



- ▶ Take management
- ▶ Task automation
- ▶ Digital Asset Management

Tools and architecture for multimedia pipelines

As a **production tool**, Synthesis provides a way to create tasks and track them, whether those tasks consist of multimedia or pure data. As a **programmers framework**, Synthesis speeds up the development of new tasks and gets repetitive or complex jobs done fast.

FQN	Feeds	Shoot Date	Stage Status	Pipeline Status	Edit Timecode In	Edit Timecode Out	Scene Notes	Lens Note	Focal Length Note
012_k_0AA_005_0A01_Z1_pc001_v001	['A0', 'B0', 'C0', 'O1', 'S1', 'T1']	06/16/10	CR	PC In Editorial	16:12:40:22	16:12:42:05	SCENE MERCURY VS. JUNO		
012_k_0BA_005_0A01_Z1_pc001_v001	['A0', 'O1', 'T1']	06/18/10	PR	PC In Editorial	11:06:54:13	11:06:56:09	LOCATION SAN CLEMENTE CIRCUS SCENE MERCURY VS. JUNO	Z3A1	16MM
012_k_0BB_002_0A01_Z1_pc001_v001	['A0']	06/18/10	PR	PC In Editorial	11:13:49:10	11:13:50:00	LOCATION SAN CLEMENTE CIRCUS	Z3A1	22MM
012_k_0AW_003_0A01_Z1_pc001_v001	['A0', 'B0', 'O1', 'T1']	06/17/10	PR	PC In Editorial	19:19:46:19	19:19:51:00			
012_k_0BD_003_0A01_Z1_pc001_v001	['A0', 'O1']	06/18/10	PR	PC In Editorial	11:34:12:15	11:34:14:00			
012_k_0AZ_003_0A01_Z1_pc001_v001	['A0', 'B0', 'O1', 'T1']	06/18/10	PR	PC In Editorial	10:47:10:04	10:47:11:00			
012_k_0AM_003_0A01_Z1_pc001_v001	['B0', 'O1', 'T1']	06/17/10	PR	PC In Editorial	13:37:14:13	13:37:23:00			
012_k_0BI_004_0A01_Z1_pc001_v001	['A0', 'B0', 'O1', 'T1']	06/18/10	PR	PC In Editorial	14:32:45:16	14:32:50:00			
010_k_00D_001_0A01_Z1_pc001_v001	['A0', 'B0', 'O1', 'T1']	06/11/10	PR	PC In Editorial	17:15:15:04	17:15:16:00			

```

Dir: Steve Synthesis
Artist: synthesis
VFX #: 744_CT0100
FOName: 043_tk_00E_004_0A01_Z1_pc001_v003
Destination: To Editorial
Comments: Launched by 744_SEQ_TO_GIANT_062510_v02.EDL in hotfolder

744_CT0100

00:00:27.15 09:13:54.05 08:36:51.05 043_tk_00E_004_0A01_Z1_pc001_v003
663

19:13:27.09 LOCATION SAN CLEMENTE CIRCUS Z3A1 24MM
turnover_[EDL_TITLE]_[TIMESTAMP]
----- README.txt
turnover_[EDL_TITLE]_[TIMESTAMP].csv
original_EDL_file.edl
original_EDL_file_w_problems.edl
job_failure_[EDL_INDEX]
[VPX_NUM]
----- README.txt
|----- 043_tk_00E_004_0A01_Z1_pc001_v002.CE.mov
|----- 043_tk_00E_004_0A01_Z1_pc001_v002.CE.270p.mov
|----- 043_tk_00E_004_0A01_Z1_pc001_v002.CE.ale
|----- 744_SEQ_TO_GIANT_062510_v02.EDL
|----- turnover-744CT01100.csv
----- datasets
|-- overdrive
|-- 006230A1.09-14-09-01.ctlsys
|-- 006230A1.09-14-09-01.show
|-- synthesis
|-- 043_tk_00E_004_0A01_01.nsb
|-- 043_tk_00E_004_0A01_Z1_pc001_v001.CamA.nsb
|-- nsb.html
|-- 043_tk_00E_004_0A01_Z1_pc001_v002.3dl
----- utils
|-- overdriveLib_20100628.zip
|-- nsb_gui.zip
  
```

A multimedia "turnover" of media and meta-data from a motion picture capture session

Why Synthesis?

