NaviTracker

'As The Crow Flies' navigation and tracking in Airplane Mode. Recreational Navigation Tool using GPS, Compass, Waypoints, and Alarm Zones.

Application Reference

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Contents

I. <u>Overview</u>

'**NaviTracker**' has all the features that any person involved with outdoor recreational or navigational activities would need. The app operates on any iOS device (in background or foreground) that has a built-in or Bluetooth-connected GPS receiver. Navigation is based on GoTo Waypoints "As The Crow Flies". No Internet connection is required (can be used in Airplane Mode). However, when an Internet connection is present, location information is displayed on a map and Waypoints can be selectively interfaced with Apple's Map app when installed on the same device.

Map displays are not available when in off-line mode.

A comprehensive set of Navigation Screens are available to display Compass and typical GPS data.
A rich database of Waypoints can be created from different input sources as well as user-supplied informational meta data.

Geofences to alert waypoint arrivals/departures can be configured as either circular or polygon-shaped Alarm Zones.
The user has the option to configure Alarm Notifications for monitoring targeted speed, altitude, and/or distance sentinels.

Alarm notifications can also be in audible voice format (English language) in case the device is being used while driving (when notifications are usually muted by iOS to prevent distraction).

A Tracking Log Manager handles a catalog of user-named track history for future review and analysis. Named tracks can be shared via email in formats ready for import into Google Earth, OSM, or into the '**NaviTracker**' app installed on a different iOS device.

Some of the utility features cover data backup via File Sharing, email attachment, or synchronization with nearby devices running a copy of '**NaviTracker**'. Tracking history files can also be imported directly into the app as email attachments received on the device.

Devices with iOS 12 (and later) can configure the app to use Siri for short-cut commands.

The app performs all navigation functions without being connected to the Internet.

NOTE: With the exception of Siri Voice Shortcuts and selected downloading of Map images for off-line navigation, the app does not upload or depend on being connected to the Internet in order to perform core navigation functionality. All user-data is securely stored

locally on the device and access-protected with owner configured password and/or a biometric type authentication method (e.g. Touch ID, Face ID).

Although primarily targeted for iPhone devices, the app can also be installed on an iPad or iPod touch, running iOS 9.0 (and later) as long as a GPS receiver hardware is accessible for location tracking. The GPS receiver can either be an integral part of the mobile device or a third-party unit connected via Bluetooth.

II. <u>Privacy and Data Protection</u>

All data collected to meet the functional objectives of this app ('**NaviTracker'**) are securely stored internally on your device and *not* uploaded to a remote server, iCloud, or any other Internet-based repository/service.

This app is not designed to share your information with any party or entity for any purpose.

Users can manage their data in confidence being assured that their information is kept private on the device on which the app is installed from the Apple App Store.

The user can control the apps' iOS Privacy settings based on certain functions to be performed. Typical allowed features include access to:

1. *Location **Always*** for the app to perform navigation functions in either background or foreground
2. *Photos* to use as a location source when defining Waypoints or augment Waypoint meta data
3. *Camera* to augment Waypoint meta data for illustration purposes
4. *Face/Touch ID* to allow quick and secure app authentication
5. *Siri Search* for verbal short cuts to initiate app actions

6. *Notifications* for the app to issue local alerts when arriving/departing at a user-defined geofence
7. *Cellular Data* to access on-line Apple navigation maps and/or download navigation maps from Open Street Maps (OSM) for local storage and use in off-line mode. The preferred method for downloading off-line maps is over the Internet via a Wi-Fi connection.

III. <u>Navigation</u>

     A. <u>Compass/GPS</u>
     B. <u>Sun/Moon</u>
     C. <u>Waypoints</u>
     D. <u>Data Sync</u>
     E. <u>Settings</u>
     F. <u>Remove Demo Items</u>

Overview

Make a customized Lock Screen Wallpaper to be displayed when your device is activated.
The information contained on the Lock Screen will have sufficient information to assist a finder to return the device to you.

Create a customized Wallpaper to aid in the recovery of a lost Apple Watch.

