

# Wwise 2011.2

## Release Notes

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# 1 New Features

## 1.1 Audio File Importer Enhancements

The Audio File Importer view has been redesigned to speed up the import process and to allow the creation of audio objects directly at the import stage:

- Hierarchies of folders containing wav files can now be imported.
- Folders, actor-mixers and containers can now be created directly from the Audio File Importer view.
- Imported hierarchies can be merged with existing objects in the project.
- Existing objects and structures in the project can be utilized as templates for new imported objects.

## 1.2 New Effects

Four new effects have been added to Wwise:

- Time Stretch - Changes duration without affecting pitch.
- Pitch Shifter - Changes pitch without affecting duration.
- Harmonizer - Adds one or two pitched voices to incoming signal.
- Stereo Delay - Provides a dual channel delay with a built-in filter. It has feedback and crossfeed controls to send delayed signals from one channel to another and create stereo effects.

## 1.3 Memory Optimizations

Enhancements on the sound property system led to significant optimizations on all platforms:

- Events and audio structures metadata in SoundBanks is taking up to 30% less space on disk.
- The Default memory pool is taking up to 15% less runtime memory.

## 1.4 Native Support for RSX(tm) Streaming (PS3(tm) only)

Sound-SFX and Sound-Voice can be set from the user interface to stream from the RSX memory on PS3. Additionally, the Wwise File Packager can be set to automatically create RSX packages with these particular stream files. To complement this, the RSX device provided as a sample in the SDK has been rewritten and may now be used as-is, and other improvements have been made in the sound engine to reduce streaming latency in general.

## 1.5 File Packager Now Supports External Sources

External sources are now supported in the File Packager and can be packaged with other soundbanks and streamed files.

## 1.6 New Contextual Shortcut Keys

Wwise 2011.2 brings new shortcut keys accessible from anywhere in Wwise:

- Ctrl+Shift+F : Show the selected objects in the List View
- Ctrl+Shift+S : Show the selected objects in the Schematic View
- Shift+F3 : Find the references to the selected objects
- Ctrl+E: Edit the selected objects in the default External Editor
- Ctrl+Shift+1 : Show the select object in the Project Explorer (sync group 1)
- Ctrl+Shift+2 : Show the select object in the Project Explorer (sync group 2)
- Ctrl+Shift+3 : Show the select object in the Project Explorer (sync group 3)
- Ctrl+Shift+4 : Show the select object in the Project Explorer (sync group 4)
- Ctrl+Shift+- : Show the select object in the Project Explorer (no sync group)

## 1.7 Communication on Nintendo 3DS

The communication module for Nintendo 3DS has been rewritten to be faster and more reliable than before. It now uses a USB connection instead of Wi-Fi.

## 1.8 New Mac OS Integration Demo

The Integration Demo was ported to the Mac Operating System.

## 1.9 Visual Studio C++ 2010 Support

Windows libraries (32-bit and 64-bit) are now available for Visual C++ 2010.

## 1.10 PlayStation Move Controllers Support

Wwise Motion now supports PlayStation®Move controllers.

# 2 Important Migration Notes (2011.2)

## 2.1 All Streamed and Converted Files Have a New File Extension (WEM)

All streamed and converted files now have the .wem file extension (Wwise Encoded Media). Wwise does not generate anymore files with the ogg, xma or wav extensions. All streamed or converted files now have the .wem extension, whatever their encoding format is. The External Source files are also all converted to .wem files.

You may have to modify your tools or installers to manipulate wem files instead of ogg, xma or wav files.

## 2.2 SDK Function SetLanguageNameDir(...) Replaced by SetCurrentLanguage(...)

When using the default Stream Manager, the language name used for localized sounds is now set using `AK::StreamMgr::SetCurrentLanguage()`, instead of setting a directory name on all low-level I/O devices. Note that the directory separator ("/" or "\\") must not be appended to the language name anymore. See `AK::StreamMgr::SetCurrentLanguage()` for more details.

