Mobile Client Android Release Notes

Version 3.1.3.9

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Overview

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

Contents of SDK

The release is distributed as a compressed archive file, GN_Music_SDK_Android_3_x_x_x.zip, where x_x_x is the current release number as 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* (delivered as Javadoc)
    - *Mobile Client Android Implementation Guide*
    - *Getting Started with the Android Sample Application*

Highlights

- Improved MID-Stream performance
- Support for Android platform versions 2.3.4 and 4.1.1
- Binary-compatible across ARM-based Android versions; no recompiling of Mobile Client SDK libraries required
- Features MusicID-File, MusicID-Stream and text search
- Mobile-optimized Gracenote query response returns a single best match for cover art and language preference
- Decodes audio to PCM from MP3, AAC, 3GP (AAC), and WAV formats for MusicID-File
- Signal preprocessing automatically optimizes MusicID-Stream recognition for differing device microphone capabilities
- Yomi and Betsumei data available (separately licensed)
- Fingerprint-only mode available for use with other Gracenote products
- Supports end-user over the air (OTA) upgrades
- Monetizes via online store support (Gracenote Link™)
- Provides fast delivery of cover art and Link data (when licensed and entitled; consult your Gracenote Professional Services representative for details)

- Enables per-query preference for type of Link data delivered
- 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)
- Provides simplified access via Android Java interfaces
- Sample Application demonstrates key feature implementation and functionality

Requirements

For a complete list of requirements and instructions for migrating from previous Mobile Client versions, see the *Mobile Client Android Implementation Guide*.

- Android ARMv6- or ARMv7-based CPU
- Library supports Android API version 2.2 or higher
- Sample application requires Android API version 2.2 or higher
- Mobile Client SDK libraries must be included within each application (`.apk`)
- Google APIs by Google Inc. (Android API 8 Rev 2) must be installed to compile and run sample application
- AlbumID operations must be called serially (one at a time); see "Calling AlbumID Operations Serially" in the Implementation Guide for details
- Optionally, approximately 21 MB of memory is needed for the local song cache

Corrected Issues

- Fixed issue where app hangs when using idNow on slower devices
- Improved error handling for network exceptions

Limitations

Cache APIs

- loadCache and clearCache APIs are not thread safe and should not be called concurrently.

Libraries

- MusicID-File and MusicID-Stream limited to recording sample rates of 8 and 44.1 kHz
- Conversion to PCM supported only for file types `.mp3, .m4a, .m4p, .3gp, .wav, .3gpp, .3gpp2 and .3g2`

Sample Application

- 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

Release History

Version 2.0.3

- Initial product release

Version 2.0.4.1

- Improved handling of variable-sized data returned from microphone

Version 2.1.1.1

- Prioritization of commerce results via per-query preference for type of Link data returned
- Ability to fetch additional album-related metadata using album identifier
- Faster decoding of MP3 and AAC audio files to PCM for MusicID-File; handled in memory (RAM)
- Improved network timeout handling
- Various minor fixes

Version 2.1.2.2

- Resolved issue with MP4 video files generated on gaming platforms

Version 2.2.0.5

- Signal preprocessing automatically optimizes MusicID-Stream recognition for differing device microphone capabilities
- Background service-based implementation available (does not require a UI)

Version 2.2.1.1

- Resolved an issue with application exception being thrown when a new device loses its network connection during initial registration
- Enabling debugging creates WAV files for captured audio when using MusicID-Stream

Version 2.3.0.5

- Ability to fetch additional track-related metadata using track identifier
- Sample application demonstrates method for maintaining a query history

Version 2.4.0.8

- Artist biographies and album reviews
- Artist images
- 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
- HTTPS implementation modified to improve integration with online Gracenote Media Recognition Service

Version 2.5.0.16

- 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 2.5.1.2

- Improved query performance on the Android platform
- Added AlbumID logic for single file queries containing fingerprints and text

Version 2.5.2.69

- 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 have been renamed and deprecated; refer to the Implementation Guide for details
- Improved cancel functionality
- Resolved an issue with the decoder library that was causing the application to crash

Version 2.5.3.1

- Added support for additional network connection types

Version 2.5.6.27

- Timer threads are now purged upon successful retrieval of images
- Fixed issue with exception being thrown when canceling concurrent operations
- Libraries have been renamed to be Gracenote-specific
- Added support for additional file extensions: .3gpp, .3gpp2 and .3g2

Version 2.5.7.15

- Fixed issue related to Turkish language support

Version 2.5.8.6

- Changed default for GNConfig property "content.coverArt" to 0 so that cover art is not requested by default
- Changed default for GNConfig property "content.country" to "" (empty string) from "usa"
- Fixed minor memory leaks in native libraries
- Fixed a defect in sample application that was causing it to crash in history

Version 2.5.9.4

- Gracenote Mobile Client Shared libraries (.so's) have been versioned to include the SDK version number in their names (Please note: SDK version must match the shared library version number for it to work)

Version 3.0.0.4

- Added new class - `GNRecognizePCM` - to more efficiently process and recognize streaming audio (renamed to `GNRecognizeStream`)
- 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.

Version 3.1.0.165

- New class - `GNRecognizeStream` - to more efficiently process and recognize streaming audio
- New `GNConfig` class methods - `loadCache()` and clearCache() - to manage local cache
- Sample application demonstrates new performance improvements with MID-Stream and usage of cancel `GNOperation`
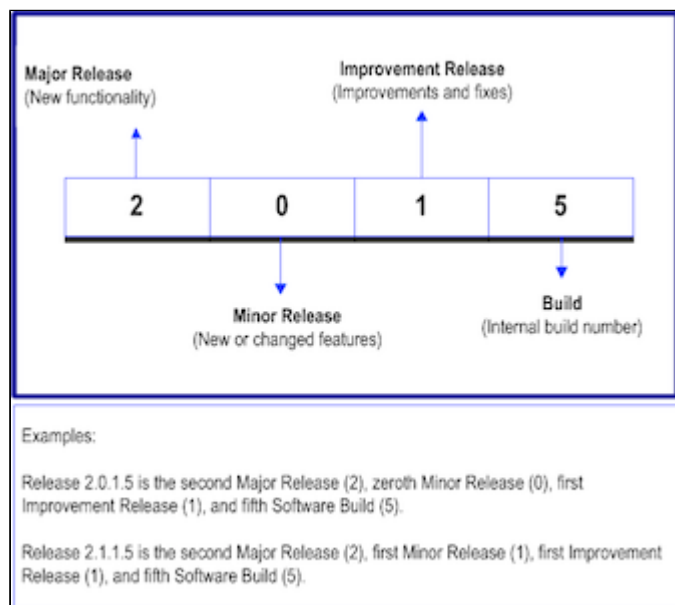- Fixed a race condition occurring with user registration in debug mode

Version 3.1.1.10

- Fixed issue with targetSdkVersion set to Android API level 11 or greater that caused SDK to hang
- Fixed defect in GNConfig method clearCache()

Version 3.1.2.4

- Fixed issue with precision for track position (GNSearchResponse method getSongPosition) for local cache

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_Android_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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