



## XML REFERENCE

7/29/10

This reference guide shows all the possible elements that can be used in a VisualEyes project listed alphabetically. The top-most element of any project is the **project** element. All other elements are contained by **project**.

The element titles shown on a grey bar with the element they are contained in written to the right. A short description appears underneath the bar. The element's *attributes* are listed alphabetically with the name, description, list of option (if any) and the default value if the attribute is not specified. If the default value is the one wanted, there is no need to specify it.

A list of elements that may be contained within the element are alphabetically listed and underlined below the attributes list. The element's name is a hypertext link to the reference for that element, and clicking on it will move you to that element.

Resources are listed as separate elements in this document for the sake of clarity, but they are all within a **resource** element with its *type* attribute set to the appropriate type (i.e. *image*, *map*, etc.) These are written with resource in the grey bar (i.e. *image resource*, *xml resource*, etc.). A star (\*) on the description means that attribute or item is required.

### Project structure:

#### [project](#)

[frame](#)

[logo](#)

[tab](#)

[textformat](#)

[view](#)

[cmap](#)

[dock](#)

[controlpanel](#)

[glue](#)

[overview](#)

[path](#)

[pmap](#)

[resource](#)

[docviewer](#)

[graph](#)

[image](#)

[infobox](#)

[map](#)

[movie](#)

[xml](#)

[timeview](#)

[table](#)

[widget](#)

[textformat](#)

[timeline](#)

[zoomcontrol](#)

#### Project start

Defines size/colors of views

Logo for all views

Defines size/colors of view tabs

Defines size/colors of text

Views

Concept map

Mac OSX-like dock

Control panel for user interactions

Glue scripts

Inset overview to navigate whole when zoomed in

Path of dots

Picture-style concept map

Resources of various types

An image and text booklet viewer

Graphs and charts

JPEG, GIF and PNG Images

Popup text box

Vector map or illustration

Flash movie

XML or CSV file

Timeview timeline display

Table resource

Univariate chart widgets

Defines size/colors of text

Timeline control

Image zoom control

band	timeview
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The bands for *timeviews* are made up of individual events, each with a date, a label, an icon type, etc, just like dots are used in the *path* and *cmap* (concept map) displays, and fully clickable.

<i>backImg</i>	Background image URL for band	
<i>border</i>	Border amount in pixels	8
<i>tickCol</i>	Color tick lines as an RBG hex number	0x999999
<i>col</i>	Color of background as an RBG hex number	0xffffffff
<i>corner</i>	Radius of corner of frame for making rounded rectangles	0
<i>frameCol</i>	Color of frame edge as RBG (-1 = none)	-1
<i>hgt</i>	Height of frame in pixels*	
<i>ratio</i>	Percentage of total time to show in band	100
<i>tickCol</i>	Color of tick mark lines as an RBG hex number	0x000000
<i>tickDateFormat</i>	Date format for tick dates: yr mo/yr dy/mo/yr mo/dy/yr mo,dy,yr yr	
<i>tickDatePos</i>	Position of tick line date text: top bot	bot
<i>tickSpan</i>	Number of days between tick mark lines	365
<i>tickWid</i>	Width of tick mark lines in pixels"	0
<a href="#"><u>dot</u></a>	Dots(s) in the band*	

cmap	view
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Concept maps are similar to paths, but the paths can be arranged in a radial manner similar to a hub and spoke shape. The *dots* are not time dependent, and *lines* (edges) must be specifically drawn by setting the relationships between the *dots* (nodes). Labels are automatically drawn if specified underneath the dot. The *frame* specifies the overall bounds of the concept map

<i>alpha</i>	Opacity as a number from 0-100	100
<i>backCol</i>	Color of interior wash to blot out background as RBG (-1=off)	-1
<i>col</i>	Color of line an RBG hex number	0x00ffff
<i>cx</i>	Center X position in pixels	
<i>cy</i>	Center Y position in pixels	
<i>hgt</i>	Height in pixels for ovals (omit for perfect circle)	0
<i>id</i>	ID of map*	
<i>preload</i>	Load this resource before screen is shown: true false	false
<i>shape</i>	Shape of the concept map: radial	radial
<i>stagger</i>	Amount to stagger odd and even spokes of map in pixels	0
<i>wid</i>	Width in pixels	0
<a href="#"><u>dot</u></a>	Dots(s) in the map*	
<a href="#"><u>frame</u></a>	Sets box of map*	
<a href="#"><u>line</u></a>	The relationship between the dots and determine how	
<a href="#"><u>linestyle</u></a>	The style of a line	
<a href="#"><u>textformat</u></a>	Sets default text attributes	
<a href="#"><u>legend</u></a>	Adds a legend	

**controlpanel**

view

Control panels provide a dialog box-like means for setting parameters of the screen. These parameters can be set using *items* such as check boxes, radio buttons, combo selection boxes, sliders, text input, and buttons to cause some sort of action. Items typically cause some action by adding an id of a **GLUE** element to call when they are changed or clicked.

