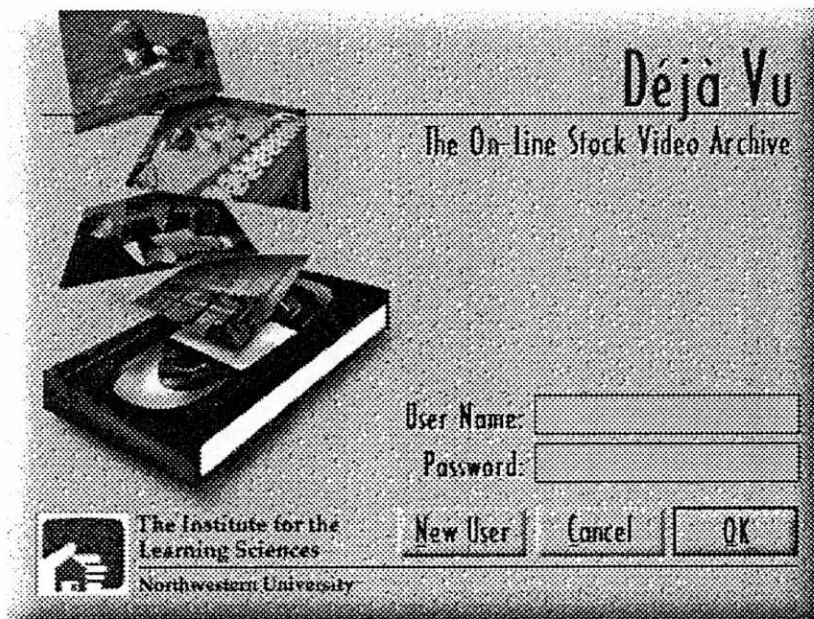


Déjà-Vu

The On-Line Stock Video Archive



User's Manual

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1. Overview

The **Déjà-Vu On-Line Stock Video Archive** is designed to enable producers of video and multimedia productions to retrieve video clips interactively from an on-line stock footage repository. Stock video footage usually includes clips that are generic enough to be reused in different productions. These collections are normally maintained by video librarians, who receive requests to fill visual gaps in a scripted production. Requests for stock video may be very specific, (e.g. "close-up of water ripples") or very abstract (e.g., "images of people designing the future"). To perform these retrievals, librarians depend not only on their familiarity with the given collection, but also on their common sense knowledge about the everyday world. (See [Gordon and Domeshek, 1995] for a more detailed overview.)

As the video repositories migrate on-line, and clips become instantly accessible to a variety of users, on-line retrieval must incorporate some of the intelligent strategies of the video librarians in order to be effective. For the retrieval of text, keyword-based information retrieval systems can search directly in the text for a match to the query. Video, on the other hand, is opaque to the computer. Effective retrieval depends critically on how each clip is represented, or indexed, in the system. Syntactic approaches represent and retrieve a clip by histograms of color or shape. Other, knowledge-based approaches use a full representation language and inference mechanism. (See Baudin, et al., 1994 for a summary of approaches.)

The indexing scheme in **Déjà-Vu** takes a middle-of-the-road approach. It provides a language of descriptors, or **concepts** (currently of things, places, people, time and activities) which are associated with a clip. Instead of having the system perform inferences from the user's **query**, the user searches the concepts in the system until he or she finds something close to what he or she wants. This is done using a 'zoom' and 'browse' approach. 'Zooming' (as in photography) provides an immediate focus on a group of concepts. For example, if the user wants video clips having to do with shopping malls, 'zooming' into retail places will focus the user in on concepts such as bakeries, shoe stores, and so on. Once an area has been 'zoomed' into, 'browsing' (as in a bookstore) provides easy access to associated concepts. For example, once focused on bakeries, one can browse to wheat fields, baking, kitchens, chefs, and so on.

The next section describes the interface and interaction of **Déjà-Vu**, and how it is used by both indexers and end-users (video/multimedia producers). All terms in **bold face** are defined in the Glossary of Terms.

2. Tour of *Déjà-Vu*

The Screen

The screen is composed of two primary elements: a **View** (a 'window' into the **concept** database) and a **Mode** (a work area for creating a **query**, indexing video clips, or editing the concept organization.)

When an end user first opens *Déjà-Vu* to find clips, the screen will look like this:

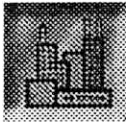


The left margin of the screen is reserved for buttons that select the view and the mode. Buttons on the upper left determine which of five different views the system will display, buttons on the lower left determine which of the three different modes is active.

Views

The user may access the concepts in the system via five different Views:

Place Zoomer



The **Place Zoomer** is a composite landscape picture of all the place concepts in the **hierarchy**. This zoomer allows the user to 'zoom in' for greater detail (e.g., concepts in "Educational places.")

World Zoomer



The **World Zoomer** allows the user to locate video clips shot in identifiable geographical places such as South Asia or Chicago, Illinois.

People Zoomer



The **People Zoomer** allows the user to select from several people-related concepts: age, race, gender, and number.

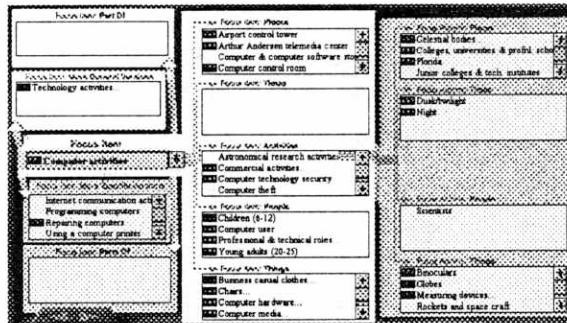
Views (continued)

Time Zoomer



The **Time Zoomer** allows the user to quickly access time-related concepts: past, future, seasons and times of day.

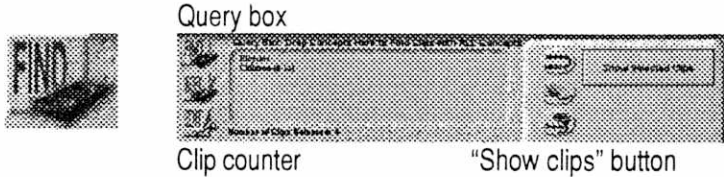
Focus Browser



The **Focus Browser** allows the user to browse concepts related to a **Focus Item**, which can be typed in or chosen from concepts already on the screen. This view shows the hierarchy of directly related concepts, as well as a list of associated items that may aid the user's search. (See the section "Using the Focus Browser" for more information).

