sources
- Location marking, sharing, history
- Chat, file sharing, photo sharing, video sharing, streaming
- Navigation-walking/hiking, driving, also useful flying and air-ground coordination
- [Elevation Tools](#), heat maps, computed contour maps, viewsheds, routes w/DTED, SRTM, including dynamic profiling
- Hashtags and Sticky tags
- Center on Self, Center on other objects (e.g. another person in the network)
- Range, bearing, and other measurement tools
- Network-aware geofences with triggers
- "Bloodhound" destination tracking, including on moving objects
- Team Emergency Beacons
- Customizable Toolbar
- Radio controls and Integration
- Photo to map capability (aka [Rubber Sheeting](#))
- Casualty evacuation tool
- Icon support for a wide variety of First Responder missions with further extensible Icons
- 3D perspective and ability to display 3D geospatial models
- Useful for First Responders, Hunting, fishing, ornithology, wildlife site survey
- An API with an SDK

7

29. For example, the Accused Products provide and store the phone numbers or contact information of users in the memories of the mobile device (*e.g.*, through communication with a server). The Accused Products enable a user to place a call by selecting a symbol on the touch display.

⁷ <https://www.civtak.org/documentation/>

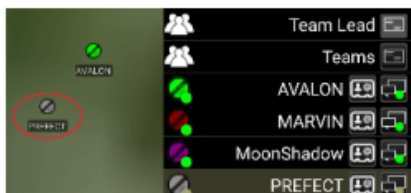
Unclassified

Contacts

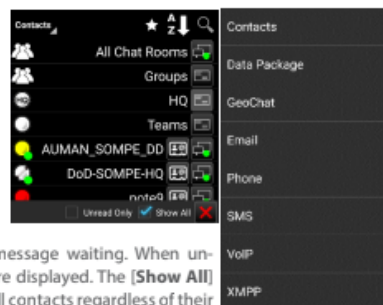


The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK Civilian's built in Chat capability), Data Packages, Email, Phone, SMS, VoIP and XMPP.

A default communication type (shown in the last column) may be selected and used until another type of communication is selected.



The Contacts list has two filters available at the bottom of the screen. The Unread Only box, when checked, will display only contacts with whom there are unread messages waiting. When unchecked (default), all available contacts are displayed. The [Show All] box, when checked (default), will display all contacts regardless of their location. When unchecked, only contacts that are visible on current map screen will be displayed.



If a contact is no longer online, it will be indicated by changing the contact listing to a yellow color and the marker changes to gray both in the list and on the map.

Profile cards are accessed by selecting the second to last column in the Contacts list and are available for each contact. These contain additional information about that contact including: 1) role, software type and version installed, node type, default connector, last reported time, battery life; 2) location information, and 3) available types of communication.



30. AGIS Software has suffered damages as a result of Defendant's direct and indirect infringement of the '728 Patent in an amount to be proved at trial.

31. AGIS Software has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '728 Patent for which there is no adequate remedy at law unless Defendant's infringement is enjoined by this Court.

COUNT II **(Infringement of the '970 Patent)**

32. Paragraphs 1 through 20 are incorporated herein by reference as if fully set forth in their entireties.

33. AGIS Software has not licensed or otherwise licensed Defendant to make, use, offer for sale, sell, distribute, export from, or import any Accused Products and/or products that embody the inventions of the '970 Patent.

34. Defendant infringes, contributes to the infringement of, and/or induces infringement of the '970 Patent by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States products and/or methods covered by one or more claims of the '970 Patent including, but not limited to, the Accused Products.

35. Defendant has and continues to directly infringe at least claim 10 of the '970 Patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products without authority and in violation of 35 U.S.C. § 271(a).

36. Defendant has and continues to indirectly infringe at least claim 10 of the '970 Patent by actively, knowingly, and intentionally inducing others to directly infringe, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products and by instructing users of the Accused Products to perform methods claimed in the '970 Patent. For example, Defendant, with knowledge that the Accused Products infringe the '970 Patent at least as of the date of this Complaint, actively, knowingly, and intentionally induced, and continues to knowingly and intentionally induce direct infringement of the '970 Patent in violation of 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '970 Patent but remained willfully blind to the infringing nature of others' actions.

37. For example, Defendant has indirectly infringed and continues to indirectly infringe at least claim 10 of the '970 Patent in the United States because Defendant's customers use the

Accused Products, including at least the Accused Products of applications, products, and/or services, alone or in conjunction with additional Accused Products, in accordance with Defendant's instructions and thereby infringe at least claim 10 of the '970 Patent in violation of 35 U.S.C. § 271. Defendant directly and/or indirectly intentionally instructs its customers to infringe through training videos, demonstrations, brochures, installations and/or user guides, such as those located at one or more of the following: <https://www.civtak.org/atak-about/>; <https://www.civtak.org/documentation/>; https://wiki.civtak.org/index.php?title=ATAK_Manual; https://www.pargovernment.com/tactical-sa/docs/S20_brochure.pdf; <https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>; <https://www.boozallen.com/expertise/products/tactical-situational-awareness-kits.html>; <https://www.boozallen.com/expertise/products/gv-solutions-full-motion-video-tools.html>; <https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>; <https://www.boozallen.com/expertise/products/edgeaware.html>; <https://www.boozallen.com/expertise/products/sitx-situational-awareness-in-real-time.html>; <https://blog.pargovernment.com/interoperability>; <https://blog.pargovernment.com/all-about-gv>; <https://blog.pargovernment.com/sitxguideteams>; <https://blog.pargovernment.com/all-about-sitx>; <https://blog.pargovernment.com/how-crisis-response-software-enhances-situational-awareness>; <https://blog.pargovernment.com/the-right-public-safety-software>; <https://blog.pargovernment.com/using-first-responder-app>; <https://blog.pargovernment.com/all-about-sitx>; https://blog.pargovernment.com/simplifying_situational_awareness; and Defendant's agents and representatives located within this Judicial District. Defendant is thereby liable for infringement of the '970 Patent under 35 U.S.C. § 271(b). Alternatively, Defendant believed there

was a high probability that others would infringe the '970 Patent but remained willfully blind to the infringing nature of others' actions.

38. For example, Defendant directly infringes and/or indirectly infringes by instructing its customers to infringe by performing claim 10 of the '970 Patent, including: a method of receiving, acknowledging and responding to a forced message alert from a sender PDA/cell phone to a recipient PDA/cell phone, wherein the receipt, acknowledgment, and response to said forced message alert is forced by a forced message alert software application program, said method comprising the steps of: receiving an electronically transmitted electronic message; identifying said electronic message as a forced message alert, wherein said forced message alert comprises a voice or text message and a forced message alert application software packet, which triggers the activation of the forced message alert software application program within the recipient PDA/cell phone; transmitting an automatic acknowledgment of receipt to the sender PDA/cell phone, which triggers the forced message alert software application program to take control of the recipient PDA/cell phone and shows the content of the text message and a required response list on the display recipient PDA/cell phone or to repeat audibly the content of the voice message on the speakers of the recipient PDA/cell phone and show the required response list on the display recipient PDA/cell phone; and transmitting a selected required response from the response list in order to allow the message required response list to be cleared from the recipient's cell phone display, whether said selected response is a chosen option from the response list, causing the forced message alert software to release control of the recipient PDA/cell phone and stop showing the content of the text message and a response list on the display recipient PDA/cell phone and/or stop repeating the content of the voice message on the speakers of the recipient PDA/cell phone; displaying the response received from the PDA cell phone that transmitted the response on the

sender of the forced alert PDA/cell phone; and providing a list of the recipient PDA/cell phones that have automatically acknowledged receipt of a forced alert message and their response to the forced alert message; and displaying a geographical map with georeferenced entities on the display of the sender PDA/cell phone; obtaining location and status data associated with the recipient PDA/cellphone; and presenting a recipient symbol on the geographical map corresponding to a correct geographical location of the recipient PDA/cellphone based on at least the location data. For example, the Accused Products include features as shown below.

Unclassified

ATAK Civilian Overview

The Civilian Team Awareness Kit for Android (ATAK Civilian) is a Government-off-the-Shelf (GOTS) software application and mapping framework for mobile devices. ATAK Civilian has been designed and developed to run on Android smart devices used in a first responder environment. The ATAK Civilian software application is an extensible moving map display that integrates imagery, map and overlay information to provide enhanced collaboration and Situational Awareness (SA) over a tactical meshed network. ATAK Civilian promotes information flow and communications from the field environment to command enterprise locations.

The first time ATAK Civilian is opened, or after a Clear Content, a passphrase is auto-generated to activate data encryption. The user can supply their own passphrase by using Settings > Show All Preferences > Device Preferences > Change Encryption Passphrase. Following this step, ATAK Civilian's End User License Agreement (EULA) must be accepted. Next, the user will be prompted to change their callsign and/or import preferences or data from a Mission Package. All changes/imports can always be updated later. Finally, the user can place their self-marker by following the instructions located in the lower right corner.

The toolbar runs along the top of the map display. The features whose icons form the center portion of the toolbar are discussed in individual sections of this guide. The three dots at the right of the toolbar provide additional menu items that appear in a drop-down menu. A Long Press on the map will toggle the toolbar between hidden and visible.



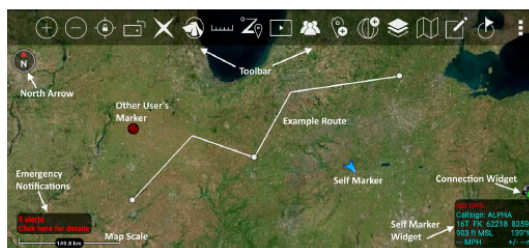
The North Arrow appears in the upper left and is used to control map orientation. It has two primary modes: North Up/Track Up (default) and Manual Map Rotation/Lock. While in North Up/Track Up Mode, single press on the [North Arrow] icon to cycle between the North Up and Track Up map orientation. Long press the [North Arrow] to call out the additional controls menu where the Manual Rotation/Lock and 3D features are available. Select the [Rotation] button to enter Manual Map Rotation/Lock Mode. When in Manual Map Rotation/Lock Mode, rotate the map orientation by pressing on the map with two fingers and pivoting them in the desired direction. Single press on the [North Arrow] to lock the screen orientation, signified by the appearance of the lock icon, and again to unlock the orientation for further adjustment. 3D controls are discussed in a separate section.

Select the [Magnifier] buttons to zoom in or out on the map. The map can also be zoomed by using two fingers on the screen to pinch and spread the map. Select the [Back] button to center the screen on the Self Marker or the [Padlock] icon to lock the center of the screen to the Self Marker. Select the [Orientation] icon to toggle the screen position between portrait and landscape.

The optional connection widget indicates whether or not the user is connected to a TAK Server. This has a corresponding Android notification that provides the same information. Toggle this display on at Settings > Network Connections > Network Connections > Display Connection Widget.

Alerts and notifications are displayed in the lower left of the map interface.

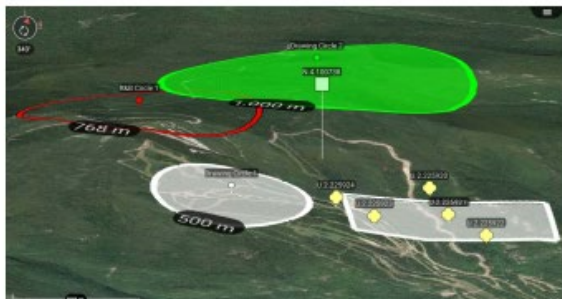
The Map Scale displays a 1 inch to X mi/km reference on the map. The scale adjusts with the map when zoomed in and out. Hint windows are available to alert users to changes or make suggestions about the use of tools the first time they are opened.



5

Unclassified

3D View



ATAK Civilian features 3D viewing of terrain and map items (DTED required). To enable 3D view, long press on the **[North Arrow]** to call out the additional controls menu and select **[3D]**. A tilt angle indicator will appear around the edge of the **[North Arrow]** when 3D view is active. Touch the screen with two fingers and simultaneously swipe up or down on the screen to tilt the view angle. Once the appropriate viewing angle is set, select the **[3D Lock]** button to retain this view while panning the map. While viewing the map from an angle, some map items will appear raised above the map surface if they have defined elevations.



3D Models

ATAK Civilian supports the use of 3D models. OBJ models and other types from products such as Pix4D can be imported via the Import Manager or can be manually placed in the atak/overlays folder prior to startup. If using Import Manager browse to the .OBJ file and import only that file, or browse to a .ZIP file that contains the .OBJ file (and others) and import only that file. If using manual placement to the atak/overlays folder, place a .ZIP file containing the .OBJ file (and others) into the directory and they will be imported on startup.



Once imported, a 3D Model icon will appear on the map. Zoom into the area of the icon until a loading ring appears. After the loading process has finished, the 3D model will be projected onto the map. Enable the map 3D View and tilt the view angle to see the 3D modeling. Loaded 3D models will appear as their own category in Overlay Manager and can be toggled on/off or removed from there.



6

Unclassified

Placement



The user can enter locations of interest using the Point Dropper tool. Select the **[Point Dropper]** icon to place internationally standardized markers and other icons on the map, edit the data and share the markers with other network members.

Self-Marker



The Self-Marker is displayed as a blue arrowhead at the user's current location. The options available on the Self-Marker radial are: Compass Rose, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, GPS Error, Range & Bearing Line, GPS Lock to Self, Tracking Breadcrumbs, Place a Marker at the user's current location and Details. Other TAK users appear on the display as a colored circle. The color of the circle represents the user's Team affiliation, with additional lettering inside the circle to identify the role the user on the team.

Team Member markers that include a diagonal line indicate that the GPS location is not available. A solid icon indicated that the team member has GPS reception.

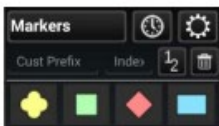


Available roles include: Team Member, Team Lead (designated by a TL in the center of the marker), Headquarters (HQ in center), Sniper (S), Medic (+), Forward Observer (FO), RTO (R) or K9 (K9). The options available when another user's Self-Marker is selected are: Inner Ring – Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, GPS Lock on Friendly, Video Player (if available), Communication Options (if configured by that user), Custom Threat Rings, Tracking Breadcrumbs and Details.

Outer Ring (Communication Options) – Data Package, Email, SMS Messaging, GeoChat, VOIP and Cellular Phone, when available.

Unclassified

Point Dropper



Selecting the **[Point Dropper]** icon will open the Point Dropper menu, containing marker symbology with one or more icon sets, a Recently Added button and an Iconset Manager button.

The Markers symbology affiliations are: Unknown, Neutral, Red and Friendly. Select the affiliation, then a location on the map interface to drop the marker. To add a marker by manually entering coordinates, long press on the map interface and enter the MGRS location. Change the standard naming convention by entering values into the custom prefix and index fields or leave blank to use the defaults. If values are entered, the next marker will be dropped with the prefix name and starting number(s) or letter(s) and every subsequent marker will be assigned the next consecutive number(s) or letter(s).

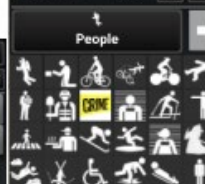
The user can select the mission specific pallet to open point options including Waypoint (WP), Sensor or Observation Point (OP).

The user can move between icon sets by either swiping in the icon set area or selecting on the **[Iconset Name]** field to bring up the Icon Pallet drop-down.



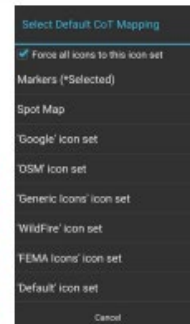
The last point placed is shown at the bottom of the Point Dropper window. The information for all recently placed points can be accessed by selecting the **[Clock]** icon. This displays the marker icon, name, coordinates, elevation and range & bearing information. The user can send, rename or remove any recently added markers by selecting the **[Arrows]** next to the marker to reveal **[SEND]**, **[RENAME]** or **[DEL]** buttons.

Select the **[Iconset Manager]** (gear) button to add or delete icon sets or to set the default Marker Mapping.



Iconset Manager

Add Iconset	Default Mapping	UID	Count
Iconset	Default	34ae1613-954	921
FEMA Icons		1b77666-9b2	42
Generic Icons		ad78aaf6-03a	657
Google		f7f71666-8b2	96
OSM		6d781af6-09	347
WildFire		631-98b4072a8	36



Unclassified

Radial Menu

Unknown Object



Neutral Object



Red Object



Friendly Object



Spot Object



The options available for Unknown Object Markers are: Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, Lock On, Tasking, Custom Threat Rings, Tracking Breadcrumbs and Details.

The options available for Neutral Object Markers are: Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, Lock On, Tasking, Custom Threat Rings, Tracking Breadcrumbs and Details.

The options available for Red Object Markers are: Delete, Polar Coordinate Entry, Compass Rose/Bullseye, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, Tasking, Custom Threat Rings, Tracking Breadcrumbs and Details.

The options available for Friendly Object Markers are: Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, Lock On, Video, Contact Card, Custom Threat Rings, Tracking Breadcrumbs and Details. The Video radial will activate if a properly formatted packet that includes the link to the video feed is included. Select the video radial to open the associated video. The Contact Card can be selected to display additional communication options, including GeoChat, Email, VoIP, SMS Messaging and Cellular Phone, when available.

The options available for Spot Map are: Delete, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, Nav-To, Custom Threat Rings, Labels and Details.

The options for User Defined Iconsets are: Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, Lock On, Tasking, Custom Threat Rings, Tracking Breadcrumbs and Details.

Select **[Details]** on the marker radial to make desired modifications, including: Coordinate, Elevation, Name, Type and Remarks. Selecting Marker Type opens a dialog box with extra categories. File attachments, including images, can be associated with the object by selecting the **[Paperclip]** icon. Once all the desired modifications have been made, the Marker can be sent to other network members using **[Send]**. The information can be broadcast to all members or sent to specific recipients. Select the **[Auto Send]** option to broadcast the marker to other TAK users on the network, with updates automatically sent about once every 60 seconds.