## 2.3 SoundBanksInfo.xml Version Was Changed to 9

The SoundbanksInfo.xml version was updated to 9 and has the following changes:

- Now has reference to .wem files
- Includes a reference to the project directory (ProjectRoot element)
- Includes a reference to the external source input file (ExternalSourcesInputFile element)
- Includes a reference to the external source output path (ExternalSourcesOutputRoot element)
- Optional RSX attribute was added to the File element for RSX streamed files

## 2.4 File Packager Projects Version Was Changed to 6

- Now support 64 bit ids for external sources references (name hash)
- Now support automatic assignation of external sources files to package
- Added RSX support to packages

## 2.5 Low-Level I/O Samples Were Modified

Although the Low-Level I/O API has not changed, most Low-Level I/O samples included in the SDK were modified in order to conform to the following new features:

- New .wem file extension (see [All Streamed and Converted Files Have a New File Extension \(WEM\)](#))
- New, simplified way of setting the current language for localized assets (see [SDK Function SetLanguageNameDir\(...\) Replaced by SetCurrentLanguage\(...\)](#))
- New file packager version (see [File Packager Projects Version Was Changed to 6](#))

Also, the Low-Level I/O hook used for streaming from RSX (PS3 only) was completely rewritten ([Native Support for RSX\(tm\) Streaming \(PS3\(tm\) only\)](#)).

You should adapt your implementation of the Low-Level I/O to support these new features. You should merge or replace the following files into your project if you were using them with little or no modifications.

CAkFileLocationBase (in SDK/samples/SoundEngine/Common/AkFileLocationBase.h and AkFileLocationBase.cpp):

- Uses the new .wem file extension
- Deduces the name of the localized assets directory by calling `AK::StreamMgr::GetCurrentLanguage()`

- Does not provide function SetLanguageNameDir() anymore

File package low-level I/O layer (in SDK/samples/SoundEngine/Common/AkFilePackageLowLevelIO.h, AkFilePackageLowLevelIO.inl, AkFilePackage.h, AkFilePackage.cpp, AkFilePackageLUT.h and AkFilePackageLUT.cpp):

- Supports the new file package format

New RSX I/O hook (PS3 only):

- The device CAkRSXIOHook (in SDK/samples/SoundEngine/PS3/AkRSXIOHook.h and AkRSXIOHook.cpp) was completely rewritten. Other files were added in order to complement it. Please refer to streamingdevicemanager and subpages for more details.
- If you are satisfied with your own implementation of audio streaming from RSX, you are not required to use the new CAkRSXIOHook and its related classes. However, in order to load file packages generated by the File Packager tool that is shipped with Wwise 2011.2, and to conform to the new language management, you should replace the underlying file package low-level I/O layer and file location services (explained above).

Please refer to the Installation and Migration Guide for general advice about migrating projects to a new version of Wwise.

## 3 Requirements and Other Important Information

We have compiled a list of specific requirements and other important information that you should know before working with Wwise.

### 3.1 General

**External components required for installation.** The following external components are required to run Wwise:

- Microsoft® .Net Framework Version 2.0, which is included in the installation package.
- XMLLite for Windows XP Service Pack 2. To download a copy of XMLLite, visit the Microsoft web site.

**Note:** XMLLite is automatically installed with Windows XP Service Pack 3 and Windows Vista.

DirectX® February 2010 or later, which is required to run the Game Object 3D Viewer in Wwise and the Xbox 360 controller on Windows. To update your version of DirectX, visit the Microsoft web site (<http://www.microsoft.com/directx>).

**Note:** If you have an older version of DirectX, Wwise will run normally, but the Game Object 3D Viewer will not be available and you will not be able to test motion in Wwise.

**Visual Studio DLL Dependencies.** The following versions of Microsoft Visual Studio are used to build the Wwise libraries:

- VC 2008 version: 9.0.30729.1 Wwise libraries have a dependency on a specific version of the CRT DLL. If you are using a different version of Visual Studio, or if you do not want your game to depend on that version of the CRT DLL, you can link to the libraries from the Debug (StaticCRT), Profile (StaticCRT) and Release (StaticCRT) folders instead. For more information on the Visual Studio DLL dependencies, refer to the “Platform Requirements” section of the SDK documentation.

