

HERE iOS SDK

Release Notes

Premium Edition Version 3.0

The logo consists of the word "here" in a bold, blue, lowercase sans-serif font, rotated 45 degrees counter-clockwise.

Contents

Legal Notices.....	3
Document Information.....	4
Overview.....	5
Target Audience.....	6
Release Content.....	7
Package Description.....	8
System Requirements.....	9
Features Overview.....	10
Getting Started.....	13
New Features.....	14
API Changes, Fixed Issues, and Improvements.....	15
Known Issues.....	18
Copyright Information.....	19

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Overview

The HERE iOS SDK offers APIs to enable developers to access HERE location-based assets and bring a rich and immersive location experience to their applications with beautiful and accurate maps, a global database of Places and a world-class routing capability.

The scope of this document is to provide the release notes of the HERE iOS SDK.

Target Audience

This document is targetted at the developers who are already familiar with iOS app development. Readers should have some experience using Xcode and Objective-C.

Release Content

Native APIs	Enabling native applications to leverage HERE functionality
Documentation	API Reference Documentation and Developer Guide
Sample Applications	Sample applications in Objective C

Package Description

<code>/docs</code>	API Reference documentation
<code>/sample-apps</code>	Sample applications to be used with the Quick Start section in the Developer's Guide
<code>/user-guide/HERE iOS SDK Premium v3.0 Developer's Guide.pdf</code>	HERE iOS SDK Developer's Guide
<code>HERE iOS SDK Premium v3.0 Release Notes.pdf</code>	This document
<code>Framework/NMAKit.framework</code>	HERE iOS SDK

System Requirements

- iOS 7.0 or higher. iOS 8 is recommended for optimal operation.
 - XCode 6.3 or above running on Mac OS X 10.10
 - iPhone 4S or newer devices
- 📄 **Note:** iPhone 5 / iOS 8.3 or newer devices are recommended for the LiveSight feature.

Features Overview

Mapping:

- Dynamically download vector maps for over 190 countries in over 50 languages
- Preload maps for offline usage
- Map styles: Normal, Night, Satellite with Streets, Terrain, and more
- Touch gestures such as tap, pan, and pinch
- Overlay objects on the map such as polylines, polygons, icons, routes
- 3D landmarks
- Overlay custom raster tiles on the map (useful for features such as heat maps)
- Show real-time traffic flow and incidents
- Traffic and transit object interaction
- Venue maps
- Extruded buildings
- Street-level imagery
- 3D map objects

Search:

- Broad content with 25 million streets, 200 million point addresses, and over 60 million categorized places across the globe
- Search Places for somewhere specific or explore by categories
- Get rich details for a Place (images, ratings, reviews, editorials etc.)
- Perform Online Geocoding and Reverse Geocoding lookups
- Offline Places search, Geocoding, Reverse Geocoding

Directions:

- Online Car , Public Transit, and Pedestrian Route Directions
- Routing options (Highways, Tolls, Fastest etc.)
- Specify preferred route type (fastest or shortest) and route options (such as avoiding toll roads, motorways, and parks)
- Alternate routes
- Offline route calculation
- Driving directions with traffic taken into account
- Public Transit directions

Turn-by-turn Navigation:

- Online and offline turn-by-turn navigation with voice instructions in US English
- Download and set additional navigation voices
- Navigation voices in the following languages:

Text-to-Speech

- English (US)
- English (UK)
- French
- German
- Spanish (Spain)
- Italian

Pre-recorded

- English (UK) - Female
- English (US) - Male
- English (UK) - Male
- Portuguese (Portugal) - Female
- Turkish - Female
- Icelandic - Female
- Russian - Female
- Hungarian - Female
- Hungarian - Male
- Dutch - Female
- Dutch - Male
- French - Female
- Czech - Female
- Slovak - Female
- Polish - Female
- Slovenian - Female
- Mandarin (Taiwan) - Female
- German - Female
- Cantonese - Female
- Mandarin(China) - Female
- German - Male
- Thai - Male
- Afrikaans - Female
- Arabic (North African) - Female
- Spanish (Latin America) - Female
- Bulgarian - Female
- Catalan - Female
- Croatian - Female
- Estonian - Female
- Italian - Female
- Farsi - Female
- French (Canada) - Female
- Greek - Female
- Hindi - Female
- Indonesian - Male
- Swedish - Female
- Korean (South Korea) -Female
- Latvian - Female
- Lithuanian - Female
- Danish - Female
- Malay - Female
- Portuguese (Brazil) - Female
- Romanian - Female
- Serbian - Male
- Norwegian - Female
- Spanish (Mexico) - Male
- Swahili - Male
- Tamil - Male