Unclassified

Bloodhound Tool



The Bloodhound Tool provides support for tracking and intercepting a map item. It allows the user to select two points on the map and/or map objects and display range & bearing information between the chosen tracker and the target.

Select the **[Bloodhound]** icon to open the Bloodhound Tool. A window will open, prompting the user to choose where to start by tapping the **[From Reticle]** (default = user's self marker) and where to bloodhound (track) to by tapping the **[To Reticle]**.

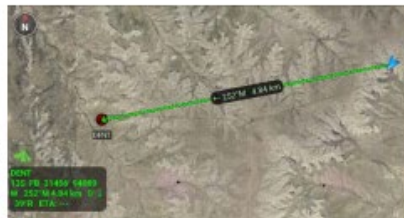


Targets include map objects like other User's Self Markers, DPs, Markers, Shape center points, Range & Bearing end-points and any other map objects. If the user selects a map location instead of an object as the target, Bloodhound will place a waypoint marker there. The self marker will then track towards the waypoint.

Select **[OK]** and Bloodhound will be activated.

If either point moves, the green widget in the lower left will show the updated information. As the tracking object begins to navigate toward the target, the Estimated Time of Arrival (ETA) will update accordingly.

The green line showing the direct path from the tracker to the target will flash when the user-defined ETA outer threshold is reached (default = 6 minutes from target). The line will flash as the tracker continues toward the target until the next ETA threshold is reached (default = 3 minutes). The line will turn a flashing yellow until the final ETA threshold (default = 1 minute) is reached. The line then flashes red until the target is reached. Colors and thresholds can be modified in Settings > Tool Preferences > Bloodhound Preferences.



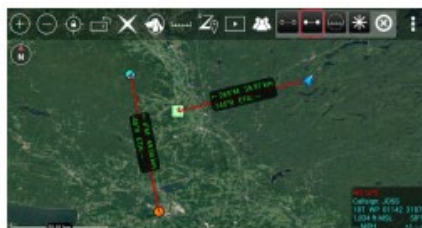
Selecting the green Bloodhound icon on the map will pan the map to the Bloodhound Range & Bearing Line. Disengage the Bloodhound Tool by selecting the **[Bloodhound]** icon on the toolbar.

Multiple Bloodhound



To create multiple bloodhounds, selecting the Range and Bearing Tool and select the **[R&B Line]** icon. Select two markers on the map and once the R&B line is created, select the line to bring up the radial. Select the **[Bloodhound]** radial, and the bloodhound information will be displayed on the R&B Line itself.

If either point moves, the Bloodhound information shown on the R&B Line will be updated. As the tracking object begins to navigate toward the target, the Estimated Time of Arrival (ETA) will update accordingly.



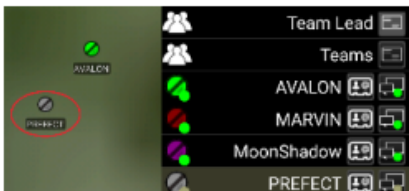
Unclassified

Contacts

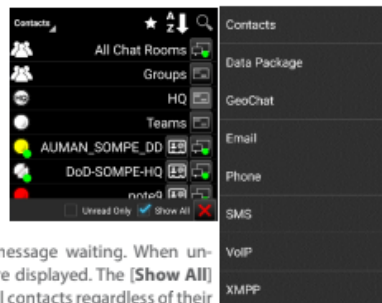


The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK Civilian's built in Chat capability), Data Packages, Email, Phone, SMS, VoIP and XMPP.

A default communication type (shown in the last column) may be selected and used until another type of communication is selected.



The Contacts list has two filters available at the bottom of the screen. The Unread Only box, when checked, will display only contacts with whom there are unread messages waiting. When unchecked (default), all available contacts are displayed. The [Show All] box, when checked (default), will display all contacts regardless of their location. When unchecked, only contacts that are visible on current map screen will be displayed.



If a contact is no longer online, it will be indicated by changing the contact listing to a yellow color and the marker changes to gray both in the list and on the map.

Profile cards are accessed by selecting the second to last column in the Contacts list and are available for each contact. These contain additional information about that contact including: 1) role, software type and version installed, node type, default connector, last reported time, battery life; 2) location information, and 3) available types of communication.

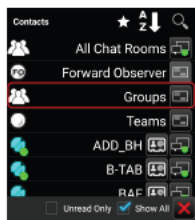


Unclassified

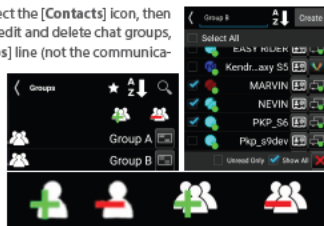
GeoChat Group Management



Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.

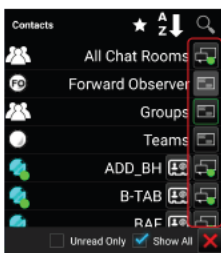


GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging



Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.

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Unclassified

GeoChat Messaging (continued)



Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.



A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.



Unclassified

Video Player



Select the [Video Player] icon to bring up the Video player. The

Video Player supports playing video streams from IP cameras and H.264 encoders. The menu allows adding, editing, deleting, playing or sending videos to other network members.

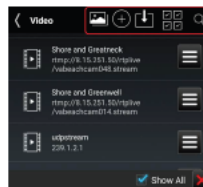
Options for the video player include: viewing video snapshots, adding a new video alias, downloading an alias from the TAK Server, selecting the Multi-Select Action option to either Export or Delete aliases or searching for a specific alias.

Select the desired listed video alias or file name to begin playing the stored or streaming video. The video will display half the width of the screen.



To view a video at full screen, slide the pull bar. To return to half screen, slide the pull bar back to the right.

Select the [Back] button to return to the list of available videos.



To add stored video file, select the [Import Manager] icon, select [Local SD], and navigate to the video file and select [OK] to add the video to the list of available videos. The user can also manually place video files in "atak\tools\videos" to have them listed after ATAK is restarted. When a video is playing at half width, slide the pull bar to the right to hide the video but maintain the connection. Slide the pull bar to the left to unhide the video. The status of the video player is reflected in the main Android toolbar located at the top of the screen.



Select the [Snapshot] icon to save the current frame of the video as a JPEG image file, the icon will flash green to indicate that the snapshot has occurred. The file will be saved in the "atak\tools\videosnaps" folder.



The user can view the saved snap shots by selecting the [Video Snapshots] icon. The user has the option of sorting the images by time taken or by the name of the snapshot. The user can also search within the snapshots taken by their name. By selecting an image, the image will be displayed within the window.

The user will have the options of cycling through the images, [Send] to a TAK user, or edit in [Image Markup]. (Image Markup would need to be installed)

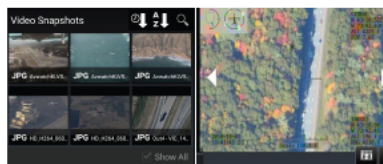
If a live UDP stream is being viewed, it can be recorded by tapping the [Record] icon. The icon will change to a green square while recording.

Select the [Green Square] to end the recording. The recordings are saved in a folder in "atak\tools\videos".

Note: This is only available for UDP streams.



To close the video player, select the [X] located at the bottom right corner of the video player or select the [Back] button.



29

Unclassified

Go To



Select the [Go To] icon to enter details and navigate to a specific location on the map.

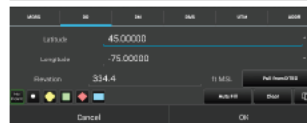
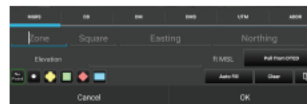
Select from the [MGRS] (military grid reference system), [DD] (decimal degrees), [DM] (degrees - minutes), [DMS] (degrees-minutes-seconds), [UTM] (Universal Transverse Mercator) or [ADDR] tabs on the Go To interface and enter the location data of interest. The address provider name appears beneath the Elevation Data when the user selects the [ADDR] tab.

The user can enter the Latitude, Longitude and Elevation in the space provided for [MGRS], [DD], [D-M] or [D-M-S] searches. If DTED is installed, the elevation value can be automatically populated by tapping the [Pull From DTED] button. The user can select a desired marker type (Spot, Unknown, Neutral, Red, or Friendly) to be placed at the entered coordinates. If [No Point] is selected, the map will pan to the location but will not add a point.



Note: The address provider name appears beneath the Elevation Data when the user selects the [ADDR] tab.

The Address Lookup provider used for the ADDR tab can be configured in the Settings > Tool Preferences > Address Lookup Preferences.



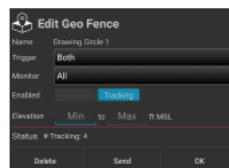
32

Geofencing



The Geo Fence tool allows users to create a virtual fence that triggers entry/exit notifications if map items of interest cross the virtual boundary lines. The Geo Fence options are added to the existing drawing tools. After a shape has been added, the Geo Fence Tool can be accessed either by selecting the [Geo Fence] icon from the menu items or selecting it from the radial.

The Enabled Field slider will move to Tracking by default when a new Geo Fence window is created. Toggle the slider between Tracking and Off to enable/disable the Geo Fence. Use the Trigger field to define which types of Geo Fence breach to monitor. Choose between Entry, Exit or Both. Use the Monitor field to define which entities the Geo Fence will track.



Choose between TAK Users, Friendly, Hostile, Custom or All. Check the [Specify Elevation] box to enable the Elevation field, where elevation boundaries for the entities being tracked can be defined. Select the [OK] button to finish creating the fence. Select the [Send] button to create the fence and send it to another user. Select [Delete] to close the Create Geo Fence window and discard changes.



Alerts appear on the map interface. Selecting the [Alert Notification] will open the alerts menu, detailing the activity monitored in the user defined region. The default radius for monitoring users (filtered within the "Monitor" field) outside the Geo Fence is set at 75 km. This means the total area monitored begins at the farthest point from the center of the shape plus 75 km. If the user wishes to keep the Geo Fence, but disable tracking, the user can set the tracking [Enabled] to off in the Edit Window.



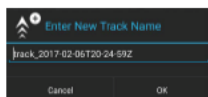
35

Unclassified

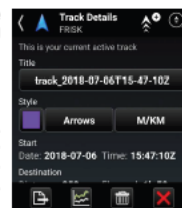
Track History



The device's GPS can be used to track movements with the Track History tool. These tracked paths can be exported to a TAK server, to a route or to a KML, KMZ, GPX or CSV file. A GPS position must be established before tracking can begin.



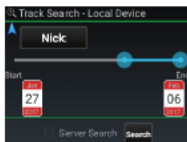
Selecting the [Track History] icon will open Track Details for the current active track. The track title, color and style can be modified. Initiate a new track by selecting the [Add Track] icon. Accept or edit the default track name and select the [OK] button to begin the new track. User location data is recorded as breadcrumbs in a new track file.



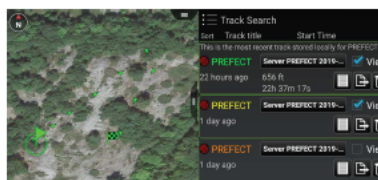
Track Search



Use the Track Search function to view track information that has been previously saved locally or on a TAK Server. The tool searches the track database for matches against the specified time range and by user callsign. Matching tracks are displayed as a list, and can be selected to view on the map interface.



Select the [Track Search] icon to access the function. Specify callsign and time frame, check the box for Server Search (if desired), then select [Search]. The track list will appear. The query results can be sorted by Track Name or Start Time. Select any of the query results to move to that track. Once selected, the name, color, and style of a selected track can be modified or the track can be cleared. Convert a track to a TAK route or export it as a



KML, KMZ, GPX or CSV file by selecting the desired track and then [Export]. Enter a file name then select [Next] and choose the export format. Select [Done] or [Send] when the export completes.



When viewing the track list, the Track History Toolbar will appear at the top of the screen. The options include [Add a Track], [Multi-select], [Track Search], [Clear Tracks] and [Exit]. The Track History List allows the user to select tracks of other users that have been saved on their device. The Track Search - Local Device allows the user to perform a tailored search for tracks meeting their criteria. The searching option allows the user to retrieve all the tracks on the device.

The Track History Breadcrumb and Settings can be configured in the Settings > Tools Preferences > Track History Preferences.

37

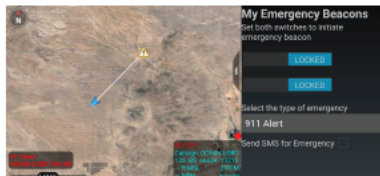
Unclassified

Emergency Beacon



Select the [Emergency Beacon] icon to open the Emergency Beacon Tool.

The Emergency Beacon allows the user to indicate their need for assistance, the type of emergency and their location on the map. The type of emergency can be selected from the drop-down menu, before activation, and includes options for an Alert, Ring the Bell, Geo Fence Breached or In Contact.



Once the Emergency type has been selected and both switches have been enabled, the TAK Server broadcasts the announcements to all network contacts. Even if the user's device is turned off, the beacon will continue. Only when the user returns to the Emergency Beacon tool and turns off the switches will the beacon be canceled and removed. If the SMS for Emergency option has been configured, the alert will be sent via text message to the configured numbers.



8

The Team Awareness Kit (TAK), for civilian uses, or Tactical Assault Kit (also TAK) for military uses is a suite of software that provides geospatial information and allows user collaboration over geography. There are numerous TAK Products in the TAK family, all developed at government expense

The Team Awareness Kit for Android (ATAK, also known as CivTAK) was originally developed by the Air Force Research Laboratory (AFRL) and is now maintained by a Joint Product Center.

ATAK (including CivTAK) is an Android smartphone geospatial infrastructure and situational awareness app. It allows for precision targeting, surrounding land formation intelligence, situational awareness, navigation, and data sharing.

All the Android variants of TAK are virtually identical and all are interoperable with each other and with other TAK products. There are small, military-specific additions in military versions of ATAK.

⁸ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLx1mn3McqEJzvgrK/view>

Features

Industry/civilian capabilities of ATAK/CivTAK include:

- Online and offline mapping (most standard formats), with a blazing fast rendering engine
- Support for very high-resolution imagery (sub 1 cm resolution)
- Collaborative mapping, including points, drawings, locations of interest
- Extensive and customizable set of [Icons](#)
- [Overlay Manager](#) which allows the Import and display of KML, KMZ, GPX overlays and maps, including online sources
- Location marking, sharing, history
- Chat, file sharing, photo sharing, video sharing, streaming
- Navigation-walking/hiking, driving, also useful flying and air-ground coordination
- [Elevation Tools](#), heat maps, computed contour maps, viewsheds, routes w/DTED, SRTM, including dynamic profiling
- Hashtags and Sticky tags
- Center on Self, Center on other objects (e.g. another person in the network)
- Range, bearing, and other measurement tools
- Network-aware geofences with triggers
- "Bloodhound" destination tracking, including on moving objects
- Team Emergency Beacons
- Customizable Toolbar
- Radio controls and Integration
- Photo to map capability (aka [Rubber Sheeting](#))
- Casualty evacuation tool
- Icon support for a wide variety of First Responder missions with further extensible Icons
- 3D perspective and ability to display 3D geospatial models
- Useful for First Responders, Hunting, fishing, ornithology, wildlife site survey
- An API with an SDK

9

39. AGIS Software has suffered damages as a result of Defendant's direct and indirect infringement of the '970 Patent in an amount to be proved at trial.

40. AGIS Software has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '970 Patent for which there is no adequate remedy at law unless Defendant's infringement is enjoined by this Court.

⁹ <https://www.civtak.org/documentation/>

COUNT III
(Infringement of the '251 Patent)

41. Paragraphs 1 through 20 are incorporated herein by reference as if fully set forth in their entireties.

42. AGIS Software has not licensed or otherwise authorized Defendant to use and/or manufacture any Accused Products and/or products that embody the inventions of the '251 Patent.

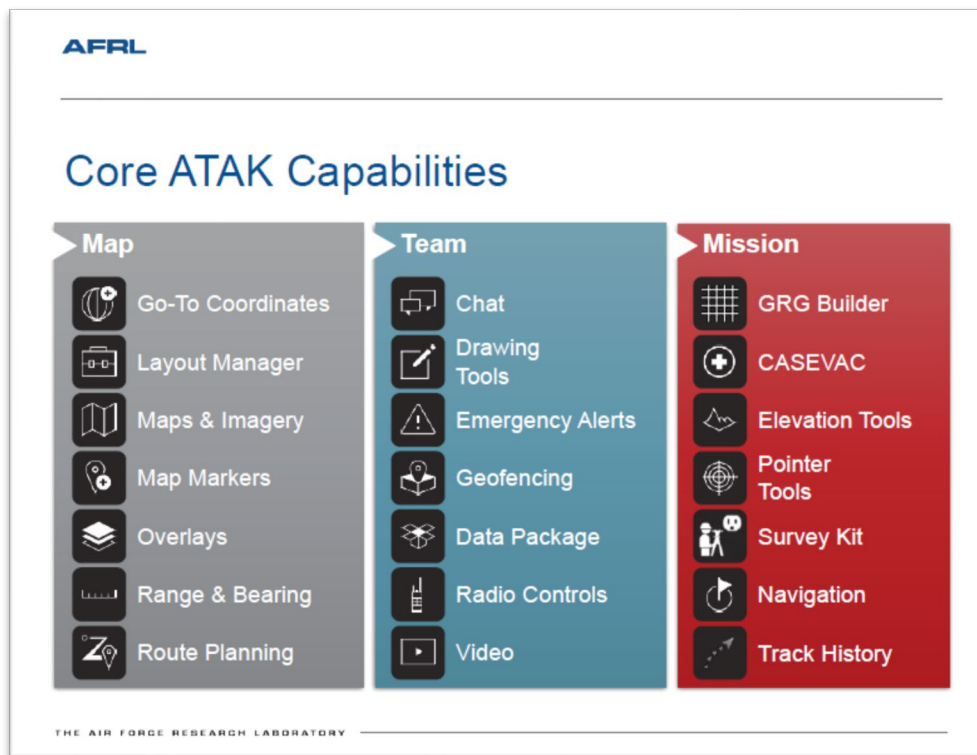
43. Defendant has and continues to directly infringe at least claim 24 of the '251 Patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products without authority and in violation of 35 U.S.C. § 271(a).

