HuTime Manual

Version 2.0.6

March 11, 2013

History of Updates

Version	Release Date	Description
1.0.0	2008/02/28	First edition
1.0.1	2008/03/31	Rename a Layer (Dataset) and Delete a Layer (Dataset) were added.
1.0.1	2008/03/31	The record detail window was modified.
1.0.1	2008/03/31	The XML (TMM) import function was added.
1.0.1	2008/03/31	The import error display function was added.
1.0.1	2008/03/31	The configuration was changed.
1.1.0	2009/03/23	The dataset (layer) icons in the Project View were changed.
1.1.0	2009/03/23	The style of the time cursor was changed.
1.1.0	2009/03/23	The Figure and Table Nos. were coordinated.
1.2.0	2009/03/23	Mention of the language switching function was included.
1.2.0	2009/03/23	Mention of the support for GTS and GTM files was included.
1.3.0	2009/03/30	The menu structure was modified.
2.0.0	2009/10/30	The content of the manual was reviewed from the perspective of enhanced usability.
2.0.0	2009/10/30	The terms were harmonized with those of the GT-Map.
2.0.1	2010/01/14	The layer preferences screens were modified.
2.0.1	2010/02/12	Mention of the installer was added.
2.0.1	2010/03/24	The option of setting the status of record edge points (open or closed) was added.
2.0.2	2010/07/15	The highlighting of a time span using the time cursor was changed from “drag & drop” to “drag.”
2.0.2	2010/07/15	Another way to cancel the highlighting of a time span was added: clicking the mouse at any point outside the highlighted area.
2.0.2	2010/07/15	Mention of the time measure function for multiple time spans was added.
2.0.2	2010/07/15	A condition for activating the outline display mode was added.
2.0.2	2010/07/15	Mention of the unit of layer height was included, changing the related dialog boxes to include mention of the unit.
2.0.2	2010/07/16	The images of layer preferences dialog boxes were changed to include the unit of size for fonts, symbols, etc.
2.0.2	2010/07/16	A description concerning record data was added.

Version	Release Date	Description
2.0.3	2012/03/10	A description concerning the KML import function was added.
2.0.3	2012/03/10	A description concerning the KML output function was added.
2.0.3	2012/03/10	A description concerning the GTM/XML Output, a function available by right-clicking on a layer, was added.
2.0.4	2012/04/16	A description concerning a layer showing multiple charts was added.
2.0.5	2012/10/31	Modifications were made to the file selection dialog box for importing or exporting files. Modifications were made as a result of changes to the menu structure.
2.0.6	2012/3/11	A description concerning the creation of a project was added.
2.0.6	2012/3/11	A description concerning the project loading function was added.
2.0.6	2012/3/11	A description concerning layer import was added.
2.0.6	2012/3/11	A description about saving a project was added.
2.0.6	2012/3/11	A description about saving a project as a new file was added.
2.0.6	2012/3/11	A description about saving a layer was added.
2.0.6	2012/3/11	A description about the function to zoom to project or layer was added.

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1. Operating Environments

The operating environments for the HuTime system are shown in Table 1-1. Operating Environments.

Table 1-1. Operating Environments

No.	Item	Description
1	OS	Windows 2000, Windows XP (SP2), Windows Vista, Linux (2.4) equivalent or later versions
2	Browser	Internet Explorer 6 or later, Mozilla Firefox 2.0 equivalent or later versions
3	Java Runtime Environment	1.5 or later versions

2. Install

Download the hutime.zip file from a designated Web site.
Extract the hutime.zip file.

If you are using a Windows operating system, you can install the HuTime system by using an installer.
Download the hutime.msi file from a designated Web site.
Double-click the hutime.msi file, and install hutime by following the install wizard.
During the installation, the installer checks if the system allows the use of the Java Runtime Environment.
The installer cancels the installation if it finds that the Java Runtime Environment cannot be used.

3. Uninstall

Delete the hutime directory.

The hutime program that was installed via the installer in a Windows operating system can be uninstalled via the software management screen that can be activated from the control panel.

4. How to Activate

HuTime is activated by double-clicking hutime/bin/hutime.cmd, displaying the initial screen as shown in Figure 4-1. HuTime Initial Screen.

If you installed HuTime using an installer in a Windows operating system, the application can be activated by selecting hutime from the list of programs in the start menu.

Immediately after HuTime is activated, a blank project screen will be created.

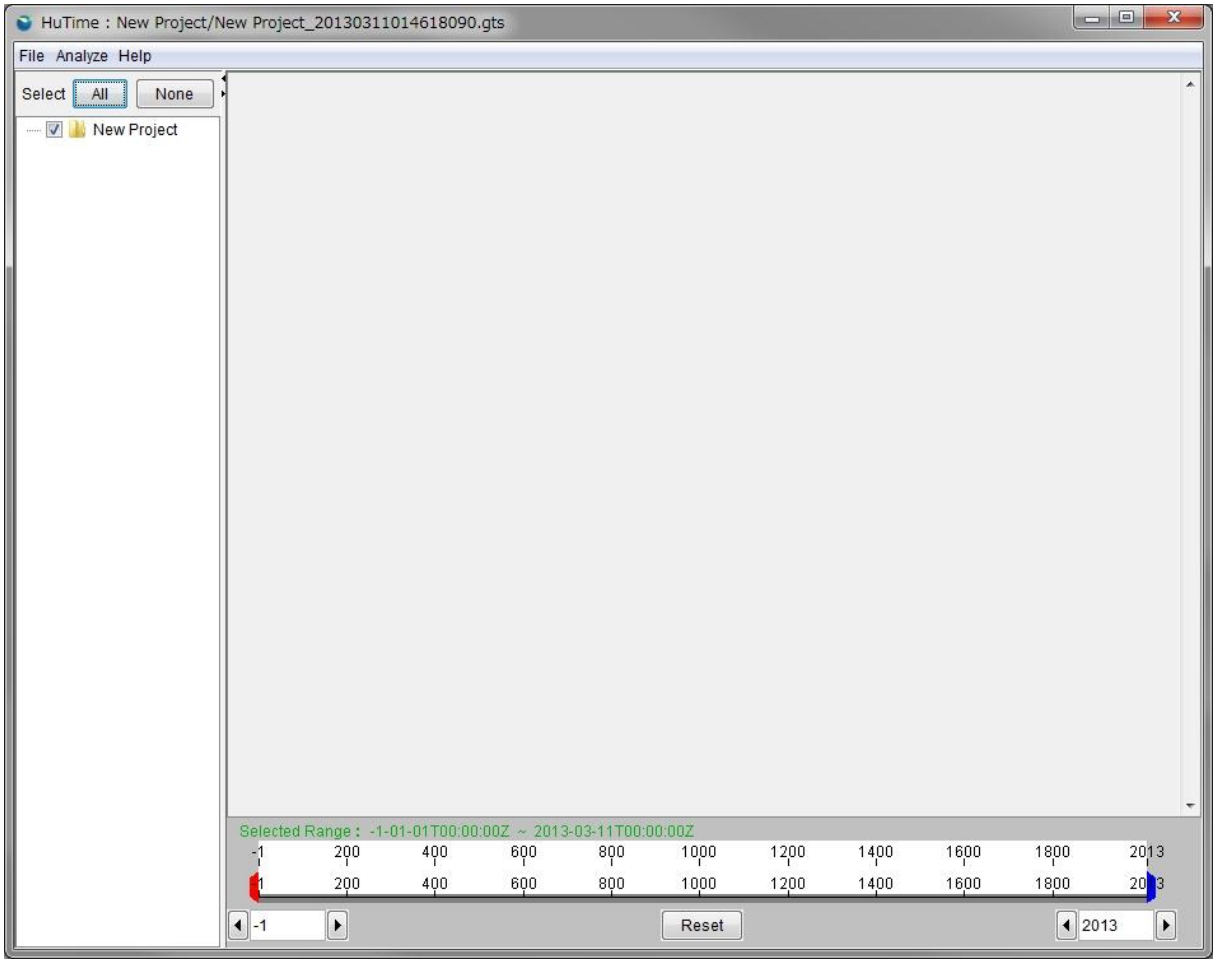


Figure 4-1. HuTime Initial Screen

5. Screen Configuration

HuTime consists of four major screen functions described in Table 5-1. Screen Functions and Figure 5-1. Screen Structure.

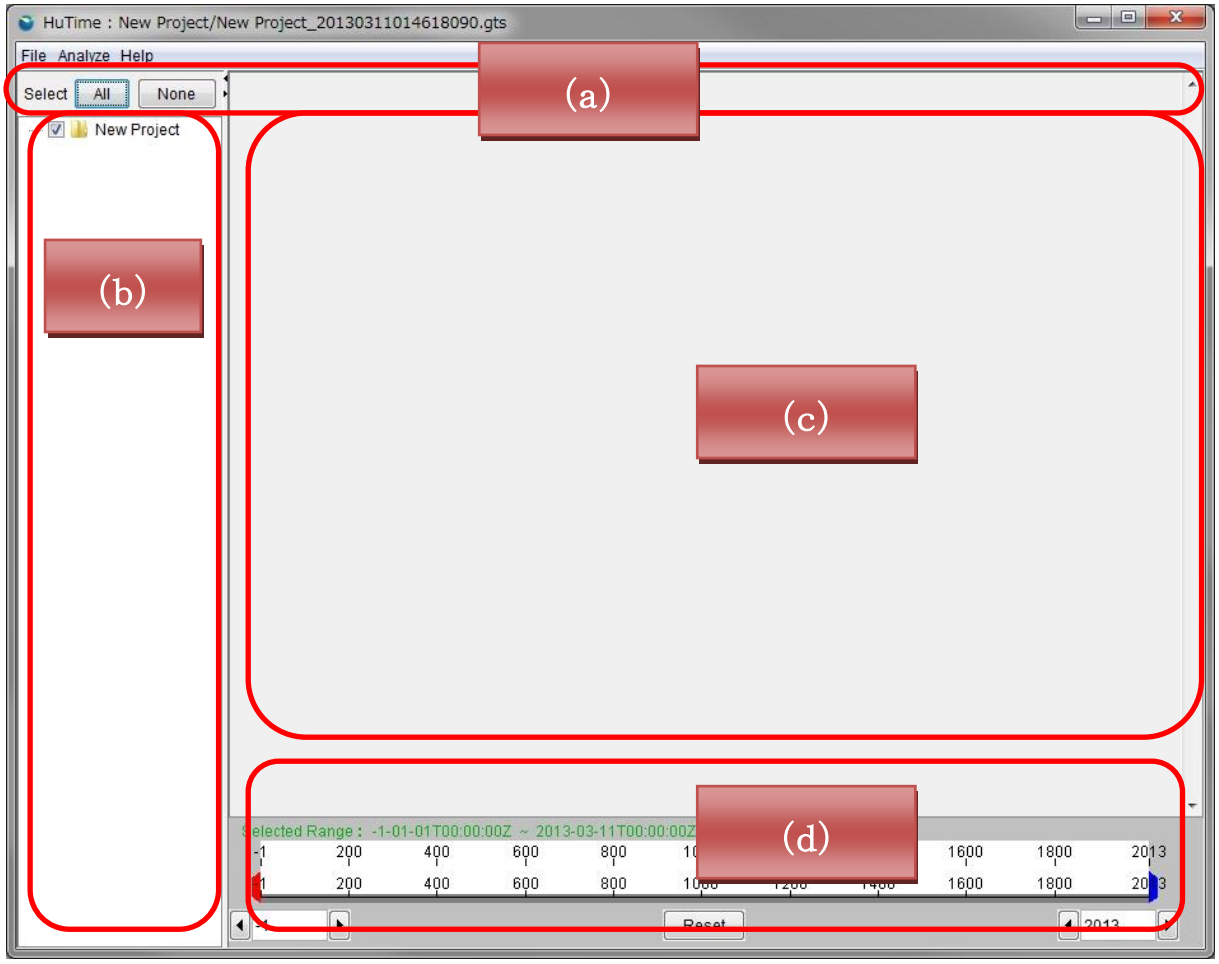


Figure 5-1. Screen Structure

Table 5-1. Screen Functions

Item	Functions	Description
(a)	Menu Bar	Read and write data, search data, change preferences and other.
(b)	Project View	Provide a hierarchical view of the projects and datasets loaded.
(c)	Data View	Show a dataset in a selected graphic style.
(d)	Time Slider	Control the range of time for which data are shown.

6. Load

6.1. Load a Workspace

From File on the menu bar, select Load Workspace. Refer to Figure 6-1. Select “Load Workspace.”

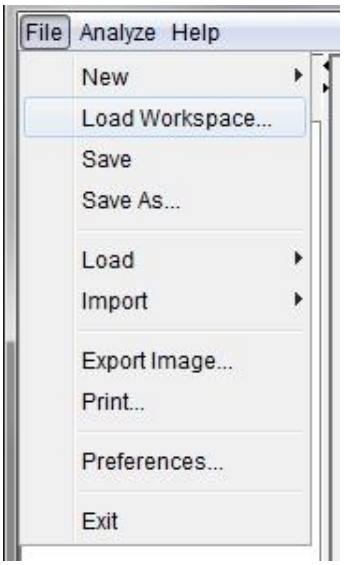


Figure 6-1. Select “Load Workspace”

In the File Selection dialog box, select the project file (with a TMS or GTS extension) you want to load and click Open. Refer to Figure 6-2. Select a Project File.

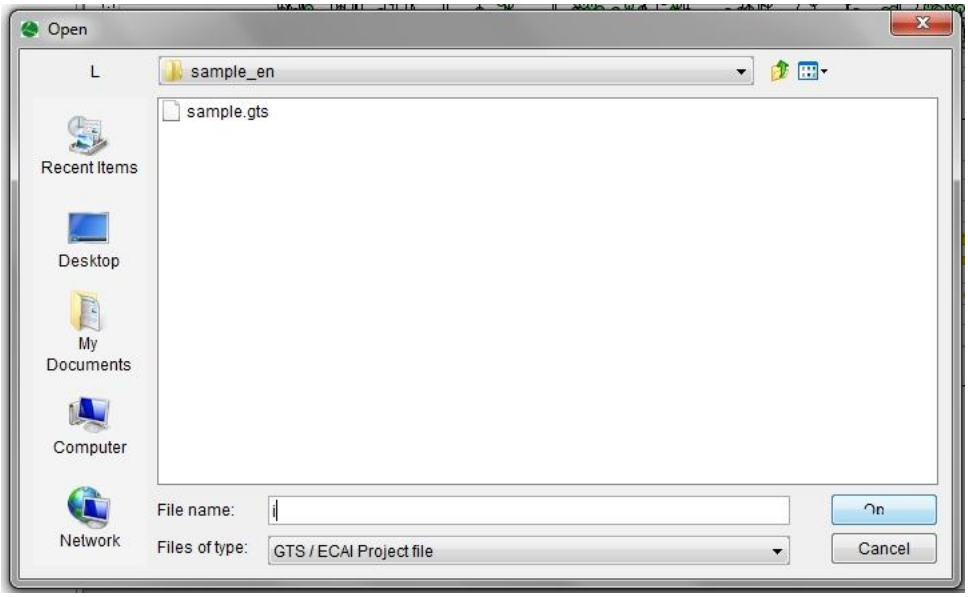


Figure 6-2. Select a Project File

The content of the project file selected will be shown in the form of a chart or a chronological table, as shown in Figure 6-3. Data Display Screen.

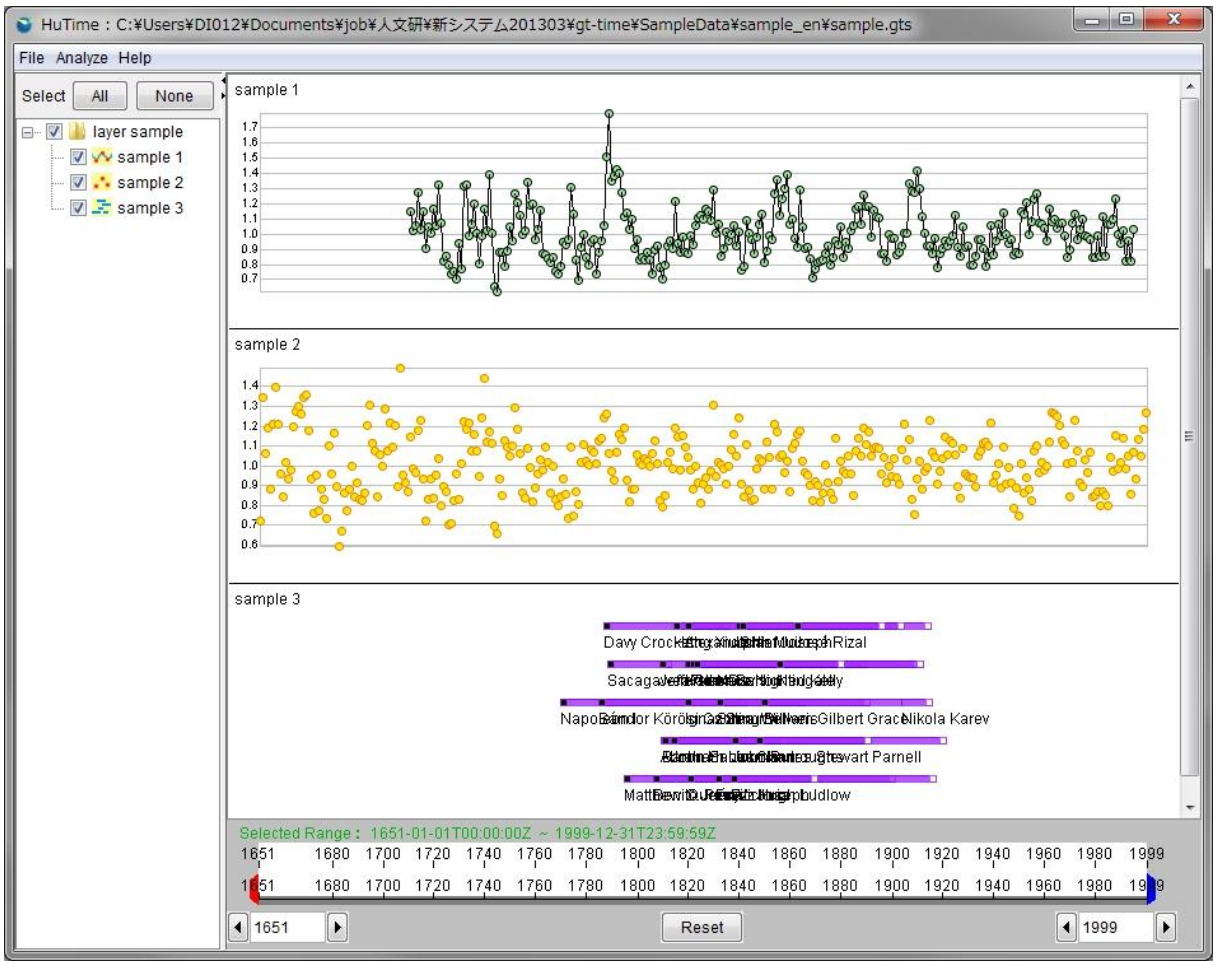


Figure 6-3. Data Display Screen

If you right-click on the File menu and select Load → Project, a project will be additionally loaded immediately under the project located at the top. Refer to Figure 6-4. Load a Project.

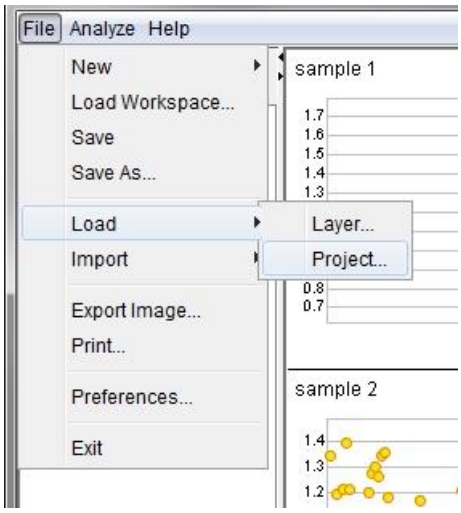


Figure 6-4. Load a Project

In the File Selection dialog box, select the project file (with a TMS or GTS extension) you want to load and click Open. Refer to Figure 6-5. Select a Project File 2.

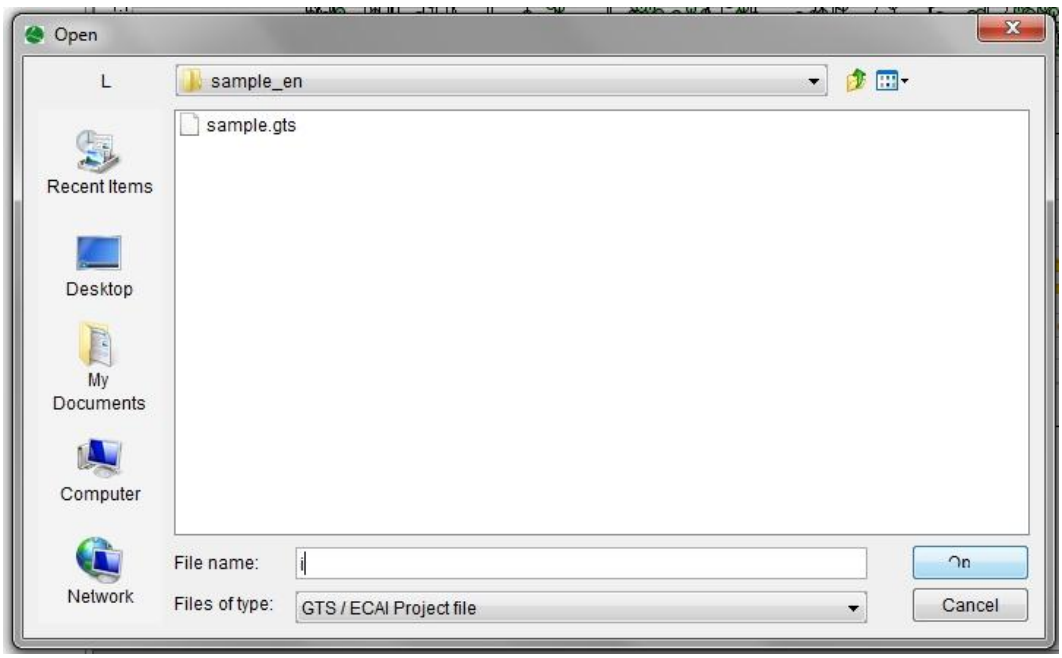


Figure 6-5. Select a Project File 2

The selected project will be inserted under the existing project.

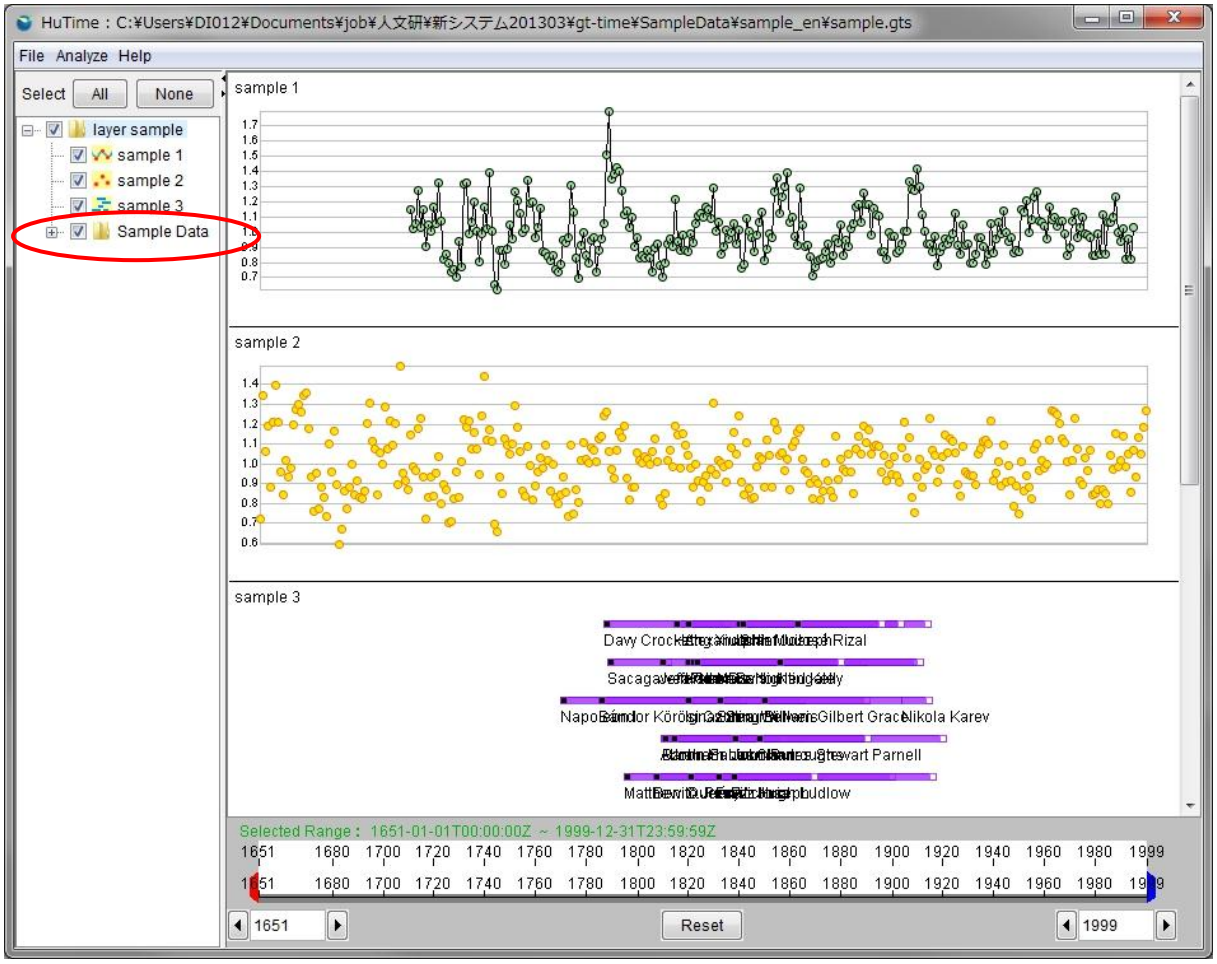


Figure 6-6. Insert a Project

If you right-click on an existing project and select Load → Project, the selected project will be loaded immediately under the right-clicked project. Refer to Figure 6-7. Load a Project 2.

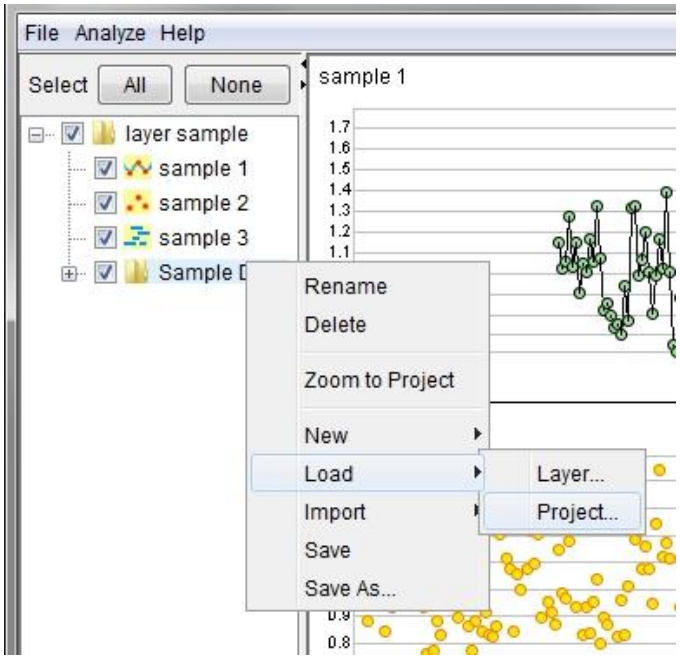


Figure 6-7. Load a Project 2

Under the right-clicked project, another project has been loaded.

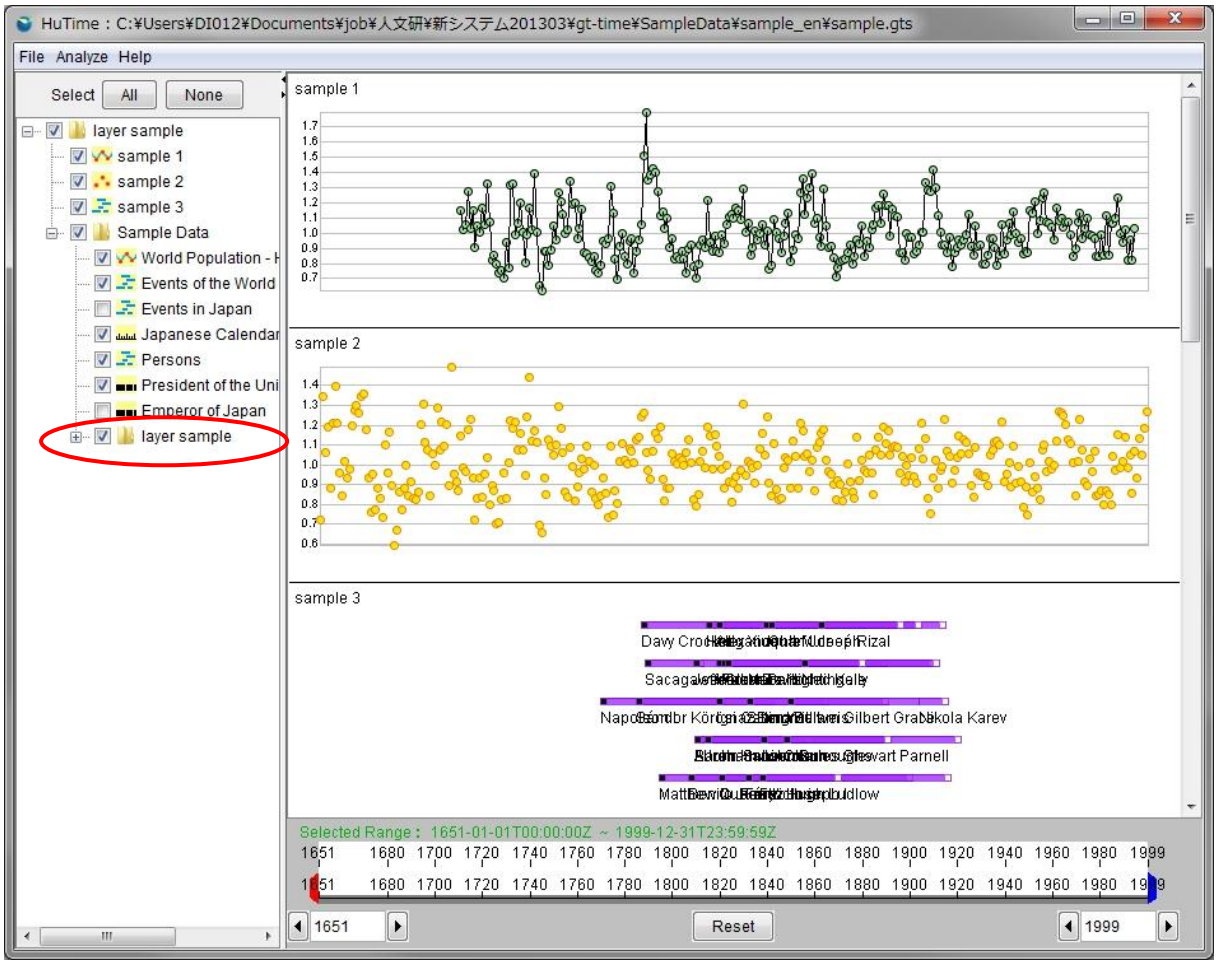


Figure 6-8. Insert a Project 2

6.2. Create a New Workspace

From the File on the menu bar, select New → Workspace. Refer to Figure 6-9. Select "Workspace."

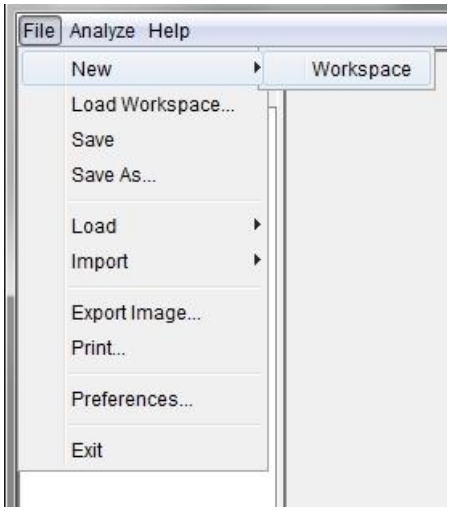


Figure 6-9. Select "Workspace"

A new blank project screen will be created.

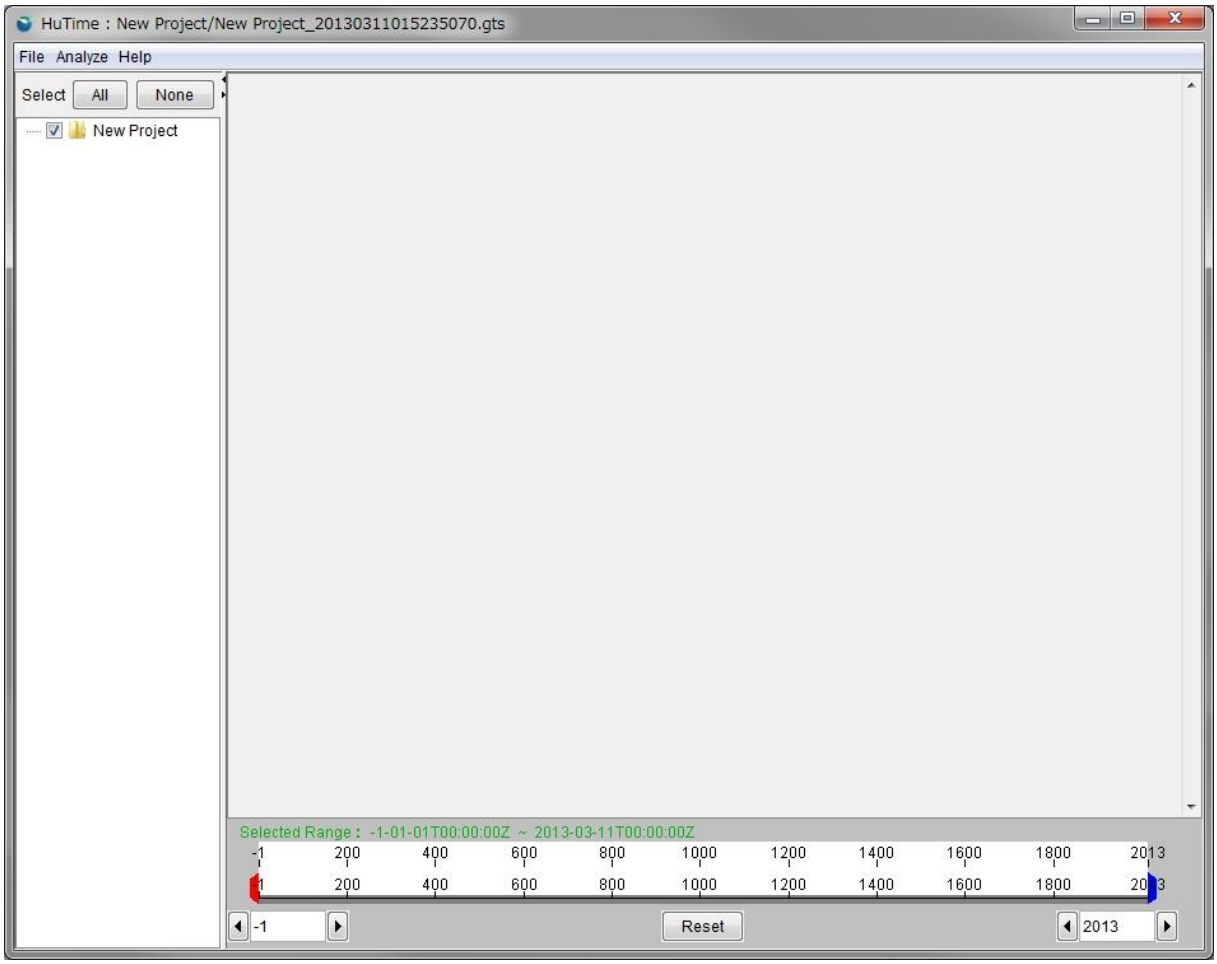


Figure 6-10. Create a New Project

If you attempt to create a new project from the File menu while there is a project already open, the following warning dialog box will appear before the newly created project is opened.

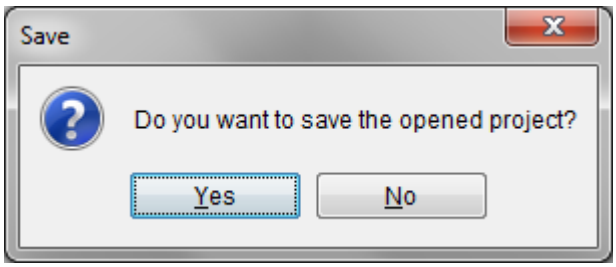


Figure 6-11. Warning Dialog Box when Attempting to Create a New Project

If you right-click on an existing project and select New → Project, the new project will be created beneath the existing project. Refer to Figure 6-12. Create a New Project 2.

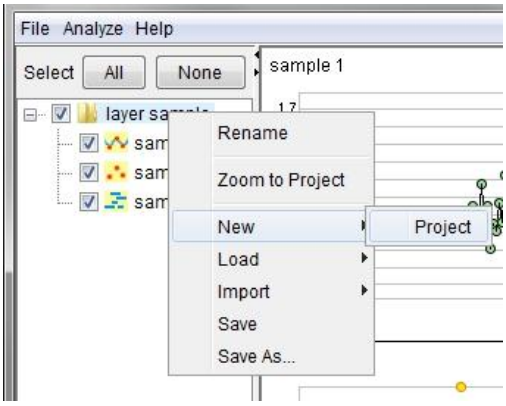


Figure 6-12. Create a New Project 2

The new project is added beneath the existing project.

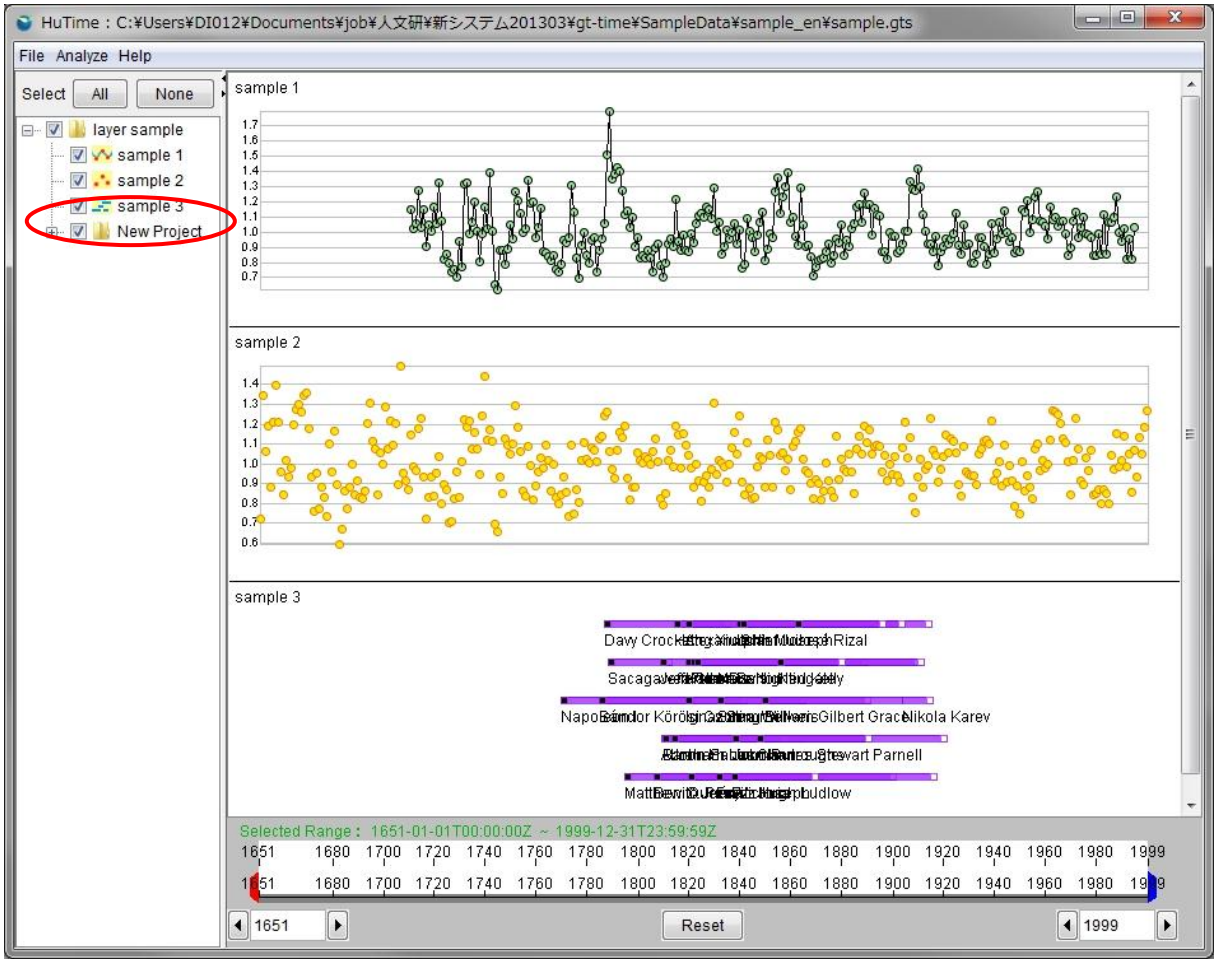


Figure 6-13. Create a New Project 3

6.3. Load a Layer

Right-click on a project and select Load → Layer. Refer to Figure 6-14. Load a Layer.