The watch face can be configured using the Watch app and applying the Wallpaper stored in the iPhone Photos Library.

Print a DIY Device Label to attach to the outside enclosure of the device.
The purpose of the label is to show recovery information in case the Lock Screen cannot be displayed (e.g. because of no power or other malfunction).

Record a personalized voice message for a Finder of your device. This message will replace the default messages provided by the app.

The message is played back on various occasions when the app is activated from either the '**NaviTracker'** widget, or when the app is launched due to a 3D/Long-Pressure touch, or some other user interactions. Customize your Device Owner Profile, which contains the contact information to be shown on the Lock Screen and DIY Device Label.

Import Device Serial Number to augment Wallpaper and other recovery information by also displaying the serial number.

This additional piece of information can be helpful when reporting a lost or stolen device to the authorities.

A. Compass/GPS
The purpose of the Lock Screen Wallpaper is to provide sufficient information to return a lost device, particularly if access to the device Home Screen is locked with a Passcode.
The Lock Screen Wallpaper will always be displayed on the startup (or Lock) screen when a device is powered up.

The app will give you the option to either create a **Custom** or **Default** Wallpaper version.
A **Custom** version enables you to change the Lock Screen Wallpaper by editing the recovery text and background image.

A **Default** version is automatically generated by the app with minimum user input.

Assuming that your device supports the display of a Live Photo, you have the option to configure a Recovery Tag in Live Photo format to be used as the Lock Screen Wallpaper.

The new version should be assigned as the current device Wallpaper for the Lock Screen.

If you also wish to display a Recovery Tag as a Widget when your device is locked, please enable the Today View as follows:
1. From the Home screen select 'Settings'.
2. Select 'Face/Touch ID & Passcode'.
3. Enter your passcode.
4. Scroll down to the section ALLOW ACCESS WHEN LOCKED:
5. Set the 'Today View' switch to *ON*

B. Sun/Moon

Create a Wallpaper in the form of a Watch Face to aid in the recovery of a lost Apple Watch.

The app will give you the option to either create a **Custom** or **Default** Wallpaper version.
A **Custom** version enables you to change the Watch Face Wallpaper by editing the recovery text and background image.
A **Default** version is automatically generated by the app with minimum user input.

The Watch Face can be configured using the Watch app and applying the Wallpaper stored in the device Photos Library.

C. Waypoints

Make your own Device Label to attach to the outside enclosure of the unit.
The purpose of the label is to show recovery information in case the Lock Screen cannot be displayed (e.g. because of no power or other malfunction).
Labels are formatted compatible with popular

ANSI A (US Letter)
or
DIN A4 (metric) sizes.

In the event that the provided label formats do not meet your needs, customize a label based on your own specifications.

You can either print one Label on a selected Row and Column, or a series of labels starting at a selected Row and Column on a sheet.

As many pages as needed will be printed to accommodate all required labels.

D. Data Sync

You can create a personal audio message in your own language for presentation to someone who recovers your lost device, leaving instructions on how to return the unit and maybe claim a reward.
You can use the built-in microphone to make your recording.

The Finder Voice Message (either customized by you, or provided by the app as default) can only be activated in case where a user has access to the app because the device was not locked and/or password protected by the you.

The app will play the voice message under the following circumstances:

1. the app is launched because the user touched the **'NaviTracker'** widget (Recovery Tag),

2. the app is launched from the Home Screen manually and the user long-presses on the Dashboard window,

3. makes more than three failed login attempts to the app, or

4. the user applies 3D/Long-Pressure Touch on the app icon and then touches the displayed Recovery Tag window.

E. Settings

You can customize your Device Owner Profile, which contains the contact information to be shown on the Lock Screen and DIY Label.

F. Remove Demo Items

By importing the device serial number, Wallpaper and other recovery information will be augmented by also displaying the serial number.

This additional piece of information can be helpful when reporting a lost or stolen device to the authorities.

IV. Off-line Maps

      A. Current Location
      B. Maps by Zoom Level

Overview

This feature is activated by setting the 'Show Inventory Menu' switch into the ON position. The switch is located on the 'General Options' page of the app 'Preferences Menu'.