<i>title</i>	Name of the control panel as it appears in header	
<i>closable</i>	Control panel has closing button: true false	<i>true</i>
<i>open</i>	Control panel is open on startup: true false	<i>true</i>
<a href="#">frame</a>	Frame of the project views*	
<a href="#">textformat</a>	Overrides view's text format for this panel*	
<a href="#">item</a>	Line(s) in the panel	

**dock**

view

A **dock** display presents a series of dots horizontally across the screen in a similar fashion to the application dock used in the Apple Macintosh OSX. The dots are typically icons or images that are fixed to a base bar. As the mouse hovers over one, it and its neighbors grow by the percentage spec'd by the *growth* tag. Setting the *growStyle* to "*single*" will cause only the dot being hovered on to grow while hovered over, as opposed to the default of "*taper*", which also grows the two dots on either side of the one being hovered over as well. The dots can have glue attached to cause some action when clicked.

The *frame* element sets the bounds of the dock, but since the dock grows and shrinks based on the number of *dots* within it, the dock will draw from the center of area defined by the frame's *left* and *wid* tags. The frame's *hgt* tag defines the height of the base bar. Setting the *hgt* to 0 will inhibit the drawing of the base bar.

<i>alpha</i>	Opacity as a number from 0-100	<i>100</i>
<i>growStyle</i>	What pictures grown when moused-over: growth taper	<i>growth</i>
<i>growth</i>	Percentage to grow when moused-over	<i>200</i>
<i>id</i>	ID of map*	
<i>preload</i>	Load this resource before screen is shown: true false	<i>false</i>
<a href="#">dot</a>	Pictures(s) in the dock*	
<a href="#">frame</a>	sets box of dock*	

An *docviewer* is resource very similar an *infobox* to that can hold HTML formatted text and a picture side-by-side in series of pages provided by a data source (i.e. and XML file or SQL query).

The data source can have 4 fields: *title*, *source*, *desc* and *caption*. The *title* field provides a title at the top and a way to select items from the data source. Items with the same title will appear as pages within the document viewer. The *source* field gives a url for a picture if desired, and *desc* is an html formatted text area. If a *caption* field is defined, it will appear underneath the picture.

If both *desc* and *source* are defined, they will appear side by side. If only one is defined, only that one will appear. The text and picture information is supplied by the `filldocviewer()` method, typically as the result of a query method. Text can contain the standard HTML formatting macros (see appendix).

<i>arrowpos</i>	Position of page numbers: bot mid top	<i>bot</i>
<i>border</i>	Border amount in pixels	<i>24</i>
<i>close</i>	Has close button: true false	<i>true</i>
<i>id</i>	ID of resource*	
<i>nopan</i>	Inhibit panning on vertical images: true false	<i>false</i>
<i>scroller</i>	Show scroller if text exceeds frame: true false	<i>true</i>
<i>selectable</i>	Text is selectable with mouse: true false	<i>true</i>

[page](#) Page for a document viewer

Containers such as paths place *dots* in particular places on the screen. A *dot* can be a graphic shape, such as a circle or square, an image, or an icon. Dots can have **GLUE** methods associated with them so actions can occur when you click on them. Dots will continue using properties set in previous dots to reduce unnecessary repeating of attributes. For example, if you set the style to *triu* (up-facing triangle), all dots that follow would be rendered as *triu* until re-specified.

<i>alpha</i>	Opacity as a number from 0-100	<i>100</i>
<i>col</i>	Color of interior as an RGB hex number	<i>0x00ffff</i>
<i>date</i>	Time dot becomes active any time format	
<i>end</i>	Time dot becomes inactive any time format (used in TimeView)	
<i>frameCol</i>	Color of frame as an RGB hex number	<i>0x000000</i>
<i>frameWid</i>	Width frame in pixels	<i>0</i>
<i>glue</i>	GLUE id to be called if clicked	
<i>hgt</i>	Height in pixels	<i>0</i>
<i>hover</i>	GLUE id to be called if hovered over	
<i>icol</i>	Re-color icon as an RGB hex number	
<i>id</i>	ID of path	
<i>lab</i>	Labels for dot	
<i>labelCol</i>	Color of labels as an RGB hex number	<i>0x000000</i>

<i>labelPos</i>	Position of labels relative to dot: bot center left right top	<i>bot</i>
<i>pct</i>	Percentage within the route	
<i>rot</i>	Angle of rotation in degrees	<i>0</i>
<i>style</i>	Shape of dot marker (icon:  .jpg .gif .swf .png: bar but cir rbar star triu trid tril trir	
<i>time</i>	Time dot becomes active from 0-1	
<i>wid</i>	Width in pixels	<i>0</i>
<i>x</i>	X position of dot	
<i>y</i>	Y position of dot	

## frame common

*frames* are used to define rectangular areas on the screen or size display objects.