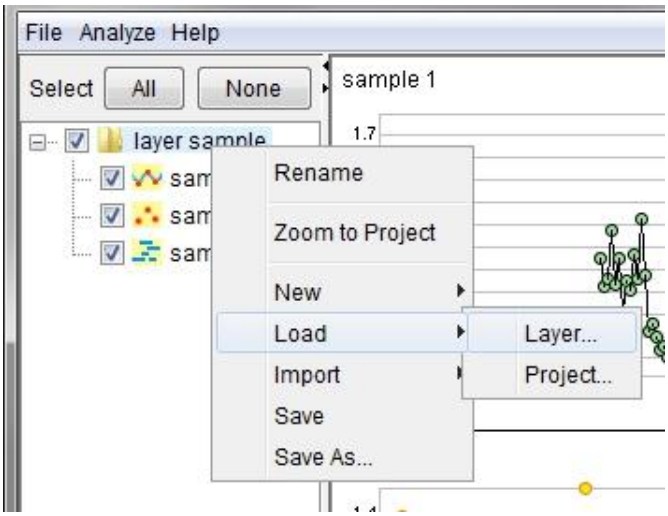


Figure 6-14. Load a Layer

In the File Selection dialog box, select the layer file (with a GTM or TMM extension) you want to load and click Open. Refer to Figure 6-15. Select a Layer File.

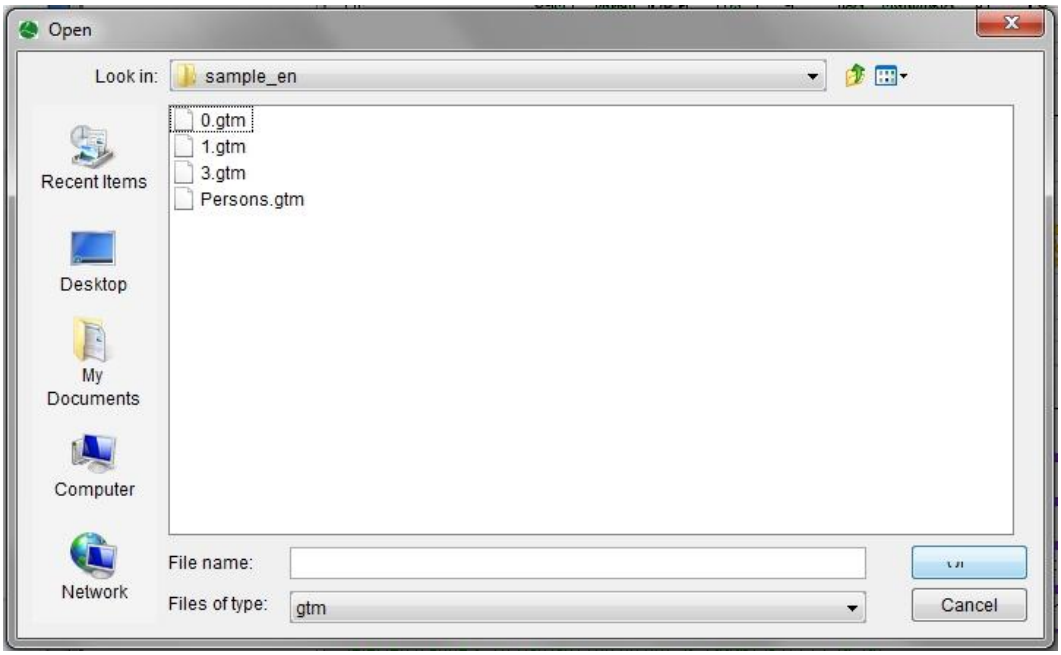


Figure 6-15. Select a Layer File

The selected layer will be added beneath the existing layers.

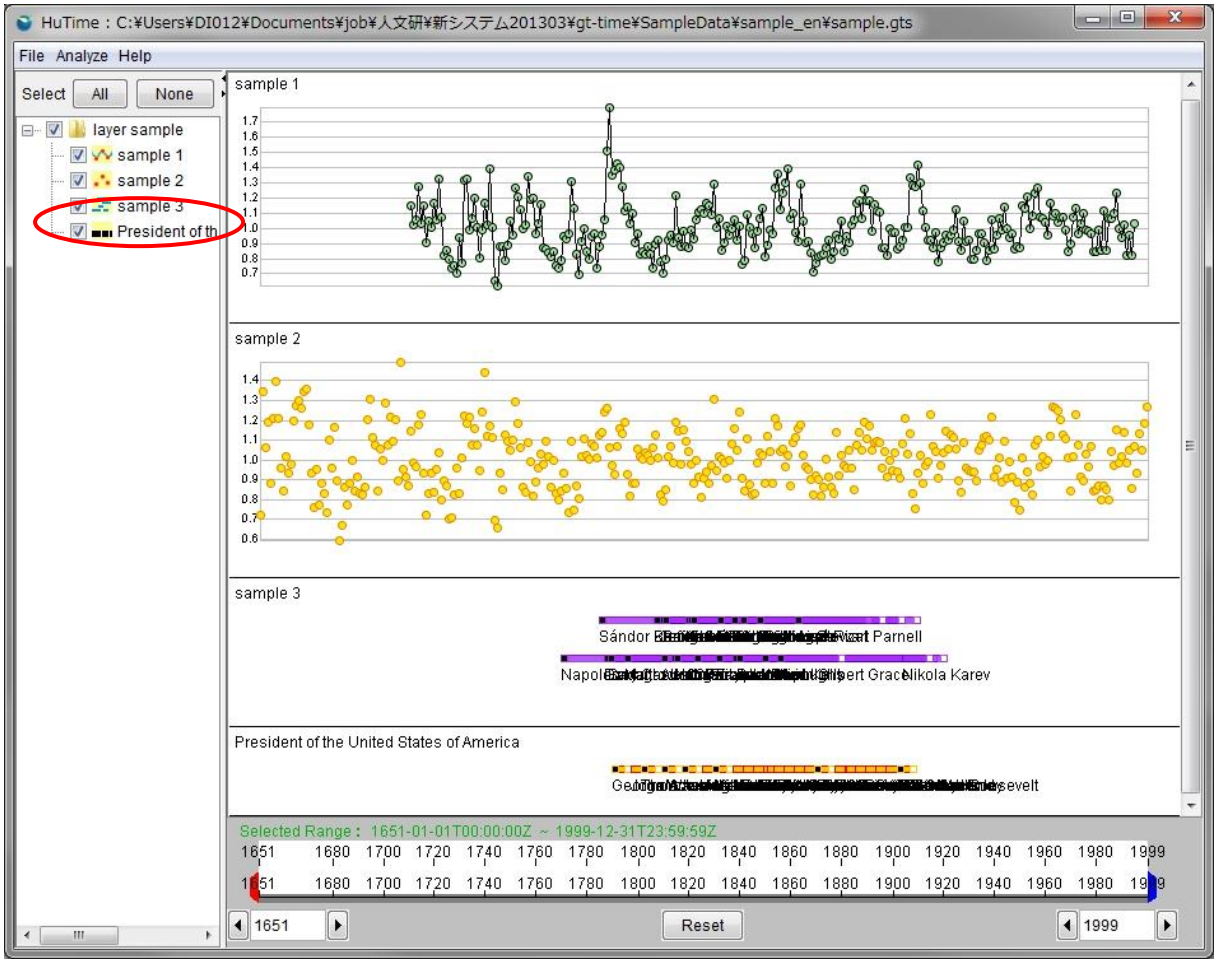


Figure 6-16. Add a Layer

7. Save

7.1. Save a Project

To save a project, select Save from File on the menu bar, as shown in Figure 7-1. Save a Project.

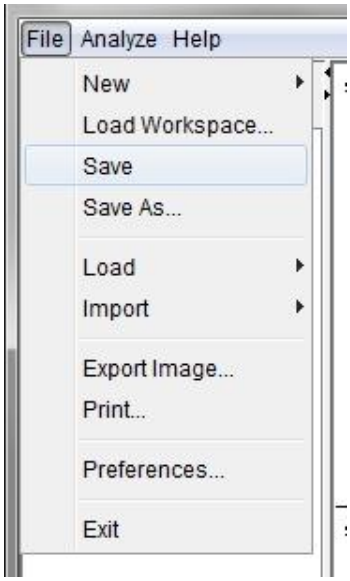


Figure 7-1. Save a Project

Alternatively, you can save a project by right-clicking on the project and selecting Save.

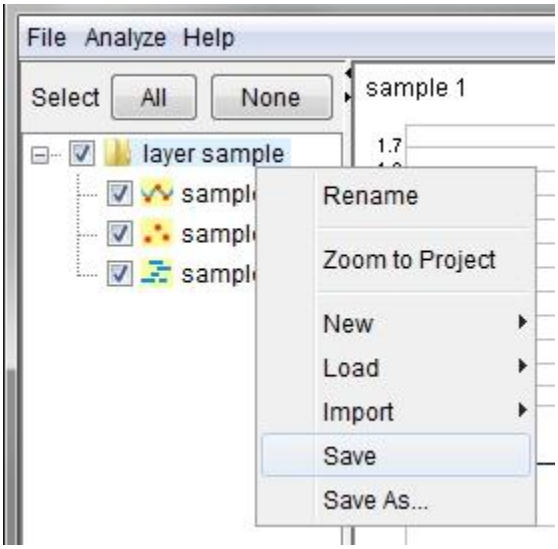


Figure 7-2. Save a Project 2

7.2. Save a Project as a New File

To save a project as a new file, select Save As from File on the menu bar, as shown in Figure 7-3. Save as a New File.

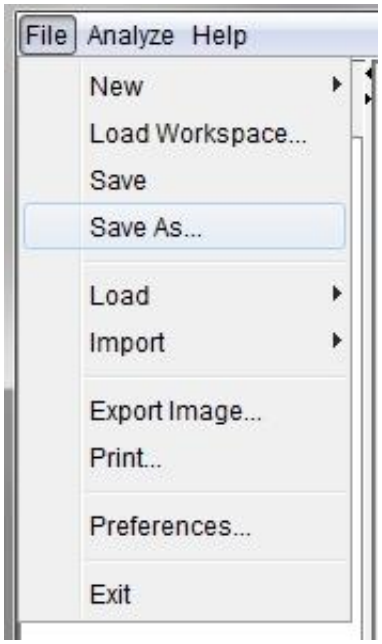


Figure 7-3. Save as a New File

In the Save File dialog box, name the file to be saved and click Save. Refer to Figure 7-4. Save a Project.

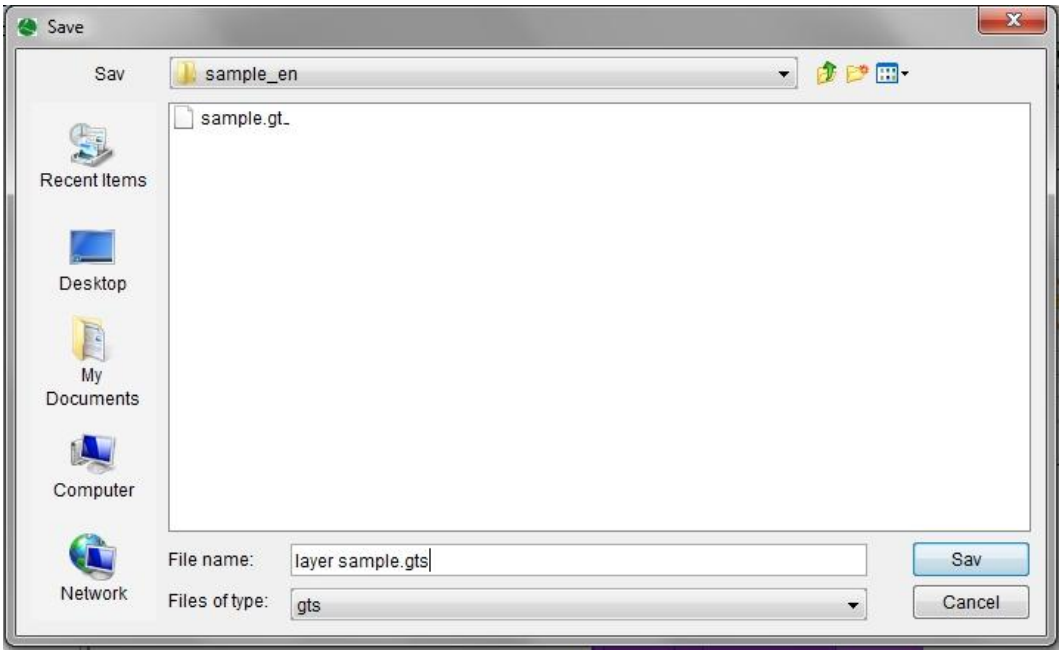


Figure 7-4. Save a Project

Alternatively, you can save a project file by right-clicking on the project name and selecting

Save As. Refer to Figure 7-5. Save as a New File 2.

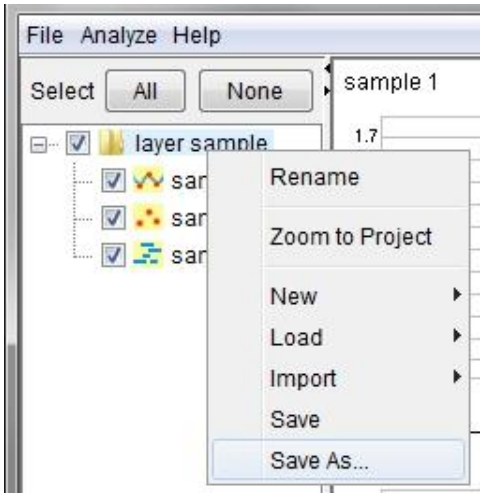


Figure 7-5. Save as a New File 2

If the system is configured to issue a warning that a TMS or TMM file, if imported, will be saved as a GTS or GMM file, respectively, the warning dialog shown in Figure 7-6. Warning Dialog Box will appear before the file is saved.

Figure 7-6. Warning Dialog Box

8. Change the Time Range

8.1. Time Slider Operation

Using the time slider, you can change the range of time shown on a layer.

Figure 8-1. Time Slider Operation
(The selected time range is narrowed to a certain length, and that length of time is then moved to the past side.)

8.2. Change the Selected Time Range

The selected time range can be changed by entering the desired start and end dates or years in the respective text boxes marked with red circles as shown in Figure 8-2. Change the Selected Time Range or by clicking on the or button next to the text boxes.

Clicking the button will change the time range toward the past side.

Clicking the button will change the time range toward the future side.

The selected time range can also be changed by entering the desired start and end dates of the range in the form of yyyy-mm-dd or just entering the start and end years in the respective text boxes. When you press the Enter key after entering these dates or years, the new time range will be reflected in the time slider.

Figure 8-2. Change the Selected Time Range

8.3. Reset

The selected time range can be reset to its initial state by clicking the Reset button marked with a red circle in Figure 8-3. Reset Button.

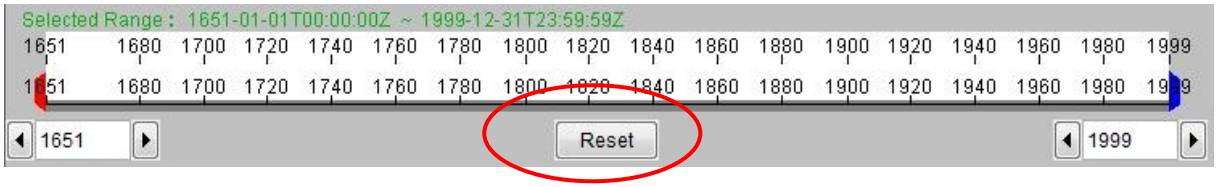


Figure 8-3. Reset Button

9. Detailed Information on Records

As shown in Figure 9-1. Detailed Record Information, clicking on a record in the Data View will open a window showing detailed information on that record.

The color of the record for which a record detail window is shown becomes different from that of the other records, and the same color appears at the top of the record detail window. Each time a record is clicked, the color changes at random.

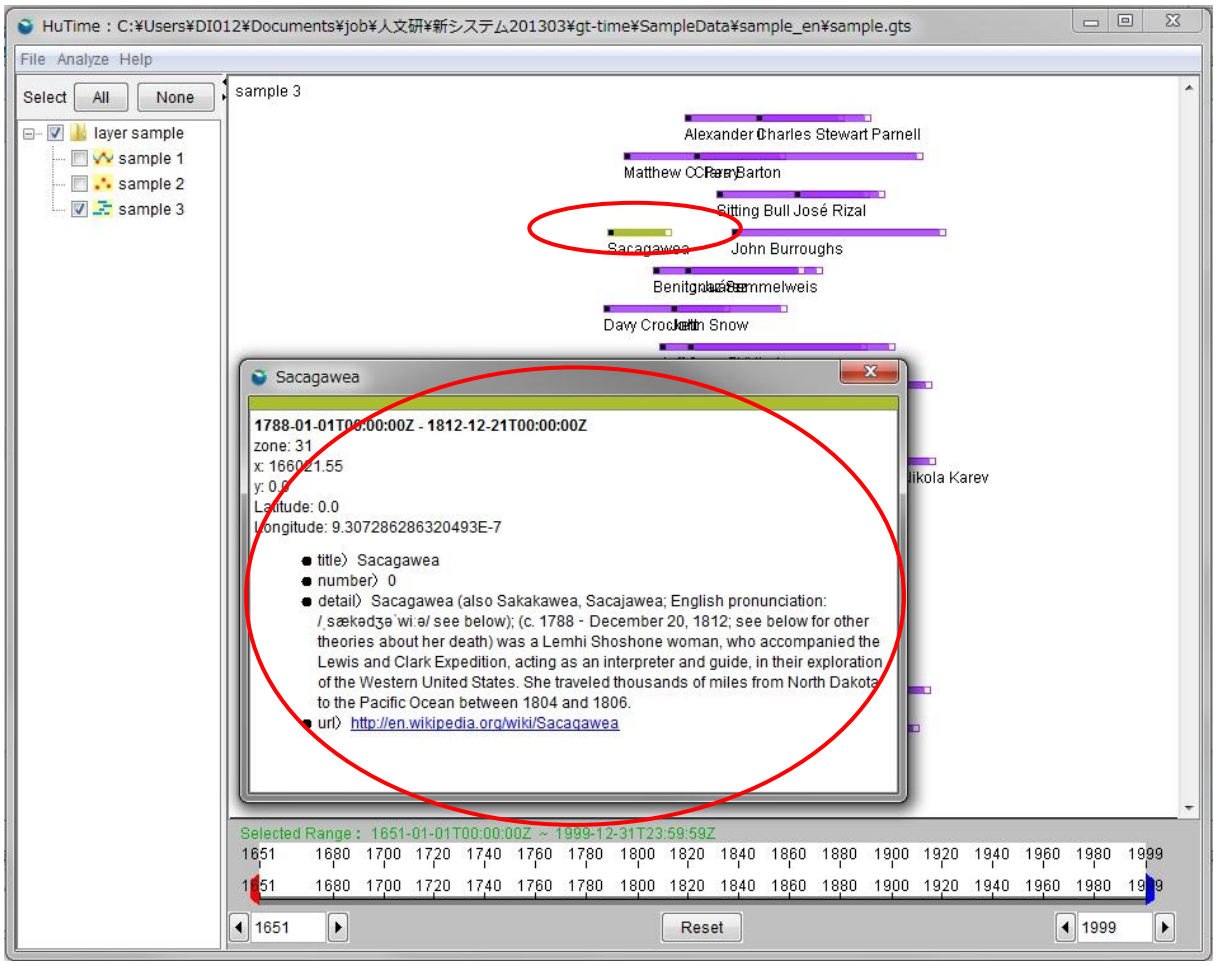


Figure 9-1. Detailed Record Information

10. Change the Sequence of Displaying Layers

The sequence of displaying layers can be changed by moving the datasets in the Project View. By moving a project, the datasets and projects that are subordinate to that project can be moved collectively.

If a dataset or project is moved into another project, the dataset or project will be placed at the bottom of the project to which they belong.

It is impossible to move a project between datasets.

Figure 10-1. Moving a Layer (Before) and Figure 10-2. Moving a Layer (After) show how the dataset “sample 1” is moved under the dataset “sample 2.”

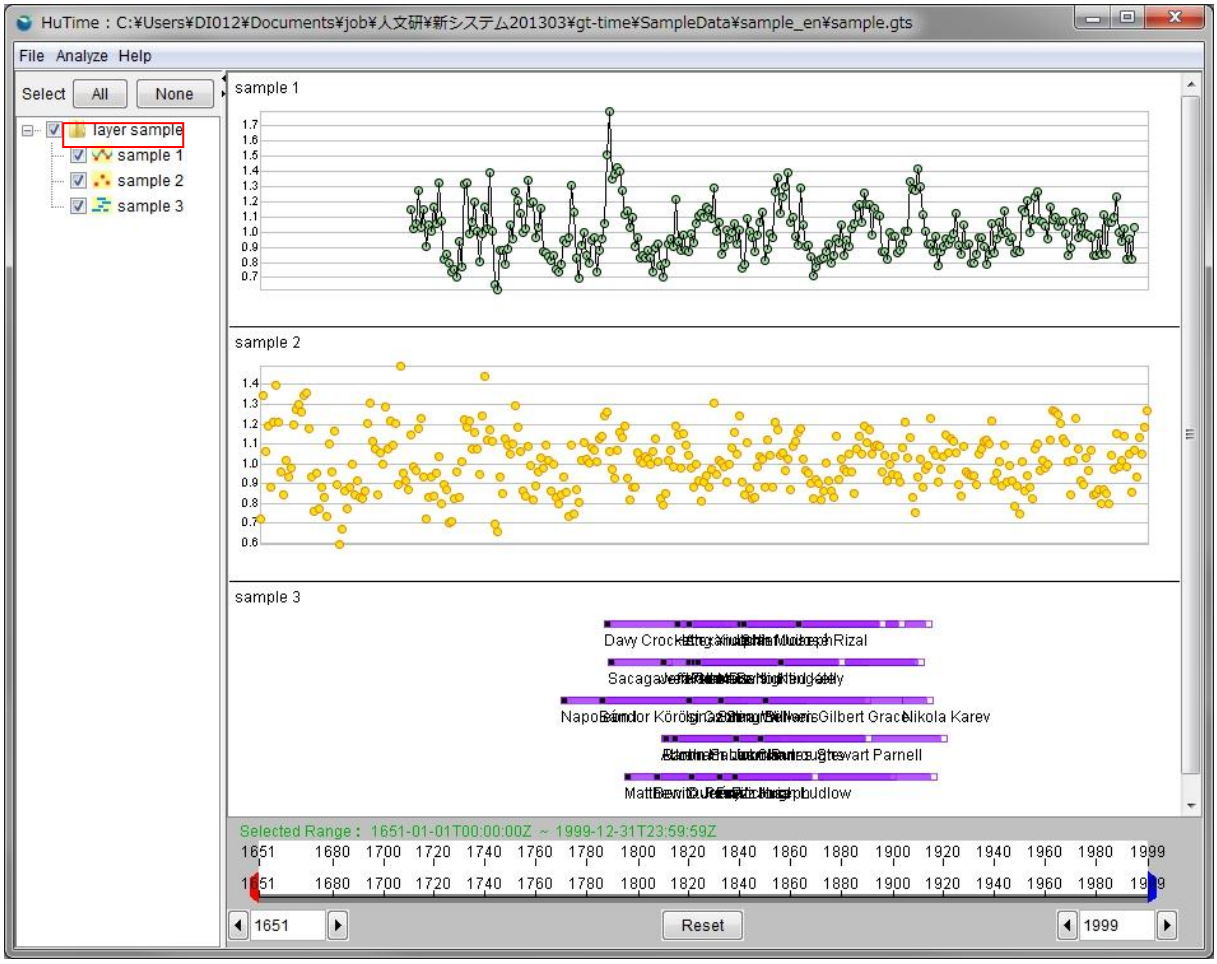


Figure 10-1. Moving a Layer (Before)

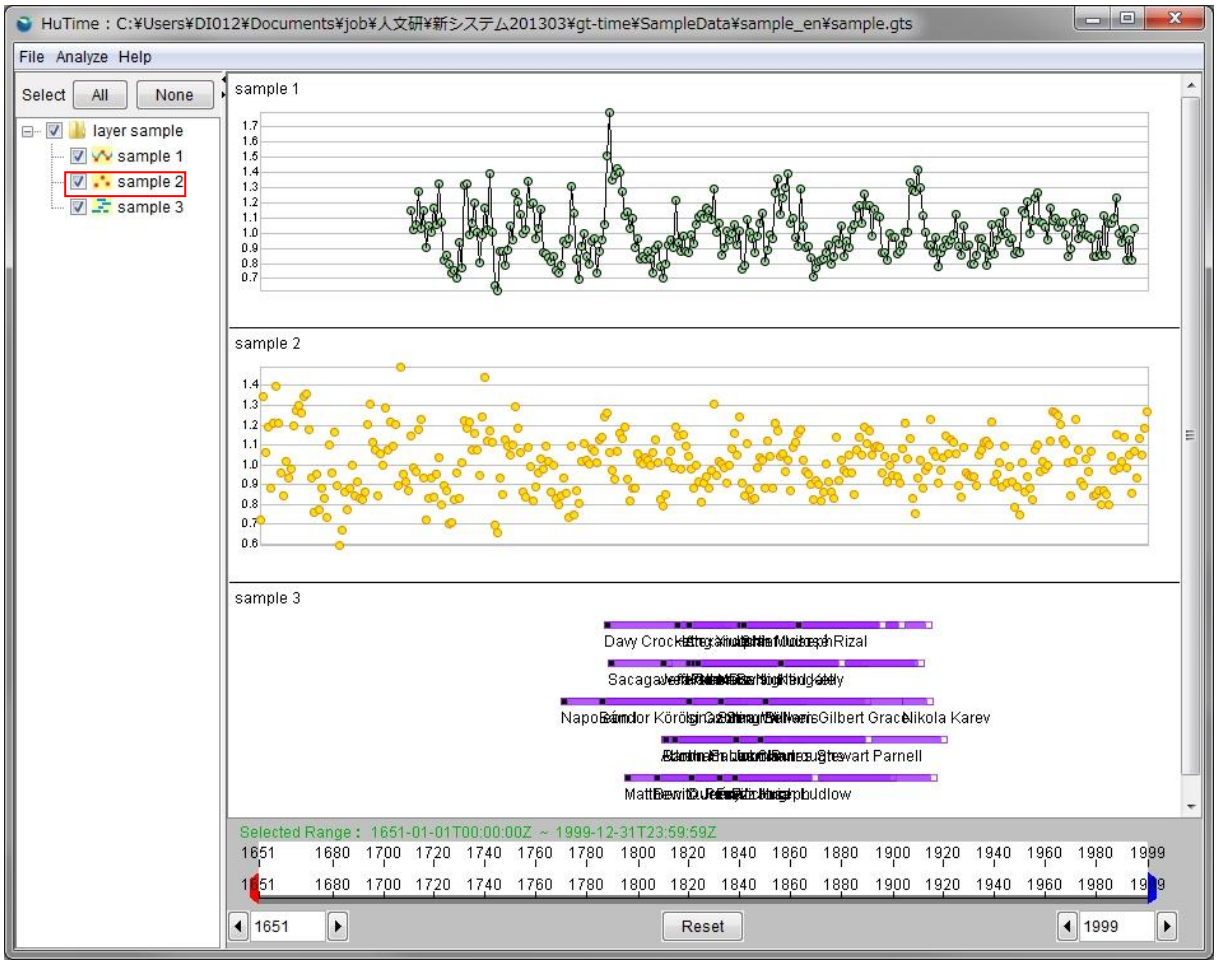


Figure 10-2. Moving a Layer (After)

11. Layer Visible/Invisible

A dataset or project in the Data View can be made visible or invisible in the Data View by checking or unchecking the checkbox that precedes dataset or project. Figure 11-1. Invisible Layer shows an example in which the dataset “sample 2” is made invisible.

Note: When a given project is made invisible, all datasets and projects subordinate to that project will be invisible, irrespective of the status of their own checkboxes.

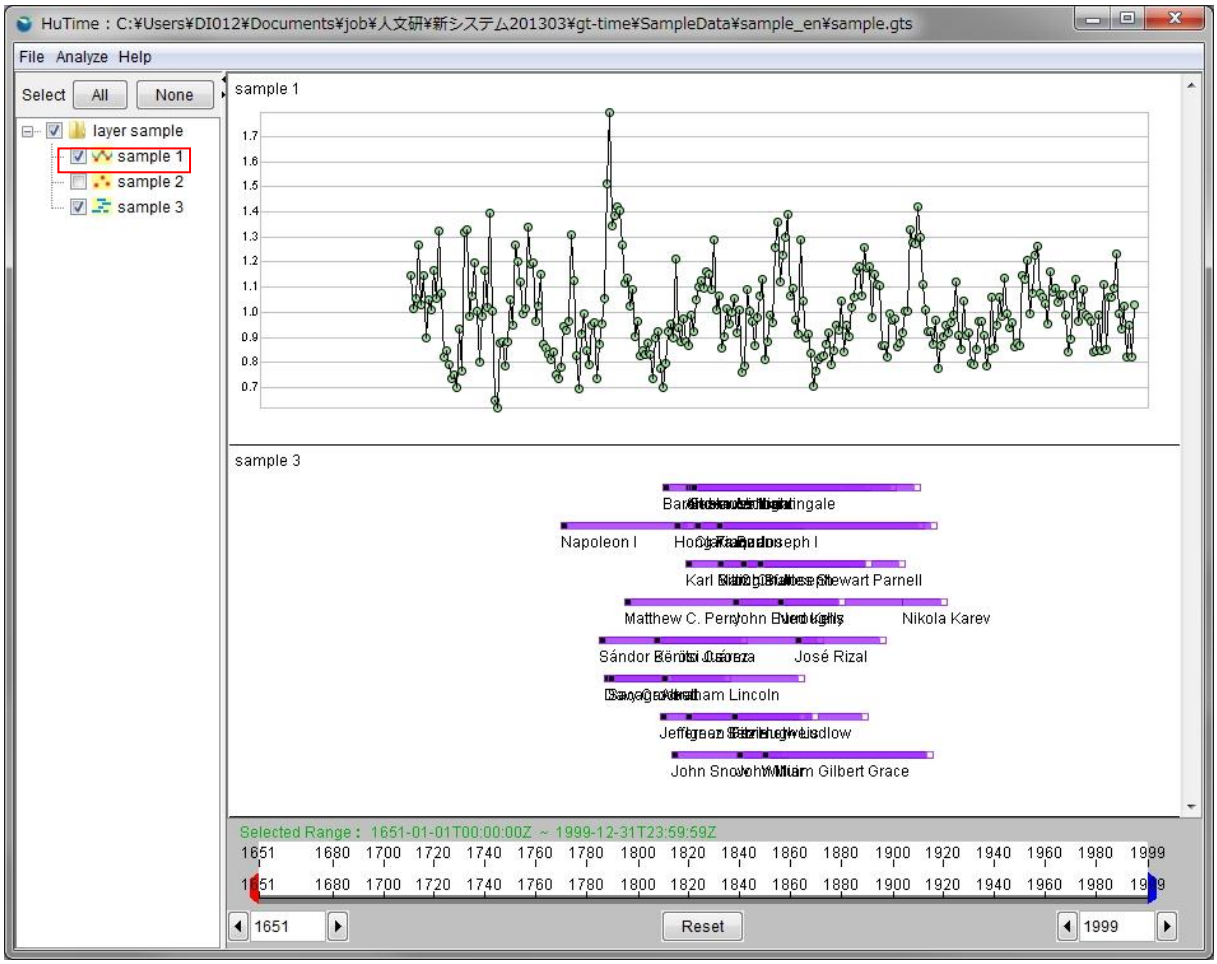


Figure 11-1. Invisible Layer

Using the Select All and None buttons at the top of the Project View, you can collectively switch all datasets and projects between invisible and visible.

Note: However, the Select All and None buttons cannot change the status of checkboxes for the datasets and projects that are subordinate to a given project when the folder icon of the project is closed.

12. Change Layer Height

The height of layers in the Data View can be changed as follows.

Dragging the borderline between layers, as shown in Figure 12-1. Change Layer Height (Before), will change the height of the layers to the Figure 12-2. Change Layer Height (After).

Note: Layer height change can be also made as described in “17.8. Change Layer Height.”

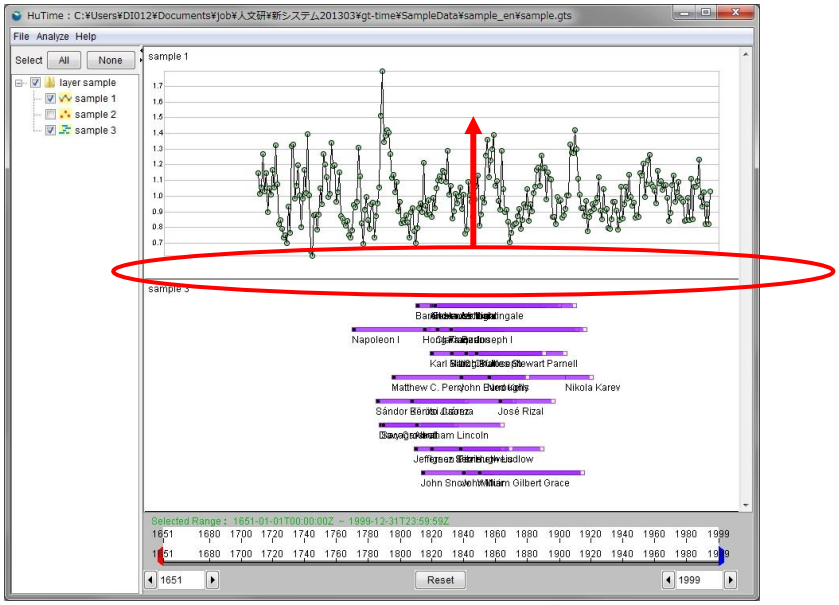


Figure 12-1. Change Layer Height (Before)

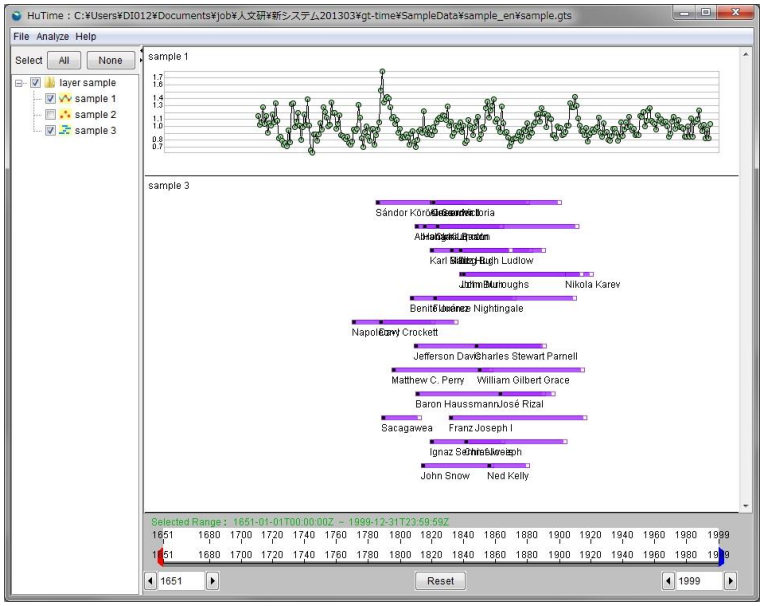


Figure 12-2. Change Layer Height (After)

13. Delete a Layer

A dataset (layer) can be deleted by right-clicking on that dataset in the Project View and selecting Delete in the context menu that will appear. Refer to Figure 13-1. Delete.

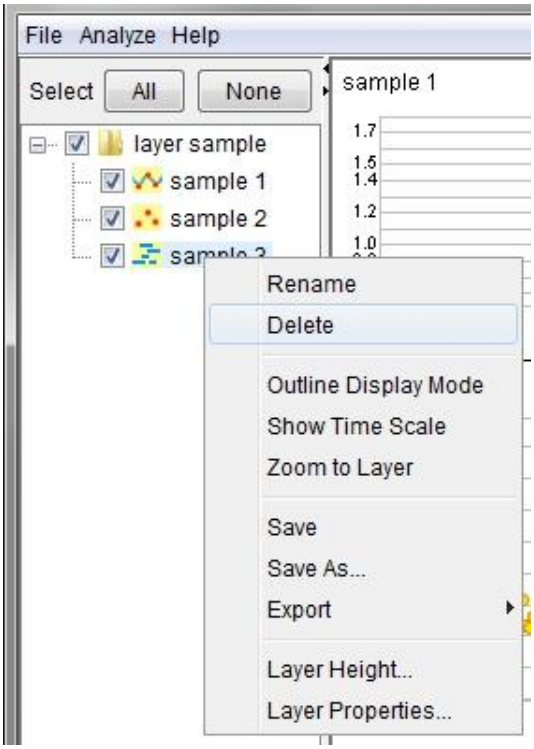


Figure 13-1. Delete

14. Rename a Layer

A project or dataset in the Project View can be renamed as follows.

To rename a project, right-click on the project name (“layer sample” in Figure 14-1. Rename a Project) and select Rename. This will open the Rename dialog box, as in Figure 14-2. Rename Dialog Box, in which a new name can be entered.

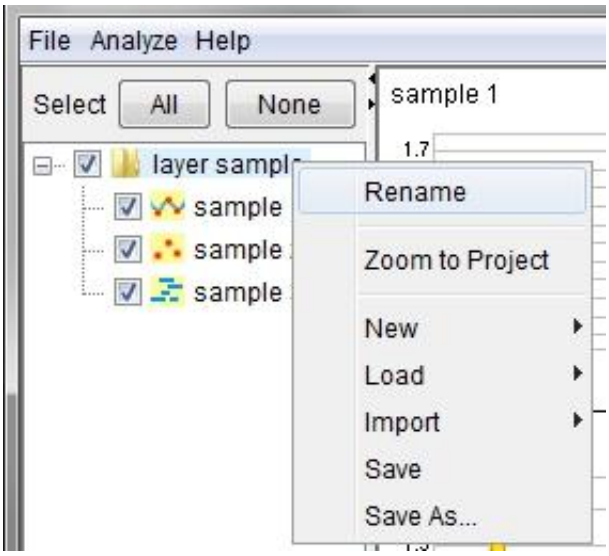


Figure 14-1. Rename a Project

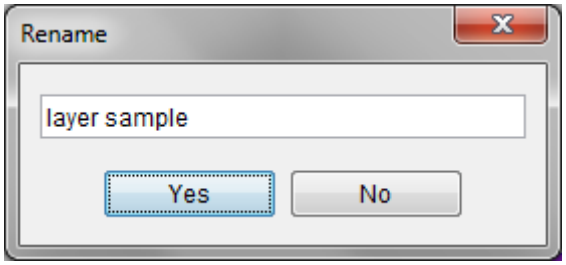


Figure 14-2. Rename Dialog Box

To rename a dataset, right-click on the dataset name (“sample 2” in Figure 14-3. Rename a Dataset) and select Rename. This will open the Rename dialog box, as in Figure 14-4. Rename Dialog Box, in which a new name can be entered.

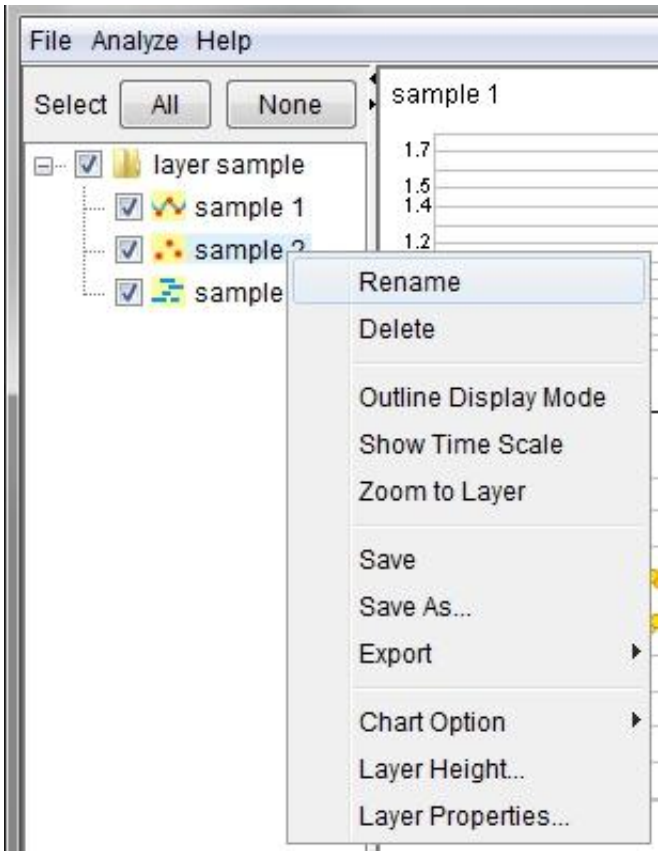


Figure 14-3. Rename a Dataset

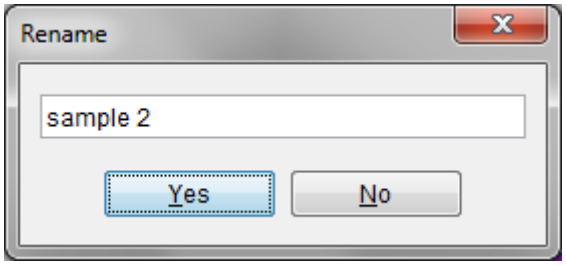


Figure 14-4. Rename Dialog Box

15. Save a Layer

15.1. Save

To save a layer, right-click on the layer name and select Save as shown in Figure 15-1. Save a Layer.

