CatDV 2.0 Reference Guide

Introduction

CatDV 2.0 is a cross-platform media cataloging and video logging utility. It supports media files and video clip data in most popular formats, including:

- still images (JPEG, GIF, PNG, BMP, TIFF, PSD, etc.)
- audio formats (MP3, AIFF, AU, WAV, etc.)
- video formats (QuickTime MOV, AVI, MPEG, DV, etc.)
- video editing capture logs and projects (EditDV, Final Cut Pro, Premiere, etc.)
- interchange formats (CMX edit decision lists, HTML, tab separated text)

Media files are indexed with thumbnails and can be played back either as previews or as full screen presentations.

CatDV helps you to keep track of which video clips are where on a tape (and which projects they are used in) by maintaining a catalog of clips, each with timecode in and out values and thumbnail previews. Each clip can be annotated with meta data (such as clip name, description, project, status, date and time of recording, or camera exposure details) that can be used for searching and sorting the catalog.

Full-resolution video files are very large and it is usually impractical to keep them all on-line at the same time. CatDV uses both thumbnail images and low-resolution preview movies to show the contents of clips that are currently off-line. To restore off-line media CatDV generates capture logs for use with the batch capture capability of your editing application.

To simplify logging the contents of a tape and creating a first rough draft of an edited program, CatDV supports automatic scene detection of captured footage. You can review each clip and enter a name and keywords describing the scene, mark it as 'good' or not, and enter 'in' and 'out' points to select portions of interest within the clip.

Although CatDV is not a fully featured editing application you can create a simple movie by stringing together clips of interest. You can export clips as either self-contained or reference movies, or you can convert a movie using a different codec, for example to create a web movie. You can also consolidate the media files on disk by trimming and deleting unused material.

Several unique utility functions are provided, such as adjusting the timecode values of a program to match the timecode generated after printing to video to permit recapture from a program tape, exporting 'whole tape' batch capture logs, or adding a burnt in security camera-style date and time display.

Installation and registration

CatDV is available for both Macintosh (Mac OS 8/9 and OS X) and Windows. It requires Java and QuickTime, which you can download for free:

- Java for Windows (Sun's JRE) is available from http://java.sun.com/j2se/1.3/jre/download-windows.html.
- Java for the Macintosh (MRJ) is at http://www.apple.com/java/.
- QuickTime for both platforms is available from http://www.apple.com/quicktime/download/. (Note that you need to do a **custom** installation and select all components including "QuickTime for Java".)

The latest version of CatDV is always available at http://www.catdv.com. You should check this site regularly for updates and bug fixes. Updates are sometimes provided as a base version plus a 'patch' consisting of just those files that are new and need to be replaced.

CatDV works as a 30-day limited-functionality demo until you purchase a license on-line to use the full application. You will then be sent a registration code to unlock the application. Enter the name and registration code in the "Registration" tab of Preferences.

For sales and registration enquiries please contact sales@squarebox.co.uk; for technical support please contact support@squarebox.co.uk.

Quick start guide

Ok, so how do I use CatDV?

- Use "Import directory" to import all the images and movies from a directory and build up a thumbnail catalog. For movies, a separate clip record for each scene or shot within the movie is created.

- Use the toolbar (or View menu) to view the catalog in different ways (as a list, a storyboard-like grid of thumbnails only, and so on). Group the clips according to tape, subject, etc. Sort or filter them as required.

- Double click (or control double click) a clip to show its contents or bring up its details dialog respectively. (Use the Preferences dialog to specify the default double click action and other options.)

- Specify the directory and size for previews in Preferences then use "Build preview movies" to build up low resolution preview movies of all your video clips. These are then available to show you the contents of your entire tape library, even when the original DV capture files have had to be deleted to make space for the next project.

- Use the details dialog to log your clips and create a rough cut program. Enter a name or description for each clip, make a selection within the clip using the "movie" tab, or mark it as good or not. Rearrange the order of clips by dragging and dropping them within the main window.

- Once you have edited a rough program containing clips of interest you can use it in various ways. You can play it as a full screen media presentation or slide show, export it as a QuickTime movie, export it as an EDL or batch list to import into your NLE video editing application, save it as a sequence within your catalog, print it out as a thumbnail "storyboard" or "contact sheet", and more.

