ATAK-Civ

Version: 3.9

Release Date: 24 August 2018

Contents

CivTAK Overview

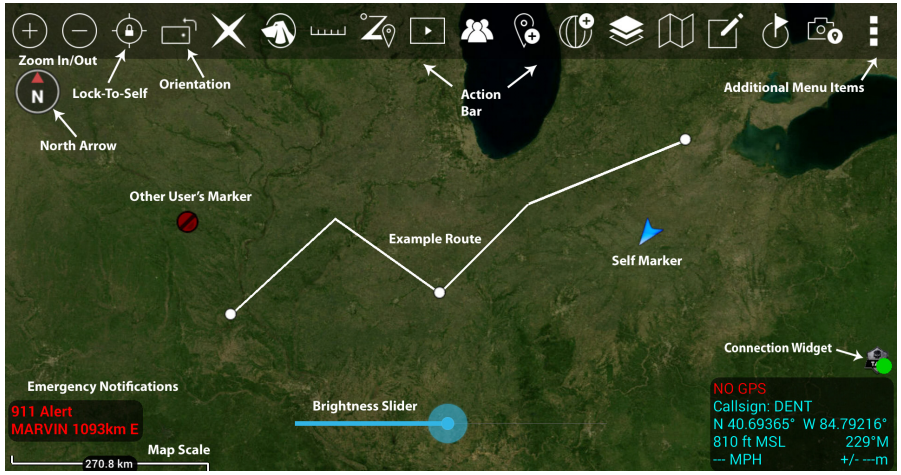
The Civilian Team Awareness Kit for Android (ATAK Civilian) is a Government-off-the-Shelf (GOTS) software application and mapping framework for mobile devices. ATAK Civilian has been designed and developed to run on Android smart devices used in a first responder environment. The ATAK Civilian software application is an extensible moving map display that integrates Department of Defense (DoD) and commercial 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 magnifier buttons allow the user to zoom in on the map by tapping the magnifier with the plus. To zoom out, the user can tap on the magnifier with the minus. Additionally, the user can use two fingers on the screen to pinch and zoom in or out on the map.

The North Arrow has two primary modes: North up/ Track up and Manual map rotation & angle lock. Long pressing on the needle will switch between the two modes, while single pressing will cycle between the North up/Track up, and Manual rotation/lock respectively.

Alerts and notifications are available in the notification region of the map interface.

A Long Press on the map is used to hide and reveal the Action Bar.



ATAK Civilian includes informational text designed to assist the user with the application. Hint windows are available to alert users to changes or make suggestion about the use of tools the first time they are opened.

Map orientation can be used to rotate the screen position from portrait to landscape.

The Map Scale displays a 1 inch to mi/km reference on the map. The scale adjusts with the map when zoomed in and out.

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.

The padlock icon can be used to lock to self.

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.

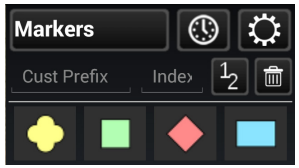
Self Marker

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 indicates that the team member has GPS reception.

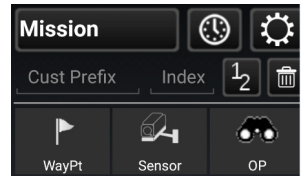
Available roles include: Team Member, Team Lead (designated by a TL in the center of the marker), Headquarters (HQ in center), Sniper (S), Medic (Red +), Forward Observer (FO), RTO (R) or K9. The options available when another user's self-marker is selected are: Inner Ring – Delete, Polar Coordinate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

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

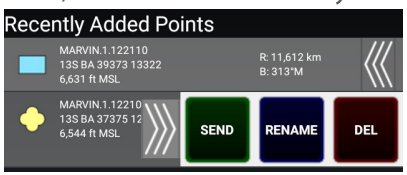
Point Dropper



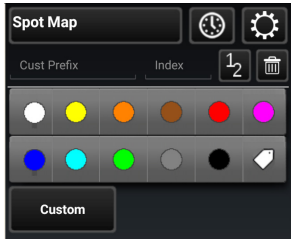
Selecting the [**Point Dropper**] Icon will open the Point Dropper menu, containing marker symbology with one or more iconsets, a Recently Added button and an Iconset Manager button. The user can select the mission specific pallet to open point options including Waypoint, Sensor, or Observation Point.

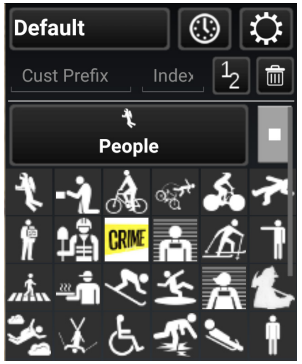


The user can move between icon sets by either swiping in the icon set area or tapping on the icon set name to bring up the Icon Pallet dropdown. The last point placed is shown at the bottom of the Point Dropper window. The information for all recently placed points can be accessed by tapping the [**Clock**] icon. This displays the marker icon, name, coordinates, elevation, and range & bearing information. The user has the ability to send, rename or remove any recently added markers by tapping the [**Arrows**] next to the marker to reveal SEND, RENAME or DEL buttons.



Select the [**Back**] button to exit the Marker menu.

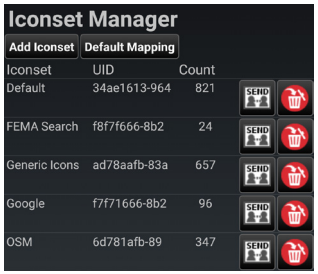


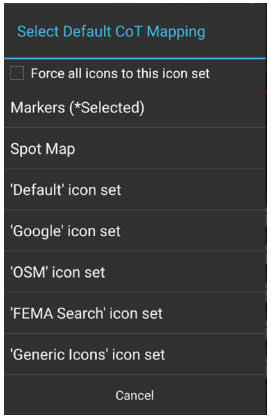


Point Dropper (continued)

The marker symbology affiliations are: Yellow, Green, Red and Blue. Select the marker symbology affiliation and then tap 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. The user can continue by long pressing and enter MGRS coordinates as desired. The standard naming convention can be changed by selecting the custom prefix and index. The user may then enter a title prefix and a starting number(s) or letter(s) and the marker will be dropped with the prefix name and starting number(s) or letter(s) and every marker dropped after will be assigned the next consecutive number(s) or letter(s).

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





Radial Menus

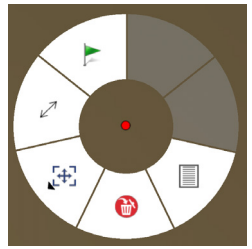
Yellow Marker

Green Marker

Red Marker

Blue Marker

Spot Marker



The options available for Yellow Marker and Green Markers are: Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range &Bearing Line, Lock On and Details.

The options available for Red Markers are: Delete, Polar Coordinate Entry, Compass Rose/Bullseye, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing and Details.

The options available for Blue Markers are: Delete, Polar Coordinate Entry, Fine Adjust/Enter Coordinate/MGRS Location, Range & Bearing Line, Lock On, Video, Tracking Breadcrumbs, Contact Card and Details. The Video radial will activate if a properly formatted packet that includes the link to the video feed is included. Simply tap 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.

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

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

Range & Bearing Tool

The [**Range & Bearing**] icon allows the user to access the Range & Bearing functionality, which provides several measuring tools. When the icon is tapped, the available tools are added to the toolbar for user access.

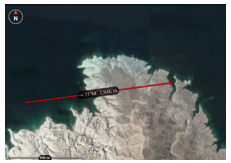
Range & Bearing Line

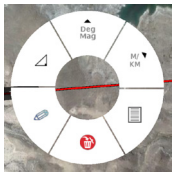
The [**R&B Line**] icon allows the user to calculate the distance between two locations on a map, to calculate the distance between an object on the map and another point on the map, or to calculate the distance between a point on the map and the Self-marker. Select the [**R&B Line**] icon on the toolbar to toggle on (green) and off (gray). When green, tap the point to measure from or long press a point to measure from the Self-marker to that point. Once the first point or object is selected, tap another point or object from which to measure.

The Dynamic R&B Line can be moved and repositioned by the user. When the desired location is established the user can select the pin button on the radial menu to lock the bearing line. The pinned R&B Line will show the azimuth, distance and depression or elevation degree between the two points. To reposition an anchor point, long press on either end of the bearing line, then select another location. The line will be moved to the new location with an adjusted distance and azimuth.

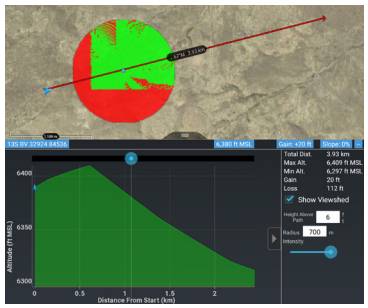
Select either end of the R&B Line to display the R&B Line end point Radial. The options available are: Delete or Fine Adjust/Enter Coordinate/MGRS Location.

To make fine adjustments to either end of the line, tap the [**Fine Adjust**] icon on the radial. Cross-hairs appear and the area is magnified. Use the drag finger gesture inside the magnified area to finely position the end of the bearing line then select the green check mark to end the fine adjust. To delete the bearing line, tap the [**Delete**] icon on the radial and the line will be deleted.



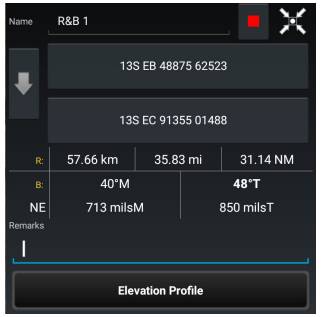


To obtain even further options for the bearing line, tap along the line and the R&B Line radial will display. Options available are: Delete, Edit, Depression or Elevation degree, Angle Bearing Units, Distance Units and Details. To change parameters of the line, select the [**Details**] icon on the radial.



The Elevation Profile option at the bottom of the Details page allows the user to view the elevation profile for the selected R&B Line. The Elevation Profile provides information on Total Distance, Maximum Altitude, Minimum Altitude, Gain and Loss. By checking the Show Viewshed checkbox, a viewshed will be shown along the route when the Elevation Profile is moved by sliding it left or right.

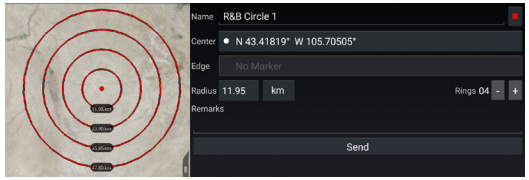
Range & Bearing Tool settings can be customized in Settings > Display Preferences > Unit Display Format Preferences.



