Technical Document – Release Version 3.0

Product Sheet

# MediaStore Coder

## File-based Transcoder
## Application Module

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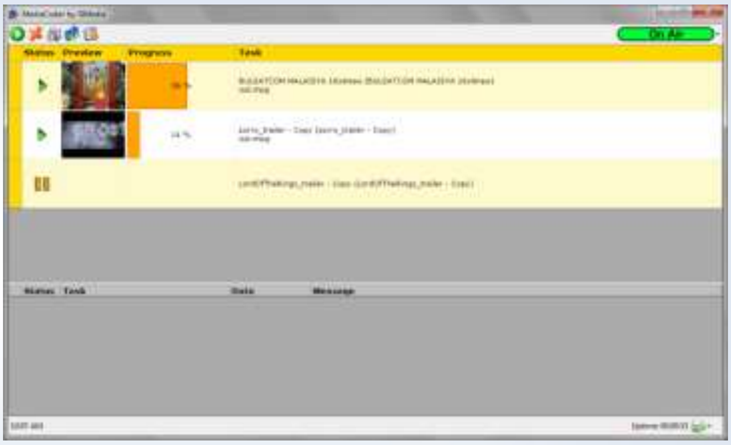
# MediaStore Coder

**MediaStore Coder** handles the video format conversions across *broadcast, editing, Web* and *mobile* environments. The system is scalable and can be adapted to the customer's workflow. Linking together several *transcoding* servers running **MediaStore Coder** is possible to set up a *transcoding farm*.
Thanks to the integration with other SI Media modules, **MediaStore Coder** is able to automatically process incoming transcoding requests, in order to automate the workflow.

## Key Features:

- ***File based Transcoding***
- **Clear user interface**
- **Full automation**
- ***Cooperation and Multithreading***
- **Multi-format platform**

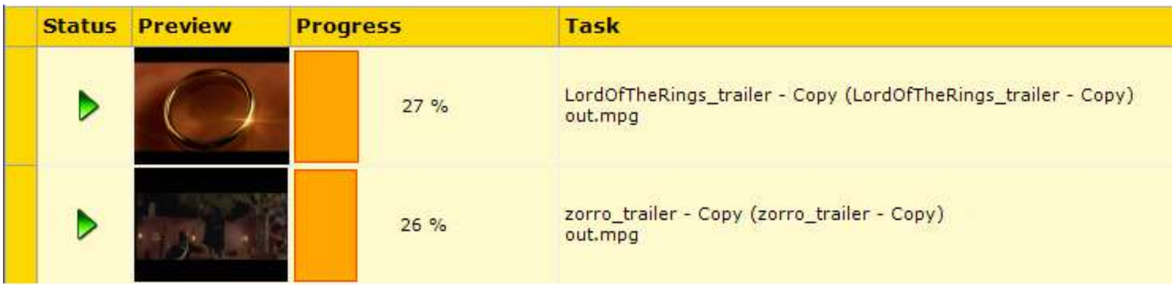


## *File based Transcoding*

*Transcoding* includes all the operations involved in converting an audio/video content or its container from a format to another. Whenever an asset requires a conversion to conform its format it is necessary to transcode it using **MediaStore Coder**.
Besides transcoding assets during the import/export phase, **MediaStore Coder** can convert contents inside the archive for *normalization* purposes or to cut off unwanted clip, or to create a set of clips out of a unique file. This is particularly useful when an archived content is composed by heterogeneous clips. Despite the logical separation provided by the *Bookmarks*, many customers prefer to physically split files. This operation is called *consolidation* and it's performed by **MediaStore Coder**.

From **MediaStore** it is possible to define a *Basket* of assets (this is a common procedure in a *newsroom* environment). In these cases **MediaStore Coder** elaborates the *basket* and generates a new content of the required format.

Transcoding not only occurs during *import* and *export* tasks but also for generating *proxy*, for *consolidation* or integrated *editing*. These elaborations are performed by the integrated engine of **MediaStore Coder**, or optionally by external engine like Rozhet Carbon Coder or FlipFactory.