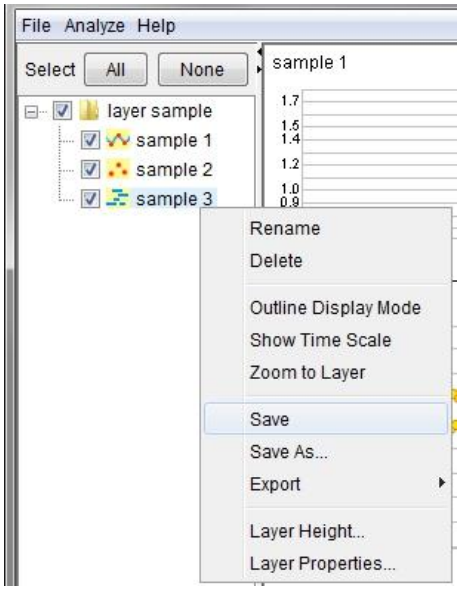


Figure 15-1. Save a Layer

15.2. Save As

To save a layer as a new file, right-click on the layer name and select Save As, as shown in Figure 15-2. Save a Layer as a New File.

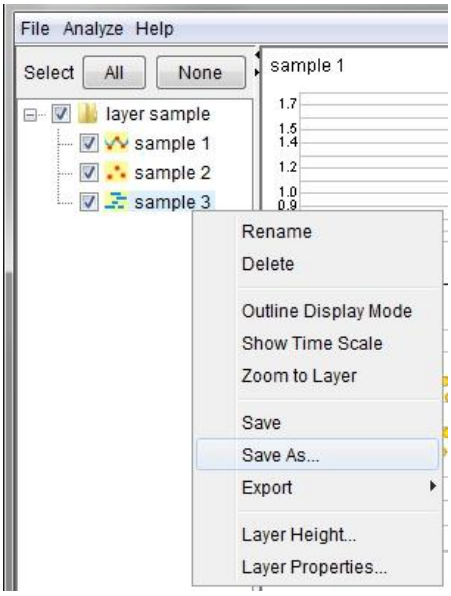


Figure 15-2. Save a Layer as a New File

In the Save File dialog box, type in the file name to be saved and click Save. Refer to Figure 15-3. Save a Layer.

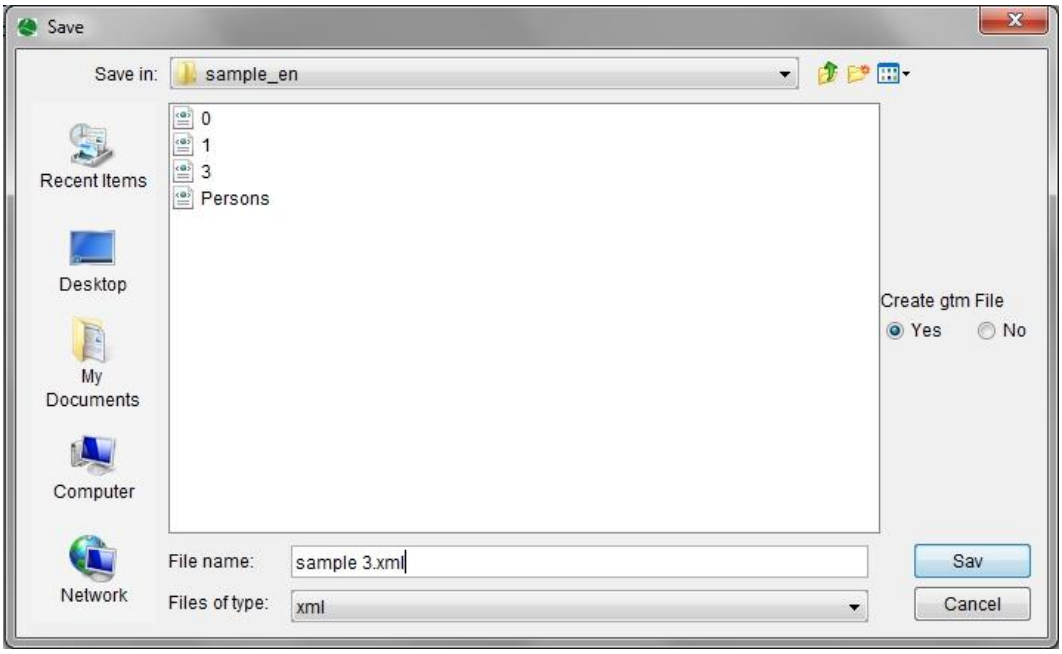


Figure 15-3. Save a Layer

If the system is configured to issue a warning that a TMS or TMM file, if imported, will be saved as a GTS or GMM file, respectively, the warning dialog shown in Figure 15-4. Warning Dialog Box will appear before the file is saved.

Figure 15-4. Warning Dialog Box

16. Time Cursor Functions

16.1. Time Cursor

As shown in Figure 16-1. Time Cursor, there is a time-indicating cursor that stretches across more than one layer and moves from side to side, following the motion of the mouse.

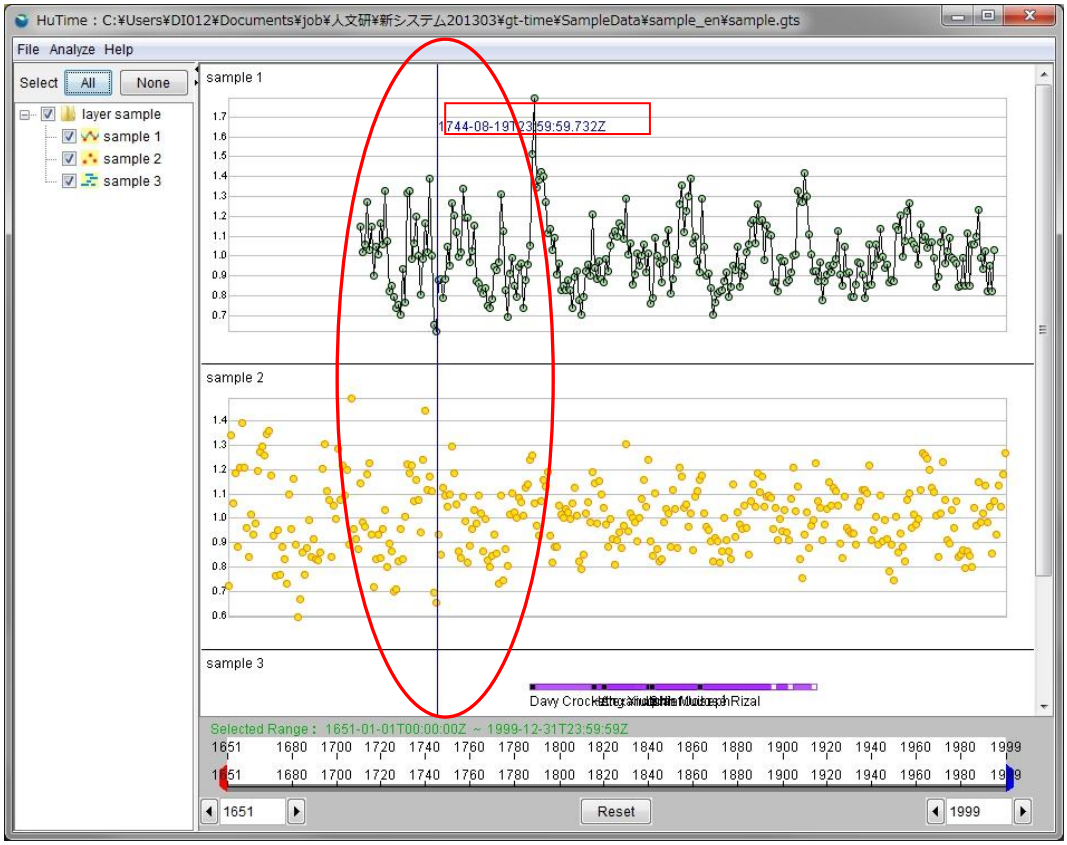


Figure 16-1. Time Cursor

16.2. Show Data on the Time Cursor

If you move the mouse up and down, the data on the time cursor within a layer on which the mouse is focused is shown. Refer to Figure16-2. Show Data on the Time Cursor 1 and Figure 16-3. Show Data on the Time Cursor 2.

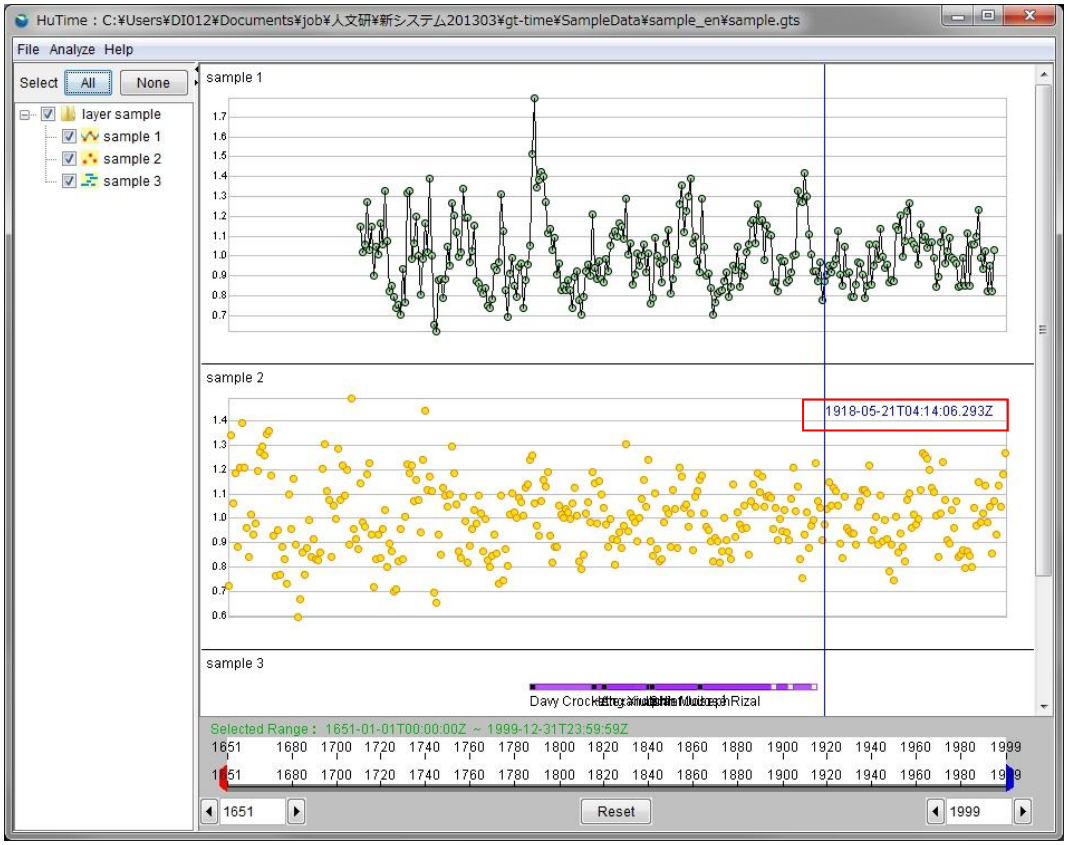


Figure 16-2. Show Data on the Time Cursor 1

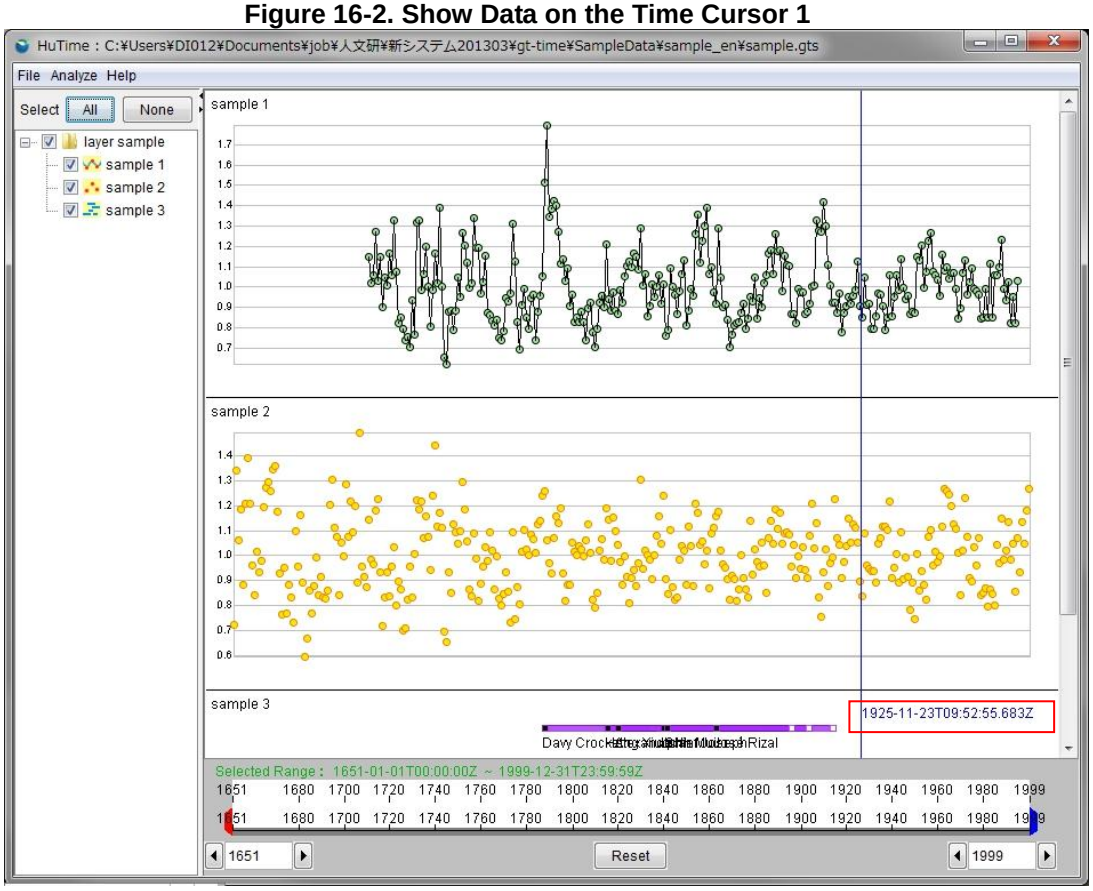


Figure 16-3. Show Data on the Time Cursor 2

16.3. Highlight a Time Span Using the Time Cursor

As shown in Figure 16-4. Highlight a Time Span Using the Time Cursor, you can specify a time span by dragging the mouse on a layer. The specified time span will be highlighted in a different color.

Time span specification can be cancelled by double-clicking the highlighted area or clicking the mouse at any point outside the highlighted area.

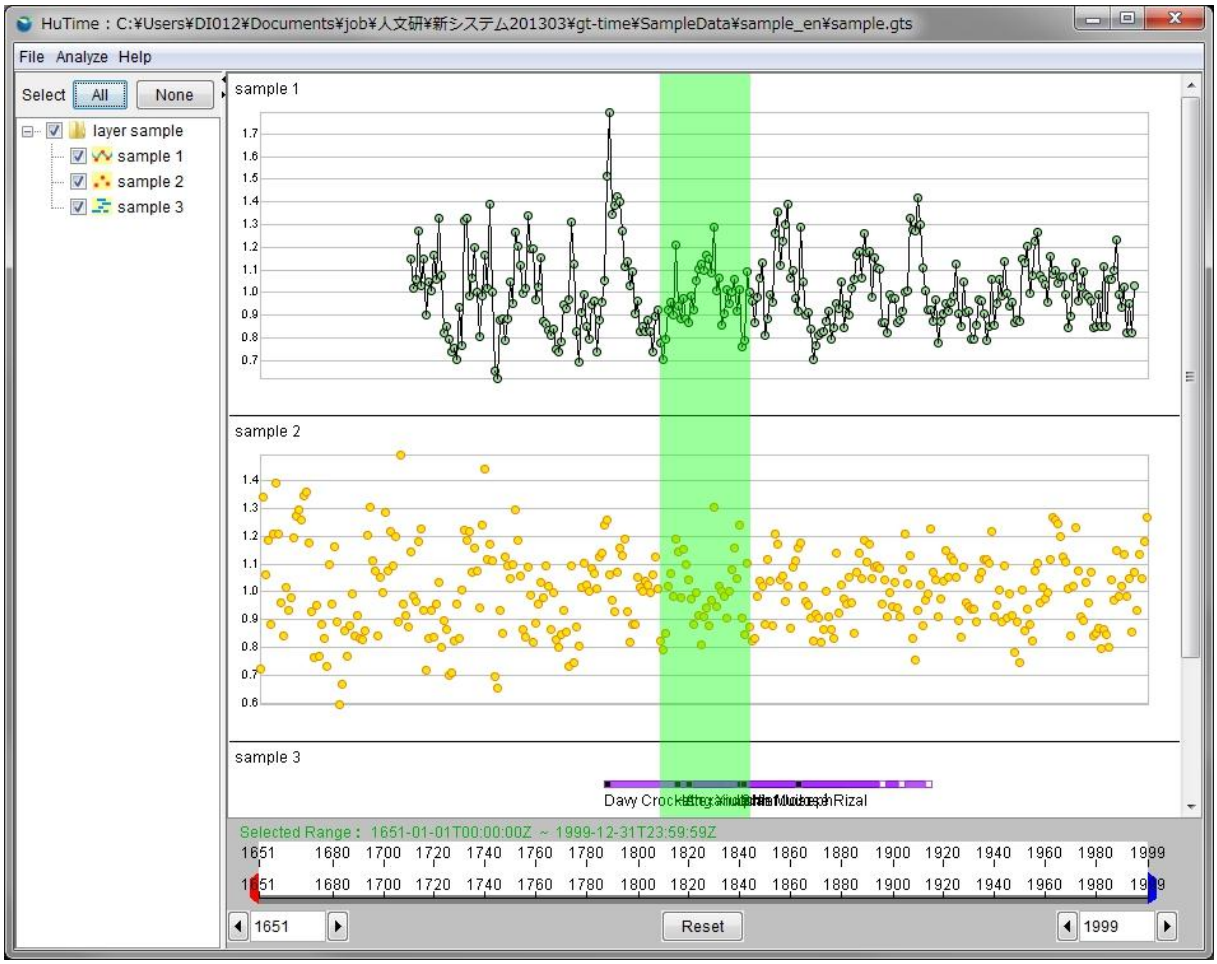


Figure 16-4. Highlight a Time Span Using the Time Cursor

16.4. Highlight an Additional Time Span

By dragging the mouse on a layer while pressing the Ctrl button on the keyboard, you can specify an additional time span. Refer to Figure 16-5. Highlight an Additional Time Span. The specified time span will be highlighted. If the additional time span overlaps with a span or spans already specified, they will be combined to be one continuous time span. Refer to Figure 16-6. Time Spans Combined.

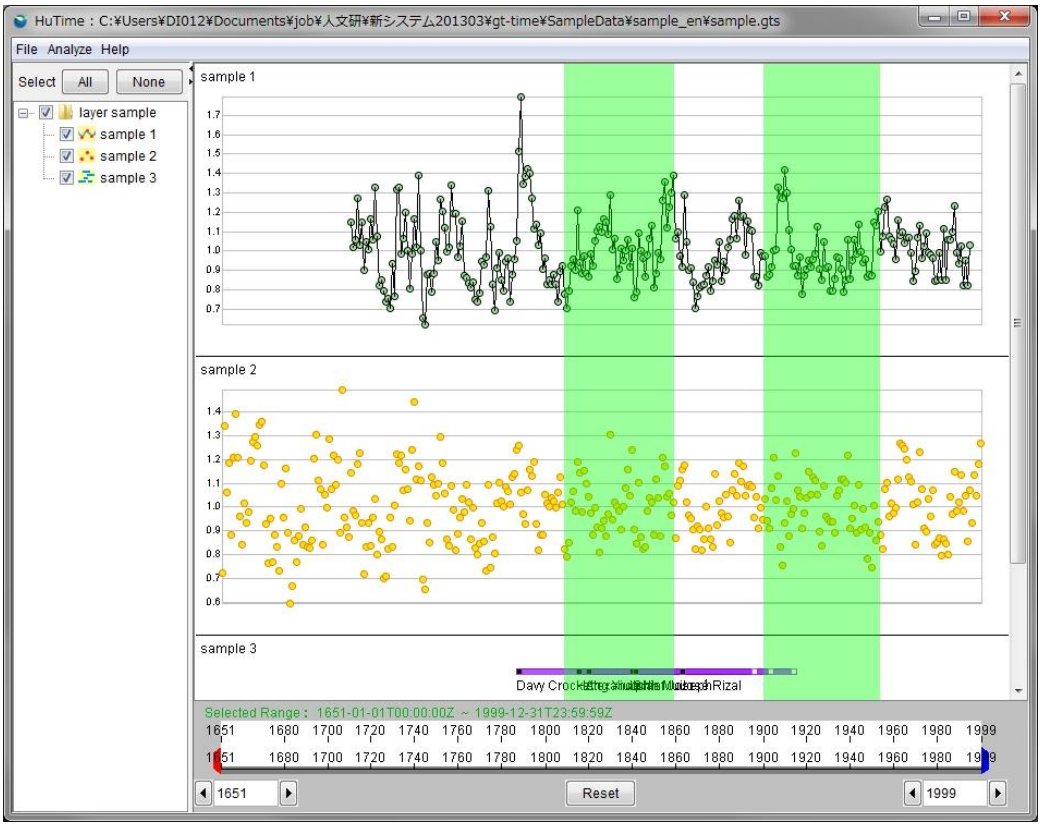


Figure 16-5. Highlight an Additional Time Span

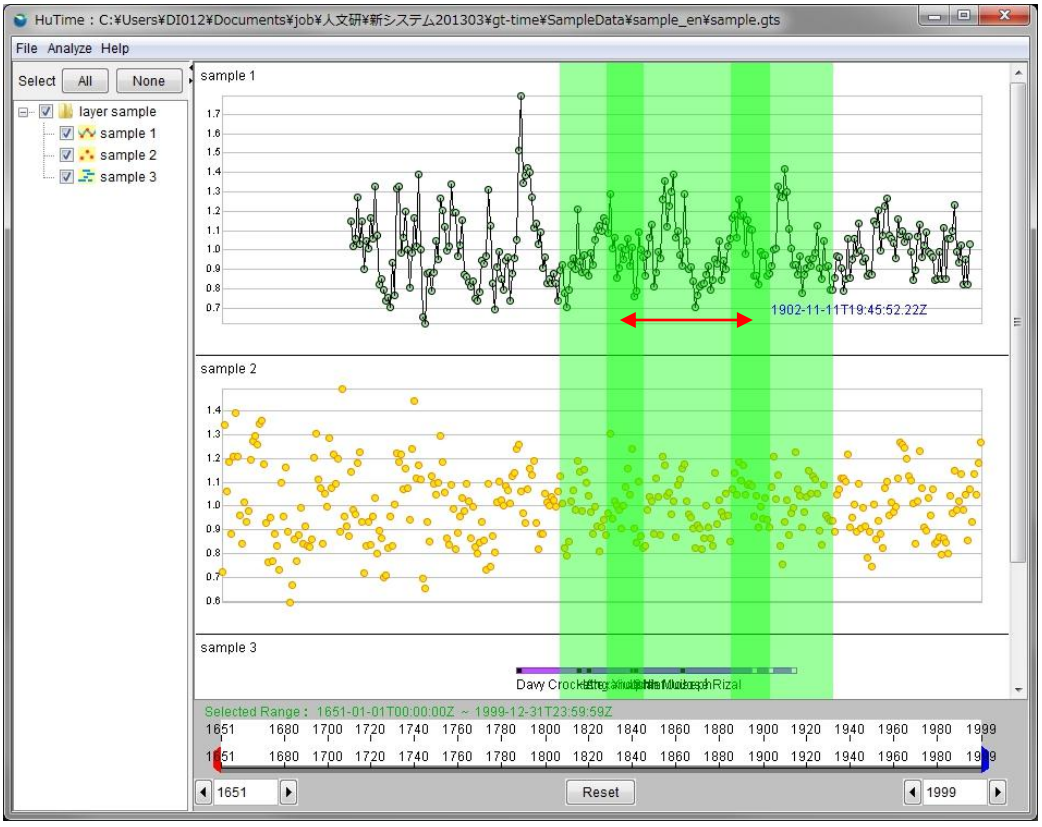


Figure 16-6. Time Spans Combined

17. Basic Layer Functions

The basic functions available on a layer are listed in Table 17-1. Basic Layer Functions.

Table 17-1. Basic Layer Functions

No.	Item	Description
1	Show Time Scale	Make the time scale at the layer bottom visible or invisible.
2	Image Output	Save the layer as an image file.
3	CSV Output	Export the layer to a CSV file.
4	GTM/XML Output	Export the layer to a GTM or XML file.
5	KML Output	Export the layer to a KML file.
6	Copy Image to Clipboard	Copy the layer image to the clipboard.
7	Time Measure	Measure the time for the area specified by the time cursor. This function is available only when such an area is selected.
8	Outline Display Mode	Turn on or off the outline display mode.

17.1. Layer Context Menus

Right-clicking on a layer will open the context menu shown in Figure 17-1. Layer Context Menu. Right-clicking on a layer while the time measure is active will open the context menu shown in Figure 17-2. Layer Context Menu While Time Measure is Active.

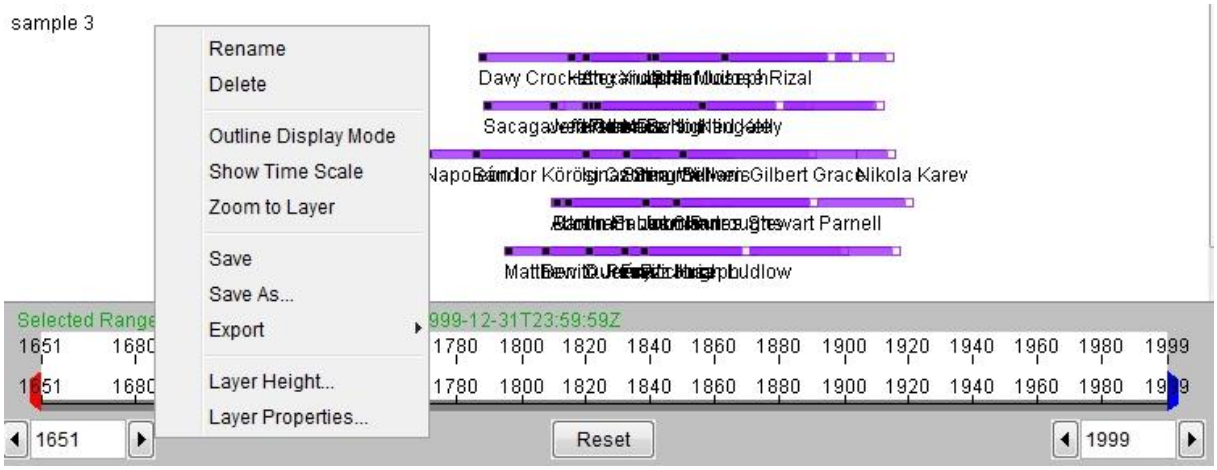


Figure 17-1. Layer Context Menu

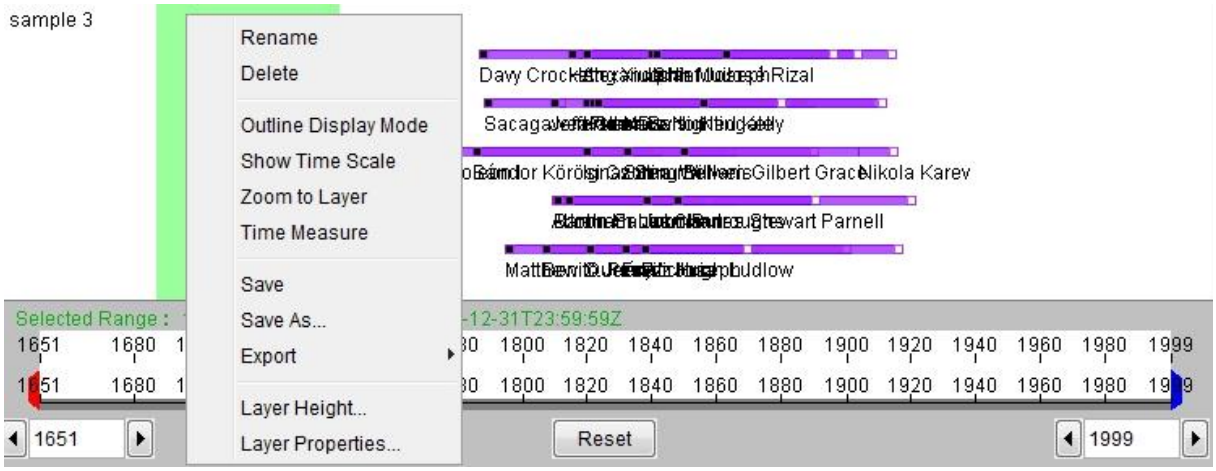


Figure 17-2. Layer Context Menu While Time Measure is Active

17.2. Show Time Scale

If you select Show Time Scale on the layer context menu, a time scale will appear at the bottom of the layer, as shown in Figure 17-3. Show Time Scale.

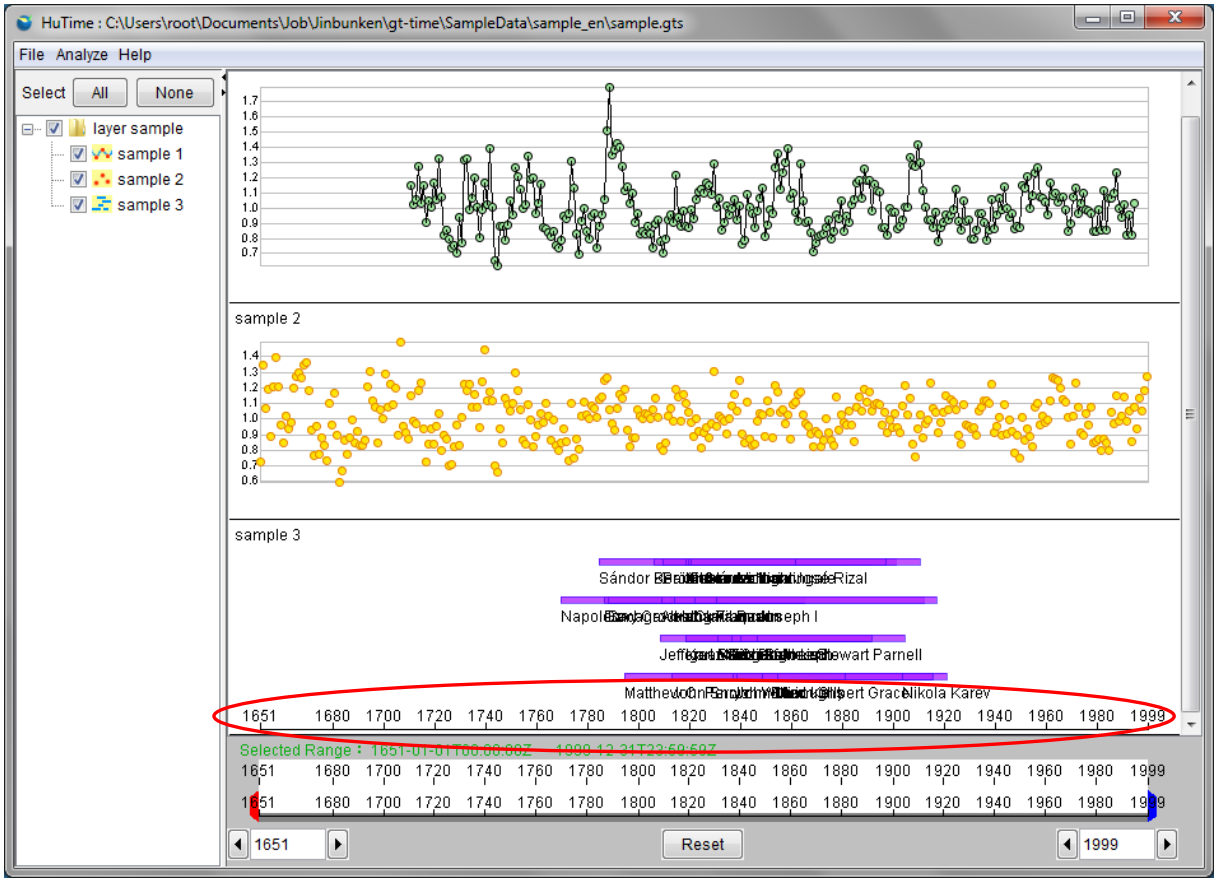


Figure 17-3. Show Time Scale

When a time scale is visible on a layer, you see a checkmark next to Show Time Scale on the layer context menu, as shown in Figure 17-4. Context Menu When Time Scale is Visible. Checking or unchecking Show Time Scale will make the time scale appear or disappear, respectively.

Figure 17-4. Context Menu When Time Scale is Visible

17.3. Data Output

By selecting Export → Data on the context menu, you can export the layer content to a CSV or KML file. When you select Export → Data as shown in Figure 17-5. Data Output, the dialog box as shown in 17-6. Data Output Dialog will appear.

In the dialog box, select csv or kml as the type of file to which the layer content is to be exported.

If you select csv, you can also export the content to a GTM file at the same time when it is exported to a CSV file. For encoding, you can select UTF-8 or Shift_JIS. Type in a file name and click Save to export the data to a CSV file.

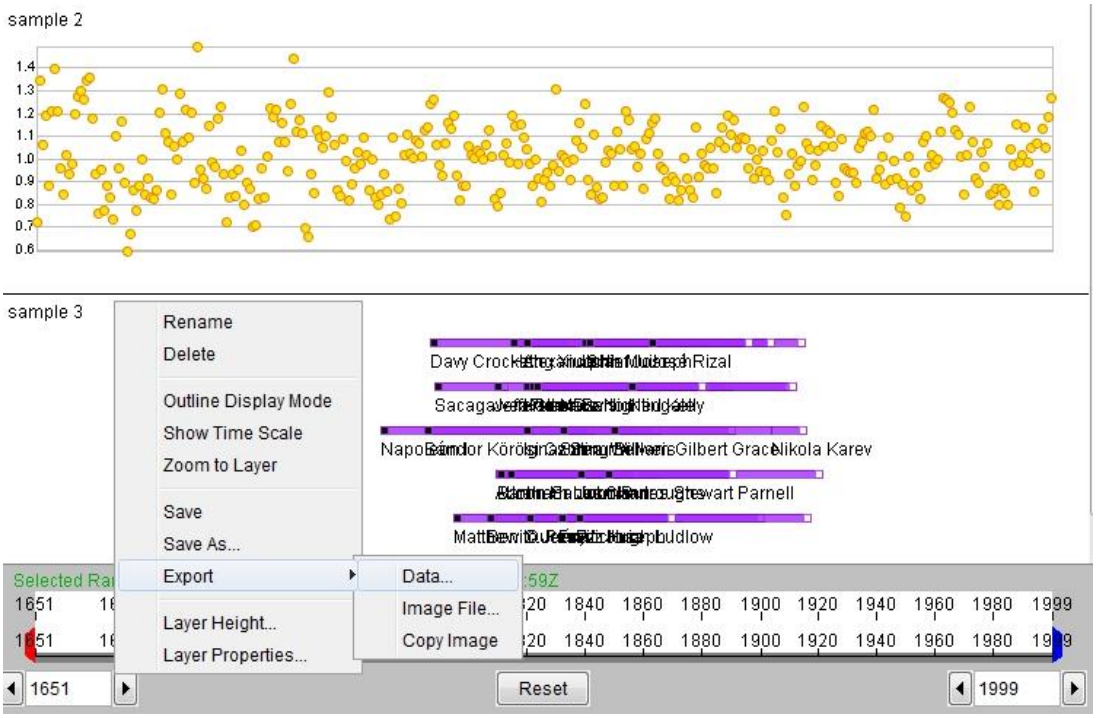


Figure 17-5. Data Output

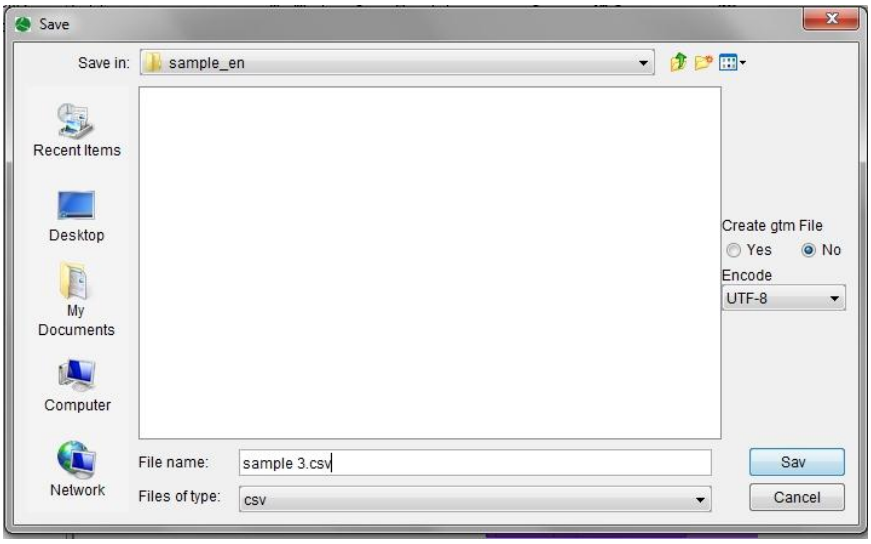


Figure 17-6. Data Output Dialog

If you select kml as the output file type, the layer content will be exported to a KML file.

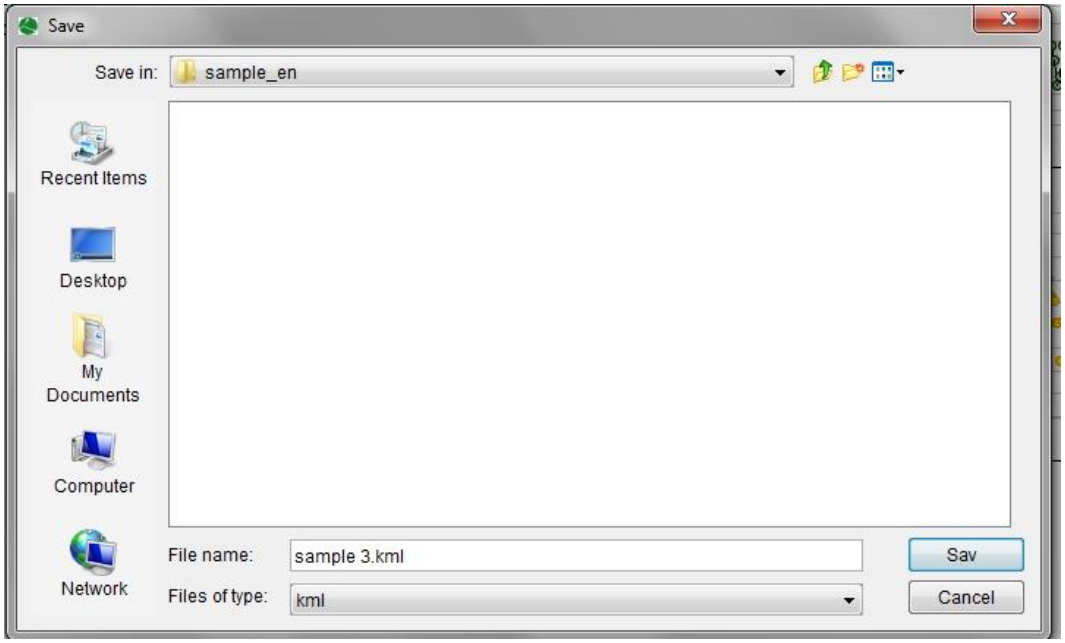


Figure 17-7. Data Output Dialog (When "kml" Selected)

17.4. Image File Output

By selecting Export → Image File on the context menu, you can export the layer content to a RAW, BMP, GIF, JPG, PNG or PPM file.

The output image will have a time duration in which all records of the layer can be shown.

When you select Export → Image File (Figure 17-8. Export Image File), the dialog box as shown in Figure 17-9. Image File Output Dialog Box will appear. Type in a file name and click

Save to export the data to a RAW, BMP, GIF, JPG, PNG or PPM file. Table 17-2. Image File Types lists the image file types to which the layer data can be exported.