Typical functions that can be performed are:

• Lists all Items registered into the Inventory by the device owner and (based on preference settings) indicates the total number in the form of an app Badge Icon on the Home Screen.

• Shows inventory items grouped by item user and also allows for Inventory Reporting with several sorting options. Reports are in PDF format, ready for printing or sharing using different means.

• Breaks down the Item Inventory by Categories (e.g. Apple Watches, Macs, Smart Apple hand-held, other Apple devices, or User-defined Items).

- Allows for the backup and restore of the Items Inventory database.

A. Current Location
This section lists all registered items by designated Owners.
Each item can be managed by either swiping a list entry to the left for added actions, or by tapping an entry to perform more extensive maintenance functions, such as changing ownership, updating item descriptions or images, documenting procurement information, and generating reports for printing as PDF.

All information is securely stored directly on your device and can also be exported for backup purposes.

NOTE: There are no practical limits to the number of items that can be recorded into the Item Inventory. However, the maximum size of the Item Inventory is limited to the available storage space on your device.

B. Maps by Zoom Level
This section allows for the creation and maintenance of inventory items by type (or category).
The following types are supported:

1. Apple Watch
2. Mac
3. Other Apple Devices

4. Any Non-Apple Items

The user can add items within each category, provided that a Serial Number or unique identifier is associated with each item.
Serial Numbers can either be entered manually or imported using the BarCode Reader feature of the app.

V. <u>Monitor</u>

Overview

Manipulate your own Live Photos when running your device with iOS version 9.1 (and later).

The maximum recording duration for a Live Photo and/or animated GIF is recommended to not exceed three seconds.

A. Speed

Make a Live Photo using a picture from your Photo Library, Camera, shoot a video with your Camera, or import one from the Video Library.

B. Distance

Use a Live Photo on your device and convert it to an animated GIF for sharing over the Internet (e.g. as an email attachment or, depending on device type, via AirDrop).

C. Altitude

Splits a Live Photo into its discrete components for subsequent use.
Stores an image and a video in the device Pictures Folder from a Live Photo input source.

D. Tracking Log Manager
Splits a Live Photo into its discrete components for subsequent use.
Stores an image and a video in the device Pictures Folder from a Live Photo input source.

VI. <u>Preferences</u>

Overview

Provides your feedback to our developers via the App Store with the intend of improving functionality in future releases.

Allows for the configuration of several app-wide behaviors.

A. General Options

Transfer constructive feedback and suggestions to our developers via the <u>Apple App Store</u>.
Your comments will be reviewed by our team to improve the functionality of the app in upcoming releases.

The device has to be connected to the Internet in order to perform this function.

B. Set App Login Credentials

Configure app-wide preferences, such as restricting app use by requiring either login authentication or having unrestricted access.

Authenticating with Touch/Face ID (if supported by device), or setting inactivity time-outs for automatic logout from the app to protect privacy.

If iOS 10.3 (and later) is installed on the device, then the app icon can be changed to display an alternative one on the Home Screen.

C. Data Backup/Restore

The app will indicate that a device has been locked by monitoring if the device has iOS Password set to ON, and will display the respective status on certain screens, suggesting that iOS Password should be active to prevent unauthorized used.

Monitoring can be enabled/disabled to affect related alerts.

D. App Feedback

Displays the current iOS privacy settings related to app **'NaviTracker'**.
The user can change the settings based on certain features to be performed by the app.

Typical allowed features include access to:

1. *Contacts* to identify the owner of a device
2. *Photos* to create customized Wallpapers
3. *Microphone* for recording a personalized device recovery announcement
4. *Face ID* to allow quick and secure app authentication
5. *Siri Search* for verbal short cuts to app functions
6. Notifications for the app to issue reminders when database should be backed up

E. App Privacy Settings

Update the login information in order for the app to be used securely.

F. Siri Shortcuts

iOS 12 (and later) users can configure voice shortcuts to perform certain '**NaviTracker**' app features via Siri. Please note that Siri does require that the device be connected to the Internet.

