

SMS: API Change Log

Ver.	Date	Reason for revision
00	4 Mar 2015	Initial version
01	22 Apr 2015	SMS API 1.3
02	15 Jun 2015	Added IsLampDimmingInPercent (for laser projectors)
03	18 Jun 2015	Added C-KDM info in TimeWindowInformation Added CKdmFreePlayStartingPositionInMilliseconds
04	10 Sep 2015	SMS API 1.4
05	18 Nov 2015	SMS API 1.5
06	01 Mar 2016	SMS API 1.6
07	05 Apr 2017	SMS API 1.7
08	07 Nov 2017	SMS API 1.7b: settings extensions
09	13 Mar 2018	SMS API 1.8

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1 Aim/objective

This document lists the incremental changes between SMS API versions.

The full reference documentation is enclosed in the API package.

2 Scope

This document is intended for software engineers that need to integrate SMS API.

3 Compatibility

The SMS API is intended to be backward compatible.

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Version of the API can be retrieved by the **GetVersion** command.

4 Versions

4.1 SMS API 1.0

Initial version.

4.2 SMS API 1.1

Introduced with ICMP 1.1.5.

Includes more commands for TMS integration.



Note: changes have not been listed. Version 1.0 was not widely released.

4.3 SMS API 1.2

Introduced with ICMP 1.2.1.

Extends with file system and content check operations. This adds a new state in the MainStatus.

Extends the output for testing settings.

Adds new commands for monitoring.

- UPDATE: **MainStatus**:
Added one field in MainStatus:
 - **FileSystemState** FileSystemState:
Enumeration of states for the file system:
 - **Disabled**: storage disabled by configuration – no local storage available). Player/ingest/content cannot be used.
 - **NotAvailable**: storage disabled in error – no local storage available). Player/ingest/content cannot be used.
 - **Ready**: file system is ok
 - **FileSystemCheckRunning**: a file system check is running (at start-up or upon demand). Player/ingest/content cannot be used.
 - **DatabaseUpdateRunning**: the database is being updated/rebuilt (at start-up, after update or after having inserted HDDs from another system). Player/ingest/content cannot be used.



Note: the storage is not available if the FileSystemState is not Ready. Some storage operations can be executed at start-up or at run time and will prevent use of the storage until complete or canceled.

- NEW: **GetFileSystemCheckOptions**(out List<String> options)

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New command to list different operations/options that can be executed when starting a file system check.

- UPDATE: **StartFileSystemCheck**(List<String> options)
Updated command to accept optional argument with options.
- NEW: **CancelFileSystemCheck**()
New command to abort a file system check.
- NEW: **GetCplCheckOptions**(out List<String> options)
New command to list different operations/options that can be executed when starting a CPL check.
NOT YET IMPLEMENTED
- UPDATE: **StartCplCheck**(string id, List<String> options)
Updated command to accept optional argument with options.
NEW OPTIONS NOT YET IMPLEMENTED
- NEW: **GetCplCheckStatus**(out **CplCheckStatus** status)
New command to retrieve status, output and progression of the CPL check (only one at a time).
NOT YET IMPLEMENTED
- NEW: **GetTestSettingsStatus**(out **TestSettingsStatus** status)
New command to retrieve asynchronous status and extended output when testing settings.
- NEW: **GetMonitoringDefinition**(out List<**MonitoringValueDefinition**> definitions)
New command to retrieve the list of values returned by a GetMonitoringValues call.
- NEW: **GetMonitoringValues**(out DateTime timestamp, out List<int> values)
New command to read a list of monitoring values.
- NEW: new settings are available to configure a **NTP server** for time synchronization. See the settings xml structure documentation.

4.4 SMS API 1.3

Introduced with ICMP 1.2.2.

Extends the projector commands with lens control and light output mode.

Extends CPL and KDM information and player with C-KDM data.

- NEW: **GetProjectorLensInformation**(out string identifier, out string description)
New command to read lens information.