In some work environments personnel do redundant tasks manually, where the automation of those tasks could save man-years of labor costs annually. Tracking those tasks in a database is of great value too.

Some work environments have home-grown approaches to automation. Without careful thought, a data or media pipeline can turn into a hodgepodge of programs and databases, using different languages, frameworks and approaches to problem-solving. As a result, there is limited usability, visibility, extendability, and maintainability.

Synthesis came about to solve these problems. It is a framework for automation tasks, and features central control, status monitoring and history. For programmers, it simplifies and unifies the writing of programs to carry out pipeline tasks.

In addition to providing applications for take management and asset management, Synthesis provides a set of programs and programming libraries for sequencing work and parceling work out among different computers. At its core, Synthesis is not specific to media pipelines, though it was designed in that context. In any data pipeline, Synthesis helps automate tasks and keep users informed about the progress of tasks.

Active Jobs

Job Number	Asset	Status	Job Type
2009_09_08_01024	DAMMonitor (DO NOT CANCEL!)	In_process	diam_monitor
2009_09_08_01027	DelRenderDirs (DO NOT CANCEL!)	In_process	del_render_dirs
2009_09_08_01028	SynCronicity (DO NOT CANCEL!)	In_process	Syn_cronicity
2009_10_06_00002	ConstructedAudioHotfolder (DO NOT CANCEL!)	In_process	constructed_audio
2009_10_06_00003	ApproveToEditorial Hotfolder (DO NOT CANCEL!)	In_process	Approve_to_editorial
2009_10_06_00004	EDLHotfolders (DO NOT CANCEL!)	In_process	edl_hotfolders
2009_10_06_00005	IngestHotfolder (DO NOT CANCEL!)	In_process	ingest_hotfolder
2009_10_06_00007	Today'sTakes (DO NOT CANCEL!)	In_process	today's_takes
2009_10_30_00036	353_tk_X0P_003_Z1_pc013_0M14_VC_Av023_RE Open Render test	Stalled with failures	One_eye_open_render
2009_10_31_00018	ZRENDER21_jobs Requested from Syn_cronicity 24/7 job	Stalled	log_mover
2009_10_31_00043	Unmark unrecnet jobs Requested from Syn_cronicity 24/7 job	Complete	Unrecnet

Selected Job Details

Job: 2009_10_30_00036
Asset: 353_tk_X0P_003_Z1_pc013_0M14_VC_Av023_RE
Job type: One_eye_open_render
Comment: Open Render test
Submitted by: nolty
Start time: 2009-10-30_16:03:13

Joblet ID	Status	Drone
0 shotgun_start_____Notify_shotgun_on_render_start.py	Complete	hornet_for_production
1 create_3dl_____Create_3dl_if_missing.py	Complete	ZRENDER11
2 fixup_sound_____fixup-sound.py	Complete	synthqueen2
3 harvest_take_info_____Threedl_to_dam.py	Complete	hornet_for_production
4 mb_render_____mb-render.py	Complete	ZRENDER11
5 get_ale_____get_ale_worker.py	Complete	hornet_for_production
6 open_render_____open-render.py	Failed	hornet_for_production
7 shotgun_done_____Notify_shotgun_on_render_done.py	Waiting	
8 check_render_____HUD_ocr_check.py	Waiting	