Range & Bearing Circle Tool

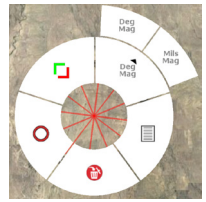
The R&B Circle Tool allows the user to mark one or more range rings around a point. It can be sent via the Details page or the Mission Package Tool. Select the [**Circle**] icon on the toolbar to toggle the Circle Tool on (green) and off (white). When green, select the desired location on the map for the center of the circle. If the self-marker or a marker is selected for either the center or the radius of the circle, the circle's center or radius will change when the markers are repositioned.

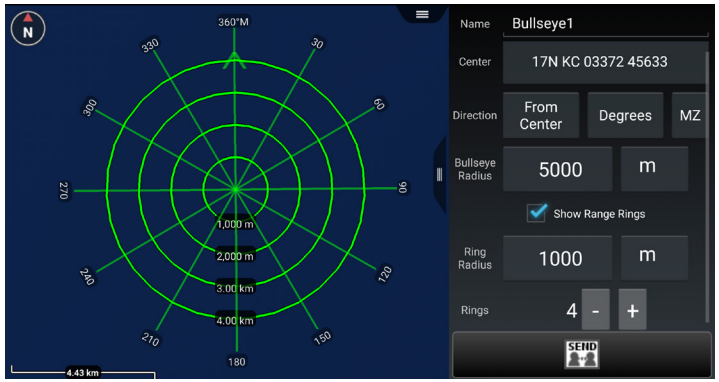
To make further adjustments to circle parameters, tap the center of the circle to display the Circle Radial menu. Options available are: Delete, Fine Adjust/Enter Coordinate/MGRS Location and Details. Select the [**Details**] icon on the radial to modify the radius rings, the unit of measurement between the rings, and the number of rings. After making adjustments, the circles will be redrawn as specified. Additionally, the R&B Circle may be sent or broadcast to other TAK users.

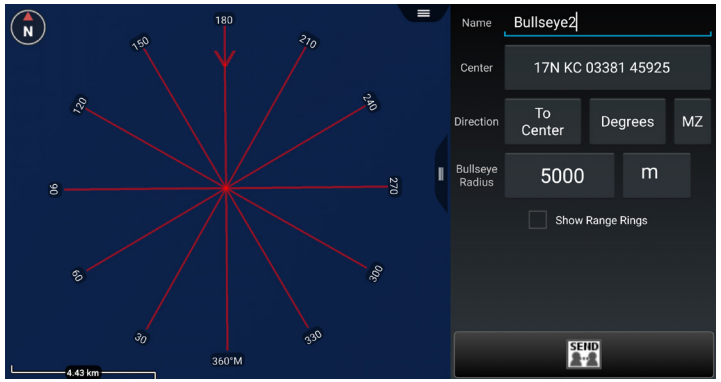


Bullseye Tool

The Bullseye Tool is an additional Range & Bearing option that gives more information than the standard R&B Line or R&B Circle. The Bullseye provides a circular grid with lines every 30 degrees. The angles can be changed to be either toward the center point or from the center point. Range rings can also be added.





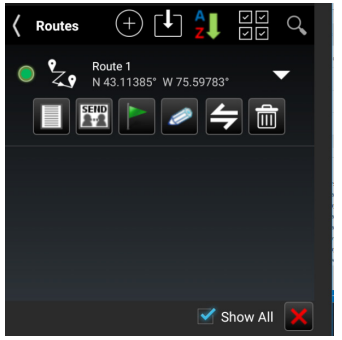


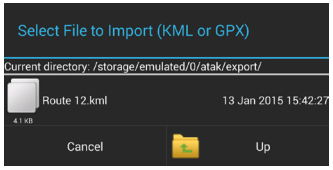
Route Planning and Navigation

Route planning and navigation capabilities allow the user to create or modify routes and set navigation objectives.

Routes

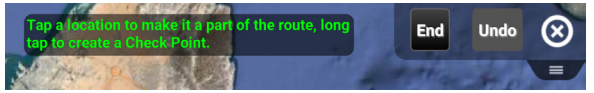
The Routes Tool allows users to quickly create, view and modify routes. Tap on the [**Routes**] icon to list existing routes, create new routes, import routes, sort, export, delete routes and search for routes. For an individual route, the user can view the details, send, navigate to, edit, or delete the selected route. If the [**Show All**] box in the lower right is unchecked, only Routes that are visible in the current map screen will be listed.

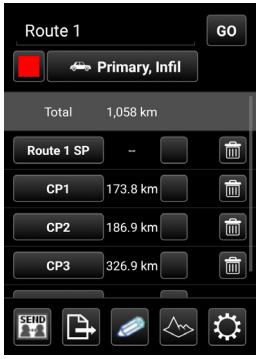




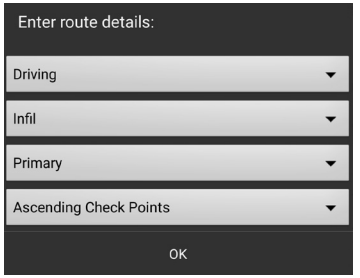
To import a saved route, select the [**Import**] icon. Navigate to the location of the saved routes (in KML or GPX format) and select the desired route. The route will be imported and displayed on the map and will be listed in the Overlay Manager under the Navigation category.

To create a new route, tap on [**+**], select the route type, and follow the onscreen instructions. Select a location on the map to make it part of the route or long press to create Check Points along the route. Tap [**Undo**] to reverse any changes and [**End**] to complete the Route.

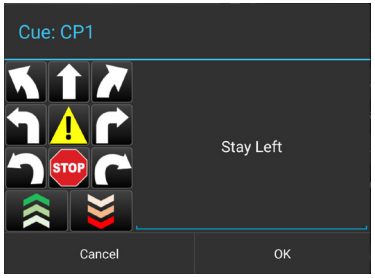




Once the [**End**] button is tapped, the route details window opens. Within the Details window, the user can choose to: navigate to the route by selecting the [**GO**] button, change the color of the Route, change the route details and modify the Check Points. The Route details may be changed by selecting the field next to the Color button. The user can change the method of movement (driving, walking, etc.); Infil or Exfil; Primary or Secondary; and Ascending or Descending Check Points.



The user can modify Check Points as follows: Rename the Check Points, add cues, align Check Point (only available when using a route alignment plug-in) or delete. To rename the Check Point, select the current Check Point and a Rename window will appear. After changing the name, select [**Done**]. To add a cue to a Check Point, select the box to the right of the mileage. The Cues window will appear and a preset cue may be selected or a custom cue may be entered. When the desired cue is added, select [**OK**].

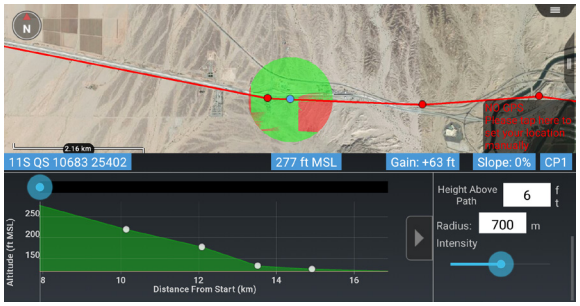


At the bottom of the route details screen, the user has options to: Send, Export, Edit, View the Elevation Profile, and view/modify Route Preferences. When the Send option is selected, the route may be sent to selected recipients on the network or broadcast to all available recipients. The route can be exported to a file in either KML or GPX format. This file will be located in the "/atak/export" folder.

Routes (continued)

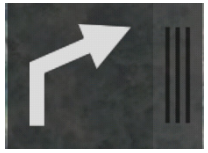
The Elevation Profile icon is also available to allow the user to view the elevation profile for that route. The Elevation Profile provides information on Max Altitude, Min Altitude, Gain and Loss. By checking the Show Viewshed checkbox, a viewshed will be shown along the route when the Elevation Profile is moved by sliding it left or right.

Routes can be customized in Settings > Tools Preferences > Route Preferences.



Navigation Flag

Selecting the [**Navigation Flag**] icon on the QuickNav tool or the route's radial allows the user to begin navigation to any point, object or route on the map. A pairing line is drawn and navigation information is displayed in the upper left portion of the screen. Estimated time to the next Check Point, Speed and distance to the next Check Point are updated as the user moves.



If a cue has been established, when the user gets close to a Check Point, the cue for that Check Point will be displayed; if the volume is turned up, the cue will be audible. Voice Cues can be turned off by selecting the [**Mute**] icon. The user can collapse the displayed cue to provide more screen space. The arrow buttons on either side of the navigation information allows the user to move forward to the next check point or move back to the previous check point. Selecting the "x" will end navigation.

Red X Tool

The [**Red X**] is available on the action bar for ease of use. It provides a quick way for discerning the coordinate and altitude information of a point on the map along with range and bearing with respect to the self-marker. Select the [**White X**] on the action bar to toggle the Red X tool into a movable state (red with red dot). Select the desired location on the map and a red X will appear in that location. Select another location to move the red X. Select the X (red with the red dot) on the action bar again to put the Red X in a pinned state (red X). When the Red X is in an unpinned state, its position information is displayed in the top right screen. Long press the X on the toolbar to disable and remove the Red X.

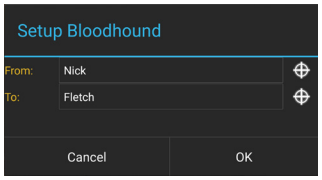
Note: The Red X is not persistent. When ATAK Civilian is closed and then reopened, the Red X will no longer be present.

The user can pair a Red X with another object (a self-marker for example) and then the R&B Line Radial can be accessed. Selecting the Details radial menu will open the R&B Line details menu. From this menu, the user can change the color of the line; reverse line direction; change the endpoint location information, add a remark, and display an elevation profile.

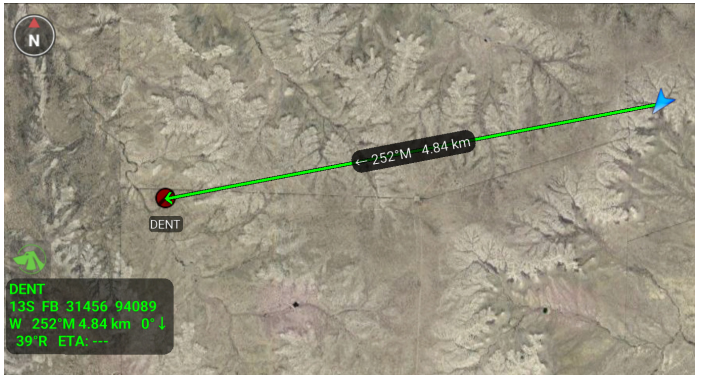
Selecting the Red X will open the Red X radial. The options available are: Delete, R&B Line to self, Compass Rose, Fine Adjust/Enter Coordinate/MGRS Location, R&B Line and Drop Marker.

Bloodhound Tool

The Bloodhound Tool provides support for tracking and intercepting a map item. This tool allows the user to select a target using a SPI to track and displays a text widget containing Range & Bearing information between the user location and the target location. A remote Bloodhound can also be created between any combination of other contacts, SPIs, markers and the Self-marker. A pairing line is also drawn connecting the two selected locations. Unlike Quick Navigation, this does not show the compass.

