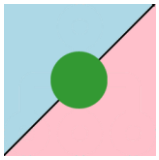
SVG Family-Tree Generator (v6.0.0) — User Guide



Tony Proctor, 24 Mar 2021

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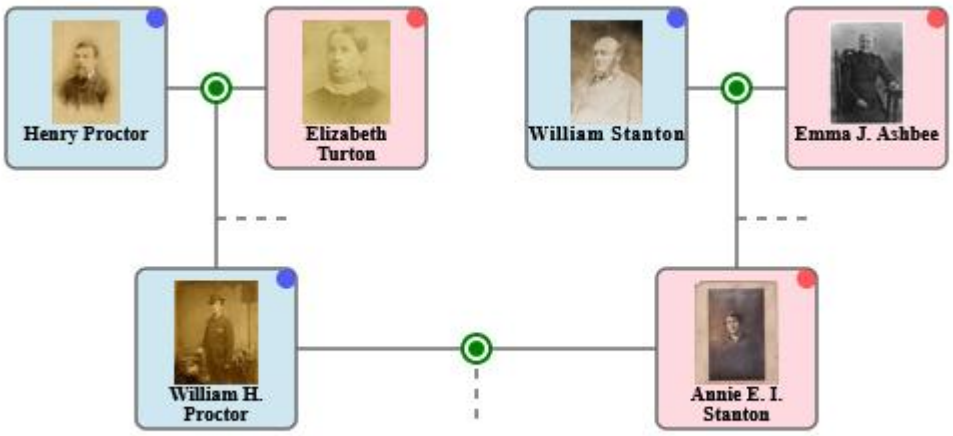
1 Introduction

This utility (hereinafter called SVG-FTG) generates interactive family trees that may be viewed in a browser such as Firefox, Chrome, or Microsoft Edge. The trees are built using a combination of HTML, SVG, CSS, and JavaScript technologies, and may include clickable actions on the person-boxes and family-circles.

More specifically, it allows you to layout a family tree graphically, using a mouse, and enter details including biographical ones, images, and documents. At any point, you can ask SVG-FTG to generate an enhanced version that you can display in your browser. You can publish that version on a web site, embed it in a blog-post, or simply email it to friends and family to view on their local computers. There is no subscription required, and no extra software required for anyone to view it. Those trees can also be interactive and incorporate a configurable number of applications that allow them to do useful things.



Each tree is defined by a simple text file (usually named Tree*.txt) rather than taking a definition directly from a database or a GEDCOM file. This is because it offers control over which persons and relationships are to be shown, and how they are to be laid out. It may even be used to depict a fictitious or deliberately inaccurate tree, as in Boots Made For Walking.

The initial goal of SVG-FTG was clean and crisp visualisation to accompany narrative reports (even at large magnification) rather than lots of swirls and scrolls, or gratuitous colours. Scalable Vector Graphics (SVG) is ideal for this as it allows trees to be created that would scale indefinitely rather than going all fuzzy at high magnification. This goal was later supplemented by the addition of interactive applications and services to family trees, such as 'Timeline Reports' or even custom ones (see Applications and Services).

This user guide is designed for end users of SVG-FTG, but the level of detail may be off-putting to some readers. The following Quick Start section is designed to get you going as quickly as possible.

After that, it depends on your ultimate goal as to which sections will be most useful. For instance, the section on Place Management will be useful if you plan to include thumbnail images, and you want to better understand how SVG-FTG maintains one local set for viewing in the Tree Designer and a duplicate set for viewing on the Internet. The last section on Tree Definition File Syntax is quite low-level and uninteresting to most users, but the section on Header Records discusses some of the configuration options that are available in the Edit-Settings and the Advanced-Settings forms.

The separate 'program notes' document looks under the hood and is aimed more at application developers, or "power users" who don't mind seeing a bit of code.

SVG-FTG is designed to run under Windows, but has been run on other platforms using virtual machines and WINE-based compatibility layers. It has also been run using multiple monitors, and in different locales.

2 Quick Start

In essence, SVG-FTG simply takes a text file (the “tree definition file”) and generates either an HTML file or an SVG file that will display the final tree within Web browsers. These files can be used from either a website, your blog, or even your local computer.

In order to get you going quickly, try the following steps:

- On the menus of the main form, select the ‘File->New Tree’ option to create a new tree definition file of your own choosing. Alternatively, select 'File->Open Tree' (or the 'Browse' button) and choose one of the samples that were part of the installation kit.
- Select the ‘Design’ button. This will present a grid of boxes where you can create people and relationships, or simple drag the boxes around to get the layout right. Right-click on any empty box to find the 'Create Person' option, and any populated box to find the 'Edit Person' option.
- At any point, you can return to the main form to select ‘Process’, and then ‘View’, in order to see your tree as it would appear in your default browser.

In the Tree Designer, there are options on the main menu, and on right-click menus for both the blue/pink person-boxes and the green family-circles. The person-boxes can be moved around, and their properties (such as caption, image, and biographical notes) can be modified through the right-click options. Lines can be drawn between two person-boxes to define a "family" (within the context of SVG-FTG, a "family" represents a marriage and/or children, and so is very flexible), or from a family-circle to a person-box to define a child relationship.

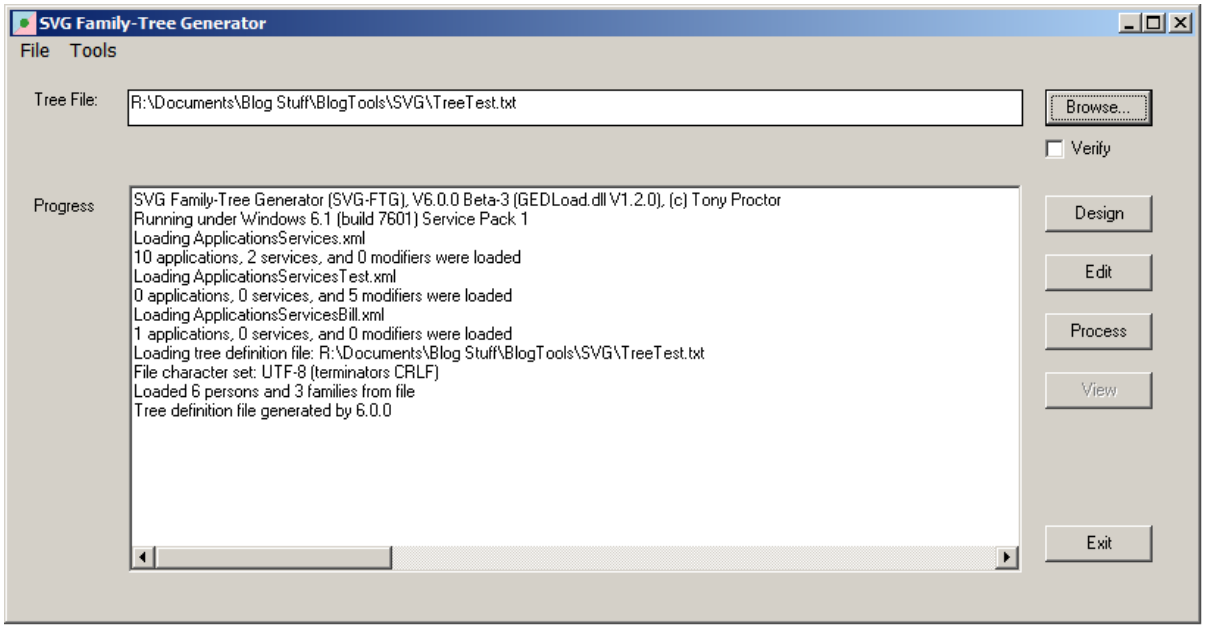
The following is a summary of the mouse operations supported in the Tree Designer:

- Click-and-drag a person-box from one grid position to another. Any relationship links will follow it.
- Shift+Click-and-drag from one person to another to create a family (spousal) relationship between them. A form will ask for details (NB: don't release Shift until mouse released).
- Click-and-drag from a family-circle to another person to creates a child relationship.

- Click-and-drag the bottom half of a child link to a new person (can move it when the link glows red). This allows you to switch the relationship to another child.
- Click-and-drag the top half of a child link to a new family-circle (can move it when the link glows red). This allows you to switch the relationship of a child to different family-circle.

3 Main Form

On launching SVG-FTG, the main form is displayed. This consists of a filename field, a box where progress messages are recorded, and a number of buttons:



- *Browse*: Browses for an existing tree definition file. If one is selected then it displays its name, and loads its contents into memory. If the 'Verify' checkbox is first ticked then each record is displayed as it is processed and may be used to identify the cause of any error messages. The 'File->Open Tree' main-menu option performs the same action as the 'Browse' button. The 'File->New Tree' main-menu option allows you to create a new, empty tree definition file.

- *Design*: Launches the graphical Tree Designer on the currently loaded tree definition file. Changes are only applied to the loaded, in-memory tree until you exit SVG_FTG normally. See Closing and Saving.

- *Edit*: Edits the tree definition file directly using the Notepad text editor, and then reloads its contents into memory. This is only for people with a good knowledge of the format used in the tree definition files (see Tree Definition File Syntax for details). The default editor may be changed by setting its name in the SVG_EDITOR environment variable.

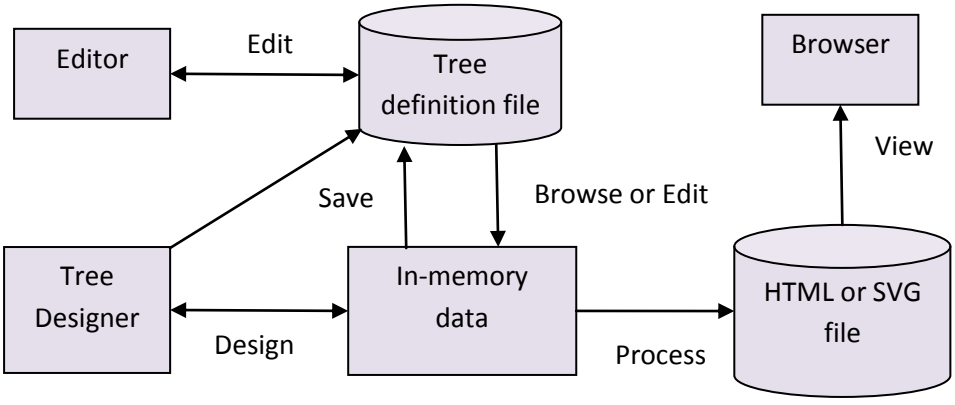
- *Process* : Processes the currently loaded tree definition file to generate an HTML/SVG output file, as appropriate to your Settings. If the SVGFile setting is True then it will generate a *.svg output file, otherwise a *.html output file. In both cases, the output file is created with the

same name and directory path as the current tree definition file — only the file extension is different.

- *View*: Views the latest HTML/SVG output file in your default browser.
- *Exit*: Saves any changes back to the tree definition file, and then leaves SVG-FTG. The 'File->Exit' menu option performs the same action.

Selected buttons may be disabled depending on the current stage of the processing of the tree definition file.

SVG-FTG loads a selected tree definition file into memory, performing some error-checking as it goes. The 'Process' button then works directly from the memory copy. The Tree Designer also modifies the memory copy but gives the option to persist any changes back to the tree definition file. Or, for the more process-orientated reader:



The main menu has a number of options, some of which have not yet been explained:

The 'File->New Tree' menu option will create a completely empty tree in a new tree definition file.

The 'File->Open Tree' menu option performs exactly the same operation as the 'Browse' button on this main form.

The 'File->Load GEDCOM File' menu option will allow you to load a GEDCOM file for later use. See GEDCOM Browser.

The 'File->Export As GEDCOM File' menu option allows the currently loaded SVG-FTG tree to be exported in GEDCOM 5.5.1 format. It should be noted that the tree definition format, as used by SVG-FTG, and GEDCOM serve quite distinct purposes, and so totally lossless round-trips (e.g. importing a GEDCOM file and re-exporting it) cannot be guaranteed. As well as exporting all the person and family details (including notes) that you have loaded in SVG-FTG, this operation also

saves your place-key mappings, your tree layout (i.e. person-box coordinates), and any local settings on your persons and families. It only saves a copy of the remote (URL) version of any image references that employ place-keys. It does not save any viewpoints or any details from the 'Program data' tabs. See also GEDCOM Browser.

The 'File->Save Progress Messages' menu option provides a convenient way of saving some or all of the messages from the progress window into a text file. This might be useful for a support request, or for me to assist you in fixing data errors. If any text is selected in the progress window when this option is actioned then the associated (whole) lines are saved, otherwise all lines are saved. At any time, the content of the progress window can be cleared by selected the text and using the delete key.

The 'File->Exit' option performs exactly the same operation of the 'Exit' button.

The 'Tools->Manage Viewpoints' option allows you to add, delete, or modify viewpoints, and to allocate persons and their families to them. See Viewpoints.

3.1 Closing and Saving

When a tree definition file is loaded into memory, the Tree Designer, Viewpoint configuration, and the 'Process' button all work from that in-memory copy. So, for instance, the Tree Designer will affect the in-memory data immediately, and if you close it and re-open it then you will continue from where you left off. At some point, though, you will probably want to save your changes back to the tree definition file, or even to a different one. The following choices are available.

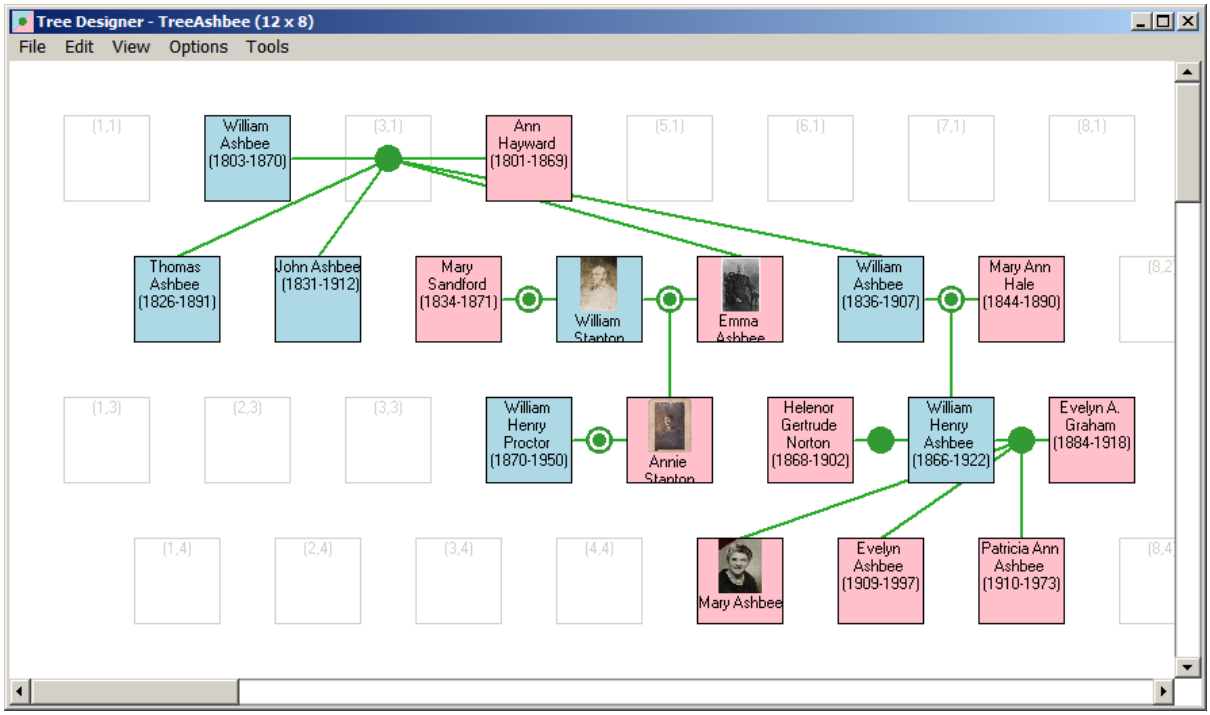
- Main form
    - *'Exit' button*: Saves any changes back to the current tree definition file and closes SVG-FTG.
    - *'File->Exit' menu option*: Save as the 'Exit' button.
    - *Form's close box (top-right corner)*: If there are unsaved changes then you will be asked to confirm whether you want to discard them and close SVG-FTG.
    - *'File->Save' menu option*: Forces a save back to the current tree definition file.
    - *'File->Save As' menu option*: Forces a save to a different tree definition file
- Tree Designer
    - *'File->Close' menu option*: Simply closes the Tree Designer. All changes are still persisted in memory.
    - *Tree Designer's close box (top-right corner)*: Same as the 'File->Close' option.
    - *'File->Save' menu option*: Forces a save back to the current tree definition file.

4 Tree Designer

The ‘Design’ button takes you into a graphical designer for positioning the person-boxes and for defining relationships via links between them. When defining relationships, the Tree Designer merely links the corresponding boxes and circles – it does not try to reproduce the exact tree lines that will eventually be shown in your browser.

The Tree Designer will show the in-memory persons and relationships in a window sized for the configured number of grid rectangles and the available screen space. Scrollbars will be visible if the window size is too small to show everything. The window caption shows the tree title and the current grid size as columns x rows.

If you exit the Tree Designer using the ‘File->Close' menu option then it simply closes the Tree Designer, just as though you had used the close box in the top-right corner. Changes are normally saved when you leave SVF-FTG itself, but they can be forced at any time using the 'File->Save' menu option . See Closing and Saving.



Persons can be moved between the grid positions by clicking and dragging them. If more than one person is moved to the same box then it is coloured red to emphasise the potential ambiguity — the box caption will reflect the topmost one in the stack.

NB: If moving a person-box to an empty location fails then it may be because there is a family-circle overlaid on it. If you drop the person-box near the edge of the empty grid box, rather than directly over the family-circle, then it should avoid the ambiguity.

A right-click on a box will yield the following menu options:

- *'Create Person'*: Create a new person at the current box position.

- *'Edit Person'*: Edit the details associated with the person in the current box. If there are multiple persons then the topmost one is selected. If there are none then the operation is disabled.

- *'Delete Person', or 'Persons' (plural)*: Delete the current person, or multiple persons if several have been selected with Ctrl+Click operations (see below). If there are multiple persons in any given box then the topmost one is the one deleted. If there are none in the box then the operation is disabled. If a person is a spouse in a family relationship then that must be dissolved first (see right-click menu on family-circles). Deleted persons will be unlinked from any associated parent family.

- *'Copy Person', or 'Persons' (plural)*: Copies the details of the current person to be pasted elsewhere. If multiple persons have been selected — by using Ctrl+Click operations — then the details of each person will be saved. See Copy and Paste.

- *'Paste Person', or 'Persons' (plural), or 'Family'*: Pastes the details of the last copy operation, if any. The copy could have been performed in the current session or in a separate invocation of SVG-FTG. If key names are already in use then the existing details are not overwritten. See Copy and Paste.

- *'Paste New Person', or 'Persons', or 'Family'*: As per the previous menu option, except that if a key is already in use then the loaded one is modified to avoid it. See Copy and Paste.

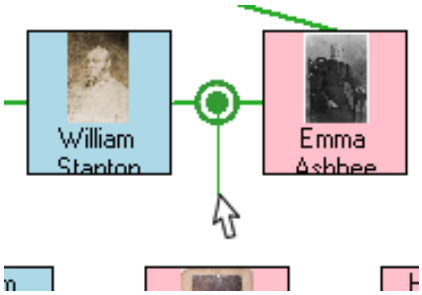
- *'Include Person', or 'Persons' (plural), or 'Family'*: Includes one or more persons, or a family, into the current viewpoint at the current grid location. The actual content will be dictated by a previous 'Exclude...' operation or a 'Copy...' operation within the Viewpoint Manager. See Copy and Paste.

- *'Exclude Person', or 'Persons' (plural)*: Excludes one or more persons from the current viewpoint. The persons are saved to the Windows clipboard to that they may be included into a different viewpoint. As with the 'Delete...' operation, described above, a person who is linked to a spouse in the current viewpoint cannot be excluded, although their details are still added to the clipboard. See Copy and Paste.

- *'Unlink Child'*: Unlink the current person from any associated family. If there are multiple persons then the topmost one is selected. If there are none then the operation is disabled.

A child-link can be grabbed at either end — the person-box end or the family-circle end — and dragged elsewhere. When the mouse gets close to a line then its colour is changed to red to indicate that you can select it for click-and-drag. If you move the family-circle end to a new family-circle then you will have moved that person from one family relationship to another. If you move the person-box end to a new (populated) person-box then you will have replaced a child in the current family relationship with a different child.

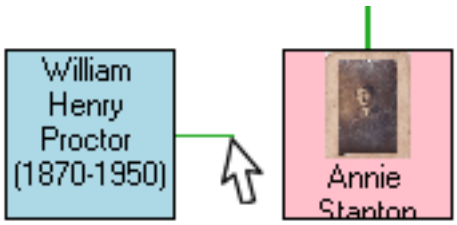
If you click on a family-circle then it allows you to drag a new child-link from that family-circle to a populated person-box. If the destination person is already associated with a family then the operation will fail.



A right-click on a family-circle will yield the following menu options:

- *'Edit Family'*: Edit details of the current family relationship.
- *'Delete Family'*: Deletes the family relationship between the associated spouses and their direct children. The spouses and children are not deleted.
- *'Copy Family'*: Copies the details of the current family. This includes details of the two spouses and their immediate children. See Copy and Paste.
- *'Exclude Family'*: Excludes the family relationship between the associated spouses and their direct children from the current viewpoint. The spouses and children are not excluded. See Copy and Paste.
- *'Show/Hide Child Links'*: This will temporarily hide the child-links for the family, and the family-circle will be enclosed in a tiny square box to indicate this fact. A later application of the menu option will toggle their visibility back again. The operation can be helpful where you have many links displayed, and you need to simplify the view.
- *'Toggle Child Selection'*: Complements the selection status of all the person-boxes containing the direct children of the current family. This is the equivalent of doing a Ctrl+Click operation on each child individually (see below).

If you click on a populated person-box with the Shift key depressed, you can drag a link and circle between there and another populated person-box in order to create a new family relationship. NB: The Shift key must remain depressed until the mouse click is released. When completed, this will have created a new green family-circle bridging between those two persons.



As with most browsers, the keystrokes Ctrl/+ and Ctrl/- may be used to incrementally zoom-in or zoom-out when designing your tree layout. A number of related menu options are also described below.

The available main-menu options in the Tree Designer are as follows:

- *'File->Switch Viewpoint'*: Presents a menu of viewpoints (if viewpoints are enabled) and an entry representing the full tree. Selecting one of them will cause the Tree Designer to load the respective persons and families.

- *'File->Import GEDCOM'*: Allows you to copy-and-paste persons or families (and their details) from a GEDCOM file into the Tree Designer. See GEDCOM Browser.

- *'File->Localise Images'*: This option will help you to create local mirror copies of images held somewhere on the Internet. It visits every person-box with a thumbnail image and extracts the associated place-key. If that key is associated with both a remote (URL) local and a local (computer) location, but no local copy of the image yet exists, then a copy is downloaded to that location for you. This allows you to see the same images in the Tree Designer. Note that one of the sample files references such images and would be a good test case to try this out (see "Installation:Sample Files").

- *'File->Save'*: Forces a save back to the current tree definition file.