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- NEW: **ControlProjectorLens**(ProjectorLensOperation operation)
New command to shift the lens or change the zoom and focus.
- NEW: **ProjectorLensOperation**
New enumeration of operations to control projector lens:
 - ShiftLeft
 - ShiftRight
 - ShiftUp
 - ShiftDown
 - ZoomIn
 - ZoomOut
 - FocusNear
 - FocusFar
- NEW: **GetProjectorLightOutputMode**(
out ProjectorLightOutputMode lightOutputMode)
New command to read the current light output mode.
- NEW: **SetProjectorLightOutputMode**(
ProjectorLightOutputMode lightOutputMode)
New command to change the current light output mode.
- NEW: **ProjectorLightOutputMode**
New structure that describes the light output mode:
 - IsCLOEnabled
 - IsLampDimmingInPercent
 - LampDimming
 - TargetFootlambert
- UPDATE: **CplInformation**
New fields for C-KDM:
 - CKdmMaximumPlaybackCount
 - CKdmRemainingPlaybackCount
 - CKdmFreePlayStartingFrameIndex
 - CKdmFreePlayStartingPositionInMilliseconds
- UPDATE: **KdmInformation**
New fields for C-KDM:
 - CKdmMaximumPlaybackCount
 - CKdmRemainingPlaybackCount
 - CKdmFreePlayStartingFrameIndex
 - CKdmFreePlayStartingPositionInMilliseconds
- UPDATE: **TimeWindowInformation**
New fields for C-KDM:
 - CKdmMaximumPlaybackCount
 - CKdmRemainingPlaybackCount
 - CKdmFreePlayStartingFrameIndex

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- CKdmFreePlayStartingPositionInMilliseconds
- UPDATE: **PlayerStatus**
New field to limit starting position based on C-KDM constraints:
 - CKdmAllowedStartingPositionInMilliseconds

4.5 SMS API 1.4

Introduced with ICMP 1.2.3.

Extends with Immersive Sound settings and usage of a dedicated KDM for the external immersive sound renderer.

Adds a new FTP access to expose a single DCP per CPL.

4.5.1 Immersive Sound

From version 1.2.3 on, the ICMP allows streaming of immersive sound data to a Dolby CP850 Immersive Sound Renderer. The implementation follows the DCI approach that requires the use of 2 KDMs for the same content: one KDM for the IMB (Barco ICMP) and one KDM for the OMB (Immersive Sound Renderer).

Both KDMs have to be ingested on the ICMP which will upload the correct KDM on the Immersive Sound Renderer when loading the content in the player. An invalid or a missing immersive sound KDM shall be reported as a warning and playback shall be possible without the immersive sound.

The main integrity of a CPL is not impacted by the immersive sound assets. A new immersive sound integrity is reported through the API. A bad integrity for immersive sound shall be reported as a warning and playback shall be possible without the immersive sound.

4.5.2 Content access over FTP

A new FTP account "*ftpdcps*" has been defined to access an alternate content file structure that exposes one DCP per CPL present on the local storage. Each CPL is stored in a folder named after the CPL uuid.

See the new SMS_FTPAccess document enclosed in the API package.

4.5.3 API changes

- UPDATE: **CplInformation**
New fields about Immersive Sound:
 - HasImmersiveSoundTrack
 - ImmersiveSoundIntegrity
 - IsImmersiveSoundTrackEncrypted
 - ImmersiveSoundInfo

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- **UPDATE: ShowInformation**

New fields about Immersive Sound:

- HasImmersiveSoundTrack
- ImmersiveSoundIntegrity
- IsImmersiveSoundTrackEncrypted
- ImmersiveSoundInfo

New fields about the clips contained in the show:

- HighestEditRateNumerator
- HighestEditRateDenominator
- MaximumPictureActiveWidth
- MaximumPictureActiveHeight
- HasStereoscopyClips

- **UPDATE: KdmInformation**

New fields for identifying the recipient kind of the KDM:

- MatchingCertificateKind



Note: this field should be used to differentiate KDMs for the ICMP or KDMs for the Immersive Sound Renderer. When this field is empty, it means no matching certificate was identified.

- **UPDATE: TimeWindowInformation**

New fields for identifying the recipient kind of the KDM:

- MatchingCertificateKind

- **NEW: GetImmersiveSoundRendererInfo**
out ImmersiveSoundRendererInfo rendererInfo)

New command to read information about the immersive sound renderer.