<i>alpha</i>	Opacity of frame as a number from 0-100	<i>100</i>
<i>backCol</i>	Color of background as an RGB hex number	<i>0xffffffff</i>
<i>corner</i>	Radius of corner of frame for making rounded rectangles	<i>0</i>
<i>docking</i>	Docking mode: left right top bottom float center	<i>float</i>
<i>dropWid</i>	Width of drop shadow in pixels	<i>0</i>
<i>dropBlur</i>	Bluriness of drop shadow (0-9)	<i>0</i>
<i>dropCol</i>	Color of drop shadow as an RGB hex number	<i>0x000000</i>
<i>frameCol</i>	Color of frame as an RGB hex number	<i>0x000000</i>
<i>frameWid</i>	Width frame in pixels	<i>0</i>
<i>hgt</i>	Height of frame in pixels*	
<i>left</i>	Number of pixels from left of screen	
<i>top</i>	Number of pixels from top of screen	
<i>wid</i>	Width of frame in pixels*	

## glue view+

GLUE contains scripts that control relationships between resources. See chapter on glue for more information,

<i>from</i>	ID of resource to control	
<i>id</i>	ID name of GLUE script	
<i>init</i>	Run script at each refresh: true false	<i>false</i>
<i>once</i>	Run script at startup only once: true false	<i>false</i>
<i>script</i>	GLUE script code	

## graph resource view

VisualEyes supports a number of chart types that can be drawn, including line, area, stacked area, bar, stacked bar, scatter, bubble, picture, and pie charts.

<i>border</i>	Border amount in pixels	<i>24</i>
<i>close</i>	Has close button: true false	<i>true</i>
<i>highWid</i>	Highlight width in pixels	<i>0</i>
<i>id</i>	ID of resource*	
<i>legend</i>	Show legend: true false	<i>false</i>

<i>selectable</i>	Text is selectable with mouse: true false	<i>true</i>
<i>showValues</i>	Show values on chart (pie): none percent true	<i>none</i>
<i>subtitle</i>	Sub-title	
<i>stacked</i>	Are data sets stacked atop one another: true false	<i>false</i>
<i>style</i>	Style of chart: area bar line picbar pie scatter area*	<i>area</i>
<i>title</i>	Title displayed on chart	
<a href="#"><u>frame</u></a>	sets box of timeline*	
<a href="#"><u>marker</u></a>	Marker for a chart	
<a href="#"><u>textformat</u></a>	sets default text attributes	
<a href="#"><u>xaxis</u></a>	Defines X-Axis chart settings	
<a href="#"><u>yaxis</u></a>	Defines Y-Axis chart settings	

image resource	view
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image allow you to add JPEG, GIF and PNG images from any valid URL provided in the *src* tag. These images are added directly to the view's screen (top-left corner by default, but can be anywhere, as set by *top* and *left* tags), where they can be panned and zoomed. Any number of images can be layer. Setting the *depth* to "topMost" will draw the image independent of any panning or zooming. Setting *wid* to non-zero, sets that image's width to that size.

<i>depth</i>	If resource is bound to screen or freestanding: screen topMost <i>screen</i>	
<i>frameCol</i>	Color of frame as an RGB hex number	<i>0x000000</i>
<i>frameWid</i>	Width frame in pixels	<i>0</i>
<i>glue</i>	GLUE id to be called if clicked: glueID	
<i>gb</i>	Bottom georef (i.e 112: 40.0876554)	
<i>gl</i>	Left side georef (i.e 35: -78.00023954)	
<i>gr</i>	Right side georef (i.e 35: -78.00023954)	
<i>gt</i>	Top georef (i.e 112: 40.0876554)	
<i>hgt</i>	Height in pixels	<i>0</i>
<i>id</i>	ID of resource*	
<i>left</i>	Number of pixels from left of screen	<i>0</i>
<i>onclick</i>	Glue to call when resource is clicked: glueID	
<i>ondoubleclick</i>	Glue to call when resource is double-clicked: glueID	
<i>onhover</i>	Glue to call when resource is hovered over: glueID	
<i>preload</i>	Load this resource before screen is shown: true false	<i>true</i>
<i>src</i>	Source URL	
<i>title</i>	Title	
<i>top</i>	Number of pixels from top of screen	<i>0</i>
<i>type</i>	Type of resource - must be <i>image</i> *	

infobox resource	view
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Information boxes are popup boxes used to display textual information on demand. They are typically called by clicking on path and graph elements. InfoBoxes can contain a variant of HTML formatting and can be populated using search and replace variable that can be set using a database. The appendix contains detailed information on the text formatting options available.

<i>backImg</i>	Background image URL	
<i>border</i>	Border amount in pixels	24
<i>close</i>	Has close button: true false	true
<i>drag</i>	Can drag: true false	false
<i>scroller</i>	Show scroller if text exceeds frame: true false	true
<i>id</i>	ID of resource*	
<i>position</i>	Position of box if following mouse click: abs north south east west <i>abs</i>	
<i>selectable</i>	Text is selectable with mouse: true false	true
<i>subtitle</i>	Sub-title	
<i>tail</i>	Box tail if following mouse click: line none solid	none
<i>title</i>	Title	
[script]	Text for infobox*	
<a href="#">frame</a>	Frame of the box*	

item	controlpanel
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Items in a control panel.