44. Defendant has and continues to indirectly infringe at least claim 24 of the '251 Patent by actively, knowingly, and intentionally inducing others to directly infringe, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products and by instructing users of the Accused Products to perform methods claimed in the '251 Patent. For example, Defendant, with knowledge that the Accused Products infringe the '251 Patent at least as of the date of this Complaint, actively, knowingly, and intentionally induced, and continues to knowingly and intentionally induce direct infringement of the '251 Patent in violation of 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '251 Patent but remained willfully blind to the infringing nature of others' actions.

45. For example, Defendant has indirectly infringed and continues to indirectly infringe at least claim 24 of the '251 Patent in the United States because Defendant's customers use the Accused Products, including at least the Accused Products of applications, products, and/or services, alone or in conjunction with additional Accused Products, in accordance with

Defendant's instructions and thereby infringe at least claim 24 of the '251 Patent in violation of 35 U.S.C. § 271. Defendant directly and/or indirectly intentionally instructs its customers to infringe through training videos, demonstrations, brochures, installations and/or user guides, such as those located at one or more of the following: <https://www.civtak.org/atak-about/>; <https://www.civtak.org/documentation/>; https://wiki.civtak.org/index.php?title=ATAK_Manual; https://www.pargovernment.com/tactical-sa/docs/S20_brochure.pdf; <https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>; <https://www.boozallen.com/expertise/products/tactical-situational-awareness-kits.html>; <https://www.boozallen.com/expertise/products/gv-solutions-full-motion-video-tools.html>; <https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>; <https://www.boozallen.com/expertise/products/edgeaware.html>; <https://www.boozallen.com/expertise/products/sitx-situational-awareness-in-real-time.html>; <https://blog.pargovernment.com/interoperability>; <https://blog.pargovernment.com/all-about-gv>; <https://blog.pargovernment.com/sitxguidesteams>; <https://blog.pargovernment.com/all-about-sitx>; <https://blog.pargovernment.com/how-crisis-response-software-enhances-situational-awareness>; <https://blog.pargovernment.com/the-right-public-safety-software>; <https://blog.pargovernment.com/using-first-responder-app>; <https://blog.pargovernment.com/all-about-sitx>; https://blog.pargovernment.com/simplifying_situational_awareness; and Defendant's agents and representatives located within this Judicial District. Defendant is thereby liable for infringement of the '251 Patent under 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '251 Patent but remained willfully blind to the infringing nature of others' actions.

46. For example, Defendant's Accused Products allow users to share their locations and view other users' locations on a map and to communicate with those users via the Accused Products.




10


¹⁰ https://drive.google.com/file/d/1h8WjJFnY5jqMGDgzXjpJnLHEEnbr4_TE/view

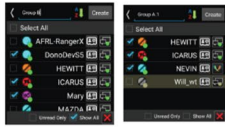

Unclassified

Geo Chat


 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat management and configuration, tap the [Contacts] icon and select GeoChat from the drop down menu.

Management and Configuration

 GeoChat management and configuration is initiated through Contacts. Tap the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit, and delete chat groups, as well as sub-groups. To create a chat group, tap on the [Groups] line (not the communications button). This will bring up the group configuration screen. Tap the [Add Group] icon to create the name of the group and add contacts to the group and the tap [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, tap the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.

Messaging


 Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication Button] icon. Tap on [All Chat Rooms] to view all messages from or send messages to those present on the network. Tap [All Streaming] to view all messages from or send messages to those present on the server. Other groupings available for viewing or sending messages are: Groups, HQ, Team Lead, and Teams. If your current role is HQ or Team Lead you can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms] or [All Streaming]. When a sub-team is chosen, messages can only be sent to your active (My Team) team color.

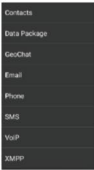
When a parent group is chosen, messages are sent to all members of the parent group as well as all of the sub-groups. When a sub-group is chosen, message are sent only to members of the sub-group.

11

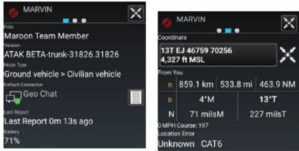
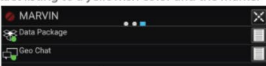

Unclassified

Contacts

 The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.

 A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).

A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.

12

47. For example, the exemplary Accused Products allow users to establish groups and to exchange messages via interaction with servers which provide the Accused Products, among


¹¹ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

¹² <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

other relevant services. The exemplary Accused Products further allow users to retrieve map information from multiple sources.

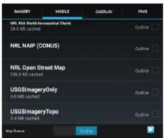
Unclassified

Map Manager



Tap on the [Map Manager] icon to list the imagery loaded in the CIV-TAK application.

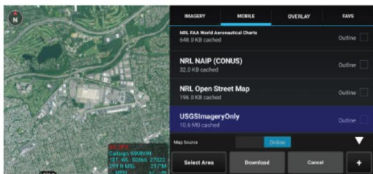
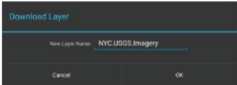
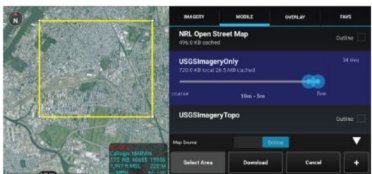
The following categories are shown: **Imagery/Maps, Mobile, Overlay, Favorites (FAVS)**. Select [Online/ Local] on the Mobile tab to toggle between downloading or using locally stored map layers over a desired area. Additionally, the user may tap the [Overlay] button to display a list of available Overlay files. Tap on the [FAVS] button to add a current view to favorites or to switch to an existing view.



Saving a Map Layer

Expand the [Map Source] option by selecting the arrow and tap [Select Area] to define a region of interest. Tap the top left and lower right corners to select the area to be saved.

A box will appear to visually display the selected layers. Drag the slider end points to select the resolution of the tileset. The number of tiles to be downloaded will be indicated. Select the [Download] button to begin the download process.

The user can choose to create a new tileset or add to an existing one. Enter the name to be applied to the selected layers and tap [OK]. A status indicator will appear to show the download progress.


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48. Upon information and belief, the exemplary Accused Products are programmed to receive messages from other devices where those messages relate to joining groups, as depicted below:

¹³ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

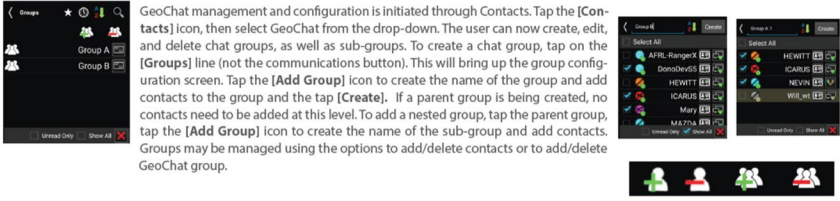
Unclassified

Geo Chat

 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat management and configuration, tap the [Contacts] icon and select GeoChat from the drop down menu.

Management and Configuration

GeoChat management and configuration is initiated through Contacts. Tap the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit, and delete chat groups, as well as sub-groups. To create a chat group, tap on the [Groups] line (not the communications button). This will bring up the group configuration screen. Tap the [Add Group] icon to create the name of the group and add contacts to the group and the tap [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, tap the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



Messaging


Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication Button] icon. Tap on [All Chat Rooms] to view all messages from or send messages to those present on the network. Tap on [All Streaming] to view all messages from or send messages to those present on the server. Other groupings available for viewing or sending messages are: Groups, HQ, Team Lead, and Teams. If your current role is HQ or Team Lead you can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms] or [All Streaming]. When a sub-team is chosen, messages can only be sent to your active (My Team) team color.

When a parent group is chosen, messages are sent to all members of the parent group as well as all of the sub-groups. When a sub-group is chosen, message are sent only to members of the sub-group.

14

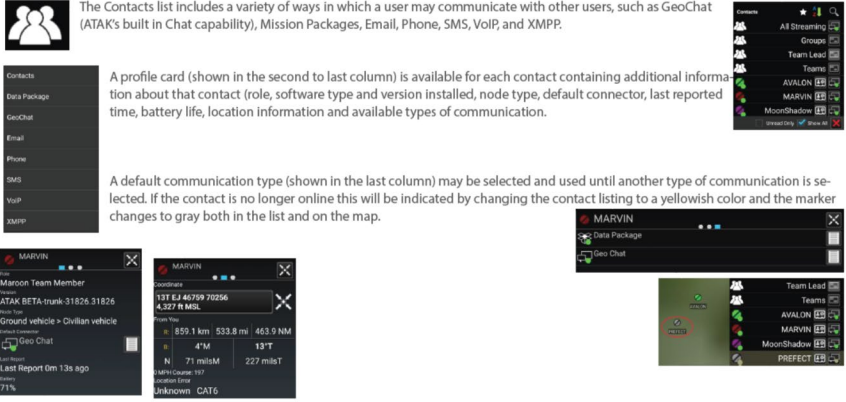
Unclassified

Contacts

 The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.

A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).

A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.




15

¹⁴ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

¹⁵ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

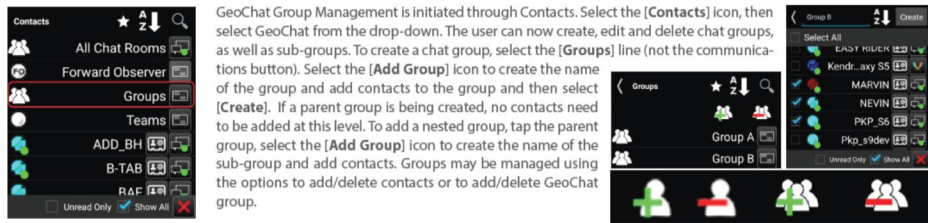
Unclassified

GeoChat Group Management

 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.

GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.

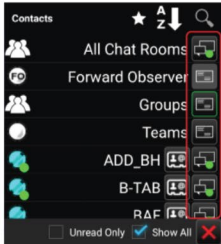
To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.



GeoChat Messaging

Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent-group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.



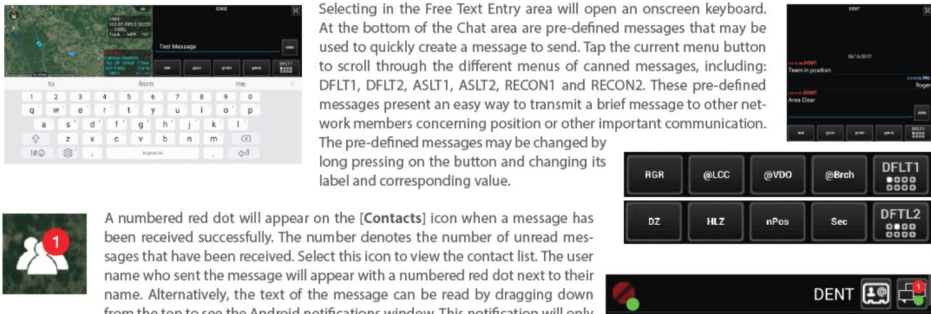
16

Unclassified

GeoChat Messaging (continued)

Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.

A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.



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¹⁶ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

¹⁷ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>


49. Upon information and belief, the exemplary Accused Products are further programmed to facilitate participation in the group by communicating with a server and sending to and receiving location information, as depicted below:

Unclassified

Data Package Tool






Select the [Data Package Tool] icon to display any data packages that have been stored. New Data Packages may be built and sent to other network members. Data Packages may also be deleted. When preparing for an operation, a team leader may prepare a route, place markers, shapes and imagery that pertain to operation objectives. Any or all of these can be included into a data package and sent it to each person on the team. This allows everyone on the team to have the same information. In addition to Map Items (with or without attachments), external files (from the SD card) may be included in a package and map item attachments may optionally be included. The visibility of the package or its elements may also be toggled on or off.



Select Items

Choose selection method:


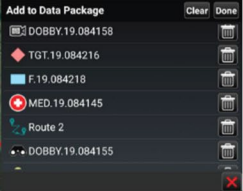
Select the [+] icon in the Data Package Tool to create a new Data Package. Choose the selection method; Map Select, File Select or Overlays to add items to the Data Package. The Map Select option allows the user to select one or more items on the map to be included in the Data Package. The File Select option allows the user to navigate the file browser and select one or more files to be included in the Data Package.

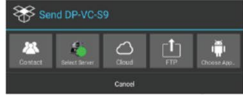
The Overlays option allows the user to select categories or individual items from the Overlay Manager to be included in the Data Package.

Select [Done] when finished, then choose to either create a new Data Package or add the items to an existing Data Package.

When the user adds to a Data Package, a red asterisk will appear on the Data Package name to indicate that the user should save the Data Package. Select the [Save] icon to save the changes. The number under the package name indicates the number of items in the Data Package. Select the name of the Data Package to view the included items. Toggle the visibility radio button to control data package content visibility on the map interface.

When done with modifications, select the [Send] icon to open a list of options for sending the Data Package including TAK Contact, TAK Server, OwnCloud, FTP or another application. If the package size is larger the value set in preferences, the size shown in the package list will be changed to red and will not be allowed to be sent.



When sending to a TAK Contact, the user may either Select All, Show All or toggle recipients by selecting or de-selecting their corresponding checkboxes. When the [Delete] icon is selected, the user will be prompted to remove or leave the contents of the Data Package on the map interface.

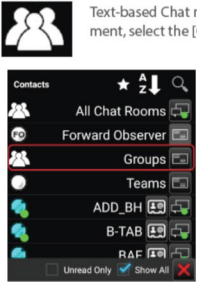
18

¹⁸ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

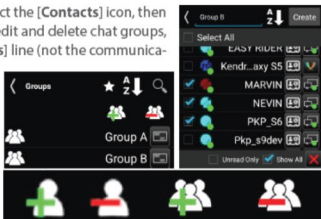
Unclassified

GeoChat Group Management

Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.



GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging

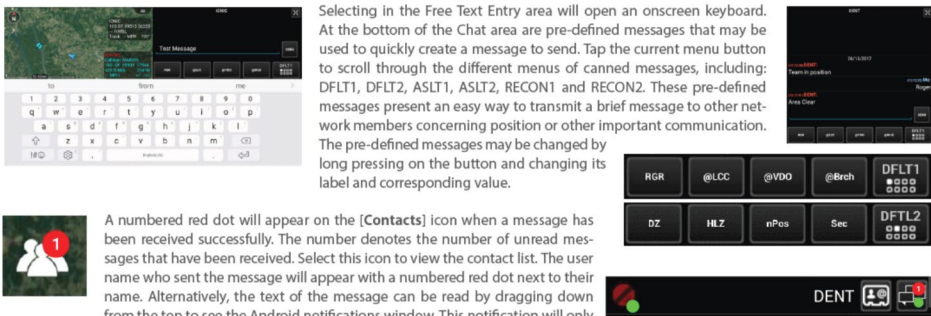
Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent-group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.

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Unclassified

GeoChat Messaging (continued)



Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.

A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.

20

¹⁹ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

²⁰ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

50. Upon information and belief, this location information is presented on interactive displays on the exemplary Accused Products which include interactive maps and a plurality of user selectable symbols corresponding to other devices. These symbols are positioned on the map at positions corresponding to the locations of the other devices, as depicted below:


Unclassified

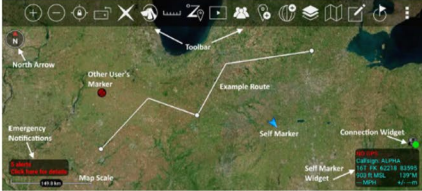
ATAK Civilian Overview

The Civilian Team Awareness Kit for Android (ATAK Civilian) is a Government-off-the-Shelf (GOTS) software application and mapping framework for mobile devices. ATAK Civilian has been designed and developed to run on Android smart devices used in a first responder environment. The ATAK Civilian software application is an extensible moving map display that integrates imagery, map and overlay information to provide enhanced collaboration and Situational Awareness (SA) over a tactical meshed network. ATAK Civilian promotes information flow and communications from the field environment to command enterprise locations.

The first time ATAK Civilian is opened, or after a Clear Content, a passphrase is auto-generated to activate data encryption. The user can supply their own passphrase by using Settings > Show All Preferences > Device Preferences > Change Encryption Passphrase. Following this step, ATAK Civilian's End User License Agreement (EULA) must be accepted. Next, the user will be prompted to change their callsign and/or import preferences or data from a Mission Package. All changes/imports can always be updated later. Finally, the user can place their self-marker by following the instructions located in the lower right corner.

The toolbar runs along the top of the map display. The features whose icons form the center portion of the toolbar are discussed in individual sections of this guide. The three dots at the right of the toolbar provide additional menu items that appear in a drop-down menu. A Long Press on the map will toggle the toolbar between hidden and visible.

 The North Arrow appears in the upper left and is used to control map orientation. It has two primary modes: North Up/Track Up (default) and Manual Map Rotation/Lock. While in North Up/Track Up Mode, single press on the [North Arrow] icon to cycle between the North Up and Track Up map orientation. Long press the [North Arrow] to call out the additional controls menu where the Manual Rotation/Lock and 3D features are available. Select the [Rotation] button to enter Manual Map Rotation/Lock Mode. When in Manual Map Rotation/Lock Mode, rotate the map orientation by pressing on the map with two fingers and pivoting them in the desired direction. Single press on the [North Arrow] to lock the screen orientation, signified by the appearance of the lock icon, and again to unlock the orientation for further adjustment. 3D controls are discussed in a separate section.

 The screenshot shows the ATAK Civilian map interface. It features a top toolbar with various icons for navigation and map control. The map itself displays a satellite-style terrain with several markers: a red dot for 'Other User's Marker', a blue dot for 'Self Marker', and a white line for 'Example Route'. Other UI elements include 'Emergency Notifications' in the bottom left, 'Map Scale' at the bottom center, and a 'Connection Widget' in the bottom right showing network status.