- To split a large DV capture file into separate files for each scene, or to trim unwanted material from the capture files, first create clips for each scene you want and make selections within them. Then select the clips you want to keep and use "Consolidate footage". This will write a separate self contained movie file for each clip before deleting the original capture files.

- Import EditDV projects, EDLs and batch lists from popular editing systems to merge cuts only projects or transfer them between applications.

Managing catalogs

CatDV stores clip details and their thumbnails in a catalog:

- Use the "New Catalog" command to create a new catalog.
- Use the "Open Catalog" or "Open Recent" commands to open an existing catalog.
- Use "Save Catalog" or "Save Catalog As" to save a catalog, either keeping the same name or making a copy with a new name.
- Use the "Always create backup" checkbox in Preferences to automatically make a backup copy of the catalog when saving.
- Use the "Open/Import" command (or toolbar button) to either open a catalog or import a movie or batch list into the current catalog, depending on the type of the file that is selected.

Catalogs are normally saved in a file with extension .cdv. You can open more than one catalog at the same time and copy and paste clips between them. Catalogs are portable between Macintosh and Windows.

The trial version of CatDV will not let you save catalogs (or export or print data).

Clips

All data within a CatDV catalog is held in the form of clips. There are different types of clip, such as still images, movie files, scenes within a movie, lines of an EDL or batch list, and so on.

Each clip has the following main properties (though many of these will often be blank, depending on the type of clip):

- "Name" - name of the clip
- "Notes" - description or other comments you enter about the clip
- "Bin" - project bin or directory on disk where the clip came from, used for grouping clips
- "Tape" - name of the tape the clip is on
- "Import source" - the file that details of this clip were imported from (eg. a movie file, EDL, or batch list)
- "Source media" - the media file that holds the video data the clip refers to (not necessarily the same as the Import Source)
- "In" and "Out" - timecode values for the whole clip. The Out point of one clip is normally the In point of the next one.
- "Duration" – the corresponding clip length, i.e. the difference between In and Out points.
- "In2" and "Out2" - timecode values for a selection made *within* the clip
- "Start" and "End" - current clip bounds, either In/Out or In2/Out2 depending on the "Export clips based on selection" Preferences option
- "Mark" - a general purpose check box to mark clips of interest or to save a selection
- "Good" - a general purpose status field to indicate whether the clip is usable or not
- "Status code" - summarise the results of reviewing a clip (combination of "Good" status with whether a selection has been made)
- "Poster" - each clip has a poster thumbnail, normally the first frame of the clip but a different poster can be set in the clip details dialog
- "Exposure" - a summary of the camera exposure details (available with some DV camcorders)
- "Record date" – the original date/time of recording of the clip (available with some DV camcorders)
- "Date" - either the DV record date or the first modification time of the source media
- "User1" to "User4" - general purpose text fields
- "Transition" and "Seq. no." - available when importing EDLs (edit decision lists)
- "Preview" - indicate whether the clip is online, or a preview or thumbnail is available
- "Used" - how many sequences a clip appears in (this indicates whether a clip is used in a project or not).

Importing clips and movies

You can import clip data into a new or existing CatDV catalog from many different sources. The "Open/Import" command attempts to determine the file type automatically but you can also use the "Import As" submenu to use a specific importer:

- Media - any QuickTime-supported media type can be imported, including still images, sound clips, and movies (including AVI and MPEG). For visual media a poster thumbnail is created, typically the first frame of the movie. If you select the "Scene analysis" Preferences options the movie is scanned as it is imported and separate secondary clips are created automatically for each scene within the movie.
- EditDV project - you can import clips from the project window and from the program of an EditDV project into CatDV. Each program track (V1, etc.) appears as a separate clip sequence. Use the Preferences option to choose whether or not to import the Program bin (which contains rendered footage that may be necessary for a program).
- CMX 3600 EDL - import both source clip definitions and a sequence of program clips from an industry standard CMX edit decision list
- FCP batch list - import standard fields from a Final Cut Pro batch list
- Tab separated text - import clips defined in a tab separated text file, one per line, eg. if you have manually logged a tape using pencil and paper or a spreadsheet. A line on its own is taken to be a tape name. The first two values that look like timecode are taken to be 'in' and 'out' points respectively (unless any of the 'out' points are less than an 'in' point, in which

case the second value is taken to be a clip duration). Other text values are interpreted, in order, as clip name, bin name, tape, and comments.

