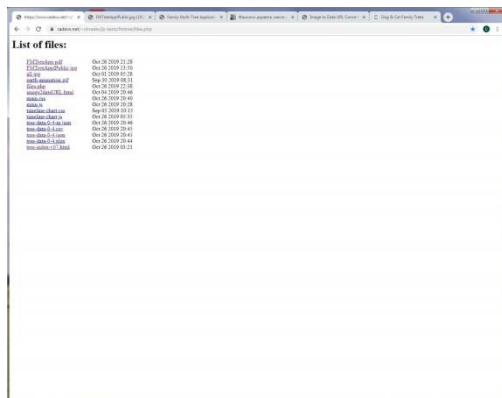# Snapshots of Family Multi-Tree (FM Tree) and Image to Data URL Convertor web applications

FM Tree application and data files on radevs.net
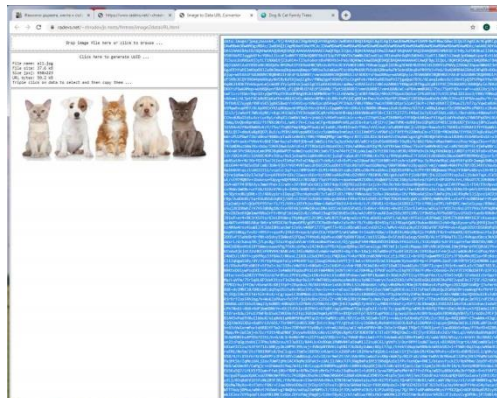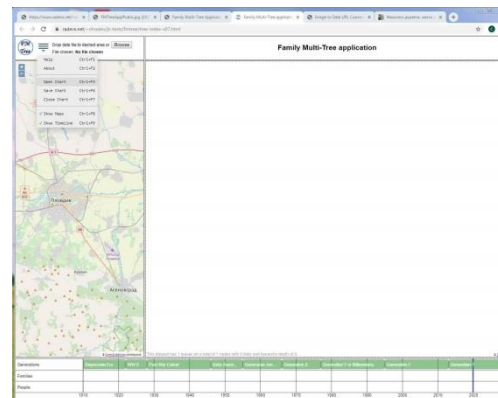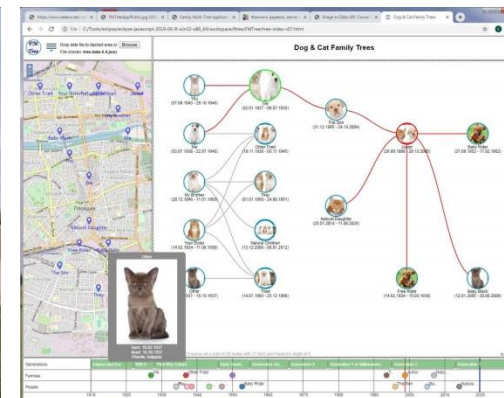https://www.radevs.net/~chradev/js-tests/fmtree/files.php

Image to Data URL Convertor in action
https://www.radevs.net/~chradev/js-tests/fmtree/image2dataURL.html

FM Tree application (no data) main menu
https://www.radevs.net/~chradev/js-tests/fmtree/tree-index-v07.html