Select the [Magnifier] buttons to zoom in or out on the map. The map can also be zoomed by using two fingers on the screen to pinch and spread the map. Select the [Back] button to center the screen on the Self Marker or the [Padlock] icon to lock the center of the screen to the Self Marker. Select the [Orientation] icon to toggle the screen position between portrait and landscape.

The optional connection widget indicates whether or not the user is connected to a TAK Server. This has a corresponding Android notification that provides the same information. Toggle this display on at Settings > Network Connections > Network Connections > Display Connection Widget.

Alerts and notifications are displayed in the lower left of the map interface.

The Map Scale displays a 1 inch to X mi/km reference on the map. The scale adjusts with the map when zoomed in and out. Hint windows are available to alert users to changes or make suggestions about the use of tools the first time they are opened.


5

21

²¹ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

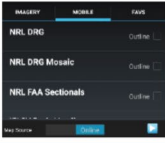
Unclassified

Maps & Favorites



Select the [Maps & Favorites] icon to list the imagery loaded in the application.

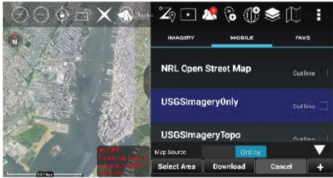
The following categories are shown: Imagery/Maps, Mobile and Favorites (FAVS). Select [Online/Local] on the Mobile tab to toggle between using an online map source or locally stored map layers over a desired area. Select the [FAVS] tab to review a previously saved view or to add the current view.




Saving a Map Layer

To save a local copy of a map layer, choose the **MOBILE** tab and toggle to [Online]. Select the right arrow to expand the Map Source option, then tap [Select Area] to define a region of interest. A prompt will appear presenting three options for map area selection: Rectangle, Free Form or Map Select. The Rectangle option uses the top left and lower right corners to denote the area to be downloaded. The Free Form option allows the user to create a custom area to be downloaded by tapping different points on the map until the shape is complete or the end button is selected. Map Select allows the user to choose an already existing shape as the area intended to be downloaded. Drag the map source slider end points to select the resolution for the tileset. The number of tiles to be downloaded will be indicated. Select the [Download] button to begin the download process.

The user can choose to create a new tileset or add to an existing one. Enter the name to be applied to the selected layers and select [OK]. A status indicator will appear to show the download progress. Cancel a download-in-process by clicking the [Cancel] button. The user can toggle between Online and Local map layers. When [Local] is selected, a listing of the downloaded Imagery layers in the current map interface appears. The local layers are listed in order beginning with the area closest to the map center. Select the [Outline] checkbox to toggle the outline around layers on or off. When the user selects a layer from the list, map source data corresponding to that downloaded layer will be used as the source for map data.



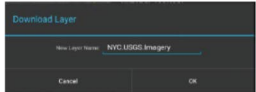


22

²² <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

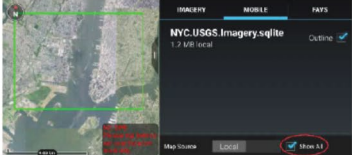
Unclassified

Saving a Map Layer (continued)



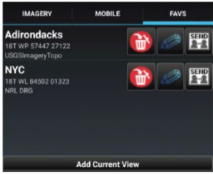
Imagery can be imported via the Import Manager tool or placed directly into the atak folder structure for use by the application. For instructions on which subfolder a specific file type should be placed, refer to Settings > Support > ATAK Dataset Instructions. All imported imagery will show up in the IMAGERY tab and function the same as the MOBILE tab.

If [Show All] is checked, all the layers are shown. Otherwise, only layers that are visible in the current map screen will be displayed. Imagery based map products (e.g., MrSID, GeoTIFF, NITF) that are placed in the atak/Imagery folder will appear under the IMAGERY tab when ATAK is restarted. The list of supported products are listed in Settings > Support > ATAK Dataset Instructions.



Bookmarking a Location

To save the current view and displayed imagery, select the [FAVS] tab and tap [Add Current View]. The user will be prompted to name the view, which will be saved along with its coordinates and the map source that was used. Selecting a view in the FAVS listing will pan the map to that location and transition the map source to match the one used in the saved view. The Favorite view can be sent to other TAK users.

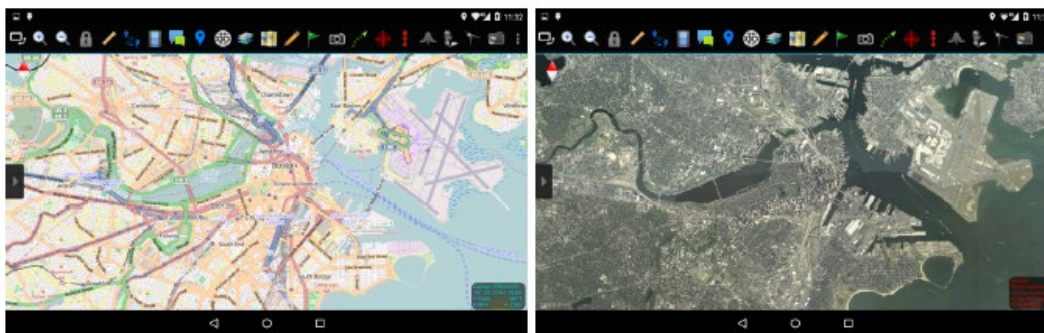


WFS Support (Web Feature Service)

WFS Imagery is supported and can be ingested in several different ways. If the user has an existing WFS xml configuration file it can be imported through the Import Manager. The file can also be manually placed into the atak/WFS directory.

WFS Imagery can also be added by selecting the right arrow to expand the Map Source option, selecting the [+] and then entering a WFS Imagery Service URL. After querying the service, the user will then be presented with a list of available Imagery sets. The user can select which services to import, then select [OK].

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(a) Vector map (© OpenStreetMap contributors) (b) Imagery map

Figure 1: Example map types loaded in ATAK

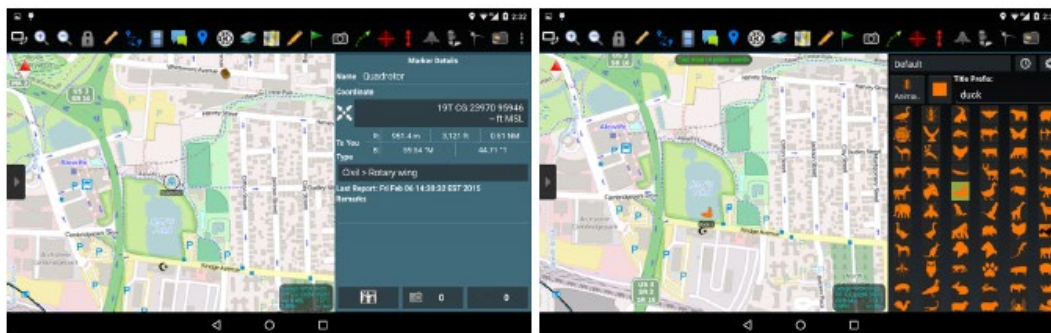
24

51. Upon information and belief, the exemplary Accused Products are programmed to permit users to request and display additional maps by, for example, moving the map screen and/or by selecting satellite image maps. The exemplary Accused Products are further programmed to permit interaction with the display where a user may select one or more symbols and where the

²³ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

²⁴ <https://apps.dtic.mil/sti/tr/pdf/ADA617401.pdf>

exemplary Accused Products further permit data to be sent to other devices based on that interaction.



(a) Drop Point Tool

(b) Custom Icons

Figure 4: Point/Icon Placement Tools

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52. AGIS Software has suffered damages as a result of Defendant's direct and indirect infringement of the '251 Patent in an amount to be proved at trial.

53. AGIS Software has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '251 Patent for which there is no adequate remedy at law unless Defendant's infringement is enjoined by this Court.

COUNT IV **(Infringement of the '838 Patent)**

54. Paragraphs 1 through 20 are incorporated herein by reference as if fully set forth in their entireties.

55. AGIS Software has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, distribute, export from, or import any products that embody the inventions of the '838 Patent.

56. Defendant has and continues to directly infringe at least claim 54 of the '838 Patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale,

²⁵ <https://apps.dtic.mil/sti/tr/pdf/ADA617401.pdf>

distributing, exporting from, and/or importing into the United States the Accused Products without authority and in violation of 35 U.S.C. § 271(a).

57. Defendant has and continues to directly infringe at least claim 54 of the '838 Patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products without authority and in violation of 35 U.S.C. § 271(a).

58. Defendant has and continues to indirectly infringe at least claim 54 of the '838 Patent by actively, knowingly, and intentionally inducing others to directly infringe, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products and by instructing users of the Accused Products to perform methods claimed in the '838 Patent. For example, Defendant, with knowledge that the Accused Products infringe the '838 Patent at least as of the date of this Complaint, actively, knowingly, and intentionally induced, and continues to actively, knowingly, and intentionally induce direct infringement of the '838 Patent.





















59. For example, Defendant has indirectly infringed and continues to indirectly infringe at least claim 54 of the '838 Patent in the United States because Defendant's customers use the Accused Products, including at least the Accused Products Application and/or services, alone or in conjunction with additional Accused Products, in accordance with Defendant's instructions and thereby directly infringe at least one claim of the '838 Patent in violation of 35 U.S.C. § 271. Defendant directly and/or indirectly intentionally instructs its customers to infringe through training videos, demonstrations, brochures, installations and/or user guides, such as those located at one or more of the following: <https://www.civtak.org/atak-about/>; <https://www.civtak.org/documentation/>; https://wiki.civtak.org/index.php?title=ATAK_Manual;

https://www.pargovernment.com/tactical-sa/docs/S20_brochure.pdf;
<https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>;
<https://www.boozallen.com/expertise/products/tactical-situational-awareness-kits.html>;
<https://www.boozallen.com/expertise/products/gv-solutions-full-motion-video-tools.html>;
<https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>;
<https://www.boozallen.com/expertise/products/edgeaware.html>;
<https://www.boozallen.com/expertise/products/sitx-situational-awareness-in-real-time.html>;
<https://blog.pargovernment.com/interoperability>; <https://blog.pargovernment.com/all-about-gv>;
<https://blog.pargovernment.com/sitxguideteams>; <https://blog.pargovernment.com/all-about-sitx>;
<https://blog.pargovernment.com/how-crisis-response-software-enhances-situational-awareness>;
<https://blog.pargovernment.com/the-right-public-safety-software>;
<https://blog.pargovernment.com/using-first-responder-app>; <https://blog.pargovernment.com/all-about-sitx>; https://blog.pargovernment.com/simplifying_situational_awareness; and Defendant's agents and representatives located within this Judicial District. Defendant is thereby liable for infringement of the '838 Patent under 35 U.S.C. § 271(b).

60. For example, Defendant's Accused Products allow users to share their locations and view other users' locations on a map and to communicate with those users via the Accused Products.

AFRL

Core ATAK Capabilities

Map	Team	Mission
 Go-To Coordinates	 Chat	 GRG Builder
 Layout Manager	 Drawing Tools	 CASEVAC
 Maps & Imagery	 Emergency Alerts	 Elevation Tools
 Map Markers	 Geofencing	 Pointer Tools
 Overlays	 Data Package	 Survey Kit
 Range & Bearing	 Radio Controls	 Navigation
 Route Planning	 Video	 Track History


THE AIR FORCE RESEARCH LABORATORY

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²⁶ https://drive.google.com/file/d/1h8WjJFnY5jqMGDgzXjpJnLHEEnbr4_TE/view

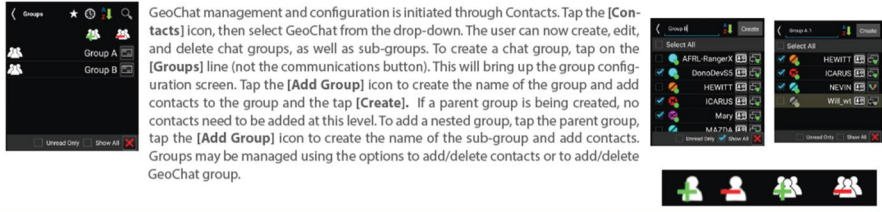
Unclassified

Geo Chat

 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat management and configuration, tap the [Contacts] icon and select GeoChat from the drop down menu.

Management and Configuration

GeoChat management and configuration is initiated through Contacts. Tap the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit, and delete chat groups, as well as sub-groups. To create a chat group, tap on the [Groups] line (not the communications button). This will bring up the group configuration screen. Tap the [Add Group] icon to create the name of the group and add contacts to the group and the tap [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, tap the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



Messaging


Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication Button] icon. Tap on [All Chat Rooms] to view all messages from or send messages to those present on the network. Tap [All Streaming] to view all messages from or send messages to those present on the server. Other groupings available for viewing or sending messages are: Groups, HQ, Team Lead, and Teams. If your current role is HQ or Team Lead you can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms] or [All Streaming]. When a sub-team is chosen, messages can only be sent to your active (My Team) team color.

When a parent group is chosen, messages are sent to all members of the parent group as well as all of the sub-groups. When a sub-group is chosen, message are sent only to members of the sub-group.

27

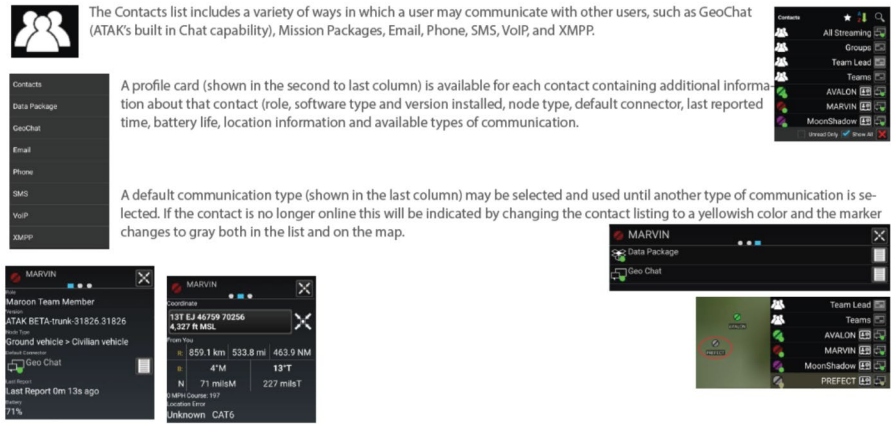
Unclassified

Contacts

 The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.

A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).

A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.



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²⁷ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

²⁸ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

61. For example, the exemplary Accused Products allow users to establish groups and to exchange messages via interaction with servers which provide the Accused Products, among other relevant services. The exemplary Accused Products further allow users to retrieve map information from multiple sources, including street-view maps.

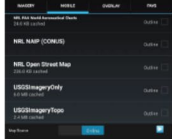
Unclassified

Map Manager



Tap on the [Map Manager] icon to list the imagery loaded in the CIV-TAK application.

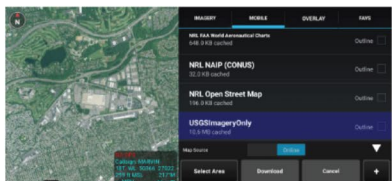
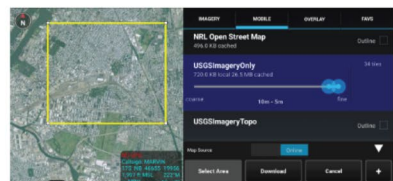
The following categories are shown: **Imagery/Maps, Mobile, Overlay, Favorites (FAVS)**. Select [Online/ Local] on the Mobile tab to toggle between downloading or using locally stored map layers over a desired area. Additionally, the user may tap the [Overlay] button to display a list of available Overlay files. Tap on the [FAVS] button to add a current view to favorites or to switch to an existing view.



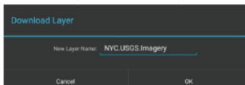
Saving a Map Layer

Expand the [Map Source] option by selecting the arrow and tap [Select Area] to define a region of interest. Tap the top left and lower right corners to select the area to be saved.

A box will appear to visually display the selected layers. Drag the slider end points to select the resolution of the tileset. The number of tiles to be downloaded will be indicated. Select the [Download] button to begin the download process.

The user can choose to create a new tileset or add to an existing one. Enter the name to be applied to the selected layers and tap [OK]. A status indicator will appear to show the download progress.




29

62. The exemplary Accused Products are programmed to receive messages from other devices where those messages relate to joining groups, as depicted below:

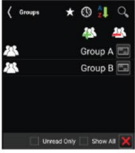
²⁹ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

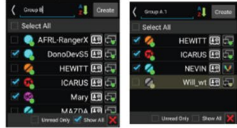
Unclassified

Geo Chat


 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat management and configuration, tap the [Contacts] icon and select GeoChat from the drop down menu.

Management and Configuration


 GeoChat management and configuration is initiated through Contacts. Tap the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit, and delete chat groups, as well as sub-groups. To create a chat group, tap on the [Groups] line (not the communications button). This will bring up the group configuration screen. Tap the [Add Group] icon to create the name of the group and add contacts to the group and the tap [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, tap the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



Messaging

 Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication Button] icon. Tap on [All Chat Rooms] to view all messages from or send messages to those present on the network. Tap [All Streaming] to view all messages from or send messages to those present on the server. Other groupings available for viewing or sending messages are: Groups, HQ, Team Lead, and Teams. If your current role is HQ or Team Lead you can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms] or [All Streaming]. When a sub-team is chosen, messages can only be sent to your active (My Team) team color.


When a parent group is chosen, messages are sent to all members of the parent group as well as all of the sub-groups. When a sub-group is chosen, message are sent only to members of the sub-group.

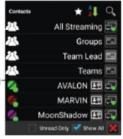



30



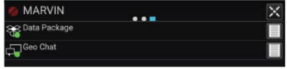

Unclassified

Contacts

 The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.

 A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).

 A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.