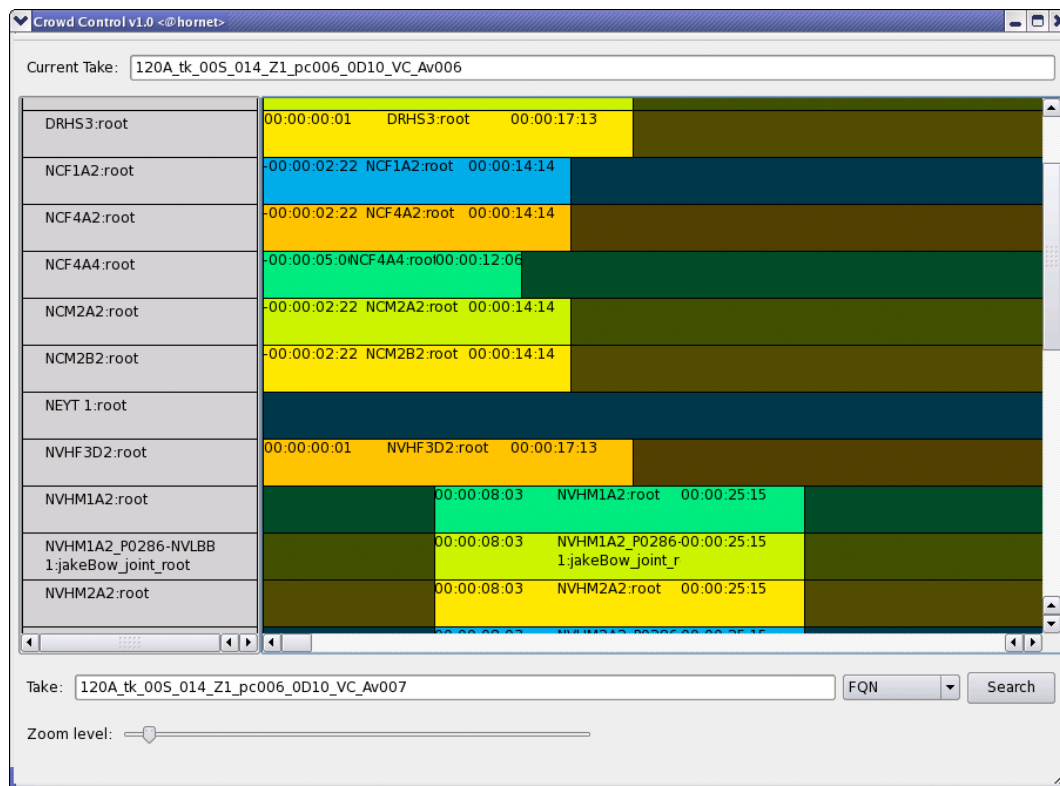
Selected Joblet Details

Joblet: 6
Failure reason: Worker exited with message: -1
Start time: 2009-10-30_20:39:34
End time: 2009-10-30_20:55:17

The web-based shared "Job-viewer", showing scheduled tasks and their sub-parts

Synthesis provides:

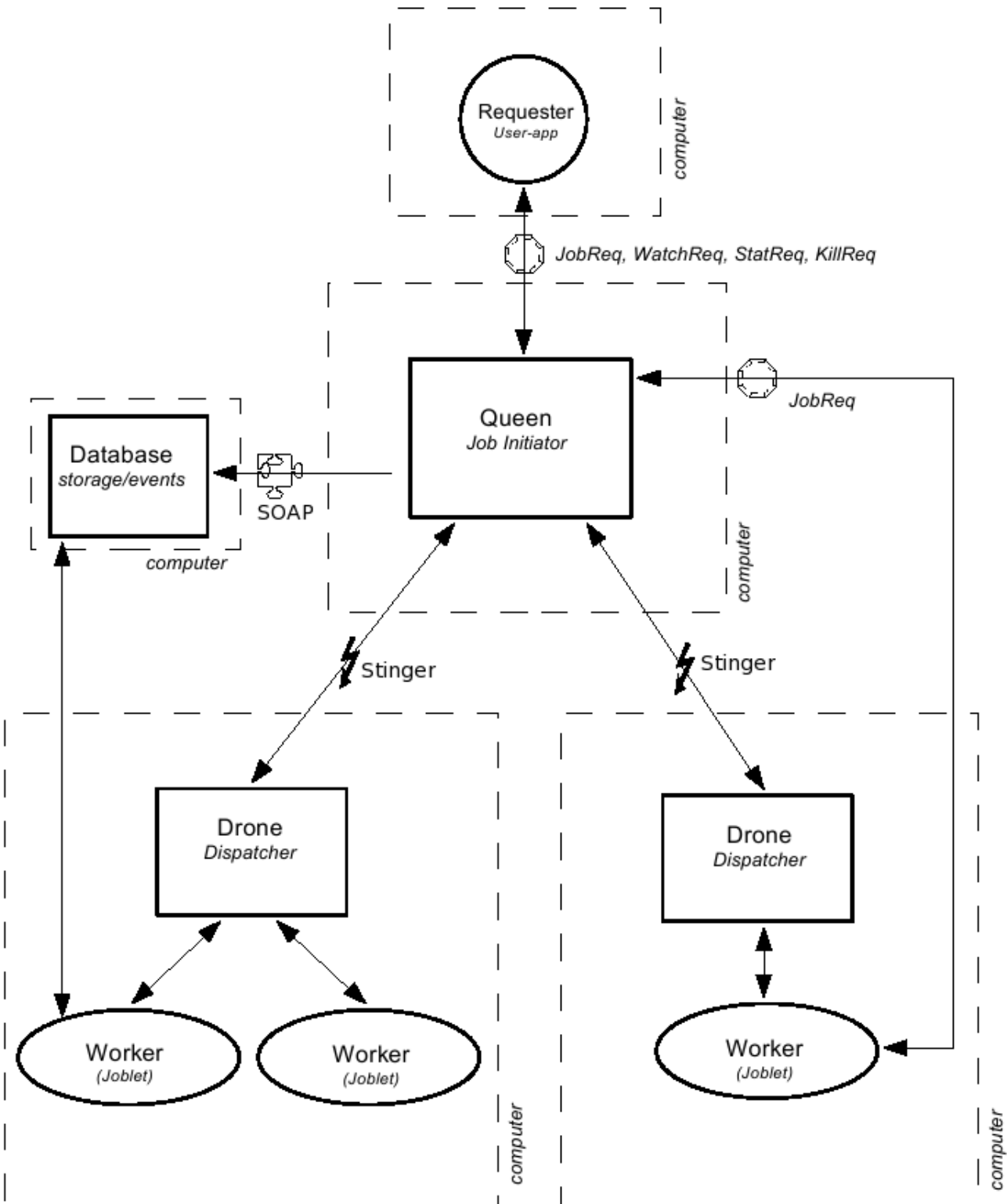
- Applications for Take Management, Asset management & Job tracking
- Task scheduling and a prioritization Server
- Databasing & database interfaces (mySQL/postgresql/Django/SOAP)
- Task monitoring with Web User interface
- Error logging and review facilities
- Multimedia Libraries
- Versioning for data & asset files
- XML, CSV, time-code, and other data libraries
- Cross-platform OS support: Windows, Linux, Mac OSX
- Straightforward programming API for Python & C++
- Dynamic job creation mechanisms
- Tasks for Maya, Motion Builder, Aftereffects, Avid, Final Cut & more