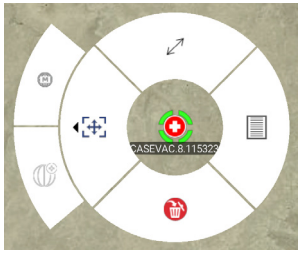


The Bloodhound Tool displays the relative bearing, direction and estimated time of arrival (ETA) based on the preferences in Settings > Tool Preferences > Bloodhound Preferences. As the user's ETA decreases, the color of the bearing line changes from green (default: 6 minutes from target and then begins to flash); flashing yellow (default: 3 minutes from the target) and flashing red (default: 1 minute from the target). The user can long press to acknowledge and discontinue the flashing feature. The Bloodhound Tool can also be initiated from another user's SPI radial menu. Selecting the [**Bloodhound**] icon on the map, allows the user to pan to the selected active Bloodhound line.



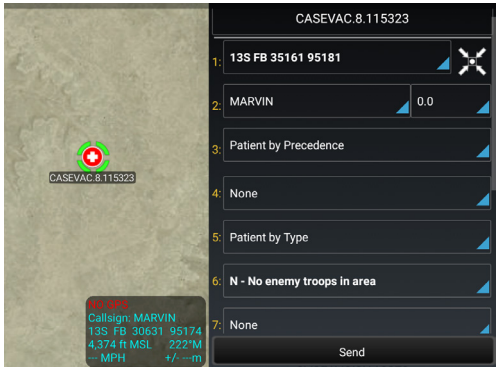
CASEVAC

The casualty evacuation CASEVAC tool is used denote any casualties/injuries in the field. The CASEVAC tool follows Appendix G of the JFIRE 2016 publication and can be used for either CASEVAC or the more restrictive MEDEVAC.



The user can drop a CASEVAC by selecting the CASEVAC icon in the menu and placing a marker on the map. CASEVAC radial options include: Delete, Bloodhound, Fine Adjust/Enter Coordinate/MGRS Location, R&B Line and Details.

When the CASEVAC Details window is opened, the user may fill out the nine lines of information. The user can also add a ZMIST (ZAP number, Mechanism of Injury, Injury Sustained, Symptoms and Signs, Treatment Given) report and/or a Helo Landing Zone (HLZ) brief. Once the user has entered all the applicable information, the CASEVAC may be sent to available users by selecting [**Send**].

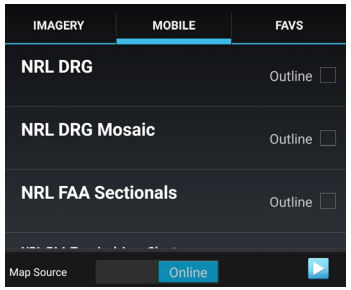


Multiple ZMIST reports can be associated to one CASEVAC. This action can be performed by selecting [**ADD**] next to the initial ZMIST heading and section. A ZMIST report can also be deleted by selecting the [**Delete**] icon. ZMIST submenus contain hotkeys for common entries and allows for text entries for non-standard conditions.

Map Manager

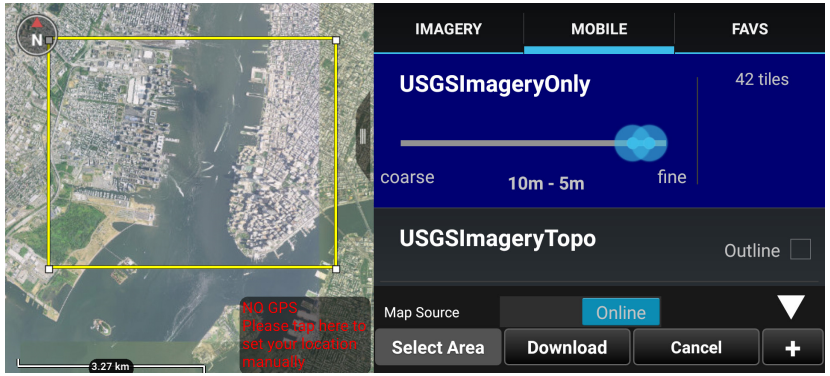
Select the [**Map Manager**] icon to list the imagery loaded in the application.

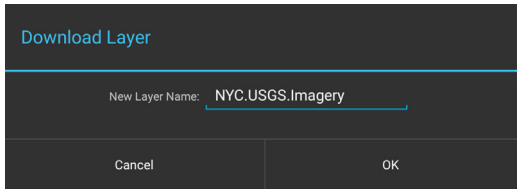
The following categories are shown: Imagery/Maps, Mobile and Favorites (FAVS). Select **[Online/ Local]** on the Mobile tab to toggle between downloading or using locally stored map layers over a desired area. Select the **[FAVS]** button to add a current view to favorites or to switch to an existing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



Saving a Map Layer

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





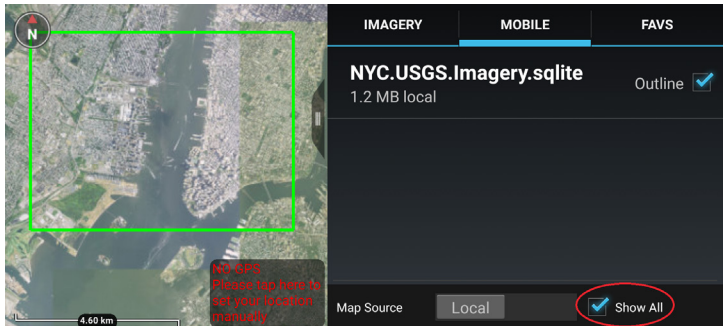
The user can choose to create a new tileset or add to an existing one. Enter the name to be applied to the selected layers and tap [**OK**]. A status indicator will appear to show the download progress.

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 map center. Select the [**Outline**] checkbox to toggle the outline 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 sole source for map data.

Saving a Map Layer (cont)

The list of supported products can be accessed by navigating to the atak\support directory and opening the README.txt file. The README.txt file states where the user can (if desired) manually store a given imagery file or the imagery can be added using the Import Manager tool. All imported imagery will show up in the [**Imagery**] tab and function the same as the [**Mobile**] tab.

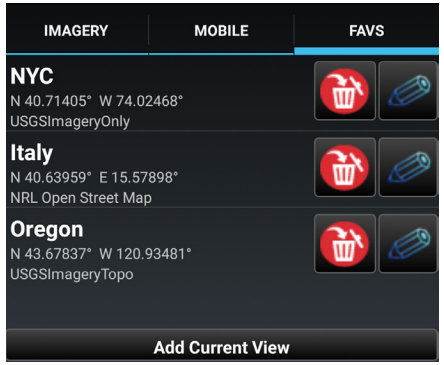
If [**Show All**] is checked, all of the layers are shown. Otherwise, only layers with coverage in the currently displayed map location will be displayed. Imagery based map products (e.g., MrSID, GeoTIFF, NITF); that are placed in the atak\imagery folder will appear under the [**Imagery**] tab when ATAK Civilian is restarted.



Bookmarking a Location

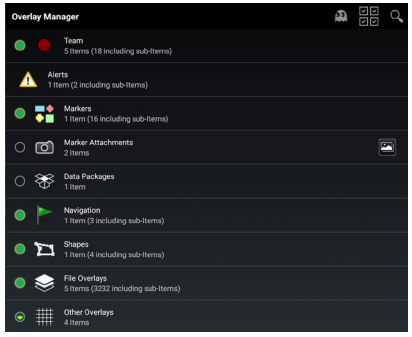
If the user wishes to save the current view and displayed imagery, select the **[FAVS]** tab and tap [**Add Current View**]. The user will be prompted to name the view, which is required to be saved to Favorites.

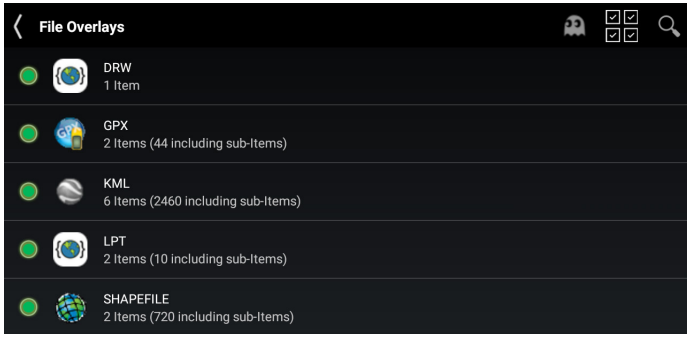
Select a saved Favorite to switch to that view. Select the **[Edit]** icon to modify the name of a view. Select the [**Delete**] icon to remove a saved view.

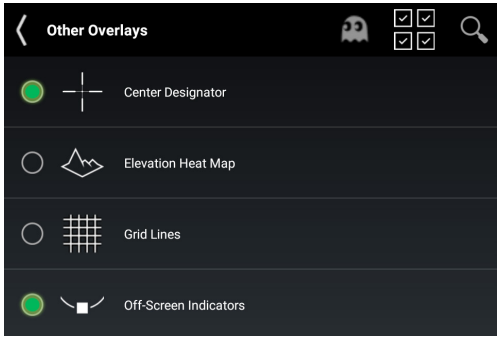


Overlay Manager

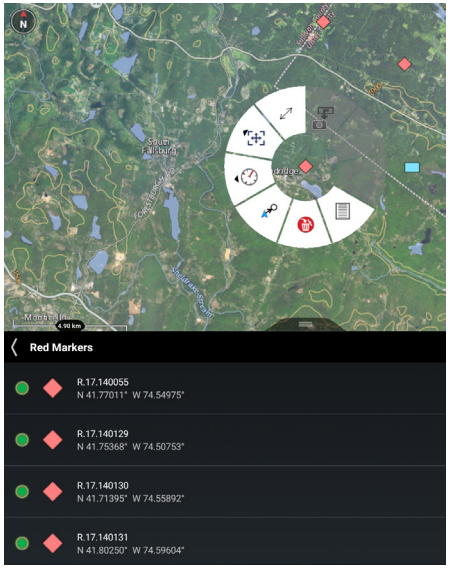
The Overlay Manager allows the user to find a specific item on the map. Select the **[Overlay Manager]** icon to bring up the menu. Scroll down in the menu to select layer types to explore. Users may select Team, Alerts, Markers, Marker Attachments, Data Packages, Navigation, Shapes, Remote Resources, File Overlays and Other Overlays from the menu options. Selecting a category will open a detailed listing of the items available in that category. The available items within each category are annotated on the menu entry, allowing the user to reference sub-menu content.