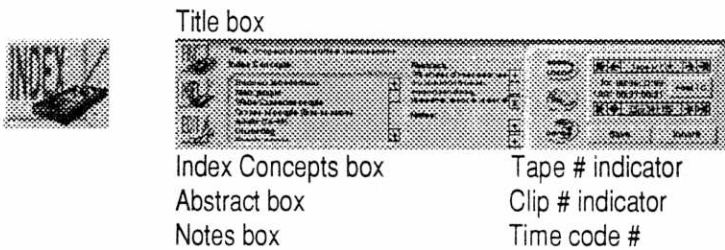
Modes The user may work in three possible Modes:

Find Mode allows the user (typically the producer) to search for video clips.



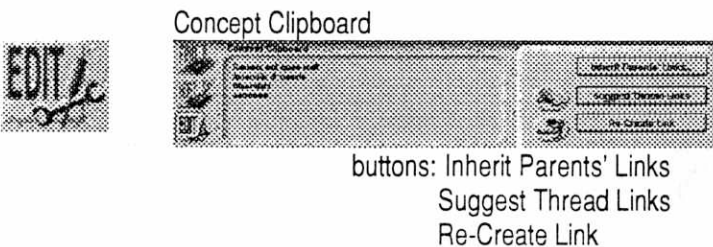
The user selects **concepts** (e.g., “Bicycles” and “Children”) one at a time from a view and inserts them into the **Query Box** (see Section 3 for more details). The counter indicates how many clips are found that match the user’s query, that is, are clips showing both bicycles *and* children. The user can then request to see the clips in the **Clip Book** (see the “Clip Book” section on next page).

Index Mode allows the indexer to assign a set of concepts to a video clip.



After analyzing a particular clip and specifying its tape and clip #, the indexer selects concepts one at a time from a view and inserts them into the **Index Concepts** box. In addition, the indexer can assign the clip a title and write a descriptive abstract.

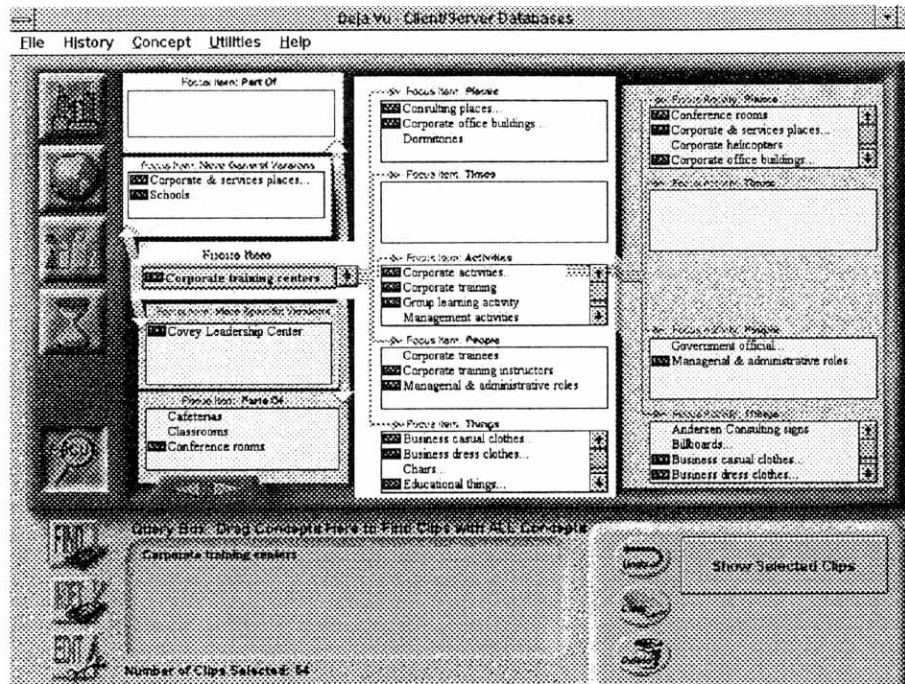
Edit Mode allows the indexer to create or modify concepts.



The indexer can create a new concept, rename an existing concept, change its group type, or re-position it in the concept hierarchy. The **Concept Clipboard** can be used as a temporary holding area for concepts selected from any of the views.

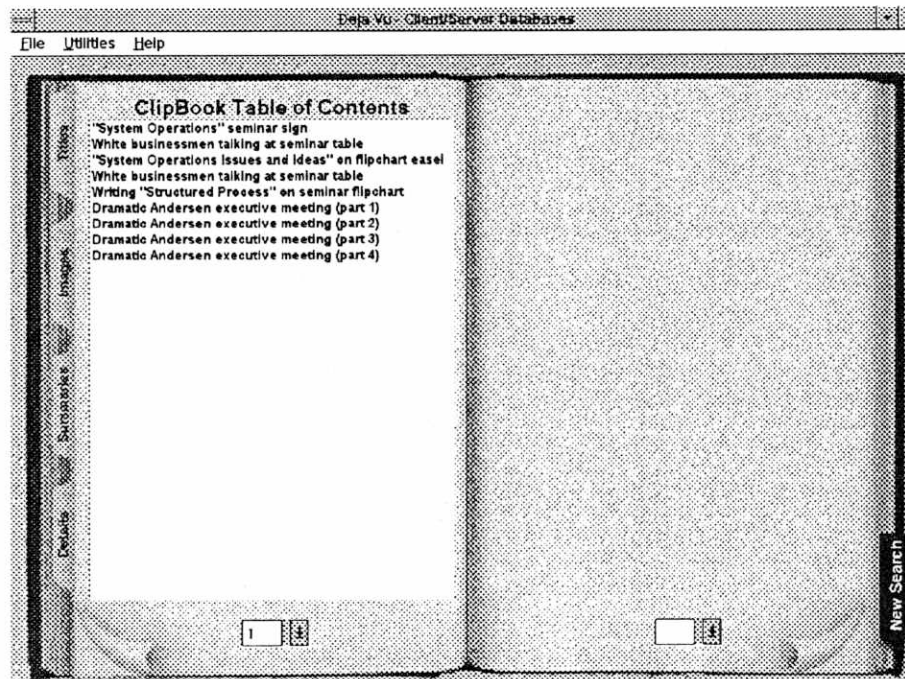
Clip Book

The video **Clip Book**, accessible only through **Find Mode**, allows the user (video producer) to preview the video clips which contain the concepts in the user's query.