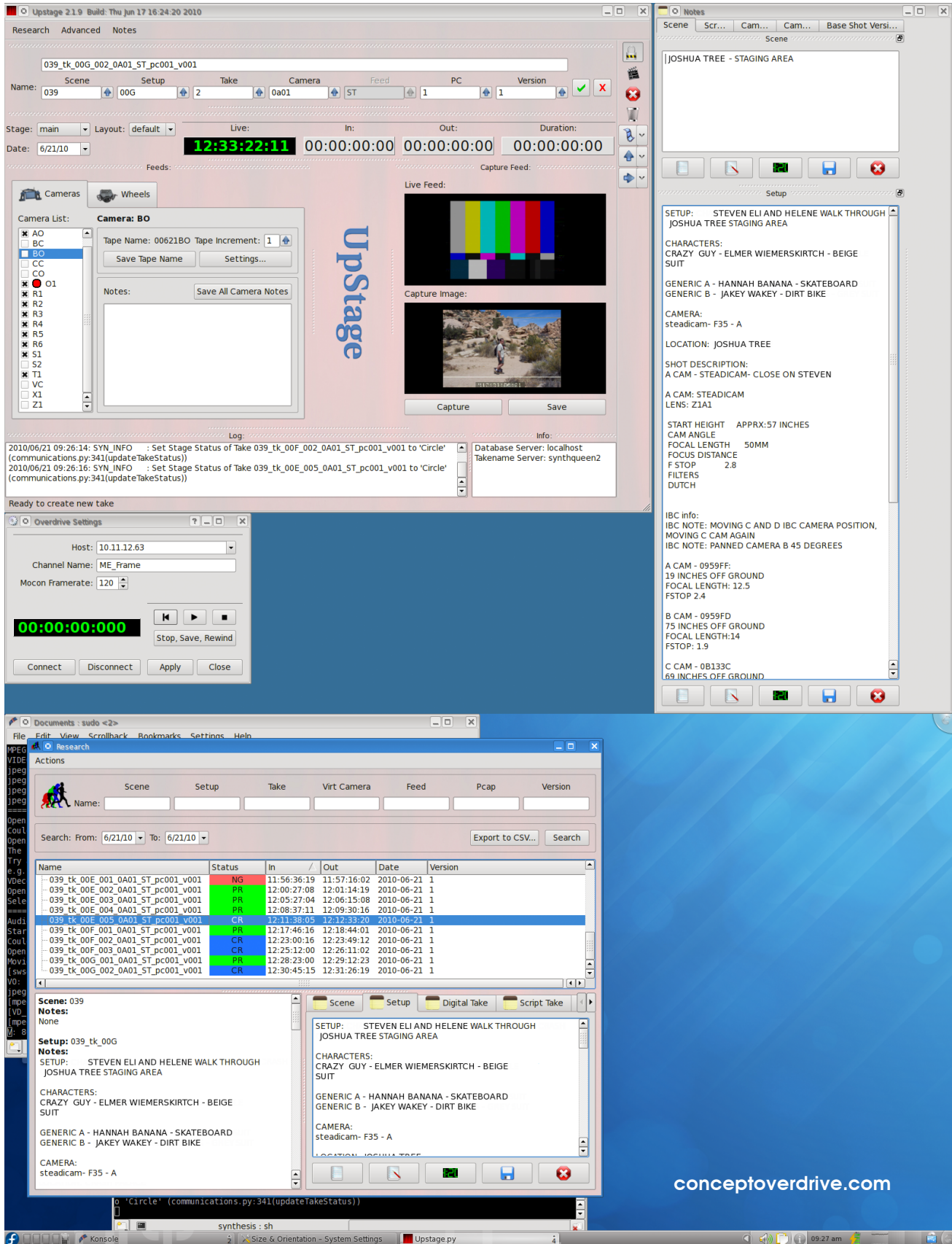


Graphical tool for tracking video clips on a time-line

Synthesis

Pipeline Management





"Upstage" take management and database tool for motion pictures

Synthesis applications:

Synthesis can be used in any environment where there is data generation, manipulation or automation to be done. This includes multimedia, accounting, databasing, medical, and manufacturing realms. Synthesis has been used in the production of major motion pictures such as “Avatar” and “Real Steel”, and is also used in the production of Video Gaming content.

Synthesis history:

Concept Overdrive originally developed the Synthesis system for “Avatar”, which was the editorial pipeline of the main camera stage. The harvesting of metadata from this mocap stage was largely automated by Synthesis, which assembled assets from multiple departments after each take. The system gathered the data, modified it and rendered it into computer-game resolution video files which were “digital dailies” for the editorial department. A flexible task-sequencing architecture was designed which utilized networked resources to automate the render process. Nearly every CG shot in “Avatar” passed through Synthesis; the renders were the final editorial cut of the film before the high-resolution rendering.

Testimony:

“I didn’t realize until I sat down and detailed what we had planned for our production - how badly we needed Synthesis automation. We’d never finish without it!” — a recent customer

- ▶ ***Companies which automate can save tens of thousands of dollars per year***
- ▶ ***Contact us for a custom quotation which suits your pipeline needs***



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