- *'File->Close'*: Simply closes the Tree Designer (the same as the form's close box in its top-right corner), leaving changes in memory. See Closing and Saving.

- *'Edit->Select All'*: Sets the multi-selection status of the topmost person in every person-box in the current tree or viewpoint. This option can also be accessed using the Ctrl+A keystroke.

- *'Edit->Find Person'*: Will help you to find a specific person, either by their caption name or the by their key name, and highlight it using the multi-selection feature described below. The search form accepts partial names, and the list of possibilities is updated as you type. For instance, you could just enter the person's initials. If the person is currently out of view then it is scrolled into view. This option can also be accessed using the Ctrl+F keystroke. See Find Person for more information.

- *'Edit->Duplicate Full Tree'*: This option is only enabled for viewpoints. It allows the full tree to be duplicated as a viewpoint. See Viewpoints for more details.

- *'View->Zoom Large'*: Zoom in (magnify) to a convenient level, which is not the maximum. See Ctrl/+ keystroke.

- *'View->Zoom Reset'*: Reset the zoom level to its default value.

- *'View->Zoom Small'*: Zoom out (shrink) to a convenient level, which is not the minimum. See Ctrl/- keystroke

- *'View->Refresh'*: Reload the Tree Designer and re-draw the grid and relationships. This may be necessary if SVG-FTG appears to have got confused.

- *'View->Auto Layout'*: Attempts to layout the person-boxes algorithmically. This may be useful after importing a tree from another product. Note that the grid size will be automatically increased, if necessary. See also the 'Revert Layout' option.

- *'View->Revert Layout'*: Reverts the layout, and the grid size, to that just prior to the last 'Auto Layout' operation.

- *'View->Show All Child Links'*: Ensures all child-links are visible. If any were temporarily hidden then they are made visible again.

- *'View->Hide All Child Links'*: Hides all currently visible child-links, and changes the corresponding family-circles to indicate their status by enclosing it in a tiny square box.

- *'Options->Toggle Step'*: Toggle the setting of Stepped=boolean, thus changing whether alternate rows are offset from each other. The Tree Designer caption is changed accordingly.

- *'Options->Toggle Orientation'*: Toggle the orientation between horizontal and vertical. The designer caption is changed accordingly.

- *'Options->Edit Settings'*: Modifies various tree settings and parameters. The Tree Designer caption is updated if necessary. See Settings.

- *'Options->Advanced Settings'*: Modified various advanced tree settings, such as ones related to application development and event handlers. It also allows a backdrop to be defined for the final view in your browser.

- *'Tools->Manage Places'*: Allows you to add, delete, or modify the place-key mappings for local and remote locations. See Place Management.

- *'Tools->Manage Viewpoints'*: Allows you to add, delete, or modify viewpoints, and to allocate persons and their families to them. See Viewpoints.

The Tree Designer supports 'multiple selection': performing a Ctrl+Click on a populated person-box will change its border to a thickened one, and performing the operation again on the same person-box will toggle the selection status. Person-boxes selected in this way may be copied or deleted as a group (see above), or moved as a group. When moving a group, the Tree Designer first checks that the new locations will all be within the current bounds of the grid. If a red box (holding multiple persons) is selected then only the visible topmost person is implied. The main 'Edit' menu and the family-circle right-click menu both have options to further control multiple selection (see above). Outstanding selections can be cancelled by clicking elsewhere outside of a box, or by using the 'Esc' (Escape) key.

The 'Auto Layout' option makes specific provision for the way that related spouses (i.e. serial marriages, and spouses of previous spouses) are depicted. In order to work efficiently, it is strongly recommended that the caption in the person-boxes have a suffix of "(date-date)", where the first is of birth and the second of death. Either can be '?' if unknown, and the second date can be empty if still living, e.g. "(?-)". No space-padding around the dates is best because it avoids breaking the text

if it has to be wrapped over multiple lines. The layout algorithm also examines event mark-up in the biographical notes: both the dates and event types of Birth/Baptism and Marriage.

If your tree includes the lineage of in-laws too then it may be hard, if not impossible, to unravel it for a neat display. The auto-layout option will apply an iterative algorithm to attempt it, but the end result may need tweaking by hand to get it right. A symptom that this algorithm may be having some difficulty is a tendency for the whole tree to creep to the right. If this happens, simple select all the boxes (using the 'Edit->Select All' menu option), Ctrl+Click any that you don't want to move, and drag the rest of them back to the left as a group. Or use 'View->Revert Layout' to revert to the previous layout.

4.1 Edit Person

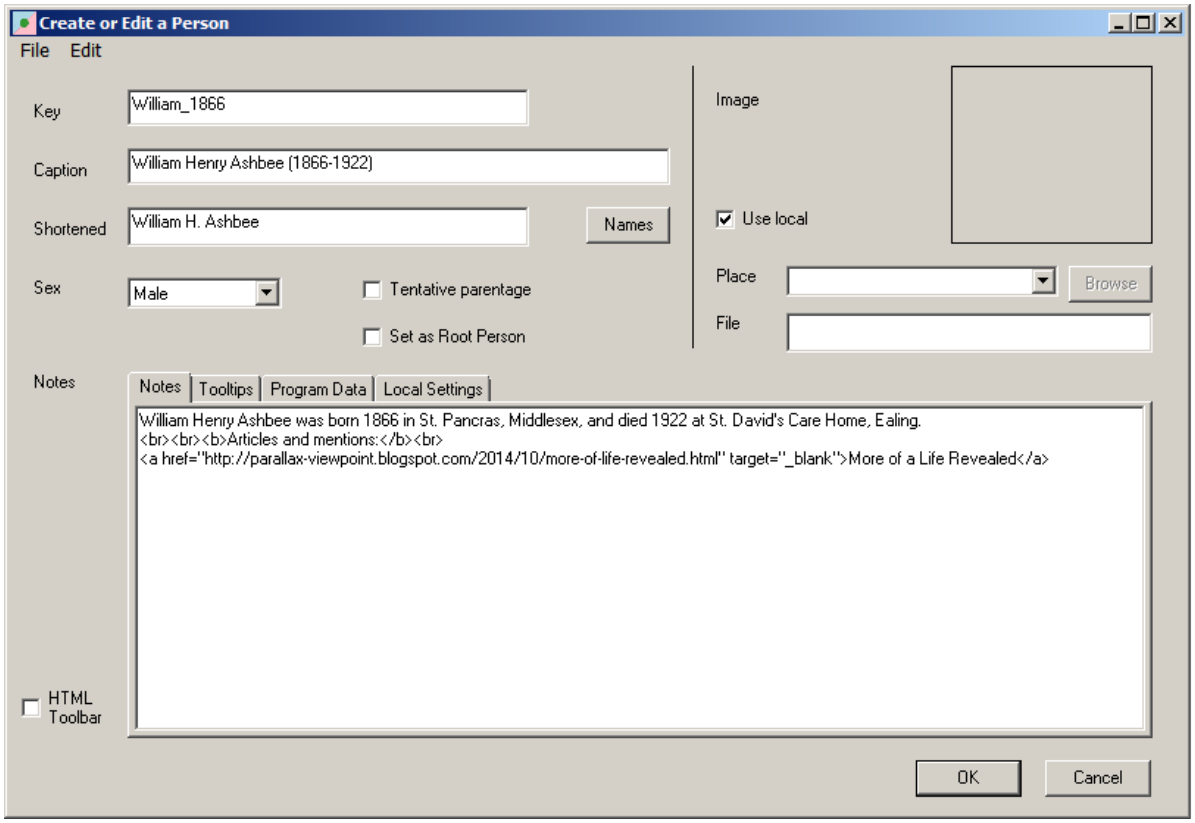
The Edit-Person form is invoked if you right-click on a person-box and select 'Edit Person', or if you right-click on an empty box in the grid and select 'Create Person'. It allows you to enter details relevant to that person.

The key is a unique symbolic name for the person that the code uses to identify it. When creating a new person, a default one is provided that is based on the caption, but it may be changed at any point before hitting 'OK', if required. Keys must be composed of alphanumeric characters, underscores, and hyphens, but must begin with an alphabetic letter.

The longer caption is used to annotate person-boxes, and would usually include a parenthesised pair of dates, as described in the last section. The shorter version of this is used when part of the person-box is allocated for a thumbnail image. If unspecified then one will be derived from the longer caption for you.

NB: the code tries to break apart captions so that they wrap in the boxes, but a "\" (backslash) character may be inserted to force a line-break at a particular position (usually before a separating space) if necessary. This character is not shown on the screen, and is simply treated as a control character. It applies to both the full caption and shortened caption. If the 'Tentative parentage' checkbox is ticked then the parentage of the person is deemed to be uncertain or tentative, and a dashed line is used to connect the box to its respective family-circle.

The 'Names' button maintains a simple list of alternative personal names, as opposed to captions. Although SVG-FTG doesn't do much with them itself, other than presenting the list as part of a person's notes, it allows SVG-FTG to interoperate better with GEDCOM-based products. If none have specified then one is derived from the main caption. As with GEDCOM, slashes may be used to delimit surnames. The 'Names' button may be used to summon the list or to dismiss it.



The 'Tentative parentage' option might be used where there is some doubt about the connection to the shown parents, or where a child was adopted or fostered by that family. It displays a dashed line rather than a solid line connecting that child to a family-circle.

The 'Set as Root Person' option causes the lines for the direct ancestral paths (paternal and maternal) from this person to be especially highlighted in the browser; in the Tree Designer, it just causes that particular person-box to be highlighted. Only one person can be given this status, and it corresponds to the RootKey header setting. The 'Ancestral Links' application provides a dynamic and more flexible version of the same functionality, but they also collaborate to allow a "start-up person" to be highlighted when a tree is first displayed. See Ancestor Links.

The image area, in the top-right part of the form, is discussed in detail at Person Images.

The main part of the form consists of four tabbed areas:

- *Notes*: Used for historical or biographical notes. It is in HTML format and so may contain formatted content, hyperlinks, images, or documents. The 'HTML Toolbar' checkbox becomes visible when on this tab. See HTML Editing.
- *Tooltips*: Plain-text notes to display when the end-user's cursor hovers over the person box in the browser.
- *Program Data*: This tab is reserved for data that will be used by one or more interactive applications. The 'Edit->Application Data' menu option becomes enabled when on this tab. See Program Data.

- *Local Settings*: This can specify a selection of header settings that may be used on a per-person basis (see Local Settings). If you select any interactive applications then they may manipulate this content in order to achieve their documented functionality.

4.2 Edit Family

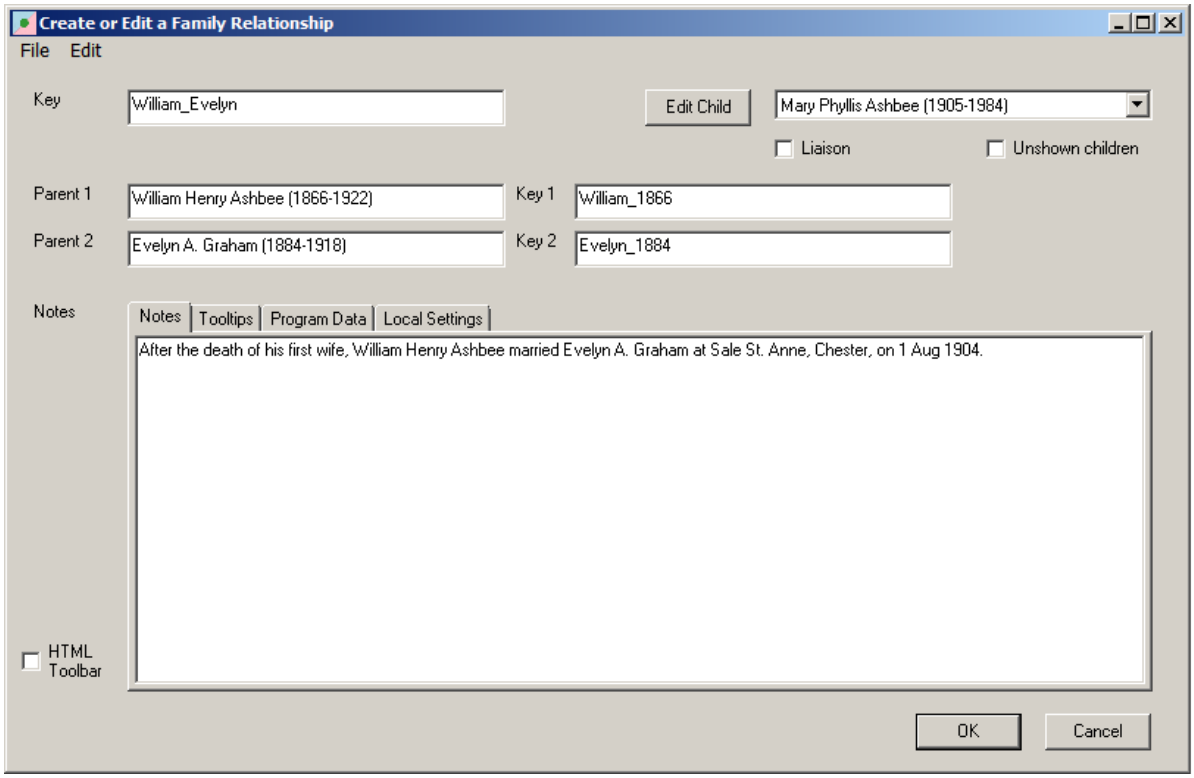
The Edit-Family form is invoked if you right-click on a family-circle and select 'Edit Family', or if you Shift+Click on a person-box and drag a line to another person box (thus creating a new family-circle).

The key is a unique symbolic name for the family that the code uses to identify it. When creating a new family, a default one is provided that is based on the keys of the two spouses, but it can be changed at any point before hitting 'OK', if required. Keys must be composed of alphanumeric characters, underscores, and hyphens, but must begin with an alphabetic letter.

The captions and keys of the associated spouses are defined in the respective person details, and so cannot be modified in this form. Edit access is offered to each of the family's current children.

If the 'Unshown children' checkbox is selected then the associated family-circle will be depicted as a striated green circle rather than a solid one. Also, in the (non-fanned) browser output, there will be a dangling dashed line that does not connect to any specific person-box.

If the 'Liaison' checkbox is selected then a different colour circle will be used to indicate a liaison rather than marriage. This would be used when there is no evidence of any official marriage between the two spouses and yet there is an associated family group.



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- *Tooltips*: Plain-text notes to display when the end-user's cursor hovers over the family-circle in the browser.

- *Program Data*: This tab is reserved for data that will be used by one or more interactive applications. The 'Edit->Application Data' menu option becomes enabled when on this tab. See Program Data.

- *Local Settings*: This can specify a selection of header settings that may be used on a per-family basis (see Local Settings). If you select any interactive applications then they may manipulate this content in order to achieve their documented functionality.

4.3 Person Images

If the ImagePart setting is non-zero then it determines how much of the height of a person-box is to be used for any associated thumbnail image. The value is fractional, between 0 and 1, or 0% and 100%, and the residual height is used to display any short caption underneath. Hence, if ImagePart=1 then it will disable the display of short captions, and if it is 0 (the default) then it will disable the display of images.

It is recommended that the image name use the compact place-key feature, as described at Place Management. As well as providing you with the option of changing a storage location more easily, it gives the Tree Designer the option to work directly, and more efficiently, with local copies.

The Tree Designer currently works with the following image types: JPG, PNG, GIF, TIF, BMP, DIB, and a few other less-useful ones. In the browser, the SVG standard only mandates that JPG, PNG, and other SVG image types must be supported, but it's safe to assume that the same images will be supported in SVG as a particular browser supports in normal HTML. JPG is better for photographic type images, although it employs "lossy" compression and will eventually lose definition when expanded. PNG is better suited to clipart and icons as it supports transparency, which JPG doesn't.

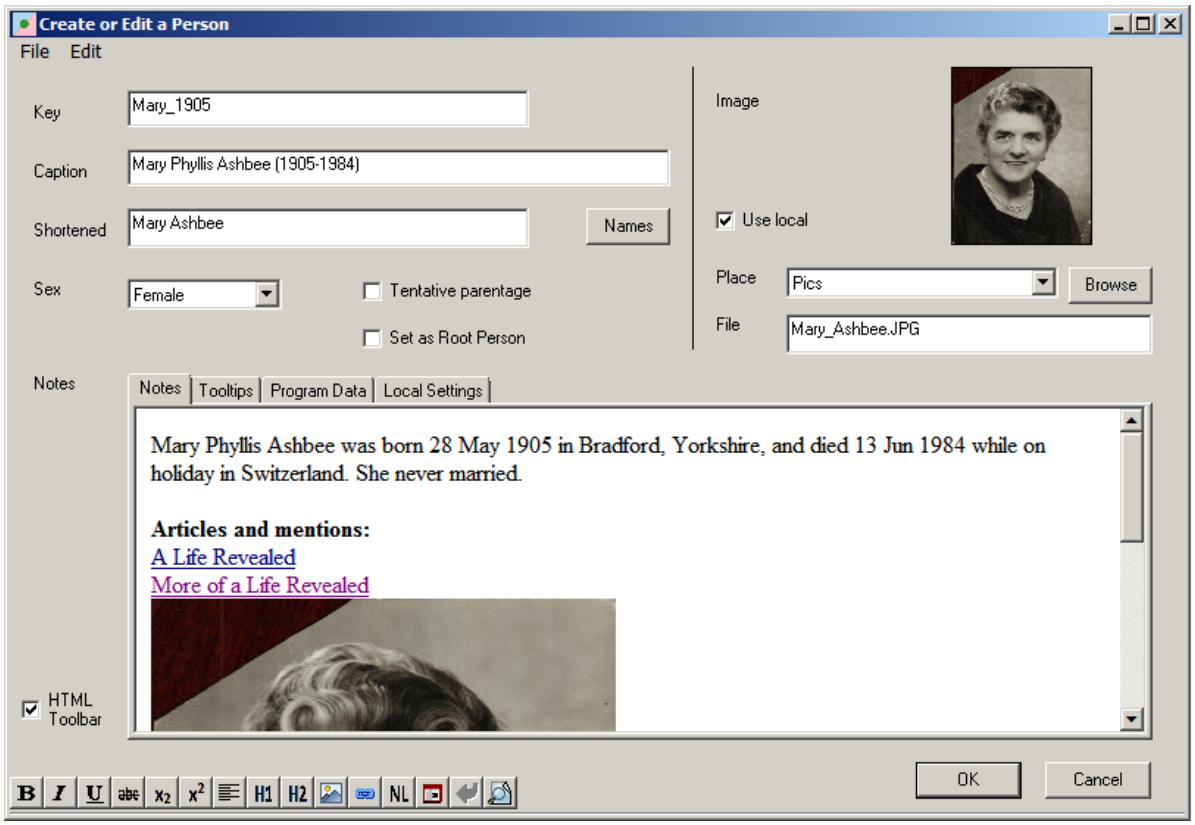
The following small example from a tree definition file illustrates how an image name might be used. Take note of the highlighted data (the Edit-Settings form gives easier control over the header settings).

```
H Small=True,SVGFile=False,InfoPanels=True,ImagePart=0.65

U Pics=https://parallaxviewpoint.com/Images/|U:\Photos\PaulineAshbee\
U Blog=http://parallax-viewpoint.blogspot.com/|

P Mary_1905($Pics:Mary_Ashbee.JPG)=f(2,1):Mary Phyllis Ashbee (1905-
1984)|Mary Ashbee
= Mary Phyllis Ashbee was born 28 May 1905 in Bradford, Yorkshire, and died
13 Jun 1984 while on holiday in Switzerland. She never married.
= <br/><br/><b>Articles and mentions:</b><br/>
```

```
= <a href="$Blog:2014/08/a-life-revealed.html" target="_blank">A Life
Revealed</a><br/>
= <a href="$Blog:2014/10/more-of-life-revealed.html" target="_blank">More
of a Life Revealed</a>
= <br/>
= <img border=0 height=400 src="$Pics:Mary_Ashbee.JPG">
```

This example uses the same image name for the thumbnail version in the person-box, whether in the Tree Designer or your browser, and for a larger version in the pop-up information panel. It also uses a second place-key to reference related blog posts — the associated key requiring no local mapping in that context (i.e. it's only relevant in the browser).

When editing or creating a person's details in the Tree Designer then you can set this up more easily.

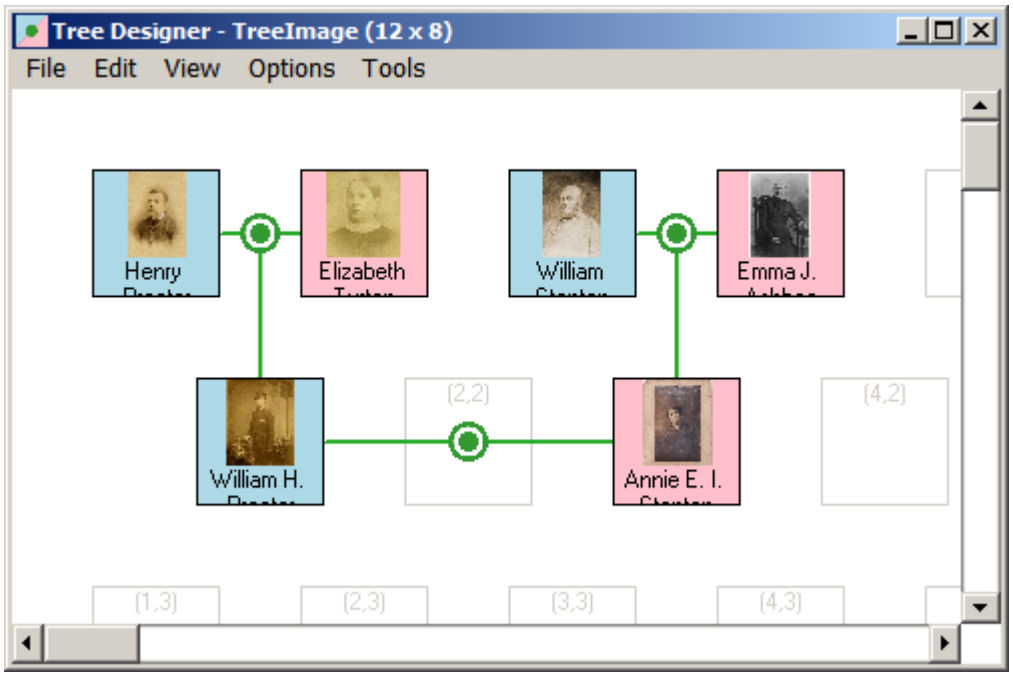


To the right of the person key and captions is an area reserved for the associated image. The 'Place' field allows you to select one of the place-keys (described under Place Management) to control where the Tree Designer is to fetch images from. The 'File' field indicates a particular image file from that place. If the 'Use local' checkbox is selected then the Tree Designer will use a local copy of the image (which is quicker), otherwise it will fetch a copy from the Internet. At any time, hovering over the image box, irrespective of whether an image is displayed, will show you the expanded image name that the Tree Designer was trying to access, and this is therefore useful diagnostic information.

If the 'Use local' checkbox is selected, and the current place-key has a local mapping on your computer, then the 'Browse' button may be used to pick an appropriate image for the person. NB: When a thumbnail image has been selected then the tooltip ("hover text") for the image shown in

the Edit-Person form will present the associated path (i.e. URL or full file specification). This can be used in conjunction with the 'Use local' checkbox to verify that both versions of the image (local and remote) work, and that they're at the locations you expect.