In the screen at left, "Corporate Training Centers" is the user's query.

To access the Clip Book press the "Show Selected Clips" button at the lower right corner of Find Mode.



The Clip Book first displays a list of titles for the selected clips.

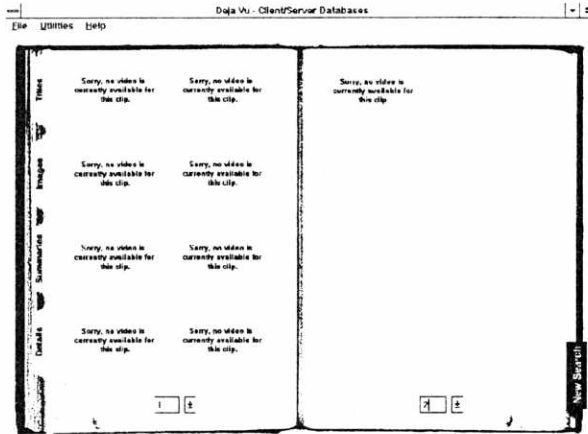
By selecting one of the other three Clip Book screens (see next page) the user can play the clips, read abstracts of the clip content, and get other technical information. Double-clicking on a title will open the "Details" screen.

Clicking on the "New Search" tab will return the user to Find Mode.



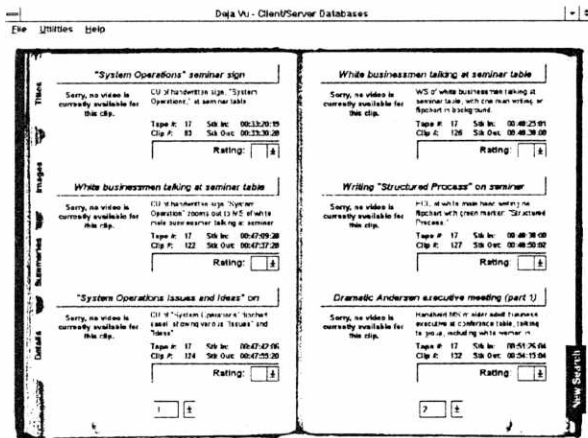
Clip Book (continued)

Images



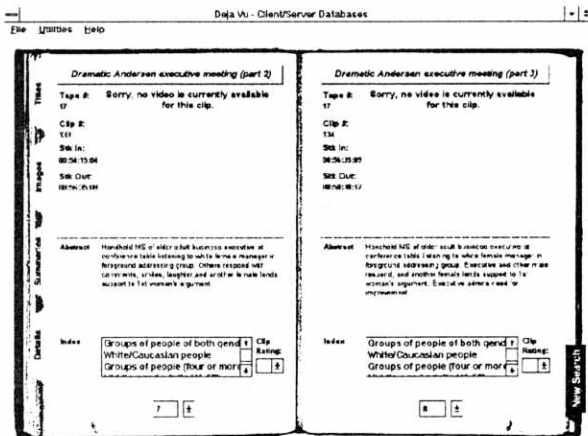
The **Images** screen displays a gallery of up to sixteen playable video clips.

Summaries



The **Summaries** screen displays playable video, titles, abstracts, and other information for up to six clips per screen.

Details

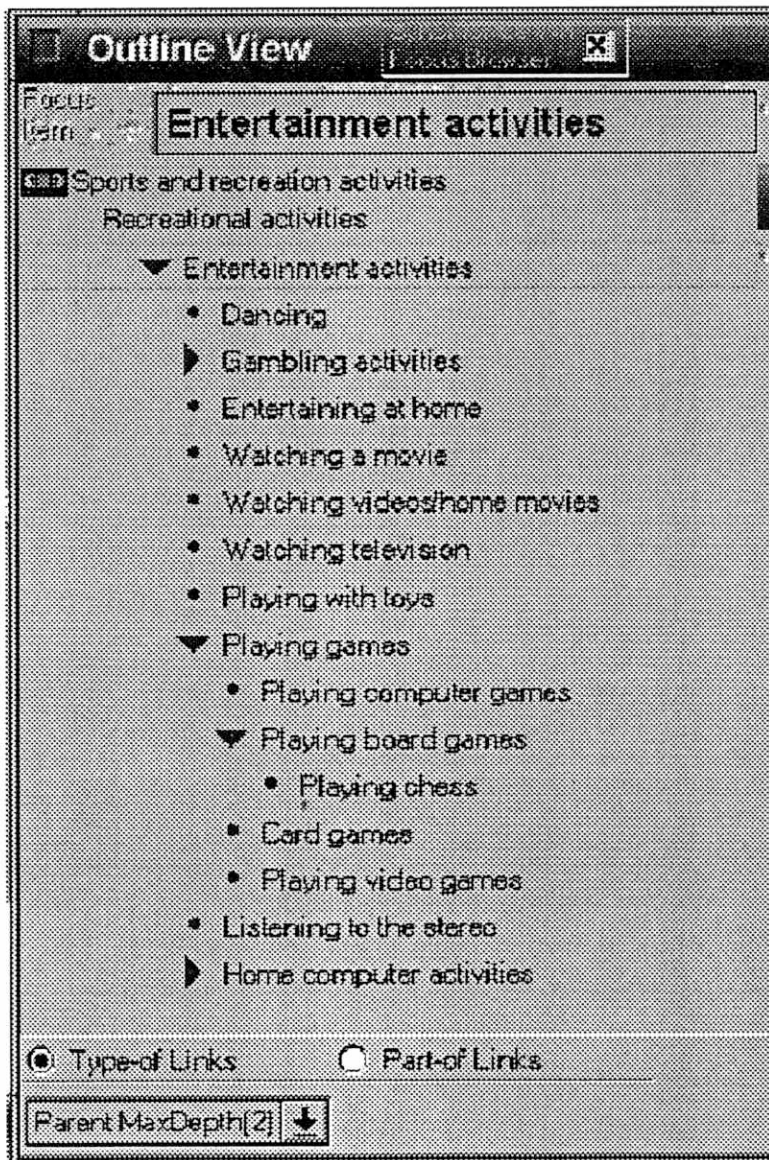


The **Details** screen displays all the contents of the Summaries screen plus a list of all the concepts with which the clips have been indexed. Only two clips can be displayed at one time.