## 3.2 Motion Devices

**Connect game controllers to high power USB ports.** Motion devices need to be connected to a high power USB port. If the USB port does not have sufficient power to run the motion device, the system will unmount the device to protect both the operating system and the device itself. The USB ports in the front of a computer are generally not powerful enough to run a motion device, so you should connect them to the USB ports at the back of the computer.

## 3.3 Project Migration

**Wwise Installation and Migration Guide.** When you are ready to upgrade to a newer version of Wwise, you need to follow a coordinated protocol to ensure that your projects created in the previous version are migrated smoothly to the newer version. For more information, it is strongly recommended that you refer to the Wwise Installation and Migration Guide, before you upgrade.

## 3.4 SoundBanks

**SoundBanks version has been updated.** The version of the SoundBanks has been updated since the previous Wwise versions. This means that you will need to regenerate all your SoundBanks so that they are compatible with the current version of Wwise.

# 4 Known Issues and Limitations

Audiokinetic is constantly working to provide you with the highest quality software; however, you should be aware of the limitations and issues in this version of Wwise.

## 4.1 Wwise Known Limitations

The following list describes the limitations in this version of Wwise.

- Audio Busses
  - If you are ducking a bus that is playing a series of short sounds within a looped sequence container set to Continuous, you may experience a loss in ducking between the short sounds or at the loop point of the container. To avoid this behavior, you can either add sample accurate transitions between the sounds within the container, or set the ducking recovery time to anything but zero.
- Audio File Management
  - The audio pipeline uses real-time sample rate conversion nodes when playing sounds that differ from the platform's native sample rate (48 kHz for Windows, Xbox 360 and PLAYSTATION 3). To prevent possible conversion rate aliasing artefacts, content that does not require pitch-shifting such as music should be converted to match that of the native platform. For Windows, it is also possible to have a native format of 24 kHz using the audio quality option that is available from the SDK.
  - The Vorbis encoder library may result in poor audio quality for sounds using sample rates below 16 kHz. The Vorbis codec was specifically tuned for higher sample rates and performs very well above 16kHz. Audio quality below the 16kHz sampling rate, however, can vary considerably depending on the encoding settings used and the audio asset itself.



- Minor artefacts may result when the Wwise loop fixing algorithm specified in some formats' conversion settings is applied. These artefacts, which result from slight time-stretching or pitch-shifting in the algorithm, are less noticeable for sources with a long duration.
  - During the audio conversion process, loop regions that are shorter than the sample boundaries (format-specific) are removed.
  - Looping music clips may lose timing accuracy each time the loop point is crossed due to loop fixing. However, the Play and Stop position in the segment are always sample accurate.
  - It is not recommended to try to align the last and the first samples of two contiguous XMA-converted clips.
- Containers
    - Although you may use a switch container as a child of a random or sequence container with sample accurate transitions, transitions will not be sample accurate if the switch container plays more than one sound simultaneously.
    - The maximum number of children in any type of container is 65535. Although Wwise lets you create more than 65535 in the authoring application, no parent-child link can be made between the parent and the child above this limit. Without the link, these child objects cannot receive any notification updates during playback, including changes to volume, positioning, and so on.
    - There are several restrictions and limitations that currently exist when using the crossfade, sample accurate, and trigger rate transitions with random and sequence containers. For a complete list, refer to the [Wwise Knowledge Base](#).
    - If the playback instance limit is reached for a random or sequence container using Trigger Rate as the transition type, the currently playing sound as well as the container itself will be killed.
    - Sample accurate transitions of random or sequence containers are ignored on the Wii platform with source plug-ins and Vorbis formats.
- Effects
    - Since you cannot apply a crossfade when bypassing or un-bypassing an effect, you may experience clicking when using the Enable/Disable Bypass event action.
- Interactive Music
    - A music switch transition rule cannot use both the options “Sync To - Same Time as Playing Segment” and “Use transition segment”. Whenever “Use transition segment” is enabled, “Sync To - Entry Cue” is used instead.
    - The Break event action has no effect on objects of the Interactive Music hierarchy. Its functionality may be reproduced with the help of a music switch container.
    - The empty space on a track before a clip will be considered as the clip's pre-entry, possibly causing music transitions to occur later.
    - Run-time sample rate conversion makes sounds longer by approximately 12 samples per minute, causing slight inconsistencies for music objects. Sources in the following sample rates are affected: 44100Hz, 22050Hz, 11025Hz.
    - The wave data displayed in the Music Segment Editor for a converted file represents the original file and not the converted file.
    - The cumulative length of stingers played over “nothing” within the same switch of a music switch container is limited to 12.4 hours. If a change in switch occurs, the cumulative time counter is reset to zero. To avoid this problem:

- \* Do not use stingers over “nothing”. Any stinger that is not scheduled to play “immediately” is dropped when “nothing” is playing.
  - \* If you use stingers over “nothing”, you should replace “nothing” with a music playlist container looping over an empty segment.
  - Source starvation may cause music tracks to be desynchronized.
- Interface
    - Some views in Wwise are cropped on Japanese systems and potentially other languages as well. This can also occur if you modify the font DPI in Windows. To fix this issue, you can download new registry files from the [Wwise Knowledge Base](#) or revert the font size to the standard Windows setting.
- Live Edition
    - Some operations are not allowed during playback or when connected to a game, but are erroneously possible to edit using the List View or the Multi-Edit features. These operations include:
      - \* Modifying the Output bus or the Override bus option.
      - \* Enabling/Disabling voice limitation system.
    - Editing these during playback could cause instability in the game and could require restarting the sound engine to recover.
- PlayStation 3 platform
    - In order for streamed Vorbis files to play correctly on the PlayStation 3, the granularity of the I/O must be a multiple of 16 bytes.
- Positioning
    - The time base used in Wwise to record changes in positioning is independent of the time base used by your computer’s sound card. As a result, the changes in positioning may not be synchronized to the sound that is played.
    - If you add or remove a point along the path during playback, the sound will continue to play, but there will be no propagation. The next time you play back the sound, the changes that you made will be applied.
    - Wwise uses an “equal power” schema to ensure that no audio source exceeds 0dB in any speaker. As a result, all stereo sounds set to 2D positioning will be played 3dB quieter by Wwise. To maintain the same mixing reference, boost the 2D sounds by 3dB.
- Projects
    - When a project is saved to a mapped network drive, performance may be seriously affected. If you decide to save your projects to a mapped network drive, Audiokinetic will not support these projects.
    - When “User Account Control” (UAC) is enabled on Windows Vista more recent versions, Wwise sample projects installed under “Program Files” or “Program Files (x86)” can’t be opened with the 64-bit version of the Wwise authoring application because of permission issues. While these projects can be opened with the 32-bit version of the Wwise authoring application even when UAC is enabled, we strongly advise against it as the cache, Originals, and GeneratedSoundBanks folders will be “virtualized”, and will thus be using the wrong folders. To workaroud this issue, do one of the following:

- \* Move the project to a location where you have full read/write permissions. Note that the IntegrationDemo executable will search for SoundBanks in the relative path where they would normally be generated, so you should also move the IntegrationDemo executable, if you plan to use it. (This option is recommended).
  - \* Disable UAC. Since UAC is a security feature introduced in Windows Vista, we do not suggest disabling it as it may render your computer vulnerable to malicious software and other forms of attacks.
- Remote Connections
    - If the IP address of a computer changes while the Remote Connections dialog box is open, the computer will be displayed in the Available list using the LAN IP address instead of the usual “Local Host” IP address. If you connect to this computer, this computer will be added to the History list using the LAN IP address even if the same computer is already in the list using the “Local Host” IP address. Wwise doesn’t recognize that these two entries are the same remote computer. The next time you use Wwise, both entries will remain in the History list. Despite the duplication, you can connect to the computer using either entry.
    - Refer to this Wwise Knowledge Base article for information on troubleshooting the remote connection: <http://kb.gowwise.com/questions/137>
  - SDK
    - Debug versions of the Wwise SDK sample effect and source plug-ins cannot be used with the Wwise authoring tool.
  - SoundBanks
    - If a sound exists in more than one SoundBank, a transition will not be applied between the two instances of the sound when one SoundBank is unloaded and another one is loaded. In this case, the first instance of the sound will stop and the second instance will start from the beginning.
    - Note: Using the PrepareEvent mechanism will prevent this sort of problem from happening.
  - Streaming
    - If the hard disk on the Xbox 360 and the PlayStation 3 have not been read for a while, you may experience longer read times than normal. When this occurs during critical streaming situations, notifications of source starvation will be sent to the Wwise error log.
  - Wii platform
    - The value returned by AK::StreamMgr::IAkLowLevelIOHook::GetBlockSize() must be a multiple of 32 (bytes) in order to play back ADPCM files.
    - On the Wii platform, streamed audio files with file and loop lengths of less than 20ms may not play correctly.

## 4.2 Wwise Known Issues

The following list describes the relevant outstanding issues that could not be resolved in this version of Wwise.

- Audio Conversion

- **WG-19165:** AAC encoding may crash or stall when run from a remote desktop.
- Audio Files
  - **WG-11260:** Audio from file with too many markers fails to play. If the marker data chunk in the file header is larger than the granularity of the file streaming, the code fails to read the header.
- Blend Containers
  - **WG-15390:** A sound within a blend container may not be triggered if it follows a sound that failed to play.
  - **WG-15729:** Playback may fail when chaining multiple containers in continuous mode and step mode and finally Blend Containers with multiple sounds.
- Contents Editor
  - **WG-14785:** Objects displayed in the Contents Editor are not sorted alphabetically, which can make it difficult to find objects quickly.
- Effects
  - **WG-10527:** Real-time effect is layered on top of rendered effect when connected to a game.
  - **WG-14931:** Rendered effects are not listed in the Edit tab of the SoundBank Editor.
- Game Object 3D Viewer
  - **WG-15054:** Game objects with multiple positions are not shown in the Game Object 3D viewer.
  - **WG-16246:** The Game Sync Monitor doesn't update as expected until you add or remove a watch from the Watches list.
- Game Simulator
  - **WG-16071:** Game Simulator is not detecting game pad inputs on Vista 64 bit.
- General
  - **WG-15941:** When using certain UI schemes in Vista, the property sliders may not react as expected.
  - **WG-19096:** Playing new sound in Wwise may reset in-progress state transition.
- Integrity Report
  - **WG-15569:** The integrity report message “Streamed XMA files do not support region loops” may be displayed even when the audio file doesn't contain a region loop.
- Interactive Music
  - **WG-6432:** “Same Time as Playing Segment” option is ignored if “Use Transition Segment” is enabled.
  - **WG-14711:** Two ‘bar’, ‘beat’ or ‘grid’ notifications may be sent in a row at segment synchronization points.

- **WG-15728:** When a transition segment is added to the Any to Any transition and then removed, the music segment and corresponding media file is still included in the SoundBank, in error.
- **WG-16261:** If a double switch reversal occurs during the playback of a music switch container that has music switch containers as children, the wrong music segment may be played.
- **WG-16269:** Effect tails are trimmed when effects are inserted in objects of the interactive music hierarchy.
- iOS:
  - **WG-19007:** Encoding and playing 0.1 sources on iOS might produce static noise or silence. 0.1 source should be avoided.
- Motion
  - **WG-14852:** Motion FX objects do not work as expected within a Dialogue Event.
- Multi-Channel Creator
  - **WG-16302:** Sample loop markers within a source file are not kept in the multi-channel files generated by the Multi-Channel Creator.
- Obstruction/Occlusion
  - **WG-15678:** When updating the Obstruction/Occlusion curves in Wwise while connected to a game, the curve information is not propagated to the game, as expected.
- Playback Limit
  - **WG-15124:** Playback limit involving Motion busses may continue to be applied even though it is greyed out in the Wwise application.
- Profiler
  - **WG-14176:** The RR and RL columns on the Listeners tab of the Advanced Profiler are inverted.
  - **WG-15476:** Error message missing in the profiler when Wwise detects two similar media files that don't have the same size.
  - **WG-15617:** When an error occurs in the profiler, Wwise displays the event ID, but not the event name.
  - **WG-19418:** Hitting repetitively reconnect when connecting on the HIO device ends up popping "Wrong protocol version". Simply ignore and reconnect.
- Projects
  - **WG-14579:** Projects may become corrupted when migrating a project that contains a missing plug-in.
- RTPCs
  - **WG-14506:** Audio glitches may occur when using a Peak Limiter as well as a Parametric EQ that has an output level driven by an RTPC.
- SDK/Sound Engine