FM Tree application running with public data both loaded from local files, tooltip, selected tree, group nodes with multiple (2 and 3) members
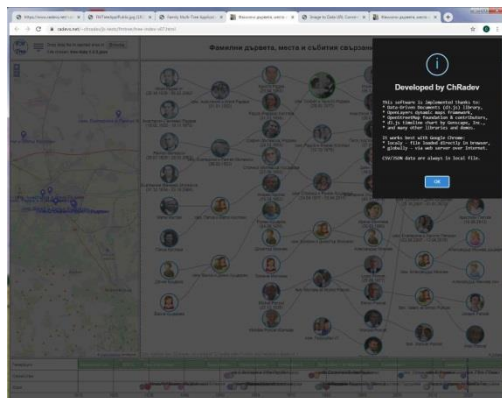
FM Tree application About view and private data loaded in background
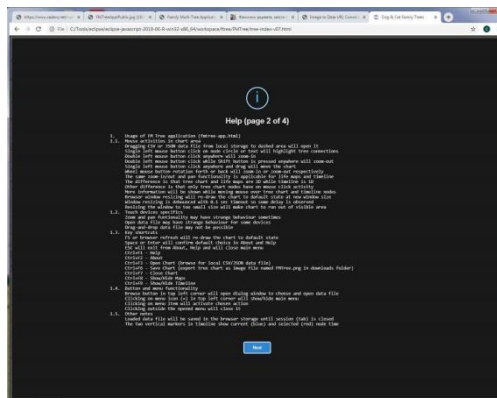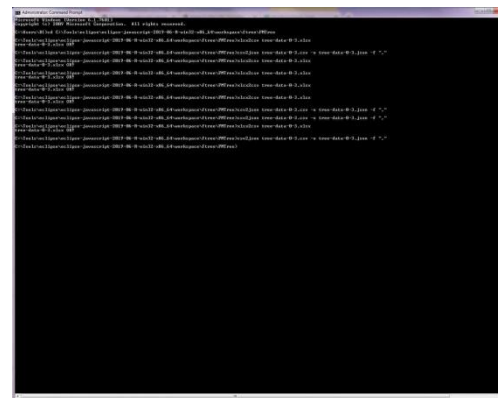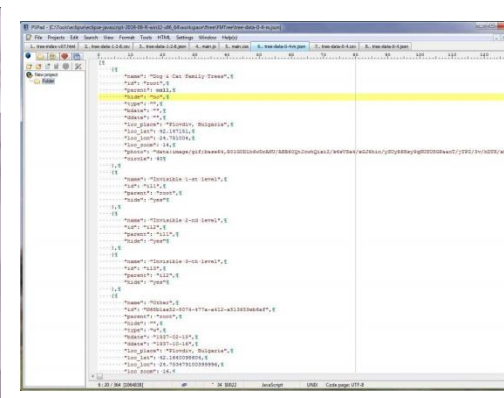

FM Tree application Help view (page 2 of 4)

FM Tree data conversion commands
XLSX to CSV: xlsx2csv tree-data…
CSV to JSON: csv2json tree-data…