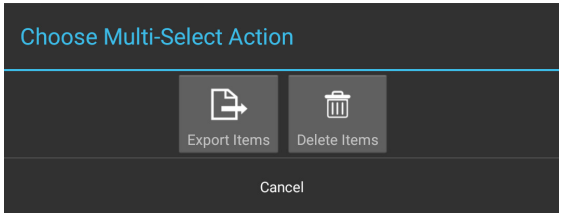


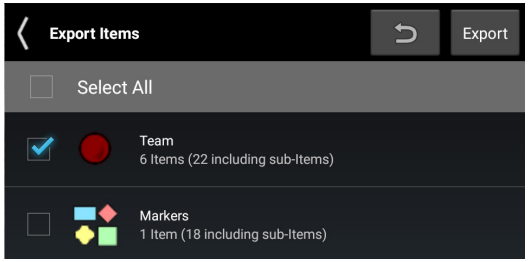
Users may select a layer of interest and use the radial buttons to turn visibility of that layer on and off. When the indicator appears green, the corresponding layer is visible. When the indicator is hollow the corresponding layer is not visible. For example, when a marker is selected, the various markers can be selected or deselected for display. When a displayed item is selected, a detailed listing will appear. This listing can be sorted alphabetically or by proximity to the self-marker. Additionally, if a category is marked green this indicates one or more sub-element is visible. If the category is not marked green, no sub-elements are visible.

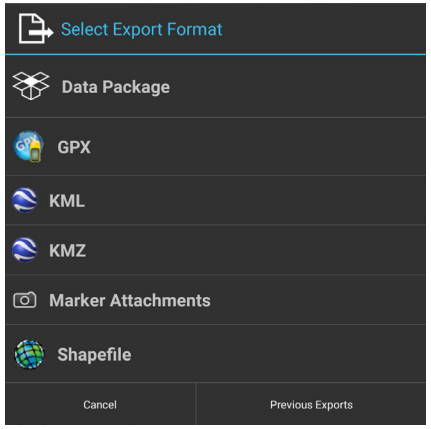


Multi-Select Export

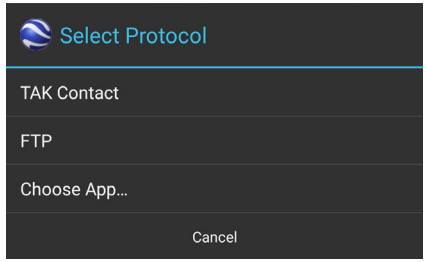
The user can export an existing overlay to a file or directly to additional users for use in other applications. This is accomplished by pressing the **[Multi-Select Action]** icon, choosing a file format, and then selecting each category of overlays that should be included in the export file. The user can also select [**Previous Exports**] to send to other users.

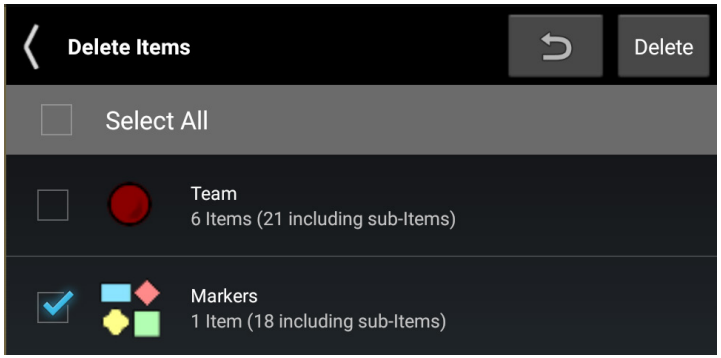






After the selections have been made, select [**Export**] to open the Enter Filename interface. Enter the desired file name and select [**Export**] to create the file. A dialog box will open notifying the user the file has been exported (in this case a GPX file). Select [**Done**] to simply save the file or select [**Send**] to open the [**Select Protocol**] dialog. The user may select a Contact, FTP or to choose an application.



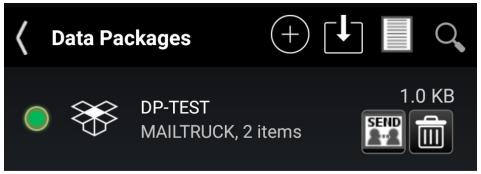


The user can delete existing overlays. This is accomplished by selecting the **[Multi-Select Action]** icon, selecting the [**Delete Items**] icon and then selecting each category of overlays that should be included for deletion. After the overlay categories are selected, press [**Delete**] to open a confirmation screen, verifying the user is confident in the selection.

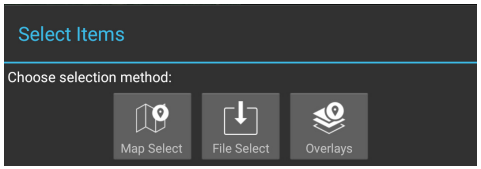
This interface can also be accessed through the Clear Content menu item.

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 built packages may be sent to other network members. Data Packages may also be deleted. When preparing for an operation, a team leader may prepare a route, plot markers, shapes and imagery that pertain to operation objectives. The team leader can include these into a data package and send it to each person on the team, so that everyone has the same information. In addition to Map Items, 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 may also be toggled on or off.

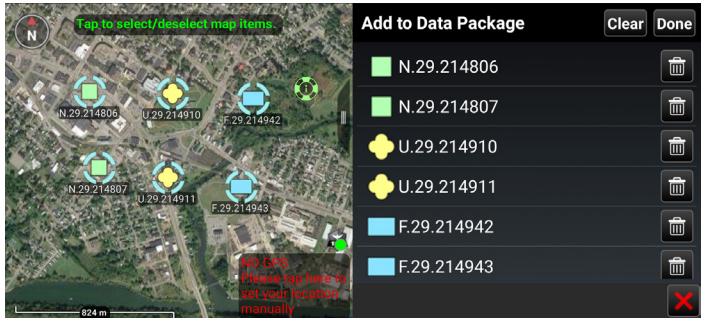


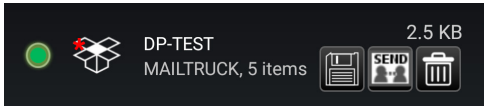
Select the [+] icon in the Data Package Tool to create a new Data Package. Choose the selection method: Map Select, File Select or Overlays to add items to the Data Package. The Map Select option allows the user to select one or more items on the map to be included in the Data Package.



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.

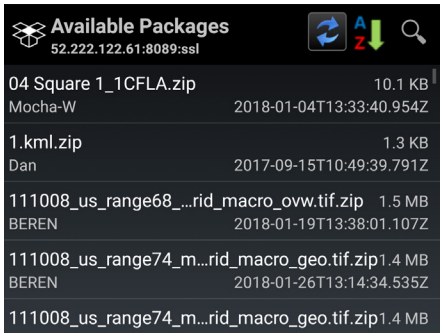
The Overlays option allows the user to select categories or individual items to be included in the Data Package. Select [**Done**] when finished, then choose to either create a new Data Package or add the items to an existing Data Package.



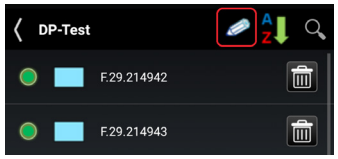


When the user adds to a Data Package, a red asterisk will appear on the Data Package name to indicate that the user should save the Mission Data Package. The size, call sign and the number of items in the mission data package are also shown. Tap on the name of the Data Package to view the included items. Toggle the visibility radial to control data package content visibility on the map interface.

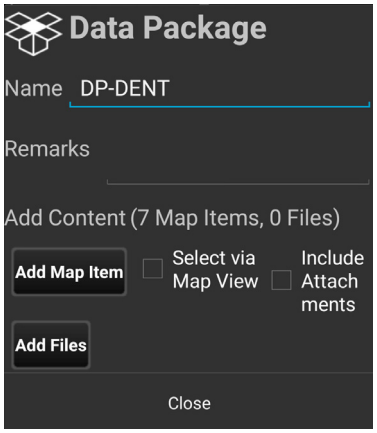
Select the **[Download]** icon to access an existing Data Package from a TAK Server.

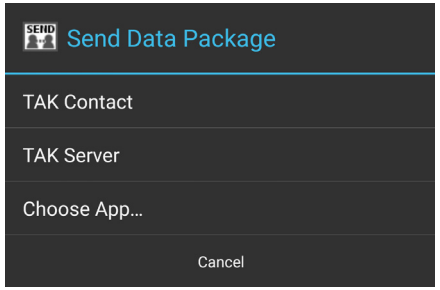


Data Package Tool Continued



An existing Data Package can be modified by either selecting the [+] icon again and following the same steps as described above or by selecting the Data Package listing name and then selecting the [**Edit**] icon to change the name, add remarks or add more content. Select [**Add Map Item**] to open a map interface to add current map items, or select [**Add Files**] to open a file browser to select saved files.





When done with modifications, select the **[Send]** icon to open a list of options for sending the Data Package including: TAK Contact, TAK Server or another application. 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.

Select the **[Transfer Log]** icon on the Data Package Tool menu to view the file transfer log of imported and exported mission packages.

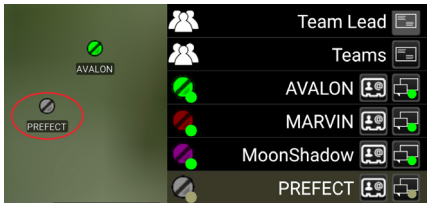
Select the **[Search]** icon to locate a desired Data Package in the listing.

The Data Package Tool can be customized in Settings> Tool Preferences> Data Package Control Preferences.

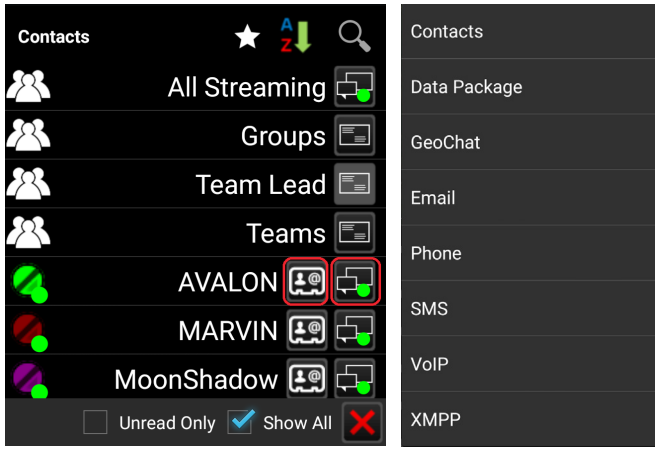
Contacts

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.

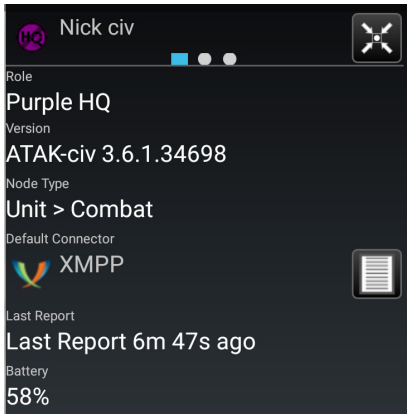
A default communication type (shown in the last column) may be selected and used until another type of communication is selected.