<i>bold</i>	Whether or not text is bold: <i>true false</i>	<i>false</i>
<i>def</i>	Default value for item on startup: <i>true false</i>	<i>false</i>
<i>glue</i>	GLUE to be called by item (with optional data)	
<i>id</i>	ID name for control (not usually needed)	
<i>italic</i>	Whether or not text is italicized: <i>true false</i>	<i>false</i>
<i>linkto</i>	ID of another item that controls this item's visibility	
<i>title</i>	Title that appears by control item*	
<i>type</i>	Type of control (see list below)*	

- **buton** A round button that will trigger a glue method when clicked
- **buttonbar** A square button with the title written inside that will trigger a glue
- **checkbox** A checkbox that will trigger a glue method when clicked.
- **color** A color chip to choose a color from, or type the RGB values
- **combobox** A combo box to choose between several choices
- **half** Used to add a half-space vertically (leading) to the list
- **header** An arrow control to collapse or expand the items that follow
- **legend** Used to put a color choice when drawing legends
- **line** Draws a separator line
- **query** Adds a query line (if: something equals value)
- **radio** A radio button, of which only one is active in a contiguous group
- **search** A text input box with a search button bar attached
- **slider** A horizontal slider to set the value from 0-100
- **text** Displays a line of text

**labels** timeline

Defines the format for timeview-like labels under the *timeline*.

<i>lines</i>	Show lines to labels: true false	<i>true</i>
<i>offset</i>	Distance from time bar to labels in pixels	<i>8</i>
<i>pos</i>	Position of labels relative to the main bar: top bot	<i>bot</i>

**legend** cmap

Adds a legend

<i>lab</i>	Labels for legends
<i>style</i>	ID of linestyle type

**line** cmap

The lines define the relationship between the *dots* and determine how they will be placed if in a concept map.

<i>from</i>	ID of dot where line is drawn from*
<i>style</i>	ID of linestyle type*
<i>to</i>	ID of node where line is drawn to*

**lineStyle** cmap

<i>alpha</i>	Opacity as a number from 0-100	<i>100</i>
<i>col</i>	Color of line an RGB hex number	<i>0x00ffff</i>
<i>dir</i>	Direction of a line: float one two	<i>one</i>
<i>id</i>	ID of path*	
<i>lab</i>	Labels for line	
<i>letter</i>	Letter drawn midway through line in concept maps	
<i>wid</i>	Width of line in pixels	<i>0</i>

**logo** project

This adds a *logo* to display on the screen

<i>left</i>	Number of pixels from left of screen*
<i>source</i>	Filename of logo (including full http:// path and extension)*
<i>top</i>	Number of pixels from top of screen*

map resource		view
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Draw a vector map to the *view*.

<i>depth</i>	If resource is bound to screen or freestanding: screen topMost <i>screen</i>	
<i>frameCol</i>	Color of frame as an RGB hex number	0x000000
<i>frameWid</i>	Width frame in pixels	0
<i>glue</i>	GLUE id to be called if clicked: glueID	
<i>gb</i>	Bottom georef (i.e 112: 40.0876554)	
<i>gl</i>	Left side georef (i.e 35: -78.00023954)	
<i>gr</i>	Right side georef (i.e 35: -78.00023954)	
<i>gt</i>	Top georef (i.e 112: 40.0876554)	
<i>hgt</i>	Height in pixels	0
<i>id</i>	ID of resource*	
<i>left</i>	Number of pixels from left of screen	0
<i>onclick</i>	GLUE id to be called if clicked: glueID	
<i>ondoubleclick</i>	GLUE id to be called if double-clicked: glueID	
<i>onhover</i>	GLUE id to be called if hovered over: glueID	
<i>preload</i>	Load this resource before screen is shown: true false	true
<i>src</i>	Source URL*	
<i>type</i>	Type of resource - must be <i>map</i> *	

marker		graph
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<i>marker</i>	Marker for a chart.	
<i>col</i>	Color of marker an RGB hex number	0x0000ff
<i>datawid</i>	width of data (i.e. line or bar)	
<i>edgeCol</i>	Color of marker edge an RGB hex number, or -1 for none	-1
<i>name</i>	Label of marker	
<i>style</i>	Shape of marker (bar cir tri u d  r)	
<i>wid</i>	Width in pixels	10

movie resource		view
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Flash video formatted files (.FLV), MP3 audio files YouTube videos and SWF flash files. The *autoplay* tag which determines if the movie playing when it first appears. Omitting the *wid* tag will cause movie and player to size itself to match the native resolution on a Flash movie. Setting the *glue* to some glue object will cause that glue object to be called every *n* ms specified by *time*. *Start* and *end* specify the movies bounds.

<i>autoPlay</i>	Play movie/sound when loaded: true false	false
<i>autoRewind</i>	Rewind movie/sound when finished: true false	false
<i>close</i>	Has close button: true false	true
<i>end</i>	Ending time of movie (in ms)*	
<i>glue</i>	GLUE id to be called if clicked: glueID	
<i>id</i>	ID of resource*	

<i>src</i>	Source URL*	
<i>start</i>	Starting time of movie (in ms)	0
<i>timer</i>	Time in ms between calls to glue when playing	250
<i>type</i>	Must be set to "movie"	movie
<a href="#">frame</a>	Frame of the player*	

#### overview view

Overview navigation control inset to scroll zoomed screen by.