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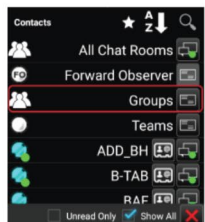
³⁰ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

³¹ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

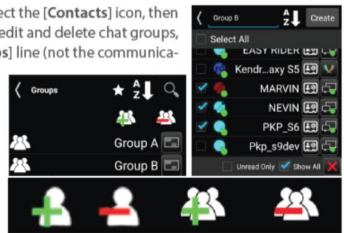
Unclassified

GeoChat Group Management

Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.



GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging

Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

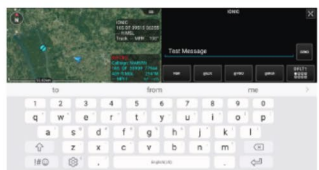

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.

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Unclassified

GeoChat Messaging (continued)

Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.

A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.


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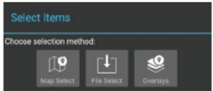
³² <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>
³³ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

63. The exemplary Accused Products are further programmed to facilitate participation in the group by communicating with a server and sending to and receiving location information, as depicted below:

Unclassified

Data Package Tool

 Select the [Data Package Tool] icon to display any data packages that have been stored. New Data Packages may be built and sent to other network members. Data Packages may also be deleted. When preparing for an operation, a team leader may prepare a route, place markers, shapes and imagery that pertain to operation objectives. Any or all of these can be included into a data package and sent it to each person on the team. This allows everyone on the team to have the same information. In addition to Map Items (with or without attachments), external files (from the SD card) may be included in a package and map item attachments may optionally be included. The visibility of the package or its elements may also be toggled on or off.

 Select the [+] icon in the Data Package Tool to create a new Data Package. Choose the selection method; Map Select, File Select or Overlays to add items to the Data Package. The Map Select option allows the user to select one or more items on the map to be included in the Data Package. The File Select option allows the user to navigate the file browser and select one or more files to be included in the Data Package.

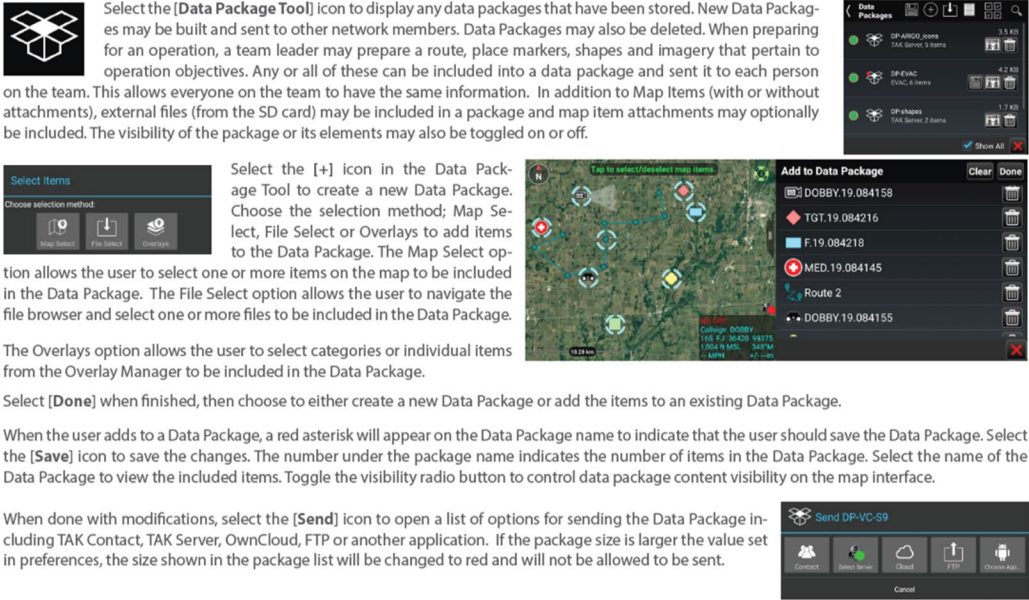
The Overlays option allows the user to select categories or individual items from the Overlay Manager to be included in the Data Package.

Select [Done] when finished, then choose to either create a new Data Package or add the items to an existing Data Package.

When the user adds to a Data Package, a red asterisk will appear on the Data Package name to indicate that the user should save the Data Package. Select the [Save] icon to save the changes. The number under the package name indicates the number of items in the Data Package. Select the name of the Data Package to view the included items. Toggle the visibility radio button to control data package content visibility on the map interface.

When done with modifications, select the [Send] icon to open a list of options for sending the Data Package including TAK Contact, TAK Server, OwnCloud, FTP or another application. If the package size is larger the value set in preferences, the size shown in the package list will be changed to red and will not be allowed to be sent.

When sending to a TAK Contact, the user may either Select All, Show All or toggle recipients by selecting or de-selecting their corresponding checkboxes. When the [Delete] icon is selected, the user will be prompted to remove or leave the contents of the Data Package on the map interface.




The screenshot displays the Data Package Tool interface. At the top, there's a 'Data Packages' list with items like 'GP-ARIGI_icons', 'GP-ARIGI_TAK Server, 5 Items', 'GP-EMAC', 'GP-EMAC_EVAC, 6 Items', and 'GP-Shapes'. Below this is a 'Select Items' menu with options for 'Map Select', 'File Select', and 'Overlays'. A central map shows a terrain with various markers and a route. To the right of the map is an 'Add to Data Package' panel with a list of items including 'DOBBY.19.084158', 'TGT.19.084216', 'F.19.084218', 'MED.19.084145', 'Route 2', and 'DOBBY.19.084155'. At the bottom right, there's a 'Send DP-VC-S9' dialog with options for 'Contact', 'TAK Server', 'OwnCloud', 'FTP', and 'Other App'.

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³⁴ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

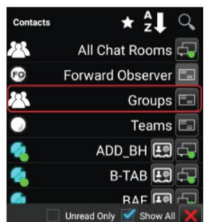
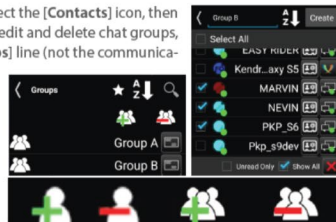
Unclassified

GeoChat Group Management

 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.

GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.

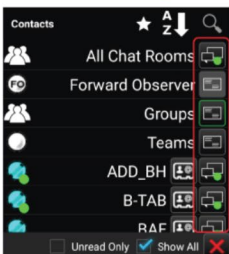
To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging

Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent-group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.






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Unclassified

GeoChat Messaging (continued)

Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.

A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.

36

³⁵ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

³⁶ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

64. This location information is presented on interactive displays on the exemplary Accused Products which include interactive maps and a plurality of user selectable symbols corresponding to other devices. These symbols are positioned on the map at positions corresponding to the locations of the other devices, as depicted below:

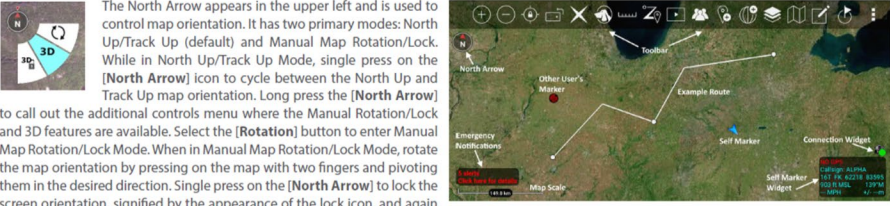
Unclassified

ATAK Civilian Overview

The Civilian Team Awareness Kit for Android (ATAK Civilian) is a Government-off-the-Shelf (GOTS) software application and mapping framework for mobile devices. ATAK Civilian has been designed and developed to run on Android smart devices used in a first responder environment. The ATAK Civilian software application is an extensible moving map display that integrates imagery, map and overlay information to provide enhanced collaboration and Situational Awareness (SA) over a tactical meshed network. ATAK Civilian promotes information flow and communications from the field environment to command enterprise locations.

The first time ATAK Civilian is opened, or after a Clear Content, a passphrase is auto-generated to activate data encryption. The user can supply their own passphrase by using Settings > Show All Preferences > Device Preferences > Change Encryption Passphrase. Following this step, ATAK Civilian's End User License Agreement (EULA) must be accepted. Next, the user will be prompted to change their call sign and/or import preferences or data from a Mission Package. All changes/imports can always be updated later. Finally, the user can place their self-marker by following the instructions located in the lower right corner.

The toolbar runs along the top of the map display. The features whose icons form the center portion of the toolbar are discussed in individual sections of this guide. The three dots at the right of the toolbar provide additional menu items that appear in a drop-down menu. A Long Press on the map will toggle the toolbar between hidden and visible.



The North Arrow appears in the upper left and is used to control map orientation. It has two primary modes: North Up/Track Up (default) and Manual Map Rotation/Lock. While in North Up/Track Up Mode, single press on the [North Arrow] icon to cycle between the North Up and Track Up map orientation. Long press the [North Arrow] to call out the additional controls menu where the Manual Rotation/Lock and 3D features are available. Select the [Rotation] button to enter Manual Map Rotation/Lock Mode. When in Manual Map Rotation/Lock Mode, rotate the map orientation by pressing on the map with two fingers and pivoting them in the desired direction. Single press on the [North Arrow] to lock the screen orientation, signified by the appearance of the lock icon, and again to unlock the orientation for further adjustment. 3D controls are discussed in a separate section.

Select the [Magnifier] buttons to zoom in or out on the map. The map can also be zoomed by using two fingers on the screen to pinch and spread the map. Select the [Back] button to center the screen on the Self Marker or the [Padlock] icon to lock the center of the screen to the Self Marker. Select the [Orientation] icon to toggle the screen position between portrait and landscape.

The optional connection widget indicates whether or not the user is connected to a TAK Server. This has a corresponding Android notification that provides the same information. Toggle this display on at Settings > Network Connections > Network Connections > Display Connection Widget.

Alerts and notifications are displayed in the lower left of the map interface.

The Map Scale displays a 1 inch to X mi/km reference on the map. The scale adjusts with the map when zoomed in and out. Hint windows are available to alert users to changes or make suggestions about the use of tools the first time they are opened.

5

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³⁷ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

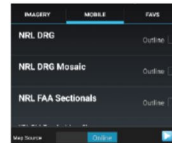
Unclassified

Maps & Favorites



Select the [Maps & Favorites] icon to list the imagery loaded in the application.

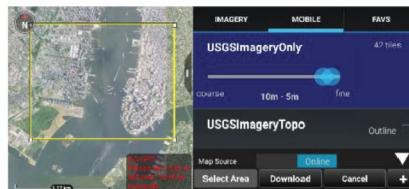
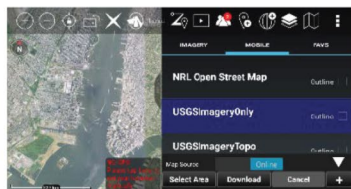
The following categories are shown: Imagery/Maps, Mobile and Favorites (FAVS). Select [Online/Local] on the Mobile tab to toggle between using an online map source or locally stored map layers over a desired area. Select the [FAVS] tab to review a previously saved view or to add the current view.



Saving a Map Layer

To save a local copy of a map layer, choose the **MOBILE** tab and toggle to [Online]. Select the right arrow to expand the Map Source option, then tap [Select Area] to define a region of interest. A prompt will appear presenting three options for map area selection: Rectangle, Free Form or Map Select. The Rectangle option uses the top left and lower right corners to denote the area to be downloaded. The Free Form option allows the user to create a custom area to be downloaded by tapping different points on the map until the shape is complete or the end button is selected. Map Select allows the user to choose an already existing shape as the area intended to be downloaded. Drag the map source slider end points to select the resolution for the tileset. The number of tiles to be downloaded will be indicated. Select the [Download] button to begin the download process.

The user can choose to create a new tileset or add to an existing one. Enter the name to be applied to the selected layers and select [OK]. A status indicator will appear to show the download progress. Cancel a download-in-process by clicking the [Cancel] button. The user can toggle between Online and Local map layers. When [Local] is selected, a listing of the downloaded Imagery layers in the current map interface appears. The local layers are listed in order beginning with the area closest to the map center. Select the [Outline] checkbox to toggle the outline around layers on or off. When the user selects a layer from the list, map source data corresponding to that downloaded layer will be used as the source for map data.




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³⁸ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>


Unclassified

Saving a Map Layer (continued)



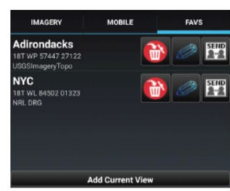
Imagery can be imported via the Import Manager tool or placed directly into the atak folder structure for use by the application. For instructions on which subfolder a specific file type should be placed, refer to Settings > Support > ATAK Dataset Instructions. All imported imagery will show up in the IMAGERY tab and function the same as the MOBILE tab.

If **[Show All]** is checked, all the layers are shown. Otherwise, only layers that are visible in the current map screen will be displayed. Imagery based map products (e.g., MrSID, GeoTIFF, NITF) that are placed in the atak/Imagery folder will appear under the IMAGERY tab when ATAK is restarted. The list of supported products are listed in Settings > Support > ATAK Dataset Instructions.



Bookmarking a Location

To save the current view and displayed imagery, select the **[FAVS]** tab and tap **[Add Current View]**. The user will be prompted to name the view, which will be saved along with its coordinates and the map source that was used. Selecting a view in the **FAVS** listing will pan the map to that location and transition the map source to match the one used in the saved view. The Favorite view can be sent to other TAK users.

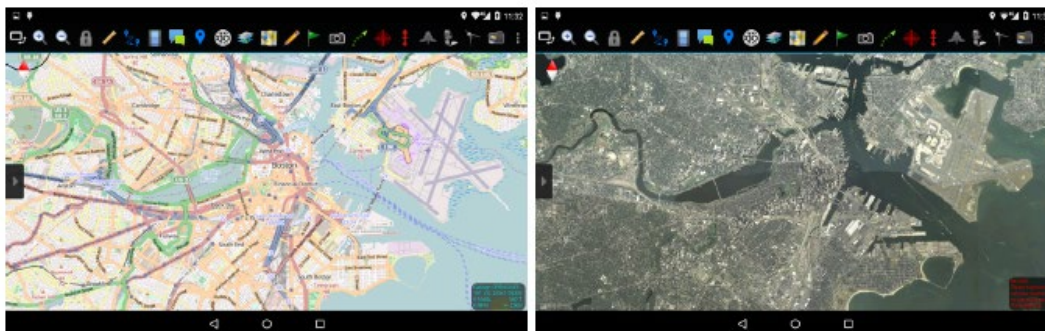


WFS Support (Web Feature Service)

WFS imagery is supported and can be ingested in several different ways. If the user has an existing WFS xml configuration file it can be imported through the Import Manager. The file can also be manually placed into the atak/WFS directory.

WFS Imagery can also be added by selecting the right arrow to expand the Map Source option, selecting the **[+]** and then entering a WFS Imagery Service URL. After querying the service, the user will then be presented with a list of available Imagery sets. The user can select which services to import, then select **[OK]**.

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(a) Vector map (© OpenStreetMap contributors) (b) Imagery map

Figure 1: Example map types loaded in ATAK

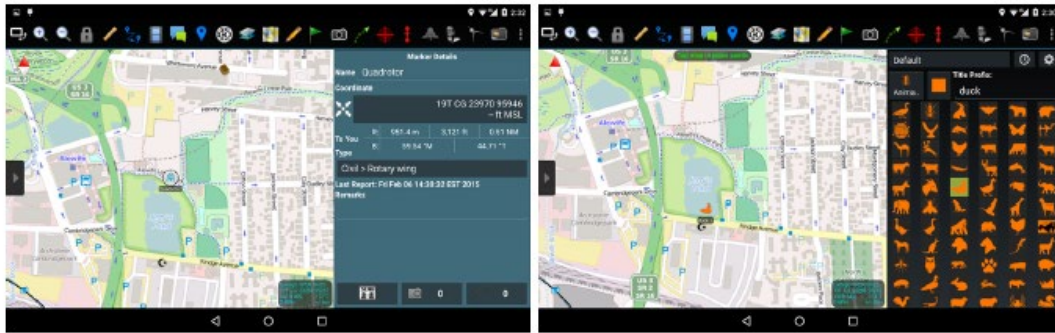
40

65. The exemplary Accused Products are programmed to permit users to request and display additional maps by, for example, moving the map screen and/or by selecting satellite image maps. The exemplary Accused Products are further programmed to permit interaction with the

³⁹ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

⁴⁰ <https://apps.dtic.mil/sti/tr/pdf/ADA617401.pdf>

display where a user may select one or more symbols and where the exemplary Accused Products further permit data to be sent to other devices based on that interaction.



(a) Drop Point Tool (b) Custom Icons
Figure 4: Point/Icon Placement Tools

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66. AGIS Software has suffered damages as a result of Defendant’s direct and indirect infringement of the ’838 Patent in an amount to be proved at trial.

67. AGIS Software has suffered, and will continue to suffer, irreparable harm as a result of Defendant’s infringement of the ’838 Patent for which there is no adequate remedy at law unless Defendant’s infringement is enjoined by this Court.

COUNT V
(Infringement of the ’123 Patent)

68. Paragraphs 1 through 20 are incorporated herein by reference as if fully set forth in their entireties.

69. AGIS Software has not licensed or otherwise authorized Defendant to use or manufacture any products that embody the inventions of the ’123 Patent.

70. Defendant has and continues to directly infringe at least claim 23 of the ’123 Patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale,

distributing, exporting from, and/or importing into the United States the Accused Products without authority and in violation of 35 U.S.C. § 271(a).

71. Defendant has and continues to indirectly infringe at least claim 23 of the '123 Patent by actively, knowingly, and intentionally inducing others to directly infringe, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products and by instructing users of the Accused Products to perform methods claimed in the '123 Patent. For example, Defendant, with knowledge that the Accused Products infringe the '123 Patent at least as of the date of this Complaint, actively, knowingly, and intentionally induced, and continues to knowingly and intentionally induce direct infringement of the '123 Patent in violation of 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '123 Patent but remained willfully blind to the infringing nature of others' actions.