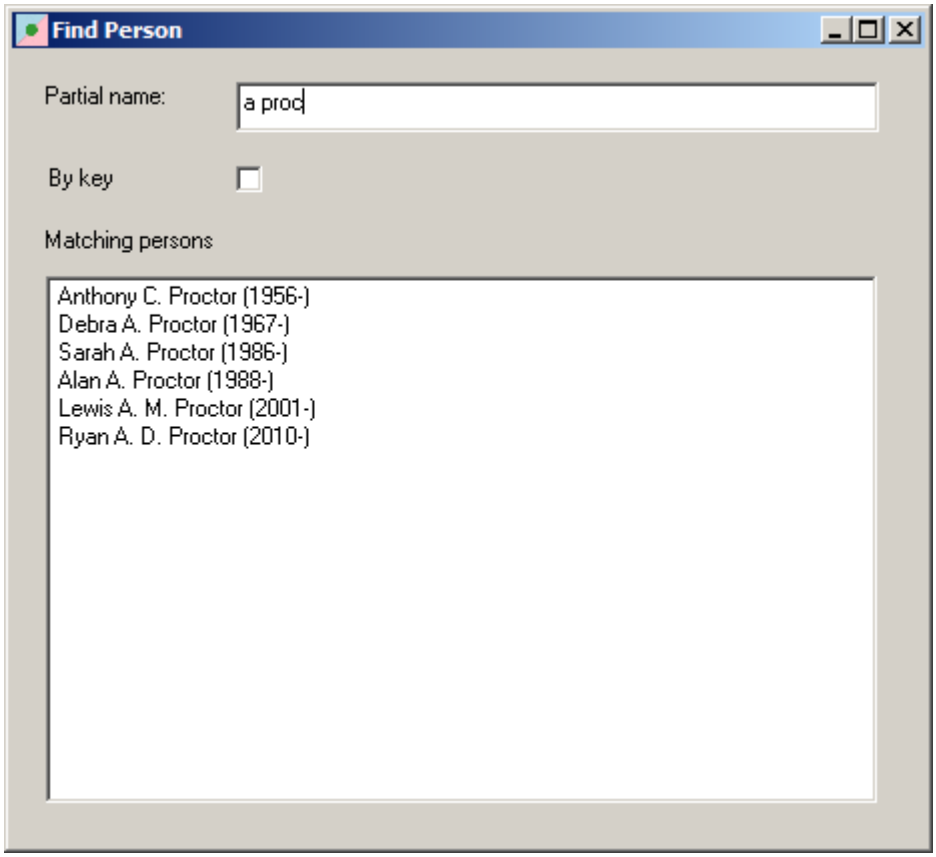
When images have been specified then the Tree Designer will show then in the person boxes, just as your Web browser will do in the final output. For instance:



4.4 Find Person

Selecting the 'Edit->Find Person' menu option (or pressing Ctrl+F) will load a search dialog to find a particular person. This can be very useful if you have many people in your tree, or you have several different viewpoints defined.

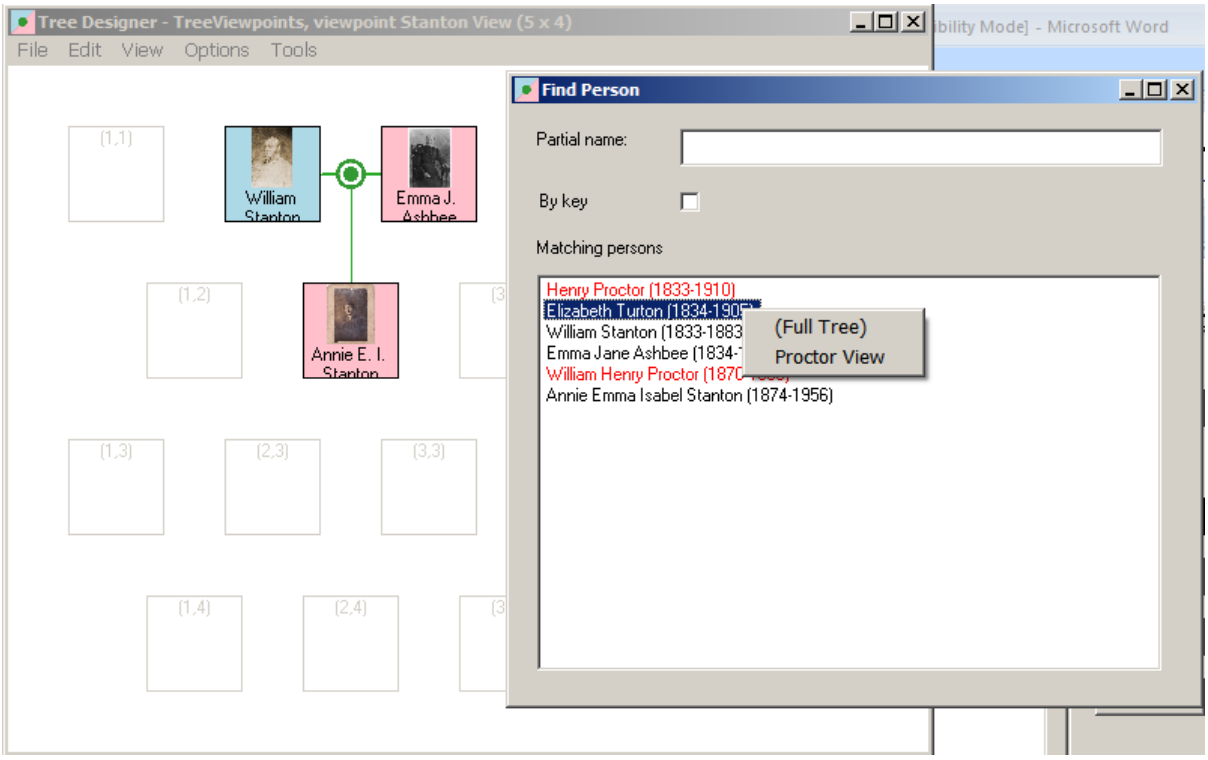
As with the lists of persons in both the Viewpoint Manager and the GEDCOM Browser, typing a partial name will filter the full list of names to only those matching the given parts.



If you select one of the names from the list then the Tree Designer grid is scrolled to ensure that it is in view, and then its person-box is highlighted using the same mechanism as the 'multiple selection' described above. If you click on the close box, in the top-right corner of the form, then no person-box is searched or highlighted.

If you tick the 'By key' checkbox then the tool allows you to find a person by their key name rather than their caption name.

If you are using viewpoints then the person of interest may not be shown in the Tree Designer's current grid. In that case, a name may appear in red to indicate that it cannot be selected. However, right-clicking on any name will show a list of the viewpoints in which the person is shown, and allow you to jump to one of them.



Selecting one will cause that viewpoint to be loaded before the relevant person-box is scrolled into view and highlighted. As well as the list of relevant (for that person) viewpoints, the list will also include "(Full Tree)", which loads the full tree rather than a particular viewpoint.

4.5 Copy and Paste

There are two mechanisms provided by SVG-FTG that may appear very similar, and so require some clarification: copy-and-paste and include-exclude. Both copy details of persons or families to the Windows clipboard so that they might be used elsewhere. There is sufficient overlap that they can be used for related purposes, and so this section will describe them both in detail.

- *Copy-and-paste*: This mechanism allows the copying of persons or family groups from one tree to another, including from a GEDCOM file to a tree hosted within SVG-FTG. This usually means between distinct trees, hosted in separate SVG-FTG sessions. The copied details include everything about the associated persons or families: their keys, captions, images, notes, etc., in order to provide a faithful copy elsewhere. If the relevant key already exists in the target tree then you would need to paste such details as a "New" entity in order to create one under a different key.

- *Include-exclude*: This mechanism allows persons and family groups to be copied or moved between viewpoints, including from the Viewpoint Manager. The copied details include only the relevant keys and so would be of very little use between separate SVG-FTG sessions. For instance, when coping a person from the Viewpoint Manager and including it into a viewpoint, only the corresponding person-key is used, implying that the person must already exist in the full tree. NB: The 'Exclude...' operations actually removes the entities from a source viewpoint so that they can be included into a target viewpoint (like a cut-and-paste

operation), but those copied details can be included into more than one viewpoint if required.

The similarity occurs because a paste operation would normally do nothing in a full tree if the target key already existed there, but would appear to do the same as an include if pasted into a viewpoint. Hence, a copy-and-paste can be used to include entities directly from the full tree into one or more viewpoints.

If it is necessary to copy persons from one tree to another, say to include in-laws or family members from a different branch, then copy-and-paste avoids having to re-enter the same details again. Details may be copied from one tree definition and pasted into a subsequent one, either in the same session or between different sessions (e.g. side-by-side launches of SVG-FTG — see Command-line and Shortcuts for tips). Persons and families may also be copy-and-pasted from the GEDCOM Browser into the Tree Designer.

The details of a single person can be copied using the option on the right-click menu on the corresponding box. If multiple people had been selected beforehand (using Ctrl+Click operations) then all their details are copied together. The right-click menu for a family-circle has an option to copy the details of a family, including those of the two spouses and their immediate children.

The previously copied details may be pasted into the Tree Designer by selecting one of the options on the right-click menu of an empty grid box, or even a populated person-box (which will stack them up). If all the keys in those details are currently unused then this will be clean and simple: a single person is pasted into the selected box; multiple people are pasted sequentially from the selected box; or the first spouse of a family is pasted in the selected box, and second spouse in the next box, with any children underneath. NB: for vertical orientations, the notion of *sequential/next* runs top-down, and *underneath* means to the right.

If, however, there are clashes with one-or-more key names already being in use, then there are some rules:

- *Person*: If the ‘Paste New Person’ option was selected then the key is modified with an incrementing suffix of “-n” until it can be pasted without overwriting an existing person having the same key. Otherwise, the previous instance of the person is untouched and an information message written to the main progress panel.

- *Persons*: The same process as described above occurs for each individual person being pasted.

- *Family*: Each person (parent or child) is treated as per the 'Persons' case, above. If the family-key is already in use and 'Paste New Family' had been selected then the key is modified as described above in order to avoid a clash. Otherwise, the previous instance of the family relationship is only re-used if the spouses are the same as the pasted one. The children are only added to the family relationship if not already connected, and not connected to some different family.

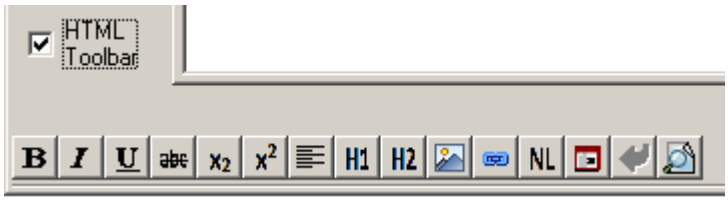
In the Place Management form, place-keys may also be copied to the clipboard and pasted elsewhere (see Place Management), Furthermore, when persons are copied, as described here, the place-keys associated with any image references are also copied with them, thus ensuring that those details are valid if pasted elsewhere.

The way in which person-boxes are arranged from the point of a paste operation also applies to an include operation. If a family is included at a particular grid location in a viewpoint then the spouses are similarly arranged sequentially fro there, and their children sequentially underneath.

4.6 HTML Editing

When editing either person or family details, there's a multi-line 'Notes' area where you can add historical or biographical notes that will appear in the browser when employing corresponding interactive applications. The text must be HTML, and this is powerful as you can produce better formatting, have hyperlinks, images, footnote references, document scans, etc., but it comes at a cost: you need to enter the HTML code.

To the left of the Notes area is a checkbox for "HTML Toolbar". If selected then a toolbar will appear at the bottom of the form to give you a little assistance.



These buttons support the following basic functions:

- *Bold*: Puts the selected text inside HTML code to make it bold. If the selected text already has that code then the operation is reversed and it removes the code.
- *Italic*: As per Bold, but for italic text.
- *Underline*: As per Bold, but for underlined text.
- *Strike-through*: As per Bold, but for struck-out text.
- *Subscript*: As per Bold, but for subscript text.
- *Superscript*: As per Bold, but for superscript text.
- *Paragraph*: As per Bold, but for a left-aligned paragraph.
- *Header level-1*: As per Bold, but for heading level-one text.
- *Header level-2*: As per Bold, but for heading level-two text.
- *Image*: Inserts or modifies a reference to an image. If the cursor position is part-way through an existing <img> element then its full range will be selected on the first press of this button

(so that you can confirm it) and edited on the second press. Any other text selected at the time of the first press becomes the “alternate text” for the image, for use when the image cannot be loaded. The image name may be a normal URL (e.g. http://me.jpg), or one using the place-key feature supported by SVG-FTG (e.g. $Gallery:me.jpg).

- *Link*: Inserts or modifies a hyperlink. If the cursor position is part-way through the opening tag (<a>) or closing tag () then the full range of the element will be selected on the first press of this button (so that you can confirm it) and edited on the second press. Any other text selected at the time of the first pres becomes the display text of the hyperlink. As with images, the link address may be a normal URL (e.g. http://blog.com/article.htm) or one incorporating a place-key (e.g. $Blog:article.html).

- *Newline*: Inserts the HTML to force a line-break. Text is normally flowed in HTML so line-breaks have to be explicit.

- *Event*: Inserts or modifies a section of event mark-up. If the cursor position is part-way through the opening tag (or) or closing tag (or) then the full range of the element will be selected on the first press of this button (so that you can confirm it) and edited on the second press. Any other text selected at the time of the first pres becomes the body of a new section to be marked up. The mark-up associates a date, description, and event type with the body of the section. See below.

- *Undo*: Restores the text to the state before the last toolbar operation. It is disabled if there are no previous changes to undo. NB: a Ctrl+Z key combination is a Windows standard that undoes the last bit of typing or deleting text. It is independent of the mechanism described here, and will only undo the very last typing or deletion.

- *Preview*: Toggles a preview of the HTML content, as it will eventually appear in a Web browser.

Many of these cases are similar to the operation to make text Bold. In order to help the end-user, if no text is currently selected when you request these operations then a guess is made at the text you require when you first select the button, and the actual operation is then performed on the next press of that button. For instance, imagine that you have the following emboldened text and your cursor is current between "Joe" and "Bloggs", but nothing is yet selected.

```
<b>Joe Bloggs</b>
```

When you first hit the 'Bold' button then it would select the whole element for you, resulting in:

```
<b>Joe Bloggs</b>
```

A second use of the same button would remove the outer tags and so remove the bold effect. But if you'd selected the 'Italic' button first then it would have only selected the text between the outer tags because they're different to the ones that the button manipulates:

```
<b>Joe Bloggs</b>
```

A second use of the 'Italic' button would make the inner text italic, resulting in it appearing both bold and italic in the final output:

```
<b><i>Joe Bloggs</i></b>
```

Whereas operations such as 'Bold' simply apply or undo that effect over some selected range, the operations 'Image', 'Link', and 'Event' are a little more complicated and invoke a dialog to let you enter or modify their details. NB: Any element attributes that are unsupported by these dialogs are simply preserved in tact.

A good way of working that applies to all element types is to place the cursor inside the opening or closing tag and let the first button press select the text it thinks is appropriate. You can then proceed to edit or undo that element, or insert new elements, or even delete the selected range.

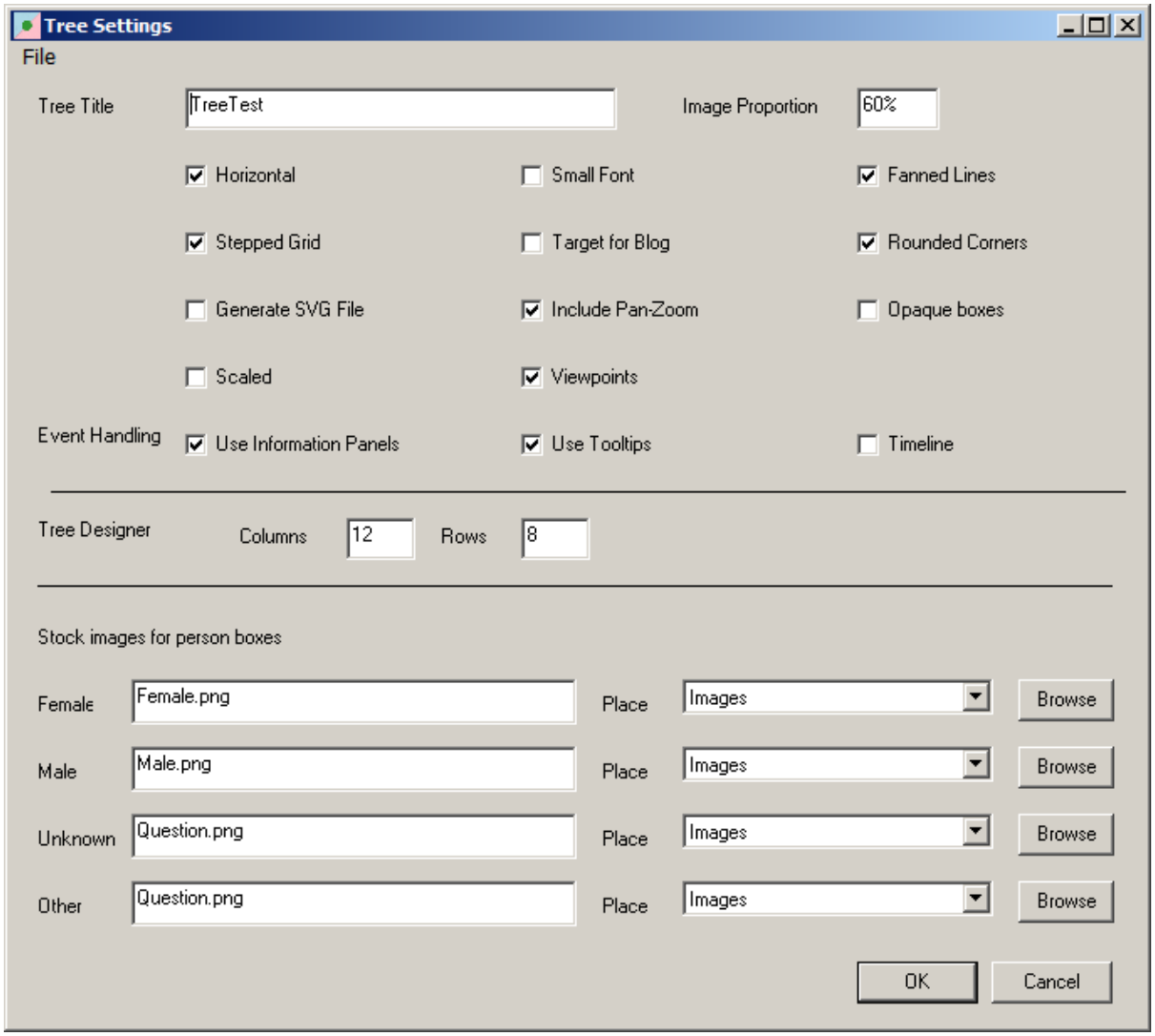
The marked-up details of events may be used by application code to generate timelines, and a working example may be found at Timeline Example (see "Program Notes:Application Development" for low-level details). Dates must include a year, but may omit a month or day if unknown. GEDCOM-like date keywords are also accommodated, as are Julian dates and double years.

When first adding mark-up (as opposed to when editing existing mark-up), a guess at the required date is made by scanning the selected text in order to assist the user. A small number of event types are predefined, but user-defined ones encountered in the tree definition file, or manually entered in the event-details dialog, are automatically added to the dropdown list for future selection. Although not strictly “keys”, these must follow the same naming restrictions as keys: alphanumerics, underscores, hyphens, and starting with an alphabetic character. NB: event types are more of a categorisation that a precise ontology. Hence, an ‘Auto layout’ operation will check for event types of ‘Marriage’ but will not be concerned with church/civil distinctions, marriage licences, or banns. Low-level details on this mark-up may be found in "Program Notes:Event Mark-Up".

4.7 Settings

The Edit-Settings form — accessed from the ‘Options->Edit Settings’ menu option in the Tree Designer — offers easy control over the more common settings and parameters mentioned in the Header Records. Note that these settings apply equally to your full tree and to any viewpoints, except the Tree Designer grid size which is viewpoint-specific.

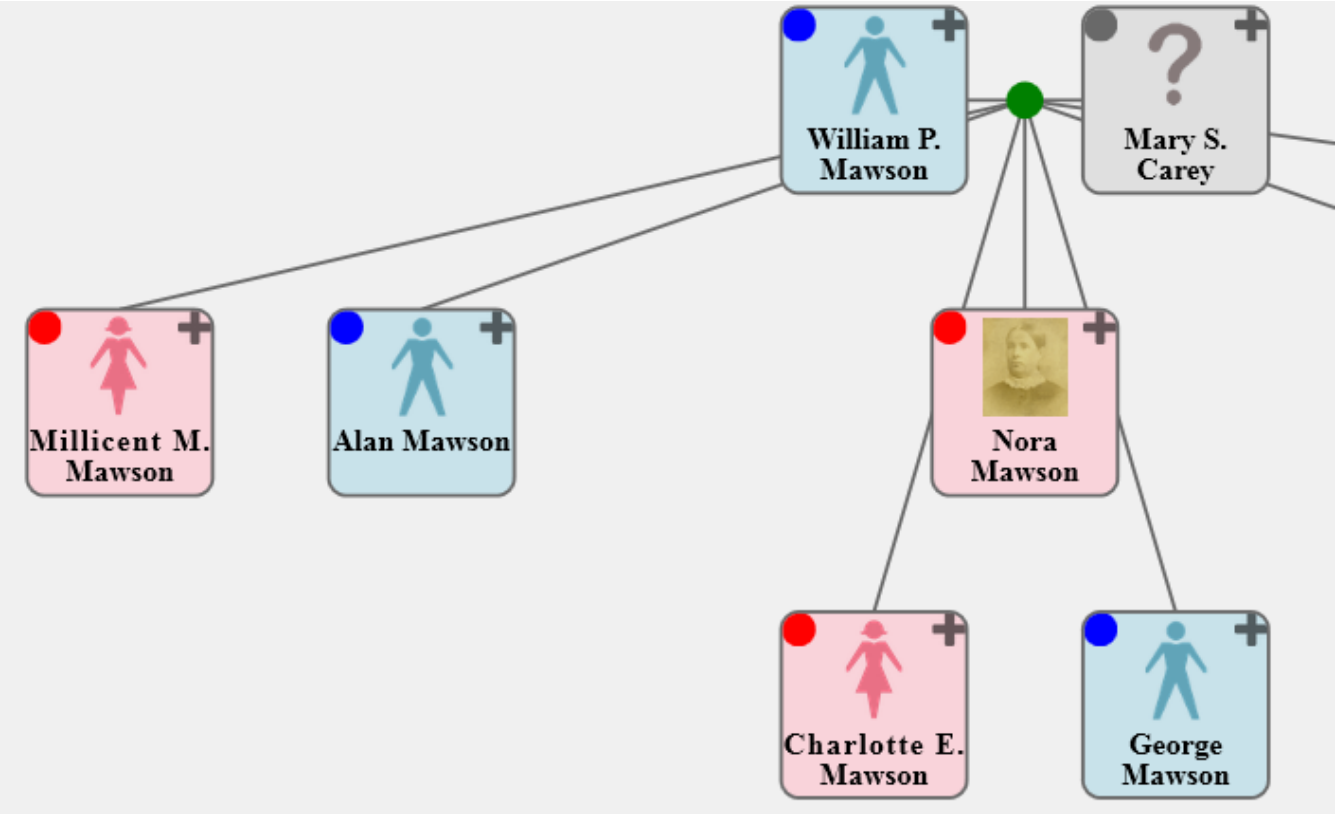
The first section contains a number of on/off setting that correspond to header settings (see Header Records), the tree title (which must follow the same rules as for keys: alphanumeric, underscores, or hyphens), and the image proportion in person-boxes. The image proportion is the upper fraction of a person-box that should be used for any images, and may be expressed as a fraction between 0 and 1, or a percentage between 0% and 100%. A value of zero (the default) disables thumbnail images.



