

Product Sheet

# MediaStore Proxy

## Low-Resolution (Proxy) generator Application Module

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## MediaStore Proxy

**MediaStore Proxy** is part of the **MediaStore** (MAM) suite developed by SI Media. It manages the macro functions of Proxying, *Key Framing*, *Subtitling*, *Story Frames* (i.e. *Story Board*) generation and *Transcoding*.

The *filling* phase activities are performed by **MediaStore** when a new asset incoming into the system. Such operations are done in order to generate:

- **Proxy**: one or more low-resolution copies of the asset, frame in compliance to the original asset (*frame accurate*) in order to help *browsing* video files across network links.
- **KeyFrames**: scene changes detected in the video files.
- **StoryFrames**: *StoryFrames* are pictures (*thumbnails*) taken at regular interval during the clip for helping contents' *browsing*. They are particularly useful when assets are coming from a long fixed camera recording, where keyframes detection is not available due to lack of scene changes.

**MediaStore Proxy** takes care of management of subtitles, importing them from SRT files, or auto-generating them thru the integrated speech detection module.

**MediaStore Proxy** also manages transcoding of assets during the import/export operations.

### Key Features:

- Management of the *Filling* process
- Proxy generation
- *KeyFrames* and *StoryFrames* generation
- *Subtitling* management
- *Transcoding* engine
- *Cooperation and Multi-threading*



## Management of the Filling process

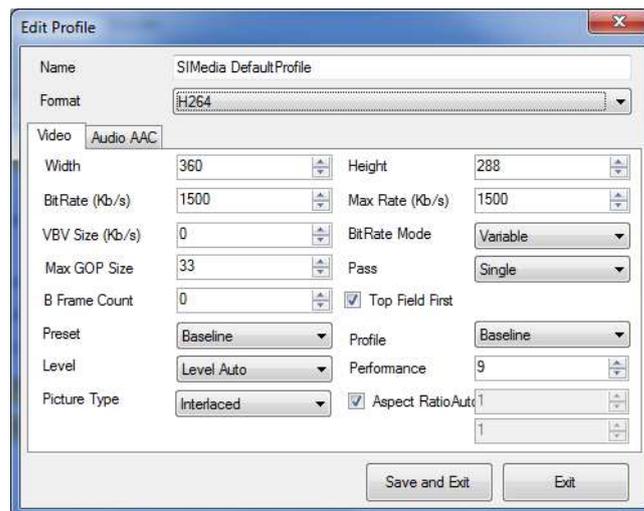
Asset that has to be added to the archive (recorded with ingest applications like **MediaRec** or coming from a direct acquisition thru a *watchfolder*) is elaborated by **MediaStore Proxy**.

The initial operations belong to the so called *filling* phase. This phase comprehends all the operations done automatically by **MediaStore** in order to retrieve asset's metadata. **MediaStore Proxy** takes care of some of these operations: *Proxy*, *KeyFrames* and *StoryFrames* generation.

## Proxy generation

This operation generates one or more low-resolution copies of the asset in order to ease the browse. The *proxy* file format can be any of the currently supported ones: Windows Media Video 9, Mpeg-1, Mpeg-2, Mpeg-4, H-264\AVC or Adobe Flash.

Each one of these formats can be tuned with a specific quality profile (*bit rate*). It is possible to associate different profiles to a single asset or to a set of them.



(Profile tuning for proxy generation)

*Proxy* can be generated by the integrated engine or by third-party *transcoding* applications.



(Proxy view in MediaStore Client)

## KeyFrames and StoryFrames generation

*KeyFrames* and *StoryFrames* generation is done along with *Proxy* generation by **MediaStore Proxy** during the so called *filling* phase.

- **KeyFrames.** It is the automatic recognition and extraction of the scene changes in a video file. This operation supports operators in the identification of contents in a heterogeneous video file.
- **StoryFrames.** *Storyframes* are pictures taken at regular interval during the clip for helping contents' *browsing*. They are particularly useful when assets are coming from a long fixed camera recording, where keyframes detection is useless because there are no scene changes.



## Transcoding engine

**MediaStore Proxy** transcodes assets in order to conform the audio/video format to the requested profiles. The transcoding of incoming assets is called *normalization*, because it allows an archive to be homogeneous regarding its contents' format.

Besides import/export *assets* transcoding, **MediaStore Proxy** can transcode archived contents in order to convert format, cut unwanted clips or split long video files into pieces. It is possible to logically split *assets* (using the *Bookmarks*), but many customers prefer the physical splitting. This activity is called *consolidation* and is carried out by **MediaStore**.