FM Tree JSON data file edited in PSPad with modified root.hide: "no" and root.photo: "animated GIF big file"
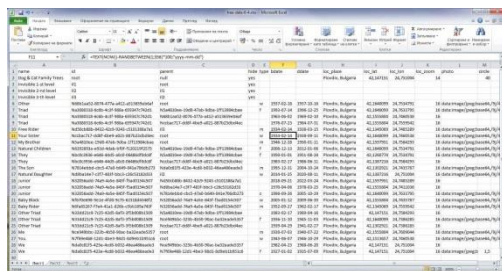
FM Tree data file edited in MS Excel 2010
IDs generated from image2dataURL application
Dates generated randomly with Excel formula
Root and set of 3 invisible nodes with hide: 'yes'
Group nodes with multiple (2 and 3) members
One node in group containing full set of data
"We" node highlighting with circle: 1.5
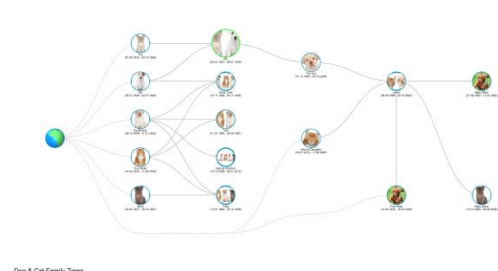
FM Tree chart from modified JSON public data exported to image file
Zoomed to see all nodes and links
Resolution 7640x4068 px (31.08 Mpx)
in PNG format (file size 2.82 MB)
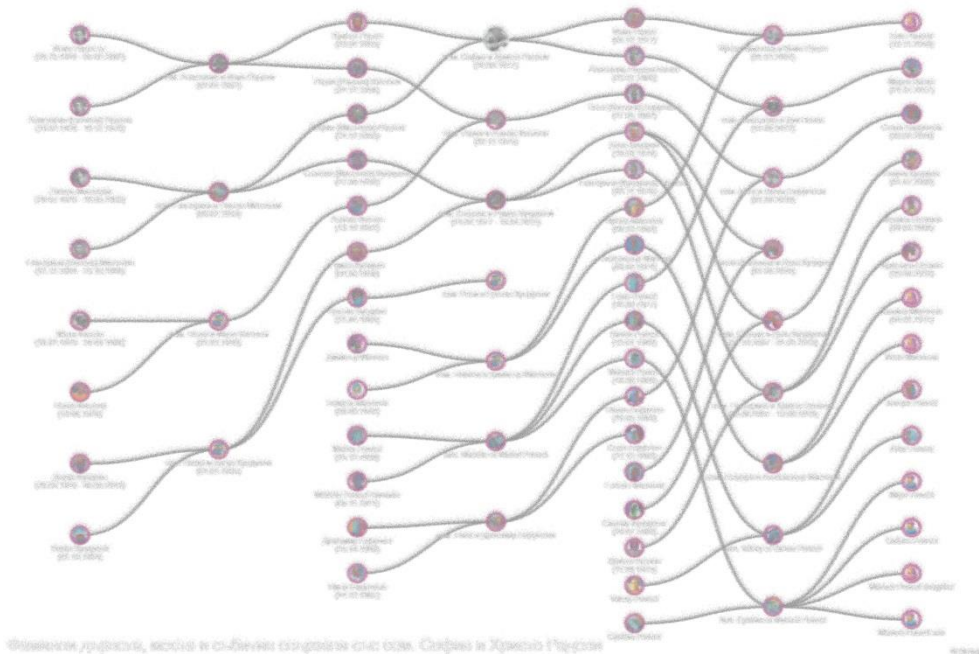
Dataset with 35 leaves on a total of 95 nodes with 94 links and hierarchy depth of 7
Images are 24 pixels in diameter to fit whole chart in 1920x1200 screen resolution

Dataset with 68 leaves on a total of 199 nodes with 198 links and hierarchy depth of 9
Images are not visible to fit whole chart in 1920x1200 screen resolution

Note: Above images are manipulated to hide prvate information.
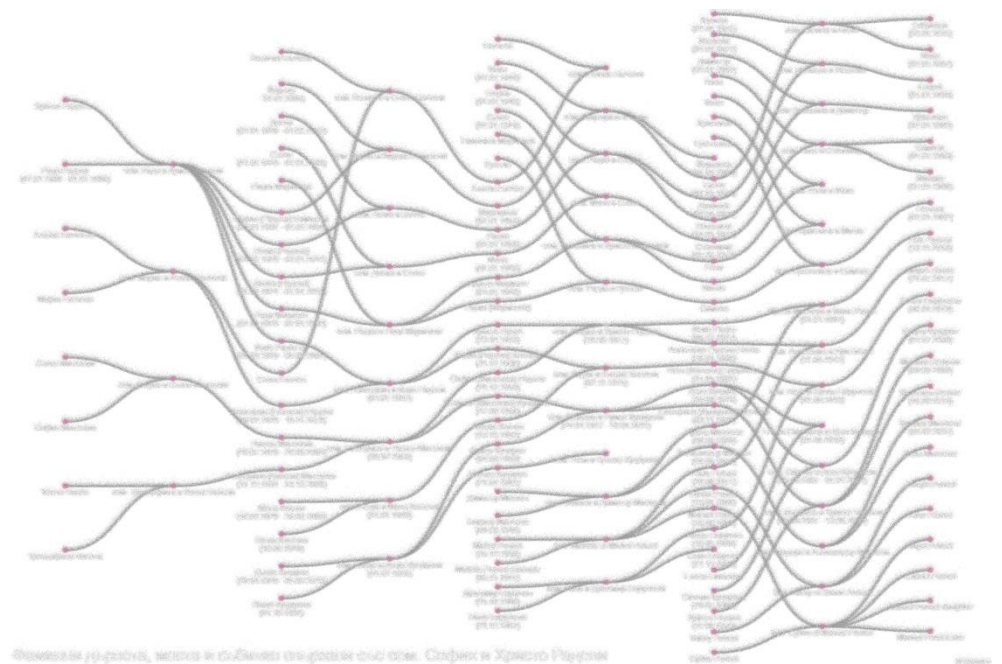
New features in FMTree ver. 2.4 (6.6.2020):