<i>boxCol</i>	Control box color	0xffff00
<i>def</i>	Show on start up: true false	true
<i>docking</i>	Docking location: botLeft topLeft botRight botRight topRight botLeft	
<i>wid</i>	Width of overview	100
<i>src</i>	URL of image (full path with http://)	

#### mysql resource view

Get data from mySQL database.

<i>host</i>	Name of mySQL host*	
<i>id</i>	ID of resource*	
<i>name</i>	Name of mySQL database*	
<i>password</i>	Encrypted password to authenticate*	
<i>preload</i>	Load this resource before screen is shown: true false	true
<i>src</i>	Source URL*	
<i>query</i>	Query to perform*	
<i>type</i>	Type of resource - must be <i>mysql</i> *	
<i>user</i>	Username to authenticate*	

#### page docviewer

**page** for a document viewer. The data source can have 4 fields: *title*, *source*, *desc* and *caption*. The *title* field provides a title at the top and a way to select items from the data source. Items with the same title will appear as pages within the document viewer. The *source* field gives a url for a picture if desired, and *desc* is an html formatted text area. If a *caption* field is defined, it will appear underneath the picture.

<i>caption</i>	Image caption
<i>desc</i>	Text for description page
<i>src</i>	Source URL for image
<i>title</i>	Page title

path	view
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**paths** place **dots** on the screen and can be connected by lines if desired. The width, color, and alpha can be specified. The position of the **dots** is set in pixels, relative to the base resource the **path** is atop.

<i>alpha</i>	Opacity as a number from 0-100	100
<i>col</i>	Color of line, as an RGB hex number	0x00ffff
<i>glue</i>	GLUE id to be called if head is clicked	
<i>headCol</i>	Color head as an RGB hex number	0x00ffff
<i>headEnd</i>	Leave head icon up at end of path: true false	false
<i>headRot</i>	Rotation angle of head icon in degrees	
<i>headSize</i>	Size of head icon in pixels	
<i>headStyle</i>	Image shown at head of path (icon:  .gif .jpg .png .swf)	
<i>id</i>	ID of path*	
<i>res</i>	ID of basemap (only if geo-referencing dot x/y's from lons/lat's)	
<i>showAllDots</i>	Show all dots, regardless of timing: true false	false
<i>tweenLines</i>	Animate line between dots based on timing: true false	false
<i>wid</i>	Width of line in pixels	0
<a href="#">dot</a>	Dots(s) in the path*	
<a href="#">frame</a>	Sets box of map*	
<a href="#">textformat</a>	Sets default text attributes	
<a href="#">pathway</a>	Collections of dots	
<a href="#">route</a>	Calls a pathway that contains dot to be draw within a time period	

pathway	path
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**pathways** are collections of dots that can be called by routes. The dots specify their time using the pct attribute as a number from 0-1 within the time specified by the **route**.

<i>id</i>	ID of pathway*
<a href="#">dot</a>	Dots(s) in the pathway*

pmap	view
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Picture maps are similar to concept maps, but the **dots** can be independently arranged on the screen. The **frame** specifies the overall bounds of the map

<i>alpha</i>	Opacity as a number from 0-100	100
<i>backImg</i>	Background image URL	
<i>id</i>	ID of map*	
<i>preload</i>	Load this resource before screen is shown: true false	false
<a href="#">dot</a>	Pictures(s) in the map*	
<a href="#">frame</a>	Frame of the map*	
<a href="#">textformat</a>	Overrides view's text format for this display	

**polygon** common

Used to define polygons used in maps and other drawings

<i>col</i>	Color of interior as an RGB hex number	<i>0x00ffff</i>
<i>edgeCol</i>	Color of edge as an RGB hex number	<i>0x000000</i>
<i>edgeWid</i>	Width of edge in pixels	<i>0</i>
<i>id</i>	ID of element	
<i>xy</i>	Coordinate data (x,y; ... x,y;)	

**polyline** common

Used to define poly-lines used in maps and other drawings

<i>col</i>	Color of interior as an RGB hex number	<i>0x00ffff</i>
<i>edgeCol</i>	Color of edge as an RGB hex number	<i>0x000000</i>
<i>edgeWid</i>	Width of edge in pixels	<i>0</i>
<i>id</i>	ID of element	
<i>xy</i>	Coordinate data (x,y; ... x,y;)	

**project**

The project is the top-most element of a VisualEyes and holds the various **views** to display.

<i>title</i>	Name of the project
<a href="#"><u>textformat</u></a>	Default text format
<a href="#"><u>frame</u></a>	Frame of the project views*
<a href="#"><u>tab</u></a>	Defines view tabs*
<a href="#"><u>logo</u></a>	Logo image for all views
<a href="#"><u>view</u></a>	Tabbed view(s)

**resource** view

Resources contain information to be used by the VisualEyes. This information is most often a table of data, but can be an interactive vector map, text, images, animation, movies, audio, charts, and graphs. The resource tag in the project file provides a way to identify sources and provide named access to the data they contain. This access is useful because once they have been identified; we can refer to them by name later on using lines of **GLUE** to easily create complex visualizations.