Use "Import Directory" to import all the recognised files in an entire directory. If the appropriate Preferences option is set it will recursively scan the contents of any subdirectories. Use "Scan For New Files" to re-scan all the directories previously included in a catalog and import any new files that have been added since last time.

Exporting clips and movies

You can export the clip definitions in a CatDV catalog in various formats for use in other applications. Select the clips you want to export and use one of the export commands:

- Export As Movie - create QuickTime movies for each clip, assuming the original media is available. There are several options: create a small reference movie for each clip (which depends on the original source media remaining on-line); create a self-contained movie (which makes a copy the source media); add a burnt in date and time of recording display (if available from DV source movies), or convert to a new codec (recompress the movie with different settings, for example to save it on CD-ROM or upload to a web site).

- Consolidate Footage - trim unused material from the source media by saving a self-contained (flattened) movie of the selection (in2/out2) within each clip and then deleting the original source movies.

- Export as Batch Log (or List) - you can export batch capture logs suitable for various popular video editing applications, including Final Cut Pro, EditDV/Cinestream, Adobe Premiere and Canopus Raptor.

- Export as Tab Separated Text - export all the columns from the current view as a plain text file, suitable for importing into a word processor or spreadsheet.

- Export as HTML - export the clips and poster thumbnails as a simple HTML catalog.

- Export as CMX 3600 EDL - export a CMX-format edit decision list. This command only works on sequences, not ordinary clips.

Use the "Export clips based on selection" checkbox in Preferences to select whether the whole clip (as defined by its "in" and "out" timecode values) or a selected portion within each clip (as defined by "in2" and "out2") is exported. (If a clip has no selection the whole clip is always used.)

The trial version of CatDV will not let you export or print clip definitions.

Views

Clips are listed in a main window, which can be displayed in one of two main ways:

- List view - a spreadsheet-like table, one row per clip, with a choice of which columns are displayed. You can resize or change the order of the columns.

- Grid view - a two-dimensional grid of clips, shown with their poster thumbnails, where you can arrange the order of clips, storyboard style.

When using the main window you can

- Click on the list or grid toolbar buttons to select a view of that type.

- Click on a column header (in list view) or use the "Order by" menu to change the order that clips are displayed in.

- Alternatively, drag and drop selected clips within the window to rearrange their order manually.

- You can have more than one window open on the same catalog with the "New view" command.

- To change what's shown when you double click on a clip in the window, choose a "double click action" in Preferences or hold down the control key as you double click.

Customising views

Use the "Customise views" command to create your own view definitions, containing just those columns you are interested in:

- Select an existing view to edit, or define a new view. (Views that you have customised are shown in italics.)
- Select the type (list, grid, or icon only) and size for the view
- Add as many columns as you like (grid and icon views only show a limited number of columns – if you ask for more columns than fit the others are simply ignored)
- Rearrange their order by dragging and dropping columns in the right hand list
- If the same column name appears more than once use tool tip text to distinguish them (eg. long and short versions of a file name).
- Define your own labels for user-defined columns, and whether they should be used for grouping or not.

Details dialog

Select "Clip Details" from the main window to bring up full details for the selected clip. This window is also used for logging.

- There are three tabs that show all the media available for a clip: thumbnail images, the original movie and a low-resolution preview movie (see below for details).
- Press the "play media" button to show the movie at full size.
- Review the clip and make a selection of the portion you want to keep by marking 'in2' and 'out2' points using the buttons in the "movie" tab.
- Select a clip status of 'good' or 'no good' to indicate whether you want to use the clip or not.
- Select a new poster frame by pressing the "Set poster" button in the "movie" tab.
- Select an existing tape or bin name from the combo box, or click in the box and type in a new name.
- The 'Detail' table shows all the properties for the clip, and may include a longer form of the columns shown in the main window (for example, time of day as well as date of last modification of a file).
- Press the "Show related clips" toolbar button to show other clips in the catalog related to this one, such as the parent clip (if this is a secondary clip), details of which projects or programs the clip is used in, any clips with overlapping timecode values, and so on. Double click on a related clip to bring up its details.
- Create a new secondary clip (consisting of just the selection), or create a duplicate of this one (a copy of the entire clip).
- Use the "up" and "down" toolbar buttons to step through the catalog and show details for other clips
- Use the "back" and "forward" buttons to move through the history of related and secondary clips
- Press the "Save" button to save any changes you have made to the clip
- If you rename or delete a primary clip you are asked if you want to rename or delete the associated media file on disk at the same time. (Rename a clip by typing into the 'name' field. Delete a clip from the catalog by pressing the "Delete" button.)

