FilePro SOAP API

v1.9.6.4

Programmer Guide

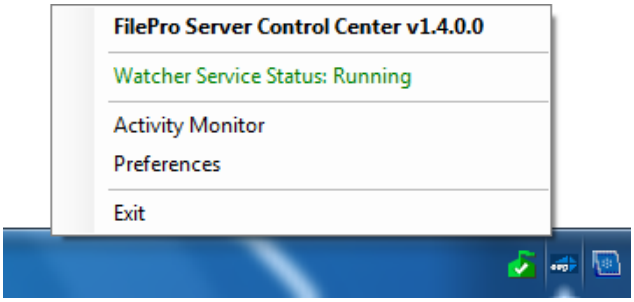
EEG Enterprises, Inc.
586 Main Street
Farmingdale, New York 11735
TEL: (516) 293-7472 FAX: (516) 293-7417

Contents

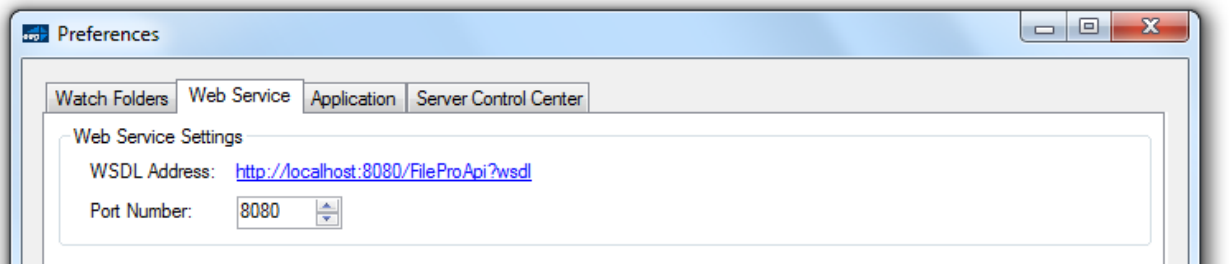
Chapter 1

Getting Started

The FilePro SOAP API is hosted in a Windows service application named `FileProWatcher`. This service is automatically installed and started by the CCPlay FilePro installer, though you can verify that the process is running at any time by right-clicking the **FilePro Server Control Center** system tray icon.



As a sanity check that the service is properly bound and listening for connections, you can then click **Preferences**, switch to the **Web Service** tab in the **Preferences** window, and click on the WSDL link.



If the WSDL XML document successfully loads in your web browser, then you know that the web service is ready to accept SOAP requests. If not, then you should check the **Activity Monitor** (also accessible from the **FilePro Server Control Center** system tray icon) for any error messages explaining why the web service could not be started (e.g. due to a port conflict).

You can also use the **Web Service** tab of the **Preferences** window to change the port number that the service is bound to. Note that after making a port number change, you will be prompted to restart the `FileProWatcher` process in order for the change to take effect.

Also note that in order for remote clients to be able to connect to the service, you may need to open the port that the web service is using in your firewall.

Available Endpoints

All of the available SOAP API endpoints are documented under the IFileProApi interface.

Sample Clients

In order to demonstrate how to consume the FilePro SOAP API, we provide sample client programs in the C#, Java, and Python programming languages. The samples show how to make most of the available API calls and are intended to be a starting point for your own client applications.

Chapter 2

A Note on Network Shares

The FilePro SOAP API can generally access files on network shares, but since it is hosted in a Windows service application named `FileProWatcher` (as noted in the Getting Started section), there are a few things to be aware of to ensure that this works correctly.

2.1 Universal Naming Convention (UNC) Paths

Windows service applications cannot reliably access network shares through paths that start with mapped drive letters, so you should always use UNC paths. This has to do with the fact that mapped drive letters exist on a per-logon basis, and a Windows service is always started in its own logon session. The interested reader is referred to the *Services and Redirected Drives* article on MSDN for a more thorough discussion of this: `https://msdn.microsoft.com/en-us/library/windows/desktop/ms685143.aspx`.

2.2 Logon Account

By default, Windows services run under a special account called `LocalSystem`, which is a privileged account on the local machine that may not have permission to access certain network shares. If you observe that this is the case for your network share, you can make the `FileProWatcher` process run under a different user account. A dialog pops up during the installation process that gives you the opportunity to set this user account, and you can change it at any time with the following procedure:

1. Open CCPlay FilePro's **Preferences** window and select the **Watch Folders** tab.
2. Click the **Open Services Manager** link.
3. In the window that pops up, scroll down to the `FileProWatcher` service, right-click on it, and click **Properties**.
4. In the window that pops up, select the **Log On** tab.
5. Click the **This account** radio button and enter the username and password for the account that the service should run under.
6. Click **OK**, then restart the `FileProWatcher` service by right-clicking its entry in the **Services** window and selecting **Restart**.

A good rule of thumb is to make the process run under the same account that you normally use; this way, you know that it will be able to access the same files that you can (with the possible exception of mapped drive letters; see the Universal Naming Convention (UNC) Paths section, above).

Chapter 3

Module Documentation

3.1 Enumerations

This module contains the allowed values for all of the enumerated types.

- enum Operation {
  Operation.Encode,
  Operation.Legalize,
  Operation.Extract,
  Operation.ConvertCcFile,
  Operation.Retime }

  Possible job operations.

- enum CaptionFileFormat {
  CaptionFileFormat.ECF,
  CaptionFileFormat.SCC,
  CaptionFileFormat.AAF,
  CaptionFileFormat.MOV,
  CaptionFileFormat.SMPTE_TT,
  CaptionFileFormat.S436M,
  CaptionFileFormat.SRT,
  CaptionFileFormat.SIMPLE_TT,
  CaptionFileFormat.SMI,
  CaptionFileFormat.TTML_SDP,
  CaptionFileFormat.WEBVTT,
  CaptionFileFormat.MCC }

  Possible output caption file formats.

- enum FrameRate {
  FrameRate.FR_239,
  FrameRate.FR_24,
  FrameRate.FR_25,
  FrameRate.FR_299,
  FrameRate.FR_30,
  FrameRate.FR_50,
  FrameRate.FR_599,
  FrameRate.FR_60 }

Possible frame rates.

- enum TimecodeCountingMode {
  TimecodeCountingMode.DROP_FRAME,
  TimecodeCountingMode.NON_DROP_FRAME }

  Possible timecode counting modes.