parent field is renamed to parents
multiparent nodes are described with comma separated list of parent IDs in parents field
loc_xxx fields are moved to place and location fields
place field is the same as loc_place
location field consists of 3 comma separated numbers: latitude, longitude and zoom factor
description field is used to enter the text shown in node tooltip for the chart
font field is added to control the font used for the chart texts
root only circle field is modified as comma separated numbers:
  circle radius (for all circles), horizontal and vertical inter text space
  for highlighted node circle field is a single scale value

Two sets of invisible nodes are required to align floating nodes to appropriate level
The deepest level of the invisible nodes chains are used to avoid linked to root visible nodes

Added feature to use data file in URL (FMTree/index.html?data=path-data-file.extension)
Both CSV and JSON file types are allowed but should be on the same server where FMTree is

d3.hierarchy is used to calculate hierarchy depth only
Nodes by type and total number of nodes are calculated from real data
Short date format (like "yyyy-mm-" and "yyyy-") support is added
The circles for nodes without images are decreased to half of the other nodes once

Vertically all levels of the chart are aligned to fit size of the level with maximal number of nodes
Horizontally the inter-level space is calculated to fit the longest texts
Added menu item to fit chart fully in viewing (dashed) area, while refresh will scale chart to 100%

Export to SVG file is added to avoid 16k pixels limitation for raster graphics export and usage
Magnification when chart is exported to PNG is calculated to fit 16k pixels size
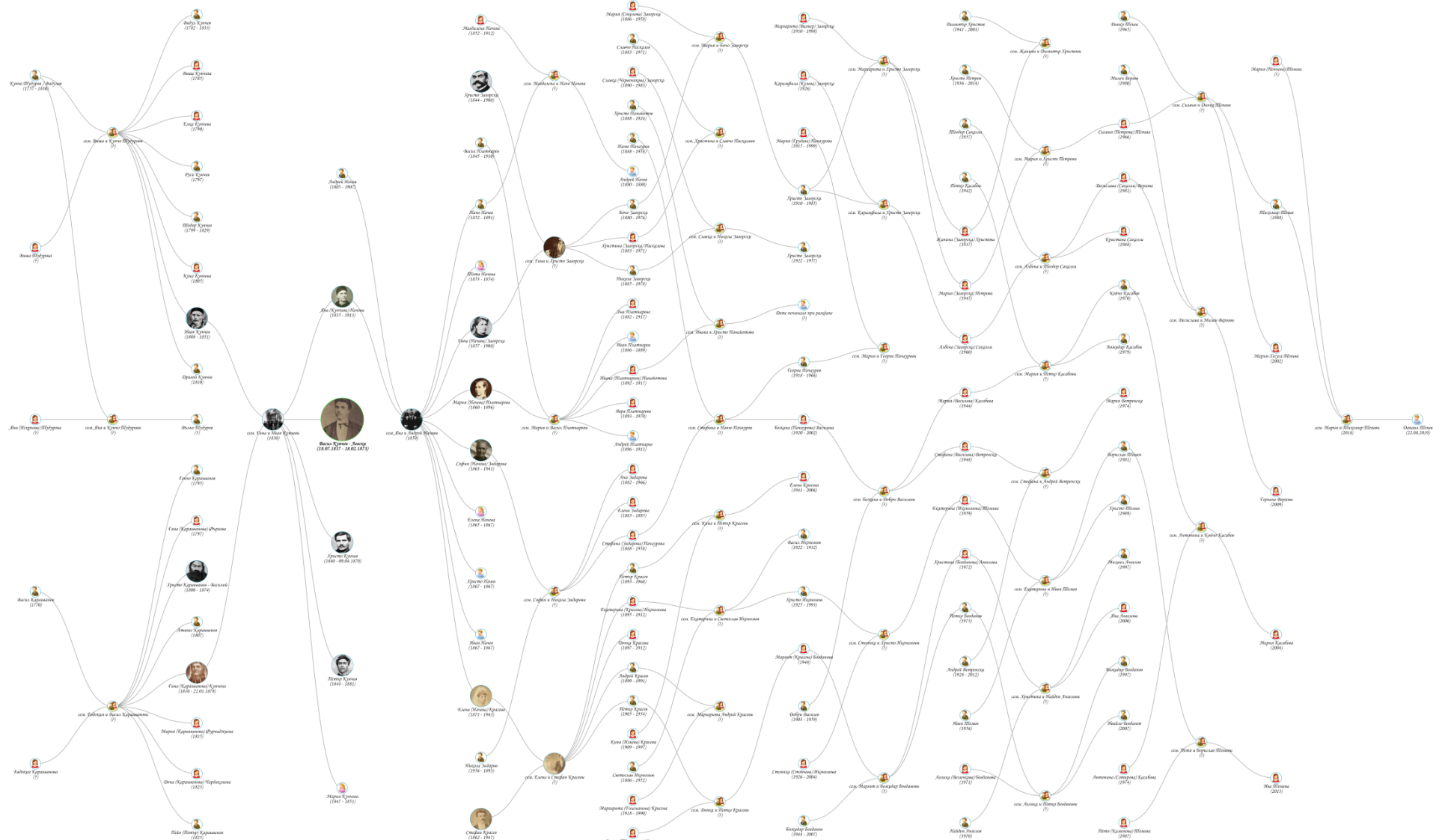Export file name is changed to Data-File-Name-Extension.PNG or SVG

