



Mobile Client iOS Release Notes

Product Version 3.3.0.14

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Overview

This document describes the Gracenote Mobile Client Software Development Kit (Mobile SDK) for the iOS (iPhone) platform. It lists the delivered package contents, highlights, and release limitations. For more information, see the *Mobile Client iOS Implementation Guide*.

Contents of SDK

The release is distributed as a compressed archive file, GN_Music_SDK_iOS_3_x_x_x.zip, where x_x_x is based on the current version number. See the version number listed on the title page of this document. The zip file contains the following components:

- Mobile Client SDK
- Sample application
- Sample audio files
- Sample fingerprint bundle
- Documentation
 - *Mobile Client API Reference Guide*
 - *Mobile Client iOS Implementation Guide*
 - *Mobile Client: Getting Started with the Sample Application* (technical note)
 - *Songs (PDF format). List of songs that are compiled into the SDK for local MusicID-Stream lookups*

Requirements

- iOS version: 4.3 or higher
- Xcode version: 4.3 or higher
- Framework Library size: 37MB
- To enable query history functionality, `CoreLocation.framework` must be imported into application
- Optionally, approximately 21 MB of memory is needed for the local song cache
- `Security.framework` must be imported into the application to enable usage of the local cache

Changes

- SDK now supports 32 bit and 64 bit iOS 7.
- Improved IDNow performance by reducing listening time.
- Sample app now supports 2 targets: one for 64 bit (iOS 6 and greater - 32 and 64 bit) and a 32 bit only (iOS 4.3 and greater).
- Sample app now uses AVAudioSession instead of AudioSessionInitialize.

Highlights

- Improved MID-Stream performance
- `GNRecognizeStream` class more efficiently processes and recognizes streaming audio
- Certified (Gracenote has tested Mobile Client SDK) on iOS versions: 5.1.1, 6.1.4
- Supports ARMv7 and ARMv7s
- Features MusicID-File, MusicID-Stream and text search
- Mobile-optimized MusicID-File and MusicID-Stream query responses return a single best match for cover art and language preference
- MusicID-Stream recognition optimized for noisy environments and differing device microphone capabilities
- Monetizes via online store support (Gracenote Link™), including a per-query preference for type of Link data delivered
- Artist biographies and images (must be licensed and entitled; consult your Gracenote Professional Services representative for details)
- Album reviews (must be licensed and entitled; consult your Gracenote Professional Services representative for details)
- Yomi and Betsumei data available (separately licensed)
- Fingerprint-only mode available for use with other Gracenote platforms
- Sample application demonstrates key features and implementation

Limitations

Libraries

- MusicID-Stream limited to recording sample rates of 8 and 44.1 kHz
- MusicID-File and AlbumID recommended for iOS 5.x and later (see Known Issues below); usage strongly recommended only on devices with a hardware decoder (e.g., iPhone 3GS, iPhone 4/4S, iPod Touch 4, iPad)

Sample Application (Original)

- Recognize File API returns cover art for first 10 results only (remaining files still matched with metadata)
- Sample application query history limited to 1000 items; logic must be added to fully manage addition and deletion of records

Known Issues

- **On iOS 4.x only:** If the application accesses multiple (i.e., dozens) tracks from the iPod library via `recognizeFileFromFile` (using `MPMediaItemPropertyAssetURL`), `albumIdFromMPMediaItemCollection`, or `albumIdFromMPMediaItems`, the Gracenote operation can fail with the following error:
AVFoundationErrorDomain Code=-11800 "The operation could not be completed. (AVFoundationErrorDomain error -11800.)". Once this error occurs, the application must be restarted before the SDK can access additional tracks. This Apple limitation can also result in minor memory leaks on iOS 4.x. Therefore, we strongly suggest that applications using MusicID-File or AlbumID have a minimum requirement of iOS 5.x. Note: This issue is not reproducible on iOS 5.01 or iOS 5.1.
- In the Sample Application, if debugging is enabled through the UI, logging will take place for everything except `idNow` operations. However, you will not see this issue if you enable debugging programmatically, See *Using Mobile Client Debug Logging* in the *Mobile Client iOS Implementation Guide* for more information.

Release History

Version 2.2.0.3

- Initial product release

Version 2.3.0.6

- MusicID-File for iPod library and other locations available for iOS versions 4.x and higher
- Ability to fetch additional track-related metadata using track identifier
- Sample application demonstrates method for maintaining a query history

Version 2.4.0.6

- Artist biographies and album reviews (must be licensed and entitled; consult your Gracenote Professional Services representative for details)
- Artist images (must be licensed and entitled; consult your Gracenote Professional Services representative for details)
- Song position data field for MusicID-Stream response: shows where within the track the audio sample was matched, in milliseconds
- Per-query option to disable delivery of genre art
- Prioritization of commerce results available for text search

Version 2.5.0.17

- AlbumID added to MusicID-File for advanced recognition and grouping of audio files within a user's collection
- Increased flexibility with Genre descriptors, including regional hierarchies and language support
- Mood descriptors available, including hierarchy and language support (entitlement required; consult your Gracenote Professional Services representative for details)
- Tempo descriptors available, including language support (entitlement required; consult your Gracenote Professional Services representative for details)
- Single and multiple matches are now supported in MusicID-Stream and MusicID-File responses
- Ability to search by a previously created fingerprint
- Album-level artist can specifically be requested for a response
- The following parameters and methods have been deprecated:
 - `webservices.isInlineCoverArtEnabled`
 - `String GNSearchResponse.getGenre()`
 - `String GNSearchResponse.getGenreId()`