- **WG-15451:** Wwise libraries may not be compatible with some compilers as a result of certain libraries using the Whole Program Optimization.
  - **WG-15501:** Memory address may be reused by switch container after a game object is unregistered causing Wwise to play a different sound than is expected.
  - **WG-15537:** Race condition may exist that causes the sound engine to crash when connected remotely to your game.
  - **WG-15805:** The casing of the file AkAssert.h is used inconsistently in the SDK; either AKAssert.h or AkAssert.h.
  - **WG-16185:** Speaker volume matrix callback is not called for 2D sounds in IsInitiallyUnderThreshold.
- SoundBanks
    - **WG-12087:** Game parameters used by control busses are not included in the Initialization bank.
    - **WG-13305:** SoundBank output text files become inconsistent when a project contains two switches/states with the same name in two different groups.
    - **WG-14186:** When SoundBanks are generated, Wwise loses registered game objects registered by the SoundFrame preventing sounds from playing.
    - **WG-19736:** (PS3 only) When duplicate sounds are respectively tagged RSX and regular stream, bank generation randomly tags the file as RSX or not.
- Source Plug-ins
    - **WG-16232:** Clipping may occur when using the Pink or Red noise color setting within the SoundSeed Air - Woosh source plug-in.
- Wii
    - **WG-15250:** Glitches may occur when pausing music segments on the Wii platform due to inconsistencies between the music and lower engines.
    - **WG-17439:** Breaking a looping and streaming sound with a very small looping region on the Wii can cause the sound to stop with the error: "File or loop region is too small to be played properly".
- Workgroups
    - **WG-15558:** When using the Perforce plug-in, the file history scrolls unnecessarily as the information is received.
    - **WG-15559:** When using the Perforce plug-in, the history returned by P4 truncates the description removing useful information.
    - **WG-16257:** Wwise may crash when loading a work unit that includes an audio source with a space at the beginning of its filename.

## 5 Complete Changelist

The following sections list and describe the changes made to Wwise between version 2011.1.2 and version 2011.2.

## 5.1 New platforms supported

- **WG-18128** Added Visual Studio 2010 Sound Engine configuration for Windows.

## 5.2 Platform SDK updates

- Xbox 360: updated to XDK 20764 (June 2011).

## 5.3 API Changes

- **WG-19397** When using the default Stream Manager, the language name used for localized sounds is now set using `AK::StreamMgr::SetCurrentLanguage()`, instead of setting a directory name on all low-level I/O devices. Note that the directory separator ("/" or "\\") must not be appended to the language name anymore. See `AK::StreamMgr::SetCurrentLanguage()` for more details.
- **WG-18044** Now possible to specify a target playing ID to `PostEvent()` and `ExecuteActionOnEvent()`, allowing to stop a specific instance using a stop event parametrized in Wwise authoring tool.
- **WG-18044** Now possible to specify the parameter `AkActionOnEventType_Break` to the function `ExecuteActionOnEvent()`.