The second section controls the number of rows and columns to display in the Tree Designer's grid. The defaults are 8 and 12, respectively. However, there is a maximum of 100 on either dimension, and a total cell maximum of 2000. NB: These are defined for the default horizontal orientation, and are automatically switched if the orientation is changed.

The last section specifies stock images (e.g. head-and-shoulders silhouettes) to display for persons who have no thumbnail image. It is recommended that you select a place-key before selecting an image because these will be shown in both the Tree Designer and in the final output for your browser, meaning that two different files will usually be involved.

If changes are saved, using the 'OK' button, then they are effective immediately in the Tree Designer. However, they will not be saved back your tree definition file until everything is saved. See Closing and Saving.



Local person and family settings are supported by a very simple tab in the Edit-Person and Edit-Family forms that presents their 'name=value' syntax for editing. Right-click on a populated person-box or a family-circle to access these edit options. Each line in those tab areas may contain a single setting or a comma-separated list. For instance, ButtonTR=False.

4.8 Advanced Settings

The Advanced-Settings form — accessed from the 'Options->Advanced Settings' menu option in the Tree Designer — offers easy control over the less common settings and parameters mentioned in the Header Records. These are generally associated with interactive applications or application development. Note that these advanced settings apply equally to your full tree and to any viewpoints; they are not viewpoint-specific.

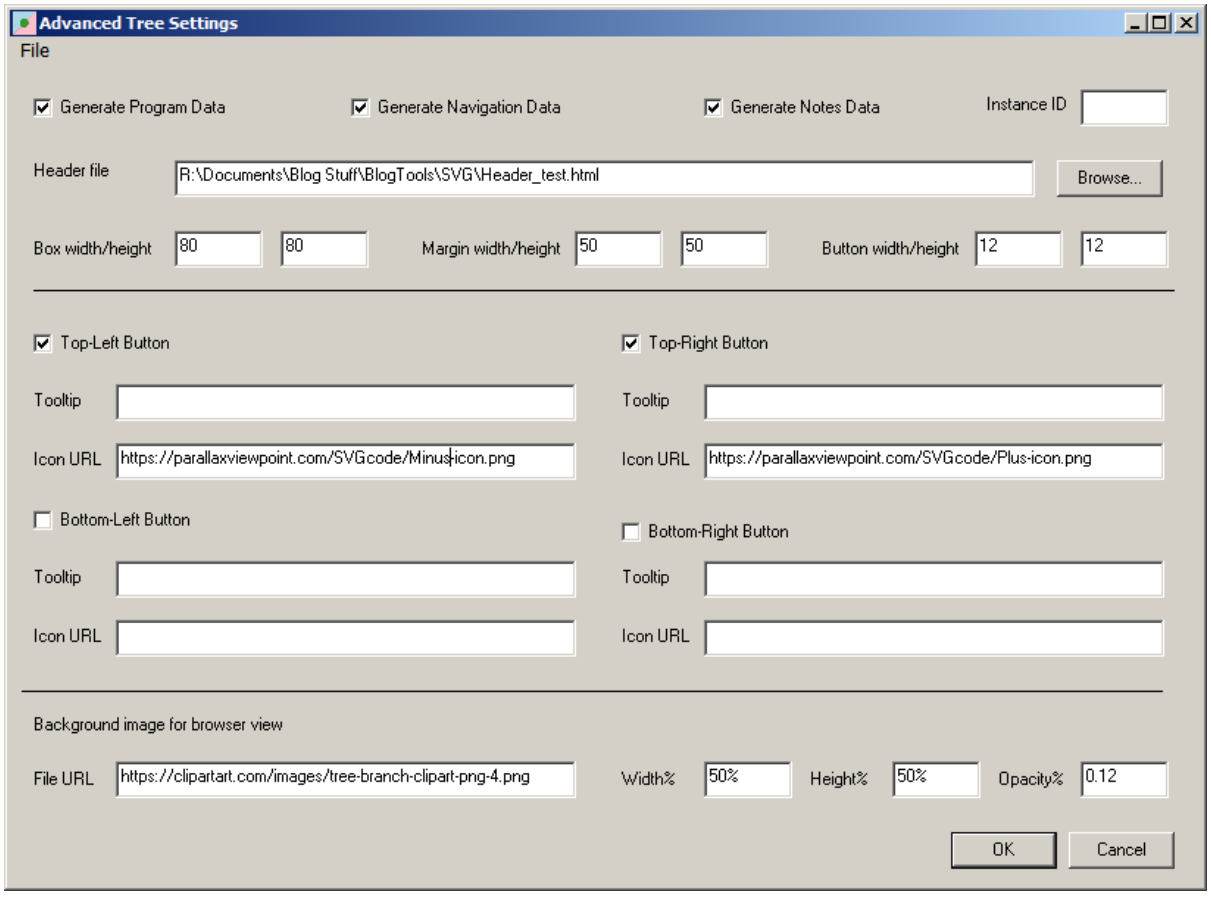
NB: None of the image references in this form accept the place-key format (unlike the stock images in the normal Edit-Settings form) because they are only relevant within a browser; they are not displayed within the Tree Designer.

In the first section, the first three options — which are responsible for generating, respectively, application-defined data ('program data') from the corresponding person or family tab, navigation data that describes the relationships between persons and families, and biographical notes — would be requested by applications or services that require or make use of them (see Applications and Services).

The optional instance ID is a single digit or letter used to distinguish separate tree instances in the same HTML page. It separates control over diagrams, styling, and event handling. The default is blank.

The optional header file name may be specified as a replacement template for one of the standard ones at the head of the generated output file. See "Program Notes:Header Files". The associated 'Browse' button will look in the system directory where the executable and the standard header files reside.

The values for the person-box, margin, and button sizes are expressed in pixels, and default to 80x80, 50x50, and 12x12, respectively. The person-box size cannot be 0. All are currently constrained to less than four times the default. Since the view of the tree in your browser can be expanded or contracted (using either the Pan-Zoom feature or the Ctrl/+ and Ctrl/- browser keys), and without going fuzzy, then the dimensions here are mainly of use for adjusting the proportions. For example, making a person-box more "portrait" or more "landscape", or changing the size of the buttons relative to person-boxes.

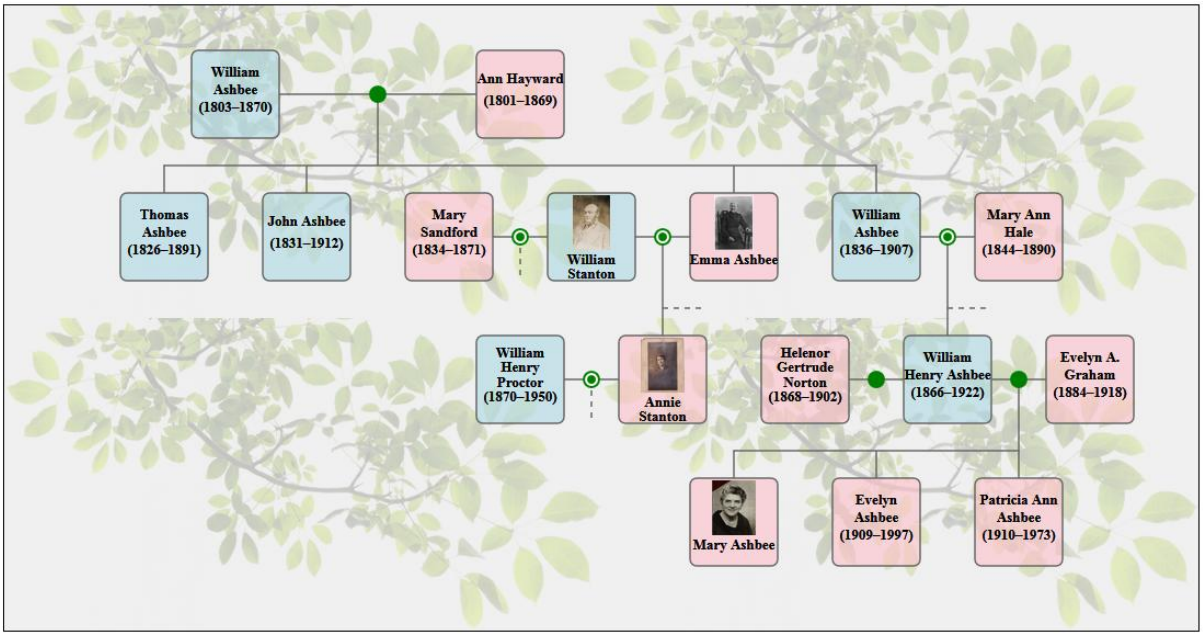


The second section is devoted to control over the optional buttons in the corners of person-boxes. Although this would normally be controlled by application configuration, too, the corresponding icons and tooltips might be weakly configured by applications, but they can also be overridden with end-user configurations. See "Program Notes:Changing the Buttons".

The last section provides easy options to select a background image to display behind the tree when viewed in your browser (not the Tree Designer). The URL of an associated image must be specified, and there are optional fields to control how it's shown. The width% and height% fields specify proportions (value between 0 and 1, or 0% and 100%) of the total visible area to use for the picture. If smaller than the defaults of 100% x 100% then the image is tiled (repeated) as necessary, starting at the top-left corner. The opacity% field specifies how faint to make the image using a value between 0 and 1 (or 0% and 100%), where the default of 100% is full intensity. The following possibilities are possible with the size:

Size	Effect
width < 100% or height < 100% (but not 0)	Image is repeated as necessary, starting at the top-left corner of the area.
width = 100% and height = 100%	Image will completely fill the tree area. This may involve stretching and distorting.
width = 100%, height unspecified	Image is full width. Aspect ratio is preserved. Image centred vertically, but may be clipped if taller than the tree area.
height = 100%, width unspecified	Image is full height. Aspect ratio is preserved. Image centred horizontally, but may be clipped if wider than the tree area.
neither width nor height specified	Both default to 100%.

For instance, a URL of https://clipartart.com/images/tree-branch-clipart-png-4.png combined with a width% of 50% and height% of 50% would put a tree branch behind you family tree, and repeat twice horizontally and twice vertically (i.e. four copies). Here's an instance using 20% opacity:



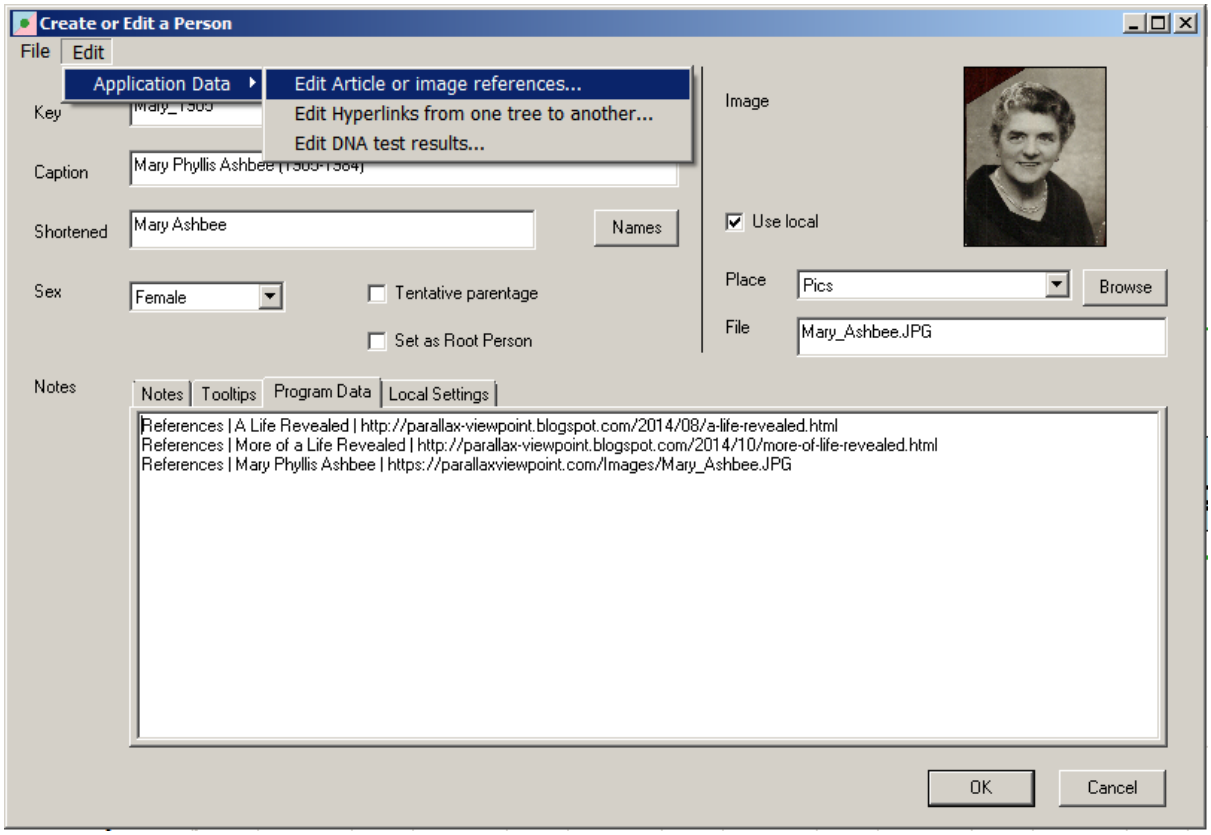
If changes are saved, using the 'OK' button, then they are effective immediately in the Tree Designer. However, they will not be saved back your tree definition file until everything is saved. See Closing and Saving.

4.9 Program Data

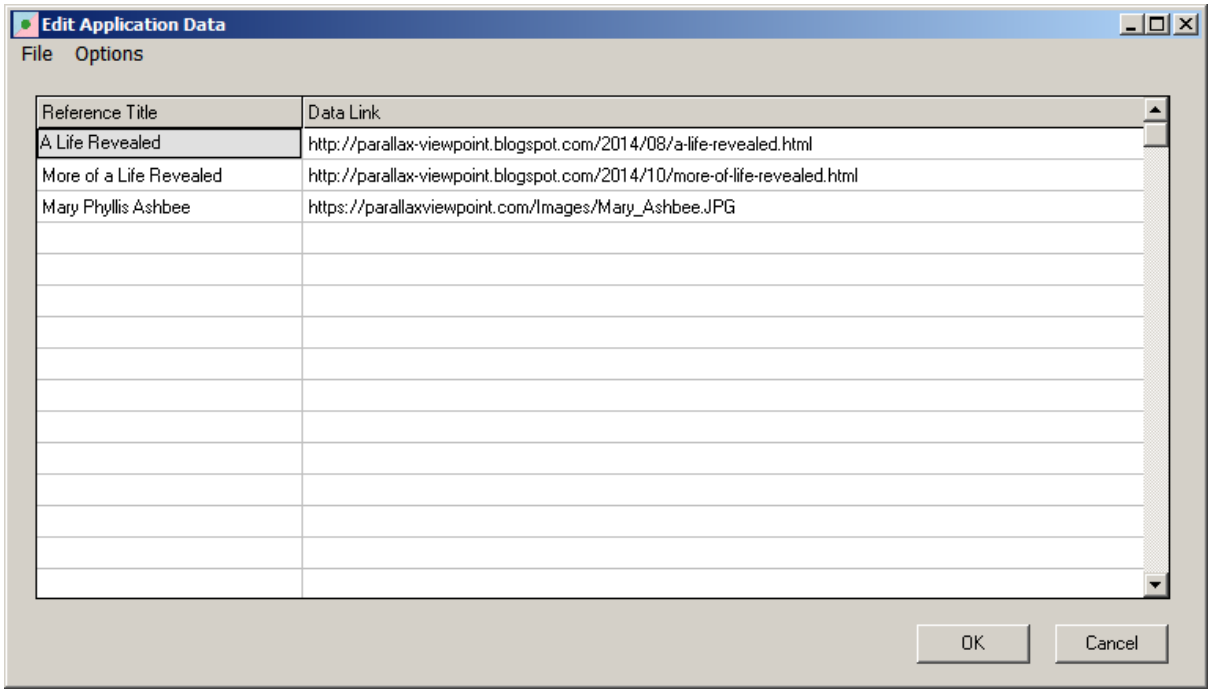
In the Edit-Person and Edit-Family forms, if you're on the 'Program Data' tab then the 'Edit->Application Data' menu option will be enabled. When selected, this presents you with a list of registered data formats (see "Program Notes:Data Registration"), and selecting one of those will present you with a configured table that will allow you to edit, add, or remove, that type of format in the 'Program Data' tab.

Some of the available interactive applications will utilise data of a particular type in this tab, and the services registration file defines the possible formats. These formats can all be mixed together in this tab, without ambiguity, but the use of this table-based editor allows you to pick out a particular one and modify the data without having to understand the format. You can edit the raw data, if necessary, but using this table-editor is much easier.

An example is the 'Compendia' application, which utilises a type of data called 'References'. The format basically consists of is a list of article and image references, each involving a reference title and a data hyperlink.



The resulting table is configured to show the correct number of columns and the appropriate headings for the selected data format. The example below is for the 'References' data format.



Right-clicking on a cell presents the following menu options:

- *'Insert Row Above'*: Inserts a single empty row above the current one.
- *'Delete Row'*: Delete the current row

The following options are also provided on the main menus:

- *'File->Close and Save'*: Saves the valid place definitions from the grid and closes the form. Any entries with a blank or invalid key name are ignored during this operation.
- *'Options->Add More Rows'*: Adds an extra five empty rows to the end of the grid each time it is selected.

When the 'OK' button is selected, the lines with non-empty data are saved back to the program data tab, together with any prior data of a different format. These are not saved back to the tree definition file until all your changes are saved together (see Closing and Saving). The 'Cancel' button discards any changes and closes the form, exactly as though you had selected the close option in the top-right corner of the form.

Specific details on using the grid can be found at Grid Usage.

5 Viewpoints

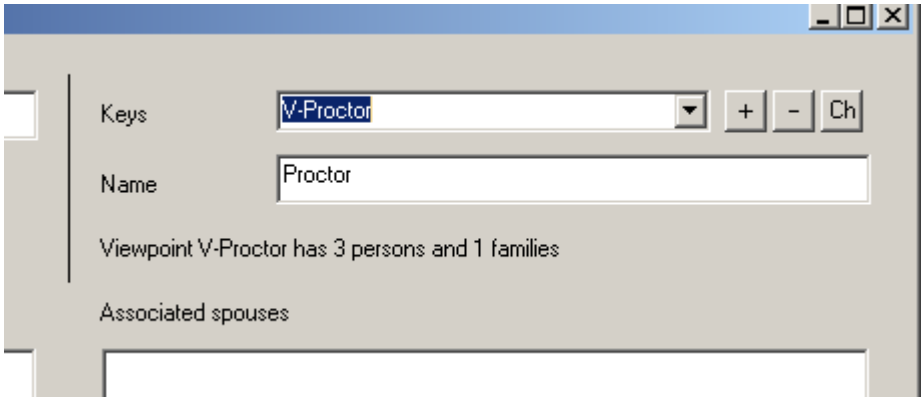
A viewpoint is a view onto a sub-tree of your loaded persons and families. What this means is that although the full tree will show every person and family that you have defined, a viewpoint can be used to focus on just a few of them. The grid size and layout of your persons is separate for each viewpoint. You can have many viewpoints defined, and persons or families may appear in multiple viewpoints if required.

When a viewpoint is loaded into the Tree Designer, things operate virtually the same as when a full tree is loaded, except that there is less clutter and complexity. A typical usage of viewpoints is to break down a large tree by surname or family groupings.

There are various facilities for helping you switch between different viewpoints, or to the full tree. If you have at least one viewpoint defined then the main 'Design' button will pop-up a small menu to ask which viewpoint to open in the Tree Designer. Once in the Tree Designer, the 'File->Switch Viewpoint' will display a similar menu allowing you to change what is loaded in the designer. Finally, the Find-Persons form (see Find Person) allows you to jump to a specific viewpoint if you are trying to locate a person who is not in the one currently loaded by the Tree Designer.

The Viewpoint Manager is a tool that allows you to add, delete, or modify viewpoints, and to allocate persons and their families to them. It may be invoked from the 'Tools->Manage Viewpoints' menu option in either the Tree Designer or the main SVG-FTG form.

Control over the viewpoint keys and display names may be found in the top-right section of the Viewpoint Manager:



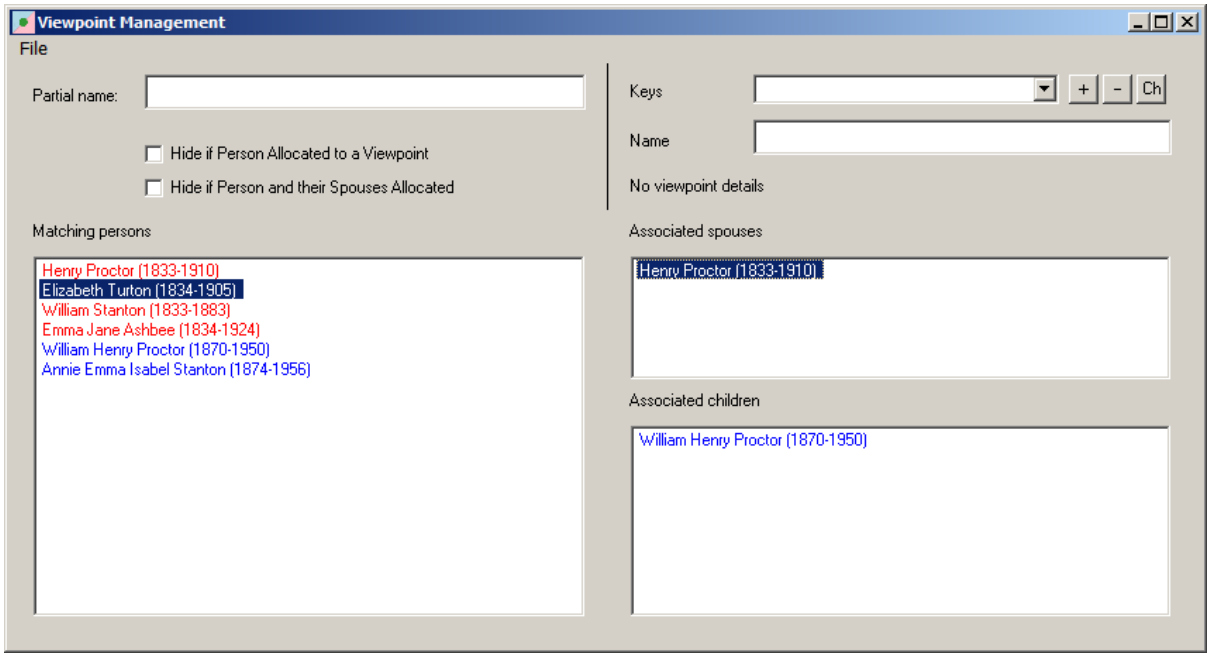
- *+ button*: Creates a new viewpoint with the specified key and display name. This is then added to the drop-down list.
- *- button*: Deletes the viewpoint whose key is currently shown.
- *Ch button*: Changes the key name and/or the display name of the currently selected viewpoint.