Table 17-2. Image File Types

No.	Image File Types
1	BMP
2	JPG
3	RAW
4	GIF
5	PNG
6	PPM

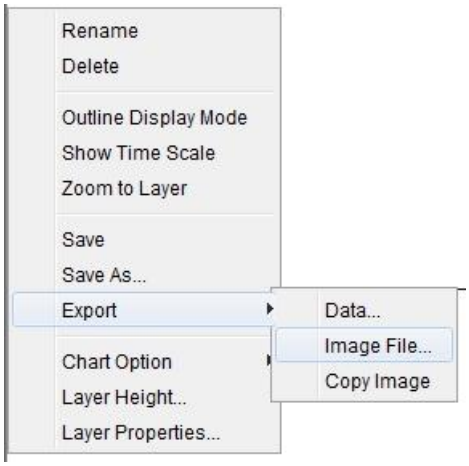


Figure 17-8. Export Image File

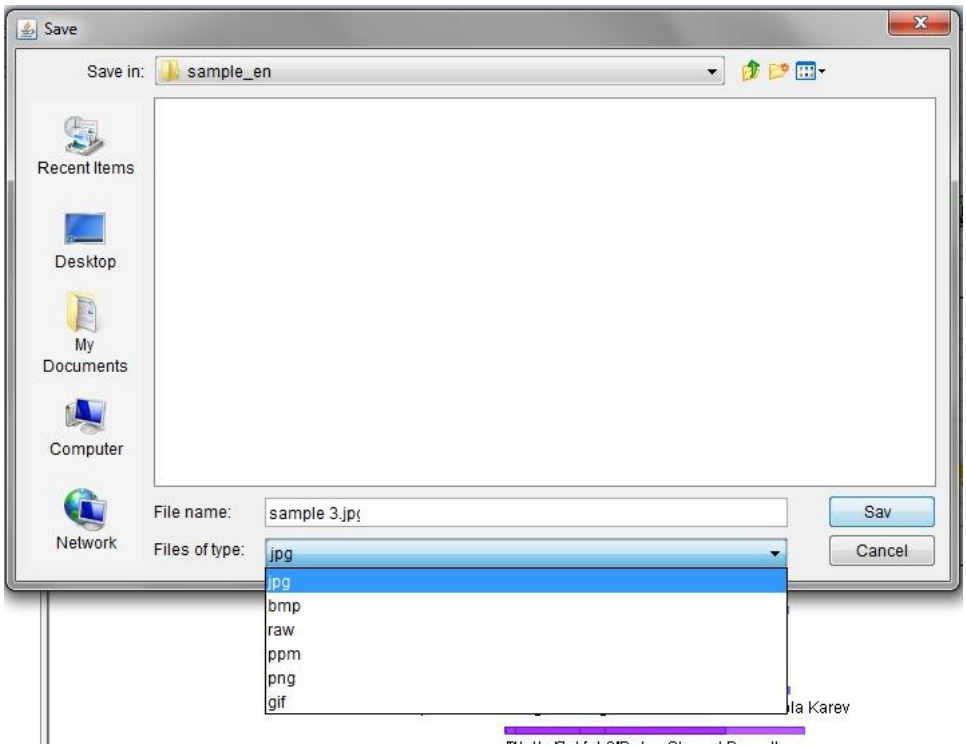


Figure 17-9. Image File Output Dialog Box

17.5. Copy Image

By selecting Export → Copy Image (Figure 17-10. Copy Image), you can copy the layer image to the clipboard.

The output image will have a time duration in which all records of the layer can be shown.

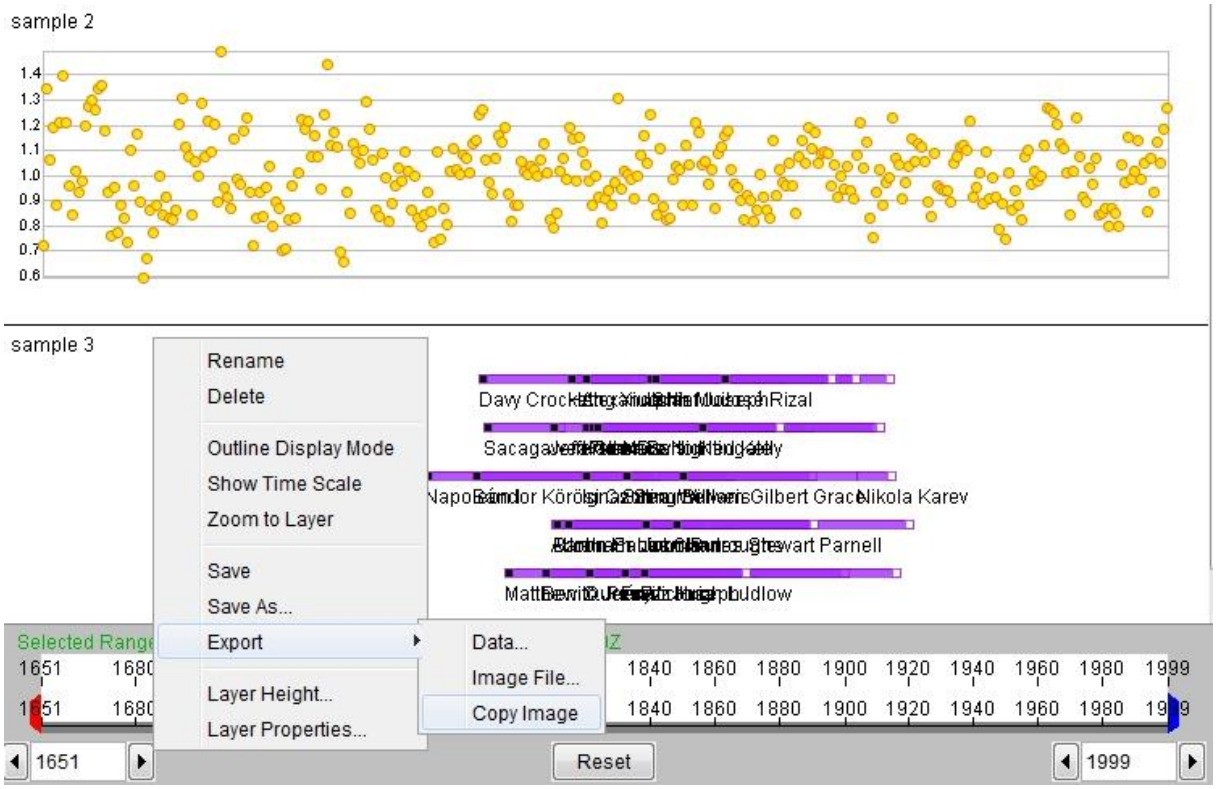


Figure 17-10. Copy Image

17.6. Time Measure

This function is only available while a time span is selected with the time cursor as described in "16.3. Highlight a Time Span Using the Time Cursor."

17.6.1. Measurement Method

If you select Time Measure on the layer context menu, as shown in Figure 17-11. Select Time Measure, the length from the start to the end point of the selected (highlighted) time span will be measured and shown in terms of year, month, week, day or hour of the Western calendar as in Figure 17-12. Measurement Result Dialog Box.

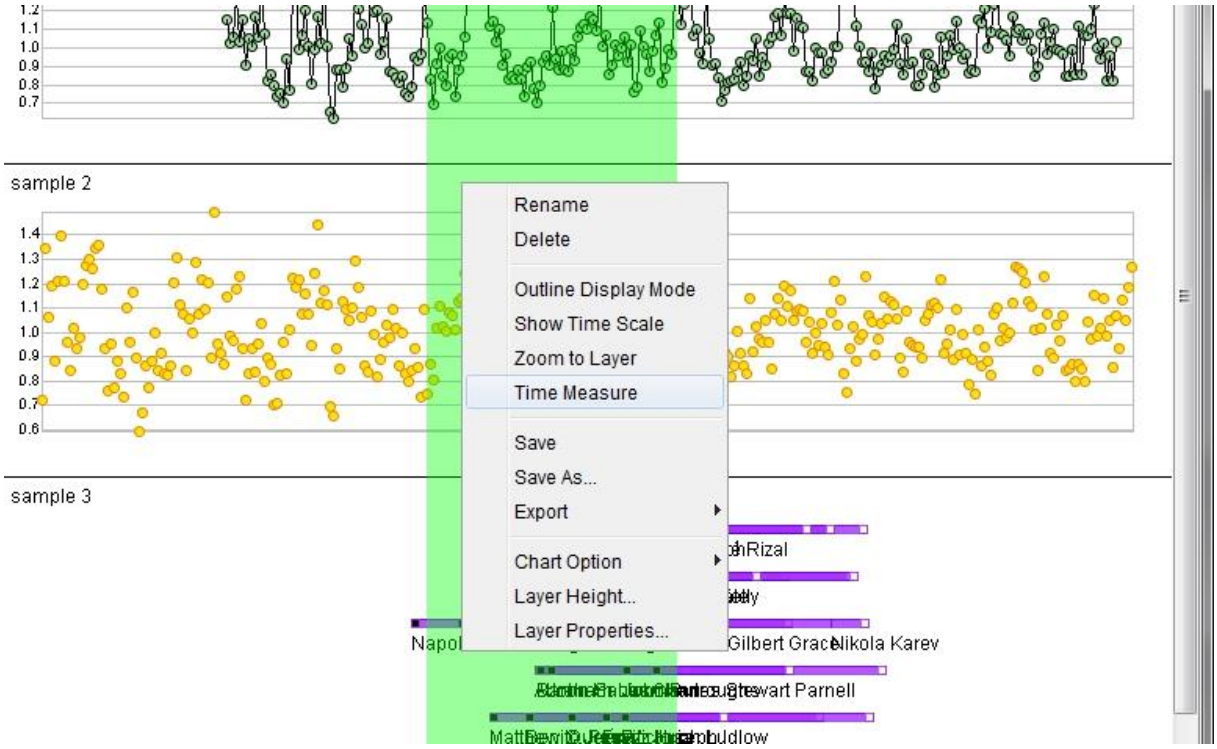


Figure 17-11. Select Time Measure

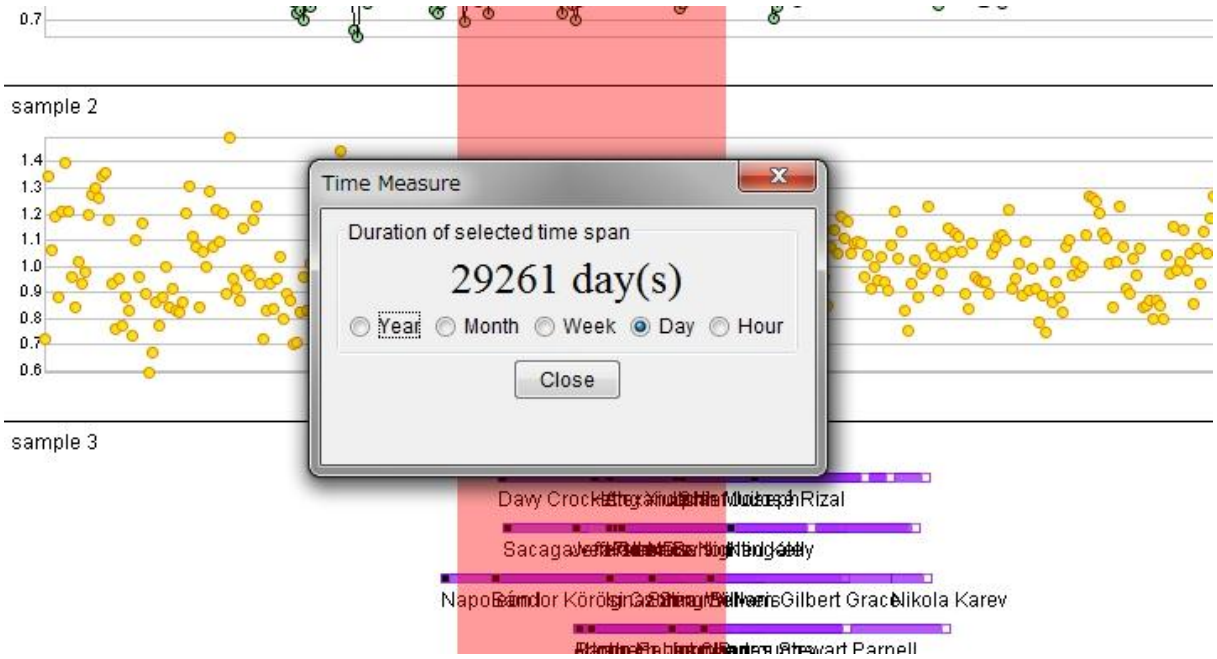


Figure 17-12. Measurement Result Dialog Box

When more than one time span is selected, if you select Time Measure on the layer context menu of a given time span as shown in Figure 17-13. Time Measure (Multiple Selections), the selected time span for which the context menu appeared will turn red, showing the duration of the red area and the total duration of all selected time spans, measured in terms of year, month, week, day or hour of the Western calendar as shown in Figure 17-14. Measurement

Result Dialog Box (Multiple Selections).

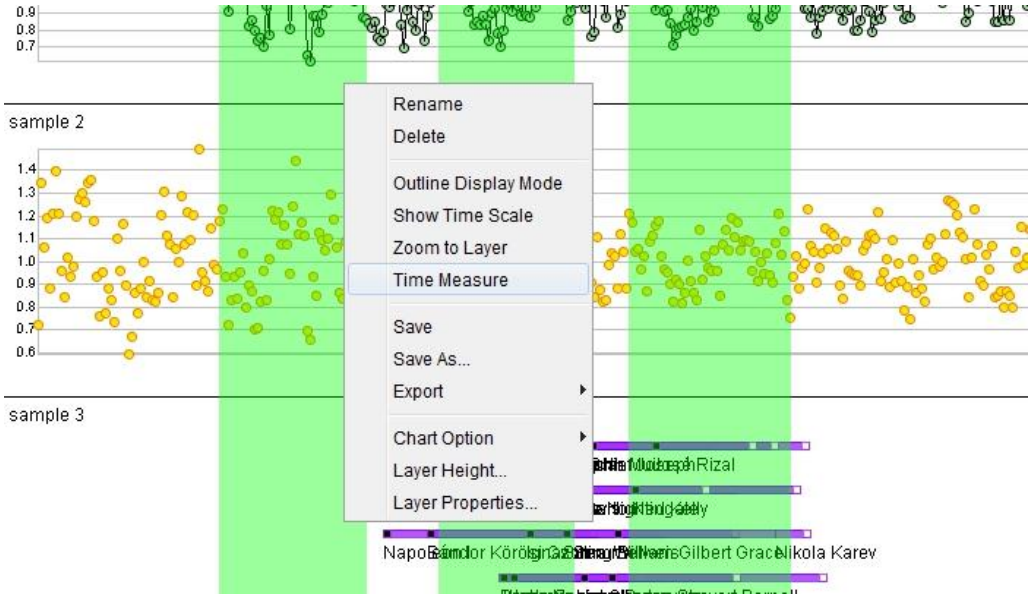


Figure 17-13. Time Measure (Multiple Selections)

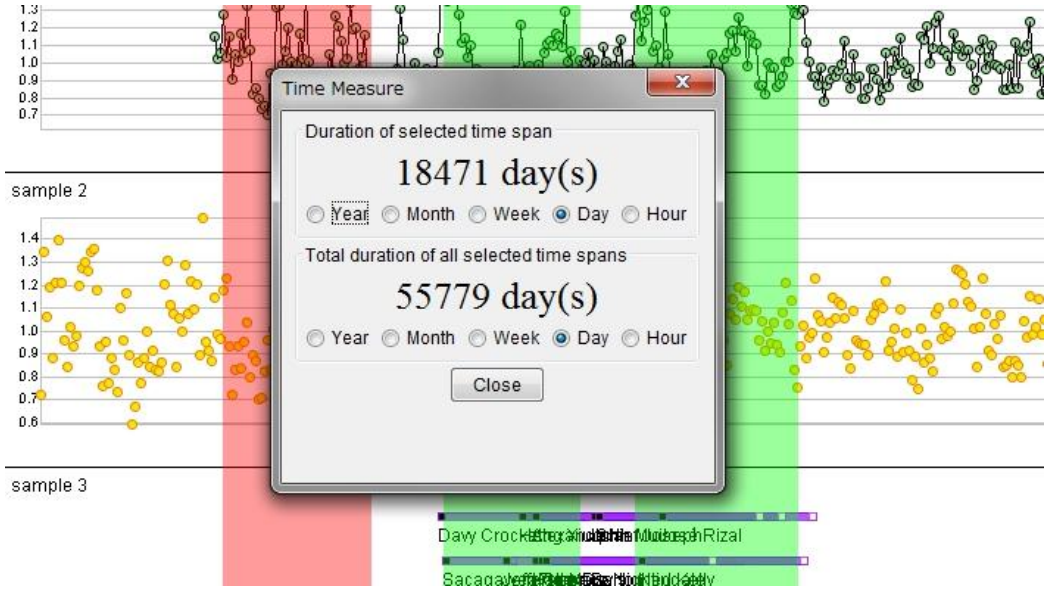


Figure 17-14. Measurement Result Dialog Box (Multiple Selections)

When more than one time span is selected, if you select Time Measure on the context menu that pops up in the Project View, as shown in Figure 17-15. Time Measure (Multiple Selections) 2, all the area for selected time spans will turn red, showing the total duration of all selected time spans, measured in terms of year, month, week, day or hour of the Western calendar, as shown in Figure 17-16. Measurement Result Dialog Box (Multiple Selections) 2.

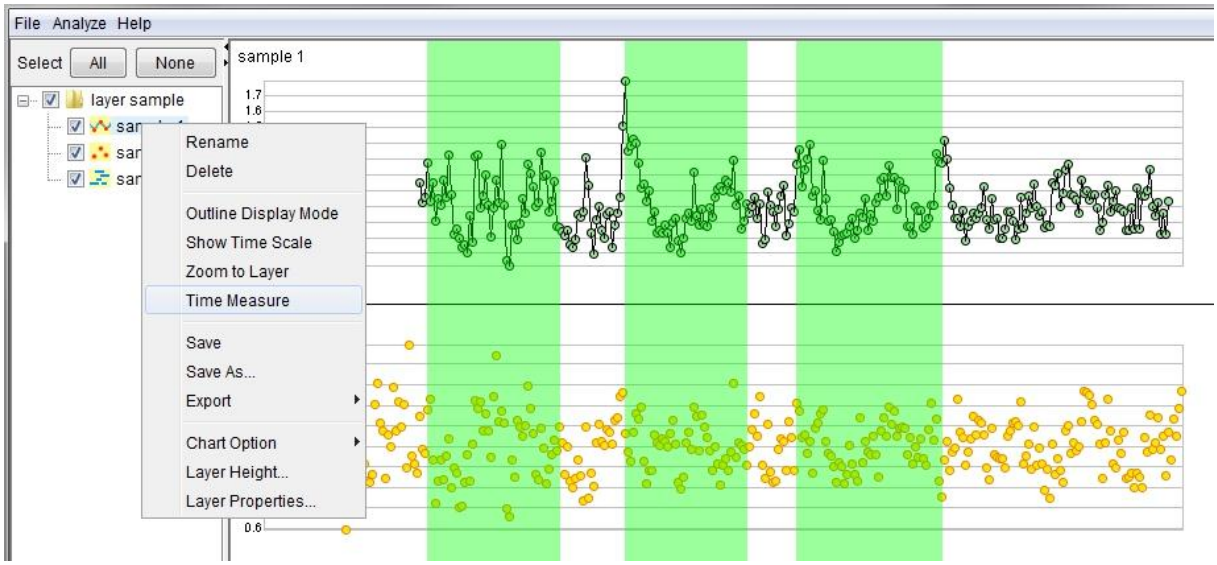


Figure 17-15. Time Measure (Multiple Selections) 2

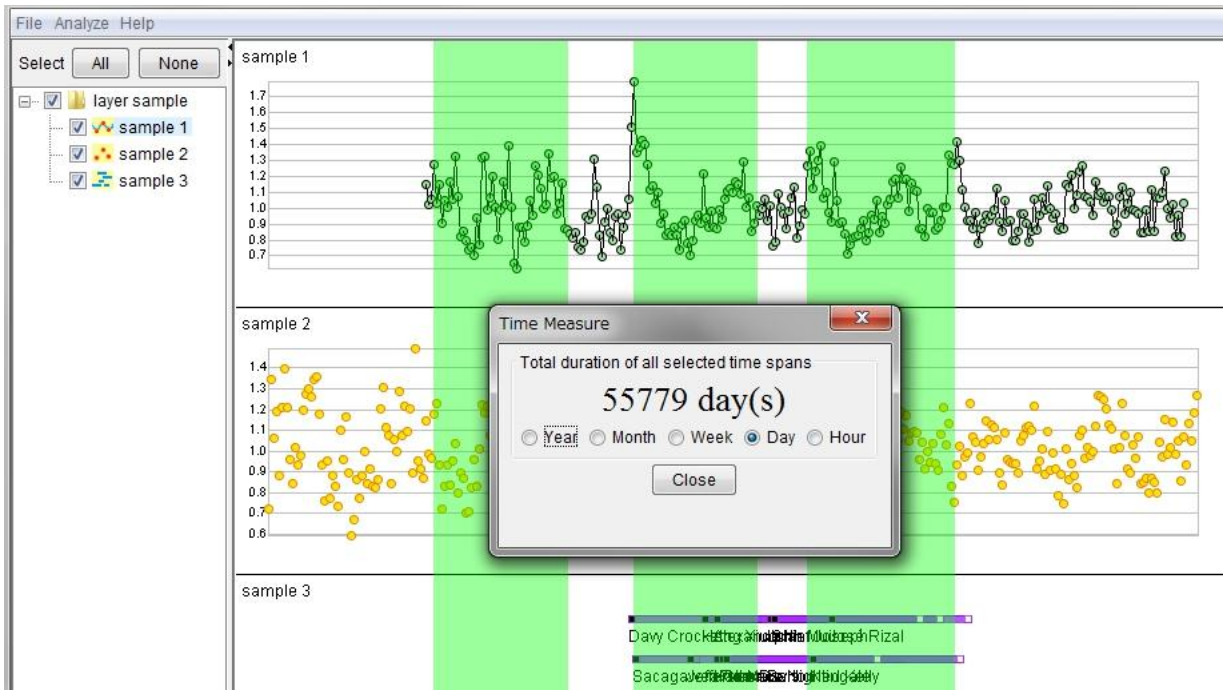


Figure 17-16. Measurement Result Dialog Box (Multiple Selections) 2

17.6.2. Measurement Results

The units showing the measurement results in the Measurement Result dialog box are switchable among year, month, week, day and hour by selecting the respective radio buttons. To see how the results are shown, refer to Table 17-3. Measurement Results Shown.

Table 17-3. Measurement Results Shown

No.	Item	Description
1	Year	Shown to three decimal places
2	Month	Shown to three decimal places
3	Week	Shown to three decimal places
4	Day	Shown in whole numbers
5	Hour	Shown in whole numbers

17.6.3. Close the Measurement Result Dialog Box

Clicking the Close button as shown in Figure 17-12. Measurement Result Dialog Box will put an end to the display of measurement results.

17.7. Outline Display Mode

The Outline Display Mode refers to the mode in which the records that exceed the threshold count are hidden. The maximum number of records for which the Outline Display Mode will be active can be changed by setting the preferences of each type of layer as described in Section 21. The rules for hiding records are also stated in Section 21.

If you click the Outline Display Mode when it does not have a checkmark on the layer context menu, the Outline Display Mode will be checked, activating the Outline Display Mode. Refer to Figure 17-17. Turning On the “Outline Display Mode.”

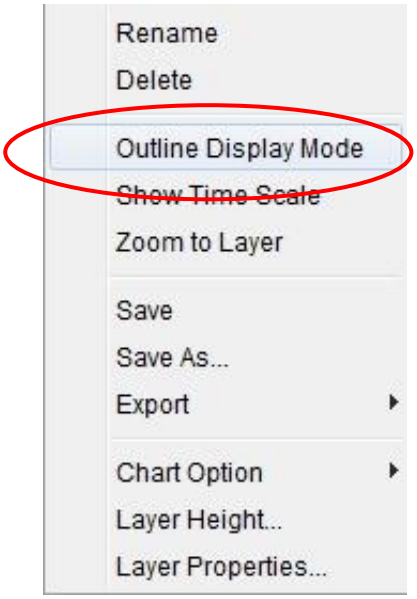


Figure 17-17. Turning On the “Outline Display Mode”

If you click on the Outline Display Mode when it has a checkmark on the layer context menu, the Outline Display Mode will be unchecked, deactivating the Outline Display Mode. Refer to Figure 17-18. Turning Off the “Outline Display Mode.”

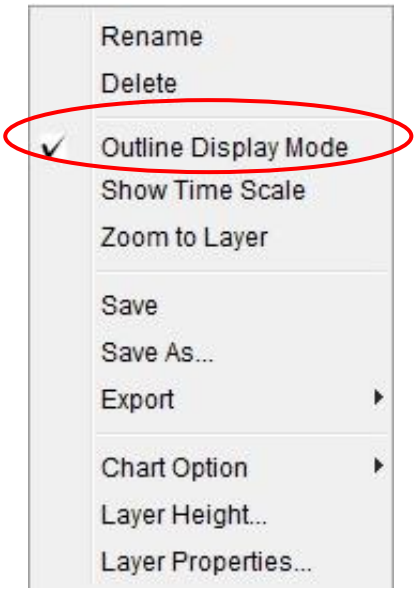


Figure 17-18. Turning Off the "Outline Display Mode"

17.8. Change Layer Height

If you click Layer Height on the layer context menu (see Figure 17-19. Change Layer Height), the Layer Height Setting dialog (see Figure 17-20. Layer Height Setting Dialog Box) will appear.

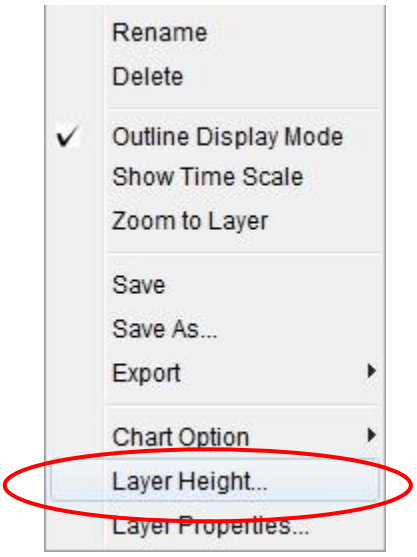


Figure 17-19. Change Layer Height

Figure 17-20. Layer Height Setting Dialog Box

By changing the value, you can change the height of a layer in pixels.

18. Zoom to Project and Layer

18.1. Zoom to Project

If you select Zoom to Project on the project context menu (see Figure 18-1. Zoom to Project), all layers of the project will be adjusted to show the entire data in the Data View.

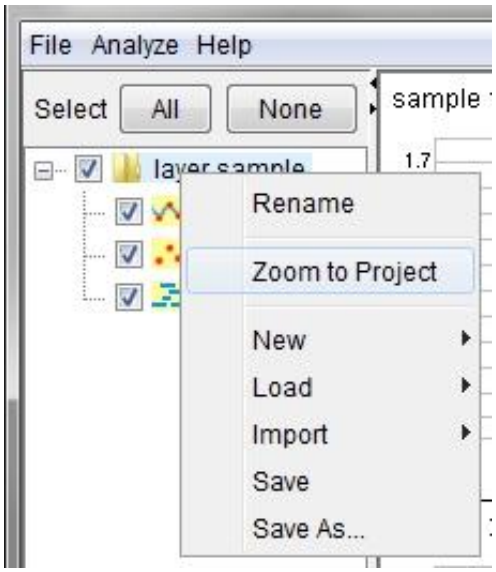


Figure 18-1. Zoom to Project

In the example below, the entire data of sample 1 and sample 2 are not shown in the respective layers (see Figure 18-2. Before Zoom to Project is Applied). When Zoom to Project is applied, the entire data will be shown within the layers (see Figure 18-3. After Zoom to Project is Applied).

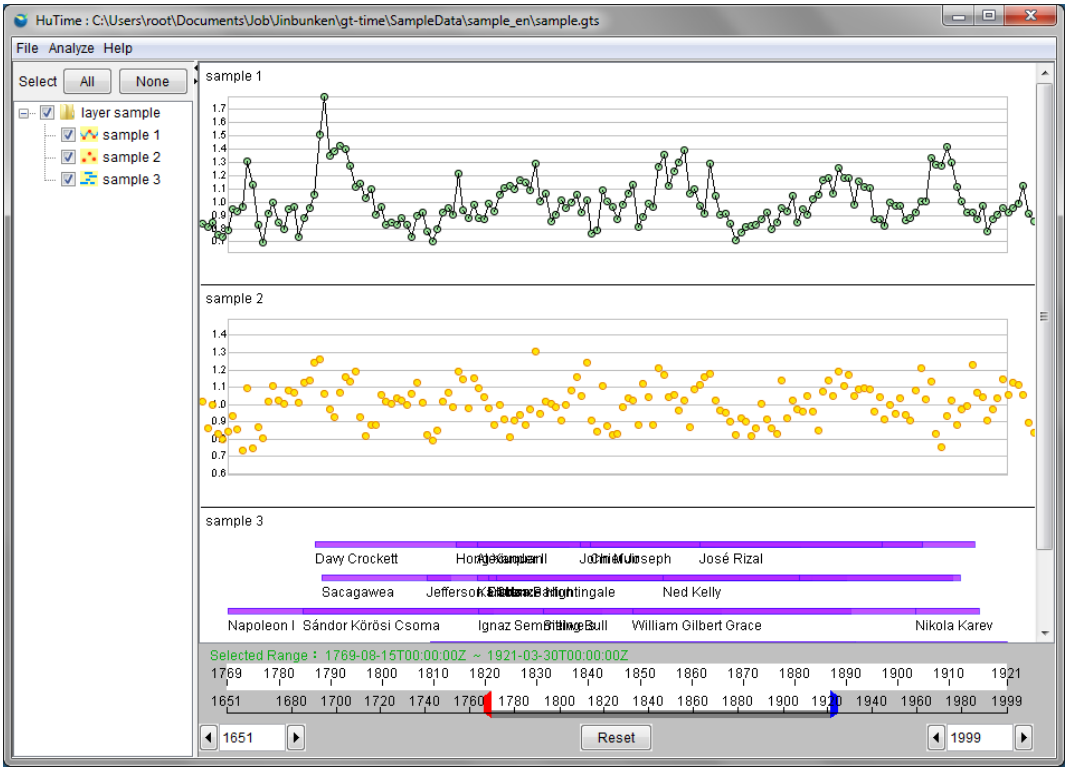


Figure 18-2. Before Zoom to Project is Applied

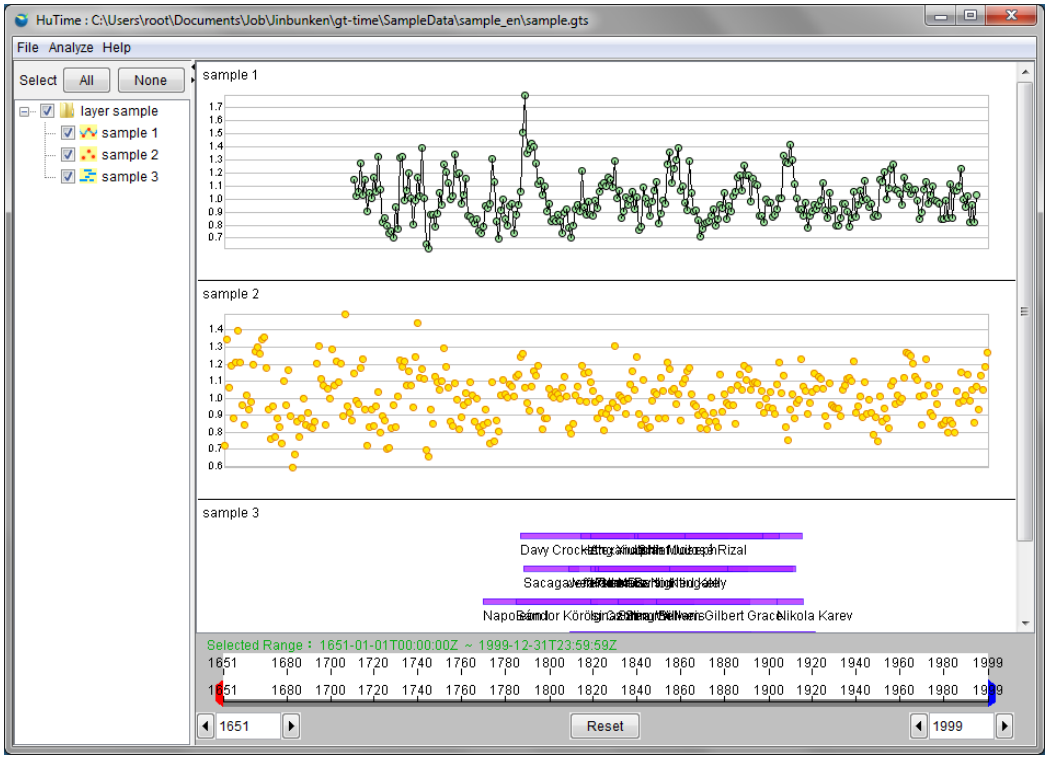


Figure 18-3. After Zoom to Project is Applied

18.2. Zoom to Layer

If you select Zoom to Layer on the layer context menu (see Figure 18-4. Zoom to Layer), the entire data of the selected layer will be shown over the full length of that layer.

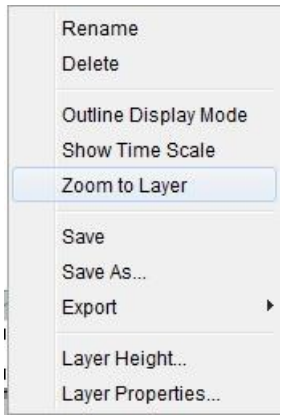


Figure 18-4. Zoom to Layer

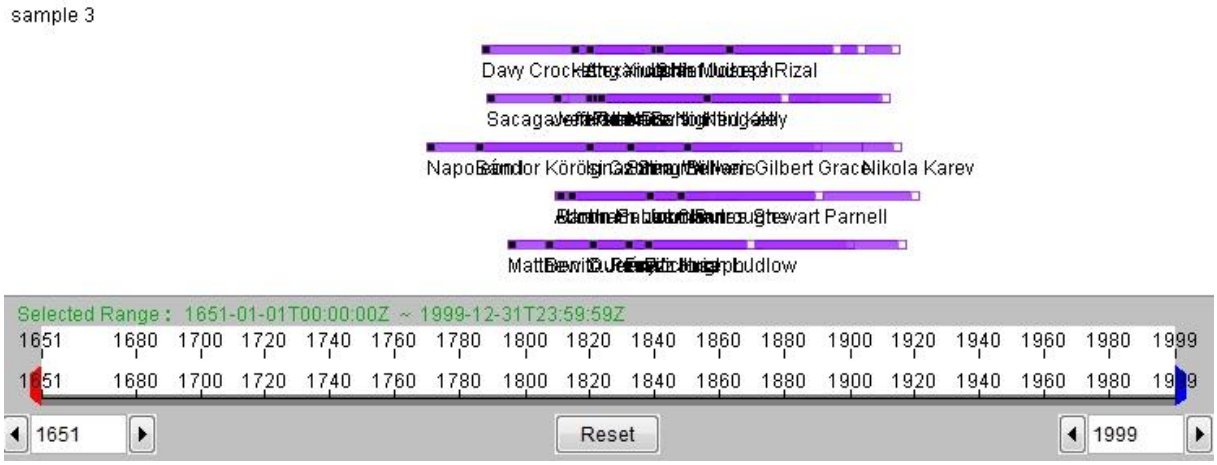


Figure 18-5. Before Zoom to Layer is Applied

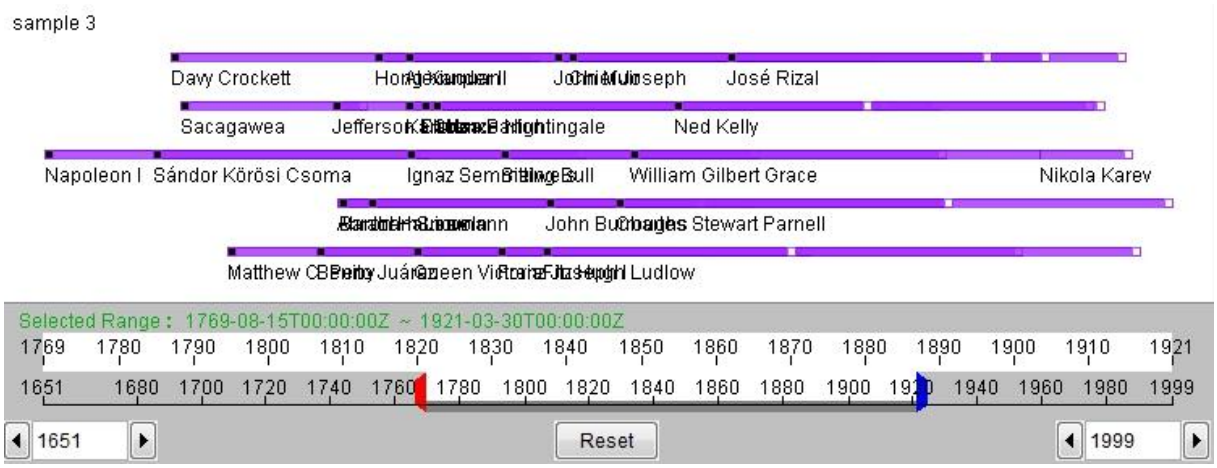


Figure 18-6. After Zoom to Layer is Applied

19. Chart Layer Functions

On a chart layer, the functions listed in Table 19-1. Chart Layer Functions are available in addition to Section 17. Basic Layer Functions.

Table 19-1. Chart Layer Functions

No.	Item	Description
1	Time Measure	Show the maximum, minimum and average values of the records and the number of records within the selected time span.
2	Gridlines	Make gridlines on a chart visible or invisible.
3	Range of Axis	Specify the range of the vertical axis.
4	Type of Chart	Select the type of charts.

19.1. Chart Layer Context Menus

Right-clicking on a chart layer will open the context menu shown in Figure 19-1. Chart Layer Context Menu while the time measure is not active or the context menu shown in Figure 19-2. Chart Layer Context Menu While Time Measure is Active.

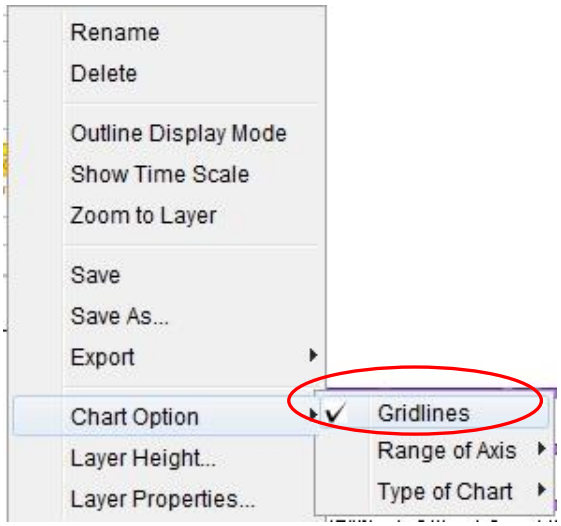


Figure 19-1. Chart Layer Context Menu

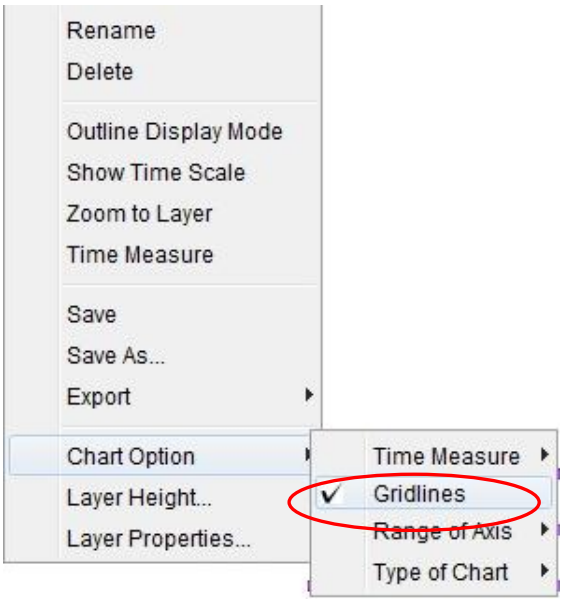


Figure 19-2. Chart Layer Context Menu While Time Measure is Active

19.2. Time Measure

This function is only available while a time span is selected with the time cursor as described in "16.3. Highlight a Time Span Using the Time Cursor."

19.2.1. Basic Statistics for the Selected Time Span

The Time Measure is used to show the maximum, minimum and average values of the records as well as the number of records within the time span selected by specifying the start and end points with the time cursor.

How to Measure

Right-click on a chart layer and select Chart Option → Time Measure → Basic Statistics on the context menu as shown in Figure 19-3. Start Time Measure. This will open the measurement result dialog box shown in Figure 19-4. Basic Statistics Dialog. Selecting Maximum Value will open the dialog box shown in Figure 19-5. Maximum Value Dialog.