72. For example, Defendant has indirectly infringed and continues to indirectly infringe at least claim 23 of the '123 Patent in the United States because Defendant's customers use the Accused Products, including at least the Accused Products of applications, products, and/or services, alone or in conjunction with additional Accused Products, in accordance with Defendant's instructions and thereby infringe at least claim 23 of the '123 Patent in violation of 35 U.S.C. § 271. Defendant directly and/or indirectly intentionally instructs its customers to infringe through training videos, demonstrations, brochures, installations and/or user guides, such as those located at one or more of the following: <https://www.civtak.org/atak-about/>; <https://www.civtak.org/documentation/>; https://wiki.civtak.org/index.php?title=ATAK_Manual; https://www.pargovernment.com/tactical-sa/docs/S20_brochure.pdf; <https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>;

<https://www.boozallen.com/expertise/products/tactical-situational-awareness-kits.html>;
<https://www.boozallen.com/expertise/products/gv-solutions-full-motion-video-tools.html>;
<https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>;
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<https://blog.pargovernment.com/how-crisis-response-software-enhances-situational-awareness>;
<https://blog.pargovernment.com/the-right-public-safety-software>;
<https://blog.pargovernment.com/using-first-responder-app>; <https://blog.pargovernment.com/all-about-sitx>; https://blog.pargovernment.com/simplifying_situational_awareness; and Defendant's agents and representatives located within this Judicial District. Defendant is thereby liable for infringement of the '123 Patent under 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '123 Patent but remained willfully blind to the infringing nature of others' actions.





















73. Upon information and belief, Defendant infringes by using and/or manufacturing a system comprising: a first device programmed to perform operations comprising: receiving a message sent by a second device, wherein the message relates to joining a group; based on receipt of the message sent by the second device, sending first location information to a first server and receiving second location information from the first server, the first location information comprising a location of the first device, the second location information comprising one or more locations of one or more respective second devices included in the group; sending, from the first device to a second server, a request for georeferenced map data; receiving, from the second server,

the georeferenced map data; presenting, via an interactive display of the first device, a georeferenced map and one or more user-selectable symbols corresponding to one or more of the second devices, wherein the symbols are positioned on the georeferenced map at respective positions corresponding to the locations of the second devices represented by the symbols, and wherein the georeferenced map data relate positions on the georeferenced map to spatial coordinates; and identifying user interaction with the interactive display selecting a particular user-selectable symbol corresponding to a particular second device and user interaction with the display specifying an action and, based thereon, using an Internet Protocol to send data to the particular second device, wherein identifying the user interaction selecting the particular user-selectable symbol comprises: detecting user selection of a portion of the interactive display corresponding to a position on the georeferenced map, and identifying the particular user-selectable symbol based, at least in part, on coordinates of the selected position, comprising: searching a set of symbols for a symbol located nearest to the coordinates of the selected position, wherein the set of symbols includes the user-selectable symbols corresponding to the second devices in the group, and wherein data associated with the set of symbols include coordinates of portions of the display corresponding to the symbols in the set, and based on a result of searching the set of symbols, identifying the particular user-selectable symbol as the symbol located nearest to the coordinates of the selected position, wherein the particular user-selectable symbol corresponds to the particular second device. For example, the Accused Products include features, as shown below.

74. For example, Defendant's Accused Products allow users to share their locations and view others' locations on a map and to communicate with those users via the Accused Products.

AFRL

Core ATAK Capabilities

Map	Team	Mission
 Go-To Coordinates	 Chat	 GRG Builder
 Layout Manager	 Drawing Tools	 CASEVAC
 Maps & Imagery	 Emergency Alerts	 Elevation Tools
 Map Markers	 Geofencing	 Pointer Tools
 Overlays	 Data Package	 Survey Kit
 Range & Bearing	 Radio Controls	 Navigation
 Route Planning	 Video	 Track History


THE AIR FORCE RESEARCH LABORATORY

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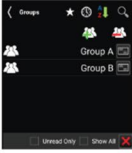
⁴² https://drive.google.com/file/d/1h8WjJFnY5jqMGDgzXjpJnLHEEnbr4_TE/view

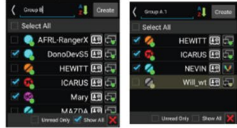
Unclassified

Geo Chat


 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat management and configuration, tap the [Contacts] icon and select GeoChat from the drop down menu.

Management and Configuration


 GeoChat management and configuration is initiated through Contacts. Tap the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit, and delete chat groups, as well as sub-groups. To create a chat group, tap on the [Groups] line (not the communications button). This will bring up the group configuration screen. Tap the [Add Group] icon to create the name of the group and add contacts to the group and the tap [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, tap the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



Messaging

 Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication Button] icon. Tap on [All Chat Rooms] to view all messages from or send messages to those present on the network. Tap [All Streaming] to view all messages from or send messages to those present on the server. Other groupings available for viewing or sending messages are: Groups, HQ, Team Lead, and Teams. If your current role is HQ or Team Lead you can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms] or [All Streaming]. When a sub-team is chosen, messages can only be sent to your active (My Team) team color.


When a parent group is chosen, messages are sent to all members of the parent group as well as all of the sub-groups. When a sub-group is chosen, message are sent only to members of the sub-group.

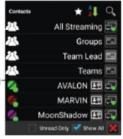



43

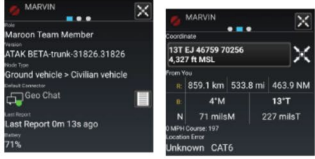
Unclassified

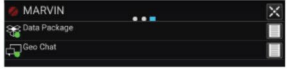
Contacts


 The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.

 A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).

 A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.







44


⁴³ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

⁴⁴ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

75. Additionally, the exemplary Accused Products allow users to establish groups and to exchange messages via interaction with servers which provide the Accused Products services, among other relevant services.

Unclassified

GeoChat Group Management

 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.

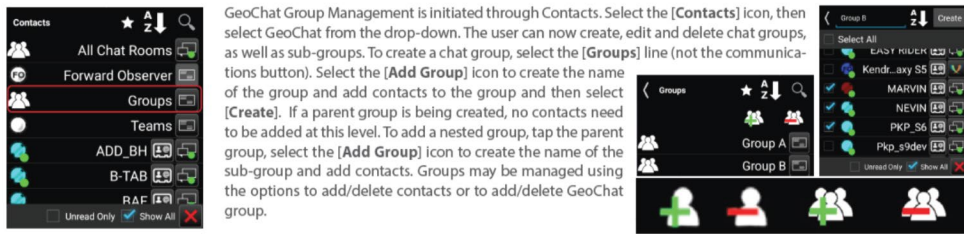
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To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging

Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.




45


⁴⁵ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

Unclassified



GeoChat Messaging (continued)



Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.



A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.





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76. The exemplary Accused Products are programmed to form and join groups by transmitting messages:


Unclassified

Geo Chat

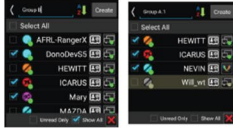


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47

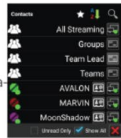
⁴⁶ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

⁴⁷ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfVf8M6j/view>

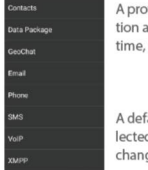
Unclassified

Contacts

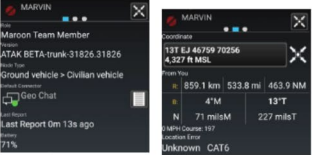
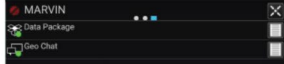

The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.



A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).



A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.

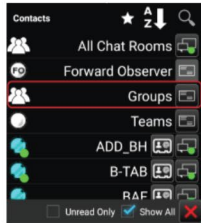




48

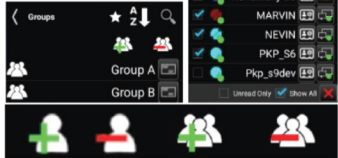
Unclassified

GeoChat Group Management

Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.



GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.

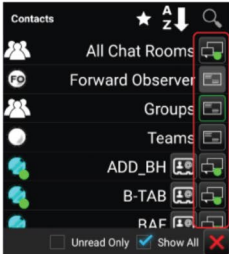


To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging

Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent-group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.




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⁴⁸ <https://drive.google.com/file/d/1vXKXsZ1KdrHIXhTf8zFVd3TxKfvf8M6j/view>




⁴⁹ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgvR/view>

Unclassified


GeoChat Messaging (continued)



Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.

A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.




50


77. The exemplary Accused Products are further programmed to facilitate participation in the groups by communicating with one or more servers and sending to and receiving location information, as depicted below:

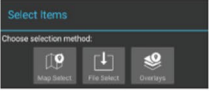
⁵⁰ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

Unclassified

Data Package Tool

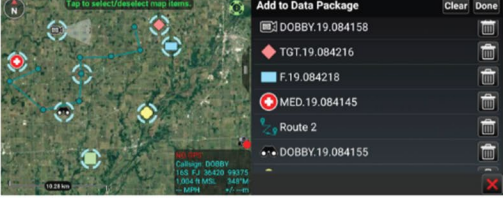
 Select the **[Data Package Tool]** icon to display any data packages that have been stored. New Data Packages may be built and sent to other network members. Data Packages may also be deleted. When preparing for an operation, a team leader may prepare a route, place markers, shapes and imagery that pertain to operation objectives. Any or all of these can be included into a data package and sent it to each person on the team. This allows everyone on the team to have the same information. In addition to Map Items (with or without attachments), external files (from the SD card) may be included in a package and map item attachments may optionally be included. The visibility of the package or its elements may also be toggled on or off.

 **Data Packages**
 DP-ARMS_icons TAK Server 3 Items 3.5 KB
 DP-EVAC Public 4 Items 4.2 KB
 DP-ARMS TAK Server 2 Items 1.7 KB
 Show All

 **Select items**
 Choose selection method:
 Map Select File Select Overlays

Select the **[+]** icon in the Data Package Tool to create a new Data Package. Choose the selection method; Map Select, File Select or Overlays to add items to the Data Package. The Map Select option allows the user to select one or more items on the map to be included in the Data Package. The File Select option allows the user to navigate the file browser and select one or more files to be included in the Data Package.


The Overlays option allows the user to select categories or individual items from the Overlay Manager to be included in the Data Package.

 **Add to Data Package** Clear Done
 DOBBY.19.084158
 TGT.19.084216
 F.19.084218
 MED.19.084145
 Route 2
 DOBBY.19.084155

Select **[Done]** when finished, then choose to either create a new Data Package or add the items to an existing Data Package.

When the user adds to a Data Package, a red asterisk will appear on the Data Package name to indicate that the user should save the Data Package. Select the **[Save]** icon to save the changes. The number under the package name indicates the number of items in the Data Package. Select the name of the Data Package to view the included items. Toggle the visibility radio button to control data package content visibility on the map interface.

When done with modifications, select the **[Send]** icon to open a list of options for sending the Data Package including TAK Contact, TAK Server, OwnCloud, FTP or another application. If the package size is larger the value set in preferences, the size shown in the package list will be changed to red and will not be allowed to be sent.

 **Send DP-VC-S9**
 Contact Send Server Cloud FTP Choose app
 Cancel

When sending to a TAK Contact, the user may either Select All, Show All or toggle recipients by selecting or de-selecting their corresponding checkboxes. When the **[Delete]** icon is selected, the user will be prompted to remove or leave the contents of the Data Package on the map interface.

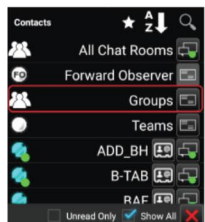
51

⁵¹ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvrK/view>

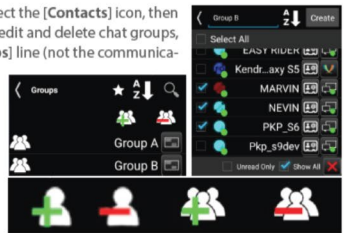
Unclassified

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GeoChat Messaging

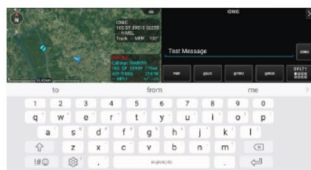
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When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.


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Unclassified


GeoChat Messaging (continued)



Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.



A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.



53

⁵² <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

⁵³ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

78. The location information is presented on interactive displays on the exemplary Accused Products which include interactive maps and a plurality of user selectable symbols corresponding to other devices. The symbols are positioned on the map at positions corresponding to the locations of the other devices, as depicted below:


Unclassified

ATAK Civilian Overview


The Civilian Team Awareness Kit for Android (ATAK Civilian) is a Government-off-the-Shelf (GOTS) software application and mapping framework for mobile devices. ATAK Civilian has been designed and developed to run on Android smart devices used in a first responder environment. The ATAK Civilian software application is an extensible moving map display that integrates imagery, map and overlay information to provide enhanced collaboration and Situational Awareness (SA) over a tactical meshed network. ATAK Civilian promotes information flow and communications from the field environment to command enterprise locations.

The first time ATAK Civilian is opened, or after a Clear Content, a passphrase is auto-generated to activate data encryption. The user can supply their own passphrase by using Settings > Show All Preferences > Device Preferences > Change Encryption Passphrase. Following this step, ATAK Civilian's End User License Agreement (EULA) must be accepted. Next, the user will be prompted to change their call sign and/or import preferences or data from a Mission Package. All changes/imports can always be updated later. Finally, the user can place their self-marker by following the instructions located in the lower right corner.

The toolbar runs along the top of the map display. The features whose icons form the center portion of the toolbar are discussed in individual sections of this guide. The three dots at the right of the toolbar provide additional menu items that appear in a drop-down menu. A Long Press on the map will toggle the toolbar between hidden and visible.



The North Arrow appears in the upper left and is used to control map orientation. It has two primary modes: North Up/Track Up (default) and Manual Map Rotation/Lock. While in North Up/Track Up Mode, single press on the [North Arrow] icon to cycle between the North Up and Track Up map orientation. Long press the [North Arrow] to call out the additional controls menu where the Manual Rotation/Lock and 3D features are available. Select the [Rotation] button to enter Manual Map Rotation/Lock Mode. When in Manual Map Rotation/Lock Mode, rotate the map orientation by pressing on the map with two fingers and pivoting them in the desired direction. Single press on the [North Arrow] to lock the screen orientation, signified by the appearance of the lock icon, and again to unlock the orientation for further adjustment. 3D controls are discussed in a separate section.



The screenshot shows the ATAK Civilian map interface. Key features labeled include: North Arrow (top left), Toolbar (top center), Other User's Marker (red dot), Example Route (white line), Self Marker (blue dot), Connection Widget (bottom right), Self Marker Widget (bottom right), Emergency Notifications (bottom left), and Map Scale (bottom left). The map shows a terrain view with various markers and overlays.

Select the [Magnifier] buttons to zoom in or out on the map. The map can also be zoomed by using two fingers on the screen to pinch and spread the map. Select the [Back] button to center the screen on the Self Marker or the [Padlock] icon to lock the center of the screen to the Self Marker. Select the [Orientation] icon to toggle the screen position between portrait and landscape.

The optional connection widget indicates whether or not the user is connected to a TAK Server. This has a corresponding Android notification that provides the same information. Toggle this display on at Settings > Network Connections > Network Connections > Display Connection Widget.

Alerts and notifications are displayed in the lower left of the map interface.

The Map Scale displays a 1 inch to X mi/km reference on the map. The scale adjusts with the map when zoomed in and out. Hint windows are available to alert users to changes or make suggestions about the use of tools the first time they are opened.

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⁵⁴ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

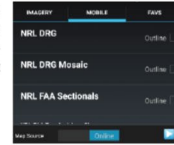
Unclassified

Maps & Favorites



Select the [Maps & Favorites] icon to list the imagery loaded in the application.

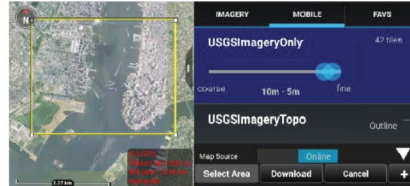
The following categories are shown: Imagery/Maps, Mobile and Favorites (FAVS). Select [Online/Local] on the Mobile tab to toggle between using an online map source or locally stored map layers over a desired area. Select the [FAVS] tab to review a previously saved view or to add the current view.



Saving a Map Layer

To save a local copy of a map layer, choose the **MOBILE** tab and toggle to [Online]. Select the right arrow to expand the Map Source option, then tap [Select Area] to define a region of interest. A prompt will appear presenting three options for map area selection: Rectangle, Free Form or Map Select. The Rectangle option uses the top left and lower right corners to denote the area to be downloaded. The Free Form option allows the user to create a custom area to be downloaded by tapping different points on the map until the shape is complete or the end button is selected. Map Select allows the user to choose an already existing shape as the area intended to be downloaded. Drag the map source slider end points to select the resolution for the tileset. The number of tiles to be downloaded will be indicated. Select the [Download] button to begin the download process.

The user can choose to create a new tileset or add to an existing one. Enter the name to be applied to the selected layers and select [OK]. A status indicator will appear to show the download progress. Cancel a download-in-process by clicking the [Cancel] button. The user can toggle between Online and Local map layers. When [Local] is selected, a listing of the downloaded Imagery layers in the current map interface appears. The local layers are listed in order beginning with the area closest to the map center. Select the [Outline] checkbox to toggle the outline around layers on or off. When the user selects a layer from the list, map source data corresponding to that downloaded layer will be used as the source for map data.




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⁵⁵ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>


Unclassified

Saving a Map Layer (continued)



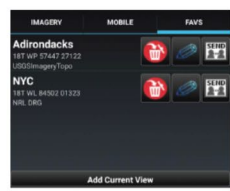
Imagery can be imported via the Import Manager tool or placed directly into the atak folder structure for use by the application. For instructions on which subfolder a specific file type should be placed, refer to Settings > Support > ATAK Dataset Instructions. All imported imagery will show up in the IMAGERY tab and function the same as the MOBILE tab.