- **NEW: ImmersiveSoundRendererInfo**

New structure with some information (when available) about the immersive sound renderer:

- IsConfigured
- Hostname
- ModelInfo
- CertificateInfo

- **UPDATE: MainStatus**

New fields for identifying the target of KDM:

- IsImmersiveSoundConfigured
- IsImmersiveSoundContentSelected
- IsImmersiveSoundRendererConnected
- IsImmersiveSoundRendererValid

- **UPDATE: GetCertificateList**

out List<CertificateInformation> list)

The command shall list the "immersive_sound_renderer" certificate kind if the immersive sound renderer is configured.

- UPDATE: **GetCertificate**(string certificateKind,
out string certificate)
The command shall return the "immersive_sound_renderer" full certificates chains if the immersive sound renderer is configured.
- UPDATE: **TestSettings**(string data)
The command has been extended to allow testing basic connectivity with the configured immersive sound renderer.
- NEW: new settings are available to configure the **Immersive Sound Renderer**. See the settings xml structure documentation.
- NEW: new FTP account "ftpdcps" can be used to access the new file structure with one DCP per CPL.

4.6 SMS API 1.5

Introduced with ICMP 1.2.4.

Small update for the Reboot command and warning message for delete operations. New documentation for automation over IP.

- UPDATE: **Reboot**(string rebootOptions)
The command access level was changed from USER_ADMINISTRATOR to USER_PROJECTIONIST.
This command implementation is improved for safer reboot procedure.
- NEW: **GetDeleteShowErrors**(string id,
out List<UInt32> errorList)
New command to get a list of errors or warnings before deleting a show. This command does not delete the show.
Access level: USER_SHOW_MANAGER
- NEW: **GetDeleteCplErrors**(string id,
out List<UInt32> errorList)
New command to get a list of errors or warnings before deleting a CPL. This command does not delete the CPL.
Access level: USER_SHOW_MANAGER
- NEW: **GetDeleteKdmErrors**(string id,
out List<UInt32> errorList)
New command to get a list of errors or warnings before deleting a KDM. This command does not delete the KDM.
Access level: USER_SHOW_MANAGER

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- NEW: **DeleteShow2**(string id, bool removeFromSchedule)
Extends the DeleteShow command with an option to remove the deleted show from the schedule.
Access level: USER_SHOW_MANAGER
- NEW: **DeleteShowList2**(List<string> idList, bool removeFromSchedule)
Extends the DeleteShowList command with an option to remove the deleted shows from the schedule.
Access level: USER_SHOW_MANAGER
- NEW: **AcknowledgeErrorMessage**(UInt32 errorCode)
New command to acknowledge a message reported by the GetErrorMessages command. It is mainly dedicated for users to acknowledge some maintenance messages from the ICMP.
Access level: USER_PROJECTIONIST
- NEW: Settings: add a value in the Schedule settings to allow starting a scheduled show based on an input cue (new Automation action) but with a maximum delay. See the settings xml structure documentation.
- UPDATE: added the missing version attribute in the show playlist documentation.
- UPDATE: the text of error messages from 10620 to 10631 has been modified: removed the "delete -" prefix.
- NEW: documentation for automation over IP: send text command to the ICMP over a TCP connection.

4.7 SMS API 1.6

Introduced with ICMP 1.2.5.

New Input clip list that can be added to show playlists to play on alternative inputs or to switch to live IP streaming (license required). Live IP streaming is not supported in 1.2.5.

New expected duration fields for shows and cues to take into account the duration of intermissions based on the "Insert Show" automation action.

New command to return the complete list of macros from the projector.

- NEW: **InputClipInformation**
New structure to describe one input clip and all its parameters.
See API reference for more details.
- NEW: **GetInputClipList**(out List<InputClipInformation> list)
New command to list the input clips available on the system. Those clips are part of the settings.
- NEW: **AddInputClip**(InputClipInformation clip)

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New command to add an input clip. The clip title must be unique.
To update an existing clip, the user must first delete it and add the new value.