Previews and thumbnails

A clip can have different types of media: small thumbnail images, the original movie or media file, and a low-resolution preview movie. All these types of media can be shared by more than one clip.

Thumbnails:

- Thumbnail images are created when you import a movie, still image or EditDV project, usually for the first, last and middle frame of each movie or scene.
- You can create another thumbnail and set that as the poster for a clip by going to the frame you want in the "movie" tab and pressing the "set poster" button.
- Thumbnails are stored in the catalog along with the clips.
- You can select different sizes of thumbnails in Preferences. (Note that larger thumbnails increase the size of catalog files and the time to open them.)
- Use the "Rebuild thumbnails" command to rebuild the poster thumbnails of selected clips after changing the thumbnail size.
- All the thumbnails in a catalog with the same tape name and whose timecode lies between the 'in' and 'out' point of a clip are available for display with that clip.

Original movies:
- The original movie or source media files are played whenever they are available on-line. However, in the case of DV movies the expectation is that the source media will be deleted from disk at the end of a project (to make space for the next one). It is assumed therefore that batch capture can be used to recapture the original files if they are needed again, without loss of quality, given the tape name and timecode values.
- Use the "Update Media Location" command if you have recaptured or moved the source media files to a new location. Usually you only need to select the new location for one file – other files in the same directory are reattached automatically if they still have the same name and file size.

Previews:
- Use the "Build Preview Movies" command to build a low-resolution preview movie of the selected clips.
- Preview movies are stored on disk in a common preview directory and are shared between catalogs. Once created they are available even when the original source movie is deleted.
- Specify the directory for previews, and choose their size and quality, in Preferences.

Media dialog

There are several ways to display the media for a selected clip at full size:
- Use the "Play Media" command (or toolbar button), from either the main window or clip details dialog
- Use the "Present Movie" command to present the selected clips combined into a single sequence (this is mainly intended for video clips).
- Use the "Run Slide Show" command to present the selected clips as a slide show of individual clips (this is mainly intended for stills and audio clips).
- Select a double click action in Preferences and double click a clip to display its media.

There are several keyboard shortcuts you can use to control the media presentation and mark the clip that is playing:
- Space bar : play or pause a movie
- F : toggle into full screen mode. Double click to return to normal mode.
- Tab (or S) : start or pause slide show mode
- +, – : increase or decrease the audio volume
- [,] : rotate image 90 degrees left or right
- D : double the playback size of the movie or image
- Shift-D : restore playback to normal size
- 0-9 : adjust speed of slide show
- L : toggle looping mode
- C : toggle showing/hiding the movie controller
- M : toggle the marked flag for the clip

- G/N/? : mark the clip as good/no good/maybe
- I, O : set start/end of a selection (in2/out2)
- P : play the selection from start to end (in2 to out2)
- T, Y : move to start/end of a selection (in2/out2)
- J (or Cmd-I) : display clip details dialog
- Up, Down : move to previous or next clip in the catalog
- Escape : close the media dialog

Marking and selecting clips

You can copy or move clips (together with their thumbnails) between catalogs.

- Use "Cut", "Copy", "Paste" and "Duplicate" on selected clips to delete, move or copy clips.
- Use "Delete clips" to delete clips from the catalog (similar to the "Cut" command) and optionally delete the media file from disk as well.
- Note that on the Mac, you must use Control-C/X/V (not the command key) to copy or paste text within a text field.