New public data file is created with family tree of Bulgarian hero Vasil Levski
The new public data file (Test-data-pub) has 202 visible nodes and 19 levels of hierarchy

Some bug fixes were done as well

New features planed in FMTree next versions:

- Multilanguage support for the help and for the date descriptors.

New real data set for family trees of Bulgarian hero Vasil Levski was created.

*Родът на Васил Левски (по Христо Икономов, Надежда Петрова, www.vasil-levski.eu и други Интернет източници)*

This dataset has hierarchy depth of 19 (+ 2 invisible) and total of 202 nodes: 42 invisible, 55 men, 57 women, 38 families, 0 cohabitations, 7 boys, 3 girls.

Above picture is taken as PNG export of the chart and has 16384x9711x24bpp resolution, file size of 15.6MB and it takes 455.2MB in memory. It is appropriate to be printed on 694x411 mm (A2 paper size is 592x420 mm) paper size at 600dpi or on 4x bigger paper (1388x822 mm – A0 paper size is 1188x840 mm) at 300dpi. In such a case normal node circles with photo (having 240px diameter) will be printed with 10.16 and 20.32 mm diameter respectively. Printing with roll printers is also possible on a paper with width up to 914 mm (36 in) even up to 1625 mm (64 in). Better quality can be achieved by printing from SVG exported file.