- enum OffsetMode {
  OffsetMode.ShiftForward,
  OffsetMode.ShiftBackward,
  OffsetMode.NewOrigin }

  Possible offset modes.

- enum CgmsaCode {
  CgmsaCode.COPY_PERMITTED,
  CgmsaCode.NO_MORE_COPIES,
  CgmsaCode.ONE_MORE_COPIES,
  CgmsaCode.NO_COPYING }

  Possible CGMS-A codes.

- enum ApsCode {
  ApsCode.PSP_ON_SPLIT_BURST_OFF,
  ApsCode.PSP_ON_2_LINE_SPLIT_BURST_ON,
  ApsCode.PSP_ON_4_LINE_SPLIT_BURST_ON }

  Possible APS codes.

- enum VChipRating {
  VChipRating.TV_Y,
  VChipRating.TV_Y7,
  VChipRating.TV_G,
  VChipRating.TV_PG,
  VChipRating.TV_14,
  VChipRating.TV_MA,
  VChipRating.MPAA_G,
  VChipRating.MPAA_PG,
  VChipRating.MPAA_PG13,
  VChipRating.MPAA_R,
  VChipRating.MPAA_NC17,
  VChipRating.MPAA_X,
  VChipRating.MPAA_NR,
  VChipRating.CE_E,
  VChipRating.CE_C,
  VChipRating.CE_C8,
  VChipRating.CE_G,
  VChipRating.CE_PG,
  VChipRating.CE_14,
  VChipRating.CE_18,
  VChipRating.CF_E,
  VChipRating.CF_G,
  VChipRating.CF_8,
  VChipRating.CF_13,
  VChipRating.CF_16,
  VChipRating.CF_18 }

Possible program ratings.

- enum Mode {
  Mode.NORMAL,
  Mode.OMNEON }

  Possible processing modes.

- enum VancFilterMode {
  VancFilterMode.BLACKLIST,
  VancFilterMode.WHITELIST }

  Possible upstream VANC packet filter modes.

- enum MxfCcInsertionLocation {
  MxfCcInsertionLocation.DEFAULT,
  MxfCcInsertionLocation.S436M,
  MxfCcInsertionLocation.MPEG2_UD,
  MxfCcInsertionLocation.QUANTEL }

  Possible MXF CC insertion locations.

- enum MxfTimecodeSource {
  MxfTimecodeSource.DEFAULT,
  MxfTimecodeSource.HEADER }

  Possible timecode sources for MXF files.

- enum TimecodeFormat {
  TimecodeFormat.DEFAULT,
  TimecodeFormat.SMPTE,
  TimecodeFormat.SUBTITLE }

  Possible Timed Text timecode formats.

- enum QuickTimeMode {
  QuickTimeMode.IOS,
  QuickTimeMode.FCP,
  QuickTimeMode.TTML,
  QuickTimeMode.TTML_CFF }

  Possible QuickTime CC insertion locations.

- enum ShiftDirection {
  ShiftDirection.Backward,
  ShiftDirection.Forward }

  This enum has been deprecated and superseded by the OffsetMode enum.

- enum Mpeg2CcCoding {
  Mpeg2CcCoding.USER_DATA,
  Mpeg2CcCoding.RDD_11_708,
  Mpeg2CcCoding.DVB_TELETEXT,
  Mpeg2CcCoding.DVB_BITMAP }

  Possible MPEG-2 TS caption/subtitle coding styles.

- enum RowLength {
  RowLength.RL_32_CHARACTERS,
  RowLength.RL_42_CHARACTERS }

  Possible CTA-708 max row lengths.

3.1.1 Detailed Description

This module contains the allowed values for all of the enumerated types.

3.1.2 Enumeration Type Documentation

3.1.2.1 enum ApsCode

Possible APS codes.

Enumerator

PSP_ON_SPLIT_BURST_OFF PSP On; Split Burst Off (01)

PSP_ON_2_LINE_SPLIT_BURST_ON PSP On; 2 Line Split Burst On (10)

PSP_ON_4_LINE_SPLIT_BURST_ON PSP On; 4 Line Split Burst On (11)

3.1.2.2 enum CaptionFileFormat

Possible output caption file formats.

Enumerator

ECF EEG Caption Files (.ecf)

SCC Scenarist Closed Caption Files (.scc)

AAF Advanced Authoring Format Files (.aaf) with SMPTE 436M Ancillary Data Tracks

MOV QuickTime Movie Files (.mov) with CTA-708 Closed Caption Tracks

SMPTE_TT SMPTE Timed Text Files (.xml)

S436M Material eXchange Format Files (.mxf) with SMPTE 436M Ancillary Data Tracks

SRT SubRip Text Files (.srt)

SIMPLE_TT Simple Timed Text Files (.xml)

SMI Synchronized Accessible Media Interchange (SAMI) Files (.smi)

TTML_SDP TTML Timed Text SDP Profile (.ttml)

WEBVTT Web Video Text Tracks (WebVTT) Files (.vtt)

MCC MacCaption Closed Caption Files (.mcc)

3.1.2.3 enum CgmsaCode

Possible CGMS-A codes.

Enumerator

COPY_PERMITTED Copying is permitted without restriction (00)

NO_MORE_COPIES No more copies (one generation of copies has been made) (01)

ONE_MORE_COPIES One generation of copies may be made (10)

NO_COPYING No copying is permitted (11)

3.1.2.4 enum FrameRate

Possible frame rates.

Enumerator

FR_239 23.976 fps

FR_24 24 fps

FR_25 25 fps

FR_299 29.97 fps

FR_30 30 fps

FR_50 50 fps

FR_599 59.94 fps

FR_60 60 fps

3.1.2.5 enum Mode

Possible processing modes.

Enumerator

NORMAL Standard processing mode.

OMNEON Use the Omneon Media API to do the video file processing.

3.1.2.6 enum Mpeg2CcCoding

Possible MPEG-2 TS caption/subtitle coding styles.

Enumerator

USER_DATA USA CTA-608/708 captions in user data as per ATSC A/53 for MPEG-2 essence or SCTE 128 for H.264/AVC essence.

RDD_11_708 USA CTA-608/708 captions in their own PES as per SMPTE RDD 11.

DVB_TELETEXT World System Teletext in a DVB PES as per ETSI EN 300 472.

DVB_BITMAP Rendered bitmap subtitles in a DVB PES as per ETSI EN 300 743.