If **[Show All]** is checked, all the layers are shown. Otherwise, only layers that are visible in the current map screen will be displayed. Imagery based map products (e.g., MrSID, GeoTIFF, NITF) that are placed in the atak/Imagery folder will appear under the IMAGERY tab when ATAK is restarted. The list of supported products are listed in Settings > Support > ATAK Dataset Instructions.



Bookmarking a Location

To save the current view and displayed imagery, select the **[FAVS]** tab and tap **[Add Current View]**. The user will be prompted to name the view, which will be saved along with its coordinates and the map source that was used. Selecting a view in the **FAVS** listing will pan the map to that location and transition the map source to match the one used in the saved view. The Favorite view can be sent to other TAK users.

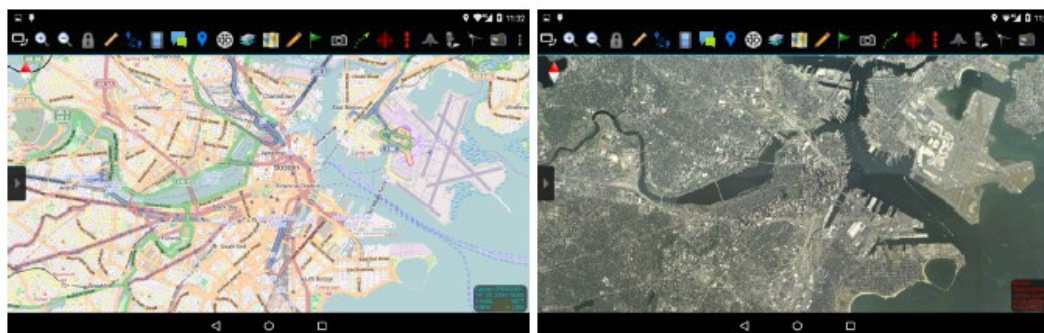


WFS Support (Web Feature Service)

WFS imagery is supported and can be ingested in several different ways. If the user has an existing WFS xml configuration file it can be imported through the Import Manager. The file can also be manually placed into the atak/WFS directory.

WFS Imagery can also be added by selecting the right arrow to expand the Map Source option, selecting the **[+]** and then entering a WFS Imagery Service URL. After querying the service, the user will then be presented with a list of available Imagery sets. The user can select which services to import, then select **[OK]**.

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(a) Vector map (© OpenStreetMap contributors) (b) Imagery map

Figure 1: Example map types loaded in ATAK

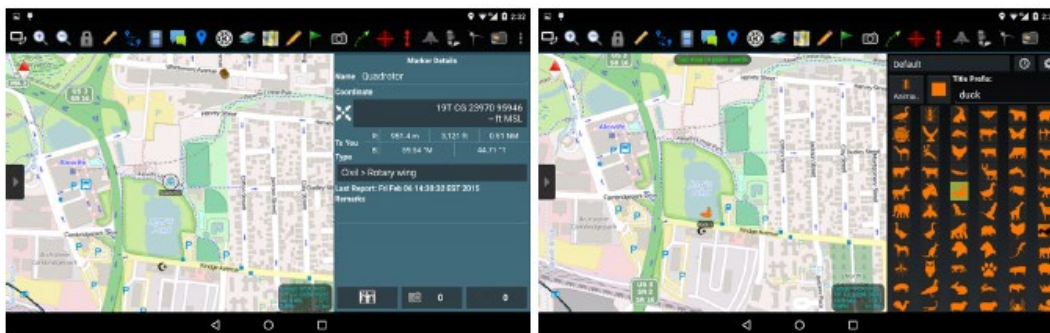
57

79. The exemplary Accused Products are further programmed to permit users to request and display additional maps from additional servers by, for example, moving the map screen and/or by selecting satellite images or other types of maps. The exemplary Accused Products are further programmed to permit interaction with the display, where a user may select one or more

⁵⁶ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

⁵⁷ <https://apps.dtic.mil/sti/tr/pdf/ADA617401.pdf>

symbols and where the exemplary Accused Products further permit data to be sent to other devices based on that interaction.



(a) Drop Point Tool

(b) Custom Icons

Figure 4: Point/Icon Placement Tools

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80. AGIS Software has suffered damages as a result of Defendant's direct and indirect infringement of the '123 Patent in an amount to be proved at trial.

81. AGIS Software has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '123 Patent for which there is no adequate remedy at law unless Defendant's infringement is enjoined by this Court.

COUNT VI **(Infringement of the '829 Patent)**

82. Paragraphs 1 through 20 are incorporated herein by reference as if fully set forth in their entireties.

83. AGIS Software has not licensed or otherwise authorized Defendant to make, use offer for sale, sell, distribute, export from, or import any products that embody the inventions of the '829 Patent.

84. Defendant has and continues to directly infringe at least claim 34 of the '829 Patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale,

⁵⁸ <https://apps.dtic.mil/sti/tr/pdf/ADA617401.pdf>

distributing, exporting from, and/or importing into the United States the Accused Products without authority and in violation of 35 U.S.C. § 271(a).

85. Defendant has and continues to directly infringe at least claim 34 of the '829 Patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products without authority and in violation of 35 U.S.C. § 271(a).

86. Defendant has and continues to indirectly infringe at least claim 34 of the '829 Patent by actively, knowingly, and intentionally inducing others to directly infringe, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States the Accused Products and by instructing users of the Accused Products to perform methods claimed in the '829 Patent. For example, Defendant, with knowledge that the Accused Products infringe the '829 Patent at least as of the date of this Complaint, actively, knowingly, and intentionally induced, and continues to knowingly and intentionally induce direct infringement of the '829 Patent in violation of 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '829 Patent but remained willfully blind to the infringing nature of others' actions.

87. For example, Defendant has indirectly infringed and continues to indirectly infringe at least claim 34 of the '829 Patent in the United States because Defendant's customers use the Accused Products, including at least the Accused Products of applications, products, and/or services, alone or in conjunction with additional Accused Products, in accordance with Defendant's instructions and thereby infringe at least claim 34 of the '829 Patent in violation of 35 U.S.C. § 271. Defendant directly and/or indirectly intentionally instructs its customers to infringe through training videos, demonstrations, brochures, installations and/or user guides, such

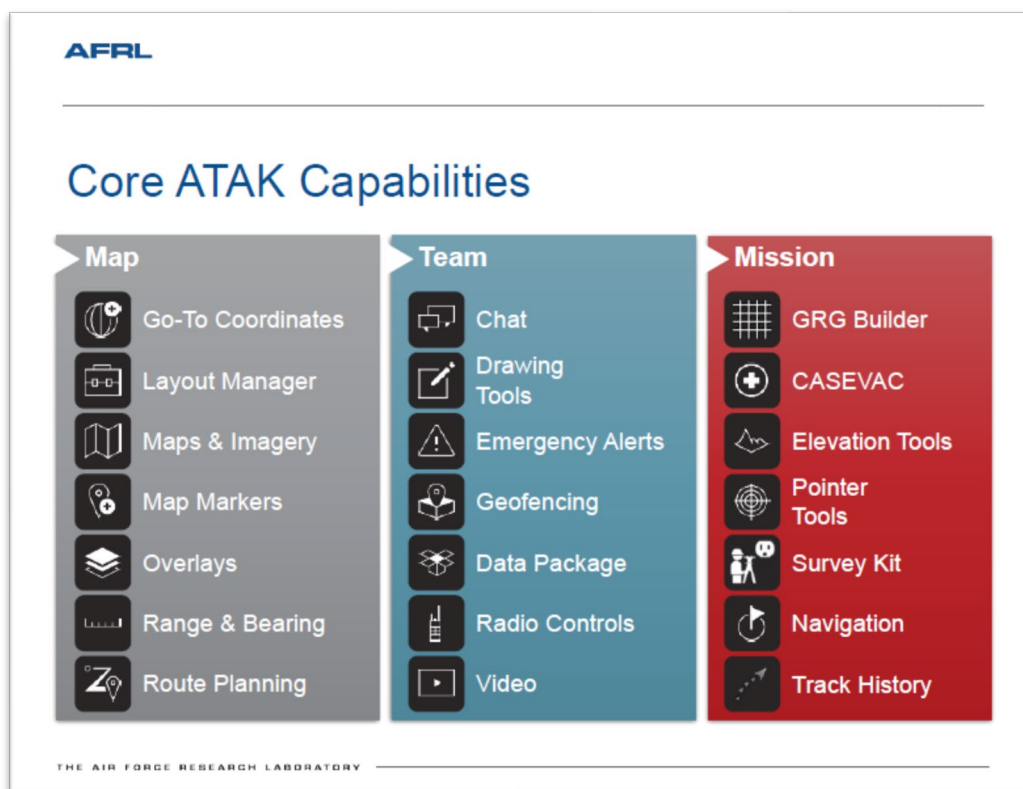
as those located at one or more of the following: <https://www.civtak.org/atak-about/>;
<https://www.civtak.org/documentation/>; https://wiki.civtak.org/index.php?title=ATAK_Manual;
https://www.pargovernment.com/tactical-sa/docs/S20_brochure.pdf;
<https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>;
<https://www.boozallen.com/expertise/products/tactical-situational-awareness-kits.html>;
<https://www.boozallen.com/expertise/products/gv-solutions-full-motion-video-tools.html>;
<https://www.boozallen.com/insights/defense/tak-accelerators-and-edge-solutions.html>;
<https://www.boozallen.com/expertise/products/edgeaware.html>;
<https://www.boozallen.com/expertise/products/sitx-situational-awareness-in-real-time.html>;
<https://blog.pargovernment.com/interoperability>; <https://blog.pargovernment.com/all-about-gv>;
<https://blog.pargovernment.com/sitxguideteams>; <https://blog.pargovernment.com/all-about-sitx>;
<https://blog.pargovernment.com/how-crisis-response-software-enhances-situational-awareness>;
<https://blog.pargovernment.com/the-right-public-safety-software>;
<https://blog.pargovernment.com/using-first-responder-app>; <https://blog.pargovernment.com/all-about-sitx>; https://blog.pargovernment.com/simplifying_situational_awareness; and Defendant's agents and representatives located within this Judicial District. Defendant is thereby liable for infringement of the '829 Patent under 35 U.S.C. § 271(b). Alternatively, Defendant believed there was a high probability that others would infringe the '829 Patent but remained willfully blind to the infringing nature of others' actions.

88. For example, Defendant directly infringes and/or indirectly infringes by instructing its customers to infringe by a system comprising: a second device programmed to perform operations comprising: receiving from a first device via a first server, a request to join a group, wherein the group includes the first device; sending, to the first server, an indication of acceptance

of the request, wherein the first server is configured to join the first device to the group based on the acceptance of the request, and wherein joining the first device to the group comprises authorizing the first device to repeatedly share device location information and repeatedly engage in remote control operations with each device included in the group; sending a first message to the first server, wherein the first message comprises data identifying the first device and a request for a first updated location of the first device, and wherein the first server is configured to send a second message to the first device based on and in response to receiving the first message from the second device, wherein the second message comprises a request for the first updated location of the first device; after sending the first message, receiving, from the first server, a response to the first message, the response including first location information comprising the first updated location of the first device; receiving from a second server, georeferenced map data; presenting, via a display of the second device, a georeferenced map based on the georeferenced map data and a symbol corresponding to the first device; wherein the symbol is positioned on the georeferenced map at a first position corresponding to the first updated location of the first device, and wherein the georeferenced map data relate positions on the georeferenced map to spatial coordinates; after receiving the first location information and the georeferenced map data, and after presenting the georeferenced map and the symbol positioned on the georeferenced map at the first position corresponding to the first updated location of the first device, receiving second location information comprising a second updated location of the first device from the first server, and using the server-provided georeferenced map data and the second location information to reposition the symbol on the georeferenced map at a second position corresponding to the second updated location of the first device; and identifying user interaction with the display specifying an action and, based thereon, sending, to the first server, a third message related to remotely

controlling the first device to perform an action, wherein the first server is configured to send a fourth message to the first device based on receiving the third message from the second device, wherein the fourth message relates to remotely controlling the first device to perform the action, and wherein the first device is configured to perform the action based on receiving the fourth message. For example, the Accused Products include features, as shown below.

89. For example, Defendant's Accused Products allow users to share their locations and view others' locations on a map and to communicate with those users via the Accused Products.




59

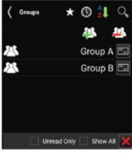
⁵⁹ https://drive.google.com/file/d/1h8WjJFnY5jqMGDgzXjpJnLHEEnbr4_TE/view

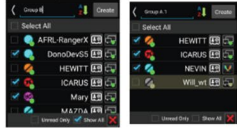
Unclassified

Geo Chat


 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat management and configuration, tap the [Contacts] icon and select GeoChat from the drop down menu.

Management and Configuration


 GeoChat management and configuration is initiated through Contacts. Tap the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit, and delete chat groups, as well as sub-groups. To create a chat group, tap on the [Groups] line (not the communications button). This will bring up the group configuration screen. Tap the [Add Group] icon to create the name of the group and add contacts to the group and the tap [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, tap the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



Messaging

 Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication Button] icon. Tap on [All Chat Rooms] to view all messages from or send messages to those present on the network. Tap [All Streaming] to view all messages from or send messages to those present on the server. Other groupings available for viewing or sending messages are: Groups, HQ, Team Lead, and Teams. If your current role is HQ or Team Lead you can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms] or [All Streaming]. When a sub-team is chosen, messages can only be sent to your active (My Team) team color.


When a parent group is chosen, messages are sent to all members of the parent group as well as all of the sub-groups. When a sub-group is chosen, message are sent only to members of the sub-group.

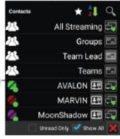


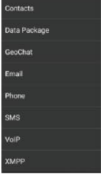
60

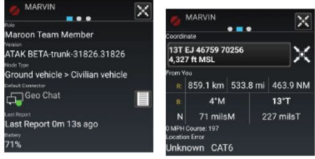
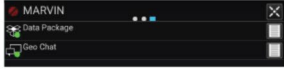

Unclassified

Contacts

 The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.

 A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).

 A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.

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⁶⁰ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

⁶¹ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

90. Additionally, the exemplary Accused Products allow users to establish groups and to exchange messages via interaction with servers which provide the Accused Products services, among other relevant services.

Unclassified

GeoChat Group Management

 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.

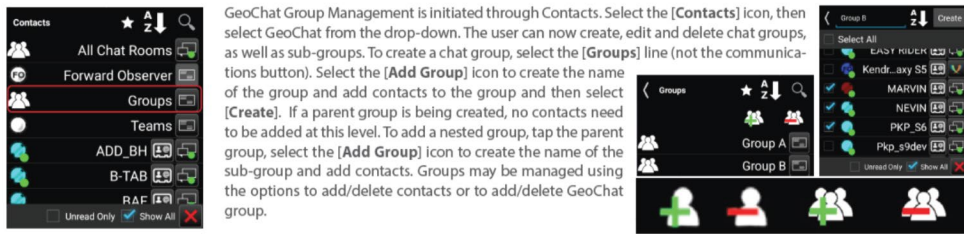
GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.

To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging

Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.




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⁶² <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

Unclassified


GeoChat Messaging (continued)



Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.

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91. The exemplary Accused Products are programmed to form and join groups by transmitting messages:

⁶³ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

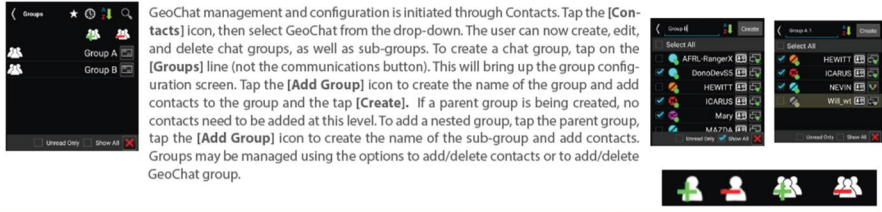
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When a parent group is chosen, messages are sent to all members of the parent group as well as all of the sub-groups. When a sub-group is chosen, message are sent only to members of the sub-group.

64

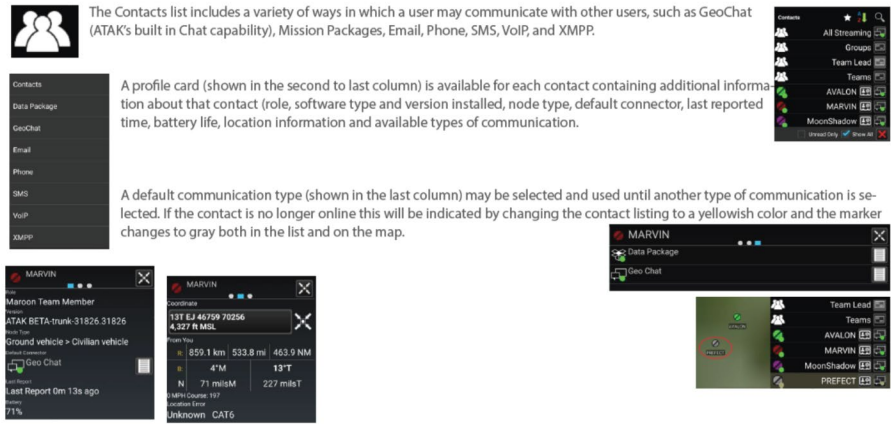
Unclassified

Contacts

 The Contacts list includes a variety of ways in which a user may communicate with other users, such as GeoChat (ATAK's built in Chat capability), Mission Packages, Email, Phone, SMS, VoIP, and XMPP.

A profile card (shown in the second to last column) is available for each contact containing additional information about that contact (role, software type and version installed, node type, default connector, last reported time, battery life, location information and available types of communication).

A default communication type (shown in the last column) may be selected and used until another type of communication is selected. If the contact is no longer online this will be indicated by changing the contact listing to a yellowish color and the marker changes to gray both in the list and on the map.




