

Cinegy Workflow:

fast, seamless solution for digital media production

Reality TV has grown enormously in popularity over the past decade sparking an explosion in the production of reality TV shows. Although generally less costly to produce than traditional narrative programming, reality TV poses unique challenges for producers. Budgets are smaller and production schedules shorter. Moreover a single episode may involve hundreds of hours of film, video or data media that has to be combed through, edited and shaped into a half-hour or hour of compelling television.

Managing digital assets has been a major stumbling block for reality TV producers. A typical reality TV show today employs 20 to 40 loggers whose role is to review raw production media and record metadata (production date, version, soundtrack data, etc.) before media is passed on to the editorial team. Unfortunately, with the technologies employed in most current production workflows, much of this valuable metadata is lost during the transition from media archive to post production, or, at best, has to be re-entered. This consumes scarce resources at a time when the production can least afford it. Reality TV producers often face additional delays as incompatible systems require assets to be digitized and re-digitized, and through the need to provide access to media assets in different formats to different stakeholders.

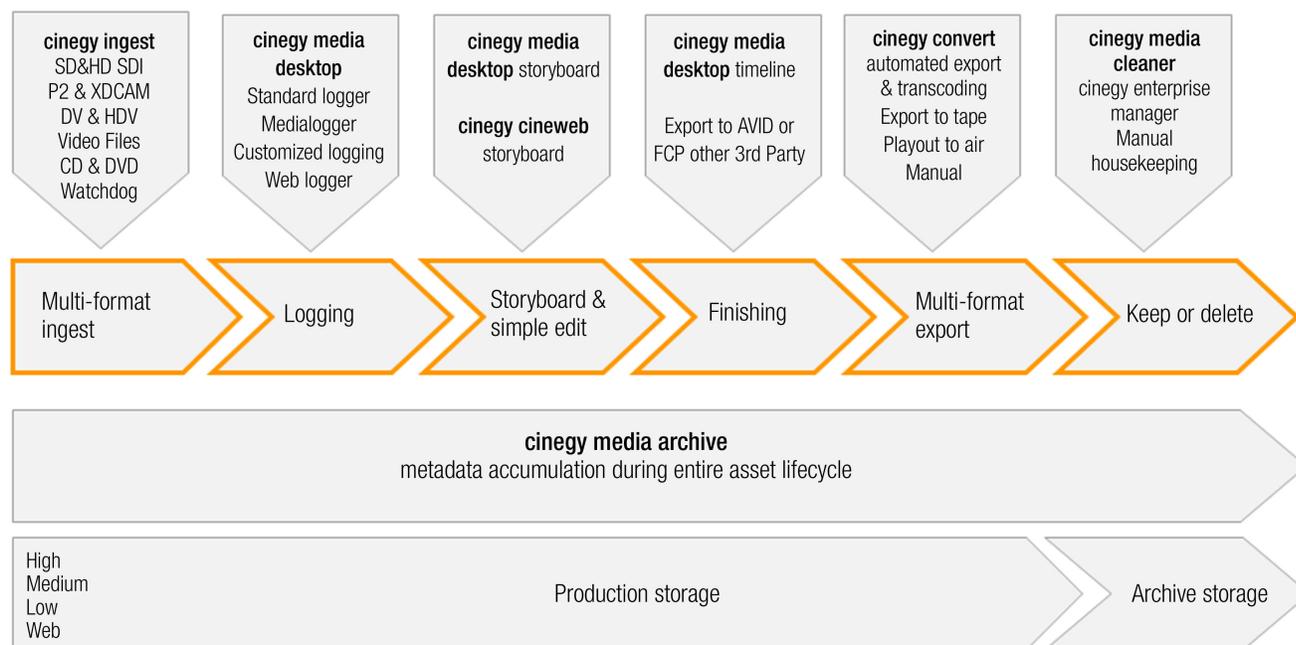
Cinegy Workflow resolves all these problems. Cinegy Workflow is a collaborative, fully-integrated workflow ideally suited to reality TV production. It provides a seamless framework for managing every aspect of production—ingest, logging, creative editorial, editorial finishing and delivery—while preserving and providing immediate access to essential metadata at every point along the way. Cinegy Workflow provides seamless integration with Avid and Final Cut Pro editing systems without the need to re-digitize media. Its unique commodity workflow architecture facilitates simultaneous access to data in multiple formats—producers can access proxies even as editors work with the same assets in high resolution format. Finally, Cinegy Workflow makes it practical—for the first time—to eliminate the conforming stage of the post process. In sum, Cinegy Workflow delivers dramatic time and cost savings, boosts quality and results in a more satisfying process for everyone involved.