- Arabic (Saudi Arabia) - Male
- Tagalog - Female
- Spanish (Spain) - Female
- Basque - Female
- Galician - Female
- Finnish - Female
- Finnish - Male
- Ukrainian - Female
- Urdu - Female
- Vietnamese - Female

📖 **Note: [Important]** The Turn-by-turn Guidance APIs are in beta. Application developers using these APIs are required to thoroughly test their applications in all expected usage scenarios to ensure safe and correct behavior. Application developers are responsible for warning their users of the following obligations:

1. Do not follow instructions that may lead to an unsafe or illegal situation
2. Obey all local laws.
3. Be aware that using a mobile phone or some of its features while driving may be prohibited.
4. Always keep hands free to operate the vehicle while driving.
5. First consideration while driving should be road safety.

LiveSight (Augmented Reality)

- Project objects in a camera view
- Track the position of the device and objects in space
- Gesture support allows the user to interact with content
- Configurable LiveSight engine allows the user experience to be customized

Other Features:

- Custom Location search by using location attributes, proximity, area, or corridor radius
- Visual information for fleet vehicles and trucks
- Congestion toll zones and the typical traffic patterns for a given time of the week
- Map Marker Clusters

Getting Started

Please refer to the documentation under the `/user-guide` folder for details on how to quickly start evaluating the HERE iOS SDK.

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New Features

New Features in Version 3.0

- We enabled access based on license keys.
- We added 3D Venue Maps
- We added the ability to deactivate voice guidance and more audio controls
- We enabled Mercator projection
- We added better support for voice navigation with Bluetooth devices
- We added support for Dynamic Navigation based on traffic
- We added the Traffic Warner
- We added support for 3D objects to LiveSight
- We have moved LiveSight out of beta
- We updated the SDK to only preload the English voice package.
- We added marker clustering
- We added native rendering for truck attributes, fleet maps, environmental zones

New Features in Version 2.1.2

- We added the ability to selectively skip voice commands. (For more details, please see "Controlling Audio Playback" in the Developer's Guide.)

New Features in Version 2.1.1

- We added LiveSight (augmented reality) as a beta feature in this release.
- We added the Natural Guidance feature in this release
- We updated the Street-Level Imagery issue-reporting link as a web link
- We added a warning message that appears on the map view when the SDK evaluation expires in less than 30 days
- We added support for the latest iPad devices

API Changes, Fixed Issues, and Improvements

Version 3.0

- Added a new API in `NMAApplicationContext` to set `appId`, `appCode` and license key. For more information, please see the Authenticating Applications section in the Developer's Guide.
- Added a method to `NMNavigationManagerDelegate` to allow skipping of voice feedback.
- [`NMNavigationManagerDelegate navigationManager:should/will/didPlayVoiceFeedbackWithText:`] methods have been introduced to allow voice navigation commands to be played with custom TTS (Test To Speech) engines. The existing [`NMNavigationManagerDelegate navigationManagerShould/will/didPlayVoiceFeedback:`] methods have been deprecated. The calling of the `will/didPlay...` methods is now synchronized with the audio output.
- `NMAAudioManager` has been updated to allow audio output to be explicitly routed to the device speaker or a Bluetooth HFP device. See `NMAAudioRoute`.
- Deprecated 2D Venue Maps.
- Deprecated `NMARoute` property `subLeg`.
- Deprecated `createGeocodeRequestWithAddress:` in `NMAGeocoder`
- Deprecated `createPlaceRequest:` in `NMAPlaces`
- Fixed issue with `MapModelEngine` not picking up new version of map data after update.
- Fixed canceling map package retrieval in `NMAMapLoader`.
- `isValid` method in `NMAMapPolygon` no longer reports `YES` for polygons with self-intersecting vertices.
- Reduced CPU load and improved battery life when the device is stationary during navigation.
- Improved the response time of the displayed user position during navigation.
- Added `pauseOnWillResignActive` property to `NMAMapView` to allow map rendering to continue while the application is inactive.
- Fixed an issue with secondary searches such as `DiscoveryLink`.
- We removed the French, German, Italian, and Spanish preloaded voice packages from the SDK. You can download these from the HERE server.