A typical usage of viewpoints is to break down a large tree by surname or by family groups, and so the rest of the Viewpoint Manager is devoted to helping you ensure that each person and family is represented in at least one viewpoint, and that no person has "fallen between the cracks".

It offers three panels — not unlike those in the GEDCOM Browser — where the left-most contains a list of all possible person captions, filtered by whatever you type into the search box above it. If you select one of those persons then the upper right panel will show their spouses, and selecting one of them will show their children in the lower right panel.

All of these person captions are coloured as follows:

- *Black*: person is not allocated to any viewpoint.
- *Blue*: Person is allocated to at least one viewpoint, but not all their spousal relationships (usually meaning marriages) are represented in any viewpoint.
- *Red*: Person and all their spousal relationships are allocated to at least one viewpoint.



There are two checkboxes above the search box that will eliminate some of these to give a simpler view of who is left to allocate. For instance, by ticking the second checkbox. The first will hide all persons who have been allocated to at least one viewpoint, and so will eliminate both red and blue entries. The second only hides persons who are allocated to a viewpoint, **and** all their spousal relations are also allocated; this will therefore eliminate only red entries.

In a fully allocated tree, where there are no person-boxes or family-circles that aren't in any viewpoints, then all the entries would be coloured red, and if the second checkbox is ticked then the lists of outstanding persons should be empty. An alternative approach to populating a viewpoint is to begin with everything, by selecting 'Edit->Duplicate Full Tree' in the Tree Designer, and then trimming it down using the right-click 'Exclude ...' options in the grid. This method can also allow you to move stuff between this viewpoint and others using Include-Exclude operations, but it does assume that the size of the full is not too large to get into the Tree Designer all at once.

A number of right-click operations are defined for the captions shown in these three panels:

- *'Copy Person'*: Copies the key of the clicked person.
- *'Copy Person and All Spouses'*: Copies the keys of the clicked person, all their spouses, and the associated spousal (family) relationships.
- *'Copy Person and Spouse'*: Copies the keys of the clicked person, a specific spouse, and their spousal (family) relationship. No child keys are copied.

- *'Copy Person, Spouse, and Children'*: Copies the keys of the clicked person, a specific spouse, their spousal (family) relationship, and their direct children.
- *'Show Details'*: Displays very brief biographical details for a person, and indicates which viewpoints currently show that person and their spousal relationships.
- *'Select Father Caption'*: Transfers the caption for the father of a family — this could be in the person or spouse panel, depending on what was originally selected - to the search box. This provides a simple mechanism for ascending a generation of the tree within these lists.
- *'Select Mother Caption'*: Transfers the caption for the mother of a family — this could be in the person or spouse panel, depending on what was originally selected - to the search box. This provides a simple mechanism for ascending a generation of the tree within these lists.
- *'Select Spouse Caption'*: Transfers the caption of the selected spouse into the search box. This provides a simple mechanism for switching between paternal and maternal ancestral lineage.
- *'Select Child Caption'*: Transfers the caption of the selected child into the search box. This provides a simple mechanism for descending a generation.

The differences and similarities between the Include-Exclude operations for populating a viewpoint and the Copy-and-Paste operations for transferring persons or families between separate trees is discussed at Copy and Paste.

When you use the main 'Process' button with viewpoints defined then it causes the generation of multiple output files instead of the single full-tree file generated in the absence of viewpoints. NB: if SVGFile=True then this feature still work but with slightly less functionality (see Linked Trees).

A separate output file is created for each of your viewpoints, and these will have file names formed from a combination of the main tree title (as specified in the Edit-Settings form, or the Title= header setting) and the key name of the specific viewpoint, i.e. {title}_{viewpoint}.{extension}. For HTML output files, the <Title> elements will be the descriptive name (not the key) of the respective viewpoints, whereas for a full tree this has always been "SVG Family Tree" followed by the tree's title setting.

When you select the main 'View' button then it will load the file into your default browser corresponding to the active viewpoint (i.e. the one currently being viewed in the Tree Designer), and if there is no active viewpoint then it will load the first one declared in your tree definition file. These viewpoint output files will be connected using the 'Linked Trees' application, which means that if a person-box is represented in more than one viewpoint then a button will be visible (usually an arrow in the bottom-right corner of the box) that will take you to the other viewpoint, or present you with a menu if there are several possibilities. All the files will be connected in this way, but the application also re-uses browser tabs, which means that each viewpoint should appear in no more than one tab. More details on this application may be found at Linked Trees.

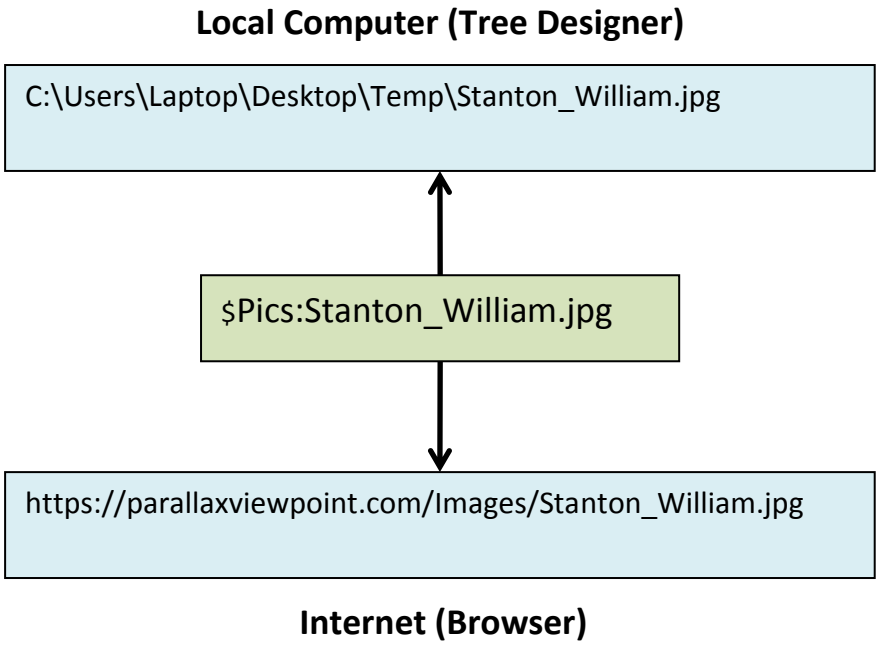
Viewpoints are enabled by default but may be disabled using the 'Viewpoints' setting in the Edit-Settings form. If disabled then you will not be presented with viewpoint menus or have access to the Viewpoint Manager, even though your tree definition file may contain information about them. Also, when disabled, the 'Process' button (main SVG-FTG form) will only generate a single HTML/SVG file, as per normal, and not generate linked sub-trees.

NB: When exporting a tree as GEDCOM ('File->Export As GEDCOM' option on main form) then the whole tree is always converted; the generated GEDCOM file will contain no references to any viewpoints.

6 Place Management

Your output (HTML or SVG) may reference a number of URLs (e.g. http://example.com), either for images, or for articles and other Internet links in the biographical notes. SVG-FTG provides an optional "compact" notation that employs place-keys to reference both internet locations (i.e. URLs) and local directory locations on your computer. Hence, as well as providing ease of change if you move all your Internet images, it provides a switch so that the Tree Designer can work more efficiently with local copies and the browser can access internet copies, both of the same images without changing anything.

Effectively, each key can yield two alternative locations, dependent upon where it's being used. This novel feature is probably best explained with a small diagram. It illustrates that a single image reference using a place-key ("Pics" in this case) will be automatically translated to a full local or remote file name, as appropriate for the tool accessing that image.



Also, when designing your tree then you may not have committed your images yet to an Internet location, but you may have local copies on your computer. It therefore defers that choice until later without incurring a huge change.

The feature allows you to define keys for both local (computer) and remote (Internet) locations for ease of reference in your tree notes or for image names. The place-keys may be substituted between "$" and ":" characters, either in an HTML/SVG attribute (as might be used in a biographical notes section) or in a person image name. This allows SVG-FTG to expand either the local mapping or the remote one, as appropriate, e.g. using local resources in the Tree Designer, but remote resources in the final output file for the browser.

For instance:

$MyGallery: Mary_Ashbee.JPG

might be expanded to:

https://parallaxviewpoint.com/Images/Mary_Ashbee.JPG

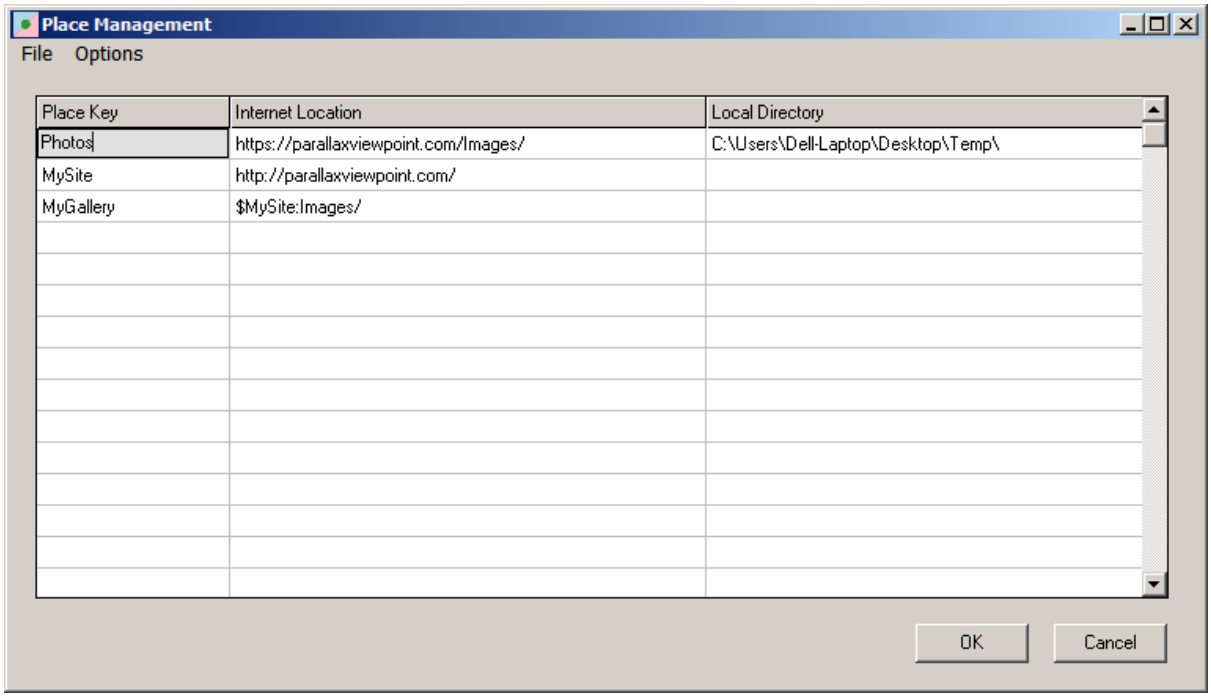
During expansion, the replacement of the place-keys with their local/remote equivalent is recursive to a depth of five. This means that one key can be defined in terms of another key.

For instance, if we have the mappings:

MySite = https://parallaxviewpoint.com/

MyGallery = $MySite:Images/

then the above example would still work; however, it would give you the choice of later changing just a folder on that site, or the site itself without changing any of its associated folders.



If the place associated with a key is enclosed in quotes (e.g. “https://parallaxviewpoint.com/”) then they are quietly removed during substitution. It is recommended that each physical location end in the appropriate terminator (e.g. "/" or "\").

NB: Some remote file references may involve query parameters in their URLs. If so then they are quietly stripped off when generating an equivalent local reference.

There is a management tool in the Tree Designer that may be accessed via the ‘Tools->Manage Places’ menu option. In this tool, a grid allows you to maintain your place-key mappings. The active cell is shaded grey for convenience. Right-clicking on a cell presents the following menu options:

- *'Insert Row Above'*: Inserts a single empty row above the current one.
- *'Delete Row'*: Delete the current row
- *'Copy Place Definition'*: Copies the current place definition (if valid) to the clipboard so that it may be pasted later or elsewhere.
- *'Paste Place Definitions'*: Pastes the details of the last copy operation, if any. The copy could have been performed in the current session or in a separate invocation of SVG-FTG. If key names are already in use then the existing details are not overwritten.
- *'Add Local Directory'*: Browse to a directory on your computer that contains your image files and insert its path into the ‘Local Directory’ column.
- *'Show URL Expansion'*: Fully expands the current key into the address of a remote (Internet) location, if one is defined. NB: This is using the unsaved data from grid rather than the working copy external to the form.
- *'Show Local Expansion'*: Fully expands the current key into the address of a local (computer) location, if one is defined. NB: This is using the unsaved data from grid rather than the working copy external to the form.

The following options are also provided on the main menus:

- *'File->Close and Save'*: Saves the valid place definitions from the grid and closes the form. Any entries with a blank or invalid key name are ignored during this operation.
- *'Options->Add More Rows'*: Adds an extra five empty rows to the end of the grid each time it is selected.
- *'Options->Copy Place Definitions'*: Copies all the valid place definitions to the clipboard so that they may be pasted later or elsewhere.

When the 'OK' button is selected, the lines with a non-empty key name are saved back to a place-key dictionary, and these can be separately saved back to a tree definition file along with other changes made in the Tree Designer (i.e. a further step). See Closing and Saving. The 'Cancel' button discards

any changes and closes the form, exactly as though you had selected the close option in the top-right corner of the form.

6.1 Grid Usage

The grid presents a set of rows that can be edited. The current cell is highlighted, and normal Windows editing keys operate within that cell.

- *Backspace/Delete*: Delete a character in either the backwards or forwards direction, respectively.
- *Left/Right Arrow*: Moves one character to the left or right in the current cell.
- *Ctrl+A*: Selects all the text in the current cell.
- *Ctrl+C, Ctrl+X, Ctrl+V*: Standard Copy, Cut, and Paste operations.
- *Ctrl+Z*: Undo/re-do the very last text-modifying operation.
- *Escape*: Discards any changes made to the current cell, and reverts to its original value.
- *Click and drag*: Selects a controllable portion of the current text.

In addition, a number of navigational keys are defined:

- *Up/Down Arrow*: Moves to the vertically previous or next cell, respectively. If you're on the first or last row then it moves to the other end of the grid.
- *Page Up/Down*: Selects the first or last row, respectively. The column is unchanged.
- *Return/Ctrl+Return*: Cycles through the cells from top-left to bottom-right, or the reverse with the Ctrl modifier.
- *Tab/Shift+Tab*: As per Return/Ctrl+Return.

The columns of the grid can be resized by dragging the dividing lines between the column titles. However, note that due to a quirk in the system code, the corresponding update of the grid content does not take place until a mouse movement is detected.

7 Applications and Services

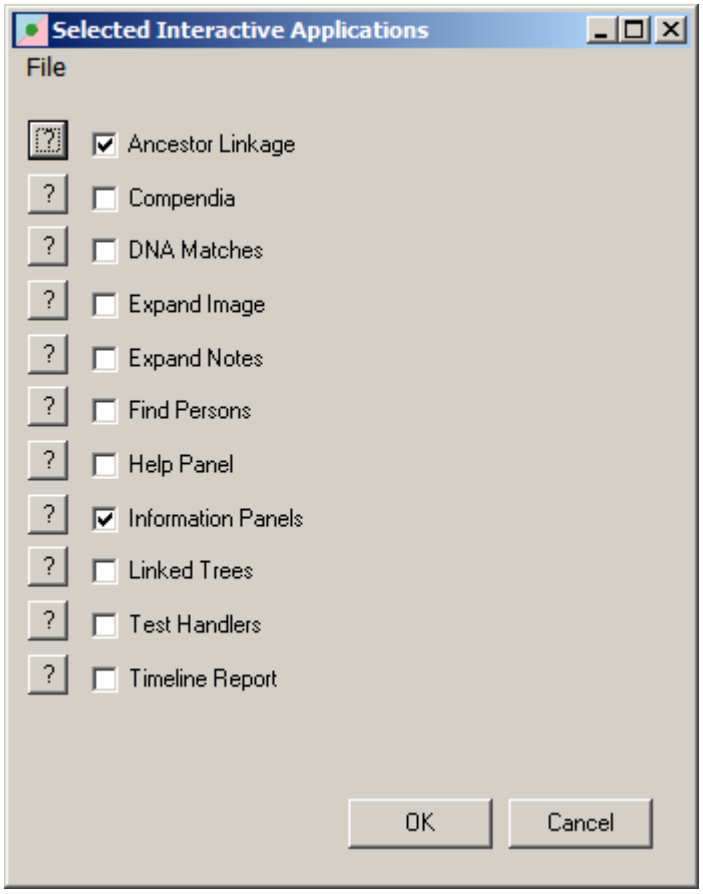
One of the most important features of SVG-FTG is that it doesn't simply produce a static image of a family tree; you can add interactive applications and services to your tree that will make it do useful things.

The difference, here, between applications and services is whether they are selected by the end-user (applications) or by applications (services). An application supports more complex functionality (e.g. 'Timeline Reports') while a service may provide something relatively simple that several applications

may utilise (e.g. a pop-up message box). Both contribute to the enhanced experience, and both are defined in the same registration file: ApplicationsServices.xml.

It is not recommended that this file be modified, but both customisations and whole new applications may be registered using variations of this file in the same directory that match the wildcard: ApplicationsServices*.xml. In other words, SVG-FTG will load all such files at start-up, including the standard one from the distribution kit and any additional ones that you have created. If you are a software developer or a "power user" then you are encouraged to try this. Detailed notes may be found under "Program Notes:Application Development".

In the Tree Designer, the 'Options->Interactive Applications' menu option will present a simple list of applications that are available to you:



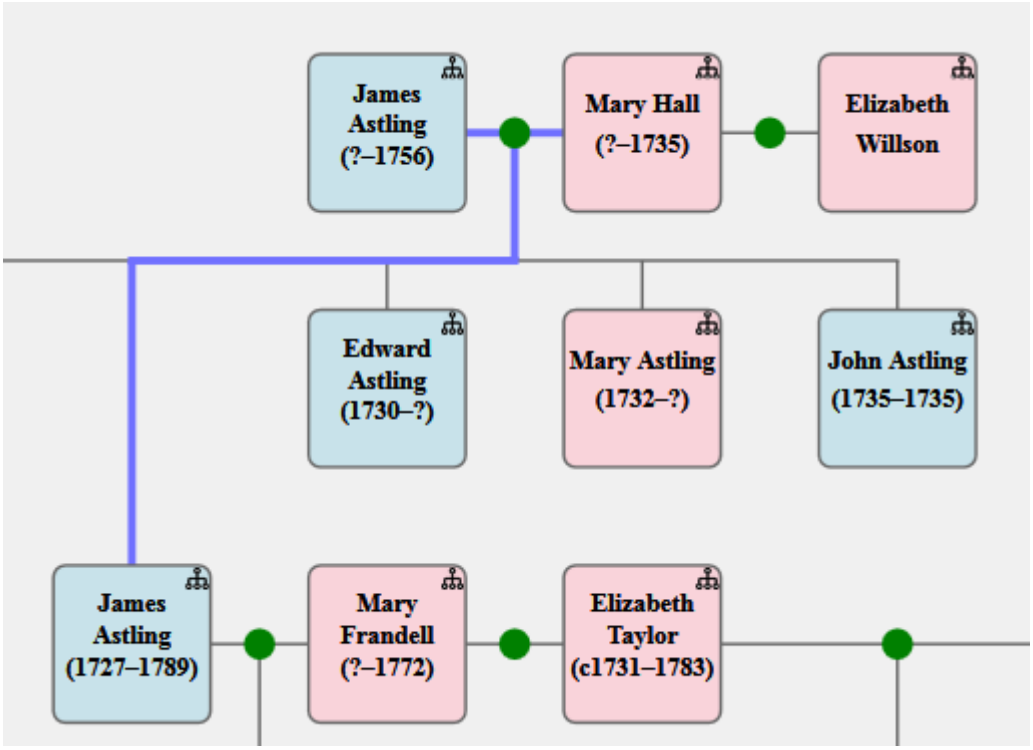
You can select multiple applications for your tree, and SVG-FTG will automatically generate the necessary code to make them all work. Each entry will display a slightly longer description of its functionality if you hover over it. The small '?' button next to each entry will tell you which mouse-click operations are currently configured for the application, and this may be the default ones or customised ones (see "Program Notes: Application Development"). NB: If you have associated more than one operation to the same type of mouse-click then you will get warnings when you press the 'OK' button. Note that the selected applications apply equally to your full tree and to any viewpoints; they are not viewpoint-specific.

If you have selected SVG output rather than mixed HTML/SVG output (i.e. SVGFile=True) then certain entries will be coloured red if they cannot be supported in that mode.

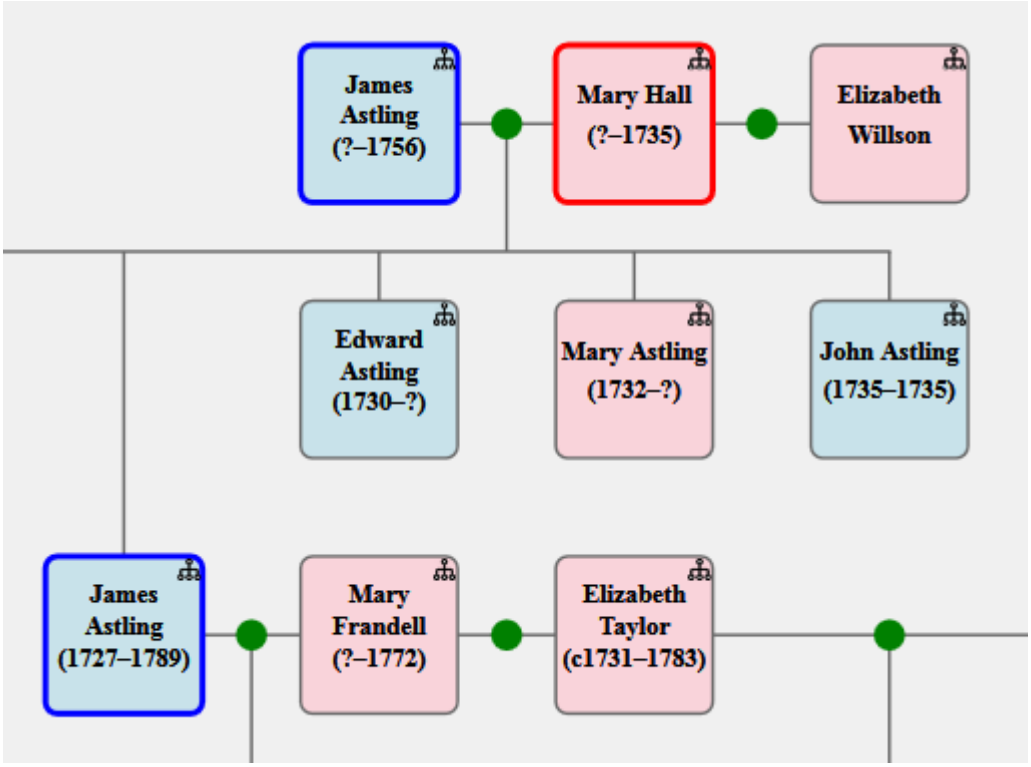
7.1 Ancestor Links

This application highlights the ancestral paths (both paternal and maternal) for any given person. The default configuration is to place this functionality on a TR button, with a tree icon by default. Notes for re-configuring the button (and other details) may be found in "Program Notes:Application Registration".