3.1.2.7 enum MxfCcInsertionLocation

Possible MXF CC insertion locations.

Enumerator

DEFAULT Add a SMPTE 436M Ancillary Data Track if the file is HD or doesn't have MPEG-2 essence, otherwise put the CC data in the MPEG-2 user data.

S436M Always add a SMPTE 436M Ancillary Data Track.

MPEG2_UD Always put the CC data in the MPEG-2 user data.

QUANTEL Always add a track with Quantel CC essence elements.

3.1.2.8 enum MxfTimecodeSource

Possible timecode sources for MXF files.

Enumerator

DEFAULT Read the timecode for each frame from the system item in its content package (i.e. timecode that is striped with the essence), if present; otherwise, use the timecode recorded in the file's header metadata.

HEADER Always use the timecode recorded in the file's header metadata.

3.1.2.9 enum OffsetMode

Possible offset modes.

Enumerator

ShiftForward The captions will be shifted forward by the specified amount.

ShiftBackward The captions will be shifted backward by the specified amount.

NewOrigin When JobSettings.Operation is Extract, the captions in the output caption file will be auto-shifted to ensure that the value of JobSettings.TimecodeShift is their timecode origin. When JobSettings.Operation is Encode, the captions are heuristically auto-aligned with the video, though this isn't guaranteed to be 100% accurate.

3.1.2.10 enum Operation

Possible job operations.

Enumerator

Encode Use this operation if you are encoding new closed captions and/or other data (e.g. AFD) into a video file.

Legalize Use this operation if you are legalizing closed caption data that is already embedded in a video file.

Extract Use this operation if you are extracting closed caption data that is already embedded in a video file.

ConvertCcFile Use this operation if you are converting a closed caption file from one format to another.

Retime Use this operation if you are shifting the timing of closed caption data that is already embedded in a video file.

3.1.2.11 enum QuickTimeMode

Possible QuickTime CC insertion locations.

Enumerator

IOS The CC data will be put in a CTA-608 track. This is the iOS and iTunes convention.

FCP The CC data will be put in a CTA-708 track. This is the Final Cut Pro convention.

TTML The CC data will be put in a TTML track.

TTML_CFF The CC data will be put in a fragmented TTML track.

3.1.2.12 enum RowLength

Possible CTA-708 max row lengths.

Enumerator

RL_32_CHARACTERS 32 characters

RL_42_CHARACTERS 42 characters

3.1.2.13 enum ShiftDirection

This enum has been deprecated and superseded by the OffsetMode enum.

Enumerator

Backward Maps to an OffsetMode value of ShiftBackward.

Forward Maps to an OffsetMode value of ShiftForward.

3.1.2.14 enum TimecodeCountingMode

Possible timecode counting modes.

Enumerator

DROP_FRAME Drop-frame counting. The only frame rates with a defined drop-frame counting mode are FR_299 and FR_599.

NON_DROP_FRAME Non-drop-frame counting.

3.1.2.15 enum TimecodeFormat

Possible Timed Text timecode formats.

Enumerator

DEFAULT hh:mm:ss:ff

SMPTE hh:mm:ss:ff

SUBTITLE hh:mm:ss.mil

3.1.2.16 enum VancFilterMode

Possible upstream VANC packet filter modes.

Enumerator

BLACKLIST The DID/SDIDs provided in JobSettings.UpstreamVancFilter will be used as a blacklist of upstream VANC packets to strip. All other packets will be passed through.

WHITELIST The DID/SDIDs provided in JobSettings.UpstreamVancFilter will be used as a whitelist of upstream VANC packets to pass through. All other packets will be stripped.

3.1.2.17 enum VChipRating

Possible program ratings.

Enumerator

TV_Y TV-Y

TV_Y7 TV-Y7

TV_G TV-G

TV_PG TV-PG

TV_14 TV-14

TV_MA TV-MA

MPAA_G MPAA G

MPAA_PG MPAA PG

MPAA_PG13 MPAA PG-13

MPAA_R MPAA R

MPAA_NC17 MPAA NC-17

MPAA_X MPAA X

MPAA_NR MPAA Not Rated

CE_E Canadian English E

CE_C Canadian English C

CE_C8 Canadian English C8+

CE_G Canadian English G

CE_PG Canadian English PG

CE_14 Canadian English 14+

CE_18 Canadian English 18+

CF_E Canadian French E

CF_G Canadian French G

CF_8 Canadian French 8 ans +

CF_13 Canadian French 13 ans +

CF_16 Canadian French 16 ans +

CF_18 Canadian French 18 ans +

Chapter 4

Class Documentation

4.1 IFileProApi Interface Reference

This interface contains all of the endpoints for the FilePro SOAP API.

Public Member Functions

- string QueueJob (JobSettings settings)

  Creates a new job and adds it to the queue.
- string QueueJobUsingProfile (string inputVideoFile, string inputCaptionFile, string outputDirectory, string profileName)

  Creates a new job, loading most settings from a preconfigured profile, and adds it to the queue.
- string GetJobStatus (string jobId)

  Gets the status of a job.
- void CancelJob (string jobId)

  Requests that a job be cancelled. If the job hasn't even started running yet, then it will never be started, and if it already finished, then this call won't do anything.
- void CancelAllJobs ()

  Requests that all jobs created by previous calls to QueueJob or QueueJobUsingProfile be cancelled.
- string[ ] GetAllQueuedJobs ()

  Obtains a list of queued jobs.
- string[ ] GetAllRunningJobs ()

  Obtains a list of running jobs.
- string[ ] GetAllFinishedJobs ()

  Obtains a list of finished jobs.
- string[ ] GetProfileNames (bool excludeWatchProfiles)

  Obtains the names of the profiles that were configured in CCPlay FilePro Server's preferences.

4.1.1 Detailed Description

This interface contains all of the endpoints for the FilePro SOAP API.

4.1.2 Member Function Documentation

4.1.2.1 void IFileProApi.CancelAllJobs ( )

Requests that all jobs created by previous calls to QueueJob or QueueJobUsingProfile be cancelled.

4.1.2.2 void IFileProApi.CancelJob (string *jobId*)

Requests that a job be cancelled. If the job hasn't even started running yet, then it will never be started, and if it already finished, then this call won't do anything.

Note that if the job is currently running, this method is asynchronous (meaning that it requests that the job be cancelled and returns immediately), so the job may not stop running right away, but it should stop soon.