VII. <u>How-To Tutorials</u>

      A. Set Lock Screen Wallpaper
      B. Import Device Serial Number
      C. Set Watch Face Wallpaper
      D. Report a Lost Apple Device
      E. Activate Inventory Management
      F. Add Items to Inventory
      G. Exporting Inventory Backup File
      H. Importing Inventory Backup File
      I. Restoring the Inventory Backup File
      J. Handling File Sharing

Overview

The usage descriptions are somewhat generic in nature to cover the general steps in order to accomplish a given task. Because of ongoing iOS feature updates and version releases, some specifics might deviate from the examples shown in the tutorials.

A. Set Lock Screen Wallpaper

Provided that the device has an active Internet connection, a Web View can be activated within the '**NaviTracker**' app, showing the pertinent information directly from the Apple Support website.

Alternatively, in off-line mode, a built-in slide presentation shows the steps to set the Lock Screen Wallpaper for either a static image or a Live Photo.
The general steps are:
1. Tap Settings on Home Screen.
2. Tap Wallpaper…
3. 'Choose a New Wallpaper'…
4. Select 'Device Tag' album…
5. Tap your Wallpaper image…
6. Scale and position the image. Touch 'Set'.
7. Tap 'Set Lock Screen'.

B. Import Device Serial Number
Provided that the device has an active Internet connection, a Web View can be activated within the '**NaviTracker**' app, showing the pertinent information directly from the Apple Support website.

Alternatively, in off-line mode, a built-in slide presentation shows the steps to import the Serial Number of the device on which the '**NaviTracker**' app is installed.
The general steps are:
1.Tap Settings on Home Screen.

2. Tap 'General'…
3. Tap 'About'…
4. Long-press 'Serial Number', tap 'Copy', then press Home button and open the app Main Menu…
5. Tap 'Import Device Serial Number'. A confirmation message will be displayed.

C. Set Watch Face Wallpaper

Provided that the device has an active Internet connection, a Web View can be activated within the '**NaviTracker**' app, showing the <u>pertinent information</u> directly from the Apple Support website.

Alternatively, in off-line mode, a built-in slide presentation shows the steps to make a Watch Face using the '**Photos**' and '**Watch**' apps installed on your device.

After the '**NaviTracker**' app generated a Wallpaper image (Watch Face), the general steps are:
1. Tap the 'Photos' app on the Home Screen.
2. Locate the 'Watch Tag' album and tap your custom image…
3. Tap your custom image to reveal the picture…
4. Touch the 'Share' action button at bottom…
5. Tap 'Create Watch Face' at bottom…
6. Choose your custom Watch Face in the Watch app…

7. Add it as your Watch Face photo image for transfer to the paired Apple Watch.

D. Report a Lost Apple Device

Provided that the device has an active Internet connection, a Web View can be activated within the '**NaviTracker**' app, showing the pertinent information directly from the Apple Support website.

E. Activate Inventory Management

The Inventory Management feature is an option that must be first activated by the device owner.
The feature can only be activated while the user is logged into the '**NaviTracker**' app.

A built-in slide presentation shows the steps to activate the Item Inventory.
The general steps are:
1. Tap 'General Options' from the app Preferences Menu.
2. Slide the 'Show Inventory Menu' switch to the ON position.

F. Add Items to Inventory

A built-in slide presentation shows the steps to add items to the Inventory.

As an example, the general steps for adding an **iPad** device are:

1. Tap the 'Items by Type' entry under the 'My Item Inventory' menu.
2. Touch 'Add other Apple Device' under the 'Other Devices' sub-menu.
3. Select the 'iPad' option as the Device Type and pick an iPad model from the drop-down list. Touch 'Next' to proceed.
4. Type, scan bar code, or paste unique Serial Number. Attach up to two optional reference images. Tap 'Register' to add to inventory.

This general procedure can be repeated for different device types, or any other user-defined items.

Each item listed in the Inventory can be augmented by information provided by the user.

The information can pertain to an items` Product Description, Pictures, Proof of Purchase, and other transactional data.