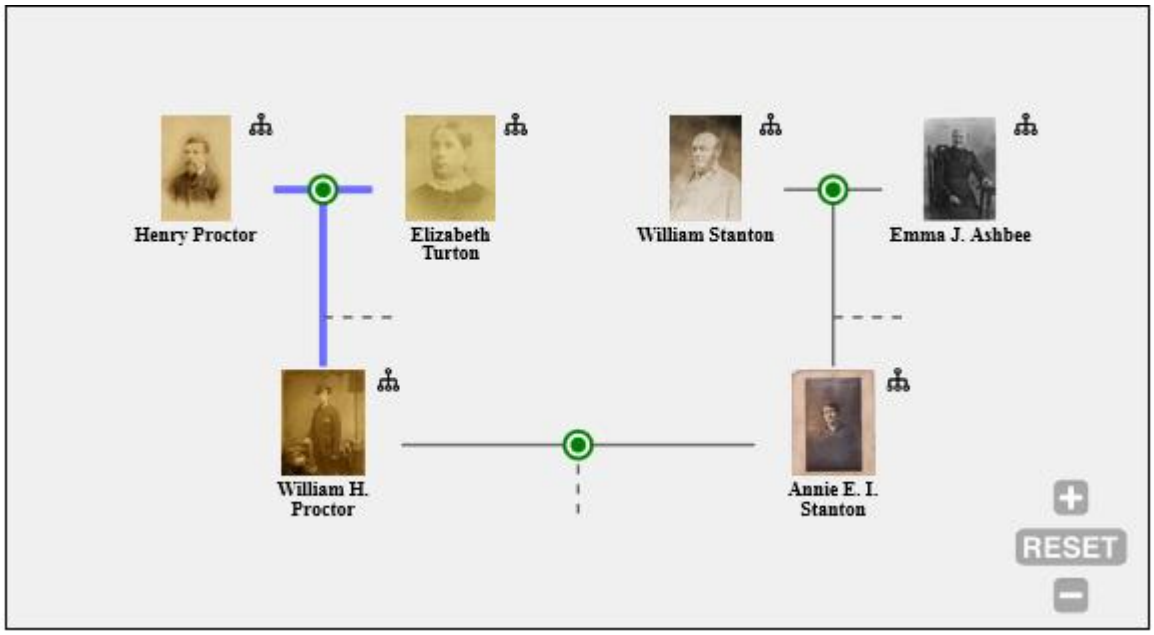
Clicking on this button for any person-box highlights the lines up through their ancestors, and branching at each respective family-circle.



A Shift+Click operation on the same button highlights the person-boxes rather than the lines.



An Alt+Click operation will display both modes together. A Ctrl+Click operation clears down any current highlights. If you have disabled the box borders then the highlighting of paths still works (Click) but not that of box borders (Shift+Click). For example, the following SVG image was generated with stroke-opacity and fill-opacity both set to zero for the collective box classes ".f, .m, .u, .x":

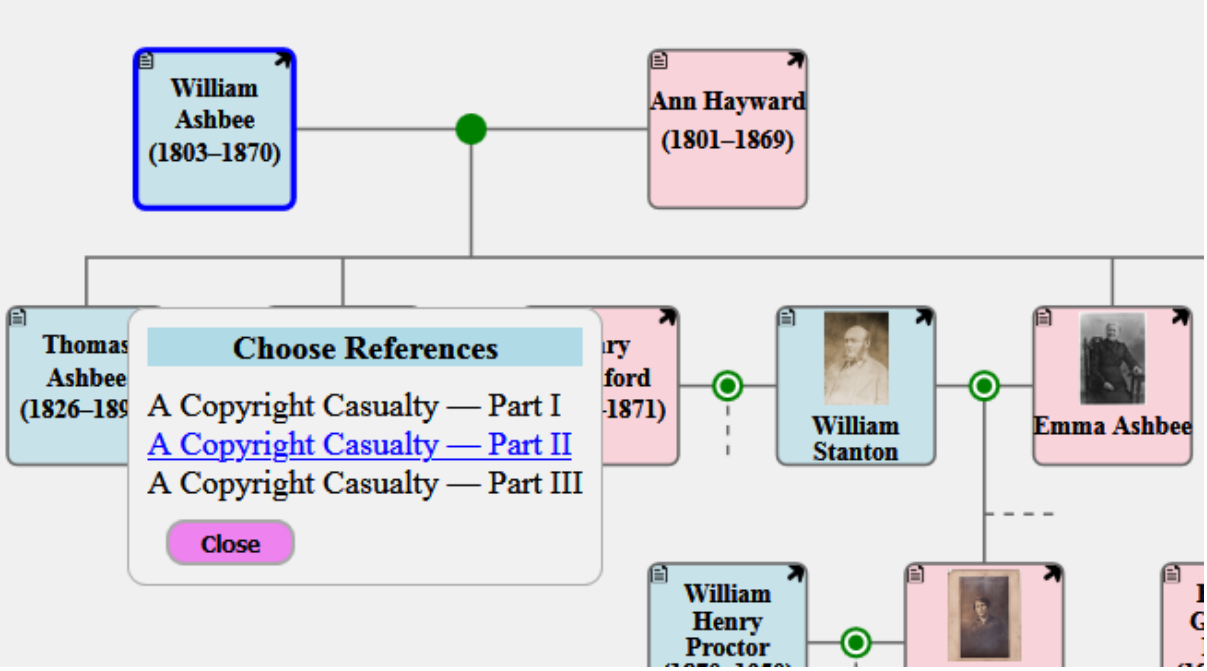


The application also works when Fanned=True, and irrespectively of whether SVGFile=True.

NB: If a root-person was selected in the Tree Designer (see 'Set as Root Person' checkbox in the Edit-Person form) then a similar, but fixed, functionality is produced. Although this application is a newer feature, it collaborates with the root-person feature by undoing its lines before drawing any new ones. Also, it will scroll-into-view and highlight any root-person to effectively implement a "start-up person" for your tree, or your viewpoint. If you need a start-up person but without their ancestral path highlighted then this can be achieved by modifying the al_init() call in the application registration file (see "Program Notes:Modifiers" for more details).

7.2 Compendia

This application uses the 'References' program data, which in turn consists of pairs of titles and URL data links held against persons (and families). Clicking on the button (a document icon by default) will present a list of any such references in a floating dialog, and clicking on each of the entries will show their contents in a new browser tab.



A Shift+Click on that button will highlight all persons or families that have at least one data link in common with the clicked one, implying that they share references in the same article or appear in the same image. An Alt+Click on the button will highlight all persons (and families) having any such references available. A Ctrl+Click on the button will clear any current highlights on all elements.

NB: the references may utilise the place-key feature for ease of maintenance.

7.3 Expand Image

This application simply expands any thumbnail image into a separate browser tab when it is clicked on. The operation does not apply to stock images (e.g. simply male/female icons). It works independently of the SVGFile setting.

7.4 Expand Notes

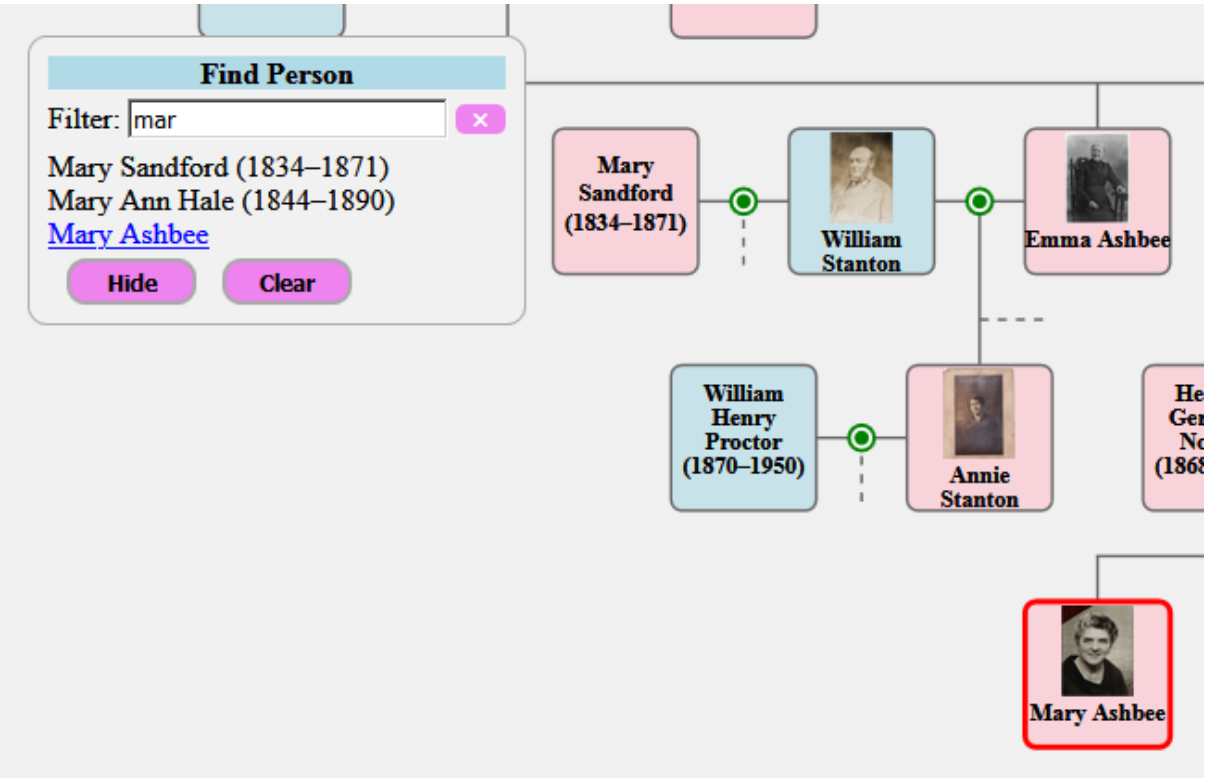
This application displays historical or biographical notes for a person or family by clicking on the associated person-box or family-circle. This is similar to Information Panels, but they are displayed in a separate browser tab. The application therefore works independently of the SVGFile setting.

This mode of presentation may also be more convenient if those notes are extensive, or they include multiple images.

NB: If the person or family has no notes defined then a pop-up message is generated. This can be disabled (or changed) by modifying the en_none text variable.

7.5 Find Persons

This application provides a search box to help find specific persons in a large tree, or across several trees hosted in the same page. The search box is initially collapsed, but may be opened with the 'Show' button. It works in a similar manner to the 'Edit->Find Person' option in the Tree Designer: typing parts of a personal name will filter the full list to help you identify the one you are trying to find. Selecting one or more names from this filtered list will highlight their corresponding person-box.



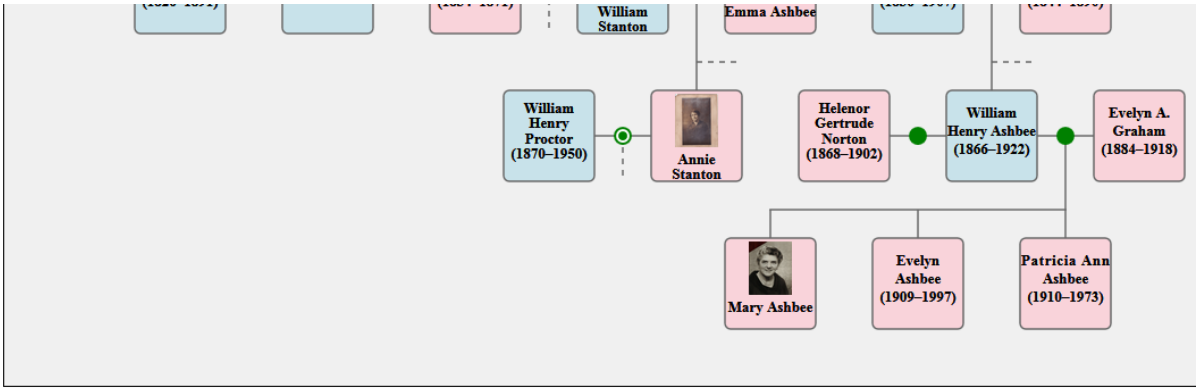
The search box may be dragged with the mouse (clicking and holding on the title bar) to move it out of the way if is obscuring anything. The 'Clear' button will remove all current person-box highlights. The application is only supported when SVGFile=False (i.e. for normal HTML generation).

7.6 Help Panel

Displays (or hides) a simple help panel showing which mouse and modifier-key combinations are configured for the selected interactive applications, in the current tree instance. By default, it is attached to an Alt+Click operation on any person-box. A 'Help' button is also provided in the bottom-right of the screen.

7.7 Information Panels

This application displays historical or biographical notes for a person or family in pop-up information panels by clicking on the associated person-box or family-circle.



Helenor Gertrude Norton was born c1868 in Leeds, and died 7 Dec 1902 at 55 Pemberton Street, Shelford, Barton-upon-Irwell, Lancashire, aged 35, of 'pulmonary tuberculosis 10 months, exhaustion'.

Articles and mentions:
More of a Life Revealed

After the death of his first wife, William Henry Ashbee married Evelyn A. Graham at Sale St. Anne, Chester, on 1 Aug 1904.

These panels can be dismissed by performing a Ctrl+Click (or CMD+Click on Mac) on any person-box or family-circle, as appropriate (See Modifier-key Usage in Browsers). The application is only supported when SVGFile=False (i.e. normal HTML generation), but see also the 'Expand Notes' application.

NB: If the person or family has no notes defined then a pop-up message is generated. This can be disabled (or changed) by modifying the ip_none text variable.

7.8 Linked Trees

The ‘Linked Trees’ application supports hyperlinks transferring you from one tree to another, or even to a different place in the same tree. It may be utilised freely by the end-user, but is also utilised by SVG-FTG itself in order to display viewpoints. In order to avoid any clash, the data format available to end-users is called ‘TreeLink’, while that generated for viewpoints is called ‘TreeLinkV’. These are

identical but the distinction allows SVG-FTG to re-generate its viewpoint links each time you use the main ‘Process’ button, without disturbing any user-defined links.

When editing program data, only the ‘TreeLink’ data format is made available to the user; the ‘TreeLinkV’ format is hidden to prevent the associated data being loaded into the table editor (see Program Data).

Both of these data formats have the following fields:

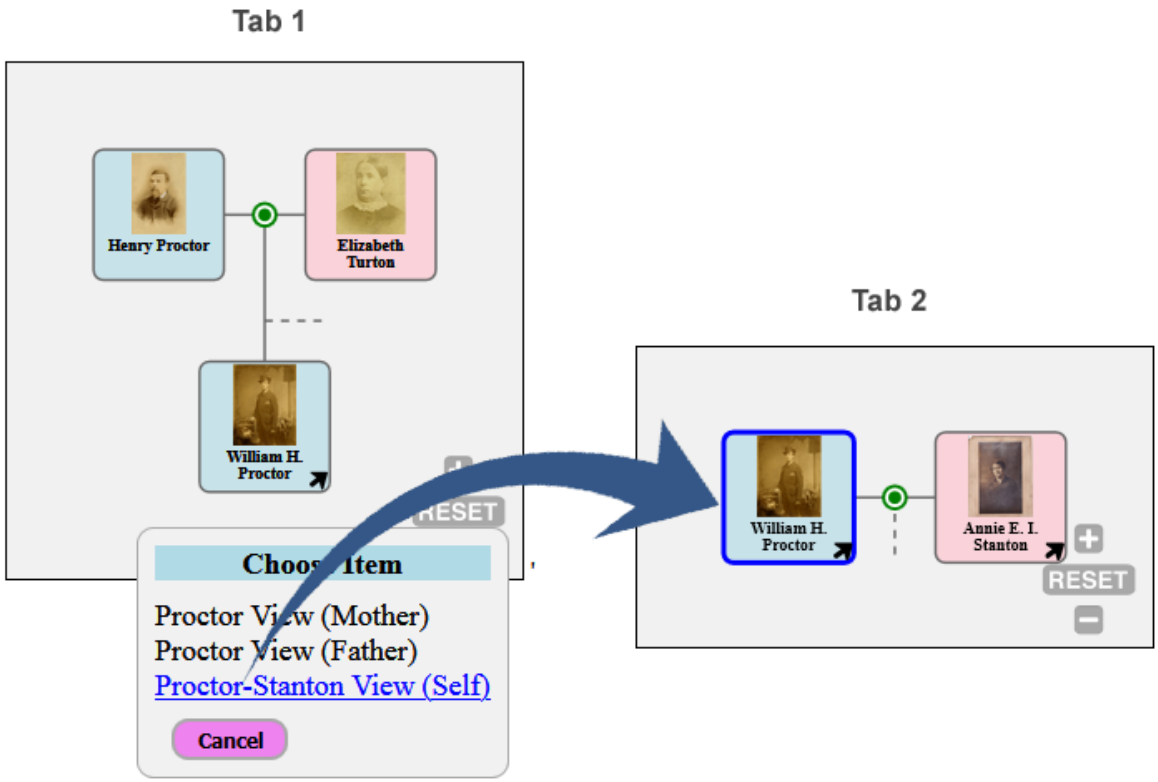
- *Viewpoint Key*: If the target tree is related to a viewpoint then this is the viewpoint key, else left blank.
- *Tree Name*: A description of the target tree that can be presented to the user in a menu. For a viewpoint, this will be the associated descriptive name (not the key).
- *File Name*: The file name of the actual HTML or SVG contribution. It should not contain any path or file extension since these will be determined at run-time by the source tree (the one transferring control to the target), partly in order to avoid “cross-origin” issues in the browser and partly to make it work irrespective of whether SVGFile is set to true or false.
- *Target ID*: The id value of the target element. This would normally be that of a person-box, in which case the element will be scrolled into view (within the target tree) and highlighted, otherwise it will just be given focus. NB: for a person (or family) is must be the id, and not just the key (see "Program Notes: Use of the id Attribute"). A single '?' character can be used as a place marker for the current instance identifier (if any). They will automatically be replaced by the application code.
- *Role*: The role of the target element in relation to the source person. For viewpoints, the TreeLinkV format puts “Self” in this field because SVG-FTG only links them only by common persons. If something is entered in this field then it is used to supplement the ‘Tree Name’ in any menus presented to the user, e.g. “tree-name (role)”.

By default, a button with an arrow icon is placed in the bottom-right corner of all person-boxes that have any 'TreeLink' or 'TreeLinkV' data. A Click operation on this button with either take you to the respective target element (person-box or other element type) if there's only one, or present you with a menu of the available targets. If the target is a person-box then it will be scrolled into view and highlighted, and if it is a family-circle then it is merely highlighted, otherwise it will simply be given focus.

An important feature of the 'Linked Trees' application is that it names the tabs that it uses in the browser, and that allows it to maintain a finite set of tabs to encompass all your linked trees; selecting a person-box that is in a tree not yet shown will automatically load it into a new tab, but thereafter that same tab will be used for all other references to the same tree.

The following image shows two such trees from the sample called TreeViewpoints.txt that is distributed with SVG-FTG. The sample contains both 'TreeLinkV' data, generated automatically to connect viewpoints, and 'TreeLink' data, generated manually (see Program Data). Viewpoints are

automatically connected only on their common persons (shown as "Self" in the menus), but extra data was added here to provide further "Mother" and "Father" links. Clicking on the arrow button for William H. Proctor, and selecting the "Self" entry would transfer you to a second tab showing the same person in a different viewpoint.



In the second tab, you could again click and select the "Self" entry to go back to the first tab, but you could also select the "Mother" or "Father" entries to be transferred to person-boxes having different roles with respect to the source person. Such roles may be freely invented, and 'TreeLink' data doesn't even have to constrain itself to viewpoints. The application is designed to be more general than viewpoints, but also capable of co-operating with them.

This type of mutually-referential transition may be less familiar to users of conventional Web pages, and it is possible to re-configure the application to always open trees in the same tab (see "Program Notes:Modifiers"), but you would then lose the advantages: having parallel access to these "tabbed trees" is very powerful given that they can each run their own applications.

An Alt+Click operation on a button will highlight all person-boxes that have any 'TreeLink' or 'TreeLinkV' data available; you can usually tell this by whether the arrow icon is present but this options may make it more apparent when there are many person-boxes. A Ctrl+Click operation on a button will clear any highlights in the corresponding tab.

NB: in SVG mode (e.g. with an SVGFile=True header setting), functionality is more limited: only page transitions within the same tab are supported, the menu dialog uses the standard (but primitive) prompt() function, and the tabs are not titled.

7.9 Test Handlers

This is a diagnostic application that tests whether all possible mouse-click operations work on person-boxes, person-box images, family circles, and person-box buttons. It works independently of the SVGFile setting.

7.10 Timeline Reports

This application sorts the vital events in the notes added for persons and families in order to generate a timeline report. Those events must be marked up, either by hand (see HTML Editing and "Program Notes: Event Mark-Up") or automatically if importing from a GEDCOM file.

A Shift+Click operation will select a specific person-box, or a family-circle, which then also selects the two spouses and all their direct children.

The 'Show' button collects the vital events for the selected items, sorts them, and displays them in a timeline report. The 'Dismiss' button closes that report. The 'Clear' button clears all the selected persons and families.

Timeline Report

Sunday March 18, 1725

James Astling (1727–1789) and **Elizabeth Taylor (c1731–1783)** — **Married**

Married on 18 Mar 1775 at Coddington All Saints.

1725

James Astling (1726–1726) — **Birth and death**

James was born c1726 and buried 1 Aug 1726 at Coddington All Saints.

Wednesday February 6, 1726

James Astling (?–1755) and **Mary Hall (?–1735)** — **Married**

Married 6 Feb 1726 at Averham St. Michael & All Angels.

Wednesday September 17, 1727

James Astling (1727–1789) — **Baptised**

Baptised 17 Sep 1727 at Coddington All Saints.

Wednesday July 19, 1730

Edward Astling (1730–?) — **Baptised**

Baptised 19 Jul 1730 at Coddington All Saints.

Wednesday September 10, 1732

Note that if the 'Information Panels' application is also selected then clicking on a green event description in the timeline report will also show any associated notes containing that event in a pop-up information panel, thus providing greater detail. The application is only supported when SVGFile=False (i.e. normal HTML generation).

8 Sharing Trees

Note that you can also share without the Internet. The preferred way to share your SVG/HTML, and associated images, is via a Website, or possibly via a blog, but if you're worried about Internet privacy, and you don't want to share with the world — only with your family — then it is possible to zip up the SVG/HTML with all its images, and simply email them to relatives.