Version 2.5.1.1

- Added AlbumID logic for single file queries containing fingerprints and text
- AlbumID functionality demonstrated in sample application

Version 2.5.2.72

- AlbumID optimized for improved performance and results
- Origin, Era, and Artist Type descriptors available, including hierarchy and language support
- Hierarchy support added for tempo descriptors
- Added ability to retrieve tag metadata and GN_ID from AAC files (MP3 and AAC now supported)
- Several parameters, methods, and objects renamed and deprecated; see "Migrating to this Release" in the Implementation Guide for details

Version 2.5.7.12

- iOS versions supported: 4.2.1, 5.0.1
- Supports ARMv6 and ARMv7
- Features MusicID-File, MusicID-Stream, text search, and lyric fragment search
- Mobile-optimized MusicID-File and MusicID-Stream query responses return a single best match for cover art and language preference
- MusicID-Stream recognition optimized for noisy environments and differing device microphone capabilities
- Monetizes via online store support (Gracenote Link™), including a per-query preference for type of Link data delivered
- Artist biographies and images (must be licensed and entitled; consult your Gracenote Professional Services representative for details)
- Album reviews (must be licensed and entitled; consult your Gracenote Professional Services representative for details)

- Yomi and Betsumeimei data available (separately licensed)
- Fingerprint-only mode available for use with other Gracenote platforms
- Demonstrates implementation and functionality via sample application

Version 3.0.0

- Added new class GNRecognizePCM to more efficiently process and recognize streaming audio
- Added new sample application that demonstrates the improved audio recognition process
- Added APIs for the retrieval of temporary URLs for enriched content. Enriched content URLs will expire. You must ensure the application properly handles expired URLs. See "Considerations" in the Implementation Guide for details.

Version 3.0.1

- Support two sample applications. The new sample application shows the improved performance with MID-Stream while the other (original) shows the use of additional MC SDK APIs.
- Improved error handling in the new sample application
- Faster audio recognition for streaming audio.
- Provide Best Match for local lookup instead of First match
- Fixed an issue in new sample application where "Total Time" reported occasionally was incorrect

Version 3.0.2

- Added support for multiple Link identifier sources in the local Music-ID Stream database
- Updated songs compiled into SDK used for local Music-ID Stream lookups
- Added support for client IDs of varying lengths

Version 3.0.3

- Modified local cache for improved security
- Fixed issue with matching multiple fingerprint blocks
- Position is now provided for matches from local cache

Version 3.1.2.4

- Fixed conflict with system gettimeofday call
- Fixed issue with precision for track position (GNSearchResponse method getSongPosition) for local cache

Version 3.1.3.4

- Modified sample application to take care of interruption listener callbacks in foreground mode only
- Resolved issue with SDK which caused application using IDNow operation to freeze in Listening mode when app toggles between foreground and background

Version 3.2.0.144

- Added getAdjustedSongPosition method
- GNSearchResponse returns track duration for MusicID-Stream queries
- GNSearchResponse now returns language for match
- Reduced network bandwidth requirements for updating the local cache
- Improved error handling for GNConfig class methods loadCache and clearCache

Version 3.2.1.3

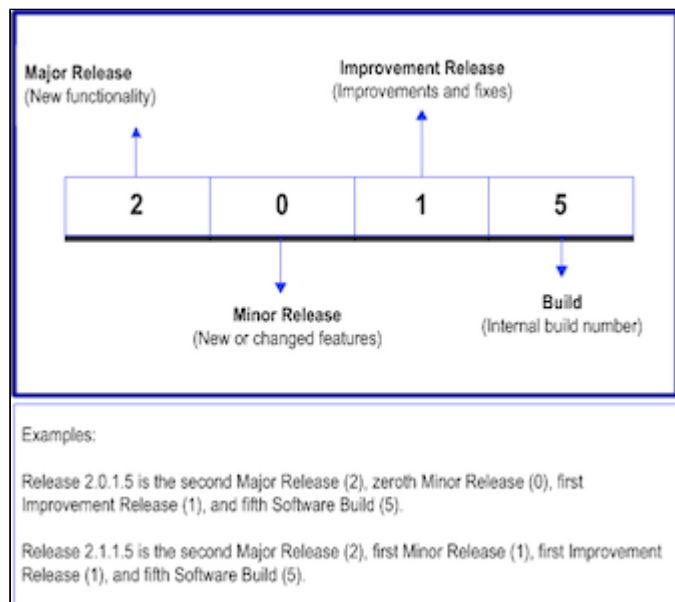
- Fixed a defect in libgnc_aactag.so library which could cause albumID operations to crash

Version 3.2.3.1

- Updated sample app to support iOS 7

Release Number Conventions

The Gracenote Mobile Client SDK is distributed as a .zip file with the release (version) number in the file name. For example, GN_Music_SDK_iOS_2_5_6_1.zip. The release number is updated for each release build and follows the conventions below:



Release Contact Information

For questions regarding this release, contact your Gracenote Professional Services representative.

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