“With Cinegy the investment and operational costs are in inverse proportion with productivity and efficiency.”
Hasan Kirađı, Dogan TV

The Cinegy Workflow solution overview

Cinegy Workflow is a fully integrated end-to-end client/server based workgroup-oriented digital media production and management system. Every aspect of production is included – real-time media ingest in multiple quality levels, automatic shot detection, speech recognition, advanced logging, production notes, voice annotation, rights management, digital asset management, search and retrieval, sequencing, storyboarding, full feature non-linear editing, workgroup collaboration, remote screening, conform and playout.

Image 1. Cinegy Workflow overview



In addition to its modular, end-to-end structure, Cinegy Workflow offers full integration with traditional post-production and production processes, managing all elements of production workflow integration with non-linear editing systems such as Avid and Final Cut Pro and multi-media output for web, review and approval, and DVD or Blu-Ray, without requiring a complete reinvestment in new infrastructures. The end-to-end HD/SD workflow operates on standard PC hardware and IT infrastructure.

Core components of a Cinegy Workflow installation include:

- **Cinegy Ingest** – multi-format SD and/or HD encoding using Cinegy software encoders, providing highest quality up to both 720p or 1080i resolutions.
- **Cinegy Desktop** – a universal production tool combining search and browse of the **Cinegy Archive** asset management system with a highly customizable logger, a powerful real-time NLE that can work with long GOP MPEG2 in SD and HD, and also offers seemingly limitless import/export capabilities to other 3rd party NLEs and automation systems.
- **Cinegy Archive** – digital asset management solution seamlessly integrated into all Cinegy products – therefore ensuring that metadata is created, updated and maintained during every step of the production workflow.

Cinegy has a proven track record having provided media technology to more than two million users worldwide either directly or through its many OEM customers. Cinegy deployments range from a single seat to hundreds of concurrent users.

The challenges of reality TV production

Reality TV lacks many of the structural features of standard TV show production. There is no script, no preconceived storyline. Editing for reality TV relies on multiple people rapidly filtering through masses of footage to find the magic moments to create multiple stories for each episode.

To accommodate the large amount of video material and the need to create a yet unknown story from it, an efficient and effective reality TV show post production workflow requires:

1. **A central digital repository** – for collaborative workflow allowing loggers, story editors and video editors to work on video material in near real-time as it is being ingested, whether on location, in the office or in another city.
2. **Excellent logging tools and search functionality** - for adding metadata to video material to create a meaningful searchable database from hundreds of hours of footage.
3. **Seamless third party integration** – for easy migration of content and data with various existing NLE and finishing systems typically used for post production.

Cinegy meets and exceeds these requirements, making it the ideal solution for an improved workflow for reality TV. UK-based post-production house, Evolutions TV, recognized the value of Cinegy technology for this unique environment. They incorporated Cinegy into their workflow solution catering specifically for reality TV show production, such as their two largest shows, *The Biggest Loser* and *Hospital Heroes*. Cinegy Workflow enables a new level of speed and flexibility for digital reality TV production.

“The Cinegy product brings major benefits to the overall production and production team. It is a grown up system with advanced logging abilities, multi-resolutions and good integration with the Avid product range. Our clients like it as they can cut down their edit time and increase their efficiency, they also like being involved in seeing the rushes and being able to familiarise themselves with the footage. Compared to the other systems this is so much easier to use and learn, especially using word documents. The product lends itself to reality TV due to the volume of footage – for Biggest Loser we have 2500 hours which is quite standard for this type of show.” James Hunter, Chief Engineer, Evolutions TV