The results of time measure shown in these dialogs are detailed in Table 19-2. Time Measure Results. Even if the Outline Display Mode is on, the time measure function applies to all records within the selected time span.

Table 19-2. Time Measure Results

No.	Dialog	Item	Description
1	Basic Statistics	Maximum	Maximum value within the selected time span
2		Minimum	Minimum value within the selected time span

3		Average	Average value within the selected time span
4		Record Count	Number of records within the selected time span
5	Maximum Value	Maximum Value	Maximum value within the selected time span

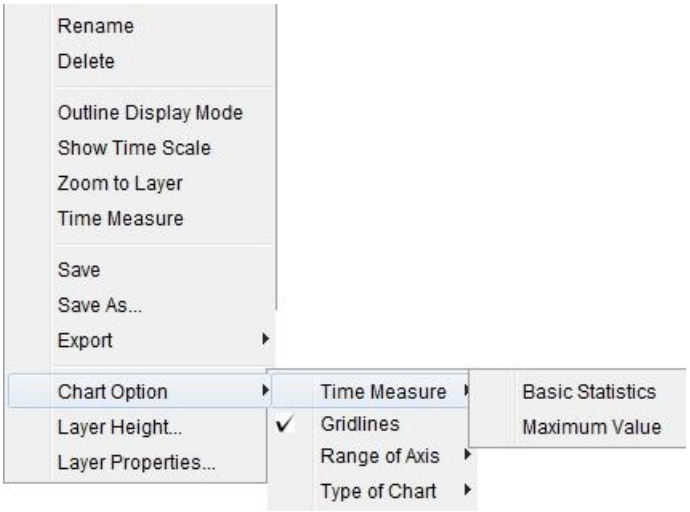


Figure 19-3. Start Time Measure

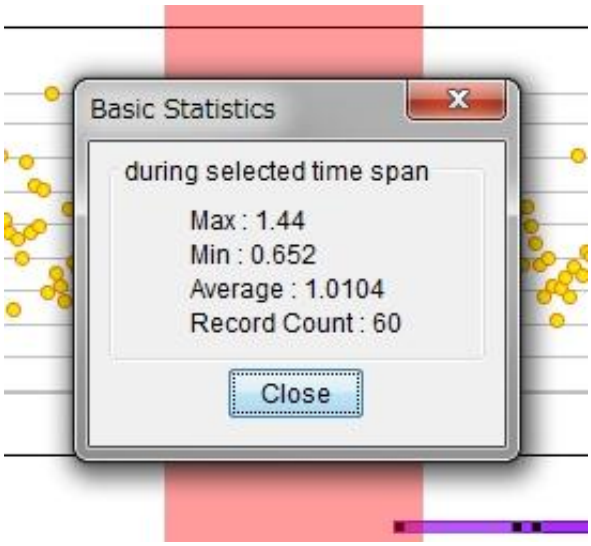


Figure 19-4. Basic Statistics Dialog

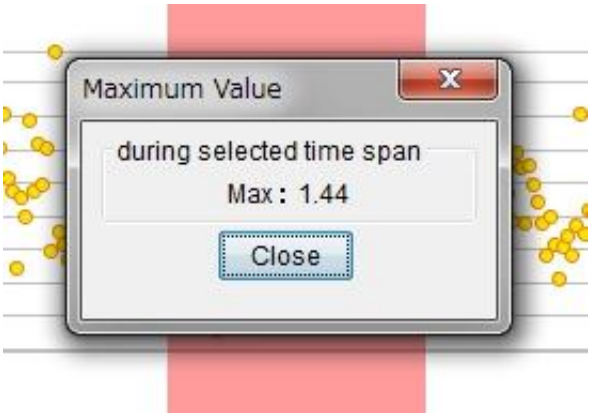


Figure 19-5. Maximum Value Dialog

19.3. Gridlines Visible/Invisible

The gridlines refer to the horizontal lines in parallel to the horizontal time scale of a chart. To make the gridlines invisible, right-click on the chart layer with the gridlines to open the context menu as shown in Figure 19-6. Make Gridlines Invisible and select Gridlines. This will uncheck Gridlines, making the horizontal lines on the chart layer invisible as shown in Figure 19-7. Gridlines Invisible.

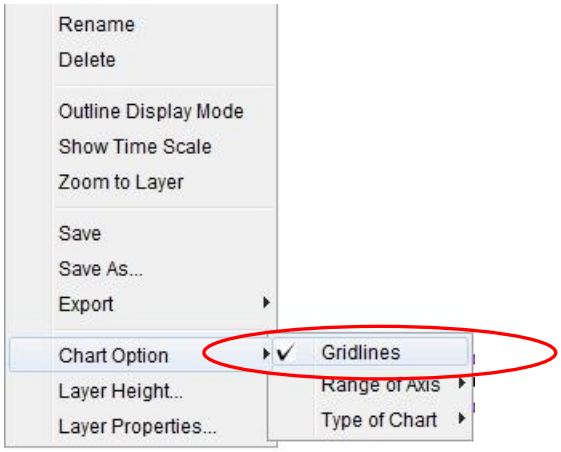


Figure 19-6. Make Gridlines Invisible

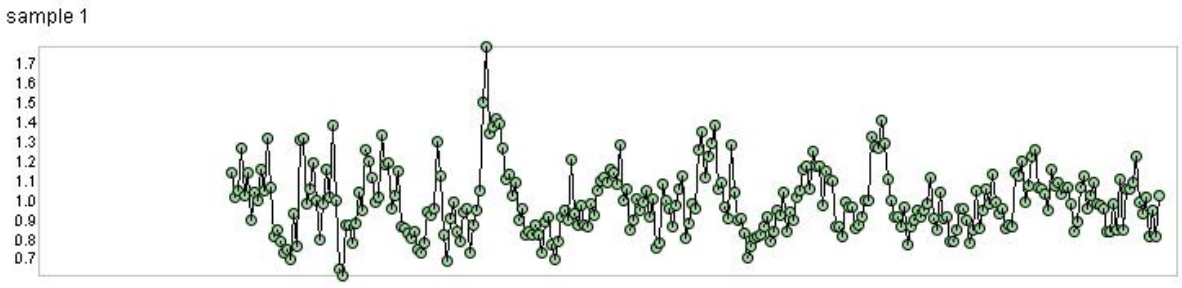


Figure 19-7. Gridlines Invisible

To make the gridlines visible, right-click on the chart layer without the gridlines to open the context menu as shown in Figure 19-8. Make Gridlines Visible and select Gridlines. This will check Gridlines, making the horizontal lines on the chart layer visible as shown in Figure 19-9. Gridlines Visible.

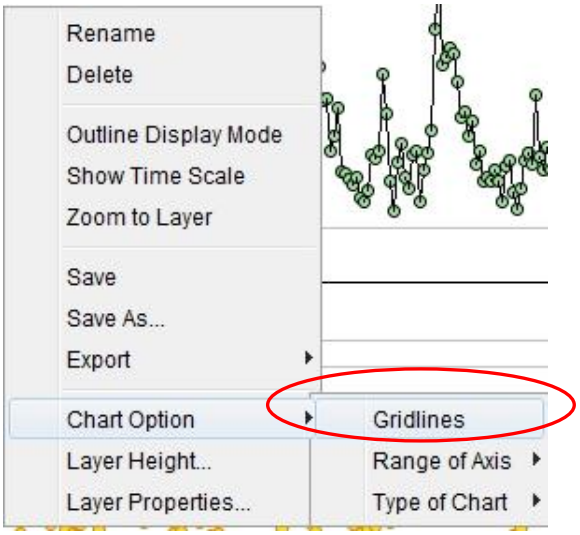


Figure 19-8. Make Gridlines Visible

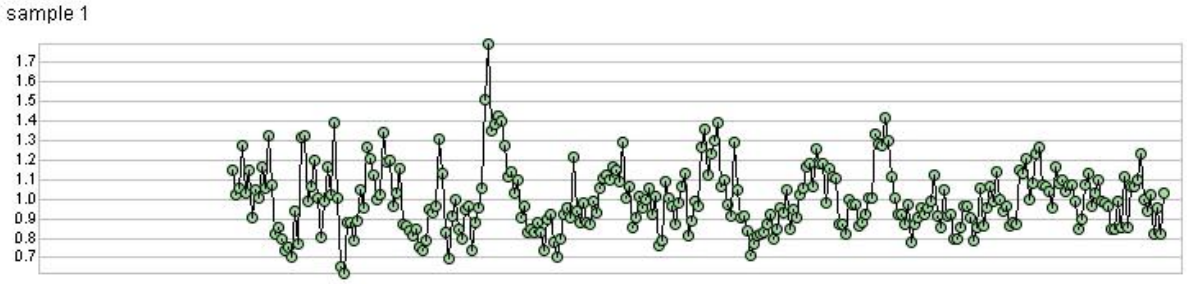


Figure 19-9. Gridlines Visible

19.4. Range of Axis

The Range of Axis refers to the scale of the vertical axis of a chart layer.

As shown in Figure 19-10. Range of Axis Context Menu, either of three options—All Data (Default), Displayed Data or Manual Settings—is selectable for setting the range of the vertical axis of a chart layer.

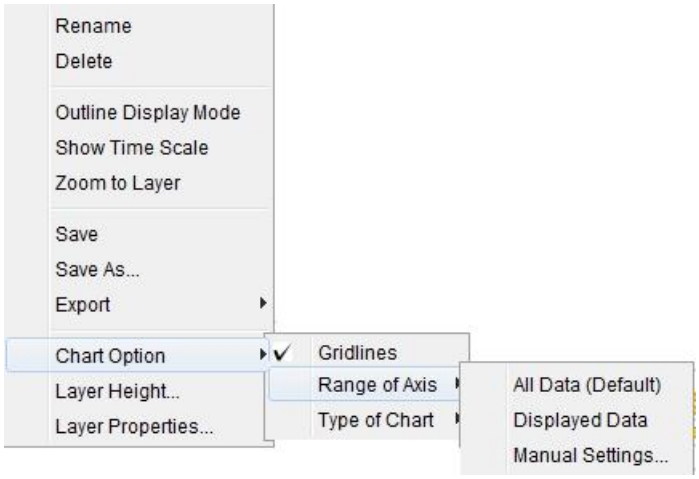


Figure 19-10. Range of Axis Context Menu

The three options on the Range of Axis context menu are described in Table 19-3. Setting the Range of Axis.

Table 19-3. Setting the Range of Axis

No.	Option	Description
1	All Data (Default)	The vertical scale is defined based on the maximum and minimum values of all data. This scale remains unchanged even if the selected time range for which data are displayed changes.
2	Displayed Data	The vertical scale is defined based on the maximum and minimum values of the data being displayed. This scale changes with the selected time range for which data are displayed.
3	Manual Settings	The vertical scale is defined through manual settings. This scale remains unchanged even if the selected time range for which data are displayed changes.

19.4.1. All Data (Default)

When All Data (Default) is selected, the vertical scale of a chart layer does not change with the selected time range as shown in Figure 19-11. Range of Axis Based on All Data (Default) before Selected Time Range is Changed and Figure 19-12. Range of Axis Based on All Data (Default) after Selected Time Range is Changed.

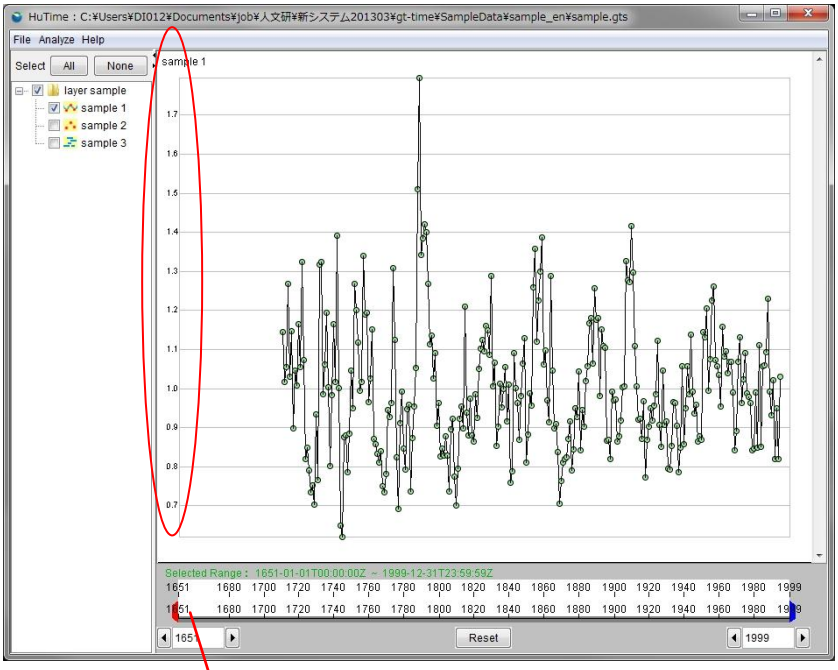


Figure 19-11. Range of Axis Based on All Data (Default) before Selected Time Range is Changed

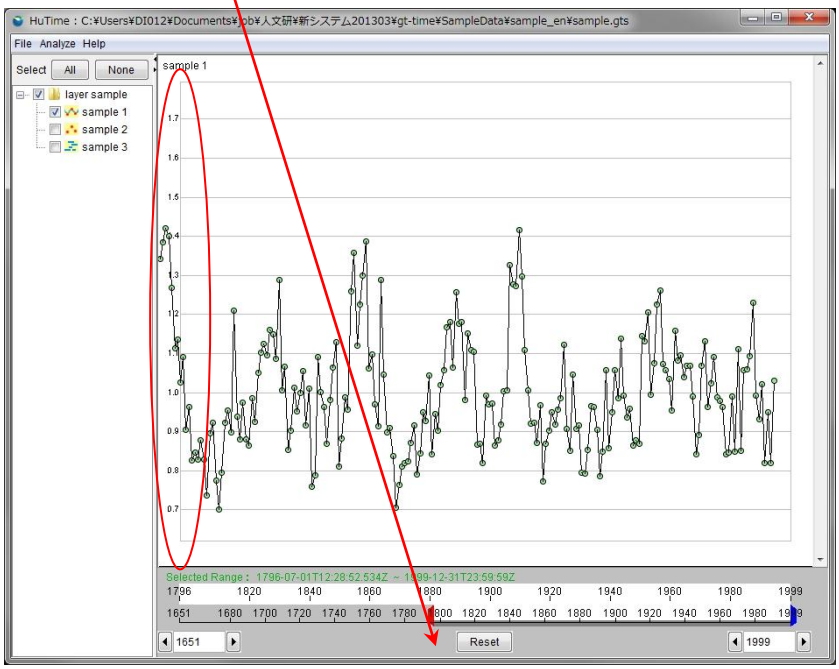


Figure 19-12. Range of Axis Based on All Data (Default) after Selected Time Range is Changed

19.4.2. Displayed Data

When Displayed Data is selected, the vertical scale of a chart layer changes with the selected time range, as shown in Figure 19-3. Range of Axis Based on Displayed Data before Selected Time Range is Changed and Figure 19-4. Range of Axis Based on Displayed Data after Selected Time Range is Changed.

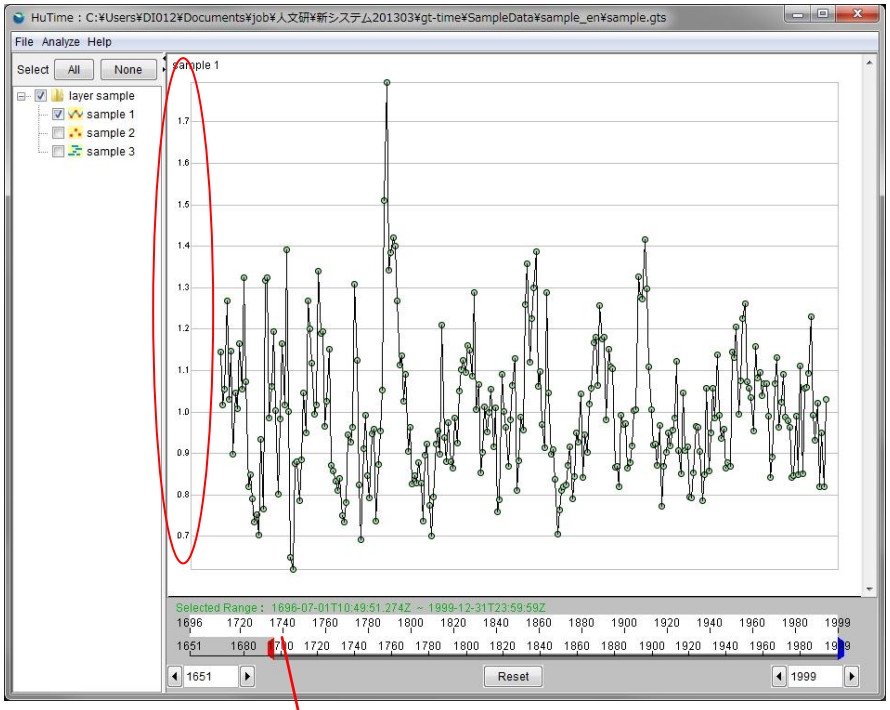


Figure 19-13. Range of Axis Based on Displayed Data before Selected Time Range is Changed

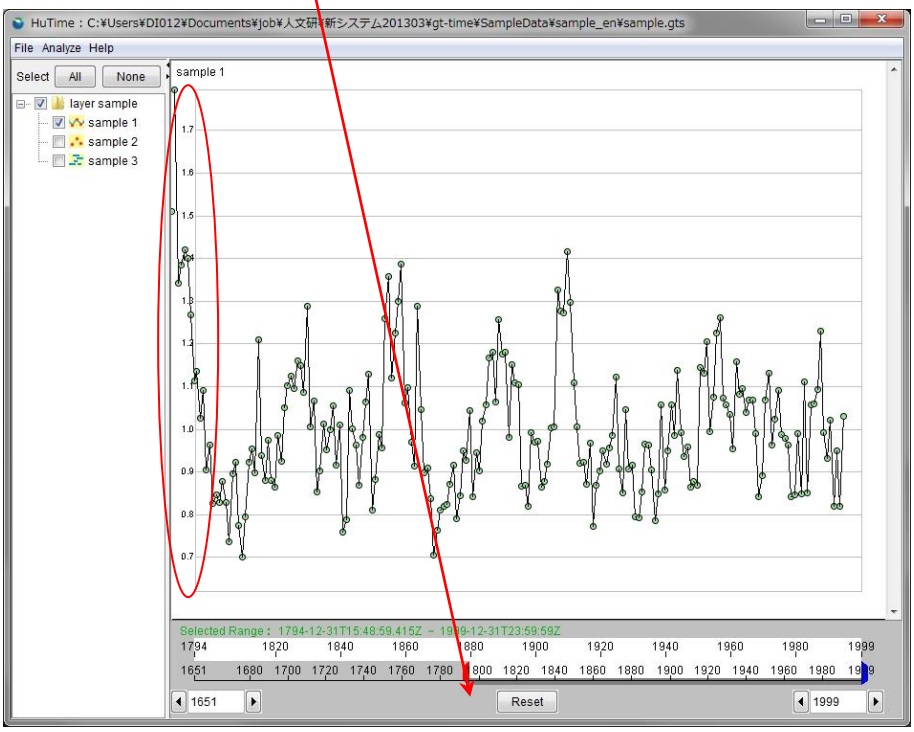


Figure 19-14. Range of Axis Based on Displayed Data after Selected Time Range is Changed

19.4.3. Manual Settings

If you select Manual Settings on the Figure 19-10. Range of Axis Context Menu, the screen as shown in Figure 19-15. Manual Settings for Range of Axis will appear. Enter your desired maximum and minimum values for the vertical scale of the chart layer.

Figure 19-15. Manual Settings for Range of Axis

When Manual Settings is selected, the vertical scale of a chart layer does not change with the selected time range as shown in Figure 19-16. Range of Axis Based on Manual Settings before Selected Time Range is Changed and Figure 19-17. Range of Axis Based on Manual Settings after Selected Time Range is Changed.

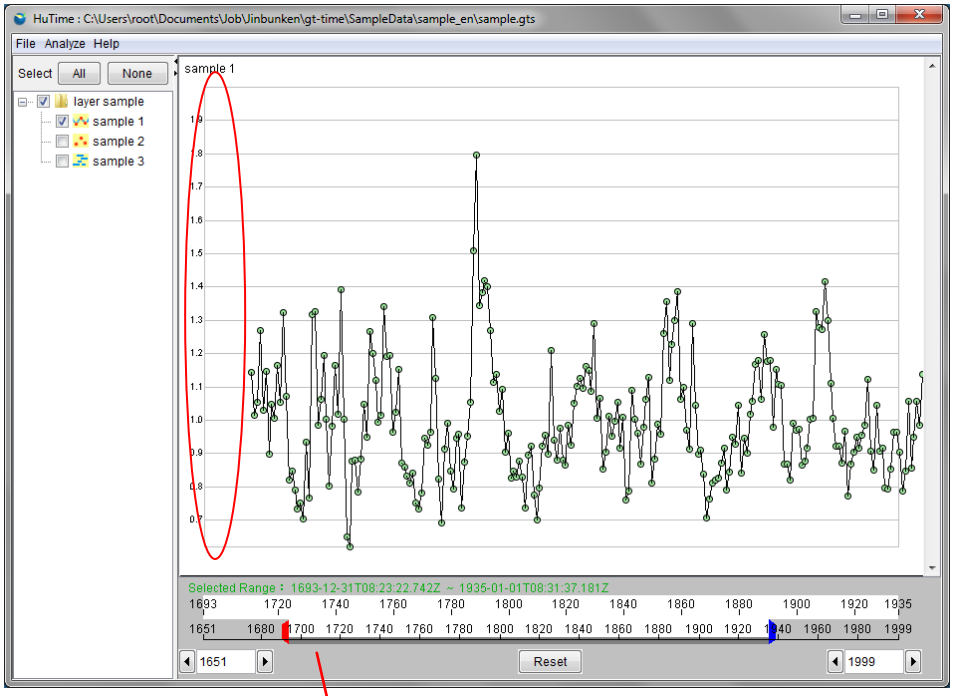


Figure 19-16. Range of Axis Based on Manual Settings before Selected Time Range is Changed

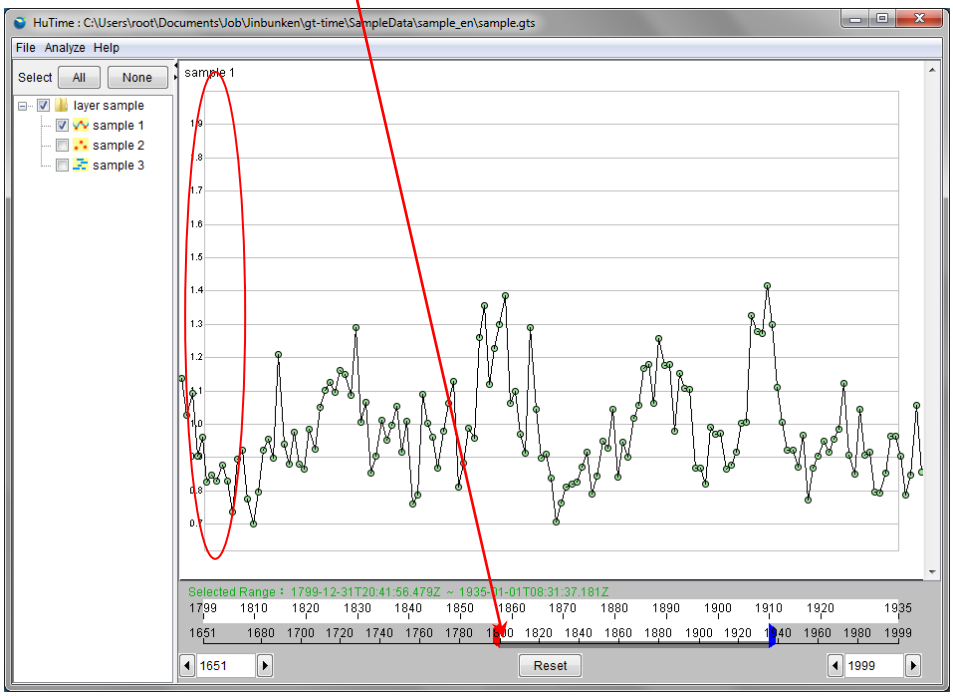


Figure 19-17. Range of Axis Based on Manual Settings after Selected Time Range is Changed

19.5. Type of Chart

The type of chart is switchable between three options.

Right-click on a chart layer to open the context menu and select Chart Option → Type of Chart and the type of chart you want to show (see Figure 19-18. Switching the Type of Chart).

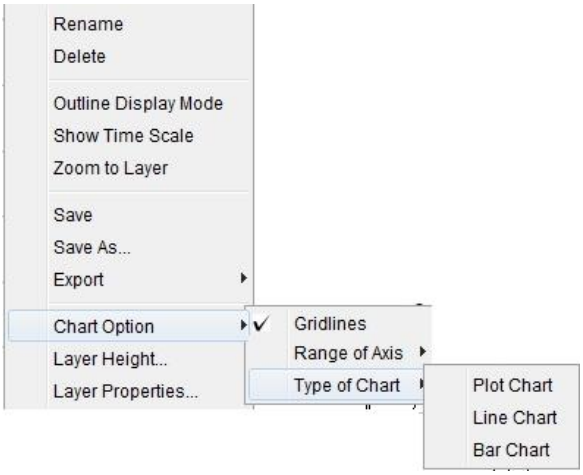


Figure 19-18. Switching the Type of Chart

For example, if you select Plot Chart on the context menu of a line chart layer (see Figure 19-18. Switching the Type of Chart), the line chart layer as shown in Figure 19-19. Before the Chart Type is Changed will be switched to the plot chart layer as shown in

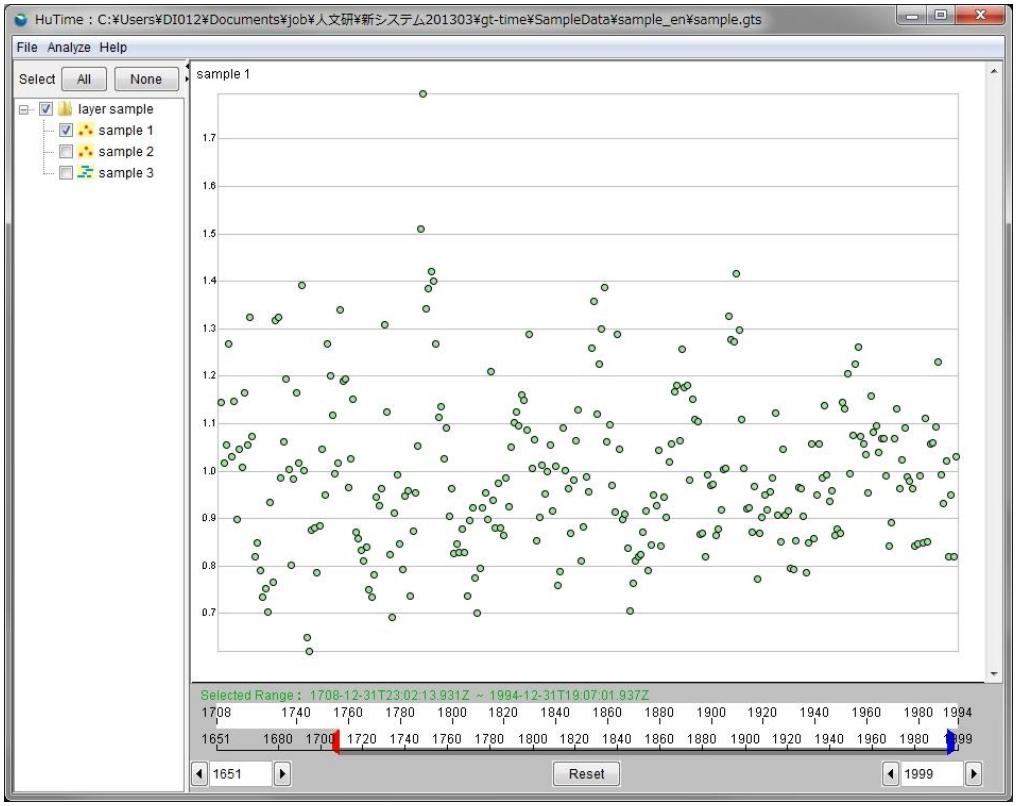


Figure 19-20. After the Chart Type is Changed.

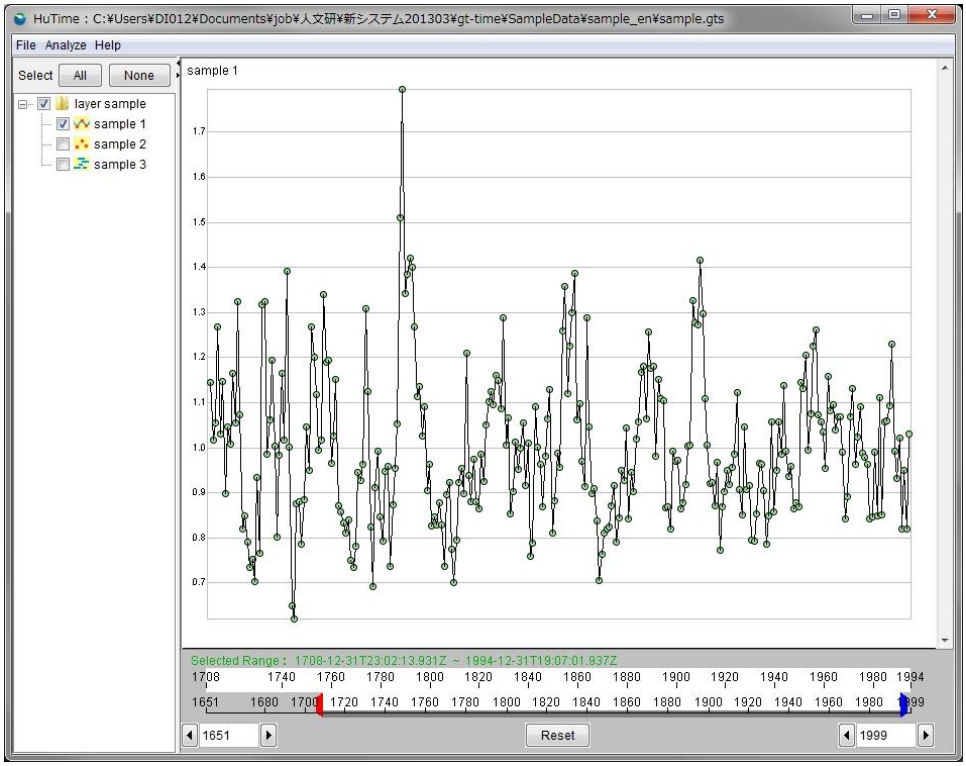


Figure 19-19. Before the Chart Type is Changed

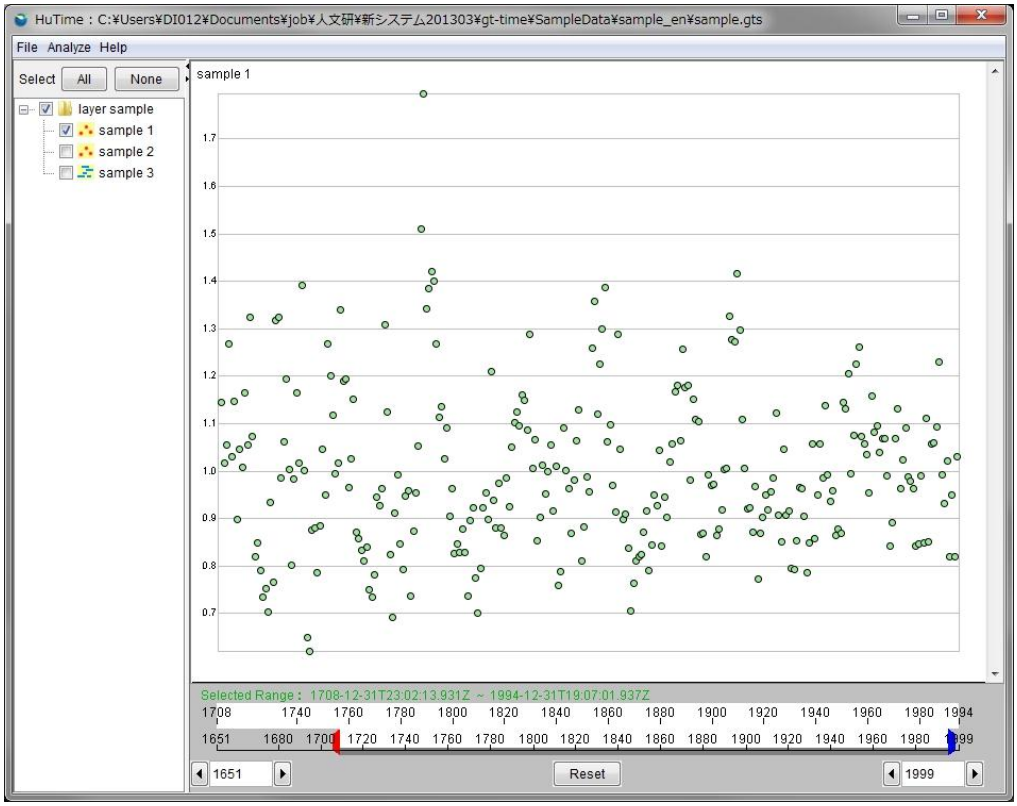


Figure 19-20. After the Chart Type is Changed

Once you change the type of a chart layer and save the relevant project with the new type of chart, you can open the chart layer with the new type of chart the next time when the project is opened.

20. Preferences

20.1. Open the Preferences Screen

From File on the menu bar, you can select Preferences to open the Preferences screen in which various settings can be made to suit the user's environment. Refer to Figure 20-1. Select "Preferences."

The Preferences screen consists of general and plugin settings. For plugin settings, please refer to the relevant plugin manuals.

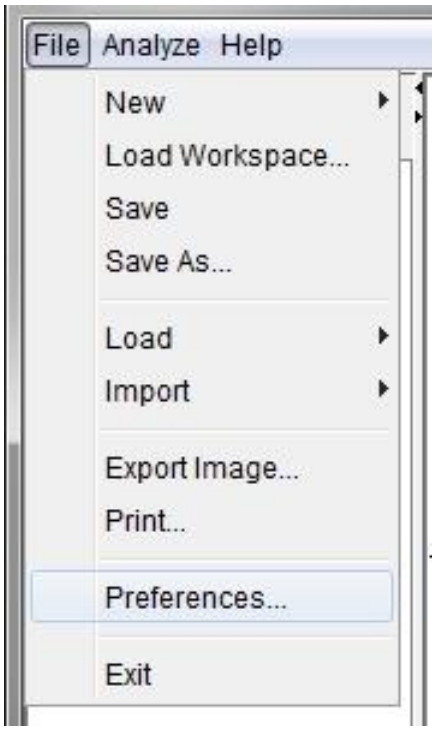


Figure 20-1. Select "Preferences"

20.2. General Preferences

20.2.1. Web Browser

As shown in Figure 20-2. Web Browser Startup File, you can specify the path to the Web browser executable file to be run when the link is clicked in the record detail window.

Clicking the Browse button will open the File Selection dialog box, in which you can select the path to the Web browser executable file.

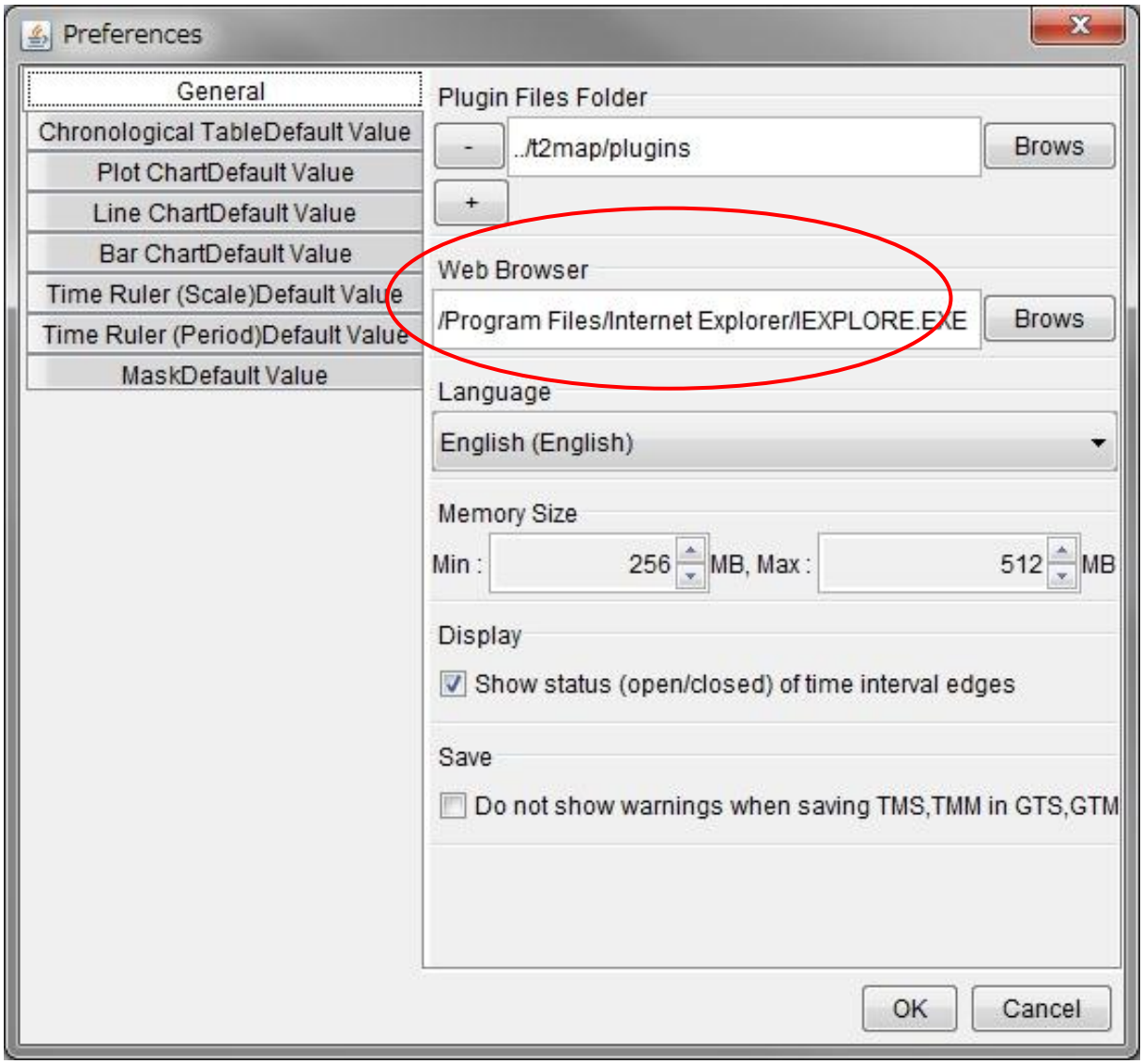


Figure 20-2. Web Browser Startup File

20.2.2. Plugin Files Folder

In the Plugin Files Folder field, you can specify the directory path where plugins exist. More than one plugin directory can be specified.

Clicking the Browse button will open the File Selection dialog box, in which you can select the path to the plugin files.

The "−" button deletes the plugin directory selected.

The "+" button enables the selection of another plugin directory.

Refer to Figure 20-3. Plugin Files Folder.

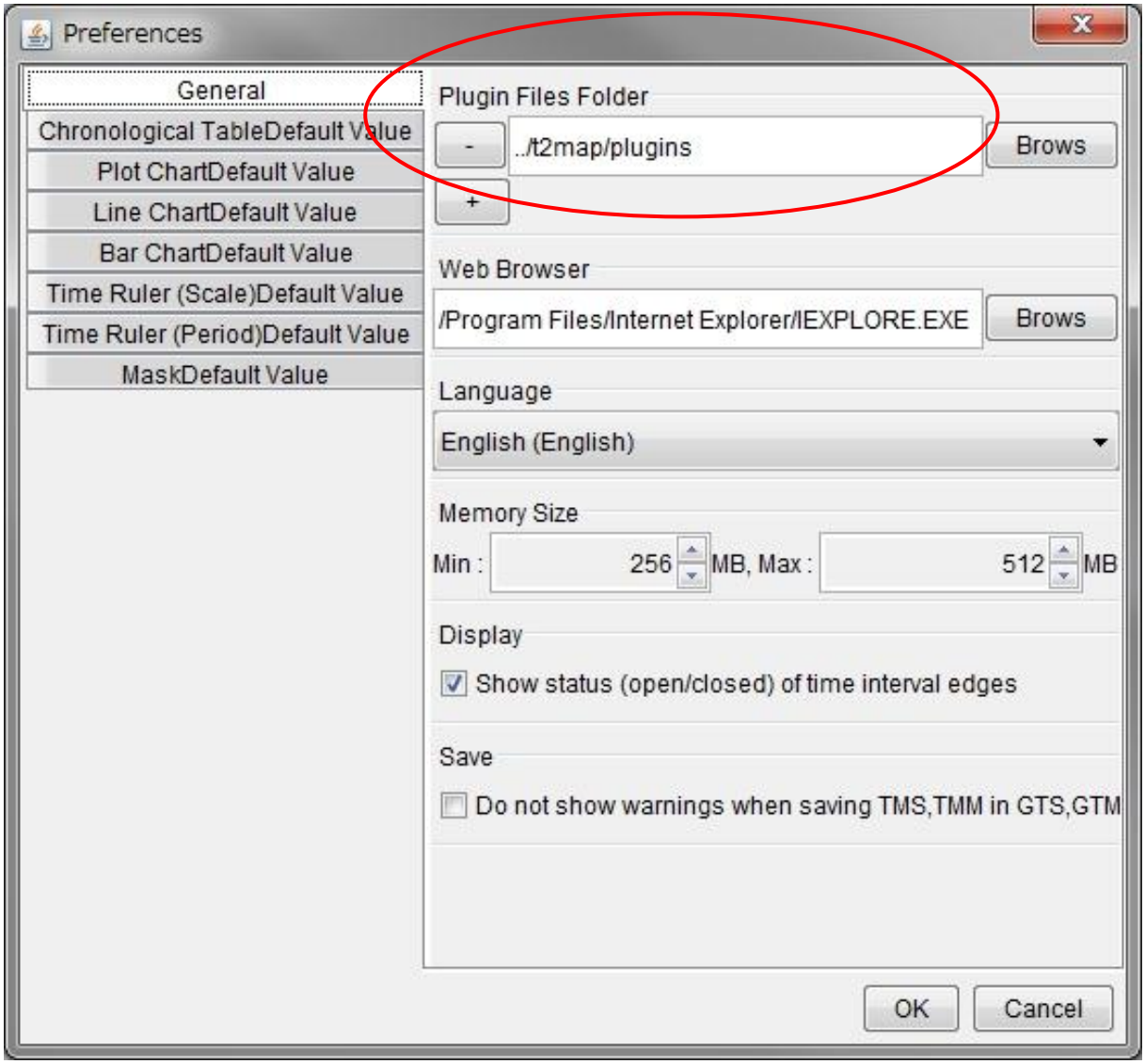


Figure 20-3. Plugin Files Folder

20.2.3. Language

There are multiple language options. Refer to Figure 20-4. Language Options.