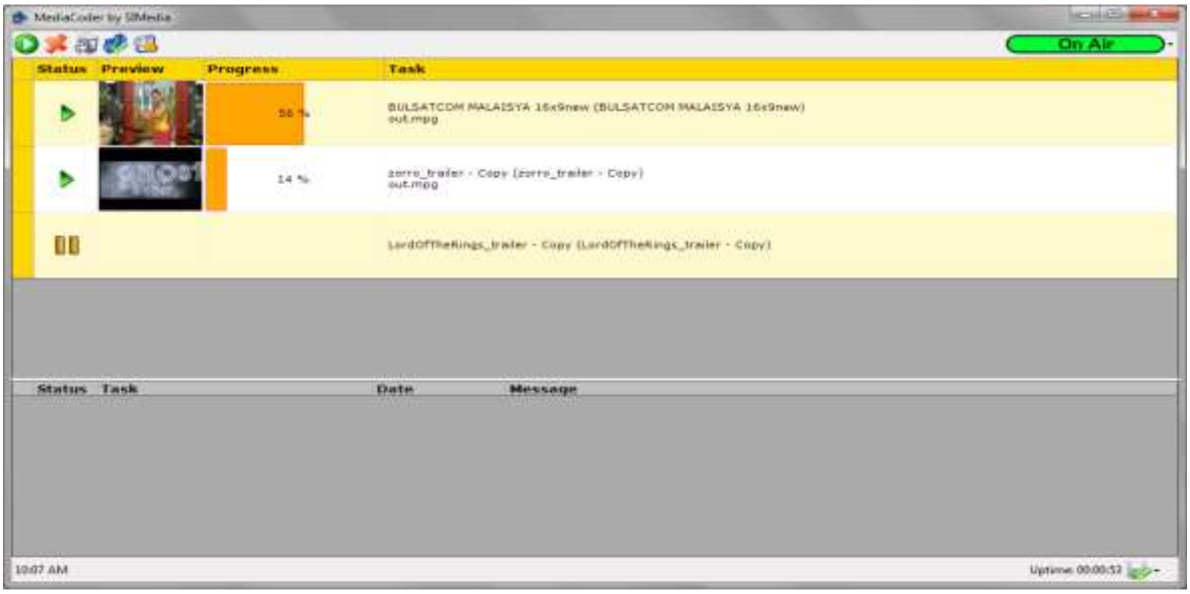


| Status | Preview | Progress | Task |
|---|---|---|---|
| ▶ | | 27 % | LordOfTheRings_trailer - Copy (LordOfTheRings_trailer - Copy)<br>out.mpg |
| ▶ | | 26 % | zorro_trailer - Copy (zorro_trailer - Copy)<br>out.mpg |

(Transcoding task progress in MediaStore Coder)

## Clear user interface

The user interface of **MediaStore Coder** is designed to be clear and effective. The main goal is to monitor the progress of the transcoding tasks. The operator can define tasks order and priority. A full set of user messages and warnings allows operators to know system status in detail. Warning and errors can be mailed to system administrator.



| Status | Preview | Progress | Task |
|---|---|---|---|
| ▶ | | 56 % | BULSATCOM MALAISYA 16x9new (BULSATCOM MALAISYA 16x9new)<br>out.mpg |
| ▶ | | 14 % | zorro_trailer - Copy (zorro_trailer - Copy)<br>out.mpg |
| ❚❚ | | | LordOfTheRings_trailer - Copy (LordOfTheRings_trailer - Copy) |

| Status | Task | Date | Message |
|---|---|---|---|

10:07 AM

Uptime: 00:00:53

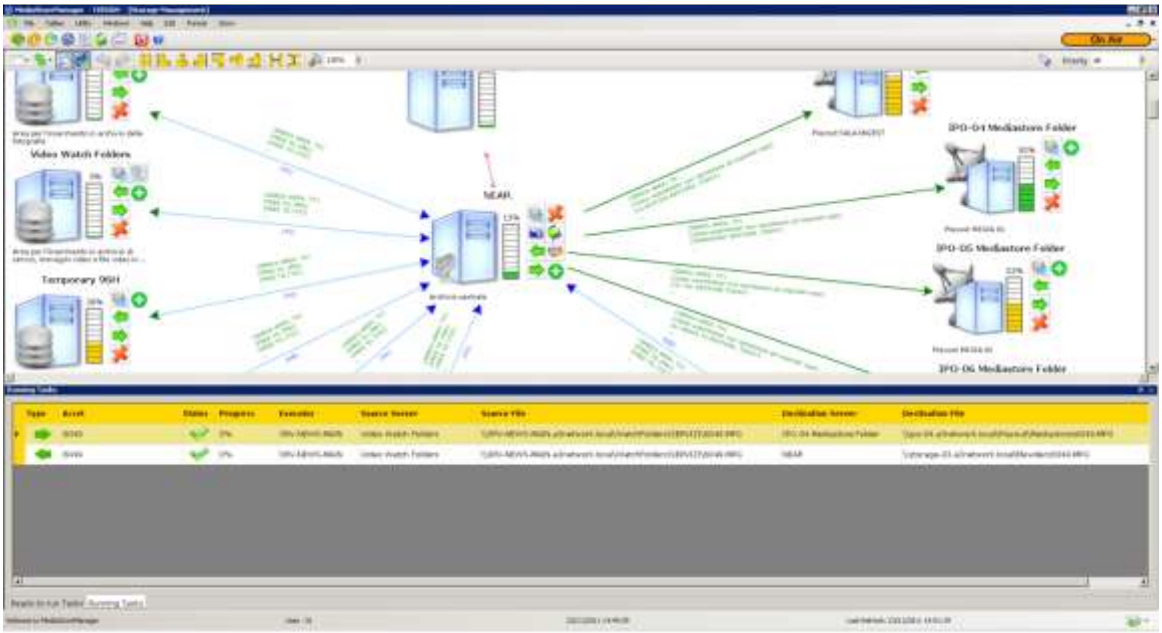
(Two running transcoding tasks and one waiting to start)