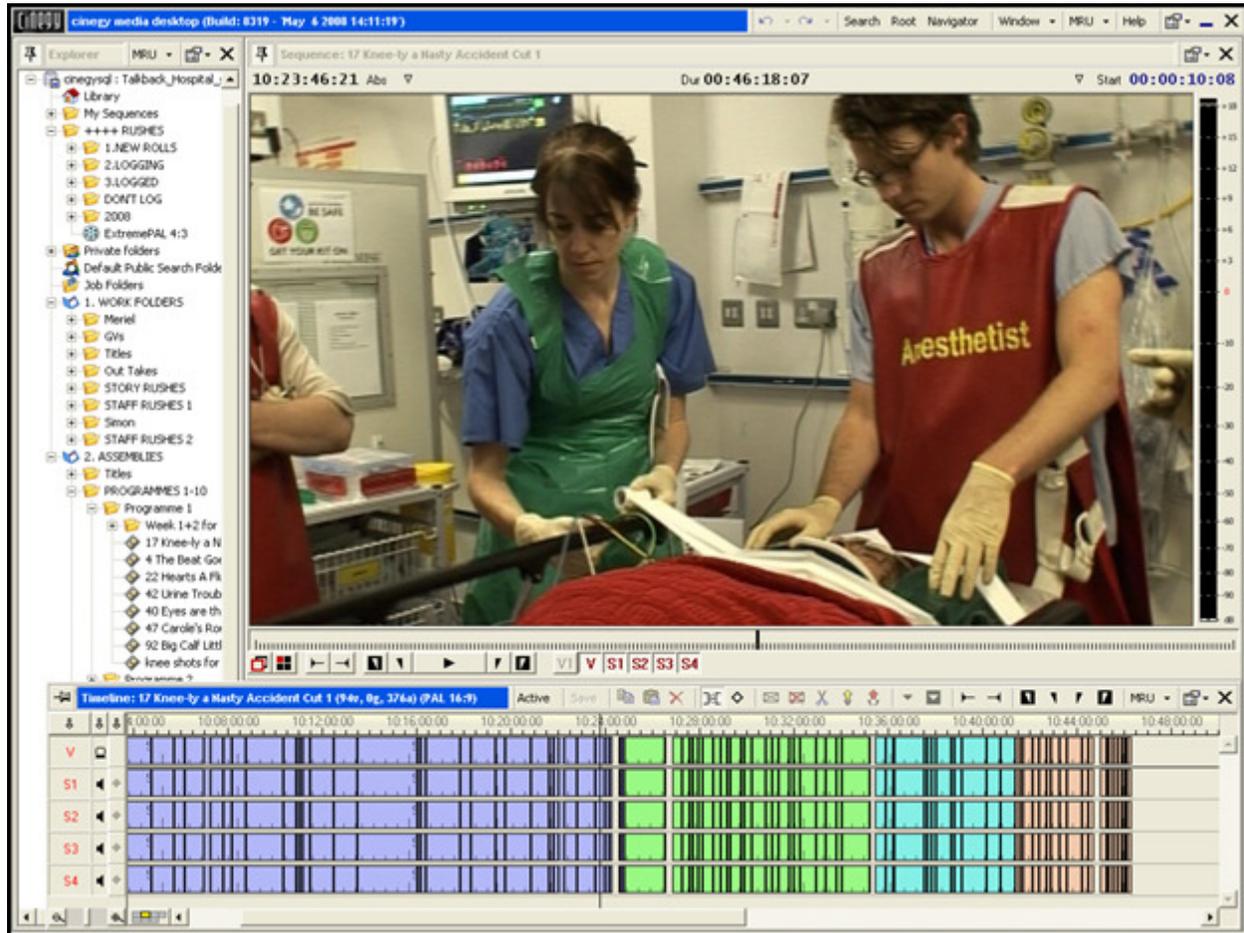
Features in detail

1. A central digital repository

Cinegy is completely database driven. No data is stored on the client. A user logging into any PC is presented with the same environment. Content can be ingested from tape, file or transferred from existing editing systems and shared storage solutions such as Avid Unity. The media is stored in a centralized repository within Cinegy Archive, accessible directly through Cinegy Desktop or through Cinegy’s platform independent web-based solution Cinegy Cineweb. Anyone with appropriate user rights can access video material and instantly view, tag or annotate ingested content. Editors and producers can work on material on the fly. Content can be accessed in parallel by a number of loggers or any authenticated and assigned end-user simultaneously. The functionality available to the user depends on the role and security level assigned. Production assistants have access to a different set of features than experienced editors.

Teams working on a program can view changes made by any member of the team (e.g. to a sequence or a bin) in real-time. Changes to the metadata or other information are propagated immediately to every user's client currently displaying affected data. Members of a team working on the same programme always have the same level of information, work with the same material and can immediately communicate ideas and see changes.