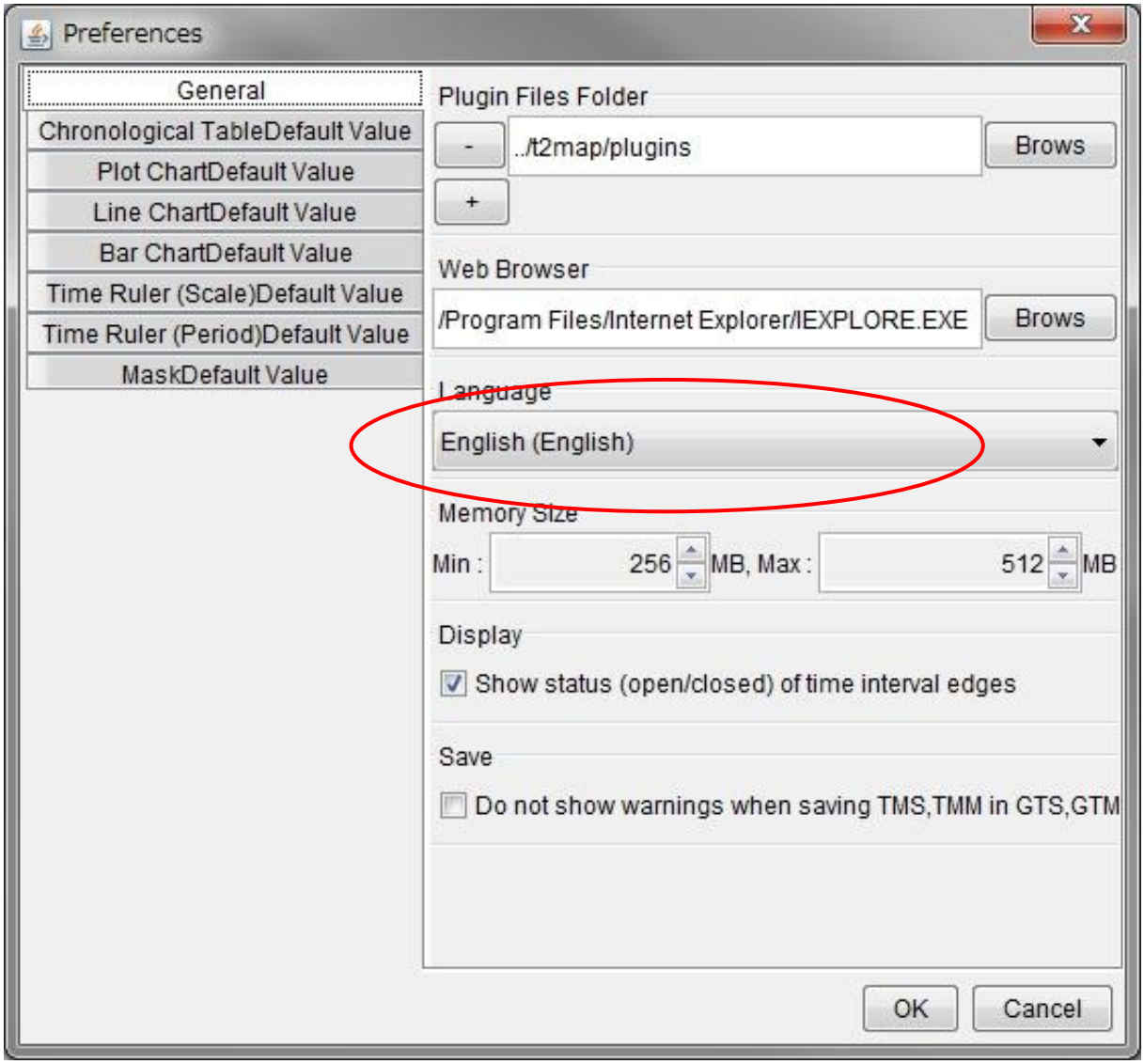


Figure 20-4. Language Options

To register a new language, specify the required language folder under the ¥bin¥lib¥resource as shown in Figure 20-5. Language Folders.

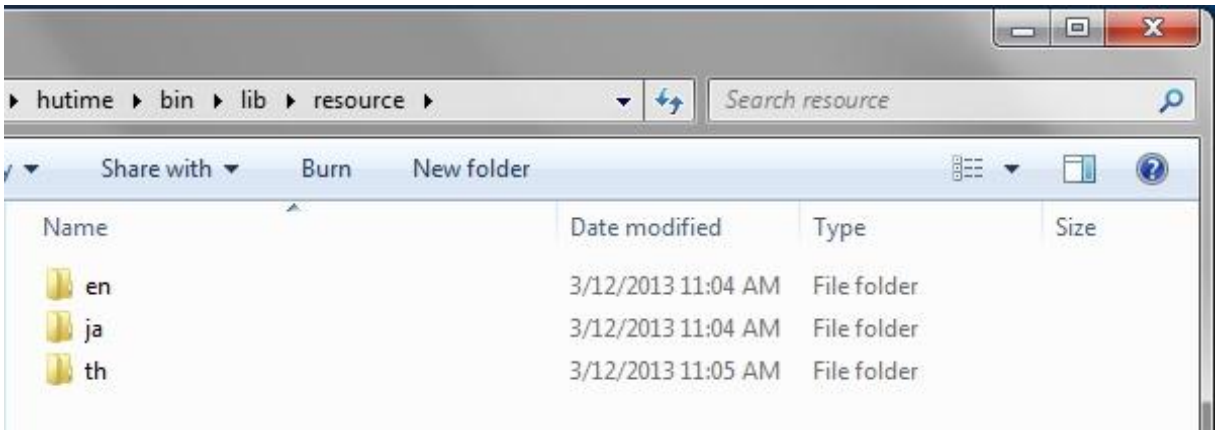


Figure 20-5. Language Folders

20.3. Status (Open/Closed) of Time Interval Edges

Figure 20-6. Show Status (Open/Closed) of Time Interval Edges is used to specify whether to show the status of the time interval edges (edge points) of records shown on a chronological table, a time chart (period) or a mask layer. The status “open” or “closed” means that the record is exclusive or inclusive, respectively, of the edge points. When this field is checked (ON), the end point becomes black when the edge is closed, whereas it becomes white when the edge is open, for records that have 20 pixels or more in width, as shown in Figure 20-7. Status (Open/Closed) Shown.

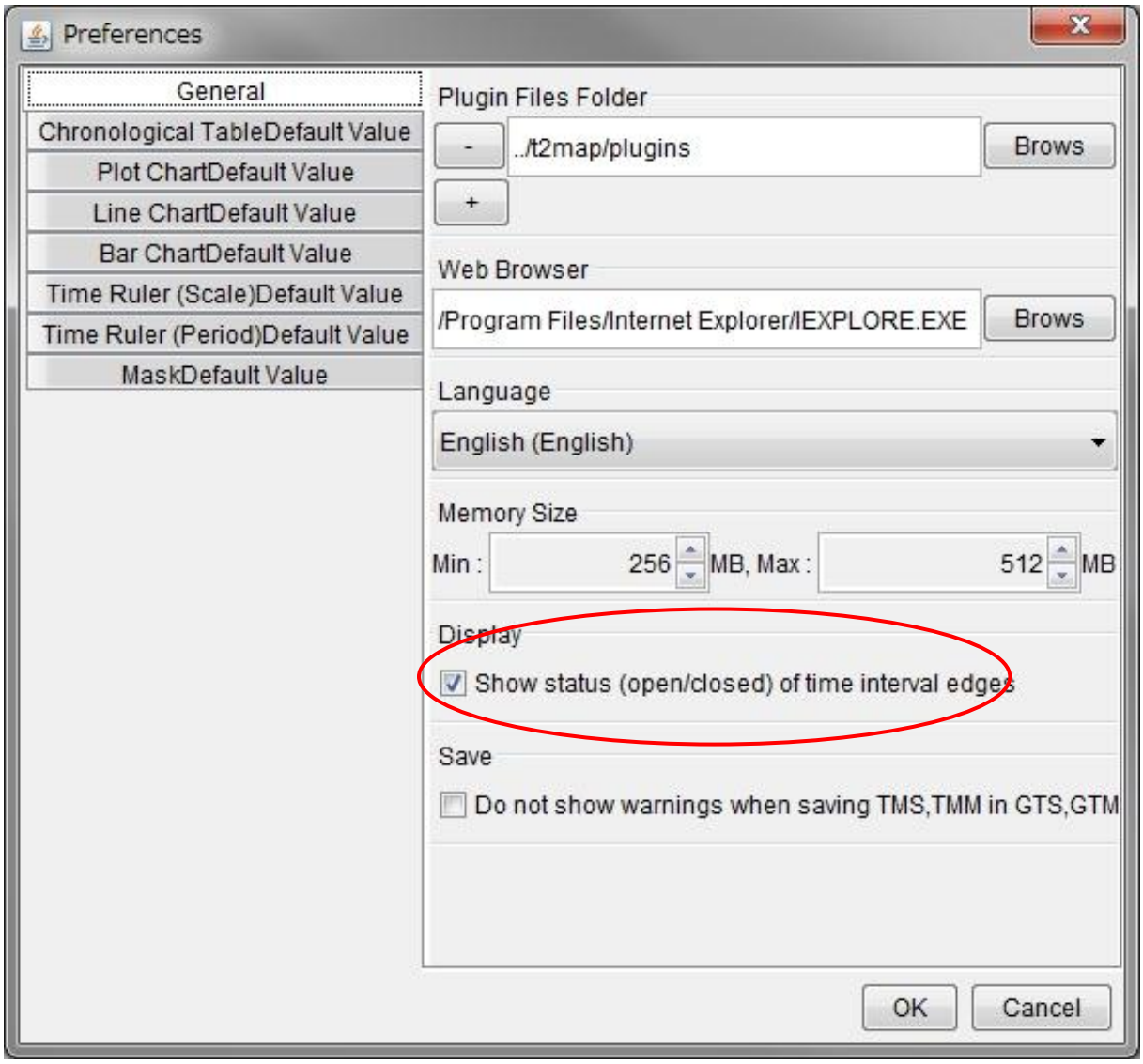


Figure 20-6. Show Status (Open/Closed) of Time Interval Edges

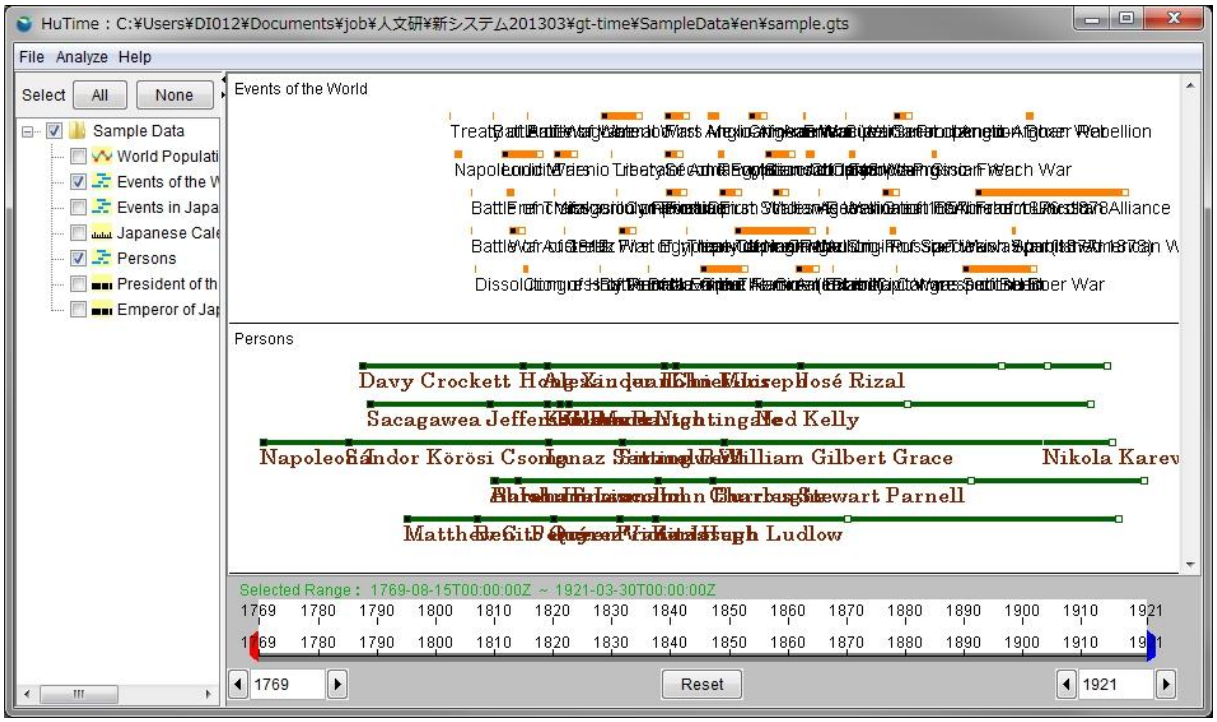


Figure 20-7. Status (Open/Closed) Shown

20.4. Warning when Saving a TMS or TMM File

As shown in Figure 20-8. Warning when Saving TMS or TMM, you can specify whether to issue a warning when an attempt is made to save a TMS or TMM file as a GTS or GTM file, respectively. If this option is unchecked, a warning dialog box as shown in Figure 7-6. Warning Dialog Box will appear when such an attempt is made.

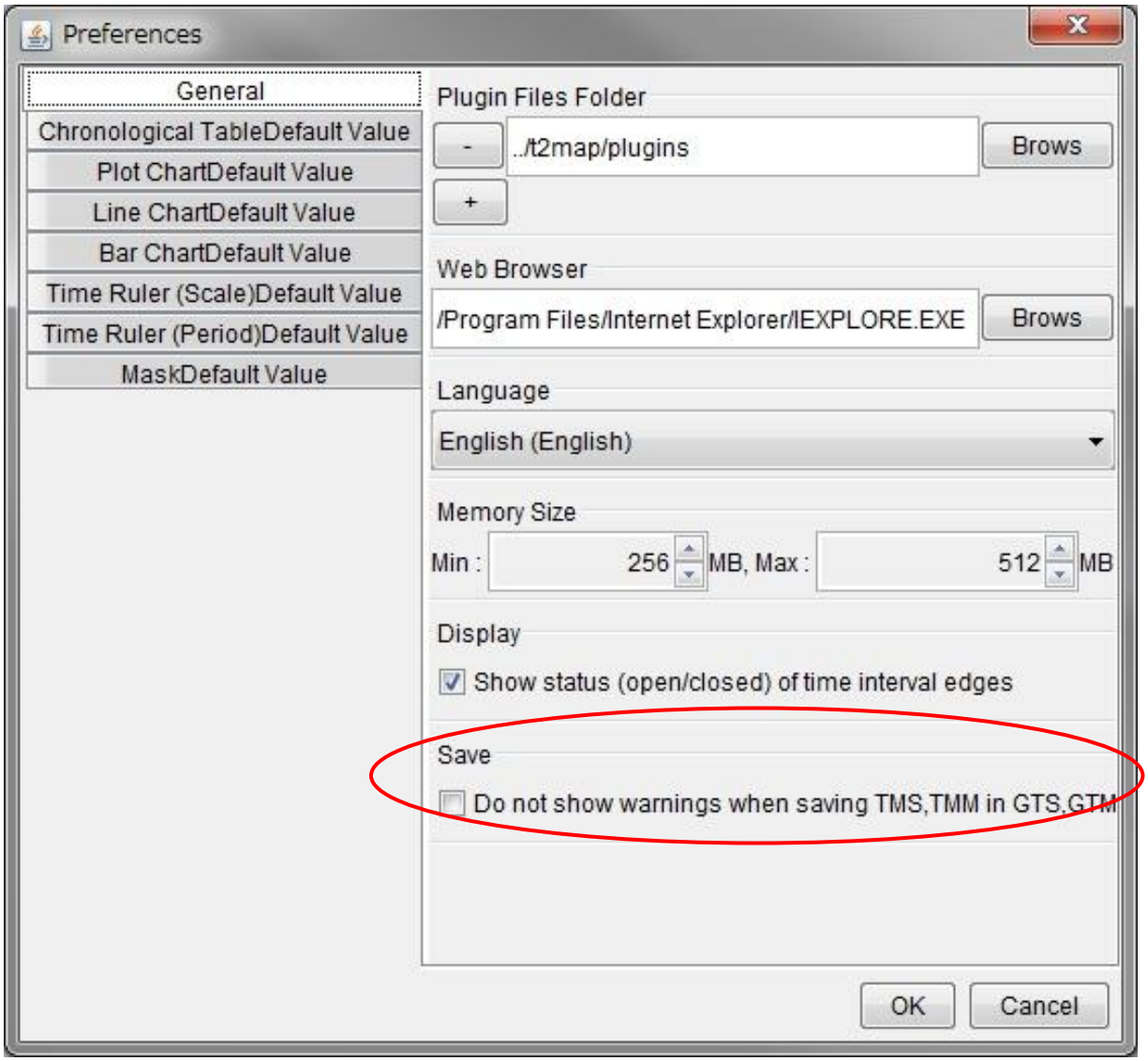


Figure 20-8. Warning when Saving TMS or TMM

20.5. Layer Default Values

Clicking any of the default value tabs shown in Figure 20-9. Layer Default Value Setting will open a screen where the default display preferences can be set for each layer. These default preferences will be applied when data without display settings are loaded or when the Default button is selected for each layer. The preferences of each layer will be stated in the description of each data showing layers below.

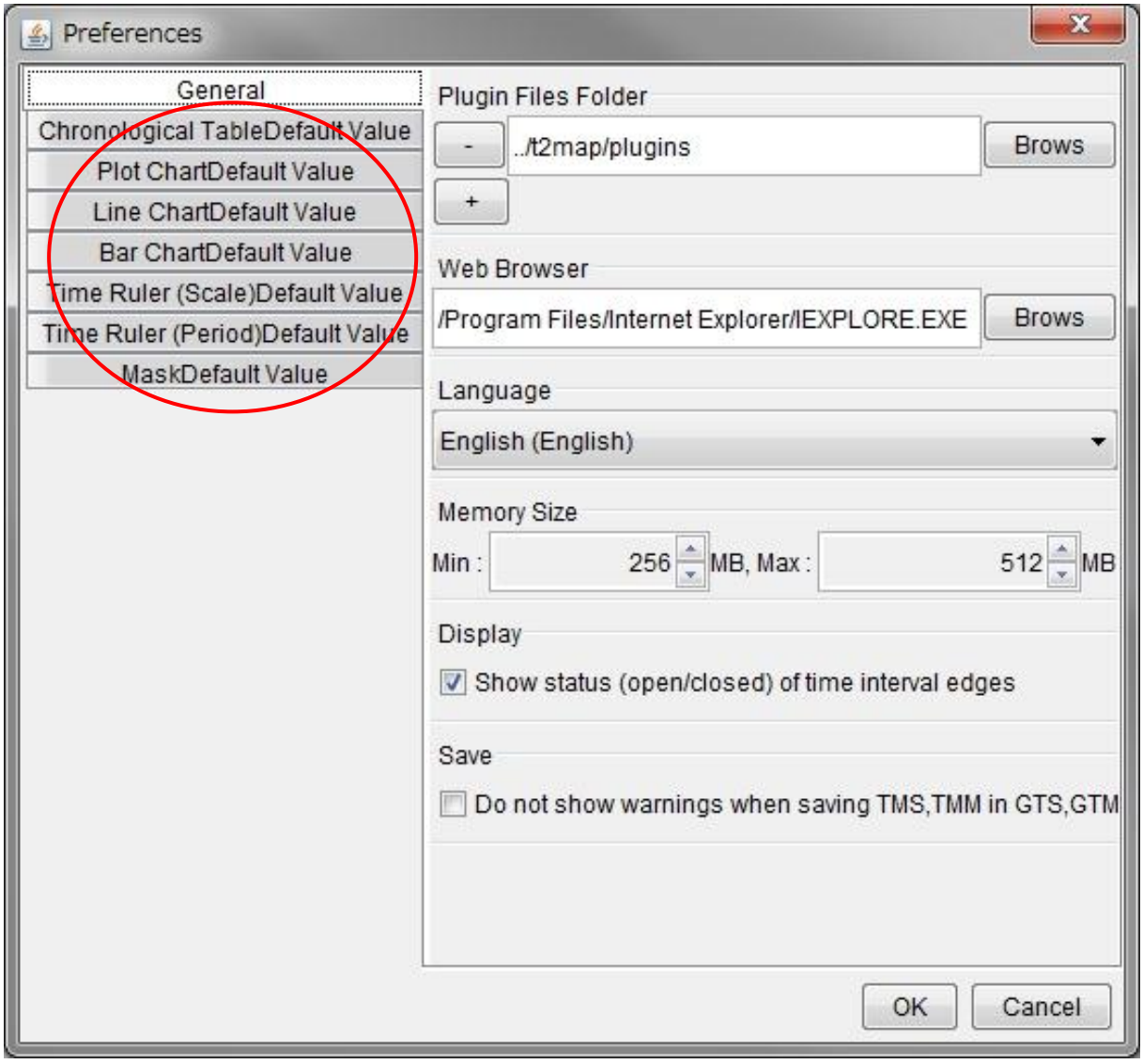


Figure 20-9. Layer Default Value Setting

21. Data Showing Layers

21.1. Chronological Table Layers

21.1.1. Display Screen

Datasets for which the CONTENT of the t2map.layertype of a TMM file or the content of the layerType element of a GTS or GTM file is set to DefaultLayer appear as chronological table layers. Each record has its title and its time interval which corresponds with the width of a horizontal bar representing each record (event). Refer to Figure 21-1. Chronological Table Layer.

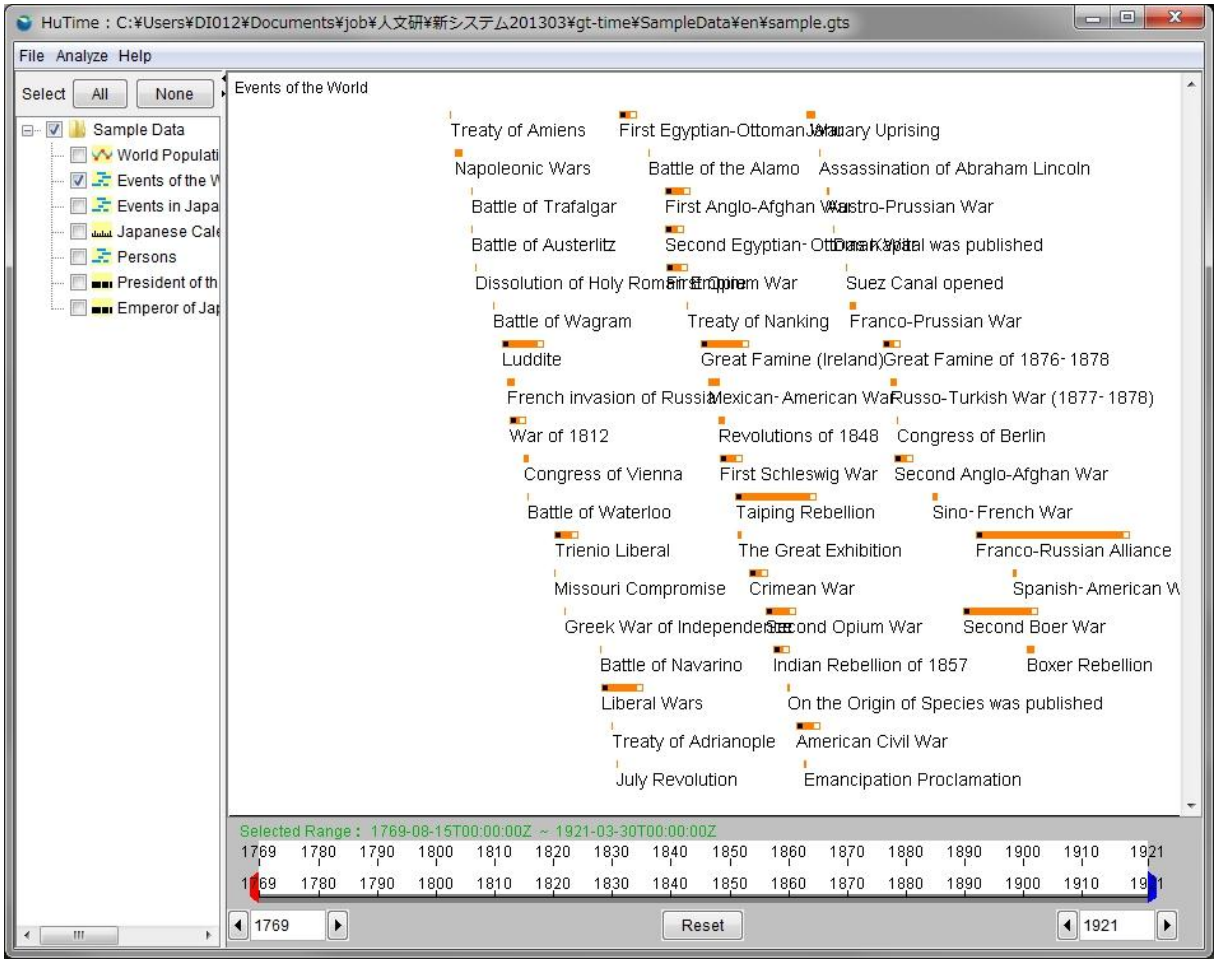


Figure 21-1. Chronological Table Layer

21.1.2. Display Preferences

As shown in Figure 21-2. Chronological Table Layer Preferences, you can specify the color of the plots (Fill Color) and plot outlines (Edge Color), etc., for the chronological table layers. The

colors can be specified using the color selection dialog box.

If the Outline Display Mode is set to ON and the number of records exceeds the threshold record count, any records for which the event width is one pixel or less are not shown.

In the Font (Record Detail Window) field, you can specify the font of the text in the record detail window that is opened by clicking a plot.

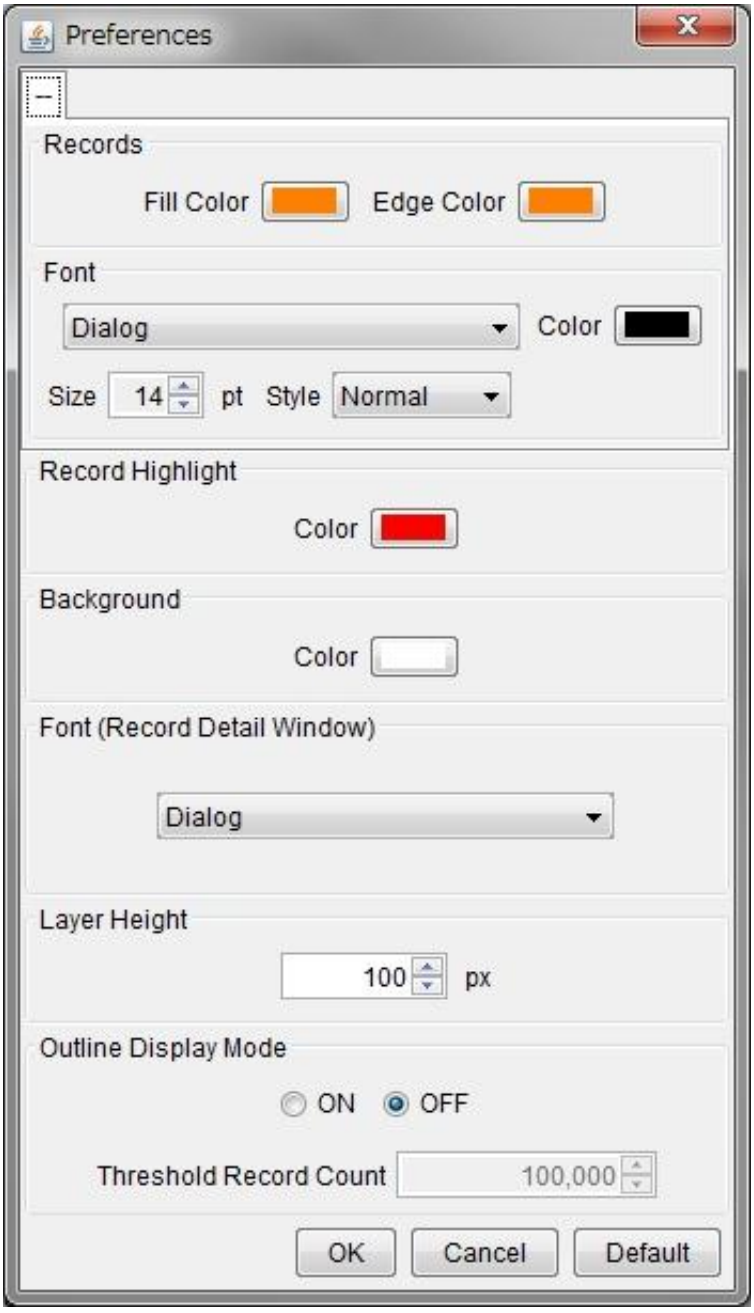


Figure 21-2. Chronological Table Layer Preferences

21.2. Plot Chart Layers

21.2.1. Display Screen

Datasets for which the CONTENT of the t2map.layertype of a TMM file or the content of the layerType element of a GTS or GTM file is set to PlotChartLayer appear as plot chart layers, as shown in Figure 21-3. Plot Chart Layer. The vertical axis represents the substance of the item element of which the name attribute value is “number.” (The value must be numerical.)

If records are grouped, records can be color-coded according to group.

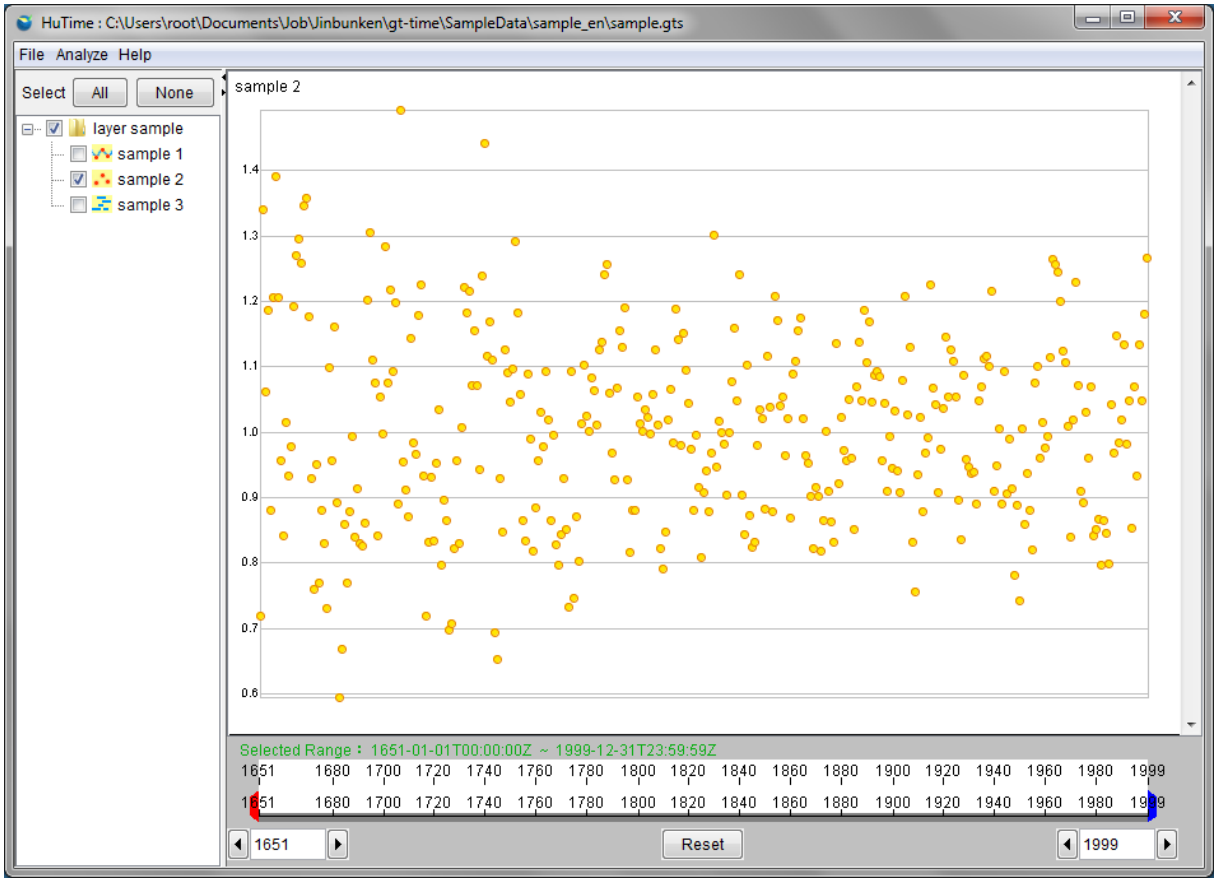


Figure 21-3. Plot Chart Layer

21.2.2. Display Preferences

As shown in Figure 21-4. Plot Chart Layer Preferences, you can specify the color of the plots (Fill Color) and plot outlines (Edge Color), the plot size, the status of the Outline Display Mode and the threshold record count for turning on the Outline Display Mode, etc., for plot chart layers. The colors can be specified using the color selection dialog box. The plot size is selectable from 1 to 10 pixels.

When the Outline Display Mode is set to ON and the number of records exceeds the threshold record count, records are not shown if the value of a record to be plotted is smaller

or not larger than both of the values of the records immediately before and after, or adjacent plots overlap each other.

If records are grouped, the symbol preferences can be set for each group.

In the Font (Record Detail Window) field, you can specify the font of the text in the record detail window that is opened by clicking a plot.

In the Group Name field, you can make the group name visible or hidden on the layer.

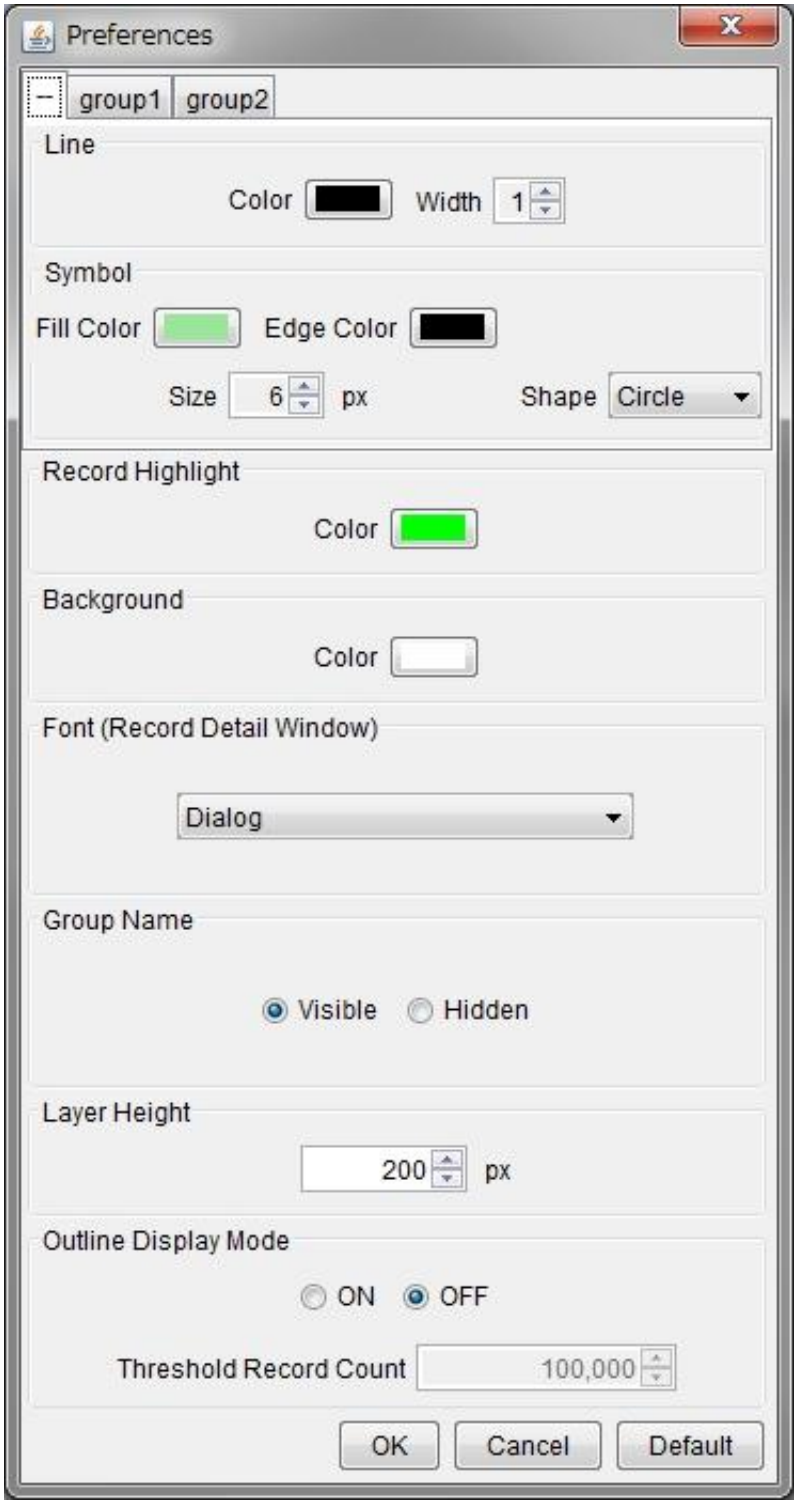


Figure 21-4. Plot Chart Layer Preferences

21.3. Line Chart Layers

21.3.1. Display Screen

Datasets for which the CONTENT of the t2map.layertype of a TMM file or the content of the layerType element of a GTS or GTM file is set to LineChartLayer appear as line chart layers, as shown in Figure 21-5. Line Chart Layer. Records appear as dots. The vertical axis represents the substance of the item element of which the name attribute value is “number.” (The value must be numerical.) Adjacent records are connected with a line.

If records are grouped, records can be color-coded according to group.