Use the "mark" check box to mark clips of interest or to save the state of a selection:

- Unlike selections within a window (which are temporary), marks are saved in the catalog.
- Use the "Mark" submenu to select marked clips, mark selected clips, invert a selection, toggle the mark for selected clips, and so on.
- Use "Select reviewed" to select just those clips that are 'good' or have been reviewed and a selection (in2/out2) has been made.

Searching and filtering

You can search for clips based on one or more clip properties, and also apply a filter so that only those clips matching the filter condition are shown in a window.

A search or filter can have different types of conditions, all of which must be true for a clip to match:

- Clip name, notes, etc. containing certain text
- Date or timecode values before or after a particular value
- Picklist properties (such as tape, bin, or format) matching one or more items from a list
- Other conditions, such as testing whether a particular property is blank or not.

When searching you can move forward to the next clip matching the conditions, or search for all clips in one go (all clips that match will be selected). You can also create a new view containing just the matching clips.

Press the 'filter' button to toggle a filter on and off.

Summary mode

If you capture a whole tape it's very unlikely that all the file boundaries will fall on an exact scene change boundary and some scenes will end up having more than one clip therefore. There are different ways to combine these broken clip segments and join them into a single clip for each scene:

- Use "Summary" mode to temporarily combine clip segments and filter out duplicates (this is useful if you have imported clips from multiple sources, eg. as both movie files and projects)
- Use the "Merge DV clips belonging to same shot" Preference option to automatically join clip segments at the time of importing a DV movie
- Use the "Merge Clips" tool to join selected DV clip start & end segments at a later stage.

The changes made by summary mode only affect how clips are displayed and exported. The original clips in the catalog are not altered, so you can safely toggle in and out of summary view as required. Summary mode displays a concise description of the scenes on a tape as follows:

- If a catalog has several clips with the same in and out value (eg. from different projects) these are merged into one
- If you captured several long clips, each of which contains several scenes, the long clips are hidden and only the scenes are listed
- If a single scene is split in two because it was captured as two files these sections are joined up.

Grouping mode

Use grouping mode to view all the clips in a catalog by tape, bin, or other picklist property. Select the property to group by from the drop down list at the left of the window, then select the particular item to view.

- Press the 'grouping' button to toggle grouping on and off.
- To rename an entire existing tape or bin name, click on that item in the grouping list and type in a new name.
- As a convenient way of editing many clips in one go you can change the tape or bin that a particular set of clips belongs to by dragging and dropping them onto an item from the grouping list.
- Create your own user-defined grouping properties in the "Customise views" dialog.

Printing

You can print reports from a catalog consisting of all the clips in the current view:

- Use "Print" to print the current window, in either list or grid view.
- Use "Index Print" to print a single page contact sheet (as many clips as will fit on one page are chosen to be as representative as possible of the tape).
- To select the tape to be printed use "Group by tape" and click on the tape you want.

To adjust the appearance of printouts:

- Choose a different type of view (list or grid).
- Select a percentage reduction in your print settings dialog and then print a large grid view for higher resolution.
- Adjust the font and scaling in Preferences.

Preferences

Use the Preferences dialog to enter your registration details and user preferences:

- 'General' tab – format for displaying dates and times; whether to interpret timecode as PAL or NTSC; whether to create a backup copy when saving catalogs.
- 'Import' tab – how to import EditDV projects; whether to recursively scan subdirectories when importing a directory; whether imports (and similar operations) can take place as a background activity; whether to combine clips with the same tape name, in and out values into a single clip reference; whether to automatically combine start and end segments of a DV clip that spans more than one capture file.
- 'Movies' tab – whether to check that audio and video length match exactly (if they don't this can indicate capture problems and possible audio sync errors, though on some systems slight differences are normal); whether to perform scene detection based on timestamp or image contents; what naming scheme to use when automatically generating clips for each scene; what size thumbnails to create; whether to use midpoint or start of clip as initial default poster; whether to create thumbnails on first/last frame or inset at 5%/95%.
- 'Previews' tab – whether to display a preview if the original movie is unavailable; size and quality settings for creating preview movies (leave all the check boxes unchecked for a balanced compression setting, or select one or more factors which are particularly important to you); directory in which to store previews.