The following resource types are available:

<a href="#"><u>graph</u></a>	Graph or chart
<a href="#"><u>infobox</u></a>	Information box
<a href="#"><u>movie</u></a>	Movie
<a href="#"><u>timeview</u></a>	Timeview display
<a href="#"><u>widget</u></a>	Univariate graph widget

<a href="#">image</a>	Image
<a href="#">map</a>	Vector map or drawing
<a href="#">mysql</a>	Get data from mySQL database
<a href="#">xml</a>	XML/CSV formatted data

<b>route</b>	<b>path</b>
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Calls a *pathway* that contains *dots* to be draw within a time period.

<i>col</i>	Color of line, as an RGB hex number (over-rides path col)
<i>end</i>	Time of the route's end in any time format"
<i>glue</i>	GLUE id to be called when the head icon (if any) is clicked
<i>start</i>	Time of the route's start in any time format*
<i>pathway</i>	ID of pathway containing the dots to draw*

<b>segment</b>	<b>timebar</b>
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*Segments* are divisions of the *timeline* in a *timebar* element

<i>end</i>	Time of the segments end in any time format*
<i>glue</i>	GLUE id to be called when segment is clicked
<i>start</i>	Time of the segments start in any time format*
<i>title</i>	Text to be displayed in the segment*

<b>shapedata</b>	<b>common</b>
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Used to define shapes used in maps and other drawings.

<i>col</i>	Color of interior as an RGB hex number	<i>0x00ffff</i>
<i>edgeCol</i>	Color of edge as an RGB hex number	<i>0x000000</i>
<i>edgeWid</i>	Width of edge in pixels	<i>0</i>
<i>xOff</i>	Offset from left in pixels	<i>0</i>
<i>yOff</i>	Offset from top in pixels	<i>0</i>

<b>shelf resource</b>	<b>view</b>
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A *shelf* is a display that shows picture in a row and is similar *timeview* element. It can have any number of *bands*, *each one having it's own scale*. All the *bands* are linked, so scrolling one, scrolls the others. A double click is required to call the **GLUE**, if specified.

<i>alpha</i>	Opacity of band background as a number from 0-100	<i>100</i>
<i>backImg</i>	Background image URL for full frame	
<i>border</i>	Border amount in pixels	<i>8</i>
<i>capCol</i>	Color of 3D cap as an RGB hex number	<i>0x999999</i>
<i>close</i>	Has close button: true/false	<i>false</i>
<i>offCol</i>	Color of dot's frame if inactive	<i>0x000000</i>
<i>onCol</i>	Color of dot's frame if active	<i>-1</i>
<i>drag</i>	Can drag timeview box: true/false	<i>true</i>

<i>fullCap</i>	Full 3D cap: true false	<i>true</i>
<i>id</i>	ID of resource	
<i>rot</i>	Angle of 3D rotation (in degrees, 0-45)	<i>0</i>
<i>subtitle</i>	Sub-title	
<i>timeline</i>	Sync to timeline in view: true false	<i>false</i>
<i>title</i>	Title	
<a href="#"><u>band</u></a>	Band(s) within a TimeView	
<a href="#"><u>frame</u></a>	Sets box of timeview*	
<a href="#"><u>textformat</u></a>	Overrides default text attributes	

<b>tab</b>	<b>project</b>
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Size and color of a *view*'s tabs.

<i>curView</i>	The active tab on start up	<i>1</i>
<i>hgt</i>	Height of tab	<i>16</i>
<i>offCol</i>	Color of tab when inactive	<i>0xcccccc</i>
<i>offTextCol</i>	Color of tab text when active	<i>0x000000</i>
<i>onCol</i>	Color of tab when active	<i>0x000000</i>
<i>onTextCol</i>	Color of tab text when active	<i>0xffffffff</i>
<i>wid</i>	Width of tab	<i>100</i>

<b>table resource</b>	<b>view</b>
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This will allow you blank *table resource* to the view. That table can have any number of fields. You will typically fill the table by using a query() **GLUE** method.

<i>days</i>	Data column(s) than need date-to-day conversion
<i>id</i>	ID of resource*
<i>src</i>	Names of the fields, separated by  s (i.e. field1 field2 field3)*
<i>type</i>	Type of resource - must be <i>xml</i> *

<b>textformat</b>	<b>common</b>
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The various options that a piece of text can have. Note that a *textformat* automatically inherits the attributes of any *textformats* before it, so not all attributes need to be specified, only the ones that have changed.

<i>alpha</i>	Opacity of text as a number from 0-100	<i>100</i>
<i>align</i>	Alignment of text to the screen: left right center	<i>left</i>
<i>bold</i>	Whether or not text is bold: true false	<i>false</i>
<i>col</i>	Color of text as an RBG hex number	<i>0x000000</i>
<i>font</i>	Font face of text: _sans _serif _fixed	<i>_serif</i>
<i>italic</i>	Whether or not text is italicized: true false	<i>false</i>
<i>leading</i>	Amount of pixels between lines of text in pixels (0 = leading of	
<i>2+size)</i>	<i>0</i>	
<i>size</i>	Height of text in pixels	<i>12</i>
<i>underline</i>	Whether or not text is underlined: true false	<i>false</i>

**timebar**

## timeline

The *timebar* element will add a bar to a timeline that will allow the user to set the timeline will show by clicking segments defined by added labels.