The source of the information can either be directly typed or imported by the user into the app.
In the case of importing supplemental item data, the source can be from File Sharing and/or the import of certain attachments to emails or files contained in Folders directly accessible from your device.

The 'NaviTracker' app will accept the following file types from File Sharing:

Image files with name extension of .png, .jpg, .jpeg, .tiff, and .gif.

Document files with name extensions of .xls, .pptx, .ppt, .docx, .doc, .pdf, .txt, and .rtf.

Upon launching the '**NaviTracker**', all files with these known name extensions will be automatically made available for use in the app.
Files that are moved with File Sharing into the app Document folder that do not comply to these known file name extensions will be deleted upon start-up or refresh of the '**NaviTracker**' app.

Importing from Other Sources

Files with name extensions ending in .r2me are associated by iOS as being compatible for processing with app '**NaviTracker**'.
For example, if an email with a file attachment named 'ProctInfo.pdfr2me' is received on the device, then the file can be copied to app '**NaviTracker**' and will be process as a pdf document.

G. Exporting Inventory Backup File

Use the File Sharing procedure described here to export the file **'NaviTracker.r2mbk' from app 'NaviTracker'.**

H. Importing Inventory Backup File

Use the File Sharing procedure described here to import the file **'NaviTracker.r2mbk' into app 'NaviTracker'.**

I. Restoring the Inventory Backup File

1. On your device, launch the '**NaviTracker**' app.

2. Navigate to the 'My Inventory' Menu.

3. Touch the 'Inventory Data Backup/Restore'.

4. For the purpose of privacy, a password must be entered by the user in order to apply the backup. The password must match the password that was used at the time when the backup file was originally created by app '**NaviTracker**'.

5. Upon successful password validation, the backup file will be synchronized with any Inventory Data already in place.

6. A confirmation message will display the results of the backup process (e.g. how many records added, modified, etc).

7. The app will then prompt you to restart and resume regular operation.

J. Handling File Sharing
You can copy files between your computer and app '**NaviTracker**' on your iOS or iPadOS device using File Sharing.
If you're using **macOS Catalina**, use the **Finder** to share files between your computer and your iOS or iPadOS device, or perform alternative Finder actions as described on the Apple Support website.
If you're using **macOS Mojave or earlier or a Windows PC**, use **iTunes** to share files between your computer and your iOS or iPadOS device, or perform alternative iTunes actions as described on the Apple Support website.

Finder File Sharing
(Copy from your Mac to your device)
1. Open a Finder window.

2. Connect your iPhone, iPad, or iPod touch to your computer with a USB cable.

3. Select your device in the Finder.
4. Click the Files tab to see a list of apps that can share files.

5. Click the triangle next to app '**NaviTracker**' to see the files that you can share.

6. Drag the files to the app on your device. The Finder copies the files to your device.

Finder File Sharing
(Copy from your device to your Mac)
1. Select the files that you want to copy.

2. Drag the files to a folder on your computer. The Finder copies the files to your computer.

iTunes File Sharing
(Copy files from your computer to an iOS or iPadOS app)
1. Open latest version of iTunes on your computer (Mac or PC).

2. Connect your device to your computer using a USB cable.

3. Select your device in iTunes.

4. On the left sidebar, click File Sharing.

5. Select the '**NaviTracker**' app from the list in the File Sharing section.

6. Drag and drop desired files from a folder or window onto the Documents list to copy it to your device.
You can also click Add in the Documents list in iTunes, find the appropriate file, and then click 'Add'.
iTunes copies the file to the app '**NaviTracker**' on your device.

iTunes File Sharing
(Copy files from an iOS or iPadOS app to your computer)

1. In iTunes, select the '**NaviTracker**' app from the list in the File Sharing section.

2. Drag and drop files from a folder or window onto the Documents list to copy them to your device.
You can also select the file or files you want to copy from the Documents list in iTunes to your computer, and then click 'Save'.

iTunes copies these files from the app '**NaviTracker**' to your computer.

NOTE: All imported files are locally stored on the device in compressed format before being automatically deleted form the source location. The user must be logged into app '**NaviTracker**' in order to manage the imported files from the app menu entitled 'Documents Collection'.