Version 2.1.2

- Improved the detection of pinch-to-zoom gestures and reduced the possibility of accidental rotations
- Fixed an issue where `NMAMapLoader` becomes unresponsive after canceling an operation
- Fixed a performance issue where traffic-enabled routes consumed massive computing resources
- Fixed an issue where `NMAMapPolygon` `isValid` incorrectly returns `YES`
- Made the `NMATrafficManager` available in this release

- Fixed an issue where current audio stops immediately when the `stopAllOutput` method is called
- Fixed an issue that caused an `NSInvalidArgumentException` during application start-up

Version 2.1.1

- Fixed an issue where map views are still interactive when rendering is disabled
- Fixed a crash in `NMARouteManager` when cancelling a route calculation
- Fixed an issue where maneuver callbacks are not sent during tunnel extrapolation
- Fixed `NMAAddress.formattedText` for both Places and Geocode search
- Fixed an issue where pedestrian route durations were being underestimated
- Fixed a text spacing issue in Place addresses
- Fixed the dispatching of new commands in `NMAVoiceCatalog` callbacks
- Fixed a time zone-related issue in the truck routing feature

Version 2.1

- The position tracker now moves smoothly with the map during navigation.
- The road view now centers at the raw position when there is no map matched position.
- Fixed an issue on iOS 8 where the position indicator is missing from the map.
- Background music volume no longer goes up/down during silent periods in a navigation session.
- Position indicator is no longer shown underneath traffic incidents and bus stops.
- Speed warning sounds no longer cut off voice guidance.
- Fixed various issues related to simultaneously running navigation and apps that use the audio player.
- Updated device information codes for iPhone 6 and 6 Plus.
- Handled the deprecation of old map gestures as follows:
 - Repeated tap gestures no longer interrupt zoom-in/zoom-out. Instead, they will now occur continuously
 - Performing the two-finger pinch/spread gestures will now cause kinetic zoom-in/zoom-out
 - Performing the two-finger rotation gesture will now cause a kinetic rotation
- The navigation voice using native TTS is faster on iOS8 than on iOS7.
- The position arrow no longer lags behind from the current position during navigation.
- Highways numbers no longer blink on the map.
- Shortened the recalculation time during navigation when the user has deviated from the planned route.
- The speed limit warning is now activated at the correct time during navigation.
- Fixed various issues that caused the `nextRoadIcon` in `NMAManeuver` and `exitIcon` in `NMASignpost` to contain a black background and the image to be blurry.
- Fixed issues causing the prerecorded guidance voice to be intermittently inaudible when background music is being played.

- Introduced a map scale modification for iPhone 6 Plus
- Fixed crashes that occur while changing navigation voice.
- The `NMAImage initWithUIImage:` method now takes the scale of the input `UIImage` into account.
- Roman numerals in road names are no longer spelled as letters.
- Map view is no longer frozen after changing the map scheme.
- Added 3x logos and icons.
- Voice navigation with Apple TTS now plays in normal speed on iOS 8.x devices.
- Fixed an issue where the voice catalog is requested in English and returns both English and localized package names.
- Removed building blurring from the street-level issue-reporting options.
- Fixed an issue in `NMAVoiceCatalog` that caused infrequent crashes while updating the voice catalog or installing voice packages.

Known Issues

- `NMACompositeView` - The camera view may become distorted when the device orientation switches repeatedly, or if the orientation is changed from its previous state before the app comes to the foreground.

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```

```
hwcryptohook.h
```

```
/*
 * ModExp / RSA (with/without KM) plugin API
 *
 * The application will load a dynamic library which
 * exports entrypoint(s) defined in this file.
 *
 * This set of entrypoints provides only a multithreaded,
 * synchronous-within-each-thread, facility.
```

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*****
* Clipper 6.2
*****

/*****
*
* Author      : Angus Johnson
* Version     : 6.2.0

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* The code in this library is an extension of Bala Vatti's clipping algorithm: *
* "A generic solution to polygon clipping" *
* Communications of the ACM, Vol 35, Issue 7 (July 1992) pp 56-63. *
* http://portal.acm.org/citation.cfm?id=129906 *
* *
* Computer graphics and geometric modeling: implementation and algorithms *
* By Max K. Agoston *
* Springer; 1 edition (January 4, 2005) *
* http://books.google.com/books?q=vatti+clipping+agoston *
* *
* See also: *
* "Polygon Offsetting by Computing Winding Numbers" *
* Paper no. DETC2005-85513 pp. 565-575 *
* ASME 2005 International Design Engineering Technical Conferences *
* and Computers and Information in Engineering Conference (IDETC/CIE2005) *
* September 24-28, 2005 , Long Beach, California, USA *
* http://www.me.berkeley.edu/~mcmains/pubs/DAC05OffsetPolygon.pdf *
* *
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/*****
*
* This is a translation of the Delphi Clipper library and the naming style *
* used has retained a Delphi flavour. *
* *
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