<i>all</i>	Add a show all segments button: true false	<i>true</i>
<i>equal</i>	Make all segments equal widths: true false	<i>false</i>
<i>glue</i>	GLUE id to be called when all button is clicked	
<i>hgt</i>	Distance of segments from main timeline	<i>6</i>
<i>offCol</i>	Color of inactive segment as an RBG hex number	<i>0x999999</i>
<i>offTextCol</i>	Color of inactive segment text as an RBG hex number	<i>0x444444</i>
<i>onCol</i>	Color of active segment as an RBG hex number	<i>0x999999</i>
<i>onTextCol</i>	Color of active segment text as an RBG hex number	<i>0xffffff</i>

[segment](#) Segments are divisions of the timeline in a timebar element

**timeline**

## view

The *timeline* will add a graphical timeline that will allow the user to set a time period along a horizontal timeline using a slider bar. A play button can be added to the timeline to animate the setting of the slider bar over time

<i>dateFormat</i>	date format: yr mo/yr dy/mo/yr mo/dy/yr mo,dy,yr	<i>yr</i>
<i>min</i>	Starting time of the timeline in any time format*	
<i>majorTick</i>	Major tick make length in pixels	<i>0</i>
<i>minmax</i>	Show values on ends of timeline: true false	<i>true</i>
<i>max</i>	Ending time of the timeline in any time format*	
<i>minorTick</i>	Minor tick make length in pixels	<i>0</i>
<i>numTicks</i>	Number of major ticks	<i>4</i>
<i>play</i>	Show play button: true false	<i>true</i>
<i>showMinorValues</i>	Show values with major tick marks: true false	<i>false</i>
<i>showValues</i>	Show values with major tick marks: true false	<i>false</i>
<i>sliderDatePos</i>	Show date on slider, or hide it: bot hidden none top	<i>top</i>
<i>speed</i>	Speed of playback from 1-100	<i>50</i>
<i>start</i>	Initial time of the timeline in any time format on startup	
<i>tickPos</i>	Position of ticks relative to the main bar: top mid bot	<i>bot</i>

[frame](#) sets box of timeline\*  
[labels](#) sets the labels under the timeline  
[textformat](#) sets default text attributes  
[timebar](#) sets punctuated timeline

**timeview resource**

## view

A *timeview* is a display that shows events that are timed to occur at particular dates. It is similar to a traditional graphic timeline like MIT's Simile. A *timeview* item can have any number of bands, *each one having it's own time scale*, allowing you to show events that occur in vastly different time scales, such as decades, years and days. All the bands are linked, so scrolling one, scrolls the others.

Setting the *rot* attribute to something other than "0" will cause the timeline's bands to be wrapped around a cylinder in 3D. The cap of the cylinder can be a full oval or cut off at the top with the *capFull* attribute. A double click is required to call the GLUE, if specified.

<i>alpha</i>	Opacity of band background as a number from 0-100	100
<i>backImg</i>	Background image URL for full frame	
<i>border</i>	Border amount in pixels	8
<i>capCol</i>	Color of 3D cap as an RGB hex number	0x999999
<i>close</i>	Has close button: true false	false
<i>dateCol</i>	Color of central date pointer as an RGB hex number	0x000000
<i>dateSize</i>	Size of central date pointer	0
<i>drag</i>	Can drag timeview box: true false	true
<i>fullCap</i>	Full 3D cap: true false	true
<i>id</i>	ID of resource	
<i>min</i>	Starting time of the timeview in any time format*	
<i>max</i>	Ending time of the timeview in any time format*	
<i>rot</i>	Angle of 3D rotation (in degrees, 0-45)	0
<i>subtitle</i>	Sub-title	
<i>timeline</i>	Sync to timeline in view: true false	false
<i>title</i>	Title	
<a href="#"><u>band</u></a>	Band(s) within a TimeView	
<a href="#"><u>frame</u></a>	Sets box of timeview*	
<a href="#"><u>textformat</u></a>	Overrides default text attributes	

<b>view</b>	<b>project</b>
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Each tab in the *project* contains a *view*. The *view* contains elements that are displayed on the *view*'s screen. Resources such as maps, images and data are loaded for display. The scope of any *view* is itself, meaning each *view* is "an island unto itself."