- NEW: **DeleteInputClip**(string clipTitle)
New command to delete an input clip.
- NEW: **GetDefaultInputClip**(string inputType,
out InputClipInformation defaultInputClip)
New command to get default values for a new input clip of the given input type.
- UPDATE: **ShowInformation**
New fields for identifying the target of KDM:
 - bool HasLiveIpStreamingClips
 - UInt32 ErrorNew field to get the duration of the show including the intermission:
 - UInt64 ExpectedDurationInMilliseconds
- UPDATE: **CueInformation**
New fields to get the duration that the cue will add to the show ("Insert Show" cues):
 - UInt64 ExpectedShowDurationInMilliseconds
 - string ShowTitle
 - UInt32 Error
 - UInt64 RewindOffsetInMilliseconds
- UPDATE: **MainStatus**
New fields for detecting changes in the input clip list:
 - DateTime InputClipListLastChangeTime
- NEW: **StartLiveIpStreamingDetection**(LiveIpStreamingSource source)
New command to initiate detection of a live IP stream programs.
- NEW: **GetLiveIpStreamingDetectionStatus**(
out LiveIpStreamingDetectionStatus status)
New command to poll the status and result of the live IP streaming detection.
- NEW: **GetAllProjectorMacros**(out List<string> list)
New command to list all the projector macros. The existing GetProjectorMacros command only returns the macros assigned to presets.
- UPDATE: the duration of a show in the Schedule matches the expected duration (including the Intermission duration)
- NEW: Settings: add a new InputClips section to store the input clips defined by the user.

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- NEW: Settings: add documentation MultiProjectors section with new LTC output option on the last slave.
- NEW: Show playlist: add support for input clips inside a show playlist.
- Show playlist Schema validation by the ICMP has been disabled to allow insertion of user data.

4.8 SMS API 1.7

Introduced with ICMP 1.3.1.

New command to select and play a CPL from a remote URL, without ingest.

New status defined in the show playlist, to be returned by ICMP.

Reviewed documentation of Pause and ChangePosition commands to allow new behaviors in future implementations.

- NEW: **SelectFromUrl(...)**
New command to select and play content from a remote storage.
First implementation will only accept CPL item type and some URL schemes.
- UPDATE: **MainStatus**
New field PlayerSelectedShowLastChangeTime to indicate a change in the xml data returned by the GetSelectedShow command.
- NEW: Show playlist: Url for clip
New element to indicate that a clip is played from a remote storage.
This optional value can set by the ICMP and is not expected when a show is added by an API client.
- NEW: Show playlist: Status for cues and clips
New Status element to be filled by the ICMP when returning data from the GetSelectedShow command.
This optional value can be set by the ICMP and is not expected when a show is added by an API client.
- UPDATE: grant access level to USER_PROJECTIONIST for the follow commands:
 - ParseExternalStorage
 - GetParsingReport
 - GetParsedCplListPage
 - GetParsedKdmListPage
 - GetParsedShowListPage
 - StopExternalStorageParsing
 - GetExternalStorageItem
 - ReleaseExternalStorageAccess level was USER_SHOW_MANAGER.
- UPDATE: Pause documentation

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Pause command could be used to start a playback in paused state.
This is restricted to some implementation.

- UPDATE: ChangePosition documentation
ChangePosition and ChangePositionInFrames commands can be executed in paused state with some restrictions.
This is restricted to some implementation and some content.

4.9 SMS API 1.7b

Introduced with ICMP 1.3.2.

No new command, only changes in the settings structure documentation.

- NEW: Settings: added optional DarkScreenDetection under Schedule section
Allows configuration of the dark screen detection mechanism.
- NEW: Settings: added optional SmpteSyncDelayInMilliseconds under Player section
Used only in combination with the SMPTE Sync signal (430-14)

4.10 SMS API 1.8

Introduced with ICMP 1.3.5.

No SMS API commands were added in this version, only the documentation was updated. The wsdl and documentation were not changed.

Update of show playlist documentation.

Update of Automation over IP.

Added recommendations document.

- UPDATE: show playlist document and xsd:
Reviewed description of DurationInMilliseconds and Url.
Added InvertSubtitlesZPosition and SubtitlesPngSize.
- UPDATE: Automation over IP: add new commands to the PLAYER device:
 - "Jump To Clip End" (input clips only)
 - "Recover"
 - "Recover And Play"
 - "Ignore Recovery"
 - "Clear"
 - "Enable Repeat"
 - "Disable Repeat"
 - "Jump To Marker"
 - "Next"
 - "Previous"
- NEW: added SMS_API_Recommendations document