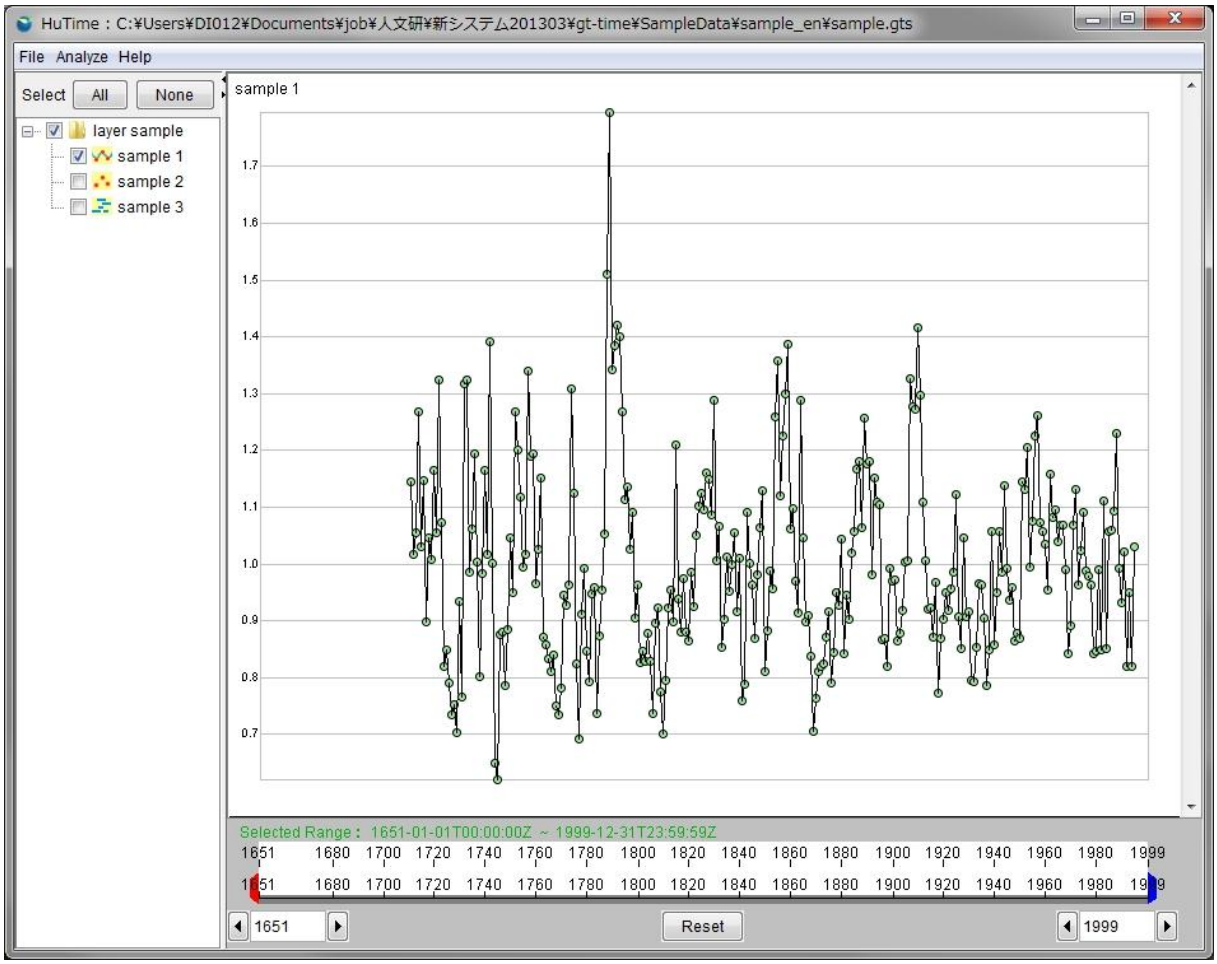


Figure 21-5. Line Chart Layer

21.3.2. Display Preferences

As shown in Figure 21-6. Line Chart Layer Preferences, you can specify the color of the plots (Fill Color) and plot outlines (Edge Color), the plot size, the line color and thickness, the status of the Outline Display Mode and the threshold record count for turning on the Outline Display Mode, etc., for line chart layers. The colors can be specified using the color selection

dialog box. The plot size is selectable from 1 to 10 pixels. The line thickness is selectable from 1 to 5.

When the Outline Display Mode is set to ON and the number of records exceeds the threshold record count, records are not shown if the value of a record to be plotted is smaller or not larger than both of the values of the records immediately before and after, or adjacent plots overlap each other.

If records are grouped, the line and symbol preferences can be set for each group.

In the Font (Record Detail Window) field, you can specify the font of the text in the record detail window that is opened by clicking a plot.

In the Group Name field, you can make the group name visible or hidden on the layer.

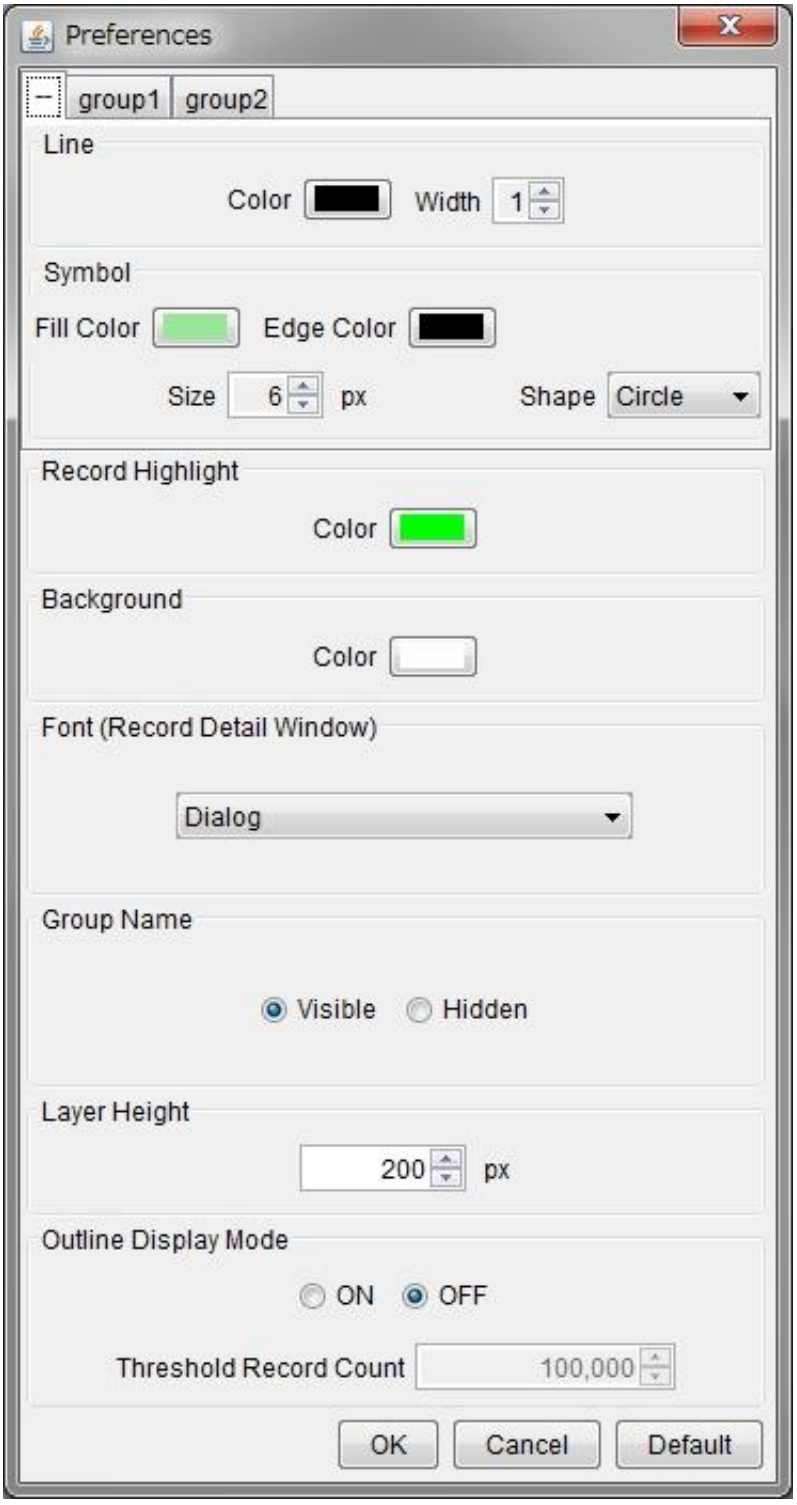


Figure 21-6. Line Chart Layer Preferences

21.4. Bar Chart Layers

21.4.1. Display Screen

Datasets for which the CONTENT of the t2map.layertype of a TMM file or the content of the layerType element of a GTS or GTM file is set to BarChartLayer appear as bar chart layers, as shown in Figure 21-7. Bar Chart Layer. The width of a record plot (bar) represents the length of time from the start date to the end date. The vertical axis represents the substance of the item element of which the name attribute value is “number.”

If records are grouped, records can be color-coded according to group.

The fill color of the plots (bars) can be transparent so that overlapped records can be identified.

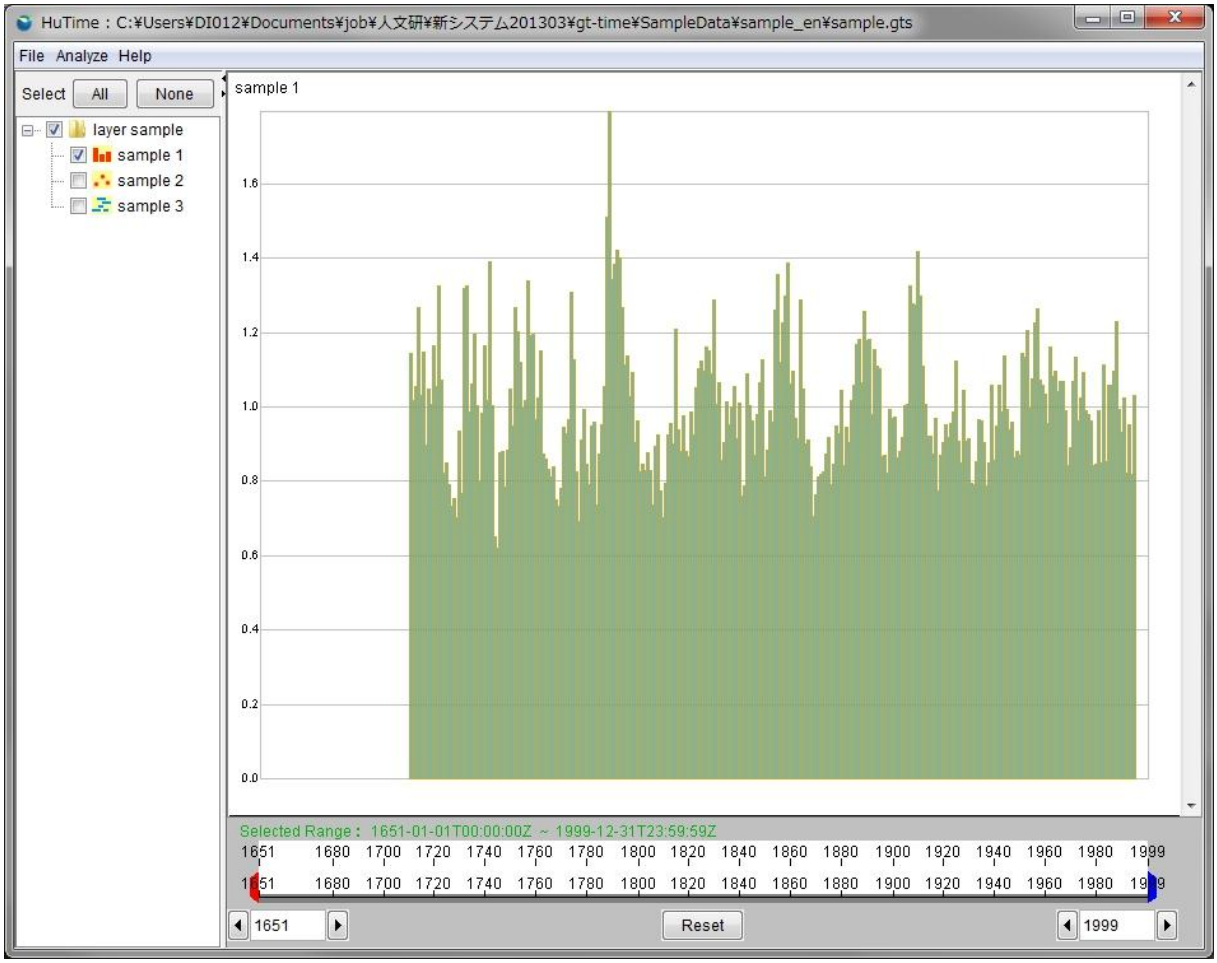


Figure 21-7. Bar Chart Layer

21.4.2. Display Preferences

As shown in Figure 21-8. Bar Chart Layer Preferences, you can specify the color of the bars (Fill Color) and bar outlines (Edge Color), the status of the Outline Display Mode and the

threshold record count for turning on the Outline Display Mode, etc., for the bar chart layers. The colors can be specified using the color selection dialog box.

When the Outline Display Mode is set to ON and the number of records exceeds the threshold record count, records are not shown if the value of a record to be plotted is smaller or not larger than both of the values of the records immediately before and after.

If records are grouped, the plot preferences can be set for each group.

In the Font (Record Detail Window) field, you can specify the font of the text in the record detail window that is opened by clicking a plot.

In the Group Name field, you can make the group name visible or hidden on the layer.

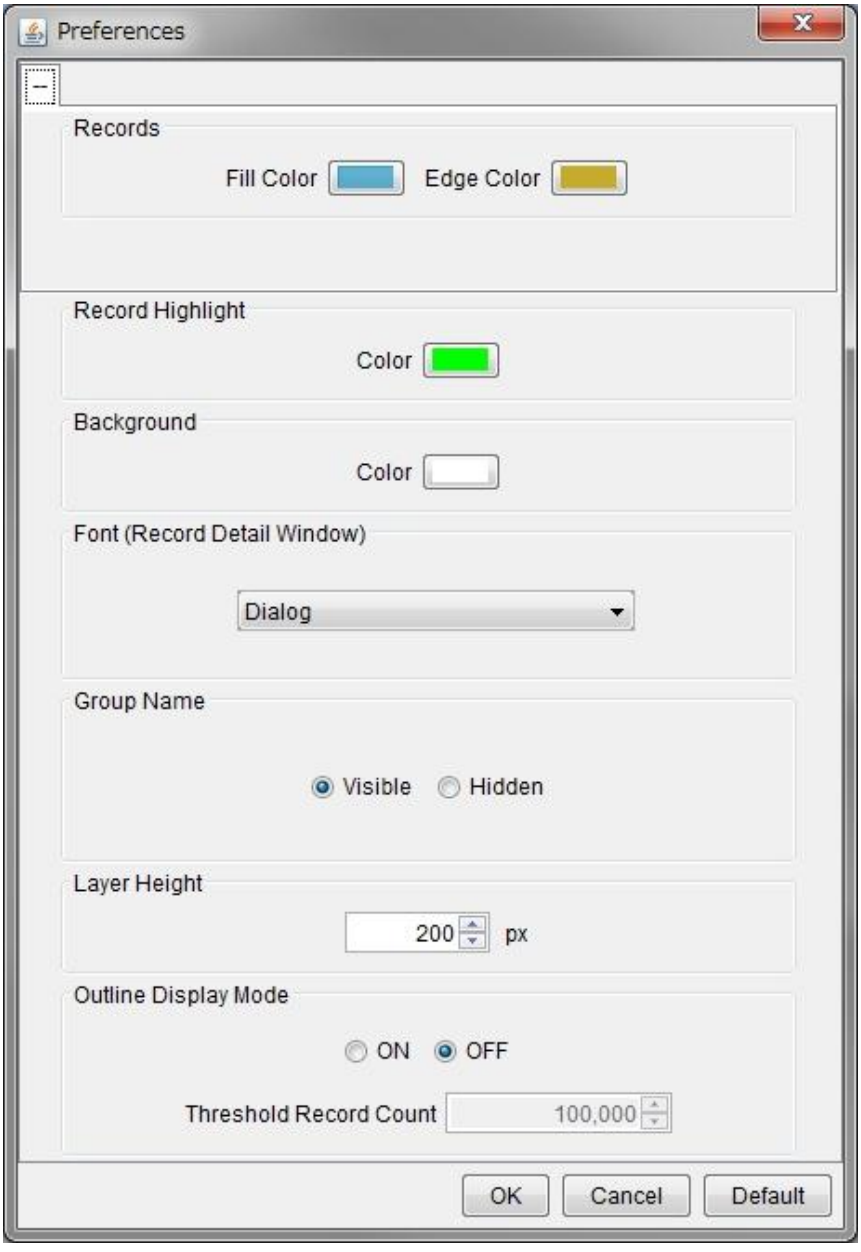


Figure 21-8. Bar Chart Layer Preferences

21.5. Mask Layers

21.5.1. Display Screen

Datasets for which the CONTENT of the t2map.layertype of a TMM file or the content of the layerType element of a GTS or GTM file is set to MaskLayer appear as mask layers, as shown in Figure 21-9. Mask Layer. Mask layers are used to extract data. Even if you click a record, it does not show detailed information on the record.

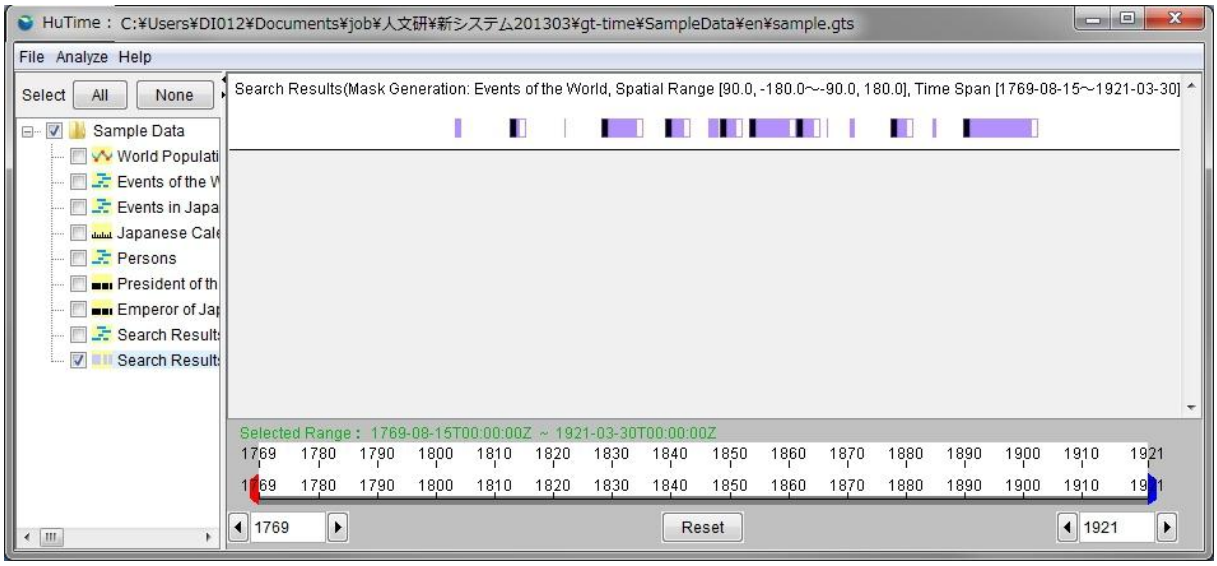


Figure 21-9. Mask Layer

21.5.2. Display Preferences

As shown in Figure 21-10. Mask Layer Preferences, you can specify the color of the plots (Fill Color) and plot outlines (Edge Color), etc., for the mask layers. The colors can be specified using the color selection dialog box.

If the Outline Display Mode is set to ON and the number of records exceeds the threshold record count, any records for which the event width is 1 pixel or less are not shown.

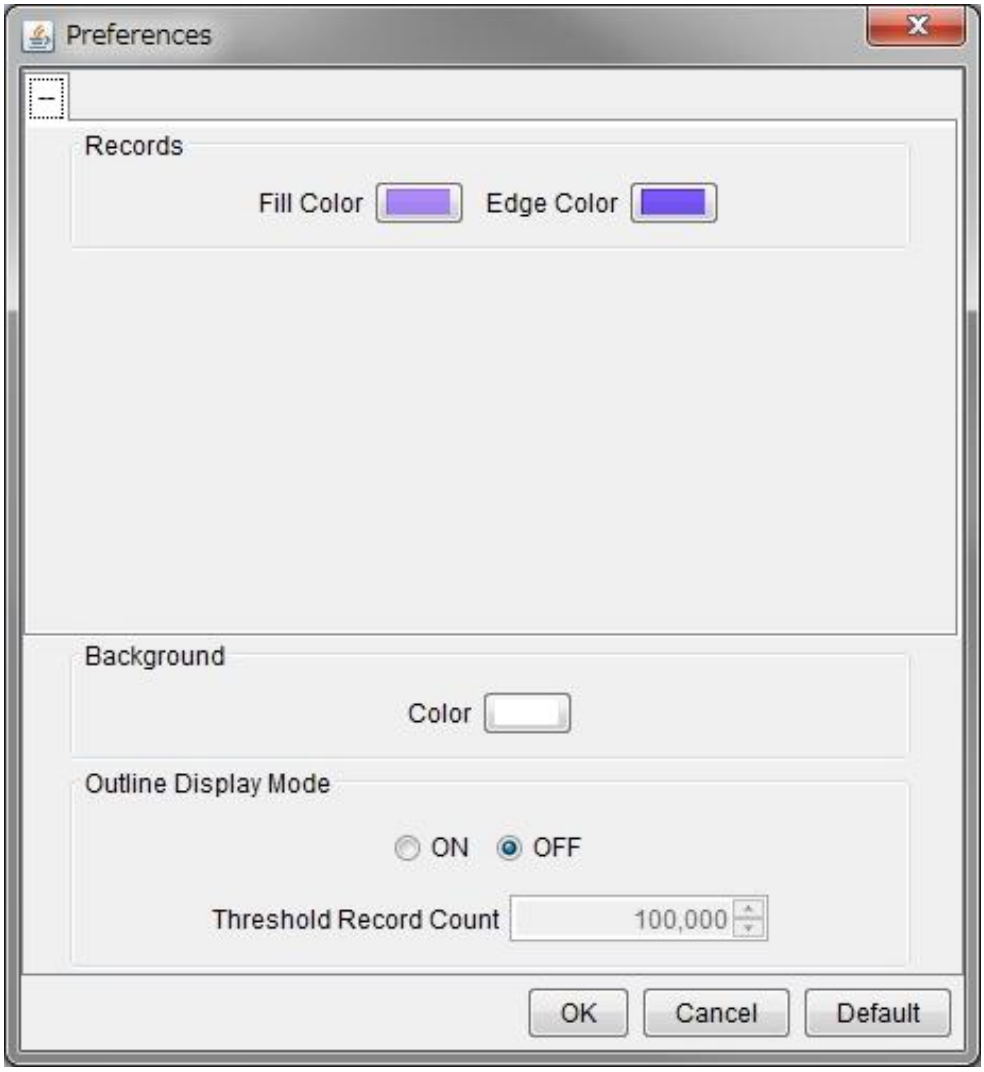


Figure 21-10. Mask Layer Preferences

21.6. Time Chart (Scale) Layers

21.6.1. Display Screen

Datasets for which the CONTENT of the t2map.layertype of a tmm file or the content of the layerType of a gts or gtm file is set to TimeChartLayer appear as time chart (scale) layers, as shown in Figure 21-11. Time Chart (Scale) Layer. A record plot does not have a temporal width, and each plot is shown by a single line. Record titles are shown above the time scale. Clicking on a title will show detailed information on the record. If adjacent titles are overlapped, they are not shown, with the corresponding ticks on the time ruler shown in red.

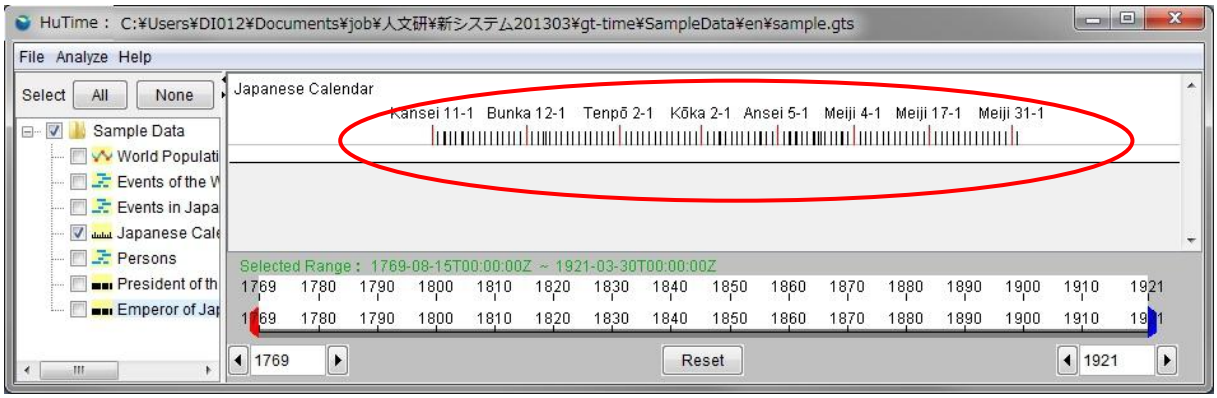


Figure 21-11. Time Chart (Scale) Layer

21.6.2. Display Preferences

As shown in Figure 21-12. Time Chart (Scale) Layer Preferences, you can specify the color of the main ticks on time scale, the sub ticks on time scale, the status of the Outline Display Mode and the threshold record count for turning on the Outline Display Mode, etc., for the time chart (scale) layers. The colors can be specified using the color selection dialog box. If the Outline Display Mode is set to ON, the number of records exceeding the threshold record count are not shown.

If the Outline Display Mode is set to ON and the number of records exceeds the threshold record count, the interval between ticks on the time scale will be wider by 5 pixels.

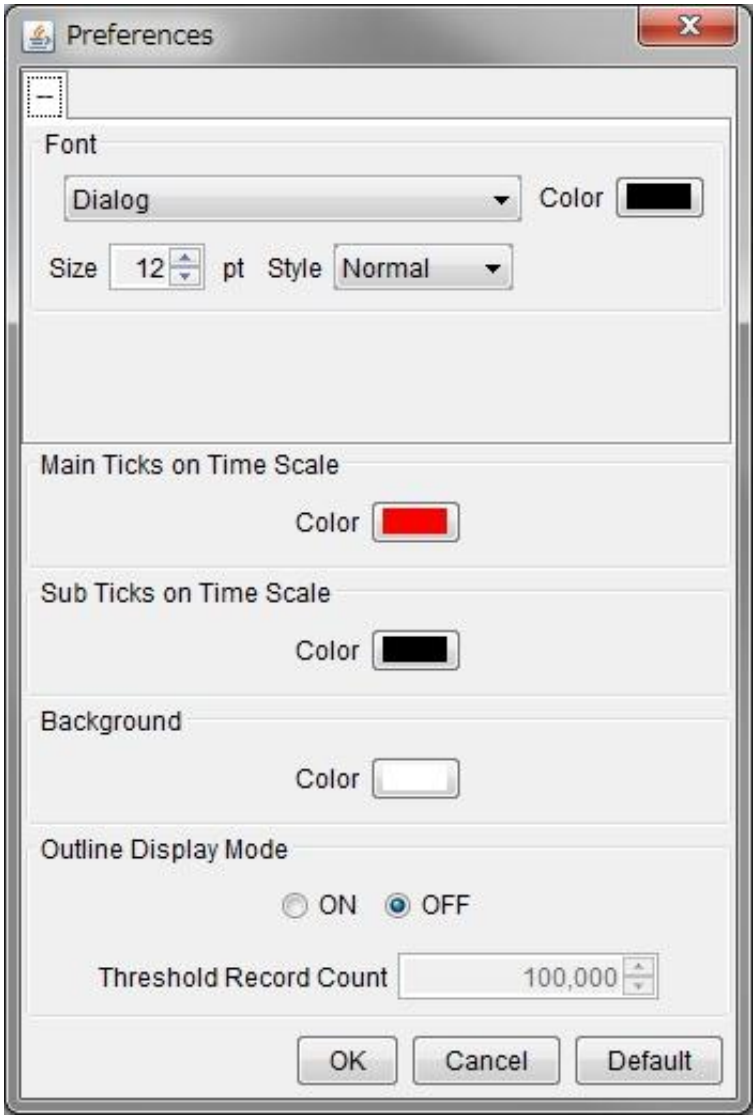


Figure 21-12. Time Chart (Scale) Layer Preferences

21.7. Time Chart (Period) Layers

Datasets for which the CONTENT of the t2map.layertype of a TMM file or the content of the layerType element of a GTS or GTM file is set to TimeChartLayer2 appear as time chart (period) layers, as shown in Figure 21-13. Time Chart (Period). A record plot has a temporal width, and more than one record is shown in a single line. Record titles are shown below the corresponding record plots. Clicking on a record plot will show detailed information on the record.

21.7.1. Display Screen

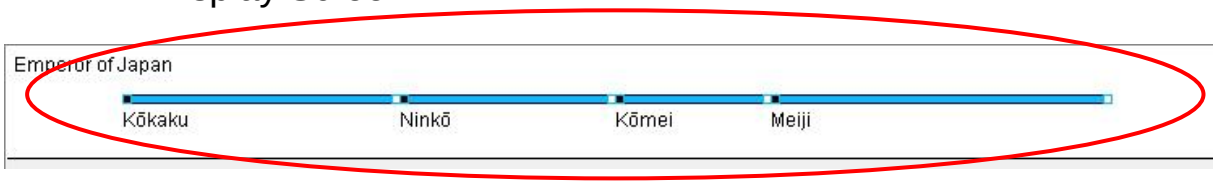


Figure 21-13. Time Chart (Period)

21.7.2. Display Preferences

As shown in Figure 21-14. Time Chart (Period) Layer Preferences, you can specify the color of the plots (Fill Color) and plot outlines (Edge Color), the status of the Outline Display Mode and the threshold record count for turning on the Outline Display Mode, etc., for the time chart (period) layers. The colors can be specified using the color selection dialog box. If the Outline Display Mode is set to ON, the number of records exceeding the threshold record count are not shown.

If the Outline Display Mode is set to ON and the number of records exceeds the threshold record count, any records for which the event width is 1 pixel or less are not shown.

In the Font (Record Detail Window) field, you can specify the font of the text in the record detail window that is opened by clicking a plot.

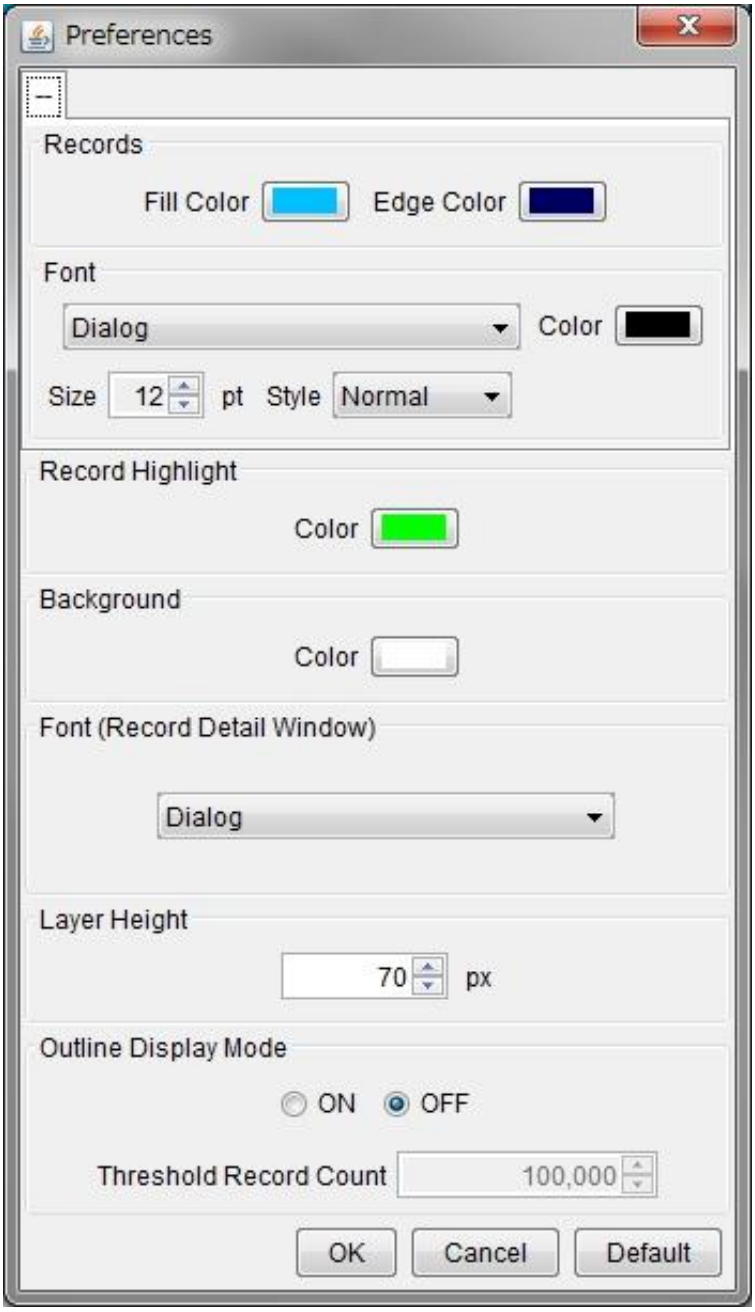


Figure 21-14. Time Chart (Period) Layer Preferences

22. Search Records

22.1. Search Records

To search records, select Search Records from the Analyze menu, as shown in Figure 22-1. Select “Search Records.”

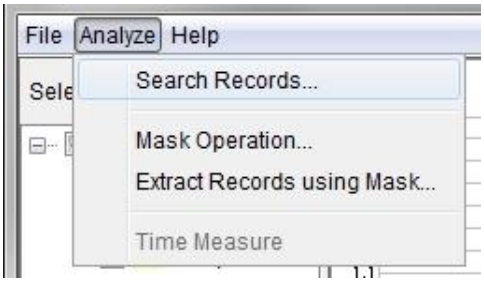


Figure 22-1. Select “Search Records”

22.1.1. Specify Search Conditions

The dialog as shown in Figure 22-2. Search Detail Dialog Box will appear where you can specify search conditions and the display option for showing the search result.

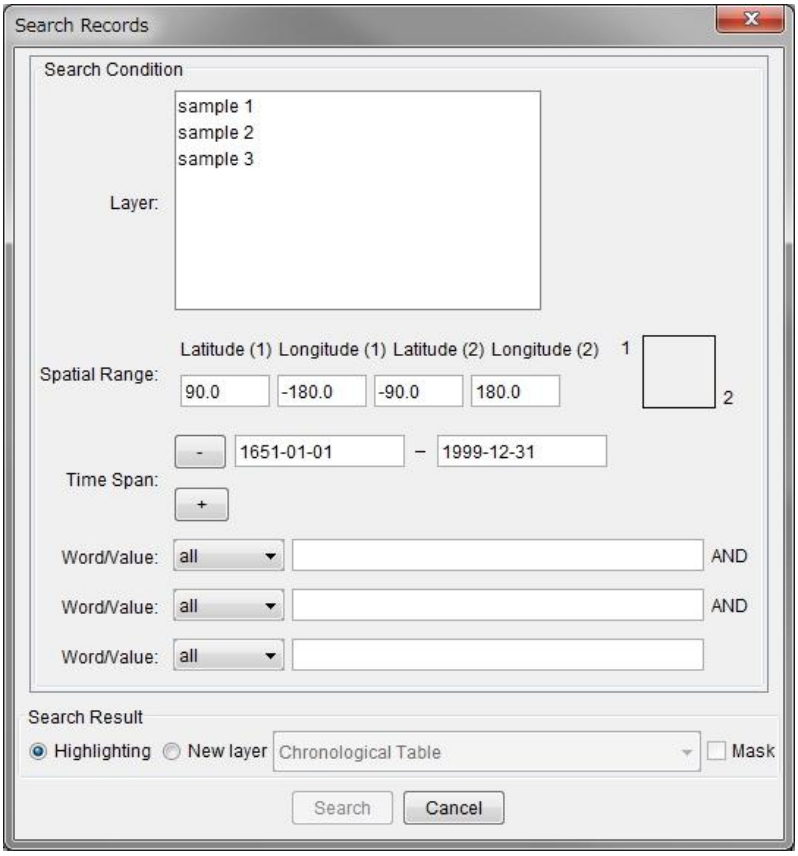
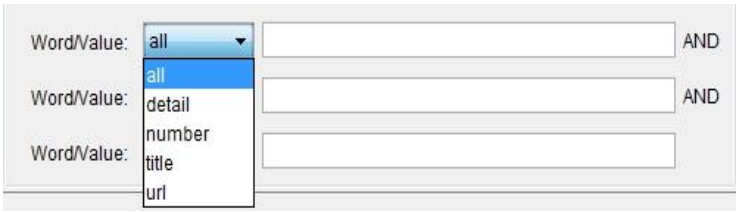
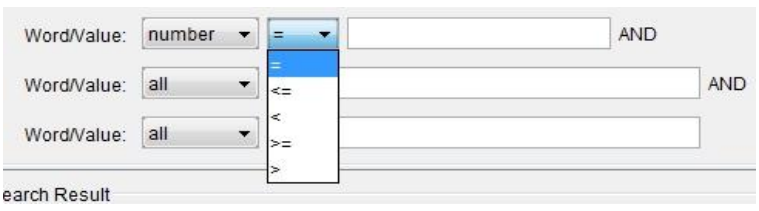


Figure 22-2. Search Detail Dialog Box

Search Conditions

Table 22-1. Search Conditions shows the conditions that can be specified when searching records.

Table 22-1. Search Conditions

No.	Item	Description
1	Layer Selection	Specify the layer(s) to search for records. If records are grouped within a layer, such group(s) can be specified to search for records.
2	Spatial Range	Specify the spatial range to search for records. (Latitude: –90 to 90; Longitude: –180 to 180) The start and end points of the rectangular area to search should be specified. If only one of those points is specified, the spatial range to search is recognized as a dot.
3	Time Span	Specify the time span (yyyy-mm-dd) to search for records. If you click "+," you can additionally specify the time spans to search.
4	Search Word/Value	Select the name of event information from the drop-down menu and enter search word(s) in the text box. If "all" is selected, all kinds of event information will be searched. More than one search word—each separated with "|"—can be specified (OR search). Refer to Figure 22-3. Entry of Search Conditions.  **Figure 22-3. Entry of Search Conditions** If "number" is selected, a numerical search will be conducted. Refer to Figure 22-4. Entry of Search Conditions (Numerical Search).  **Figure 22-4. Entry of Search Conditions (Numerical Search)**

Display Options

Table 22-2. Display Options and Figure 22-5. Display Options list the display options for showing the search result.

Table 22-2. Display Options

No.	Item		Description
1	Highlighting		Highlight the records that match the search conditions in a different color.
2	New Layer	—	Create a new layer based on the search result. The type of the new layer should be selected from the drop-down menu.
3		Mask	The search result is displayed as a mask layer. Only selectable when New Layer is selected.
4		Chronological Table	The search result is displayed as a chronological table layer.
5		Time Ruler (Scale)	The search result is displayed as a time ruler (scale) layer.
6		Time Ruler (Period)	The search result is displayed as a time ruler (period) layer.
7		Bar Chart	The search result is displayed as a bar chart layer.
8		Plot Chart	The search result is displayed as a plot chart layer.
9		Line Chart	The search result is displayed as a line chart layer.

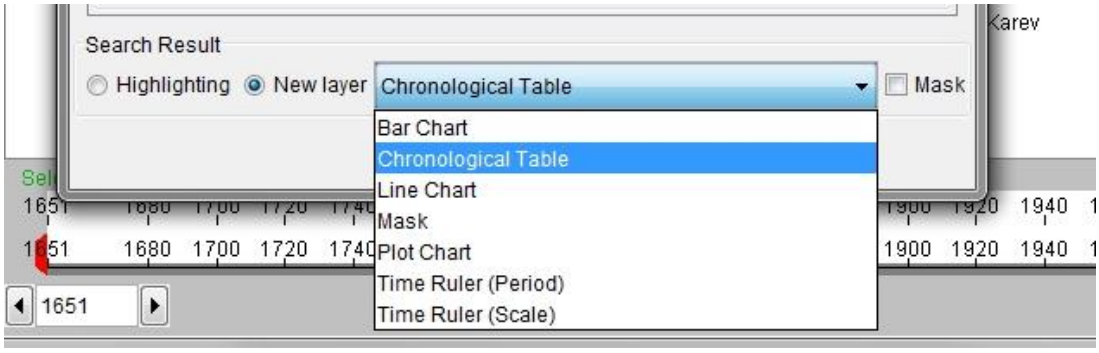


Figure 22-5. Display Options

22.1.2. Search Result

To display the Search Result through highlighting, specify the layer(s) to search and other search conditions, select Highlighting as the display option for showing the search result and click Search.

The search result will be shown by changing the color (to red) of the records of the existing

layer(s) that match the search conditions, as shown in Figure 22-6. Search Result (Highlighted).