Image 2: Timeline editing



Editing within the timeline using **Cinegy Desktop**.
Image from *Hospital Heroes*, courtesy of Evolutions TV

Cinegy supports multi-camera formats, making multiple angles accessible concurrently in real-time. This is invaluable for the initial stage of logging and accelerating the triage process, given the amount of footage generated for reality TV productions. Feeds from four or more cameras can be accessed with synchronous real-time processing and preview. The multi-cam tool enables instant switching between different feeds for creating sub-clips straight into a clip bin or timeline. This is the perfect tool to reduce media preparation time for reality TV.

The multi-cam feature can be used on video streams recorded live or on pre-recorded video streams synced by timecode. For video clips with non-identical timecode, a tool is provided to enable alignment and bring clips into sync. As with other tools in the **Cinegy Desktop**, the multi-cam tool can be used with any of the working

resolutions (high, medium or low). This allows multi-cam editing in using the low-res proxy while at the same time applying it, for example, to the HD high-res material.

Cinegy Desktop runs on standard office IT infrastructure and networks. This allows producers to interact with the post-production process from their desktop, without having to tie up costly editing bays. Because Cinegy Desktop maintains the relationship with the source media throughout the process editors can recover information a producer entered within Cinegy Desktop in a the traditional post-production environment without having to reconstruct edits. The Cinegy Desktop can be installed at any user's desktop within the network. Every function can be performed from the workplace, an editing bay or the machine room. This allows more flexibility and frees up the dedicated edit suites for more lucrative high-end work. Space formerly required for edit bays can be used for additional staff or repurposed altogether, given that office space represents a considerable production cost.

Today it is increasingly common for shows to be co-productions involving broadcast companies and other parties located far apart who nonetheless need to be closely involved in the approval process. To increase efficiency and eliminate the need to send tapes around the globe, Cinegy includes integrated functionality allowing sequences to be emailed directly from the Cinegy Desktop in Windows Media or MPEG4 format. The email recipient can use Cinegy Cineweb to view sequences, add comments and metadata, perform rough cut editing, paint and highlight areas in the video. Comments can be sent back via email without the corresponding video information resulting in time and cost savings through smaller data transfers. Email comments can be viewed along with the original video in the **Cinegy Desktop**. This remote access speeds up the review and approval process dramatically.

2. Excellent logging tools and search functionality

Cinegy uses the most advanced accumulative metadata collection methods. Ingested video clips automatically inherit information such as tape or disk reference IDs, cameraman, date, program name, rights, resolution, type, legal information and production notes. Users can add additional information to a video clip or a section of a clip.

Cinegy's logging functionality can be applied either during or following ingest. The main logging workflow utilizes an html-based logging template. Unique templates can be created for individual shows. For example, a show may focus on two households competing for a prize. The respective template can include the names and portraits of family members as well as typical show scenarios. This speeds the logging process by making it possible to choose the individuals visually instead of via names, this works especially well with a touch screen.

This Cinegy media logging tool allows script in rich text format or text file format to be associated with a roll. When a script and roll have been associated with each other, the system parses the script file, recognizes the timecode and links it to the timecode within the entire. Any script timecodes that are recognized as valid within the entire become hyperlinks and are displayed as such. Clicking on the hyperlink moves the content in the player to that point. At any point a user can type a timecode or use the shortcut to insert the timecode into the script. The ability to jump instantly from one timecode to another saves a great deal of time compared with shuttling back and forth on tapes. For some competition-based reality TV shows, the time-of-day timecode is essential for accurately representing competitors' progress against one another. Footage from multiple cameras can be matched for the time-of-day timecode in order to show the relative standings of players at different stages.

Image 3: Simple logging



The simple logging window for manually adding details to clips using **Cinegy Desktop**.
Image from *Hospital Heroes*, courtesy of Evolutions TV.

The virtual clips window in Cinegy Desktop is updated in real-time as changes are made in the logging panel. When logging is completed the user saves the logging file, saving the logging to the metadata fields of the masterclips. The user can define keyboard hot keys and short-cuts, and determine which metadata field is to be populated with the logging. (For example, the script could be placed in the “clip description field” or in the “comments field.”)

The metadata manager of the Cinegy Desktop allows users to easily view metadata stored against an object, export metadata in a choice of formats, and migrate metadata from any roll to a similar roll. With an easy-to-use toolbar, the metadata manager allows users to quickly locate and view metadata, which is then presented in the selected output format; document, ALE, EDL, or Cinegy Convert job service.