## Full automation

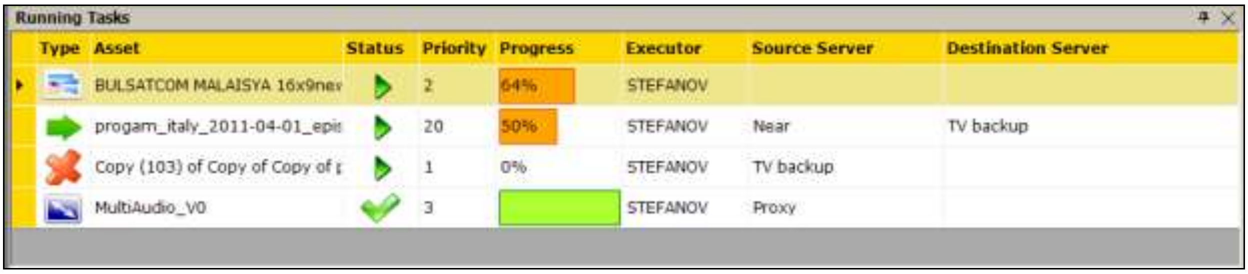
**MediaStore Coder** is demanded to process the automated *assets* transcoding requests by the MAM, whenever these are needed. This is possible thanks to the **MediaStore Coder** interaction with the MAM *workflow* rules. Once defined a suitable workflow, no human operation is needed.

## *Cooperation* and *Multithreading*

**MediaStore Coder** is a *Multi-threading* and *Cooperative* platform.
*Multi-threading* stands for multiple tasks executed simultaneously. For example the system can transcode several assets 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 Coder**.
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 Coder** 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.



(MediaStore: main monitoring window with running tasks)



Running Tasks

| Type | Asset | Status | Priority | Progress | Executor | Source Server | Destination Server |
|---|---|---|---|---|---|---|---|
|  | BULSATCOM MALAISYA 16x9nev | ▶ | 2 | 64% | STEFANOV |  |  |
| → | progam_italy_2011-04-01_epis | ▶ | 20 | 50% | STEFANOV | Near | TV backup |
| ✗ | Copy (103) of Copy of Copy of p | ▶ | 1 | 0% | STEFANOV | TV backup |  |
|  | MultiAudio_V0 | ✓ | 3 | 🟩 | STEFANOV | Proxy |  |

(MediaStore: running processes)

## Multi-format platform

Below the list of the supported formats by **MediaStore Coder**.

| Supported Formats |
|---|
| **Workflows** |
| **SD, HD, Mixed workflows** |
| **Video Codecs** |
| **MPEG-1, MPEG-2, MPEG-4, IMX30/50**<br>**H.263, H.264, VC-1, VC-3, Flash**<br>**DV25, DV50, DV100, DVCPro**<br>**DPS, DivX, JPEG 2000, AVCIntra**<br>**Windows Media, RealVideo** |
| **Media Containers** |
| **HDV, MOV**<br>**MXF (including D-10/IMX, XDCAM, P2)**<br>**MPEG-2 PS, MPEG-2 TS**<br>**LXF, GXF, QuickTime (including Apple ProRes)**<br>**WMV, ASF, AVI, VOB**<br>**3GPP, 3G2**<br>**WMA, WAV, Broadcast WAV** |
| **Audio Codecs** |
| **PCM, MPEG-1 Layer II, MP3**<br>**AAC, WM Audio, RealAudio**<br>**Dolby Digital, Dolby Digital Plus Systems** |