OK, so how and why does this work? Well, we've already explained that each place key has both a local definition (a folder on your computer for the Tree Designer to look in) and an Internet definition (an http:// reference that browsers can look in when viewing the SVG/HTML). If you leave the Internet definition empty then it means that the generated SVG/HTML code references the images without any http:// prefix. Then, if a relative loads their local copy of the SVG/HTML into their browser, it will look in the same local folder (where their SVG/HTML is executed from) for the images and not on the Internet.

9 Printing

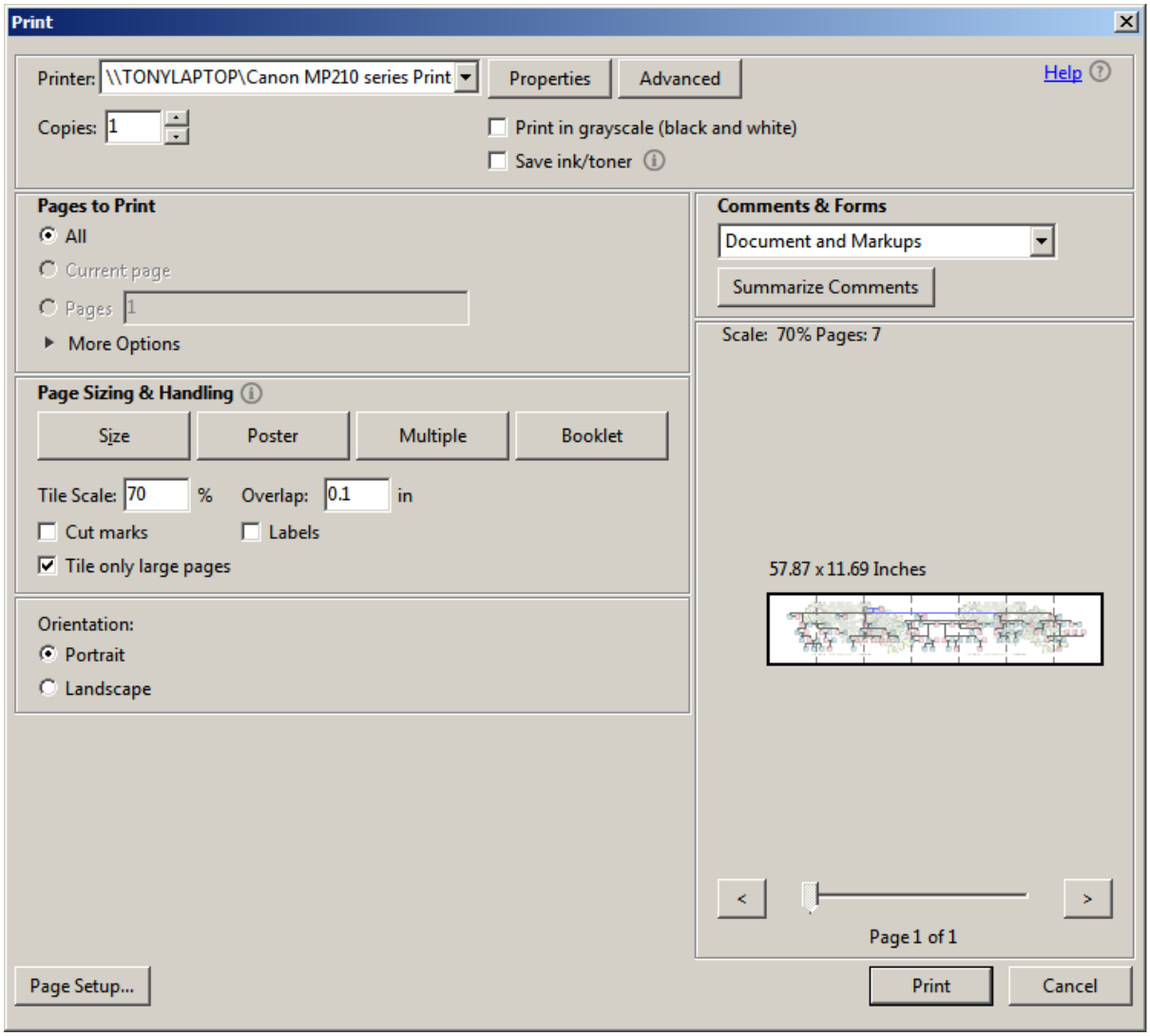
SVG trees are great for viewing them in browsers — where you can get pop-up biographical details, hover text, timeline reports, etc — but not so good for printing. The Print dialog in most browsers is not good for spreading (i.e. "tiling") a wide document like a family tree over multiple pages, and ensuring that you can stick the parts back together again.

Using free software only, the best approach is to use Inkscape (https://inkscape.org/), or an online equivalent such as https://convertio.co/svg-pdf/, to convert the SVG to PDF format, and then use Adobe Acrobat (https://get.adobe.com/uk/reader/) to print it as it has a much better Print dialog.

There is a small problem, though, because Inkscape will not process Internet-based image references (e.g. http://...) for "security reasons", and puts a huge square error marker in the view of the tree that cannot be edited out. You can get around this by using local computer-based image references, but the conversion seems to lose the faintness set on any background image (see Advanced Settings). The procedure begins, therefore, by downloading copies of any images to your computer. If one is your background image then adjust it to be as faint as you need using some image editor (e.g. Microsoft Office Picture Manager). In your SVG file, using Notepad, change all the image references from http://... to file:///... (yes, three slashes) referencing the local versions of files, e.g. "file:///C:/Users/Tony/Desktop/Tree-branch-clipart-png-4.png". If you have a lot then you can always use the Place-key feature of SVG-FTG.

Then load the SVG file into Inkscape and simply do a Save-As to PDF format.

Load the PDF copy into Acrobat and select 'Print...' from the menu. This should show a Print dialog looking as follows:



Select 'Poster', which is what it calls the tiling. Make sure 'Cut Marks' and 'Labels' are clear. Adjust the 'Tile Scale' so that the tree fits within one page height. Acrobat will automatically select landscape/portrait based on this, and will ignore the associated radio button below. For instance, on a typical tree of about 35 columns by 10 rows, with larger-than-normal boxes, 50% might span the tree over 4xA4 landscape sheets, whereas 70% might span it over 7xA4 portrait sheets. It depends on how good your eyesight is which one you want. There's a little image to help show you what you're getting, and a summary above it giving you the overall size and page count. NB: A4 is 8.27 × 11.69 inches.

When it works, you will probably see a small white margin on one sheet of an adjoining pair, and none of the other, thus allowing you to stick them together.

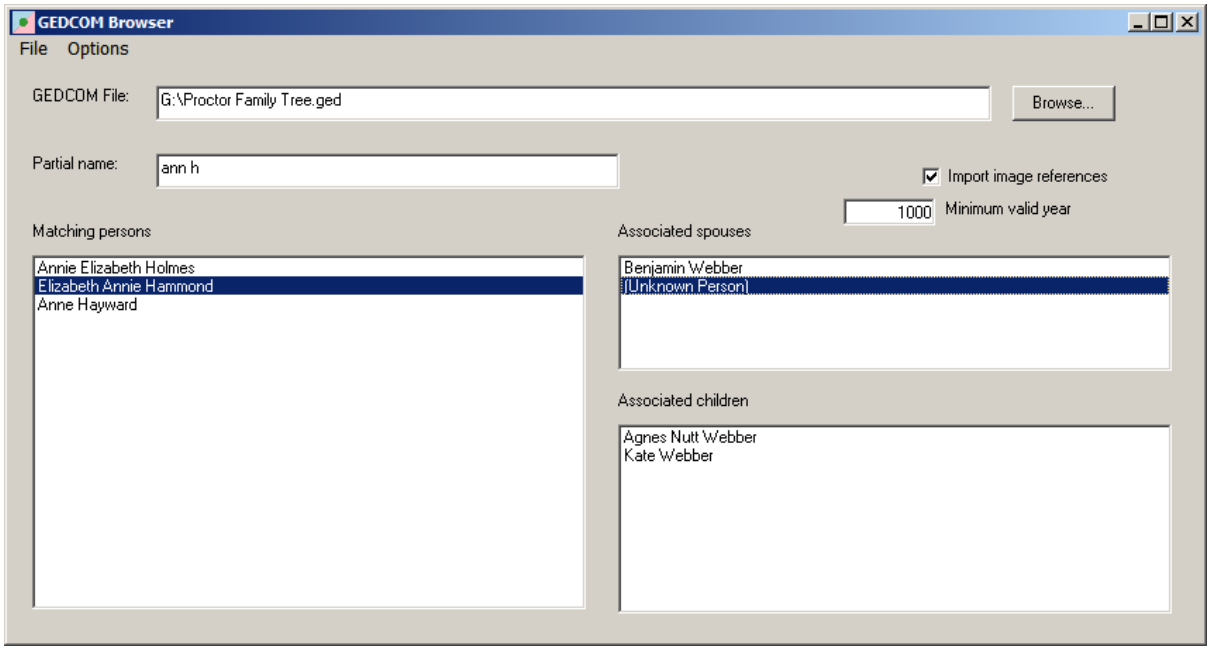
I've tried playing with the 'Overlap' setting but it's not very predictable. It's suppose to print a certain amount of the image on both adjoining edges to help you overlap them without losing anything. Sometimes, though, I got a white margin on both sheets and had to trim one with a guillotine. I eventually used a setting of 0.1 inches, but you might want to experiment.

From the 'Properties' button, you should be able to get to your normal printer preferences. Mine offer a 'Borderless printing' option, but when I selected it, it just complicated the already random nature of the 'Overlap' setting.

10 GEDCOM Browser

SVG-FTG may load a GEDCOM 5.5(.1) file and allow you to copy-and-paste persons, or families, from there into the Tree Designer. It will also allow a complete export of a loaded GEDCOM file into a new tree definition file.

On the main SVG-FTG form, there's a 'File->Load GEDCOM File' menu option that will invoke the GEDCOM Browser.



On selecting and loading a GEDCOM file, the browser allows you to explore the people by personal name and family structure. Entering a partial name (e.g. with abbreviated name tokens) will show those people with matching names, as demonstrated in the example image, above.

Selecting one of the matches will present their spouse(s) in the window to the right, and further selecting a spouse will enumerate the children associated with that family.

Until the Tree Designer is invoked, the only useful right-click options in the 'GEDCOM Browser' are 'Show Details', in order to present brief details of the person or family to confirm whether you have the right one, and 'Select ... Name', which moves the name of the selected person (or of one of their parents) to the partial-name field to allow you to descend a further level of lineage.

In the Tree Designer, the 'File->Import GEDCOM' menu option also invokes the browser, and it doesn't matter which option you use. If you close and re-open the browser then it will continue from where you left off before.

There are a number of 'Copy ...' right-click options on the persons and their spouses that will save the details of one-or-more persons, or a couple and their direct children. These may be pasted into the Tree Designer at a selected point, just as with its native copy-and-paste operations (see Copy and Paste).

- *'Copy Person'*: Copies the details of a specific individual.
- *'Copy Person and All Spouses'*: Copies the details of a specific individual and all their spouses. This will still create a family-circle, when pasted, but will not include their direct children.
- *'Copy Person and Spouse'*: Copies the details of a specific individual and their selected spouse. This will still create a family-circle, when pasted, but will not include their direct children.
- *'Copy Person, Spouse, and Children'*: Copies the details of a specific individual and their selected spouse, plus all their direct children.
- *'Copy Child'*: Copies the details of a specific child.

The browser also has its own 'File->Export to File' menu option that will convert the whole GEDCOM file to the format of the tree definition file, as used by SVG-FTG.

In all of these copy or export operations, the browser automatically generates a caption for the person-boxes, and generates both HTML biographical details and plain-text tooltips (i.e. "hover text") from the events and notes in the GEDCOM file. The HTML biographical details also includes event mark-up that will support the 'Timeline Reports' application, as demonstrated at TimelineExample.html , and which is automatically selected (see Settings). The conversion acknowledges multiple personal names, and non-biological lineage in a family.

NB: The count of loaded persons, as reported in the main progress window, may be slightly higher than the actual count of GEDCOM INDI (individual) records in the file. This is because the code automatically creates additional unnamed persons if any FAM (family) record doesn't have exactly one HUSB (husband) and one WIFE record.

NB: The ANSEL character set is not supported. See also "Program Notes:GEDCOM Data".

10.1 Thumbnail Images

The GEDCOM Browser will also import any thumbnail image references defined in the data. As well as supporting both of the differing version 5.5 and 5.5.1 GEDCOM structures, it also supports some custom tags such as _FILE, _TYPE, _KEYS, and _PRIM. It also takes remedial action on Ancestry's otherwise useless image references.

If the 'Import image references' checkbox is unchecked then no image references will be imported.

Any imported image-file references are converted to use SVG-FTG's place-key feature as it gives the user many options for accessing them in the SVG code. Let me explain this in stepwise fashion.

- After loading a GEDCOM file, the browser scans for all the paths used by the associated image-file references, whether remote ones (i.e. URLs) or local computer file names (either absolute or relative ones).
- The browser records the associated folder s or directories in a list. If they are not already present in the list then default place-key are created for them.
- This list can be modified at any time using the 'Tools->Manage Places' menu option on the GEDCOM-Browser form (not the one in the Tree Designer).

This presents a number of alternatives for the end-user.

- If they are happy with the choice of place-key names, and they have no intention of moving the image files to a different location, then there is nothing more to do.
- If they would like to give the place-keys more meaningful names then they can be changed using 'Tools->Manage Places'. If the same GEDCOM file is then reloaded, it will automatically make use of the new user-defined place-keys and will not record the same ones again.
- If the user will be moving the image files to a location better-designed for either SVG-FTG's Tree Designer or for the SVG code in the browser then the paths can then be edited to add their corresponding mirror locations (see below).
- When GEDCOM data is subsequently copy-and-pasted into the Tree Designer, or exported to a *.txt file, then the final names and values of the place-keys will follow it.

If you've imported image references from an online site then place-keys would have been created for their remote locations (i.e. URLs pointing to the corresponding site). This means that the SVG output should show those same images in your browser, but the Tree Designer may not show them by default — unless you happen to have local copies available and have already updated the place-keys to say where they are. In order to help in this situation (and other similar ones), the Tree Designer has a 'File->Localise Images' menu option that will download those remote images to a local directory for the Tree Designer to display. Simply edit the place-keys to ensure they have a local mirror directory, and then execute that menu option.

NB: the GEDCOM 5.5.1 specification allows a single OBJE record to specify multiple FILE references, but only the first is acknowledged by the browser since I'm not aware of any software that makes use of that feature.

NB: The now-deprecated 5.5 BLOB tag is not supported for image definitions.

11 Command-line and Shortcuts

Note that if a tree definition file is specified as a command-line argument then SVG-FTG will immediately load that file, thus avoiding the need to browse for it. This results in a couple of advantages worth noting:

- If you right-click on a tree definition file, select ‘Open with’, and then ‘Choose default program’, then you can browse for SVG.exe (in the system's 'Program files (x86)\SVG' directory), and select it. The ‘SVG Family-Tree Generator’ will thereafter appear in the right-click menu when clicking on other tree definition files.

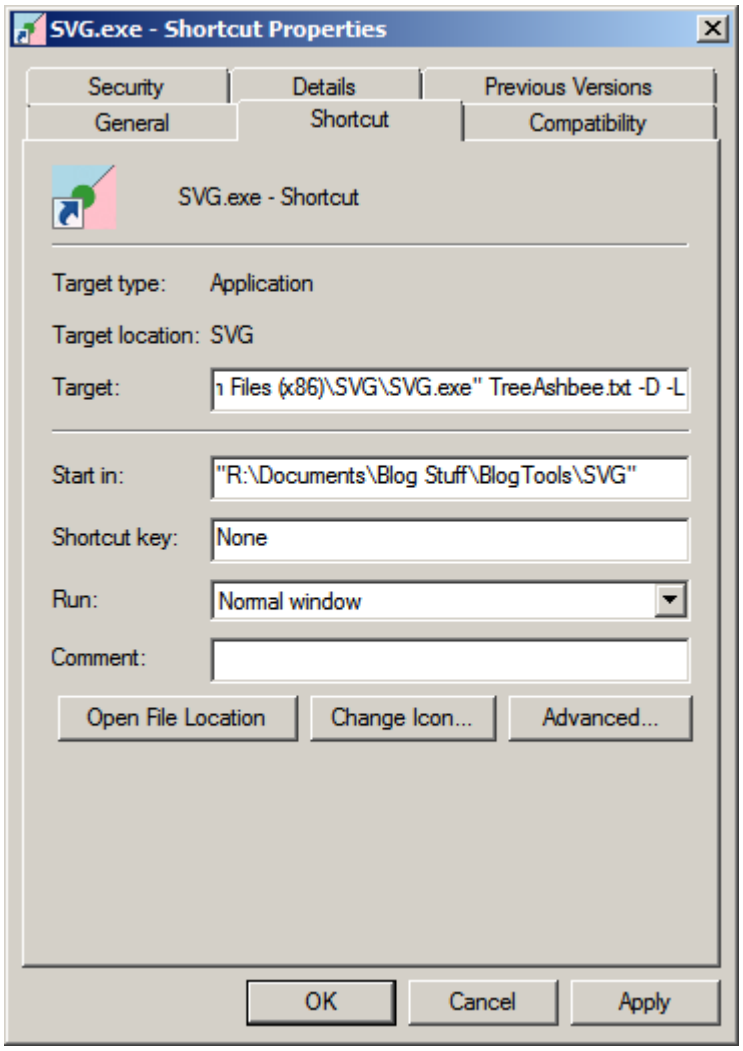
- If you find the SVG shortcut in your Start Menu, right-click it and drag it on to your desktop, and then choose ‘Create shortcuts here’, then it will create a duplicate shortcut on your desktop. You can do this multiple times and make each one specific to a different tree definition file. Once copied to your desktop, right-click it and select ‘Properties’. The name of the shortcut (e.g. “Ashbee family tree”) can be specified on the ‘General’ tab, and the associated command-line on the ‘Shortcut’ tab. Place the additions to the command-line at the end of the program name, in the ‘Target’ field.

Note that the 'Start in' directory must be your working directory, and not a system directory.

The command line for SVG-FTG has the following format:

[tree definition file] -option ...

For instance:



This example specifies an initial tree definition file of TreeAshbee.txt, and two options: -D (causing it to go immediately into the Tree Designer and –L (causing the Tree Designer window to occupy the top part of the screen).

The available options, which can be preceded by either "-" or "/", may include the following:

- -B — restricts the Tree Designer to the bottom part of the screen.
- -D — immediately open Tree Designer with the loaded file.
- -I — Causes the Tree Designer to utilise a private 'Drag Icon' rather than the standard one. This may be necessary when using a WINE-based compatibility layer. See "Program Notes:Browsers and Windows" for more details.
- -L — perform an auto-layout operation.
- -P — processes the loaded file to generate the corresponding HTML or SVG output.
- -T — restricts the Tree Designer to the top part of the screen.

It would therefore be possible to load two tree definition files, one above the other, with just two mouse clicks.

NB: -0 is reserved for special diagnostic mode to do with image handling.

12 Modifier-key Usage in Browsers

The interactive applications and services may utilise mouse clicks on person-boxes, thumbnail images, family-circles, or in optional buttons placed in the corners of a person-box. The operations themselves may be simple mouse clicks, or in combination with the Control, Shift, or Alt keys. In other words, 28 variations ((3+4)*4).

Mac users have a different keyboard and the modifier-key correspondences are as follows:

Control — Not really the same as a Windows Ctrl key: this actually provides one way of achieving a right-click on a Mac.

Command (or CMD) - This is the true equivalent of the Windows Ctrl key.

Option — This is the equivalent of the Windows Alt key.

Shift — Identical to the Windows Shift key.

It is not currently possible with SVG elements to detect which mouse button was used, or to distinguish a single-click from a double-click. Although it's possible to use multiple modifier keys for extra options (e.g. Ctrl+Shift+Click), SVG-FTG does not take advantage of that currently because it would make the user interface a bit complicated.

NB: Some browsers may impose certain functionality when different modifiers are used with a mouse click. For instance, in Google Chrome, a Ctrl+Click on a link does not pass focus to a newly

opened tab, and a Shift+Click will open a link in a new window rather than as new tab. However, SVG-FTG's functionality requires that these alternative actions are consistent and equally programmable. It therefore does its best to overcome such impositions.

13 Tree Definition File Syntax

The tree definition files are simple text files that define persons and the relationships between them. The record types are distinguished by the first character (which must be followed by a space), as follows:

- “H” — header records
- “P” — person records
- “F” — family records
- ”=”/”-“/”#”— notes associated with a preceding person or family.
- “/”— local settings for the preceding person or family.
- “U” — maps a place key to a URL and/or a local directory path.

Lines beginning with a single quote are treated as commentary and ignored, but note that the Tree Designer does not currently preserve them.

13.1 Header Records

Define global settings and other parameter values for the Tree Designer and the final tree. Each record contains a comma-separated list of ‘name=value’ terms. For instance:

"H W=80,H=80,MH=50,MW=50,Small=False,Horiz=True,Stepped=True,Title=TreeTest,Blog=True”

The Tree Designer offers a forms-based interface to most of these settings (see Settings and Advanced Settings). The following parameter names are defined:

- BW/BH — Changes width and height of buttons used in corners of person-boxes. Default is 12x12 pixels. Not recommended for change unless you’ve also changes the size of the person-boxes too. See "Program Notes:Changing the Buttons".
- BGImage, BGImageWidth, BGImageHeight, BGImageOpacity — BGImage optionally specifies the URL of an image to use as a backdrop in the browser (not the Tree Designer). The width and height are proportions of the total tree area (values between 0 and 1, or 0% and 100%). The opacity is a value between 0 and 1 (or 0% and 100%) causing the image to be rendered less intensely. See Advanced Settings for specific details.
- Blog — Whether to target for blog. Implies such things as modified sizing, small-font default, and line break between the two pop-up information panels). Default is False

- ButtonTR, ButtonTL, ButtonBR, ButtonBL — Request a small selectable area be added to the corresponding corner of every person-box. These can be used to provide additional operations on the final tree in the browser. The default for each is False, although the selection of interactive applications and services may enable them. NB: By default, the buttons are rectangular (dimensions BWxBH), but if Rounded=True then this is changed to a circle (if BW=BH) or an ellipse. Buttons can also be specified on a per person-box basis using Local Settings.

- ClassPerson ,ClassPersonLines, ClassPersonNotes, ClassFamily, ClassFamilyLines, ClassFamilyNotes — Allow extra CSS classes to be associated with person-boxes, family-circles, lines, or notes divs, so that they can be presented differently. See "Program Notes:User-defined CSS Classes". Classes can also be specified locally on a per-person or per-family basis using Local Settings.

- DesCols/DesRows — Specify the number of columns and rows to show in the Tree Designer's grid. The defaults are 12 and 8, respectively. These are defined for the default horizontal orientation, and are automatically switched if the orientation is changed.

- Fanned — Duplicates the Tree Designer representation by using direct angled ("fanned") lines rather than the normal combination of horizontal/vertical lines. This can be useful if your tree is very complicated with lines that cross each other. The default is False.