- 'Export' tab – what line ending character to use when exporting batch logs; whether to use the whole clip or a selection within the clip when exporting clips; whether to prefix the name of exported movie files with the tape or bin name (or create subdirectories based on these names).
- 'Printing' tab – what fonts and margins to use when printing; how much extra spacing to leave around cells.
- 'Appearance' tab – select the look and feel of the application; control the appearance and positioning of the toolbar and status line in the main window; define the default view and grouping when a window is first opened; define whether the media or details dialog is shown when double clicking on a clip.
- 'Registration' tab – enter the name and registration code you were sent to register CatDV, or clear an existing registration.

Sequences

A "sequence" is a special type of clip that contains a sequence of clips in order. It corresponds to an edited program. A sequence is created:

- when you import an EDL
- when you import an EditDV project (one sequence per program track "V1", etc.)
- when you select some clips and use the "Create Sequence" command.

Double click a sequence to display it in a special sequence dialog. There, you can:

- View the clip usages in the sequence as a timeline or as a list
- Zoom in and out of the timeline, and determine whether to wrap the timeline to the window width or not.
- Select large or small thumbnails in the timeline, and whether to show the clip date as well as the name
- Press the 'clip details' icon to show details for a clip usage
- Press the 'play media' icon to play a selection within the sequence.

The sequence dialog is also used when you use "View tape as sequence".

Tools

- Use "Whole Tape Capture Log" to create clip definitions of equal size spanning a tape. These can be exported as a batch capture log to capture an entire tape unattended.
- Use "Map Tape Offsets" to adjust the timecode values of selected clips by a fixed amount (for example to recapture from a program tape after printing to video, as this will have different timecode assigned by the camcorder).
- "Memory Usage" shows how much memory is being used by the application and is intended for diagnostic purposes.

New features in 2.0

- Improvements to clip details dialog, with a new toolbar and "Preview" tab panel, and improved navigation to other clips.
- Improved support for non-DV media formats (still images, MPEG, audio files, etc.)
- New media dialog to present movies, including full screen display. CatDV handles non-square pixels and both 4:3 and 16:9 DV movies are shown at the correct aspect ratio.
- New slide show mode (and related functionality, eg. randomizing clip order, rotating stills).
- Generation and display of low resolution preview movies (with choice of size and quality)
- Choice of thumbnail sizes; ability to rebuild thumbnails; ability to select new poster frame from "Movie" tab of details dialog; new Preferences option to specify midpoint rather than first frame as default poster.
- Improved file management (renaming or deleting a clip gives you option to do the same to the media file; new command to update media file location).

- New properties including "Good", "Status code", "Date", "Month", "Orientation", "QT Tracks", '"Folder" and "Data rate".
- Much improved search and filter dialogs.
- Enhanced "Export as movie" command, adding the ability to convert movies using a different codec and to add a date/time text track. There is also an explicit "Consolidate footage" command now for creating flattened movies from each clip.
- Program clips have been replaced by "clip usages" within a "sequence". This is more flexible and allows EDLs to be exported as well as imported. Removed EDL import Preferences options as EDLs are always imported as a sequence now.
- New "sequence view" dialog and command to create sequences and allow simple cuts only editing.
- New icon-only grid view (at different sizes), allowing more clips to be visible within a window.
- New dialog to define custom view types and labels for the user-defined columns. Added a fourth user-defined property.
- "Whole tape capture log" now creates clips that can be exported in any of the supported batch file formats.
- All long-running operations such as imports now display a progress bar, with a Preferences option whether processing should take place in background or not.
- Preferences dialog has new tabs and a 'Default' button to set factory defaults for many options.
- Rewrote portions of the EditDV project import handling, eg. to make handling of file names more robust and cross platform.
- Various other new menu commands, such as "View marked clips", "Scan for new files" and "Merge clips".
- More extensive use of tool tip text, eg. on table column headers.
- Renamed and rearranged several menu items to make them more consistent.
- Various performance improvements, eg. improved speed of thumbnail creation.
- Added export to Canopus file format
- New Preferences options to configure the default view when opening a window, appearance of toolbar and status line, and so on.
- Numerous other minor improvements and fixes, for example the name of an audio format, rather than just a code, is now displayed, thumbnails are always shown at the correct aspect ratio, new look toolbar, etc.

7 August 2001