The **MediaStore** client allows the edition of a set of *assets* (*Basket*) to create a new content (particularly useful in a *newsroom*). In this case **MediaStore Proxy** will transcode the editing project and will create the new content in the appropriate format.

Status	Preview	Progress	Task
▶		27 %	LordOfTheRings_trailer - Copy (LordOfTheRings_trailer - Copy) out.mpg
▶		26 %	zorro_trailer - Copy (zorro_trailer - Copy) out.mpg

(A View of two transcoding task)

All the transcoding activities (*import/export*, *proxy generation*, *normalization*, *consolidation*, integrated *editing*, etc...) can be realized by the internal transcoding engine, **MediaStore Coder**, or by an external engine like Rozhet Carbon Coder or FlipFactory.



(Some third party transcoding engines supported by SI Media workflow)

## Cooperation and Multithreading

**MediaStore Proxy** is a *Multi-threading* and *Cooperative* platform.

*Multi-threading* stands for multiple tasks executed simultaneously. For example the system can transcode several assets (generating *Proxy*) while deleting some other. This feature avoid performance bottleneck when multiple requests come to a server. The concurrent operations number can be tuned to the hardware performance or to other constraints.

*Cooperative* means that more than one server (*instance*) can run **MediaStore Proxy**.

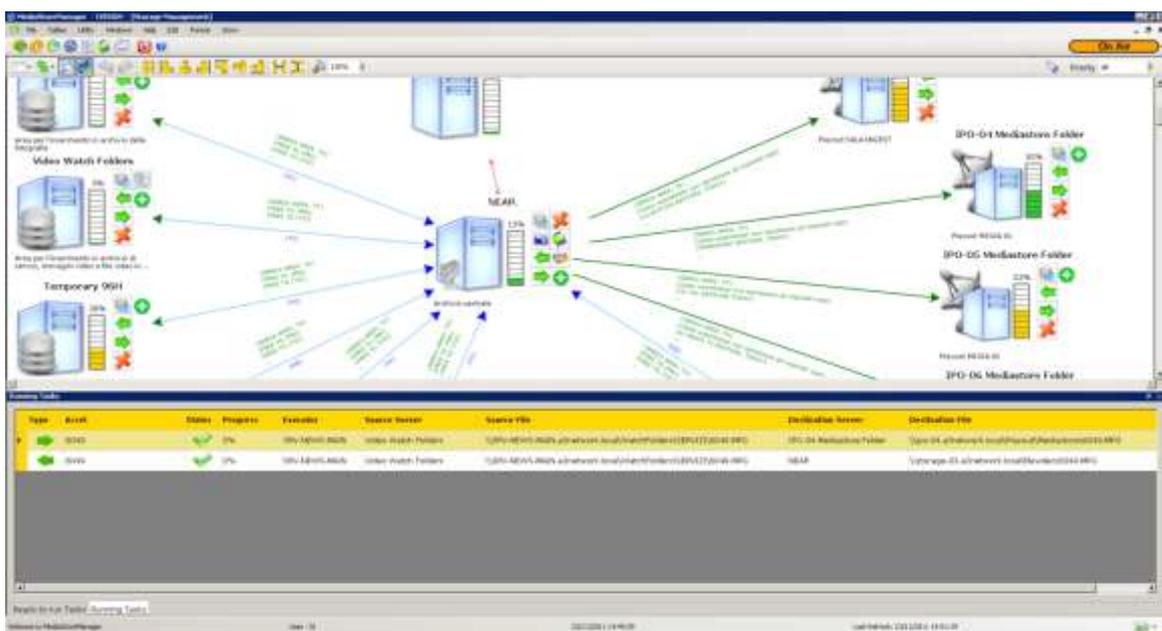
Multiple servers can be configured to execute the same kind of task (*Proxy* generation, transcoding, *Key Frames* generation, etc...). Usually *Proxy* generation and transcoding are handled by more than one server.

These **MediaStore Proxy** instances will share the incoming requests in order to cut down execution time. This kind of *load balancing* increases reliability, providing a sort of *active/active backup*.

If one of the servers goes down, its tasks will be taken on charge by other running servers.

Type	Asset	Status	Priority	Progress	Executor	Source Server	Destination Server
	BULSATCOM MALAYSIA 16x9nev	▶	2	64%	STEFANOV		
	progam_italy_2011-04-01_epic	▶	20	50%	STEFANOV	Near	TV backup
	Copy (103) of Copy of Copy of E	▶	1	0%	STEFANOV	TV backup	
	MultiAudio_V0	✔	3		STEFANOV	Proxy	

(MediaStore: running processes)



(MediaStore: main monitoring window with running tasks)