As reality TV shows involve large amounts of footage and metadata the Cinegy Archive tends to grow quickly. It therefore requires a sophisticated search engine to find video material and documents as they are needed. The search functionality of the Cinegy Desktop allows users to search and sort content by keywords and metadata values. The simple search feature find files quickly; the federated search provides access to Internet and Intranet; and the advanced search enables further functionality for more precise search results. Instead of scrolling through hours of footage to find needed clips, the user can define search terms by location, scene or event and instantly

view all clips associated with those search terms. This speeds the process of story editing and reduces the overall time required to build each episode.

“Historically, logging meant watching DVDs and typing into Word or Excel. The logs were completely detached from the process and their value lost. The next generation of systems saw text documents created and attached to .WMV files or the like, made from transcoded clips of the rushes. Again, these were comparatively inefficient, needing another digitizing stage and impossible to edit with. Cinegy allows actual metadata to be added to media that Avid understands, meaning that you don’t need to go back and digitize the selected shots. What’s more, the unique workflow architecture, designed by Evolutions’ engineering team headed up by James Hunter, means that the production team can work with proxies but the edits can work with online resolution material, so it’s finally practical and affordable to lose the conforming stage of the process. You’re not just saving on the offline suite costs, you’re saving on the conforms, the editor, the edit producer, and you’re shortening the schedule overall – you’re ratcheting up savings all the time.” John Jamieson, Commercial Director Evolutions TV

3. Seamless third party integration

Cinegy Workflow allows for easy export to other systems with the batch job functionality. Cinegy Workflow integrates with the common tools used in post production processes including Avid and Final Cut Pro systems. This important feature makes it possible to switch between the Cinegy system and third party tools without loss of quality or metadata. By supporting standard EDL formats, Cinegy Workflow supports legacy NLE systems. The Advanced Authoring Format (AAF) is fast becoming the new interoperability standard, allowing different vendor’s solutions to exchange project data. By supporting this format, Cinegy Workflow can be integrated into heterogeneous post-production and NLE environments as needed.

With the integrated editing tools available in Cinegy Desktop a story editor can put together a rough cut of the sequence on the PC, the Cinegy NLE is perfect for quick, absolute frame accurate rough cuts and assembly of stories. When other tools are needed Cinegy has several options for integrating with third party systems. One of the easiest ways is through Cinegy Convert, a server-based transcode and batch processing service. This network based “print server” for repetitive export and conversion jobs allows you to “print” to pre-defined formats and destinations using simple drag and drop in any Cinegy Desktop.

Cinegy Convert job folders are special types of folders in the Cinegy Archive database structure. Each job folder can be set up for specific repetitive actions, such as conversion to AAF for AVID, XML for FCP or WMV for web. Final Cut Pro integration requires a simple QuickTime component to be installed on a Mac to enable it to read the media files. Once the settings are configured, it becomes a simple process of drag and drop. The processing is performed on a specified Cinegy Convert server that acts as a print queue/spooler processing one job after the other. Using simple drag and drop, a sequence can be sent off for finishing in a dedicated editing suite on a third party system. When editing the sequence is complete it can be ingested directly back into the Cinegy system with all the metadata intact. The automatic processing of the material according to defined settings saves editors from performing repetitive tasks, leaving them with more time to get on with more important activities.

Cinegy offers the Cinegy Cinebridge component to provide even further options for viewing footage. This unique service enables the user to open any asset inside the cinegy system as if it were an AVI file. As a result, any application with the ability to open AVI files can be transparently incorporated into Cinegy Workflow, without

requiring file conversions or rendering. Significantly, Cinegy Cinebridge also has the ability to function as a virtual file server, allowing third party applications to access assets on Cinegy Workflow as if they were locally stored without export or conversion.

Conclusion

Cinegy Workflow offers a truly integrated end-to-end media workgroup production solution that meets the challenges of 21st century television production. In environments such as reality TV production, where speed and cost are key, Cinegy's fully integrated system enables an accelerated workflow through all stages of archive, asset management and production, at high-quality and low-cost. Cinegy's use of standard PCs and normal Ethernet networks makes it cost efficient, easy to deploy and quick to integrate. Learning to work with Cinegy is easy and required training is minimal. The increase in production output and the cost reduction possible using Cinegy amortize the investment almost immediately.

Cinegy GmbH

Muellerstr.27
80469 München
Germany

Phone: +49 (0) 89 2388 5360

Fax: +49 (0) 89 2388 5369

www.cinegy.com

info@cinegy.com