Concept Hierarchies

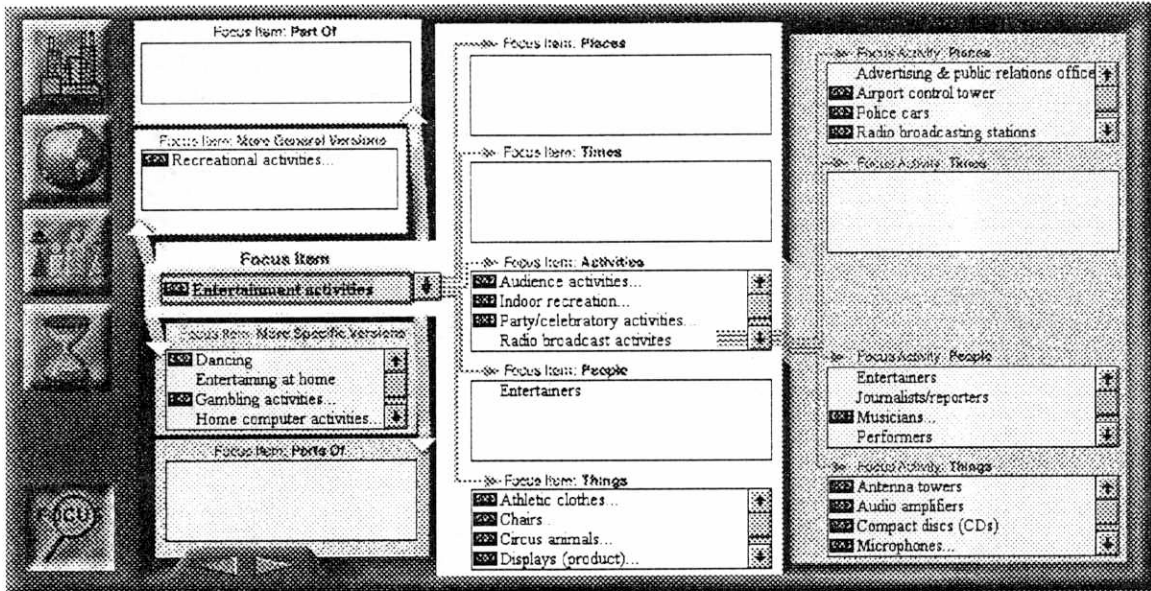
The **concepts** are organized by five main groups: People, Places, Things, Activities and Time. The concepts in each group are organized by a generalization/specialization **hierarchy**. For example, “Playing games” is more specialized than “Entertainment activities” and more general than “Playing chess” (see below). These relationships can also be described using familial terms: “Playing games” is a ‘child’ of “Entertainment activities,” a ‘parent’ of “Playing board games,” and a ‘sibling’ of “Watching a movie.” In Déjà-Vu the term “**type of**” is also used to indicate “child-of,” or more specialized relationships.

The “Outline View” tool (in the Utilities menu) shows this hierarchical organization:

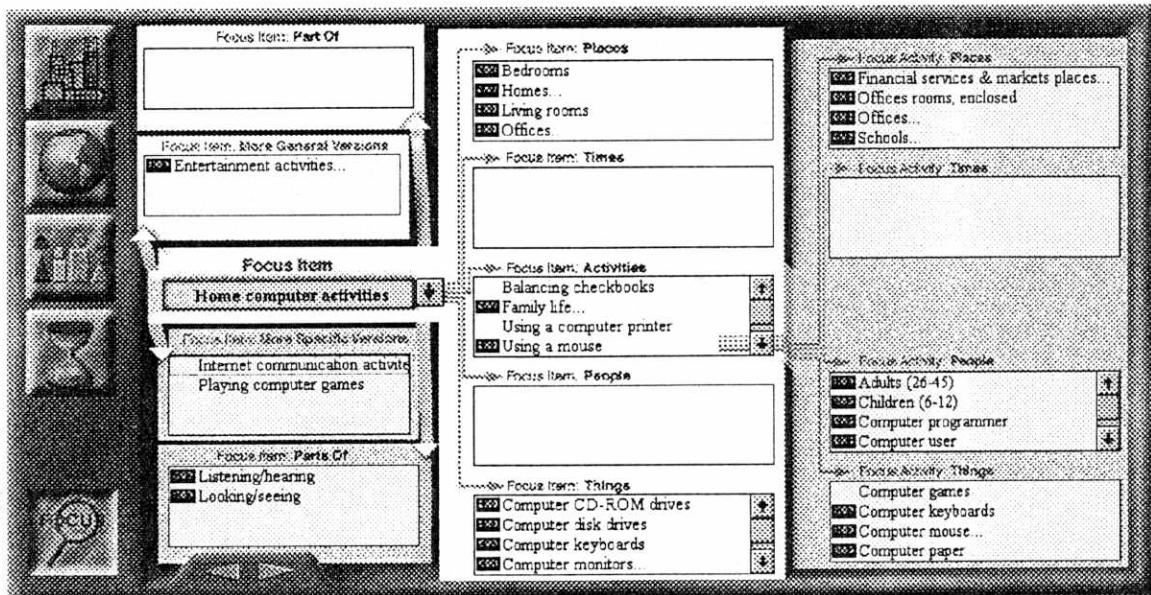


Using the Focus Browser

In the example below, "Entertainment activities" is currently the **Focus Item**. Its parent, "Recreational activities," is in the More General Versions of Focus Item box. Its children, "Dancing," "Home computer activities," etc., are in the More Specific Versions of Focus Item box.



Any concept on the screen becomes the Focus Item by double-clicking on it. For example, when "Home computer activities" is put into focus, its children and associated concepts appear, and its parent "Entertainment activities" moves up into the More General Versions of Focus Item box (see below).



3. Procedures for Finding Video Clips

These procedures describe how a user, usually a producer of video or multimedia productions, can find video clips for a given script. Using concepts found in Déjà-Vu, the user composes a textual **query** which retrieves a set of video clips. The user can then view the desired clips. Each query can also be saved in a customized **Clip Book** for future use.

There are two basic methods of searching for **concepts**: *zooming* and *browsing*. The four **Zoomers (Places, World, Time and People)** allow you to find concepts represented by pictures. The **Focus Browser**, accessible from any Zoomer, allows the user to browse concepts related to a chosen **Focus Item**. This view shows the **hierarchy** of directly related concepts, as well as a list of associated concepts that may aid the user's search.