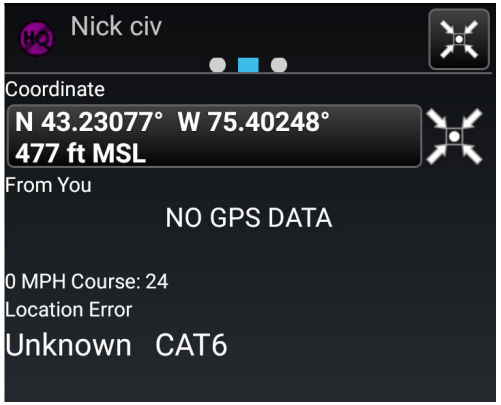


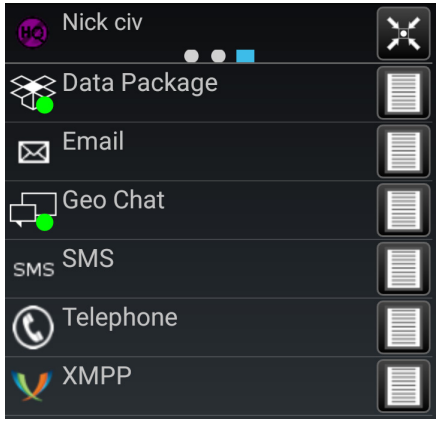
If a contact is no longer online this will be indicated by the contact listing changing to a yellow hue and the marker changing to gray both in the list and on the map.



Profile cards are accessed by selecting the second to last column 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.



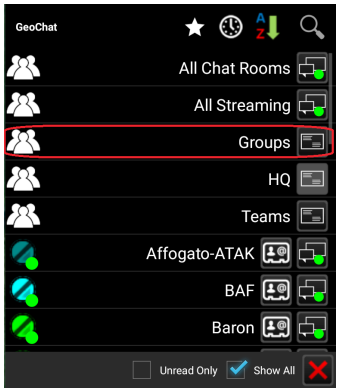




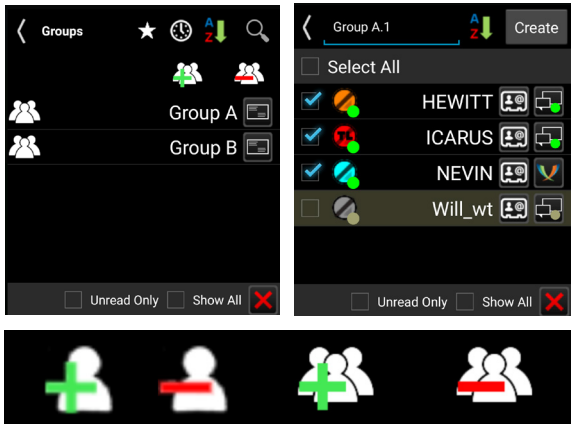
GeoChat

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

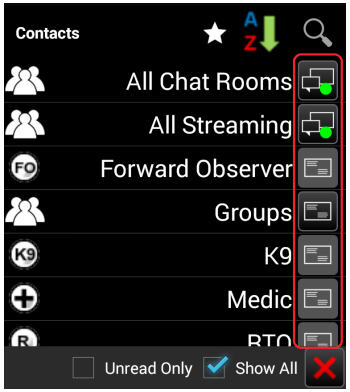
Management and Configuration



GeoChat management and configuration 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, tap on the [**Groups**] line (not the communications button). This will bring up the group configuration screen. 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.

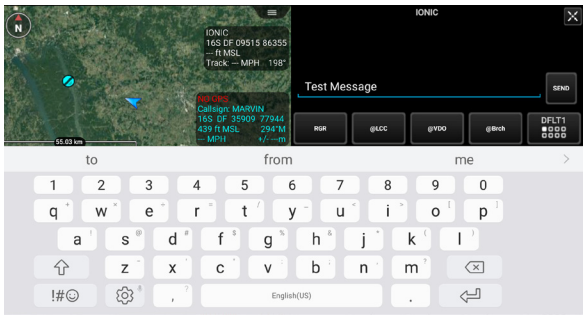


Messaging

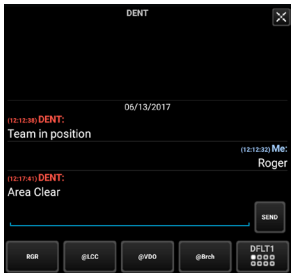


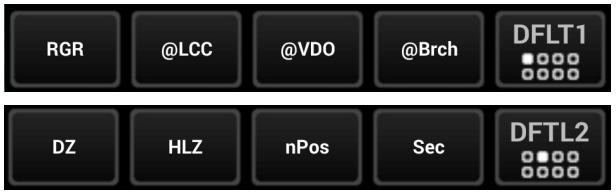
Group and person-to-person messaging is available. To view messages from or send messages to an individual, tap on the desired contact's [**Communication Button**] icon. Select [**All Chat Rooms**] to view all messages from or send messages to those present on the network. Select [**All Streaming**] to view all messages from or send messages to those present on the server. Other groupings available for viewing or sending messages are: 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**] 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, messages are sent only to members of the sub-group.

GeoChat (continued)



Tapping in the Free Text Entry area will bring up 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.



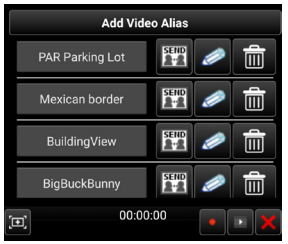


A numbered red dot will appear on the [**Contacts**] icon when a message has been received successfully. The number denotes the number of unread messages that have been received. Select this icon to view the contact list. The user name who sent the message will appear with a numbered red dot next to 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.

Video Player

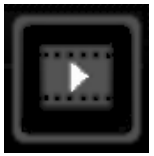
The Video Player supports playing video streams from IP cameras. The menu allows adding, editing, deleting, playing, or sending videos to other network members. Tap the [**Video Player**] icon to bring up the Video player.

Select the desired video alias 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 the left. To return to half screen slide the pull bar back to the right. Pinch Out or Pinch In to zoom.

Select the [**Video Listing**] icon to return to the list of available videos. Tap the [**Play**] icon to return to the currently playing video.



When a video is playing at half width, slide the pull bar to the right to hide the video but maintain the connection for a configurable time. This time can be configured in Settings > Tool Preferences > Video Preferences > Idle Stream. The default is set to 180 seconds. Slide the pull bar to the left to unhide the video. The status of the video player is reflected in the main Android Notification Bar 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 and will be saved in the "\atak\videosnaps" folder. The image file can then be viewed in any application capable of JPEG images.

If a live UDP stream is being viewed, it can be recorded by selecting 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\."

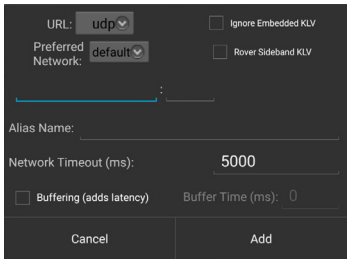
Note: This is only available for UDP streams.

To close the video player, tap the [**X**] located at the bottom right corner of the video player.

Adding a Video Stream

To add a video alias, select the **[Add Video Alias]** button and add a video alias or import an alias from the TAK Server.

Enter the necessary information for the selected stream type: Stream Type (UDP, RTSP, RTMP, RTMPS, TCP, RTP, HTTP, HTTPS, RAW) along with the necessary streaming information including, IP address (leave IP blank to listen on your own IP), Port Number, Alias Name, Network Timeout, Buffering and Buffer Time. Selecting Buffering along with a Buffer Time will provide a small amount of buffering of input video flow to help smooth video streams.



Note: Adding buffering will increase latency. When done, tap **[Add]**.

Video Aliases may be sent to other network members by selecting the [**Send**] button on the desired video listing. One or more members may be selected. Tap the [**Send**] button to send to the intended recipients or send to a TAK Server.

To edit an existing Video Alias, tap the [**Edit**] icon to access the same options as shown for the Add Video Alias option. During editing, the video alias can be renamed or redirected to a new address and port combination.

To delete an existing video, tap on the [**Trash can**] to the right of the desired video alias.

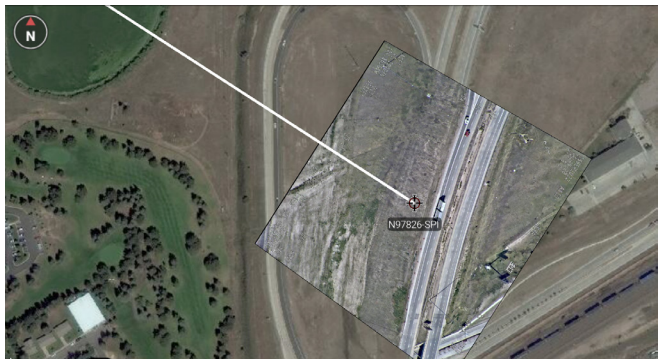
Viewing KLV

If a video includes associated metadata, an option will be available to view a representative SPI or Marker. These markers indicate the map location of the sensor at the corresponding time viewed within the video player. The SPI marker will indicate the center of view corresponding to that sensor as the video plays. The user may zoom to the SPI or Marker by selecting the [**Zoom To**] icon on the video controls, or may lock to an SPI by selecting the [**Lock**] icon.

Note: This functionality is only available for live streams in UDP format if the KLV data is available as well.

Live Video Map Display

When the user has a video (video stream) with metadata for the four corners of the video, the user can view the video in the map interface. The user starts by opening the video and tapping the [**Globe**] icon in the upper right hand corner of the video window, turning the globe green. When the window is minimized, the video can be viewed on the map interface. The video will overlay upon any current imagery displayed.

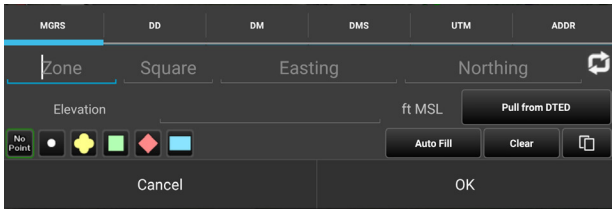


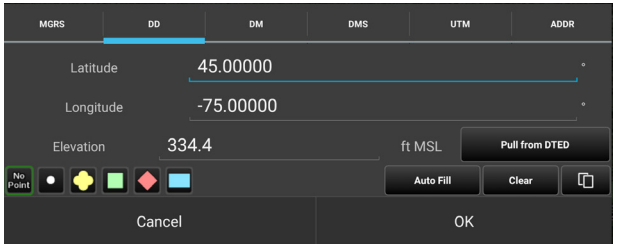
A live stream can be saved and viewed by using a [**Sensor Point**] from the [**Mission Specific**] icon pallet. After the user adds the URL and FOV to the details window of the Sensor Point the video can be viewed. This sensor point can be sent to other users when provided with the URL and FOV.