Parameters

jobId	The unique ID string for the job to cancel that was returned by a previous call to QueueJob or QueueJobUsingProfile.

4.1.2.3 string [ ] IFileProApi.GetAllFinishedJobs ( )

Obtains a list of finished jobs.

Returns

An array of unique ID strings for all of the jobs that have been created with QueueJob or QueueJobUsingProfile that have successfully completed, failed to successfully complete, or were cancelled.

4.1.2.4 string [ ] IFileProApi.GetAllQueuedJobs ( )

Obtains a list of queued jobs.

Returns

An array of unique ID strings for all of the jobs that have been created with QueueJob or QueueJobUsingProfile that haven't started running yet.

4.1.2.5 string [ ] IFileProApi.GetAllRunningJobs ( )

Obtains a list of running jobs.

Returns

An array of unique ID strings for all of the jobs that have been created with QueueJob or QueueJobUsingProfile that are currently running.

4.1.2.6 string IFileProApi.GetJobStatus (string *jobId*)

Gets the status of a job.

Parameters

jobId	The unique ID string for the job whose status is desired that was returned by a previous call to QueueJob or QueueJobUsingProfile.

Returns

A string that contains a human-readable status of the job. Possible values include:

`"Queued"`	This means that the job is in the queue, but hasn't yet started running.
`"##%"`	This means that the job is currently running with this percentage completion.
`"Completed"`	This means that the job has successfully completed.
`"Cancelled"`	This means that the job stopped running or was never started because CancelJob was called on it or CancelAllJobs was called.
`"Failed"`	This means that the job was not able to complete. See the .failure file in the job's output directory for more information as to why it failed.

4.1.2.7 string [ ] IFileProApi.GetProfileNames (bool *excludeWatchProfiles*)

Obtains the names of the profiles that were configured in CCPlay FilePro Server's preferences.

Parameters

excludeWatch↩ Profiles	Set this to `true` if you want the returned list to only include profiles that were configured with the "Use profile as SOAP settings" option or `false` if you want it to include all of the profiles. Note that a profile is allowed to function as both a watch profile and a template for QueueJob↩ UsingProfile simultaneously.

Returns

An array of profile names that can be passed as the *profileName* parameter to QueueJobUsingProfile.

4.1.2.8 string IFileProApi.QueueJob (JobSettings *settings*)

Creates a new job and adds it to the queue.

Parameters

settings	Settings that define the job. For a discussion of the available settings, see the JobSettings reference.

Returns

A unique ID string for identifying this job to other API calls such as GetJobStatus and CancelJob.

See also

QueueJobUsingProfile

4.1.2.9 string IFileProApi.QueueJobUsingProfile (string *inputVideoFile,* string *inputCaptionFile,* string *outputDirectory,* string *profileName*)

Creates a new job, loading most settings from a preconfigured profile, and adds it to the queue.

Note that if you are using files on network shares, you may want to look at the A Note on Network Shares section for additional considerations.

Parameters

inputVideoFile	Filesystem path that the machine hosting the Web service can use to access the input video file. May be a UNC path.
inputCaptionFile	Filesystem path that the machine hosting the Web service can use to access the input caption file. May be a UNC path. May also be null if an input caption file is not required for this job.
outputDirectory	Filesystem path to a directory that the machine hosting the Web service will use to write the output file(s) of this job. May be a UNC path. If this directory doesn't already exist, it will be created.
profileName	Name of a profile that was configured in CCPlay FilePro Server's preferences from which all additional settings will be loaded. A list of available profiles can be obtained by calling GetProfileNames.

Returns

A unique ID string for identifying this job to other API calls such as GetJobStatus and CancelJob.

See also

QueueJob

4.2 JobSettings Class Reference

The sole parameter to the IFileProApi.QueueJob API call is an object of this type. This object includes all of the settings that specify what the job should do.

Public Attributes

Core Settings

- Operation Operation
  An enumerated value that specifies the operation to be performed.
- string InputFile
  Filesystem path that the machine hosting the Web service can use to access the main input file. May be a UNC path.
- string OutputDirectory
  Filesystem path to a directory that the machine hosting the Web service will use to write the output file(s) of this job. May be a UNC path.
- string OutputSuffix
  Suffix that is appended to the filename of InputFile to generate the filenames of the output files.

Options

- bool SeparateOutputFolder
  Flag indicating the placement of output files.
- bool CreateLogs

Flag indicating the creation of CC log files (.s1/.s2).

- bool CreateJobLog

  Flag indicating the creation of a job log file (.job).

Basic Closed Captioning Settings

- string InputLang1File

  Filesystem path that the machine hosting the Web service can use to access the caption file that will be encoded into Language 1. May be a UNC path.
- string InputLang2File

  Filesystem path that the machine hosting the Web service can use to access the caption file that will be encoded into Language 2. May be a UNC path.
- CaptionFileFormat OutputCaptionFormat

  Supplying this setting will cause output caption file(s) to be created, and its value determines the file format that will be used.
- string TimecodeShift

  Timecode shift (formatted as "`hh:mm:ss:ff`") to be applied to the captions that are being encoded, legalized, extracted, etc.
- OffsetMode ShiftMode

  An enumerated value that specifies the semantics of the applied TimecodeShift.
- bool FlipDropFrame

  Flag indicating whether the existing drop-frame timing of the captions being encoded, legalized, extracted, etc. should be inverted.

Advanced Closed Captioning Settings

- FrameRate InputLang1FrameRate

  Frame rate to use when interpreting the timecode stamps for the CC data in InputLang1File.
- FrameRate InputLang2FrameRate

  Frame rate to use when interpreting the timecode stamps for the CC data in InputLang2File.
- TimecodeCountingMode InputLang1DropFrame

  Drop-frame convention to use when interpreting the timecode stamps for the CC data in InputLang1File.
- TimecodeCountingMode InputLang2DropFrame

  Drop-frame convention to use when interpreting the timecode stamps for the CC data in InputLang2File.
- string InputLang1Origin

  Timecode origin (formatted as "`hh:mm:ss:ff`") to be used for any conversions that need to be done to the timecode stamps for the CC data in InputLang1File.
- string InputLang2Origin

  Timecode origin (formatted as "`hh:mm:ss:ff`") to be used for any conversions that need to be done to the timecode stamps for the CC data in InputLang2File.
- string InputLang1Code

  ISO 639-2 language code to be encoded for the Language 1 captions.
- string InputLang2Code

  ISO 639-2 language code to be encoded for the Language 2 captions.
- FrameRate OutputCaptionFrameRate

  This setting is only relevant when OutputCaptionFormat is set to AAF, MOV, S436M, or MCC. It is an enumerated value that specifies the frame rate of the video that the output caption file(s) will be used with.
- RowLength Cta708MaxRowLength

  The maximum row length to use in the encoded CTA-708 data.
- bool MapCc3toS3

  Map the data in the CTA-608 CC3 service to the CTA-708 S3 service.