	Action	Procedure	Example
1.	Enter Find Mode	Select "Start New Search" upon opening Déjà-Vu, or if already open, click on the Find Mode button	--
2.	Select the View screen most appropriate for script's content	Click on View button of your choice (Places, World, Time or People Zoomer, or Focus Browser)	Your script calls for "a basketball coach coaching a basketball game." You select the Place Zoomer as a starting point predicting that you will find a basketball-related place
3.	Explore the concept space to find a concept specific enough for your needs.	Choose from a Zoomer the picture most closely related to your concept or theme. If you find one, go to Step 4. Otherwise, double-click on the picture or text most closely related to the desired concept. This will send you to the Focus Browser. Or, if you are already in the Focus Browser, it will change the Focus Item. If a suitable concept is not on the current screen, double-click on a related concept to access its links. Repeat until you find a desired concept.	In Place Zoomer you double-click on "Sports and recreation places" and are sent to the Focus Browser. You double-click on one of its children, "Stadiums," to make it the Focus Item. Several concepts related and associated to "Stadiums" appear.
4.	Compile a query of concept(s).	Click on concept and drag it into the Concept Clipboard . Repeat until your query is complete. Note that "Total number of clips" may decrease as your query becomes refined.	From the Focus Browser you compile a query consisting of the concepts "Basketball stadiums," "Coaching," and "Basketball games." Deju Vu tells you there are 20 clips which match your query.
5.	Enact query.	Click on "Show Clips" button	A Clip Book appears showing the titles of the video clips which match your query.

6.	View clip(s) and clip information.	Click on desired Clip Book screen tab: "Images," "Summaries," or "Details." You can play the clip by double-clicking on it.	Because there are 20 clips, you choose the "Images" screen to see representative frames of as many clips as possible. You watch those clips that appear useful and check the "Details" screen to get more information about them.
7.	If any clips meet your needs, rank them and save/title a custom Clip Book	Rank clips from 5 to 1 (5 is best) using the ranking box in the "Summaries" or "Details" screen. To save a Clip Book, select "Save Clip Book" from "File" menu, and save the file using the standard file dialog box.	You rank six clips as "5s" and two clips as "4s" and ignore the others. You save a custom Clip Book, titling it "bball.cb"

4. Guidelines for Indexing and Creating Concepts

Indexing video clips

Abstract and index

- Look for salient images, objects and concrete themes with these factors in mind:

1. **Size and duration on screen**

The more screen area the object occupies, and the longer it is on the screen, the more likely it should be considered a salient concept.

2. **Foreground vs. background**

Objects in the foreground of the shot are often larger in screen size and may often be considered salient.

3. **Needs of the end-user**

Consider how useful this instance of the object might be to a video or multimedia producer.

- Use cinematic terms consistently.

CU	Close up (relative to scene).
MS	Medium shot (relative to scene).
WS	Wide shot (relative to scene).
pan (right or left) to	Horizontal pivoting of camera during the shot.
tilt (up or down) to	Vertical pivoting of camera during the shot.
zoom (in or out) to	Changing the field of view (wider or narrower) during the shot.
telephoto	Extremely long focal length (usually from a distance; has the effect of flattening the image's depth of field so that far and near objects appear equally prominent).
dolly (in or out) to	Movement of the camera's position closer to or further away from object.
track (left, right, with)	Sideways movement of camera's position, often to follow an object.
cut to	Abrupt transition to new shot.
dissolve to	Overlapping transition to new shot.
jump-cut to	Abrupt, but disorienting, transition to similar-looking shot (intentional or not).
rack focus	Changing the camera focus during the shot.
time-lapse	Shortening of natural time by shooting fewer frames than normal in given interval.
stop-motion	Illusion of movement created by making small position changes to object or camera's position between short bursts of filming.

- Don't index irrelevant images in a clip.

Example: In a clip of a business meeting there is a pencil sharpener on a table in the background. The pencil sharpener is not relevant to the clip's content: it is small and it is in the background. Do not index the clip with "Pencil sharpener" as a concept. An end-user looking for a clip of a pencil sharpener would most likely not want this clip.

- **Do, however, index objects or scenes which are relevant to the theme of the clip despite their lack of prominence.**

Example: A clip shows a girl and her ice skating coach sitting in front of a video monitor watching videos of people ice skating. Though the video image is hard to see and there are no people *actually* ice skating in the clip, index the clip with the “Ice skating” concept. This clip would be of interest to a user who wants to retrieve every clip with ice skating relevance.

- **Don’t create new concepts to index abstract themes.**

Example: A montage sequence juxtaposing computers and traditional Chinese folk dancing might be interpreted as portraying “Technology versus Tradition,” a very abstract theme which cannot be indexed in the present system. You may, of course, indicate such a theme in the **Title** or **Abstract** box.

- **Don’t index concepts that are too common to provide useful discriminations between most clips.**

Examples: Time concepts such as “Night,” “Sunrise” or “Sunset” are useful because of their infrequency, but not “Day” (most clips are “Day” time.) Don’t use the primary groups (“All Places,” “All Times,” “All Activities,” etc.); a more specific concept should already exist (if it doesn’t, create one.)

Titles

- **Be brief and descriptive.**

What grabs your eyes immediately? What does the clip portray? Try to capture the broad theme of the clip but be sure to include at least one descriptive word which will distinguish this clip from similar clips.

Examples: “Young couple drinking in *bright* cafe,” “Interactive TV Family (*edited promo*).”

Creating Concepts

The goal of an “ideal” browsable database is to be as comprehensive as possible in its content while remaining relatively easy for users to navigate. Factors which must be considered when creating concepts include:

- **meaningfulness of concepts**
- **language and semantics**
- **psychological limitations of the user**
- **structure and parallelism**

Create only concepts that add meaning

- **Don’t create specializations if you can get the same effect by conjoining existing concepts or if the specialization is too artificial-sounding.**

Example 1: Don’t create “Beach towel” if the separate concepts “Beach” and “Towel” already exist.

Example 2: A clip shows a bar code scanner being used in a medical laboratory. Index the clip with the concepts “Using a computer scanner” and “Medical lab work.” Don’t create “Laboratory scanning” as a new concept; overspecializing an activity might produce artificial—and meaningless—combinations.

Creating a specialized concept is justifiable if: (1) it has a clearly different form or function with unique thread-link associations, (2) it will be used frequently in Déjà-Vu, and (3) it uses commonsense language.

Balance commonsense language with typology

- **Avoid conflating concepts which should be “typed” separately within the local hierarchy.**

Example: Don’t create a concept called “Sailboats and sailboards;” this disables the consistent use of the “type of” hierarchy. While the items have similarities, sailboats are a type of “Boat,” but sailboards are not. However, “Sculptures and statues” is acceptable as a combined concept because both are “Visual arts products” and are often not easily distinguishable.