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.

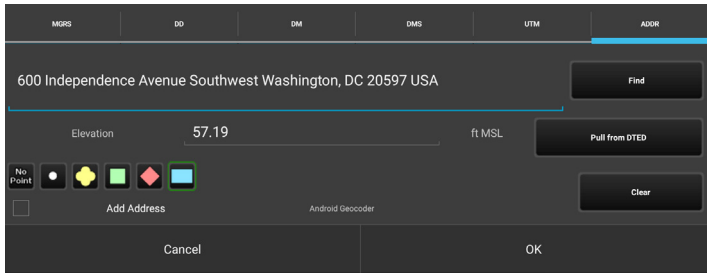




The user can enter the Latitude, Longitude and Elevation in the space provided for [**MGRS**] , [**DD**], [**D-M**] or [**D-M-S**] searches. If DTED is installed, the Elevation value can be automatically populated by tapping the [**Pull From DTED**] button. The user can select a desired marker type (Spot, Yellow, Green, Red, or Blue) 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. The user can also enter an address and drop a marker or zoom to the entered location.

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.

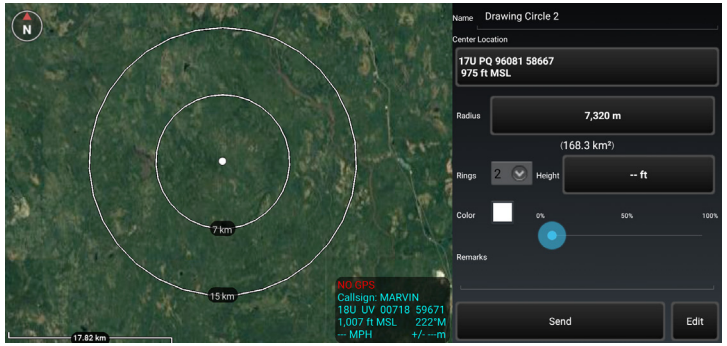


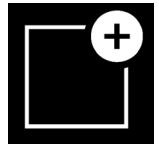
Drawing Tools

The **[Drawing Tools]** Icon allows the user create different shapes and/or telestrate on the map. The R&B Line, Fine Adjust, and Delete radial menus behave in the same manner as other map objects. The user may choose to create a shape by selecting the [**Shape**] icon. The Geo Fence Tool allows users to create a virtual fence, using an existing closed shape, which triggers entry/exit notifications. The Telestrate Tool allows the user to create a quick, free form drawing on the interface.

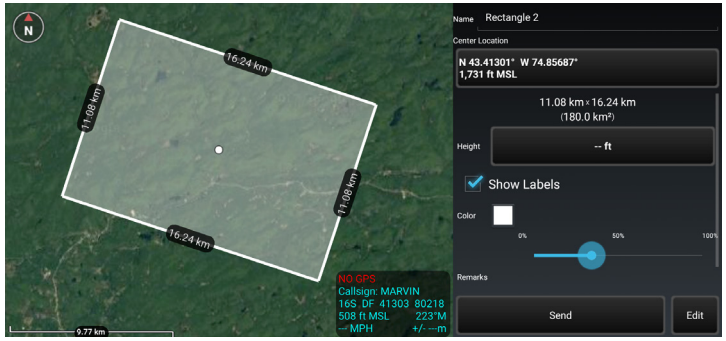
Create a Shape

To add a Circle, tap the [**Circle**] icon and then tap on a location to place the center point and tap another location for the radius. Select the circle on the map and select the details radial to change the name, radius, number of rings, color, opacity, addition location information, add a height, a remark or send or broadcast the circle information to others. Selecting the circle on the map, will bring up the Circle radial menu. Options available are: Delete, R&B Line, Geo Fence, Edit and Details. Note that Fine Adjust is not active for this shape.
To edit the circle, select the [**Edit**] icon. Long press the center point to move the circle or long press the edge to resize. Tap [**Undo**] to reverse changes or [**End Editing**] to save the changes.



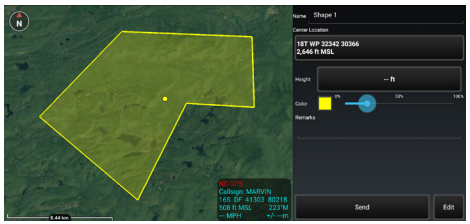


To add a Rectangle, select the [**Rectangle**] icon, then tap a location to place the first corner, tap another location to add a parallel corner, and tap a third location to indicate the desired depth of the rectangle. Select the rectangle on the map and select the details radial to change the name, color, opacity, addition location information, add a height, a remark or send or broadcast the rectangle information to others. Tapping on the rectangle on the map, will bring up the Rectangle radial. Options available are: Delete, Show Labels, R&B Line, Geo Fence, Edit and Details. Note that Fine Adjust is not active for this shape.
To edit the rectangle, tap on the **[Edit]** icon. Drag a corner or side of the rectangle, or long press a mid-point or vertex, to move the selected side. The rectangle can be rotated if one of the four mid-points are held and dragged. Select [**Undo**] to reverse changes or select [**End Editing**] to save the changes.



Create a Shape Continued

To add a Free Form shape, select the [**Free Form**] icon and select a location to place the first vertex for the shape and then continue to tap to add vertices. Tap on the initial vertex to close the shape or tap [**End Shape**] to form an open shape. Select the [**Undo**] button to remove the links in sequence. Select the Free Form shape on the map and select the details radial to change the coordinate of shape center point, coordinate type, name, color, opacity, add a height, add a remark, and send or broadcast the shape information to others. Note that an open shape's center point cannot be changed. Tapping on the shape on the map, will bring up the Free Form radial. Options available are: Delete, R&B Line, Geo Fence, Edit and Details. Note that Fine Adjust is not active for this shape. To edit the shape, select the [**Edit**] icon on the Radial. Drag a vertex of the shape or long press a line to add a vertex. Select [**Undo**] to reverse changes or tap [**End Editing**] to save the changes.

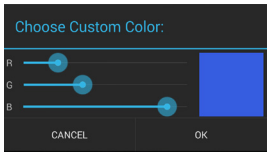


Telestrate

Select the [**Telestrate**] icon to access the Telestrate toolbar. Tapping the [**Telestrate**] icon enables and disables map scrolling by turning telestration on or off. Select [**Undo**] to reverse the most recent activity. Selecting [**End**], will end the current telestration session saving all activity as a single Multi-Polyline and returns the user to the main Drawing Tools menu. Tapping a telestration on the map will bring up the Radial menu. Options available are: Delete and Details. Select telestration details on the radial menu to change the name; add a height; change, delete or add lines, or send/broadcast to others.

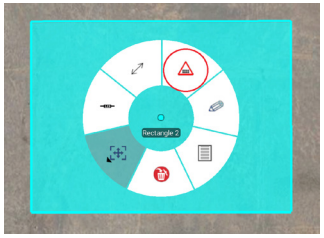
When the Telestrator is toggled on, the user is able to free form draw manually or with a stylus.

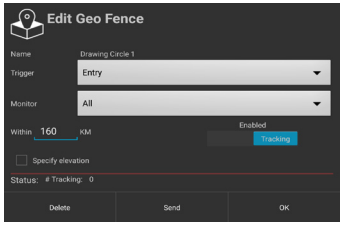
Selecting the Color Selection icon will open the Choose Telestration Color Menu. The user may choose a provided color or select **[Custom]** to customize a color using the Choose Custom Color window.

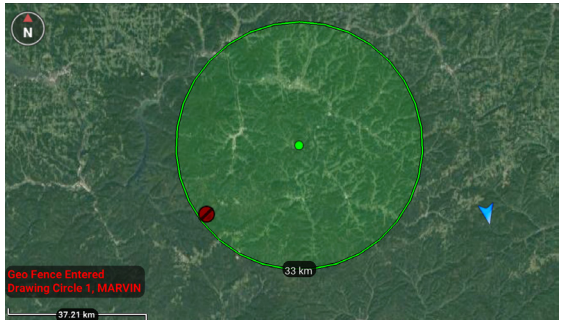


Geofencing

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. Alerts appear on the map interface. Selecting the [**Alert Notification**] will open the alerts menu, detailing the activity monitored in the user defined region of interest. Note the "Within" distance is the radius from the Geo Fence center point to search for map items to monitor. If the user wishes to keep the Geo Fence, but disable tracking, the user can slide tracking off in the Edit interface.

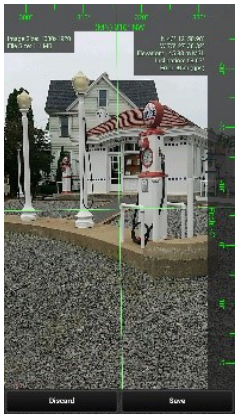




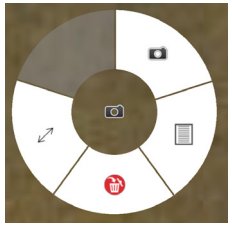


Quick Pic

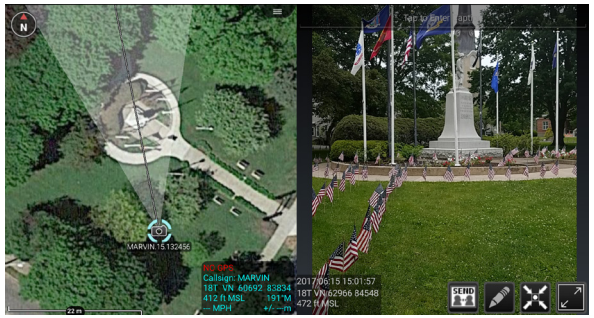
Select the [**Quick Pic**] icon to access the Android device's camera or another camera application.



After taking a picture, the user may discard a picture or save it. Saving the picture opens a map view with a camera icon present at the user's location and attaches the image to the camera marker. The user then can send, mark-up, center on the marker in the map pane, or expand the picture to the entire screen.



Select the Quick Pic marker to activate its radial. Options include: Delete, R&B Line, image view, and Details. Selecting image view allows the user to view the image along with the marker and the approximate field of view of the still image. The image can also be accessed by selecting details and tapping the paper clip and then tapping the thumbnail image.



Gallery

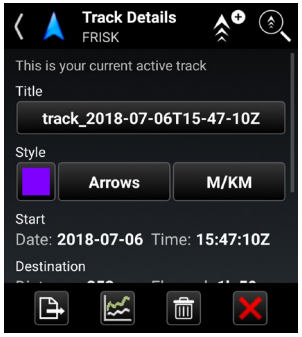
The integrated Gallery Tool allows the user to view media attachments. The marker attachments are shown on the right side of the screen. The user can add a caption to the image by opening the thumbnail in the gallery and tapping the line at the top of the image.