AFD Settings

- string ActiveFormat

The AFD code to be inserted into the video, formatted as an ASCII-encoded binary string ("0101", "1100", etc.).

CGMS-A Settings

- CgmsaCode CGMSA
  An enumerated value that specifies the CGMS-A code to be inserted into the video.
- ApsCode APS
  An enumerated value that specifies the APS code to be inserted into the video.

V-Chip Settings

- VChipRating VChipRating
  An enumerated value that specifies the program rating to be inserted into the video.
- bool VChipViolence
  V-Chip violence bit.
- bool VChipSex
  V-Chip sex bit.
- bool VChipLanguage
  V-Chip language bit.
- bool VChipDialogue
  V-Chip dialogue bit.

VANC Settings

- ushort CcVancInsertionLine
  The VANC line number on which to insert CC packets.
- ushort AfdVancInsertionLine
  The VANC line number on which to insert AFD packets.
- VancFilterMode UpstreamVancFilterMode
  An enumerated value that specifies the semantics of the applied UpstreamVancFilter.
- string[ ] UpstreamVancFilter
  An array of DID/SDIDs for the upstream VANC packets to be filtered, each of which is formatted as an ASCII-encoded hexadecimal string ("6060", "4105", etc.).
- string As02NewVancTrackSuffix
  Suffix that is appended to the AS-02 bundle name to generate the essence component filename for a new VANC track.

Omneon Settings

- Mode Mode
  Enumerated value indicating the processing mode.

Miscellaneous Advanced Settings

- MxfCcInsertionLocation MxfLocation
  An enumerated value that specifies the preferred location for new CC insertion.
- MxfTimecodeSource MxfTimecodeSource
  An enumerated value that specifies which timecodes in the video file to use when inserting the CC data from InputLang1File and InputLang2File.
- TimecodeFormat TimecodeFormatTT
  An enumerated value that specifies the timecode format for any output Timed Text files.
- bool Include608TunnelingDataTT
  Flag indicating whether CTA-608 tunneling data should be included in any output Timed Text files.
- bool BlockS1Cc
  Flag indicating whether upstream S1 captions should be blocked.

- bool BlockS1Text

  Flag indicating whether the upstream S1 text service should be blocked.
- bool BlockS2Cc

  Flag indicating whether upstream S2 captions should be blocked.
- bool BlockS2Text

  Flag indicating whether the upstream S2 text service should be blocked.
- bool BlockXds

  Flag indicating whether the upstream XDS data should be blocked.
- QuickTimeMode QuickTimeMode

  An enumerated value that specifies where the CC data will be inserted for QuickTime files.

MPEG-2 Settings

- bool IncludeScte20InHd

  Flag indicating whether SCTE-20 data should be included in HD MPEG-2.
- Mpeg2CcCoding Mpeg2CcCoding

  An enumerated value that specifies where the CC data will be inserted for MPEG-2 TS files.
- int TransportRate

  Override the transport rate of the input file.
- bool Mpeg2VancOutOnly

  Flag indicating whether the output TS is only an RDD-11 VANC stream.
- int CcPid

  Explicitly set the PID of the output CC stream when Mpeg2CcCoding is RDD_11_708, DVB_TELETEXT, or DVB_B↩ ITMAP.
- bool IncludeIsdbStreamId

  Include an ISDB Stream Descriptor in the PMT for an MPEG-2 Stream.
- int TeletextPageNumS1

  Specifies the S1 DVB teletext magazine/page number.
- int TeletextPageNumS2

  Specifies the S2 DVB teletext magazine/page number.
- int SubtitlePageNumS1

  Specifies the S1 DVB bitmap ancillary/composition page number.
- int SubtitlePageNumS2

  Specifies the S2 DVB bitmap ancillary/composition page number.

Deprecated Settings

- ShiftDirection ShiftDirection

  This setting is deprecated and has been superseded by the ShiftMode setting.

4.2.1 Detailed Description

The sole parameter to the IFileProApi.QueueJob API call is an object of this type. This object includes all of the settings that specify what the job should do.

4.2.2 Member Data Documentation

4.2.2.1 string JobSettings.ActiveFormat

The AFD code to be inserted into the video, formatted as an ASCII-encoded binary string ("0101", "1100", etc.).

This setting may be required. Specifically, at least one of InputLang1File, InputLang2File, ActiveFormat, CGMSA, and VChipRating need to be set for the Encode operation.

4.2.2.2 ushort JobSettings.AfdVancInsertionLine

The VANC line number on which to insert AFD packets.

This setting is only relevant if the input file is in a format that stores VANC line number information, such as MXF or GXF. If omitted, it will default to `9`.

4.2.2.3 ApsCode JobSettings.APS

An enumerated value that specifies the APS code to be inserted into the video.

This setting is only allowed if CGMSA is specified.

4.2.2.4 string JobSettings.As02NewVancTrackSuffix

Suffix that is appended to the AS-02 bundle name to generate the essence component filename for a new VANC track.

Note that this setting is only relevant if InputFile is an AS-02 version file and the AS-02 bundle doesn't already have a VANC track. If the AS-02 bundle already has a VANC track, the existing one will be used and so a new one won't be created.

Also note that this is not allowed to contain any characters that aren't allowed in filenames (e.g. `'\'`).

If omitted, this setting will default to `"_vanc0"`.

4.2.2.5 bool JobSettings.BlockS1Cc

Flag indicating whether upstream S1 captions should be blocked.

Note that it isn't necessary to specify this if InputLang1File is specified, as the new CC data will automatically overwrite the upstream data in that service.

This setting is only relevant if the input file is a video file and the operation isn't Extract. If omitted, it will default to `false`.

4.2.2.6 bool JobSettings.BlockS1Text

Flag indicating whether the upstream S1 text service should be blocked.

This setting is only relevant if the input file is a video file and the operation isn't Extract. If omitted, it will default to `false`.