## 5.4 New Features

- **WG-19208** Audio File Importer Enhancements: Now can import folders, and use templates for importation.
- **WG-14665** Different lists in Wwise now remember the column sizes between user sessions.
- **WG-17600** Binary data is now supported in WAV marker labels (i.e. including NULL characters).
- **WG-17676** Wwise Motion now supports rumble on the PS3 Move.
- **WG-17721** New Effect: Harmonizer. Supports pitch shift of multiple voiced without affecting the signal duration.
- **WG-18629** New Effect: Stereo Delay.
- **WG-18633** New Effect: Pitch Shifter plug-in to create a mix of multiple pitched voices without time scaling.
- **WG-17713** New Effect: Time Stretch.
- **WG-18761** States groups inside the Mixing Desk remain sorted and aligned. State groups are now sorted in State tab of Property Editor.
- **WG-18788** Integration Demo for Mac is now available.
- **WG-18909** Multi-editor now remembers the expanded section across sessions.
- **WG-18985** New shortcut key to Edit in an External Editor available from all views (Ctrl+E).
- **WG-19083** Holding the Ctrl key while clicking Solo will remove all other solo currently in place and will solo the currently selected objects.
- **WG-19105** Originals and cache folders can now be relative to Project folder.

- **WG-19208** Now possible to import folders in Wwise and automatically create Containers for every folder.
- **WG-19225** Now possible to specify a list of soundbanks when generating packages with the File Packager to only generate the package associated with the specified soundbanks.
- **WG-19237** Wwise to 3DS Profiler connection is now performed using 3DS Serial IO system instead of the WiFi system.
- **WG-19326** The Content Editor now shows the number of children for the current object.
- **WG-19330** New shortcuts are now enumerated inside context menu. For example, press Ctrl+Shift+1 to do find in project explorer.
- **WG-19344** Content Editor remembers splitter position in for Blend Container, Switch Container and Playlist Containers.
- **WG-19066** Improved streaming latency as well as workflow for sounds that are streamed from RSX (PS3).
- **WG-19457** The File Packager now shows the package header and content size.
- **WG-19040** The File Packager now supports external sources. External Sources can be manually or automatically assigned to packages.

## 5.5 Behavior and Performance Changes

- **WG-19393** CAkFilePackageLowLevelIO now uses the Wwise Stream Manager API to read file packages instead of reading from disk directly.
- **WG-19404** PS3 controller rumble is slightly stronger to match the XBox controller results.
- **WG-18924** Fixed: FutzBox potential denormal performance problem (drastic CPU increase when effect runs with silenced input).
- **WG-19077** Optimization: Calling PrepareEvent and PrepareGameSync functions will now be causing less seeking on disk as they now order all the media to be loaded by file ID and file offset before proceeding to the I/O. There is now a real advantage to pack all the events to prepare in a single PrepareEvent or PrepareGameSync instead of calling it for each event or gamesync independently.
- **WG-19423** Improved performance of virtual voices on 3DS and Wii.

## 5.6 Miscellaneous Changes

- **WG-19004** Updated Vorbis encoder to aoTuV beta 6.03.
- **WG-19200** Removed the WwiseMax 3ds Max / SoundFrame sample plug-in.

## 5.7 Bug Fixes

Sound Engine:

- **WG-19360** Fixed: Loading banks containing very large amount of children under a single container could hang the AudioThread for some time, causing voice starvation.