Track History

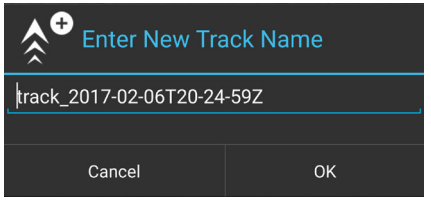
The device's GPS can be used to track movements with the Track History tool. These tracked paths can be exported to a TAK server, to a route or to a KML, KMZ, GPX or CSV file. A GPS position must be established before tracking can begin.

Selecting the [**Track History**] icon will open Track Details for the current active track. The track title, color and style can be modified. A new track can be initiated by selecting the [**Add Track**] icon. The screen displays a default name which the user can accept or edit. When the user selects the [**OK**] button a new track is created in the Track Database and the user's location data is recorded as breadcrumbs.

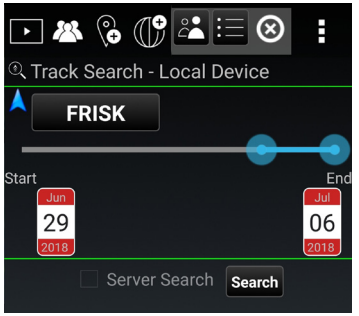
Track Search

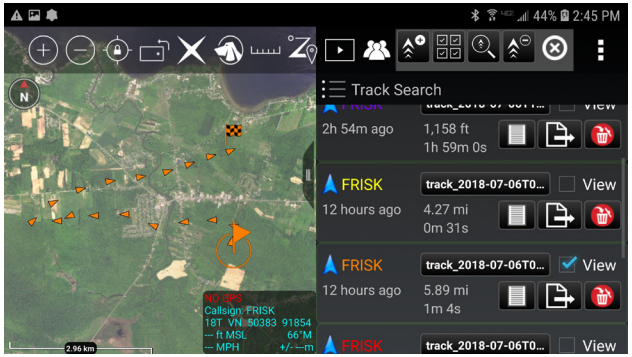


The Track Search function allows a user to view track information that has been previously saved locally or on a TAK Server. The tool searches the Track Database for matches against the specified time range or by user callsign. The matching tracks are displayed as a list. The user can select tracks of interest and those tracks will appear on the map interface.



Select the [**TrackSearch**] icon to access the function. Select the desired callsign and time frame then tap the [**Search**] button. The track list will appear. The query results may be sorted by Track Name or Start Time. The user can modify the name, color, and style of a selected track. Selected tracks may be cleared. Select any of the query results to move to that track. The query results may also be converted to a TAK route or exported as a KML, KMZ, GPX or CSV file. Select the desired tracks and tap [**Export**]. Enter the export name then select [**Next**] and choose the export format. Tap [**Done**] or [**Send**] when the export completes.





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.

Digital Pointer Tools

Select the [**Digital Pointer**] icon to begin using the Digital Pointer Tools feature. When the icon is selected, the available tools appear in the toolbar. The Digital Pointer Tools capability primarily allows the user to share Special Points of Interest with team members. Additionally, GoTo MGRS is available for use.

The two Special Point of Interest (SPI) buttons allow the user to place indicators on the map. If other team members are on the same network, the SPI markers will automatically be sent to them as notification messages. The SPI icon will autosend to all other users' maps with a line to the user's marker that set the SPI. Selecting the SPI opens a radial menu, allowing the user to Delete, Fine Adjust, R&B Line to Self-Marker, R&B Line, Range Ring and Place a Marker.

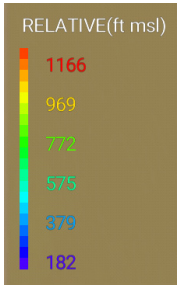
The Digital Pointer Tools settings can be customized in Settings > Tool Preferences > Digital Pointer Toolbar Preferences.

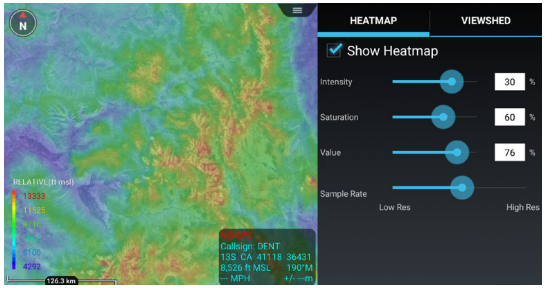
The user can also enable the legacy toolbar mode in the same preference area. The legacy mode will add another SPI and the Dynamic Range & Bearing Line.

Elevation Tools

Select the [**Elevation Tools**] icon to open the Elevation Tools which includes Heatmap and Viewshed functionality.

The Heatmap shows the user elevation data on a color scale with lower elevations represented by blue and higher elevations by red. The Intensity, Saturation, Value and Sample Rate of Resolution can be modified to user preference. DTED is needed for this tool to work properly





Viewshed

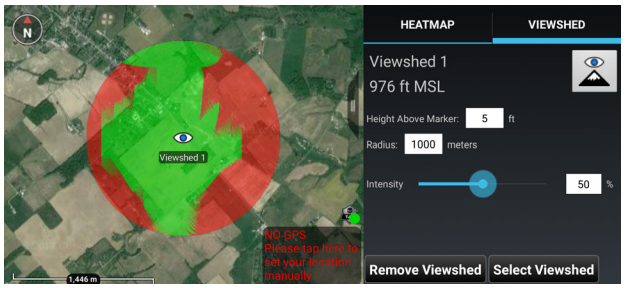
The Viewshed tool allows the user to choose a position on the map interface and determine visibility from that location. Select the [**Eye View**] icon and then tap a location on the map or a map marker. An Eye marker will appear on the map.

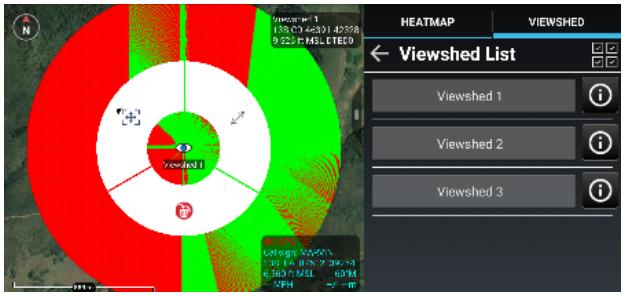
NOTE: If zoomed out too far, the user will only see the Eye View icon and will need to zoom in further to see the viewshed.

A radius will display with green representing areas visible to the viewer and red representing areas that are obstructed from view. The user can modify the viewshed radius. The Height Above Marker can be altered to reflect how far above ground level the viewshed should calculate. Intensity can be increased or decreased using the slide bar or entering a numeric value. Select [**Remove Viewshed**] to delete the viewshed from the map.

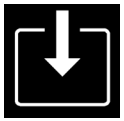
Settings for Elevation Tools can be changed by navigating to Settings > Tool Preferences > Elevation Overlay Preferences.

Tap [**Select Viewshed**] to show a list of all created viewsheds. Select an individual viewshed name to pan to it on the map. Select the details icon [**i**] to view or modify the current viewshed parameters. The user can also remove viewsheds through the multi select tool.



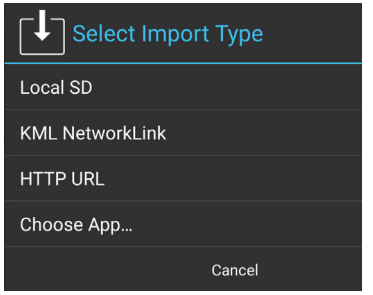


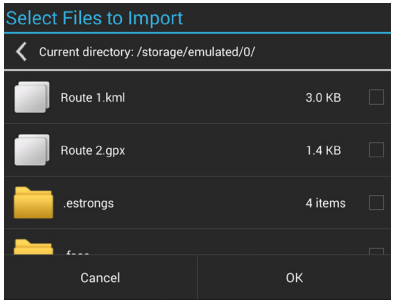
Import Manager



Select the [**Import Manager**] icon to import supported files into the TAK application from an SD card or via the TAK Server.

Tap the [+] icon on the Import Manager menu to open the Select Import Type interface. The user can select [**Local SD**], [**KML NetworkLink**], [**HTTP URL**], or choose a different application.

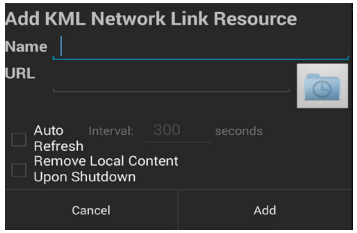


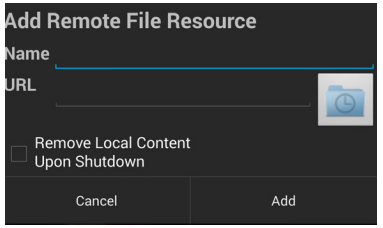


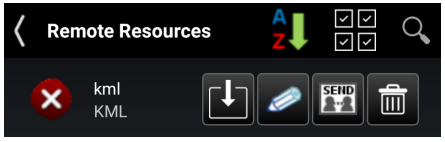
Select **[LOCAL SD]** to import from a folder residing on the internal or external SD card. Navigate to the folder from where files are to be imported. Various types of files can be imported via Import Manager including: TAK configuration, Data package zip files, DTED, GRG, imagery and overlay files.

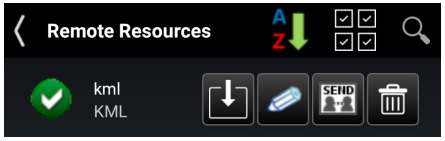
Imagery file types that are supported include XML, SQLite, GeoPackage with imagery, CADRG, CIB, ECRG, GeoTiff, JPEG2000, KMZ with imagery, MrSid, NTIF and PFPS. Overlay file types that are supported include DRW, GPX, KML, KMZ, LPT and Shape.

Select [**KML Network Link**] to import a KML file via the network using HTTP or tap [**HTTP URL**] or [**Choose APP**] to import other file types via the network using HTTP. Enter a name for the link, a valid HTTP URL and a refresh interval, and then indicate whether or not the local content should be removed when the application is shutdown. Select [**Add**] to save the link.



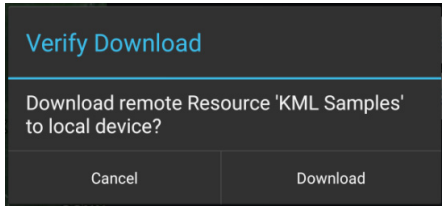


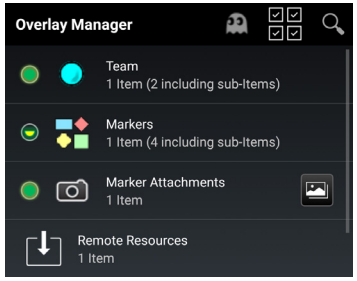




The Import Manager menu will be populated with the listing of links to network files. The Red Status Indicator appears next to files that are available for download but have yet to be added. Selecting the [**Globe**] icon initiates the download process after the user verifies the activity. The Green Status Indicator lists files that have been successfully downloaded.