- **Create concepts general enough to accomodate visual ambiguity.**

Example: If “Ball-bearing factory” is created as a concept, make sure the general concept “Factory” also exists (or create it) for those clips depicting factories which can’t be specifically identified.

- **Use consistent punctuation.**

1. Consider common word use when creating noun phrases or nouns with multiple types. Place the most salient part of the phrase first, using commas if necessary.

Examples:

Pipes, smoking
Pipes, water
Cameras, still
Cameras, motion picture
Artists, visual
Eggs, fried
Gardening tools
Police officers
Rubber gloves

2. Parentheses may be used to better describe a concept with modifiers which, when combined with the concept, would not form a phrase normally used in everyday language. For example, if you want to specify the geographic location of named places such as streets or building names (e.g., “LaSalle St.,” “Sears Tower”), add the location (“Chicago”) in parentheses after the place name. Don’t use hyphens or commas.

3. Use hyphens only for compound nouns (e.g., “Water-related structures”). Do not use a hyphen in place of a dash, a punctuation mark which is not available in the Déjà Vu tool.

Remember the psychological limitations of the user

- **You may need to create concepts to either maintain consistency in the local hierarchy or to break up extremely long lists of sibling concepts (10+).**

Example: Because there are over 50 specific types of “Factories/plants,” they should be organized under suitable mid-level concepts, e.g., “Textile & leather mills” and “Electronic & electrical appliance factories.” Long lists can be overwhelming to the user.

Hierarchy structure

- **Place concepts at the appropriate level of abstraction in the hierarchy.**

Example: “Chinese line drawings” should not be at the same level as “Sculptures and Statues.” While all three concepts are types of “Visual arts products,” “Chinese line drawings” indicates a more specialized type of art and should be placed under a mid-level concept, say “Calligraphy.” If it is necessary to create a new concept “Calligraphy,” make sure it is first made a child of the higher level “Visual arts products” before placing “Chinese line drawings” under “Calligraphy.”

Sample of hierarchy:

```
Visual arts products
  Sculptures and statues
  Calligraphy
    Chinese line drawings
  Paintings
```

- **If necessary, place concepts under more than one parent.**

Example: In the example above one might feel that “Chinese line drawings” should be placed under not only “Calligraphy” but also “Paintings” because of the painterly style of Chinese line drawings.

Sample of hierarchy with double-parent:

```
Visual arts products
  Sculptures and statues
  Calligraphy
    Chinese line drawings
  Paintings
    Chinese line drawings
```

- **If necessary, classify concepts under more than one primary hierarchy.**

Example: Some concepts—buildings, trains, etc.—are classified as both things *and* places because they can be either objects or locations.

- **Don’t create a concept without (eventually) placing it in a hierarchical relationship.**

Unconnected concepts become “orphans” within the system, and can not be easily accessed. (Note: An indexer may leave newly-created concepts *temporarily* unlinked for work efficiency; see section 5, Procedures for Indexers)

Maintain (but don't force) parallelism

- **Strict parallelism should not be forced when artificial parallelisms are semantically problematic.**
Example: For the most part, upper level **concepts** follow a parallel construction: “Educational activities” parallels “Educational places,” “Educational things” and “Educational people roles.” However, there are some cases for which parallelism across all classifications doesn’t work well. “Natural events” (type of activity) parallels “Natural places,” but “Natural *things*” can not be used because of the difficulty in determining which things are “natural” and which are not. And “Natural people” is simply redundant.

Creating Thread-links

Maintain (but don't force) parallelism

- **Maintain parallelism in thread-links wherever possible.**
Example: Link “Musical instruments” to “Musical activities,” and “Guitars” to “Playing guitars” (i.e., link parent to parent, child to child).

<i>Focus Item</i>	<i>Associated activity</i>
Musical instruments	Musical activities
Guitars	Playing guitars
Pianos	Playing pianos

- **When thread-linking concepts that are indirectly related, link *only* the concept of the same class (e.g. activity to activity)—don’t link indirectly related concepts of different classes.**
Example: If “Police activities” is the focus item, it is appropriate to link “Judicial activities” to it but not “Judges” since “Judges” will be already associated to “Judicial activities” (and is even less related).
- **Restrict “Part of” links to like classes of concepts (link activities to activities, things to things, etc.)**
Example: “Hand gesturing” is literally part of the activity “Conducting an orchestra.” The concept “Batons,” although colloquially considered “part of” conducting, is more properly treated as an “Associated thing.”

5. Procedures for Indexing

Indexing video clips

These procedures describe how to index the images in a video clip using **concepts** found in *Déjà Vu*. For guidance on making indexing effective, see Section 4: Guidelines for Indexing and Creating Concepts.

	Action	Procedure	Example
1.	Enter the Focus Browser in Index Mode	Select "Index Clips" upon opening <i>Déjà Vu</i> , or if already open, click on Focus button and click on Index Mode button	--
2.	Select tape and clip number to work on	Enter the desired tape and clip numbers in respective pop up boxes. Thereafter: (1) use arrows on either side of tape/clip button, or (2) push tape/clip button and enter tape/clip number you wish to index	--
3.	Cue video tape to desired clip	Match the 'in-point' time (displayed in the Index Mode) with the corresponding time code window at the bottom of the video monitor screen	You see that the desired clip's time code in-point is 01:00:07:12. Cue the video tape so that 01:00:07:12 is displayed in the 'window burn' at the bottom of the screen
4.	View and analyze clip for its content	Look for <i>salient</i> concepts in the clip (see Section 4: Guidelines for Indexing and Creating Concepts).	You play the video tape. The clip shows a woman eating at a kitchen table. Salient concepts might include "female," "kitchen," "eating," cereal, "table" and "household activities."
5.	Enter an abstract into Abstract field	Enter a thorough description of the clip's contents. Include indexable salient concepts. Use cinematic terms that would be helpful to a video producer (see Section 4: Guidelines for Indexing and Creating Concepts). Be as descriptive as possible, e.g., "pans quickly" or " <i>middle-aged white female</i> "	You type "MS of young female eating at kitchen table, zooms in to CU of her face, tilts down and pans right to CU of Corn Flakes cereal box on table"
6.	Search the database for each prospective concept.	In the Focus Item box, type a prospective concept	Clip shows a woman eating in a kitchen. You type "eating" in the Focus Item box

7.	If concept exists as typed, select the concept for this clip's index. Repeat until all possible concepts represented by the clip have been indexed.	Select it by dragging it from the Focus Browser into the Index Concepts box. <i>Hint: scan the concepts linked to the focus concept; there's a good chance other salient concepts are already on the screen, and can be dragged directly to the Index Concepts box.</i>	"Eating/drinking" exists so you drag the concept into the Index Concepts box
8.	If a concept does not exist as typed, it might exist in another form or may have to be created. Follow the substring search procedures (next page) before continuing.		
9.	Enter title into Title field	Enter a short and descriptive title (see Section 4: Guidelines for Indexing and Creating Concepts).	You type "Woman eating breakfast in kitchen"
10.	Enter notes into Notes field (if necessary). Notes are meant only for use by indexers and will not be seen by the end-user.		