<i>id</i>	ID of the tab	
<i>pan</i>	Allow panning of screen: true false	true
<i>title</i>	Name of the tab*	
<i>visible</i>	Sets visibility: on off	on
<a href="#"><u>cmap</u></a>	Concept maps(s)	
<a href="#"><u>controlpanel</u></a>	Control panel(s)	
<a href="#"><u>dock</u></a>	Dock display	
<a href="#"><u>docviewer</u></a>	Add document viewer(s)	
<a href="#"><u>overview</u></a>	Overview navigation control	
<a href="#"><u>pmap</u></a>	Picture Maps(s) for this view	
<a href="#"><u>resource</u></a>	Resource(s)	
<a href="#"><u>textformat</u></a>	Overrides project text format for this view	
<a href="#"><u>timeline</u></a>	Timeline	
<a href="#"><u>zoomcontrol</u></a>	Zoom control for this view	

**widget resource**

view

Widgets are a type of *graph* that graphically displays a single continuous value on the screen, such as a dial, clock, thermometer, etc. The range of widgets available will grow with time, but they plot the *val* attribute from *min* to *max*.

The data is plotted in the color *col*. The title is displayed below the widget except for the dial, where it's in the dial. The value is displayed to 2 decimal places if it is less than 1, or otherwise whole numbers. The size of round widgets like dials look at the *wid* attribute, where things like thermometer use the *hgt* attribute as well.

<i>dataCol</i>	Color of marker as an RBG hex number	<i>0x000000</i>
<i>hgt</i>	Height in pixels (not for mag.)	<i>0</i>
<i>id</i>	ID of resource*	
<i>left</i>	Number of pixels from left of screen (not for mag.)	<i>0</i>
<i>max</i>	Maximum data value	<i>100</i>
<i>min</i>	Minimum data value	<i>0</i>
<i>src</i>	Source URL	
<i>style</i>	Style of chart: clock crop dial magnifier number thermometer	<i>dial</i>
<i>title</i>	Title of widget to display	
<i>top</i>	Number of pixels from top of screen (not for mag.)	<i>0</i>
<i>val</i>	Initial value to display	<i>50</i>
<i>wid</i>	Width in pixels (not for mag.)	<i>0</i>

**xaxis**

graph

Defines X-Axis chart settings.

<i>autoScale</i>	Scale x axis max automatically (scatter charts only): true false	<i>true</i>
<i>col</i>	Color of line as RBG hex number	<i>0x0000ff</i>
<i>grid</i>	Show grid lines: true false	<i>false</i>
<i>lab</i>	Labels for data elements	
<i>majorTick</i>	Length of major tick mark in pixels	<i>0</i>
<i>max</i>	Maximum data value	
<i>min</i>	Minimum data value	<i>0</i>
<i>minorTick</i>	Length of minor tick mark in pixels	<i>0</i>
<i>mod</i>	Number to round values by	<i>1</i>
<i>title</i>	Title	
<i>showValues</i>	Show numeric values on axis: true false	<i>true</i>
<i>valueCol</i>	Color of values as RBG hex number	<i>0x0000ff</i>
<i>valuePrefix</i>	Prefix for value labels	
<i>wid</i>	Length of axis line in pixels	<i>0</i>

[textformat](#) Overrides text format for this axis

**xml resource**

view

This will allow you to added an XML or CSV formatted data file. That file can have any number of fields and rows. The project tool has a converter that takes tab-delimited spreadsheet files and formats it automatically to XML. The actual format is listed in the appendix. The data is accessed by its field's name (i.e.

myData.censusAge). You can load a CSV (Comma delimited) data file as well, but this will add 2-5 seconds to the load time when the project is run.

<i>days</i>	Data column(s) than need date-to-day conversion	
<i>id</i>	ID of resource*	
<i>preload</i>	Load this resource before screen is shown: true false	<i>true</i>
<i>src</i>	Source URL*	
<i>type</i>	Type of resource - must be <i>xml</i> *	

## **yaxis** graph

Defines Y-Axis chart settings.

<i>autoScale</i>	Scale y axis maximum automatically: true false	<i>true</i>
<i>col</i>	Color of line as RGB hex number	<i>0x0000ff</i>
<i>grid</i>	Show grid lines: true false	<i>false</i>
<i>majorTick</i>	Length of major tick mark in pixels	<i>0</i>
<i>max</i>	Maximum data value	
<i>min</i>	Minimum data value	<i>0</i>
<i>minorTick</i>	Length of minor tick mark in pixels	<i>0</i>
<i>mod</i>	Number to round values by	<i>1</i>
<i>pos</i>	Axis position: left right	<i>left</i>
<i>showValues</i>	Show numeric values on axis: true false	<i>true</i>
<i>title</i>	Title	
<i>valueCol</i>	Color of values as RGB hex number	<i>0x0000ff</i>
<i>valuePrefix</i>	Prefix for value labels	
<i>wid</i>	Length of axis line in pixels	<i>0</i>

[textformat](#) Overrides text format for this axis

## **zoomcontrol** view

Zoom control for this *view*.

<i>def</i>	Starting value of zoom control ( <i>0-10 times</i> )	<i>0</i>
<i>dock</i>	Docking to overview control: true false	<i>false</i>
<i>left</i>	Horizontal position of zoom control ( <i>in pixels</i> )*	
<i>magnifier</i>	Show magnifier icon: true false	<i>false</i>
<i>max</i>	Maximum zoom allowed ( <i>1-10 times</i> )	<i>3</i>
<i>top</i>	Vertical position of zoom control ( <i>in pixels</i> )*	