- **WG-19400** Fixed: Argument `AkFileDesc` & `out_fileDesc` of `AK::StreamMgr::IAkFileLocationResolver::Open()` does not have the same address as when it is passed to other functions of the Low-Level I/O interfaces.
- **WG-19429** Fixed: Crash when changing the delay time of a Flanger plug-in while connected to a game (PS3 only).
- **WG-19449** Fixed: LPF and LFE curves set in attenuation editor do not work if spatialization is disabled.
- **WG-19455** Fixed: Memory corruption when a soundbank, loaded into an user-supplied memory pool created with the `AkFixedBlockSize` attribute, has a media section that is larger than the pool's block size. They should fail gracefully.
- **WG-19460** Fixed: Crash in `CAkDeviceBase` when terminating a "blocking" streaming device while there are still streams open.
- **WG-19464** Fixed: small audio glitch when LPF parameter changes to and from 0.
- **WG-19483** Fixed: (Xbox 360) Bad throughput heuristic set on xWMA streams. Results in inconsistent xWMA stream profiling data, and suboptimal I/O scheduling when there are xWMA files playing.
- **WG-19503** Fixed: Possible click while stopping continuous containers with sample-accurate transitions on the Wii.
- **WG-19505** Fixed: A maximum of 256 non-virtual voices can be playing at the same time.
- **WG-19515** Fixed: Crash in game when connecting with Wwise and syncing interactive music hierarchy with specific memory conditions.
- **WG-19580** Fixed: Source starvation with streamed XMA in interactive music, if seeking is required when a segment starts.
- **WG-19597** Fixed: (3DS only) Possible crash when Source plug-in are going virtual from elapsed time.
- **WG-19626** Fixed: Possible crash when connecting to the game in low memory situations.
- **WG-19700** Fixed: `AKASSERT(!IsActivityChunkEnabled())`; when unloading a bank with a Switch Container in Continuous Mode.
- **WG-19701** Fixed: Streamed sounds within same event are not guaranteed to be synchronized.
- **WG-19721** Fixed: `GetSourcePlayPosition()` returns undertermined values when more than one sound is played from within the same event.
- **WG-19724** Fixed: `GetSourcePlayPosition()` returns invalid values after going virtual if started physical, or going physical if started virtual.

#### Authoring:

- **WG-18570** Fixed: Blend containers using RTPC on layers were not using the common global default RTPC value if the RTPC was not explicitly given to the engine.
- **WG-18748** Fixed: Files may not be re-converted when "Insert filename marker" changes on the conversion settings and working on several platforms.
- **WG-18868** Fixed: Wwise at command line does not handle correctly project paths beginning with a backslash.

- **WG-18914** Fixed: Folder and Work Unit are missing from the object types in the Query editor.
- **WG-19039** Fixed: Now possible to restore None as the Default Switch of a Switch Container.
- **WG-19065** Fixed: GameObject View was not displaying unnamed registered objects registered before the connection.
- **WG-19112** Fixed: Advanced profiler sometimes shows prepared soundbank as loaded in wrong memory pool.
- **WG-19220** Fixed: Wwise memory consumption increases over time when profiler capture stops at maximum memory usage.
- **WG-19256** Fixed: Invalid soundbank names in Soundbank Definition Files now generates an error or warning based on project preference.
- **WG-19294** Fixed: Wav file containing bad RIFF data size in header could hang Wwise in certain situations.
- **WG-19394** Fixed: Wwise Authoring can crash if an event requires more than 16MB.
- **WG-19395** Fixed: Custom instance of Copied sharesets of Meter plug-in do not get their Game Parameter reference copied.
- **WG-19452** Fixed: Some wav files can't load in the waveform view and fail to use the Automatic Sample Detection.
- **WG-19521** Fixed: Possible crash in the Profiler Stat View with empty events.
- **WG-19703** Fixed: The Query Criteria "Platform inclusion" does not consider the ancestor inclusions.

## 6 Need Help?

### 6.1 Using Help

Wwise Help contains detailed information on each interface element in Wwise.

To open Help from within Wwise, do one of the following:

- Click the Help icon in the title bar of any of the views or dialog boxes.
- From the menu bar, click **Help > Wwise Help**.
- Press **F1**.

### 6.2 Contacting Support

Audiokinetic has established a complete [online support center](#) for our maintenance and evaluation customers. The following resources are available:

- A [feedback form](#) to submit details about bugs, crashes, and/or to suggest a feature, or make any general inquiries.
- Access to all the latest product [downloads](#).

- The [Wwise Knowledge Base](#) with knowledge base articles, tips, and tricks.
- [Video tutorials](#).

You can also contact us directly at: [support@audiokinetic.com](mailto:support@audiokinetic.com).

**Note:** Email support is only available for maintenance and registered evaluation customers.

### **6.3 Got Comments?**

We'd appreciate any comments or suggestions you may have about these release notes or any other piece of our documentation. Just send them to [documentation](#).