4.2.2.7 bool JobSettings.BlockS2Cc

Flag indicating whether upstream S2 captions should be blocked.

Note that it isn't necessary to specify this if InputLang2File is specified, as the new CC data will automatically overwrite the upstream data in that service.

This setting is only relevant if the input file is a video file and the operation isn't Extract. If omitted, it will default to `false`.

4.2.2.8 bool JobSettings.BlockS2Text

Flag indicating whether the upstream S2 text service should be blocked.

This setting is only relevant if the input file is a video file and the operation isn't Extract. If omitted, it will default to `false`.

4.2.2.9 bool JobSettings.BlockXds

Flag indicating whether the upstream XDS data should be blocked.

Note that any upstream XDS packets of a type that are being inserted (e.g. if CGMS-A or V-Chip settings are specified) will be overwritten regardless of this setting.

This setting is only relevant if the input file is a video file and the operation isn't Extract. If omitted, it will default to `false`.

4.2.2.10 int JobSettings.CcPid

Explicitly set the PID of the output CC stream when Mpeg2CcCoding is RDD_11_708, DVB_TELETEXT, or DVB_BI↩TMAP.

This setting is only relevant if the input file is an MPEG-2 transport stream and an ancillary CC coding is chosen. If omitted or set to

```
0
```

the PID will be chosen automatically.

4.2.2.11 ushort JobSettings.CcVancInsertionLine

The VANC line number on which to insert CC packets.

This setting is only relevant if the input file is in a format that stores VANC line number information, such as MXF or GXF. If omitted, it will default to `9`.

4.2.2.12 CgmsaCode JobSettings.CGMSA

An enumerated value that specifies the CGMS-A code to be inserted into the video.

This setting is required if APS is specified. Further, at least one of InputLang1File, InputLang2File, ActiveFormat, CGMSA, and VChipRating need to be set for the Encode operation.

4.2.2.13 bool JobSettings.CreateJobLog

Flag indicating the creation of a job log file (.job).

If `true`, the job log file is created.

This setting is optional. If omitted, it will default to `false`.

4.2.2.14 bool JobSettings.CreateLogs

Flag indicating the creation of CC log files (.s1/.s2).

If `true`, the CC log files are created.

This setting is optional. If omitted, it will default to `false`.

4.2.2.15 RowLength JobSettings.Cta708MaxRowLength

The maximum row length to use in the encoded CTA-708 data.

Note that the CTA-608 limit is 32 characters per row. A value of RL_42_CHARACTERS should only be used for C↩ TA-708–only workflows, as the encoded captions will not be CTA-608 compliant and may not display properly on all decoders.

This setting is optional. If omitted, it will default to RL_32_CHARACTERS.

4.2.2.16 bool JobSettings.FlipDropFrame

Flag indicating whether the existing drop-frame timing of the captions being encoded, legalized, extracted, etc. should be inverted.

This setting is optional. If omitted, it will default to `false`.

4.2.2.17 bool JobSettings.Include608TunnelingDataTT

Flag indicating whether CTA-608 tunneling data should be included in any output Timed Text files.

This setting is only relevant if OutputCaptionFormat is set to SMPTE_TT. If omitted, it will default to `true`.

4.2.2.18 bool JobSettings.IncludeIsdbStreamId

Include an ISDB Stream Descriptor in the PMT for an MPEG-2 Stream.

4.2.2.19 bool JobSettings.IncludeScte20InHd

Flag indicating whether SCTE-20 data should be included in HD MPEG-2.

This setting is only relevant if the input file is an HD MPEG-2 file. If omitted, it will default to `false`.

4.2.2.20 string JobSettings.InputFile

Filesystem path that the machine hosting the Web service can use to access the main input file. May be a UNC path.

For the ConvertCcFile operation, the main input file will be a caption file, and for all other operations, it will be a video file.

Note that if this is a file on a network share, you may want to look at the A Note on Network Shares section for additional considerations.

This setting is required for all jobs.

4.2.2.21 string JobSettings.InputLang1Code

ISO 639-2 language code to be encoded for the Language 1 captions.

Please refer to the ISO 639-2 specification for a complete list of language codes.

This setting is optional. If omitted, it will default to `"eng"`.

4.2.2.22 TimecodeCountingMode JobSettings.InputLang1DropFrame

Drop-frame convention to use when interpreting the timecode stamps for the CC data in InputLang1File.

In many caption file formats, the timecodes are stored as a count of hours, minutes, seconds, and frames, so it is necessary to know whether or not drop-frame counting was used in order to properly interpret them. This is especially important if the caption file uses drop-frame counting and the video that it's being stitched into doesn't (or vice versa), as a conversion is necessary to ensure proper synchronization.

This setting is only allowed when both InputLang1File and InputLang1FrameRate are specified, and is required when InputLang1FrameRate is specified. If InputLang1File is specified and this setting is omitted, the drop-frame convention to use is heuristically deduced based on the timecodes in InputLang1File and the drop-frame timing of InputFile, though this algorithm isn't guaranteed to always get it right.

See also

InputLang1FrameRate, InputLang1Origin

4.2.2.23 string JobSettings.InputLang1File

Filesystem path that the machine hosting the Web service can use to access the caption file that will be encoded into Language 1. May be a UNC path.

Note that if this is a file on a network share, you may want to look at the A Note on Network Shares section for additional considerations.

This setting is only allowed when Operation is set to Encode. Further, at least one of InputLang1File, InputLang2File, ActiveFormat, CGMSA, and VChipRating need to be set for the Encode operation.

4.2.2.24 FrameRate JobSettings.InputLang1FrameRate

Frame rate to use when interpreting the timecode stamps for the CC data in InputLang1File.

In many caption file formats, the timecodes are stored as a count of hours, minutes, seconds, and frames, so it is necessary to know the frame rate that was used to create these timecodes in order to properly interpret them. This is especially important if this doesn't match the frame rate of the video that the caption file is being stitched into, as a conversion is necessary to ensure proper synchronization.

This setting is only allowed when both InputLang1File and InputLang1DropFrame are specified, and is required when InputLang1DropFrame is specified. If InputLang1File is specified and this setting is omitted, the frame rate to use is heuristically deduced based on the timecodes in InputLang1File and the frame rate of InputFile, though this algorithm isn't guaranteed to always get it right.