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⁶⁴ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

⁶⁵ <https://drive.google.com/file/d/1vXKXsZ1KdrHlXhTf8zFVd3TxKfvf8M6j/view>

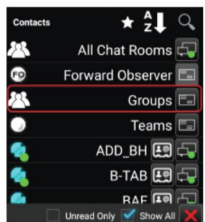
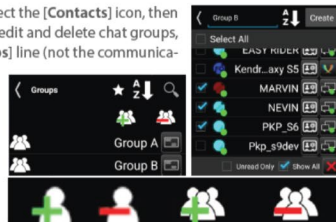
Unclassified

GeoChat Group Management

 Text-based Chat messages may be sent to active network members by using the GeoChat function. To enter GeoChat Group Management, select the [Contacts] icon and select [GeoChat] from the drop-down menu.

GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.

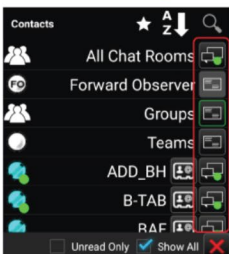
To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging

Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent-group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.






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Unclassified

GeoChat Messaging (continued)

Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.

A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.

67

⁶⁶ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

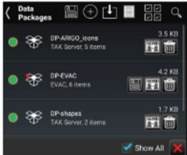
⁶⁷ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

92. The exemplary Accused Products are further programmed to facilitate participation in the groups by communicating with one or more servers and sending to and receiving location information, as depicted below:

Unclassified

Data Package Tool

Select the **[Data Package Tool]** icon to display any data packages that have been stored. New Data Packages may be built and sent to other network members. Data Packages may also be deleted. When preparing for an operation, a team leader may prepare a route, place markers, shapes and imagery that pertain to operation objectives. Any or all of these can be included into a data package and sent to each person on the team. This allows everyone on the team to have the same information. In addition to Map Items (with or without attachments), external files (from the SD card) may be included in a package and map item attachments may optionally be included. The visibility of the package or its elements may also be toggled on or off.



Select Items

Choose selection method:


- Map Select
- File Select
- Overlays

Select the **[+]** icon in the Data Package Tool to create a new Data Package. Choose the selection method; Map Select, File Select or Overlays to add items to the Data Package. The Map Select option allows the user to select one or more items on the map to be included in the Data Package. The File Select option allows the user to navigate the file browser and select one or more files to be included in the Data Package.

The Overlays option allows the user to select categories or individual items from the Overlay Manager to be included in the Data Package.

Select **[Done]** when finished, then choose to either create a new Data Package or add the items to an existing Data Package.


When the user adds to a Data Package, a red asterisk will appear on the Data Package name to indicate that the user should save the Data Package. Select the **[Save]** icon to save the changes. The number under the package name indicates the number of items in the Data Package. Select the name of the Data Package to view the included items. Toggle the visibility radio button to control data package content visibility on the map interface.



Add to Data Package Clear Done

- DOBBY.19.084158
- TGT.19.084216
- F.19.084218
- MED.19.084145
- Route 2
- DOBBY.19.084155

When done with modifications, select the **[Send]** icon to open a list of options for sending the Data Package including TAK Contact, TAK Server, OwnCloud, FTP or another application. If the package size is larger the value set in preferences, the size shown in the package list will be changed to red and will not be allowed to be sent.



When sending to a TAK Contact, the user may either Select All, Show All or toggle recipients by selecting or de-selecting their corresponding checkboxes. When the **[Delete]** icon is selected, the user will be prompted to remove or leave the contents of the Data Package on the map interface.

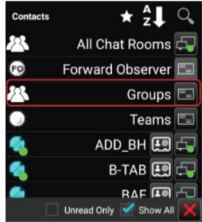
68

⁶⁸ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

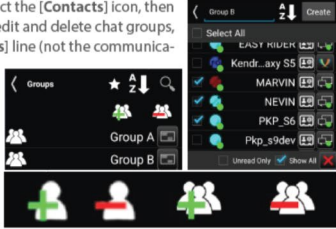
Unclassified

GeoChat Group Management

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GeoChat Group Management is initiated through Contacts. Select the [Contacts] icon, then select GeoChat from the drop-down. The user can now create, edit and delete chat groups, as well as sub-groups. To create a chat group, select the [Groups] line (not the communications button). Select the [Add Group] icon to create the name of the group and add contacts to the group and then select [Create]. If a parent group is being created, no contacts need to be added at this level. To add a nested group, tap the parent group, select the [Add Group] icon to create the name of the sub-group and add contacts. Groups may be managed using the options to add/delete contacts or to add/delete GeoChat group.



To add users to a group, select the [Groups] line (not the communications button), then select the name of the group to add users. Select the [Add Users] icon. A window will open allowing the group creator to add users to the selected group. Select the [Add] button when all the users to be added are checked.

GeoChat Messaging


Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [Communication] icon. Selecting the [Pan To] icon, located at the top right of the call sign in an individual chat, will pan the map interface to that user's location. Select [All Chat Rooms] to view all messages from or send messages to those present on the network or TAK Server. Other groupings available for viewing or sending messages are: Forward Observer, Groups, HQ, K9, Medic, RTO, Sniper, Team Lead and Teams. If the user's current role is Forward Observer, HQ, K9, Medic, RTO, Sniper or Team Lead, that user can view or send messages to all other contacts with the same role. If a GeoChat message is sent from the top level of Teams, it will be sent to all contacts, similar to [All Chat Rooms].

When a sub-Team is chosen, messages can only be sent to that user's active (My Team) team color. When a parent group is chosen, messages are sent to all members of the parent group, as well as all of the sub-groups. When a sub-group is chosen, messages are sent only to members of the sub-group. Individuals within GeoChat may be removed from the Contacts menu by toggling the visibility of individuals or groups within Overlay Manager.


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Unclassified


GeoChat Messaging (continued)



Selecting in the Free Text Entry area will open an onscreen keyboard. At the bottom of the Chat area are pre-defined messages that may be used to quickly create a message to send. Tap the current menu button to scroll through the different menus of canned messages, including: DFLT1, DFLT2, ASLT1, ASLT2, RECON1 and RECON2. These pre-defined messages present an easy way to transmit a brief message to other network members concerning position or other important communication. The pre-defined messages may be changed by long pressing on the button and changing its label and corresponding value.



A numbered red dot will appear on the [Contacts] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to their name. Alternatively, the text of the message can be read by dragging down from the top to see the Android notifications window. This notification will only stay available for a short time.



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⁶⁹ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

⁷⁰ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

93. The location information is presented on interactive displays on the exemplary Accused Products which include interactive maps and a plurality of user selectable symbols corresponding to other devices. The symbols are positioned on the map at positions corresponding to the locations of the other devices, as depicted below:


Unclassified

ATAK Civilian Overview

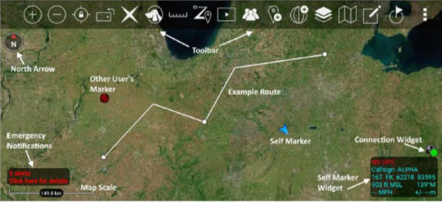
The Civilian Team Awareness Kit for Android (ATAK Civilian) is a Government-off-the-Shelf (GOTS) software application and mapping framework for mobile devices. ATAK Civilian has been designed and developed to run on Android smart devices used in a first responder environment. The ATAK Civilian software application is an extensible moving map display that integrates imagery, map and overlay information to provide enhanced collaboration and Situational Awareness (SA) over a tactical meshed network. ATAK Civilian promotes information flow and communications from the field environment to command enterprise locations.

The first time ATAK Civilian is opened, or after a Clear Content, a passphrase is auto-generated to activate data encryption. The user can supply their own passphrase by using Settings > Show All Preferences > Device Preferences > Change Encryption Passphrase. Following this step, ATAK Civilian's End User License Agreement (EULA) must be accepted. Next, the user will be prompted to change their callsign and/or import preferences or data from a Mission Package. All changes/imports can always be updated later. Finally, the user can place their self-marker by following the instructions located in the lower right corner.

The toolbar runs along the top of the map display. The features whose icons form the center portion of the toolbar are discussed in individual sections of this guide. The three dots at the right of the toolbar provide additional menu items that appear in a drop-down menu. A Long Press on the map will toggle the toolbar between hidden and visible.



The North Arrow appears in the upper left and is used to control map orientation. It has two primary modes: North Up/Track Up (default) and Manual Map Rotation/Lock. While in North Up/Track Up Mode, single press on the [North Arrow] icon to cycle between the North Up and Track Up map orientation. Long press the [North Arrow] to call out the additional controls menu where the Manual Rotation/Lock and 3D features are available. Select the [Rotation] button to enter Manual Map Rotation/Lock Mode. When in Manual Map Rotation/Lock Mode, rotate the map orientation by pressing on the map with two fingers and pivoting them in the desired direction. Single press on the [North Arrow] to lock the screen orientation, signified by the appearance of the lock icon, and again to unlock the orientation for further adjustment. 3D controls are discussed in a separate section.



The screenshot shows a topographic map with various overlays. A toolbar is visible at the top with icons for zooming, rotation, and other map functions. A 'North Arrow' icon is in the top left. A 'Self Marker' is shown as a red dot on the map. An 'Example Route' is shown as a white line. A 'Connection Widget' is in the bottom right, showing connection status. A 'Map Scale' is in the bottom left. A 'Self Marker Widget' is also visible in the bottom right, showing coordinates and other data.

Select the [Magnifier] buttons to zoom in or out on the map. The map can also be zoomed by using two fingers on the screen to pinch and spread the map. Select the [Back] button to center the screen on the Self Marker or the [Padlock] icon to lock the center of the screen to the Self Marker. Select the [Orientation] icon to toggle the screen position between portrait and landscape.

The optional connection widget indicates whether or not the user is connected to a TAK Server. This has a corresponding Android notification that provides the same information. Toggle this display on at Settings > Network Connections > Network Connections > Display Connection Widget.

Alerts and notifications are displayed in the lower left of the map interface.

The Map Scale displays a 1 inch to X mi/km reference on the map. The scale adjusts with the map when zoomed in and out. Hint windows are available to alert users to changes or make suggestions about the use of tools the first time they are opened.


5

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⁷¹ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

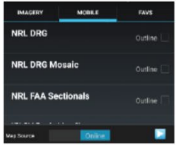
Unclassified

Maps & Favorites



Select the **[Maps & Favorites]** icon to list the imagery loaded in the application.


The following categories are shown: Imagery/Maps, Mobile and Favorites (FAVS). Select **[Online/Local]** on the Mobile tab to toggle between using an online map source or locally stored map layers over a desired area. Select the **[FAVS]** tab to review a previously saved view or to add the current view.




Saving a Map Layer

To save a local copy of a map layer, choose the **MOBILE** tab and toggle to **[Online]**. Select the right arrow to expand the Map Source option, then tap **[Select Area]** to define a region of interest. A prompt will appear presenting three options for map area selection: Rectangle, Free Form or Map Select. The Rectangle option uses the top left and lower right corners to denote the area to be downloaded. The Free Form option allows the user to create a custom area to be downloaded by tapping different points on the map until the shape is complete or the end button is selected. Map Select allows the user to choose an already existing shape as the area intended to be downloaded. Drag the map source slider end points to select the resolution for the tileset. The number of tiles to be downloaded will be indicated. Select the **[Download]** button to begin the download process.

The user can choose to create a new tileset or add to an existing one. Enter the name to be applied to the selected layers and select **[OK]**. A status indicator will appear to show the download progress. Cancel a download-in-process by clicking the **[Cancel]** button. The user can toggle between Online and Local map layers. When **[Local]** is selected, a listing of the downloaded Imagery layers in the current map interface appears. The local layers are listed in order beginning with the area closest to the map center. Select the **[Outline]** checkbox to toggle the outline around layers on or off. When the user selects a layer from the list, map source data corresponding to that downloaded layer will be used as the source for map data.






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⁷² <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

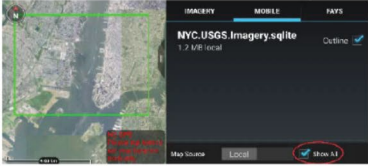
Unclassified

Saving a Map Layer (continued)



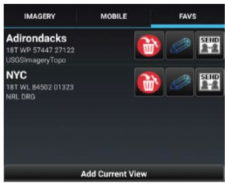
Imagery can be imported via the Import Manager tool or placed directly into the atak folder structure for use by the application. For instructions on which subfolder a specific file type should be placed, refer to Settings > Support > ATAK Dataset Instructions. All imported imagery will show up in the IMAGERY tab and function the same as the MOBILE tab.

If [Show All] is checked, all the layers are shown. Otherwise, only layers that are visible in the current map screen will be displayed. Imagery based map products (e.g., MrSID, GeoTIFF, NITF) that are placed in the atak/Imagery folder will appear under the IMAGERY tab when ATAK is restarted. The list of supported products are listed in Settings > Support > ATAK Dataset Instructions.



Bookmarking a Location

To save the current view and displayed imagery, select the [FAVS] tab and tap [Add Current View]. The user will be prompted to name the view, which will be saved along with its coordinates and the map source that was used. Selecting a view in the FAVS listing will pan the map to that location and transition the map source to match the one used in the saved view. The Favorite view can be sent to other TAK users.

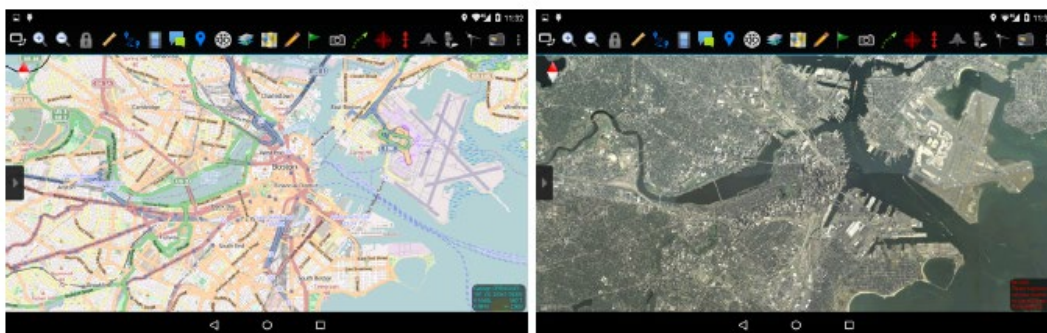


WFS Support (Web Feature Service)

WFS imagery is supported and can be ingested in several different ways. If the user has an existing WFS xml configuration file it can be imported through the Import Manager. The file can also be manually placed into the atak/WFS directory.

WFS Imagery can also be added by selecting the right arrow to expand the Map Source option, selecting the [+] and then entering a WFS Imagery Service URL. After querying the service, the user will then be presented with a list of available Imagery sets. The user can select which services to import, then select [OK].

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(a) Vector map (© OpenStreetMap contributors)

(b) Imagery map

Figure 1: Example map types loaded in ATAK

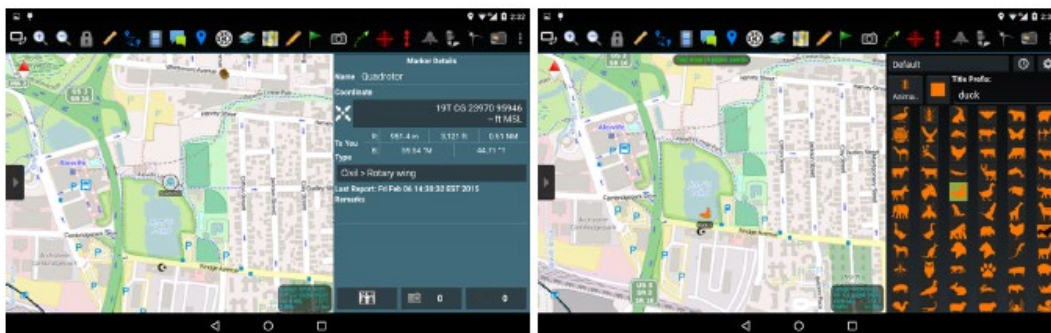
74

94. The exemplary Accused Products are further programmed to permit users to request and display additional maps from additional servers by, for example, moving the map screen and/or by selecting satellite images or other types of maps. The exemplary Accused Products are further programmed to permit interaction with the display, where a user may select one or more

⁷³ <https://drive.google.com/file/d/1bo9WHadg3J3o55OLlx1mn3McqEJzvgrK/view>

⁷⁴ <https://apps.dtic.mil/sti/tr/pdf/ADA617401.pdf>

symbols and where the exemplary Accused Products further permit data to be sent to other devices based on that interaction.



(a) Drop Point Tool

(b) Custom Icons

Figure 4: Point/Icon Placement Tools

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95. AGIS Software has suffered damages as a result of Defendant’s direct and indirect infringement of the ’829 Patent in an amount to be proved at trial.

96. AGIS Software has suffered, and will continue to suffer, irreparable harm as a result of Defendant’s infringement of the ’829 Patent for which there is no adequate remedy at law unless Defendant’s infringement is enjoined by this Court.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury for all issues so triable.

PRAAYER FOR RELIEF

WHEREFORE, AGIS Software prays for relief against Defendant as follows:

a. Entry of judgment declaring that Defendant has directly and/or indirectly infringed one or more claims of each of the Patents-in-Suit;

b. Entry of judgment declaring that Defendant’s infringement of the Patents-in-Suit have been willful and deliberate;

⁷⁵ <https://apps.dtic.mil/sti/tr/pdf/ADA617401.pdf>

c. An order pursuant to 35 U.S.C. § 283 permanently enjoining Defendant, its officers, agents, servants, employees, attorneys, and those persons in active concert or participation with it, from further acts of infringement of the Patents-in-Suit;

d. An order awarding damages sufficient to compensate AGIS Software for Defendant's infringement of the Patents-in-Suit, but in no event less than a reasonable royalty, together with interest and costs;

e. An order awarding AGIS Software treble damages under 35 U.S.C. § 284 as a result of Defendant's willful and deliberate infringement of the Patents-in-Suit;

f. Entry of judgment declaring that this case is exceptional and awarding AGIS Software its costs and reasonable attorney fees under 35 U.S.C. § 285; and

g. Such other and further relief as the Court deems just and proper.

Dated: September 19, 2024

Respectfully submitted,

/s/ Alfred R. Fabricant
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