Substring search and creating new concepts

These procedures will help find **concepts** that cannot be found through the **Focus Browser's** text list because of differences in phrasing or usage. The procedure for creating new concepts is also described.

	Action	Procedure	Example
A.	Open a new List View	Select "New List View" under the "Utilities" menu	--
B.	Search database for possible occurrences of concept(s). <i>Tip: substring searches are most effective when short strings are used, e.g., it's better to shorten "trackballing" to "trackball."</i> If no appropriate substrings appear at first, repeat until you have exhausted all possibilities.	Enter a word or word part (substring) in the open box and activate "Substring Search" button (or type 'ALT-S').	You're trying to index a clip showing a high school graduation speech. Because "speech" doesn't come up in the Focus Browser (Indexing Step 6), you now search for "speech" as a substring. Any concepts which include the word "speech" will appear in the list.
C.	If a suitable concept appears in the substring list, select it. Go back to Indexing Step 7 to finish the indexing process for this clip.	Click on the desired concept and drag it from the List View into the Index Concepts box.	"Giving a speech" appears as a concept. Because you're satisfied that this concept describes the action in the clip, you drag "Giving a speech" into the Index Concepts box.
D.	If no existing concepts are suitable, then you must <i>create a concept</i> . When finished creating, go back to Indexing Step 7 to index the clip with this concept.	Select "Create New Concept" from the Concept menu. In "Create New Concept" box, type name of new concept and click "OK." (Note: if you do not plan to place the new concept in the hierarchy immediately, you should "flag" the concept by typing an asterisk (*) at the beginning of the word to aid subsequent retrieval	You create new concept "*commencement address." The new concept appears in the Index Concepts box.

Adding new concepts to the hierarchy

These procedures describe how to place new or recently created **concepts** into the **hierarchy**.

	Action	Procedure	Example
1.	Enter the Focus Browser in Edit Mode	Select "Edit Concepts" upon opening Déjà-Vu, or if already open, click on the Focus Browser view button and the Edit Mode button	--
2.	Determine where in the hierarchy to place the new concept	Search through the Focus Browser and/or the Outline View (in Utilities) to find the parent and the children of the new concept	You decide that proposed new concept "Saxophone" (or previously created "*Saxophone") is a type of existing concept "Musical instruments" (in the Things hierarchy)
3.	Select a potential parent concept as Focus Item in the Focus Browser	(1) Click on 'pull down arrow' in Focus Item box to open a searchable text box, (2) type name of parent concept in Focus Item box, (3) press Enter on keyboard	You type "Musical instruments" in the Focus Item box and make it the focus
4.	Refine your search for the most appropriate parent, moving children into the parent's position if necessary	(1) Double-click on concepts which appear in "type-of" boxes, (2) decide exactly where the new concept should be placed, (3) double-click on an existing child concept to move it to the Focus Item box, setting it up to be parent of new concept	You discover that "Musical instruments" has a child "Wind instruments," which is determined to be a more appropriate parent for new concept "Saxophone."
5.	Create a new concept (or locate previously created concept with '*' flag)	Select "Create New Concept" from the Concept menu. In "Create New Concept" box, type name of new concept and click "OK." (or drag the previously created concept from the Focus Browser's text list into the Concept Clipboard)	You create new concept "Saxophones" The new concept appears in the Concept Clipboard. (or you drag "*Saxophones" from the text list into the Concept Clipboard).
6.	Add the new concept to the hierarchy (as a child of a parent). If you are going to create thread-links immediately, follow Thread-linking procedures (next page). Otherwise keep a list of all new concepts to be thread-linked later.	(1) Verify that parent concept is the Focus Item (if not there, put it there), (2) Drag new concept from Concept Clipboard to the Focus Item: More Specific Versions box.	You add "Saxophones" (or "*Saxophones") to the hierarchy by making it a child, i.e., type of, "Wind instruments." (Rename "*Saxophones" as "Saxophones." Use the "Rename Concept" tool under the "Concept" menu.)

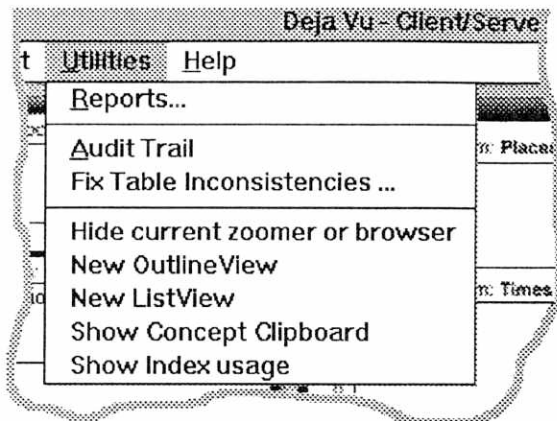
Creating thread-links

Thread-links are connections between different groups of **concepts** (between places, people, things, time and activities) that are not **hierarchically** related. These associated concepts help make an end-user's search more comprehensive by enabling the end-user to browse related concepts (e.g., the concept "Pallets" is associated with "Loading docks," "Loading" and "Forklifts.") To create thread links, indexers "connect" existing concepts to a selected focus concept (**Focus Item**). Note: it is best to perform the linking procedure by starting with the more general concepts in the hierarchy and moving to more specific concepts because previous links can then be "inherited." Another note: it is best to use activities as the foci from which to build links since activities are often broad enough to include people, places *and* things.