See also

InputLang1DropFrame, InputLang1Origin

4.2.2.25 string JobSettings.InputLang1Origin

Timecode origin (formatted as `"hh:mm:ss:ff"`) to be used for any conversions that need to be done to the timecode stamps for the CC data in InputLang1File.

If the timecode conventions (i.e. the frame rate and counting mode) differ between the video and caption files, a conversion will be done to put them into the same time domain. In order to ensure that this conversion does the right thing, it is necessary to establish the count of hours, minutes, seconds, and frames that is considered equivalent in both

time domains. For example, let's say that you have a 23.976 fps video asset and a corresponding caption file with 29.97 fps drop-frame timecodes. Further, assume that both the video and caption files are striped with timecodes starting at 01:00:00:00. In order to do the proper conversion, 01:00:00:00 in the caption file must correspond to 01:00:00:00 in the video, and any drift due to differing conventions must be relative to 01:00:00:00. The purpose of this setting is to specify this equilibrium point, so in this example, you should set InputLang1Origin to `"01:00:00:00"`.

This setting is only allowed when InputLang1File is specified. If omitted, timecode conversions will be done relative to 00:00:00:00.

See also

InputLang1FrameRate, InputLang1DropFrame

4.2.2.26 string JobSettings.InputLang2Code

ISO 639-2 language code to be encoded for the Language 2 captions.

Please refer to the ISO 639-2 specification for a complete list of language codes.

This setting is optional. If omitted, no language code will be included for Language 2.

4.2.2.27 TimecodeCountingMode JobSettings.InputLang2DropFrame

Drop-frame convention to use when interpreting the timecode stamps for the CC data in InputLang2File.

In many caption file formats, the timecodes are stored as a count of hours, minutes, seconds, and frames, so it is necessary to know whether or not drop-frame counting was used in order to properly interpret them. This is especially important if the caption file uses drop-frame counting and the video that it's being stitched into doesn't (or vice versa), as a conversion is necessary to ensure proper synchronization.

This setting is only allowed when both InputLang2File and InputLang2FrameRate are specified, and is required when InputLang2FrameRate is specified. If InputLang2File is specified and this setting is omitted, the drop-frame convention to use is heuristically deduced based on the timecodes in InputLang2File and the drop-frame timing of InputFile, though this algorithm isn't guaranteed to always get it right.

See also

InputLang2FrameRate, InputLang2Origin

4.2.2.28 string JobSettings.InputLang2File

Filesystem path that the machine hosting the Web service can use to access the caption file that will be encoded into Language 2. May be a UNC path.

Note that if this is a file on a network share, you may want to look at the A Note on Network Shares section for additional considerations.

This setting is only allowed when Operation is set to Encode. Further, at least one of InputLang1File, InputLang2File, ActiveFormat, CGMSA, and VChipRating need to be set for the Encode operation.

4.2.2.29 FrameRate JobSettings.InputLang2FrameRate

Frame rate to use when interpreting the timecode stamps for the CC data in InputLang2File.

In many caption file formats, the timecodes are stored as a count of hours, minutes, seconds, and frames, so it is necessary to know the frame rate that was used to create these timecodes in order to properly interpret them. This is especially important if this doesn't match the frame rate of the video that the caption file is being stitched into, as a conversion is necessary to ensure proper synchronization.

This setting is only allowed when both InputLang2File and InputLang2DropFrame are specified, and is required when InputLang2DropFrame is specified. If InputLang2File is specified and this setting is omitted, the frame rate to use is heuristically deduced based on the timecodes in InputLang2File and the frame rate of InputFile, though this algorithm isn't guaranteed to always get it right.

See also

InputLang2DropFrame, InputLang2Origin

4.2.2.30 string JobSettings.InputLang2Origin

Timecode origin (formatted as `"hh:mm:ss:ff"`) to be used for any conversions that need to be done to the timecode stamps for the CC data in InputLang2File.

If the timecode conventions (i.e. the frame rate and counting mode) differ between the video and caption files, a conversion will be done to put them into the same time domain. In order to ensure that this conversion does the right thing, it is necessary to establish the count of hours, minutes, seconds, and frames that is considered equivalent in both time domains. For example, let's say that you have a 23.976 fps video asset and a corresponding caption file with 29.97 fps drop-frame timecodes. Further, assume that both the video and caption files are striped with timecodes starting at 01:00:00:00. In order to do the proper conversion, 01:00:00:00 in the caption file must correspond to 01:00:00:00 in the video, and any drift due to differing conventions must be relative to 01:00:00:00. The purpose of this setting is to specify this equilibrium point, so in this example, you should set InputLang2Origin to `"01:00:00:00"`.

This setting is only allowed when InputLang2File is specified. If omitted, timecode conversions will be done relative to 00:00:00:00.

See also

InputLang2FrameRate, InputLang2DropFrame

4.2.2.31 bool JobSettings.MapCc3toS3

Map the data in the CTA-608 CC3 service to the CTA-708 S3 service.

By default, the 608 CC3 service is mapped to the 708 S2 service in the encoded 708 data, as per standard practice. This should only be set to `true` for non-standard applications in which this data needs to be mapped to the 708 S3 service instead.

This setting is optional. If omitted, it will default to `false`.

4.2.2.32 Mode JobSettings.Mode

Enumerated value indicating the processing mode.

This setting is optional. If omitted, it will default to NORMAL.

4.2.2.33 Mpeg2CcCoding JobSettings.Mpeg2CcCoding

An enumerated value that specifies where the CC data will be inserted for MPEG-2 TS files.

This setting is only relevant if the input file is an MPEG-2 transport stream. If omitted, it will default to USER_DATA.

4.2.2.34 bool JobSettings.Mpeg2VancOutOnly

Flag indicating whether the output TS is only an RDD-11 VANC stream.

This setting is only relevant if the input file is an MPEG-2 transport stream and Mpeg2CcCoding is set to USER_DATA. If omitted, it will default to `false`

4.2.2.35 MxfCcInsertionLocation JobSettings.MxfLocation

An enumerated value that specifies the preferred location for new CC insertion.

This setting is only relevant if the input file is an MXF file. If omitted, it will default to DEFAULT.

4.2.2.36 MxfTimecodeSource JobSettings.MxfTimecodeSource

An enumerated value that specifies which timecodes in the video file to use when inserting the CC data from InputLang1File and InputLang2File.

This setting is only relevant if the input file is an MXF file. If omitted, it will default to DEFAULT.