Once the remote resources have been set up and imported, they will be listed in the Overlay Manager under the Remote Resources category.

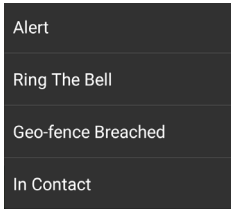


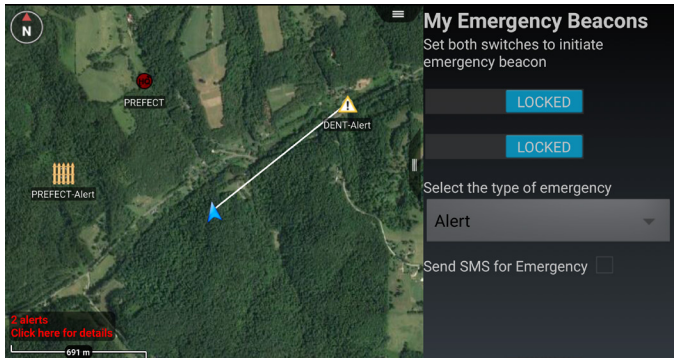


Emergency Beacon

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

The Emergency Alert (beacon) allows the user to indicate their location and need for assistance by selecting one of the following: 911 Alert, Ring the Bell, Geo-Fence Breached and In Contact.

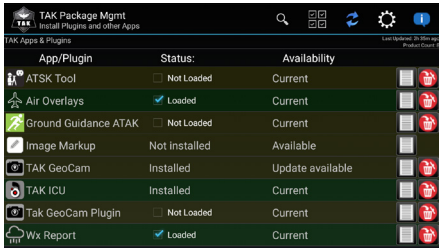




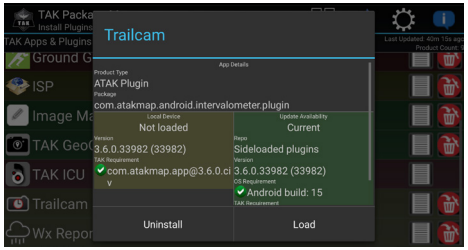
Once the Emergency type has been selected and both switches have been enabled, the TAK Server broadcasts the announcements to all network contacts. Even if the user's device is turned off, the beacon will continue. Only when the user returns to the Emergency Beacon tool and turns off the switches will 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.

TAK Package Management

The primary user interface for managing products and Product Repositories in ATAK Civilian is within the TAK Package Management Tool. This tool streamlines the process of obtaining plug-ins, installing them into Android OS, and loading them into ATAK Civilian. It is available via Settings > Tool Preferences > TAK Package Mgmt.

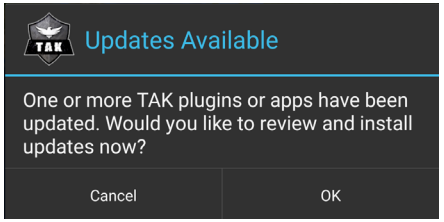


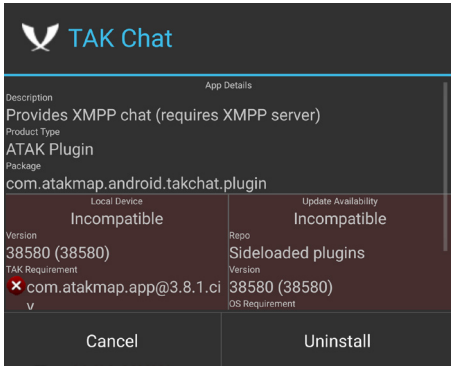
Upon opening ATAK Civilian or after a Product Repository sync completes, if any current products have available updates (e.g., new version of an application or plug-in), then the user will be prompted to open the TAK Package Management view to update products as desired.



Note: Compatible products may still be run when an update is available; however, incompatible products will not be loaded into ATAK Civilian until they are updated.

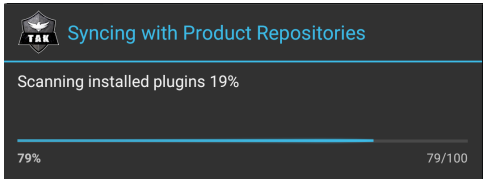
The TAK Package Management view provides a single location for the user to manage TAK products available across all supported TAK Product Repositories. The user may quickly view status, availability and details of all products. The user may also install, update and uninstall products. A search interface is provided to search and filter products.





The Over the Air Update Server Product Repository may be configured to (1) view status of Remote Repository (status of last sync attempt), (2) view time of last successful sync with the Remote Repository, (3) enable or disable a Remote Repository (disable by clearing the URL) or (4) switch to a custom or private Remote Repository (change the URL).

To enable or disable auto synchronization of the device with all configured Product Repositories tap the [**Settings**] icon and then tap the [**Auto Sync**] box. If "Auto Sync" is enabled, the sync occurs each time ATAK Civilian is started. The user may sync on-demand by pressing the blue [**Sync**] icon on the toolbar.

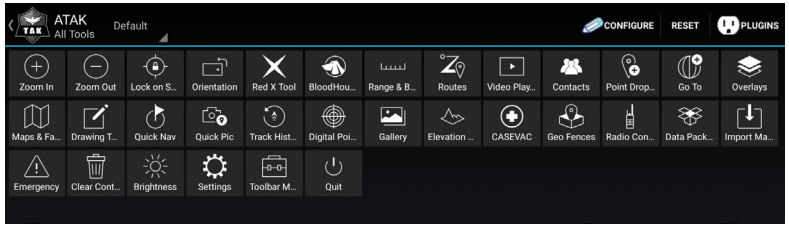


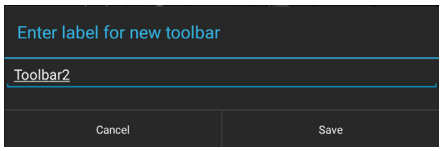
Additionally, ATAK Civilian automatically syncs with the configured product repositories the first time ATAK Civilian runs after being upgraded to a new version. This allows ATAK Civilian to check for available updates and incompatible plug-ins. If a repository sync is explicitly requested by the user, a sync operation will display a progress dialog. Auto sync operations which occur during startup do not display a progress dialog, minimizing interference of the user working in other ATAK Civilian tools.

Toolbar Manager

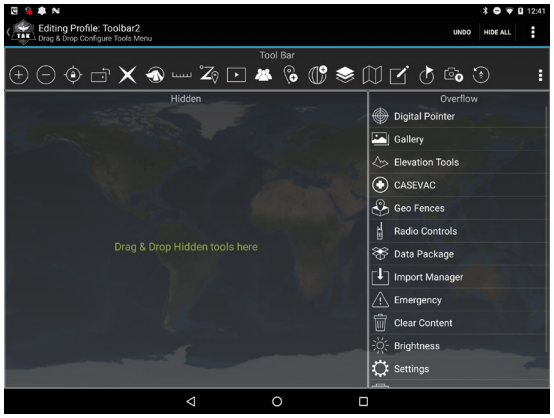
Select the **[Toolbar Manager]** icon to access the Toolbar Manager interface. The user can hide tool icons, customize the icons displayed on the top ATAK Civilian menu bar and customize the appearance of tools listed in the additional menu items dropdown.

The Toolbar Manager interface displays the icons for all the available tools in ATAK Civilian. The following preset toolbars are available for specific mission sets through the default dropdown: Default, Minimal and Planning.



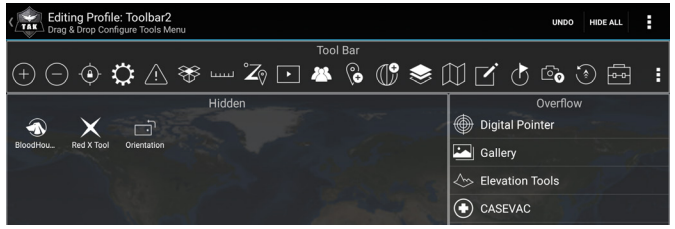


The user can create and name a new toolbar by selecting [**Configure**]. The user drags and drops icons to configure the interface as required. The Configure Tools interface is comprised of three areas: the Action Bar, which displays tool icons on the main toolbar in ATAK; the Hidden region, which allows the user to select tools to remove from the toolbar and menu views; and the Overflow region, which lists the tools available in the Additional Menu Items drop down. The [**Undo**] and [**Hide All**] options are available at the top right corner of the interface. Selecting the Additional Menu drop down allows the user to discard the toolbar or save it.



Selecting [**Save As**] opens the [**Enter Label**] window and allows the user to name the new toolbar. The label will appear among the available toolbars drop down on the main Toolbar Manager interface.

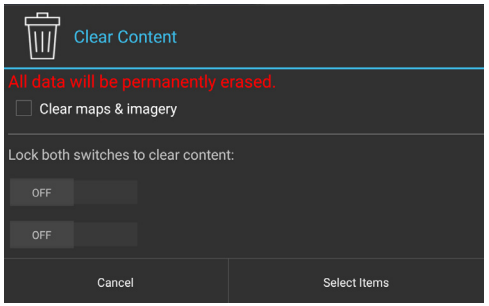
The user may select [**Reset**] to discard all the toolbars that have been configured. The [**Default**] view is always available and after the Toolbar Manager is reset, ATAK Civilian will revert to the default view. Additional views allow the user to customize tools needed for specific mission planning.

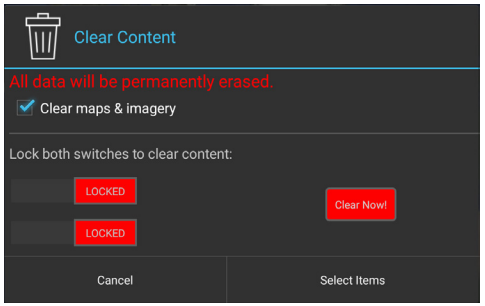


Clear Content

Select the [**Clear Content**] icon to remove all ATAK Civilian content from the Android device. Note that this action will permanently erase all content.

Select the [**Clear maps & imagery**] checkbox to clear map and imagery data as well.





Lock both switches by swiping them to the right to activate the **[Clear Now]** button then tap [**Clear Now**]. ATAK Civilian will exit after this action has completed. The user can select specific items to delete by tapping the [**Select Items**] button. This will navigate to the Overlay Manager Multi-select tool. Select [**Cancel**] to return to the main interface.

During the delete process the file data is corrupted, making file recovery nearly impossible.

This can also be accessed through Settings > Control Preferences > Media Preferences > Clear Content. In the Media Preferences Settings, the user may select the option to Clear Attachments, Clear Content or Clear Content Upon Shut Down.