- Header — Optional header file to insert at the head of the generated output file, instead of the standards ones documented under "Program Notes:Application Development".

- Horiz — Whether tree orientation is horizontal (default True) or vertical.

- IconTR, IconTL, IconBR, IconBL — Optional icon images to use for the buttons in the person-box corners. These URLs can make use of the "compact" place-key notation. See "Program Notes:Changing the Buttons" for more details.

- ImagePart — A fractional number between 0 and 1 that controls how much of a person-box height to use for any associated image. A value of 0 (the default) disables the display of any images, and a value of 1 disables any short caption underneath. Percentages are accepted as an alternative form, e.g. 70% is 0.7, etc. See Person Images.

- InfoPanels — Whether to generate application code to display pop-up information panels (default True). Not supported if SVGFile=True is also set. See below.

- Inst — Instance ID: single digit or letter to distinguish separate tree instances in the same HTML page (separates control over diagrams, styling, and event handling). Default is blank.

- MW/MH — Width/height of margin around tree, and box separation (default 50x50 pixels). Not recommended for change since there is a zoom feature in both the Tree Designer and your browser.

- NavData — Whether to generate tree-navigation data to support interactive applications and services. See "Program Notes:Application Development".
- NotesData — Whether to generate the notes provided in the tabs of the Edit-Person and Edit-Family forms. NB: access to this is not provided in the Edit-Settings form as it is generally requested by the applications or services that you have selected (see Applications and Services).
- Opaque — Whether the person-boxes are translucent (and thus showing any lines or background image from underneath) or opaque. The default is False (translucent).
- PanZoom — Includes open-source script to allow easy panning and zooming of each specific SVG image within a Web page. Cannot be supported if you have SVGFile=True. See "Program Notes:Pan-Zoom" for more details.
- ProgData — Whether to generate application-defined program data for persons/families to support interactive applications and services. See "Program Notes:Application Development".
- RootKey — This parameter nominates the key of a specific person for whom you wish the direct line to be emphasised. A different line style is used to indicate their ancestral lines — both paternal and maternal — through successive ancestral generations. There is a corresponding checkbox in the Edit-Person form, and the Tree Designer identifies the selected person-box with a different border style (blue and thickened). See also the 'Ancestor Links' application.
- Rounded — Put rounded corners on the person-boxes, and any button placed in its corners. The default is True. This only affects the final browser output, not the Tree Designer. The curvature of the corners is determined by the dimensions of the buttons (BWxBH).
- Scaled — Controls whether a large SVG image is scaled to fit, or scrolled. The default is False, meaning that the content is normally scrolled (or panned, if Pan-Zoom support is selected).
- Small —Whether to use small font (10px) rather than normal 13px font. Default is False, unless Blog=True. You can put more text in with a small font. There are only two settings because the browser display can always be zoomed using normal Ctrl/+ and Ctrl/- keys, or the special Pan-Zoom support.
- Stepped — Whether alternate rows (or columns if vertical) of boxes on grid are offset from each other (default True). This can help make child-link relationships a little neater.
- StockImageF, StockImageM, StockImageU, StockImageX — Optional paths to stock images for the respective sexes, e.g. head-and-shoulders silhouettes. If any of these are defined then they're used in boxes that have no thumbnail image. The specifications should employ the place-key facility (see Place Management) so that they can be used in both the browser and the Tree Designer. A few examples may be found at https://parallaxviewpoint.com/SVGcode/ — Male.png, Female.png, and Question.png.

- SVGFile — Generate a *.svg file rather than a *.html file (default False). This is simpler for many people to incorporate into their Web page or blog post (see "Program Notes:Configuration") but it entails some restrictions in the supported interactive applications and services.

- Timeline — Whether to include application code to generate timeline reports from selected person-boxes and family-circles. The default is False in normal usage, but set to true when importing a GEDCOM file. This option is not supported with SVGFile=True. See below, and see TimelineExample.html for a demonstration.

- Title — Tree title, used to label certain bits of code in the output files. The default is taken from the name of the tree definition file. This can only contain the same characters as keys: alphanumerics, underscores, and hyphens (must also start with an alphabetic character).

- Tooltips — Whether to generate native browser tooltips (default False). These may not be supported by some small devices, such as smart phones, or touch-screens.

- TooltipTR, TooltipTL, TooltipBR, TooltipBL — Optional single-line tooltip text to use for the buttons in the person-box corners. If specified, they must not contain any comma characters. See "Program Notes:Changing the Buttons" for more details.

- Version — Records the version of SVG-FTG that originally generated the current tree definition file. Generated automatically.

- Viewpoints — Whether the viewpoint facility is enabled (the default) or not. If disabled then you will not be presented with viewpoint menus or have access to the Viewpoint Manager, even though your tree definition file may contain information about them. The setting also affects the operation of the 'Process' button on the main SVG-FTG form (see Viewpoints).

- W/H — Width/height of boxes in pixels (default 80x80 pixels). Not recommended for change since there is a zoom feature in both the Tree Designer and your browser.

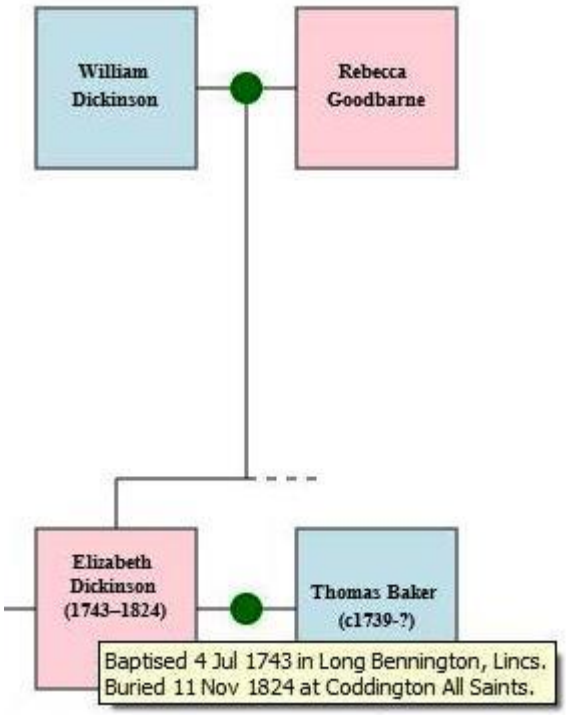
- (application or service names) — If any of the applications or services have been selected (see Applications and Services) then their 'id' will appear in the header record of the tree definition file. The Timeline and InfoPanels settings are categorised as applications since V6 of SVG-FTG, but are listed here explicitly as they also pre-date the general application and service support.

Some of the primary configuration options depend on whether the output will be SVG-only (i.e. SVGFile=True) or a combination of HTML and SVG. All mouse-click operations on person-boxes, family-circles, and buttons work in both modes, as do tooltips when hovering over the respective element. PanZoom=True is only supported when SVGFile=False.

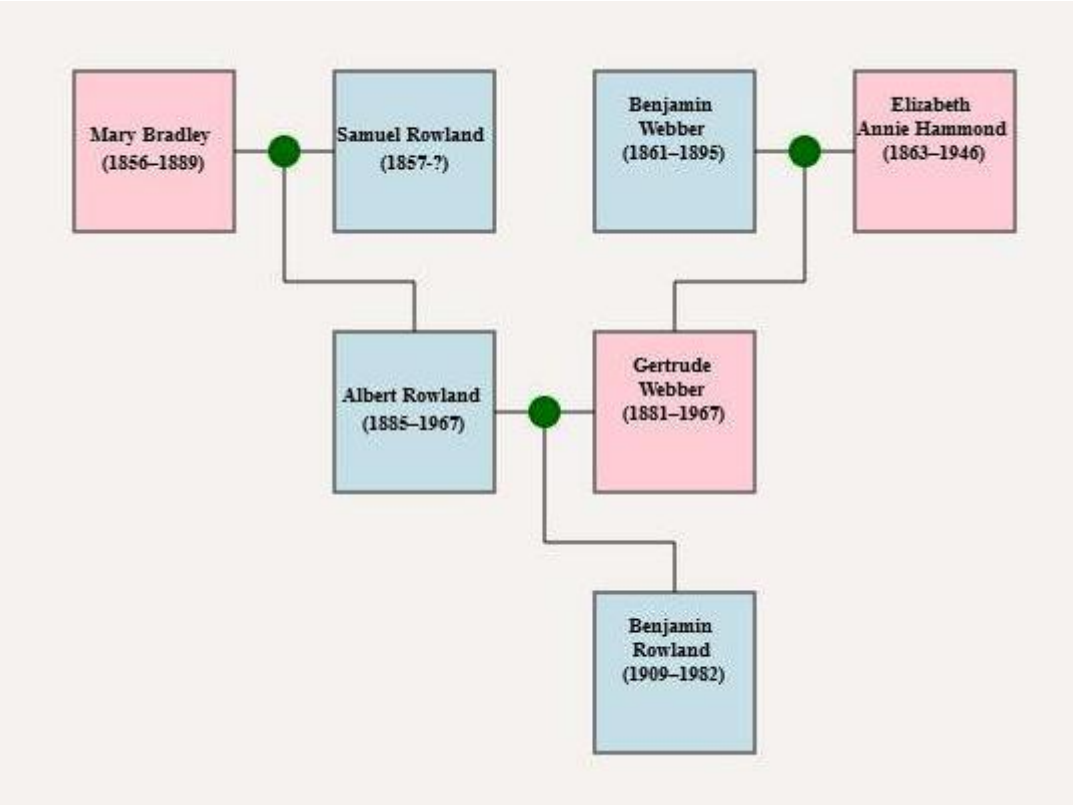
With Applications and Services, it depends on the actual case, as defined in the associated registration file. For instance, Timeline=True is only supported when SVGFile=False. Although InfoPanels=True is only supported when SVGFile=False, there is an alternative application ('Expand

Notes') that will display any biographical notes in a separate browser tab. This alternative is also convenient when those notes are extensive and possibly including multiple images.

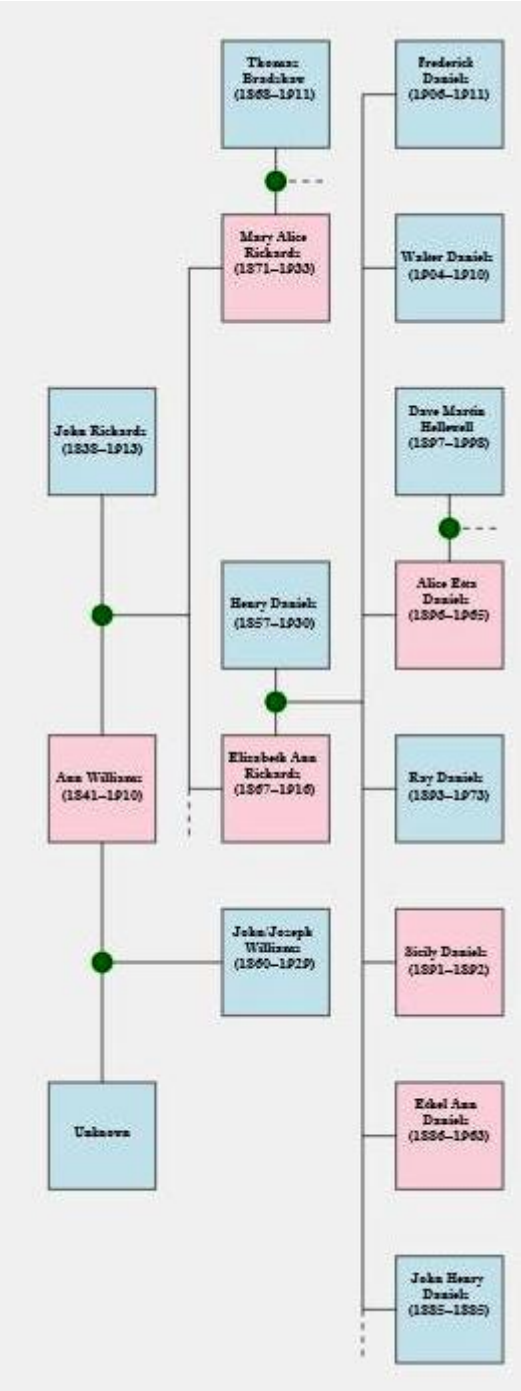
Plain-text notes can be made to appear as native browser tooltips, become visible when hovering over something, if Tooltips=True.



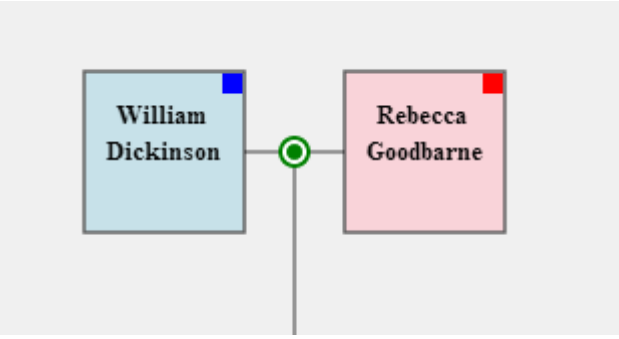
Setting Stepped=False uses an even grid, where successive rows are not offset from each other, and this may be useful in circumstances such as pedigree charts, although using Fanned=True would avoid the “dog leg” lines.



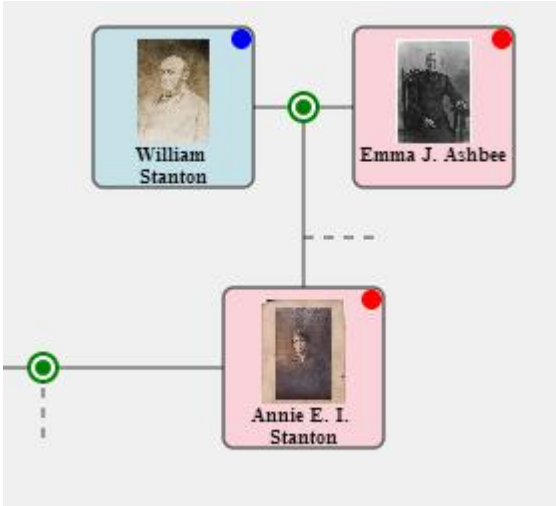
When Horiz=False then the tree is orientated vertically, running top-to-bottom, as opposed to horizontally, running left-to-right. The person coordinates do not need changing in this configuration since SVG-FTG simply reverses the interpretation of your specified ones, i.e. (row,col) instead of (col,row).



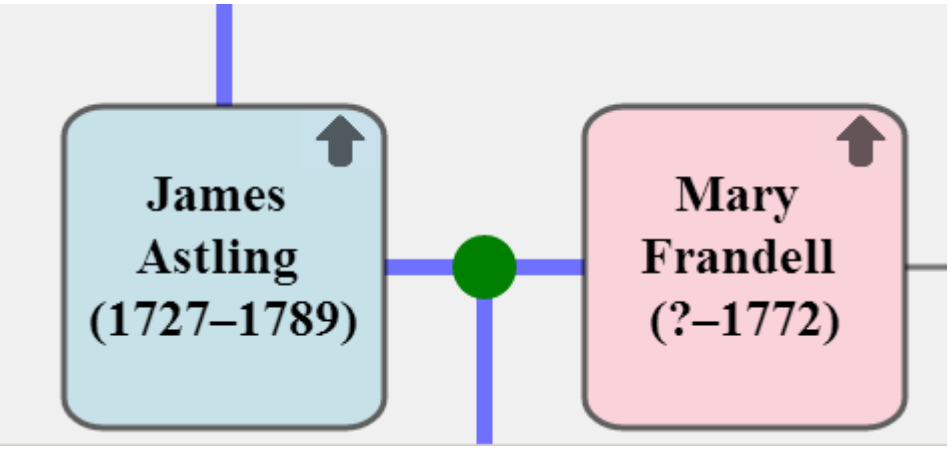
When ButtonTR=True then every person-box has an additional button that may be programmed to add additional functions. See "Program Notes:Application Development" for more details.



When Rounded=True then the person-boxes are given rounded corners, and this also has to apply to any buttons in the box corners. For instance:



The IconTR setting (and related ones for other box corners) allow a custom icon to be used for each button. For instance: IconTR= https://parallaxviewpoint.com/SVGcode/Up-Arrow-icon.png might generate something like the following:



See "Program Notes:Changing the Buttons".

13.2 Person Records

A person record defines a single person, as follows:

key(image)=sex(col,row):caption [|short-caption [|personal-names]]

Personal names is a "|"-separated list of alternatives, including any slashes as per GEDCOM surnames. The image name, short caption, and list of personal names are all optional. For instance:

"P JH($Pics:me.jpg)=m(1,1):John Hammond (1791-1838)”

"P JH=m(1,1):John Hammond (1791-1838)|J. Hammond”

"P JH=m(1,1):John Hammond (1791-1838)||John Hammond|Jonnie Hammond”

- Key — A word used to identify this person later in the file. Valid characters are alphanumerics, underscores, and hyphens (must start with an alphabetic character).
- Image name — Optional image to present in the associated person-box. Images are discussed in detail at Person Images.
- Sex —f (female), m (male), u (unknown/unspecified), or x (indeterminate/other).
- (Col,Row) — Tree coordinates, assuming a horizontal tree. Columns and row numbers are 1:n. If Horiz=False then the interpretation of these values for the actual screen coordinates is (Row,Col) so no change is needed when flipping the orientation.
- Caption, and short-caption — Text is automatically flowed. XML character entities (incl. dashes) are handled automatically. If a box is too small for the main caption and a short caption is defined then it will be used instead. If an image is being displayed then any short caption is placed underneath it, if there’s space. Backslash characters (“\”) may be used to force line breaks at specific locations (usually before a separating space) in the captions if required.

If '~' used instead of '=' then the parentage is deemed to be uncertain or tentative, and a dashed line is used to connect the box to its respective family-circle.

13.3 Family Records

The family record defines a single family (i.e. marriage and/or children), as follows:

key=parent1+parent2:child,child, (etc)

where the parents and children are identified by their respective keys. For instance:

“F J_C=JH+CB:EZH,HB,EAH”

Family-keys must obey the same naming rules as person-keys. If '~' used instead of '=' then the relationship is deemed to be other than a marriage (e.g. a liaison).

If multiple spouses are to be drawn then it’s best to order their boxes based on the distance from their common spouse (i.e. inner-to-outer), on either side. The Tree Designer will automatically do this.

No particular order is required for the children as the corresponding person records will have achieved the positioning in the tree.

If there are no children then the ':' character is still required.

If last child is ellipsis (...) then an indication of additional, un-shown children is drawn using a striated family-circle. In the browser output, there will also be a small dashed line that doesn't connect to any specific person-box, unless Fanned=True.

13.4 Notes Records

There are a number of distinct record types in this category:

- "=" — Notes data: each record specifies a line of HTML text (e.g. historical and biographical details) for the preceding person or family record.
- "-" — Tooltip data: each record specifies lines for a plain-text tooltip for the preceding person or family record.
- "#" — Program data: each record specifies a line of arbitrary textual data to support interactive applications and services for the preceding person or family record.

For instance:

```
P Mary_1905=f(5,4):Mary Phyllis Ashbee (1905-1984)
= Mary Phyllis Ashbee was born 28 May 1905 in Bradford, Yorkshire, and died 13 Jun 1984 while on holiday in Switzerland. She never married.
= <br/><br/><b>Articles and mentions:</b><br/>
= <a href="http://parallax-viewpoint.blogspot.com/2014/08/a-life-revealed.html" target="_blank">A Life Revealed</a><br/>
= <a href="http://parallax-viewpoint.blogspot.com/2014/10/more-of-life-revealed.html" target="_blank">More of a Life Revealed</a>
```

The associated notes must be valid HTML, and the lines will be flowed unless you put in your own line-breaks (
). You can also add your own <b>, <a>, etc., elements as necessary. The Edit-Person and Edit-Family forms provide an HTML toolbar to help with basic operations. See HTML Editing.

The tooltip data (generated with Tooltips=True) are simple line-by-line plain text with no embedded HTML elements, but any entity references are handled automatically.

13.5 Local Settings

Each "/" record is designed to provide settings specific to a preceding person-box or family-circle definition, including the overriding of some global settings on a Header record.

For a person-box, the following local settings are currently defined:

- Enabling or disabling buttons on a per-person basis (ButtonTR, ButtonTL, ButtonBR, ButtonBL).

- Modifying button tooltips on a per-person basis (TooltipTR, TooltipTL, TooltipBR, TooltipBL).
- Assigning CSS classes on a per-person basis (ClassPerson, ClassPersonLines, ClassPersonNotes).

For instance:

```
P Mary_1905=f(5,4):Mary Phyllis Ashbee (1905-1984)
/ ButtonTR=True,TooltipTR=Show qualifications
```

For a family-circle, the following local settings are currently defined:

- HideLinks will hide the child links when first entering the Tree Designer. The effect is similar to the right-click option of 'Show/Hide Child Links' on a family-circle. This is particularly useful when the data may have been imported from elsewhere (e.g. by a paste operation) and much re-arranging is necessary before a meaningful and readable presentation can be achieved.
- Assigning CSS classes on a per-family basis (ClassFamily, ClassFamilyLines, ClassFamilyNotes).

For instance:

```
F William_Mary=William_1833+Mary_1834:...
/ HideLinks=True,ClassFamilyLines=C?-??
```

13.6 URL Records

Each "U" record specifies a mapping between a place-key, a remote Internet address (I.e. a URL), and an optional local directory address.

key=URL|local-directory

The local-directory is optional. For instance:

U MyGallery= https://parallaxviewpoint.com/Images/| C:\Documents and Settings\Tony Proctor\My Documents\My Pictures\

U MyGallery= https://parallaxviewpoint.com/Images/

NB: The final terminating characters (slash or backslash in this example) are usually required in order to form a valid specification after substitution.

What these records do is build up a dictionary of these place-keys to help manage your local and remote resources. This is explained in detail at Place Management.

13.7 Viewpoint Records

It is sometimes inconvenient to manipulate all your persons and families in a single window, especially if multiple surnames are involved. If your tree is huge then there may also be practical limits in how many can be displayed together.

A 'Viewpoint' is a selected set of persons and families that may be viewed in isolation, and given their own layout that is independent of any established for the whole tree. When generating HTML or SVG output, you can optionally generate independent files for each viewpoint, and hence create a series of linked trees that are connected by hyperlinks, as opposed to one single tree around which you have to pan and zoom.

Each "V" record defines a single viewpoint.

```
key=display-name  [| columns,  rows]
```

The viewpoint key must follow the normal rules about key names (alphanumerics, underscores, and hyphens). The display name is used in menus and user-facing messages. The optional column and row count are for dimensioning the Tree Designer grid. For instance:

```
V sub1=Smith relatives | 12,4
```

13.8 Person Viewpoint Records

The "p" (lowercase) record associates a person — one that must have already been defined with a "P" (uppercase) record — with the current viewpoint. It is an error if there is no preceding "V" record.

The "p" record sets the coordinates of the person within the current viewpoint, i.e.

```
key (column,row)
```

For instance:

```
p P581(5,1)
```

13.9 Family Viewpoint Records

The "f" (lowercase) record associates a family — one that must have already been defined with a "F" (uppercase) record — with the current viewpoint. It is an error if there is no preceding "V" record.

The "f" record simply selects the family by its key, i.e.

```
key
```

For instance:

```
f F24
```