4.2.2.37 Operation JobSettings.Operation

An enumerated value that specifies the operation to be performed.

This setting is required for all jobs.

4.2.2.38 CaptionFileFormat JobSettings.OutputCaptionFormat

Supplying this setting will cause output caption file(s) to be created, and its value determines the file format that will be used.

This setting is allowed for all operations, but is required when Operation is set to Extract or ConvertCcFile.

4.2.2.39 FrameRate JobSettings.OutputCaptionFrameRate

This setting is only relevant when OutputCaptionFormat is set to AAF, MOV, S436M, or MCC. It is an enumerated value that specifies the frame rate of the video that the output caption file(s) will be used with.

If this setting is omitted and InputFile is a video file, this defaults to the input video file's frame rate.

This setting is required if OutputCaptionFormat is set to AAF, MOV, S436M, or MCC and Operation is set to ConvertCcFile.

4.2.2.40 string JobSettings.OutputDirectory

Filesystem path to a directory that the machine hosting the Web service will use to write the output file(s) of this job. May be a UNC path.

If this directory doesn't already exist, it will be created.

Note that if this is a path on a network share, you may want to look at the A Note on Network Shares section for additional considerations.

This setting is required for all jobs.

4.2.2.41 string JobSettings.OutputSuffix

Suffix that is appended to the filename of InputFile to generate the filenames of the output files.

Note that this is not allowed to contain any characters that aren't allowed in filenames (e.g. `'\'`).

This setting is optional. If omitted, it will default to `"_EEG"`.

4.2.2.42 QuickTimeMode JobSettings.QuickTimeMode

An enumerated value that specifies where the CC data will be inserted for QuickTime files.

This setting is only relevant if the input file is a QuickTime file (.mov or .mp4). If omitted, it will default to IOS.

4.2.2.43 bool JobSettings.SeparateOutputFolder

Flag indicating the placement of output files.

If `true`, the output files for the job are placed in a new folder within OutputDirectory; otherwise, output files are placed directly into OutputDirectory.

This setting is optional. If omitted, it will default to `false`.

4.2.2.44 ShiftDirection JobSettings.ShiftDirection

This setting is deprecated and has been superseded by the ShiftMode setting.

New applications should use the ShiftMode setting instead of this one. If the ShiftMode setting is present, this one will be ignored.

4.2.2.45 OffsetMode JobSettings.ShiftMode

An enumerated value that specifies the semantics of the applied TimecodeShift.

This setting is only required if the TimecodeShift setting is specified.

4.2.2.46 int JobSettings.SubtitlePageNumS1

Specifies the S1 DVB bitmap ancillary/composition page number.

This setting is only relevant if the input file is an MPEG-2 transport stream and Mpeg2CcCoding is set to DVB_BITMAP. If omitted or set to 0 the page will be set to 2 by default.

4.2.2.47 int JobSettings.SubtitlePageNumS2

Specifies the S2 DVB bitmap ancillary/composition page number.

This setting is only relevant if the input file is an MPEG-2 transport stream and Mpeg2CcCoding is set to DVB_BITMAP. If omitted or set to 0 the page will be set to 4 by default.

4.2.2.48 int JobSettings.TeletextPageNumS1

Specifies the S1 DVB teletext magazine/page number.

This setting is only relevant if the input file is an MPEG-2 transport stream and Mpeg2CcCoding is set to DVB_TELE↩TEXT. If omitted or set to 0 the page will be set to 801 by default.

4.2.2.49 int JobSettings.TeletextPageNumS2

Specifies the S2 DVB teletext magazine/page number.

This setting is only relevant if the input file is an MPEG-2 transport stream and Mpeg2CcCoding is set to DVB_TELE↩TEXT. If omitted or set to 0 the page will be set to 802 by default.

4.2.2.50 TimecodeFormat JobSettings.TimecodeFormatTT

An enumerated value that specifies the timecode format for any output Timed Text files.

This setting is only relevant if OutputCaptionFormat is set to SMPTE_TT. If omitted, it will default to DEFAULT.

4.2.2.51 string JobSettings.TimecodeShift

Timecode shift (formatted as `"hh:mm:ss:ff"`) to be applied to the captions that are being encoded, legalized, extracted, etc.

The semantics of the shift are determined by the ShiftMode setting.

This setting is optional for all jobs.

4.2.2.52 int JobSettings.TransportRate

Override the transport rate of the input file.

This setting is only relevant if the input file is an MPEG-2 transport stream. If omitted, it will default to 0 which will leave the rate unaltered.

4.2.2.53 string [ ] JobSettings.UpstreamVancFilter

An array of DID/SDIDs for the upstream VANC packets to be filtered, each of which is formatted as an ASCII-encoded hexadecimal string (`"6060"`, `"4105"`, etc.).

This setting is required if the UpstreamVancFilterMode setting is specified. Additionally, it is only relevant if the input file is in a format that stores arbitrary VANC packets, such as MXF or GXF.

Note that this is allowed to be an empty array. For example, in order to strip all upstream VANC packets, you could set this to an empty array and UpstreamVancFilterMode to WHITELIST.

4.2.2.54 VancFilterMode JobSettings.UpstreamVancFilterMode

An enumerated value that specifies the semantics of the applied UpstreamVancFilter.

This setting is required if the UpstreamVancFilter setting is specified. Additionally, it is only relevant if the input file is in a format that stores arbitrary VANC packets, such as MXF or GXF.

4.2.2.55 bool JobSettings.VChipDialogue

V-Chip dialogue bit.

Set if `true`.

This setting is only allowed if VChipRating is specified.

4.2.2.56 bool JobSettings.VChipLanguage

V-Chip language bit.

Set if `true`.

This setting is only allowed if VChipRating is specified.

4.2.2.57 VChipRating JobSettings.VChipRating

An enumerated value that specifies the program rating to be inserted into the video.

This setting is required if VChipViolence, VChipSex, VChipLanguage, and/or VChipDialogue are specified. Further, at least one of InputLang1File, InputLang2File, ActiveFormat, CGMSA, and VChipRating need to be set for the Encode operation.

4.2.2.58 bool JobSettings.VChipSex

V-Chip sex bit.

Set if `true`.

This setting is only allowed if VChipRating is specified.

4.2.2.59 bool JobSettings.VChipViolence

V-Chip violence bit.

Set if `true`.

This setting is only allowed if VChipRating is specified.

Index