	Action	Procedure	Example
1.	Enter the Focus Browser in Edit Mode	Select "Edit Concepts" upon opening Déjà-Vu, or if already open, click on the Focus Browser view button and the Edit Mode button	--
2.	Choose a concept for which to create links	(1) Click on 'pull down arrow' in Focus Item box, (2) type name of concept in Focus Item box, (3) press Enter on keyboard, (4) Drag the Focus Item into the Concept Clipboard for future use	You choose "Conducting an Orchestra"
3.	Put parent of chosen concept into focus.	Double-click on chosen concept's parent	You double-click on "Musical Performance Activities" and discover that it has links.
4.	Put chosen concept back into focus. To inherit parent's links, go to Step 5, to create new links, go to Step 8.	Double-click on chosen concept in "Focus Concept: More Detailed Versions" box	You put "Conducting an Orchestra" back into focus
5.	Begin inherit procedure	Click on "Inherit Parents' Links" button	The "Select Links to Inherit" box appears
6.	Weed out unwanted links	From the "Select Links to Inherit" box highlight and delete any unwanted concepts	The "Select Links to Inherit" box lists "Amplifier" as an Associated Thing. Because "Amplifier" should not be associated with "Conducting an orchestra," you delete it.
7.	Inherit applicable links	When the "Select Links to Inherit" box holds only those concepts which should be linked to the Focus Item, press the "OK" button	You keep the other links, "Audience" and "Stages," because they are associated with "Conducting an orchestra"

8.	Determine which new links (if any) should be created	(1) Browse concept hierarchy, (2) Select and drag into the Concept Clipboard any concept(s) which you wish to link to your chosen concept	You decide "Baton" and "Hand gestures" should be associated with "Conducting an Orchestra" so you find them and drag it into the Concept Clipboard
9.	Create new links if desired	(1) Drag chosen concept back into focus, (2) Drag into appropriate fields (Associated Places, Associated Times, Associated Activities, Associated People, Associated Things, and Parts Of) concepts to be linked to the Focus Item	You put "Conducting an Orchestra" back into focus. You make "Baton" an Associated Thing, and "Hand gestures" a Part-of the Focus Item.

6. Utilities Menu



Reports

Generates several standard or custom-designed reports: Part-Of-Type-Of Hierarchy, Type-Of Hierarchy, Concept Lists, Orphaned Concepts, MOP, Indexes, Notes Field Summary, and New Concepts.

Audit Trail

Records a user's work for later analysis.

Fix Table Inconsistencies

Checks the consistency of all concept classifications.

Hide Current Zoomer or Browser

Hides current Zoomer or Browser.

New Outline View

Opens a box shows the direct hierarchical relationships of a chosen concept. The box will remain on the screen even when toggling between different views or modes.

New List View

Opens a box which can be used for performing substring searches for concepts. The box will remain on the screen even when toggling between different views or modes.

Show Concept Clipboard

Opens a box which can be used for temporary storage of concepts, especially useful when toggling between different views or modes.

Show Index Usage

Opens a box which enables a user to find out which clip(s), if any, have been indexed with a selected concept. The user may then go directly to Index Mode to view and/or edit the index. The box will remain on the screen even when toggling between different views or modes.

7. Keyboard Command Shortcuts

Index Mode

Control + Right Arrow : moves to the next clip on the tape
Control + Left Arrow : moves to the previous clip on the tape
Control + I : inherit dialogue
Control + U : undo

Focus Browser

Control + A : opens the text list for typing

8. Appendix

Glossary of Terms

Abstract	An unlimited character field in which the indexer is able to (a) describe to the end-user the content of the clip and (b) describe content in a clip which can not be indexed using concepts in the hierarchy (e.g., cinematic terms such as <i>close-ups</i> and <i>wide shots</i>).
Clip Book	Special screen which displays video clips and technical information in response to a query performed through Find Mode .
Concept	The term for “descriptor” or “subject.” Concepts are selected from one or more of five basic hierarchy groups (People, Places, Things, Times and Activities) to represent specific images, objects, or themes in a video clip.
Concept Clipboard	Concept holding area for work done in Edit Mode . Also available as a “floating” utility.
Edit Mode	Mode screen used with Focus Browser to create or edit hierarchical links between concepts with Place, People, Time or World Zoomers to edit graphical “hot regions.”
Find Mode	Mode screen used to find video clips that contain desired concepts .
Focus Browser	A View ‘window’ that shows the hierarchical and associative relationships of the user’s focus concept to all concepts in the database. The centerpiece of <i>Déjà Vu</i> , the Focus Browser automatically suggests associated concepts to aid the user’s search.
Focus Item	A concept selected by the user as a basis for browsing.
Hierarchy	The relationship organization of all concepts —the “family tree.” Type-of hierarchy: hierarchy in which children are “types of” parents. Part-of hierarchy: hierarchy in which children are “parts of” parents.
Hot Regions	Mouse-sensitive graphical regions representing specific concepts in the Zoomers .
Index Concepts	A box in Index Mode used to place concepts when indexing a video clip.
Index Mode	Mode screen used to index video clips using concepts from the database.
Mode	A work area for creating a query , indexing video clips, or editing the concept organization.
Notes	A field in which indexers can write notes about clips. The Notes section will be viewed only by indexers/editors and is not intended to be a tool for the end-user. Indexers can use the Notes section to ask indexing questions (e.g. “Should I index the

pencil sharpener in this clip?”), mention a concept they think might need to be created, report a new concept they have created, etc.

Part-Of	Describes a relationship between two concepts of the same group (Activities, People, Places, Things, and Time) in which one concept is contained by, or attached to, the other (e.g., a “Tire” is part of a “Car” and “Sweating” is part of “Exercising”). See Focus Browser .
People Zoomer	A View ‘window’ of people-related concepts : age, race, gender, and number.
Places Zoomer	A View ‘window’ of all the possible places included in the concept database, typically used to begin a search of generic place concepts.
Query	Set of concept(s) selected by the user to find video clips in Find Mode .
Query Box	Concept holding area for forming queries in Find Mode .
Thread-links	Connections created (by indexers) between associated concepts in the Focus Browser .
Time Zoomer	A View ‘window’ of time-related concepts : past, future, seasons, times of day, etc.
Title	A limited-character field used by the indexer to concisely describe the basic theme of a clip.
Type-Of	Describes a hierarchical relationship between two concepts in which one is a more specific version of the other (e.g., a “High School” is a type of “Educational place”). See Focus Browser .
View	A ‘window’ into the concept database.
World Zoomer	A View ‘window’ of the geopolitical world, used to begin a search of named place concepts such as countries and cites.
Zoomers	Graphical View ‘windows’ into the concept space, including People, Places, Time and World Zoomers .

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