FMTree application snapshot with public data for Vasil Levski family trees loaded:
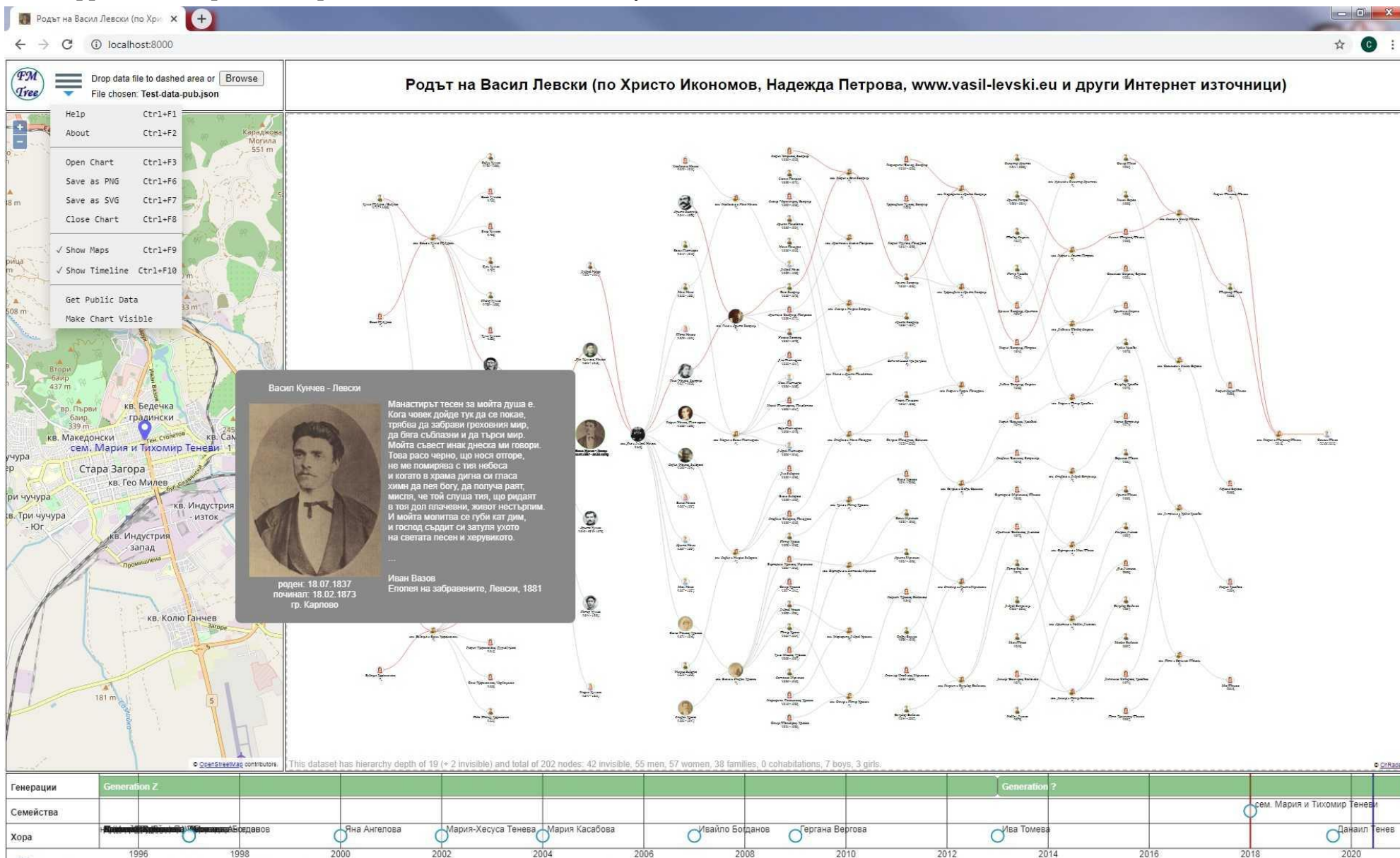
Additionally following actions are performed: the chart is zoomed to fit; a node is selected to show forth and back genealogy links, position on map and timeline; the timeline is zoomed to show selected node; the menu is opened and the mouse is positioned to the highlighted node to bring a tooltip.

FMTree application is also tested with following private data sets:

hierarchy depth of 9 (+ 2 invisible) and total of 83 nodes: 21 invisible, 18 men, 19 women, 18 families, 1 cohabitations, 2 boys, 4 girls;

hierarchy depth of 11 (+ 2 invisible) and total of 282 nodes: 25 invisible, 78 men, 80 women, 67 families, 3 cohabitations, 12 boys, 17 girls.