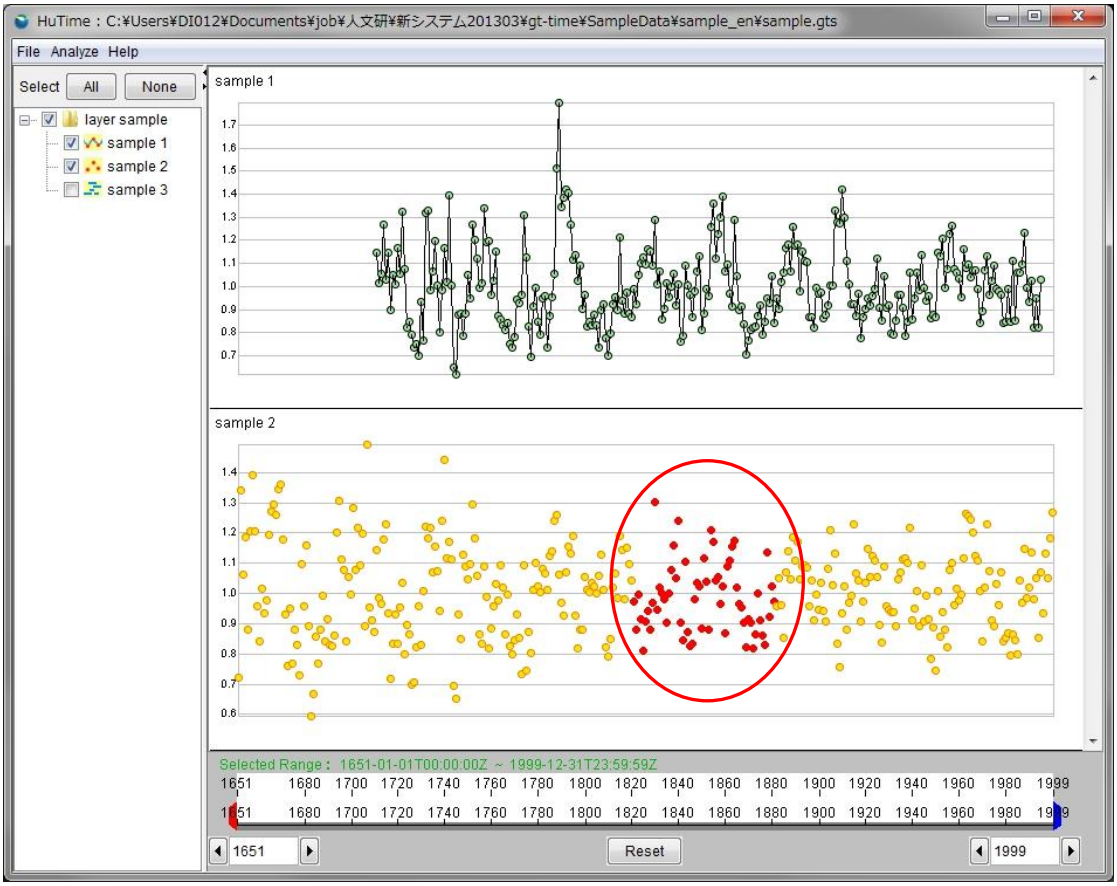


Figure 22-6. Search Result (Highlighted)

To display the Search Result through a New Layer (or a Mask Layer), specify the layer(s) to search and other search conditions, select New Layer (and Mask, if necessary) as the display option for showing the search result and click Search.

The search result will appear as a new layer as shown in Figure 22-7. Search Result (New Layer + Mask).

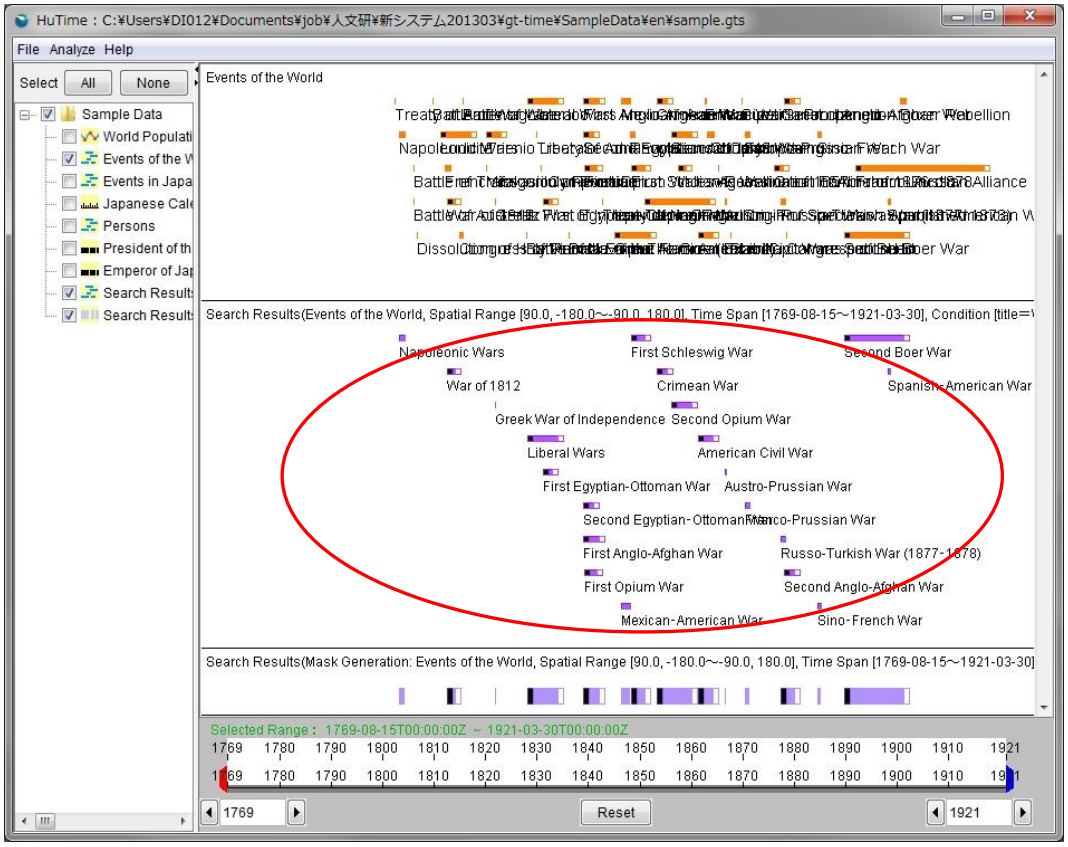


Figure 22-7. Search Result (New Layer + Mask)

23. Mask Operations

23.1. Two Mask Logical Operations

23.1.1. Select Mask Analysis Option

To conduct mask analysis, select Mask Operation from Analyze on the menu bar, as shown in Figure 23-1. Select Mask Analysis Option (Mask Logical Operation).

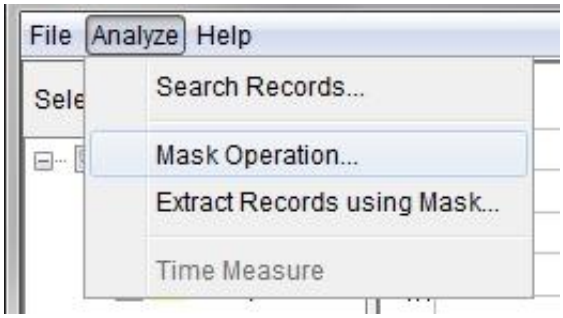


Figure 23-1. Select Mask Analysis Option (Mask Logical Operation)

23.1.2. Select Mask Analysis Conditions

In the dialog box shown in Figure 23-2. Mask Logical Operation Dialog Box, specify the mask operation conditions.

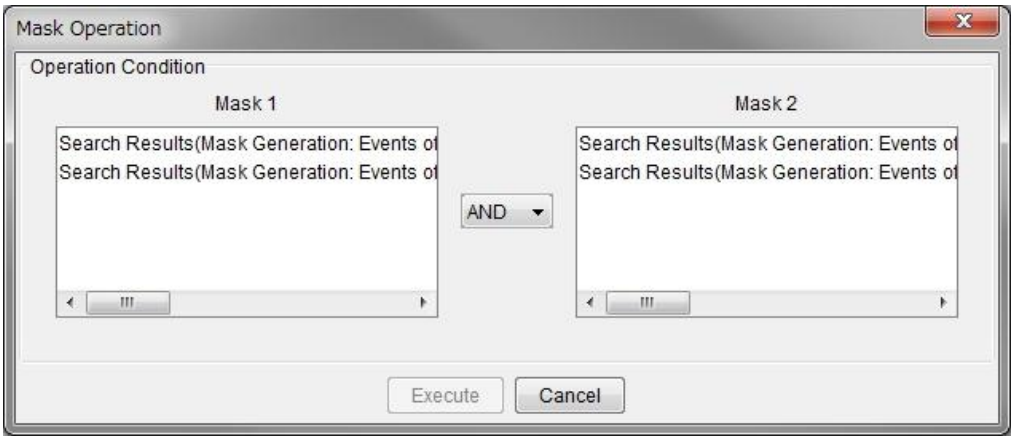


Figure 23-2. Mask Logical Operation Dialog Box

For a detailed description of this dialog box, refer to Table 23-1. Dialog Box Description.

Table 23-1. Dialog Box Description

No.	Item	Description
1	Mask 1/ Mask 2	Specify the layer(s) for which the logical operation is to be conducted. Select Mask 1 alone if a logical NOT operation is to be conducted.
2	Logical Operator	Select the logical operator from among AND (logical product), OR (logical add) and NOT (logical NOT).

23.1.3. Analysis Result

Specifying the target layer and the logical operator to be applied and clicking Execute will generate a mask layer, as shown in Figure 23-3. Analysis Result (Mask Generated by Logical Operation).

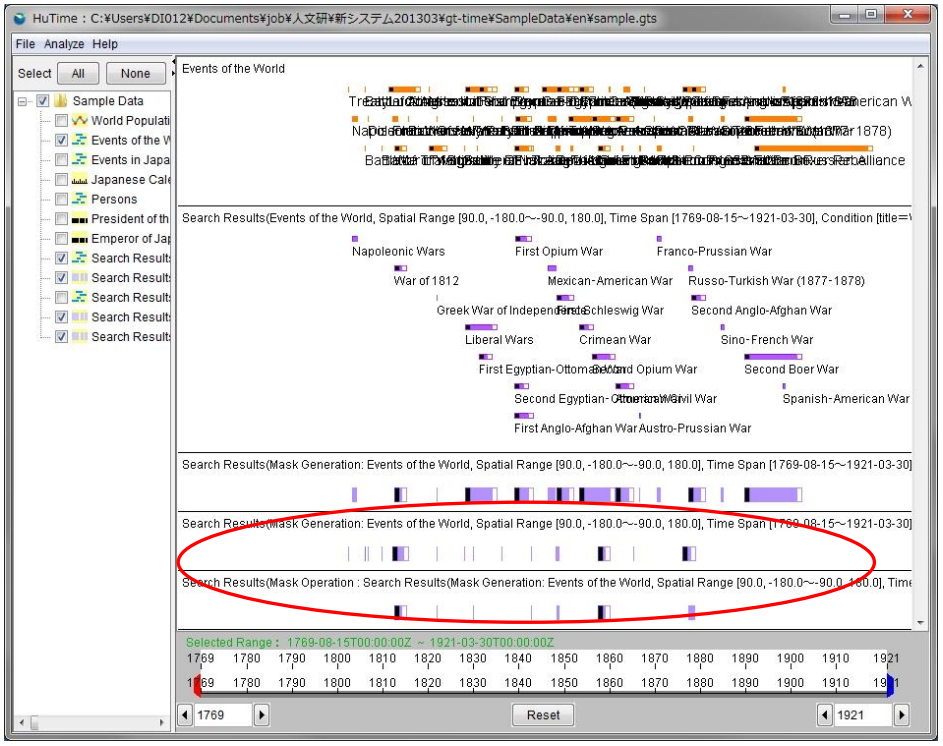


Figure 23-3. Analysis Result (Mask Generated by Logical Operation)

23.2. Extract Records Using Mask

23.2.1. Select Mask Analysis Option

To conduct mask analysis, select Extract Records using Mask from Analyze on the menu bar, as shown in Figure 23-4. Select Mask Analysis Option (Extract Records Using Mask).

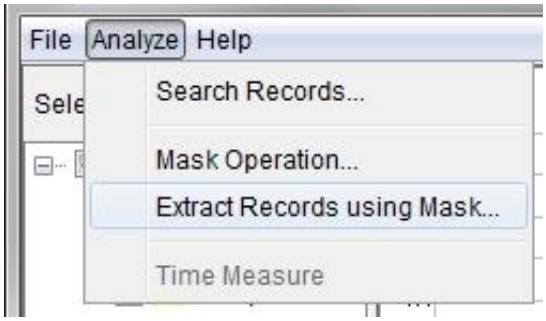


Figure 23-4. Select Mask Analysis Option (Extract Records Using Mask)

23.2.2. Select Mask Analysis Conditions

In the dialog box shown in Figure 23-5. Extract Records Using Mask Dialog Box, specify the condition for extracting records.

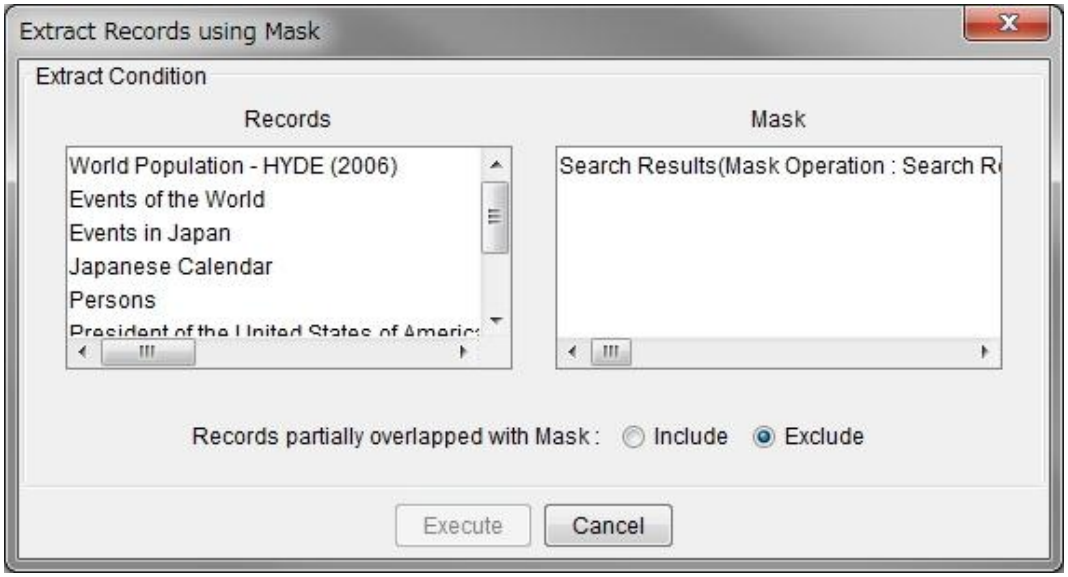


Figure 23-5. Extract Records Using Mask Dialog Box

For a detailed description of this dialog box, refer to Table 23-2. Dialog Box Description.

Table 23-2. Dialog Box Description

No.	Item	Description
1	Records	Select the records for which the extraction is to be conducted. If records are grouped, you can select records by the group.
2	Mask	Select the mask to be used for extraction.
3	Extract Condition	Select Exclude to extract records within the mask's time span. Select Include to extract all records that overlap, either all or in part, with the mask's time span.

23.2.3. Analysis Result

Specifying the target mask and records and clicking Execute will generate a layer with extracted records, as shown in Figure 23-6. Analysis Result (Records Extracted Using Mask).

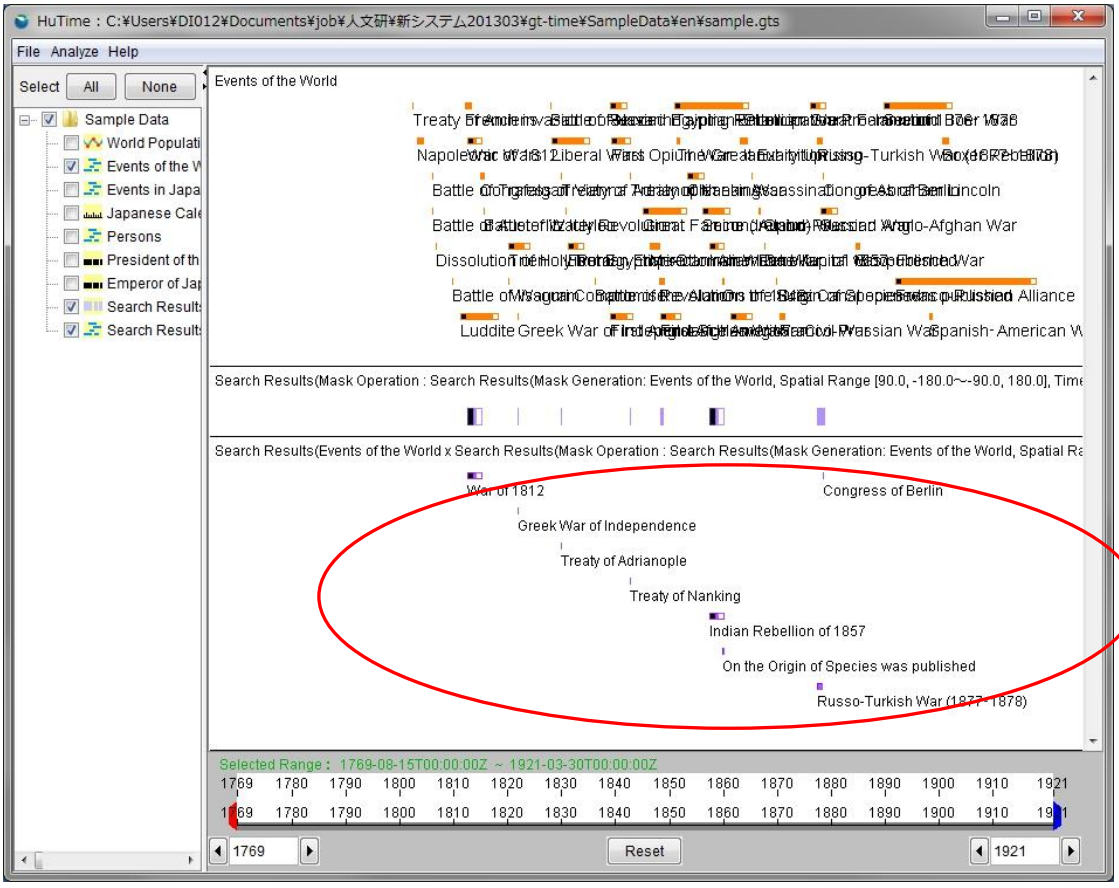


Figure 23-6. Analysis Result (Records Extracted Using Mask)

24. Print and Export Image

24.1. Print Image

To print an image, select Print from File on the menu bar, as shown in Figure 24-1. Select "Print."

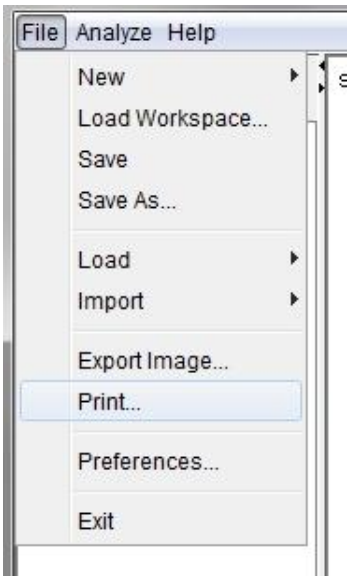


Figure 24-1. Select "Print"

24.2. Select Print Conditions

In the dialog box that will appear, as shown in Figure 24-2. Print Image Dialog Box, select the image option to be printed.

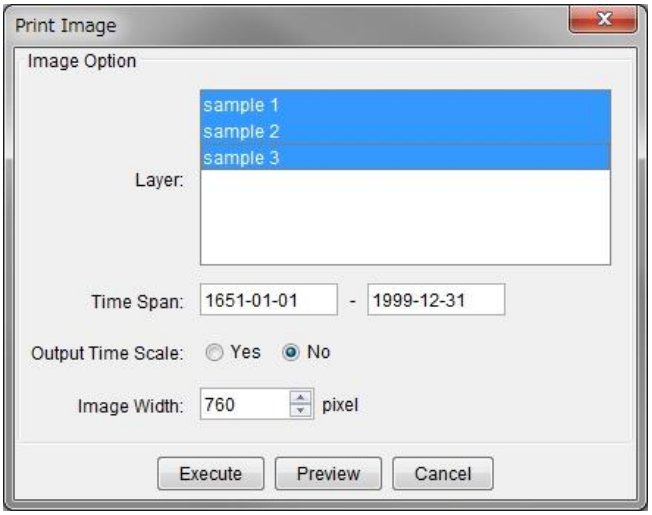


Figure 24-2. Print Image Dialog Box

For a detailed description of this dialog box, refer to Table 24-1. Dialog Box Description.

Table 24-1. Dialog Box Description

No.	Item	Description
1	Layer	Select the layer(s) from which an image is to be printed.
2	Time Span	Specify the time span (yyyy-mm-dd) for which an image is to be printed.
3	Output Time Scale	Specify whether to display a time scale at the bottom of each layer.
4	Image Width	Specify the width of an image to be printed in pixels.

24.2.1. Printer Output

For printer output, click Execute, as shown in Figure 24-3. Printer Output.

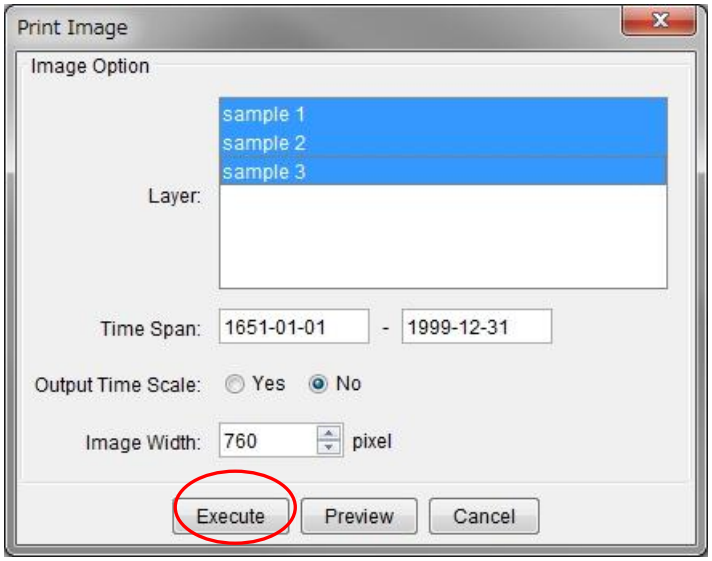


Figure 24-3. Printer Output

This will open Figure 24-4. Print Dialog Box, in which you can specify the printing conditions and click Print.

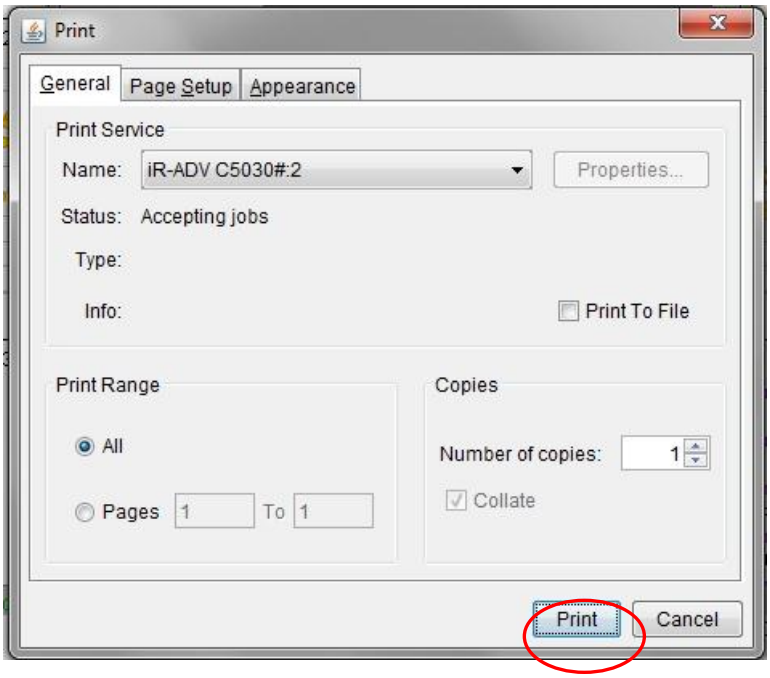


Figure 24-4. Print Dialog Box

24.3. Select Export Image

To export an image, select Export Image from File on the menu bar, as shown in Figure 24-5. Select “Export Image.”

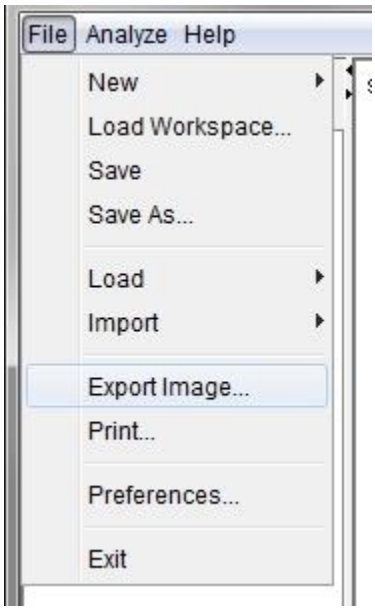


Figure 24-5. Select “Export Image”

24.4. Export Image

24.4.1. Export to Clipboard

Select Export to Clipboard as shown in Figure 24-6. Export to Clipboard, and click Execute.

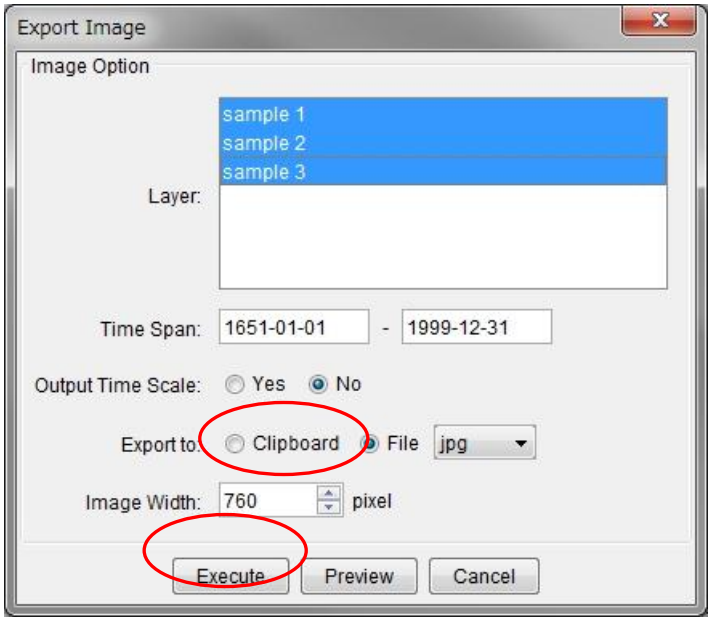


Figure 24-6. Export to Clipboard

24.4.2. Export to File

In the dialog box shown in Figure 24-7. Export to File, select Export to File and the type of file from among JPEG, PNG, GIF, BMP and EMF (enhanced meta file), and click Execute.

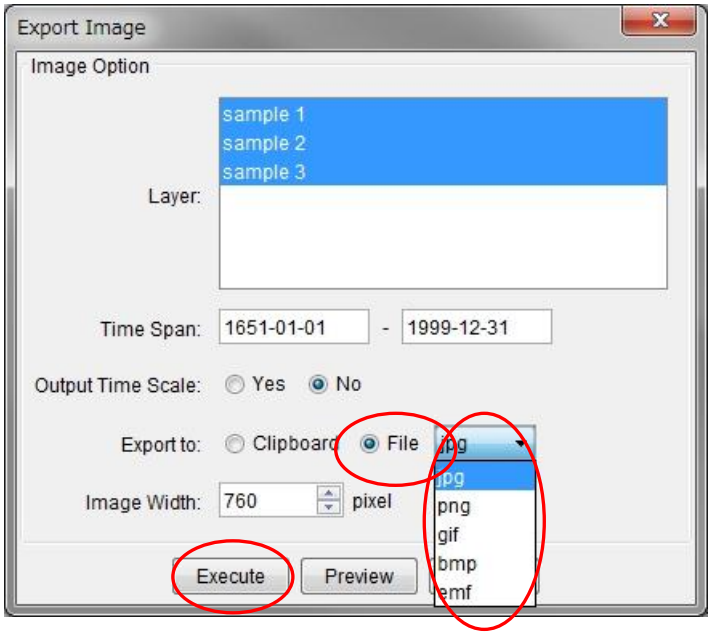


Figure 24-7. Export to File

This will open the Figure 24-8. Specify File Name dialog box, in which you can specify the name of the file to which an image is to be exported, and click Save.

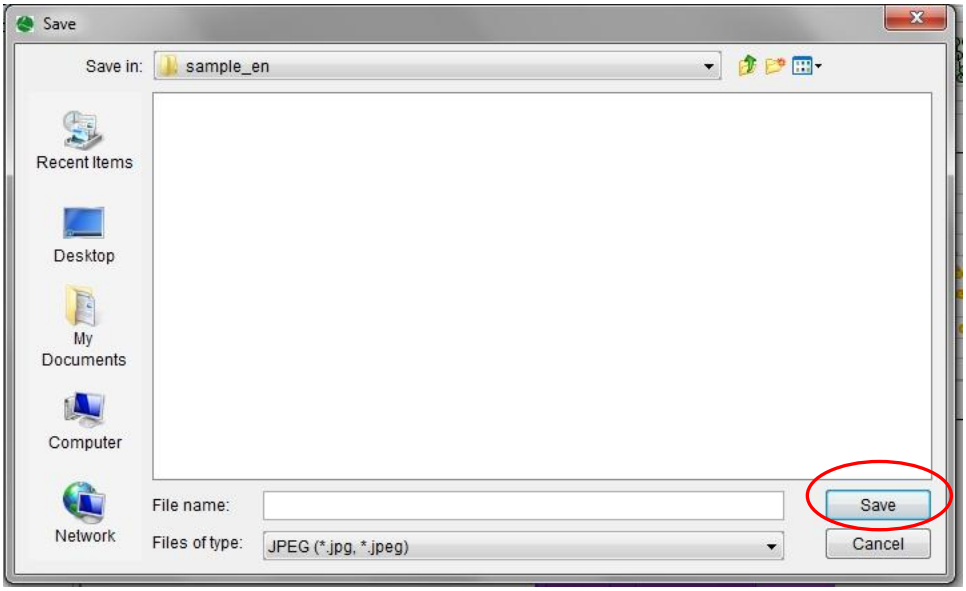


Figure 24-8. Specify File Name

24.5. Image Preview

Clicking the Preview button shown in Figure 24-7. Export to File will open the image preview dialog box as shown in Figure 24-9 Image Preview Dialog Box, in which you can preview the image to be exported.

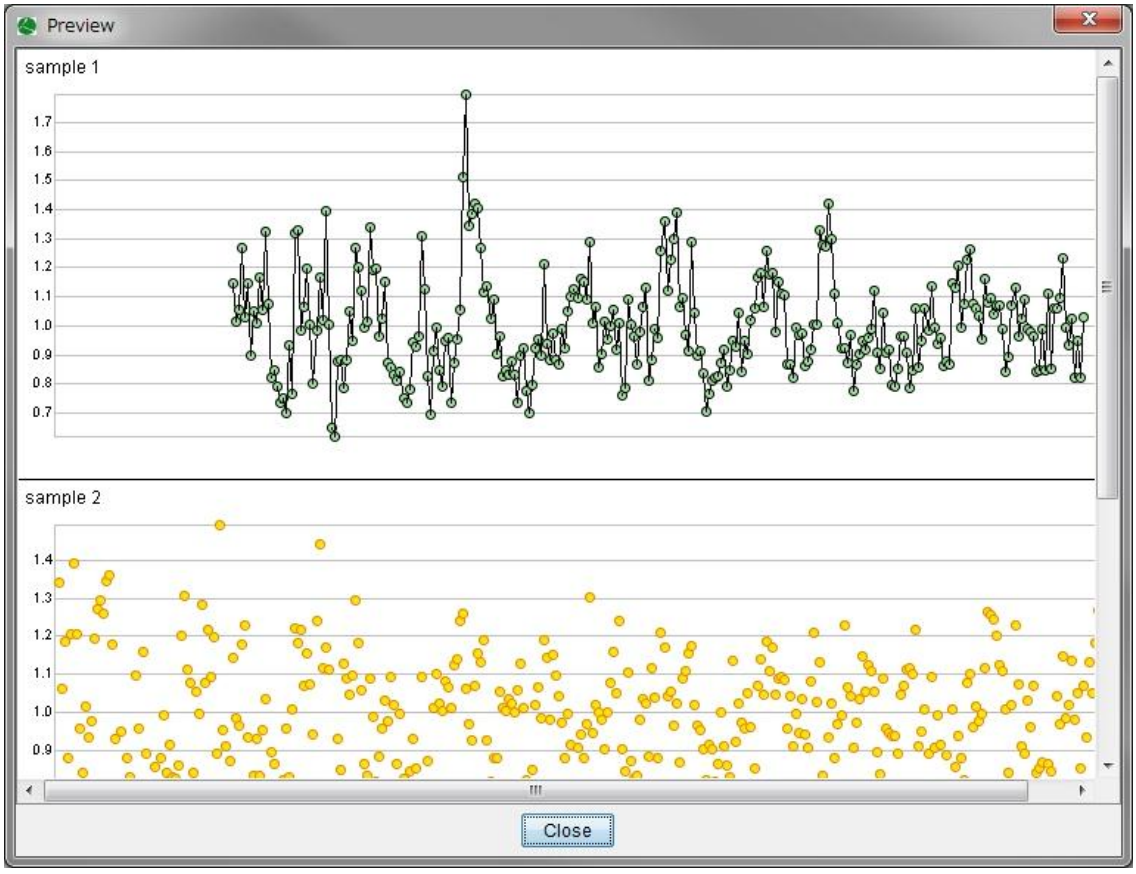


Figure 24-9. Image Preview Dialog Box

25. Data Import

25.1. CSV Data

25.1.1. Start Import

As shown in Figure 25-1. Start CSV Data Import, select File → Import → Layer. In the dialog box that will appear (Figure 25-2. File Selection Dialog Box for Layer Import), specify "csv" as the file type and select the CSV file to be imported.

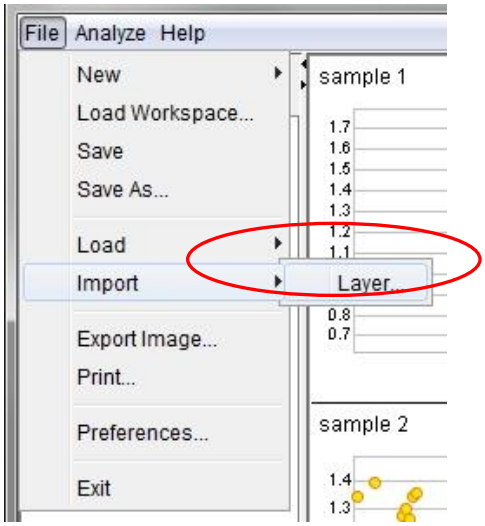


Figure 25-1. Start CSV Data Import

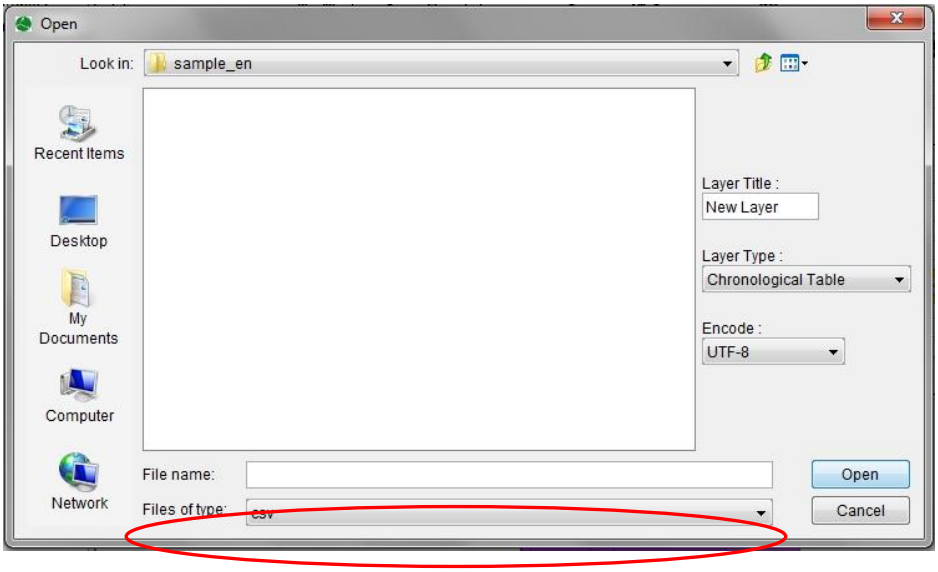


Figure 25-2. File Selection Dialog Box for Layer Import

The CSV file to be imported, the dataset name (Layer Title), the layer type and the encoding should be specified in this dialog box.

You can also access the import file dialog box by right-clicking on a project name and selecting Import → Layer as shown in Figure 25-3. Start CSV Data Import 2.

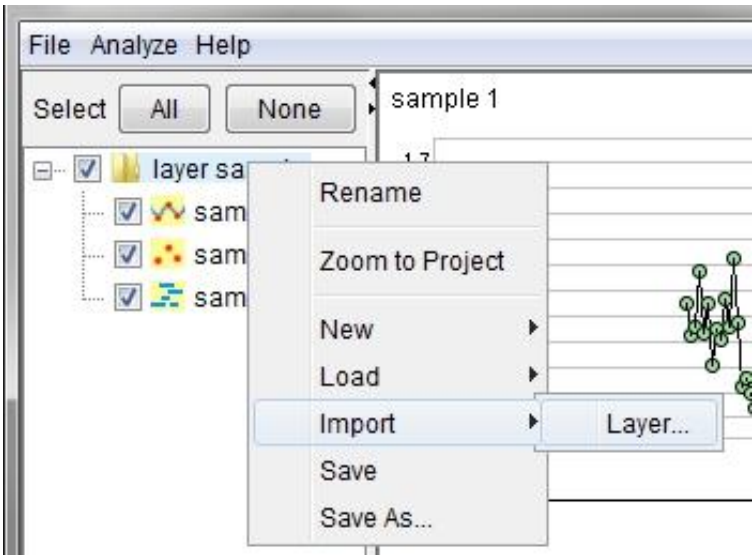


Figure 25-3. Start CSV Data Import 2

25.1.2. Dataset Name (Layer Title)

A dataset name refers to the title of a dataset.
By default, the dataset name is shown as New Layer.

25.1.3. Layer Type

Select the type of layer for displaying the CSV file to be imported.

25.1.4. Encoding

Select SHIFT_JIS or UTF-8.

25.1.5. Import

Select the CSV file to be imported and click Open. This will start importing the selected file. If imported projects already exist, a newly imported dataset will be included as a new layer under the root project, being placed at the bottom within the project, as shown in Figure 25-4. Imported as a New Layer.

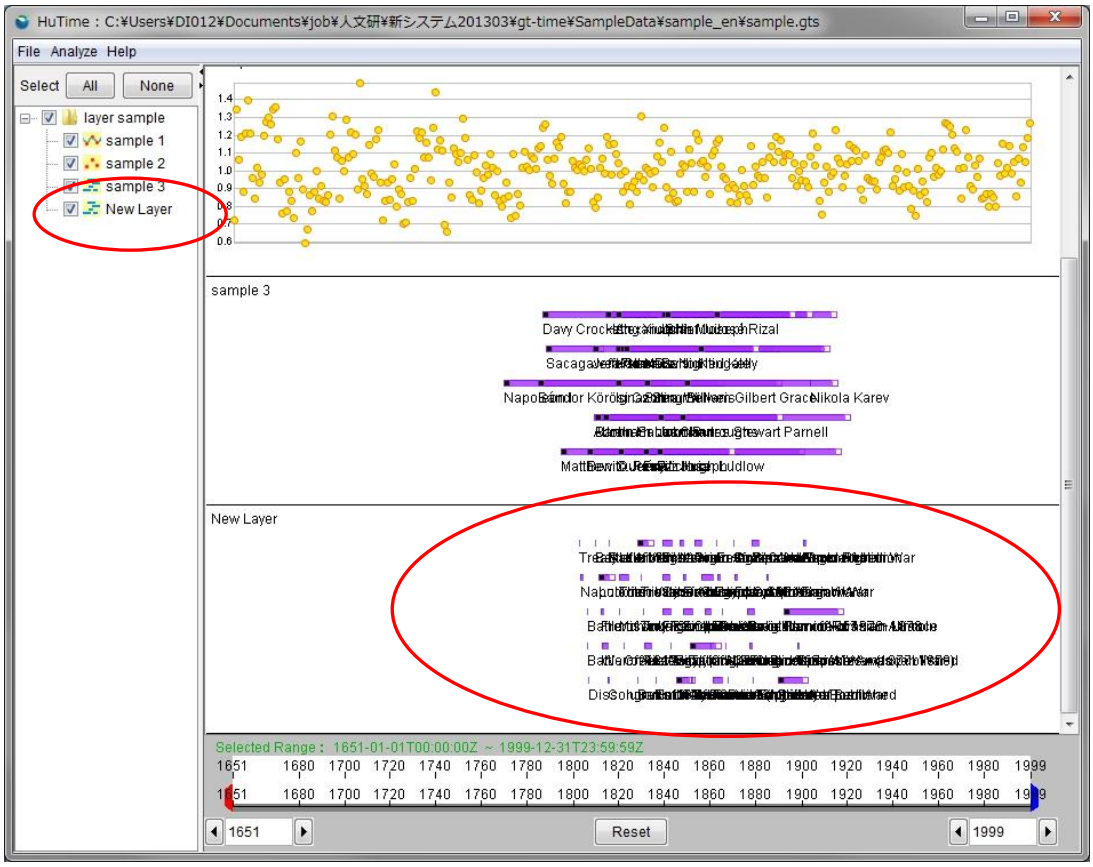


Figure 25-4. Imported as a New Layer

If no projects have yet been imported, importing a dataset will create a new project, in which the dataset will be imported as a new layer, as shown in Figure 25-5. Imported as a New Project.

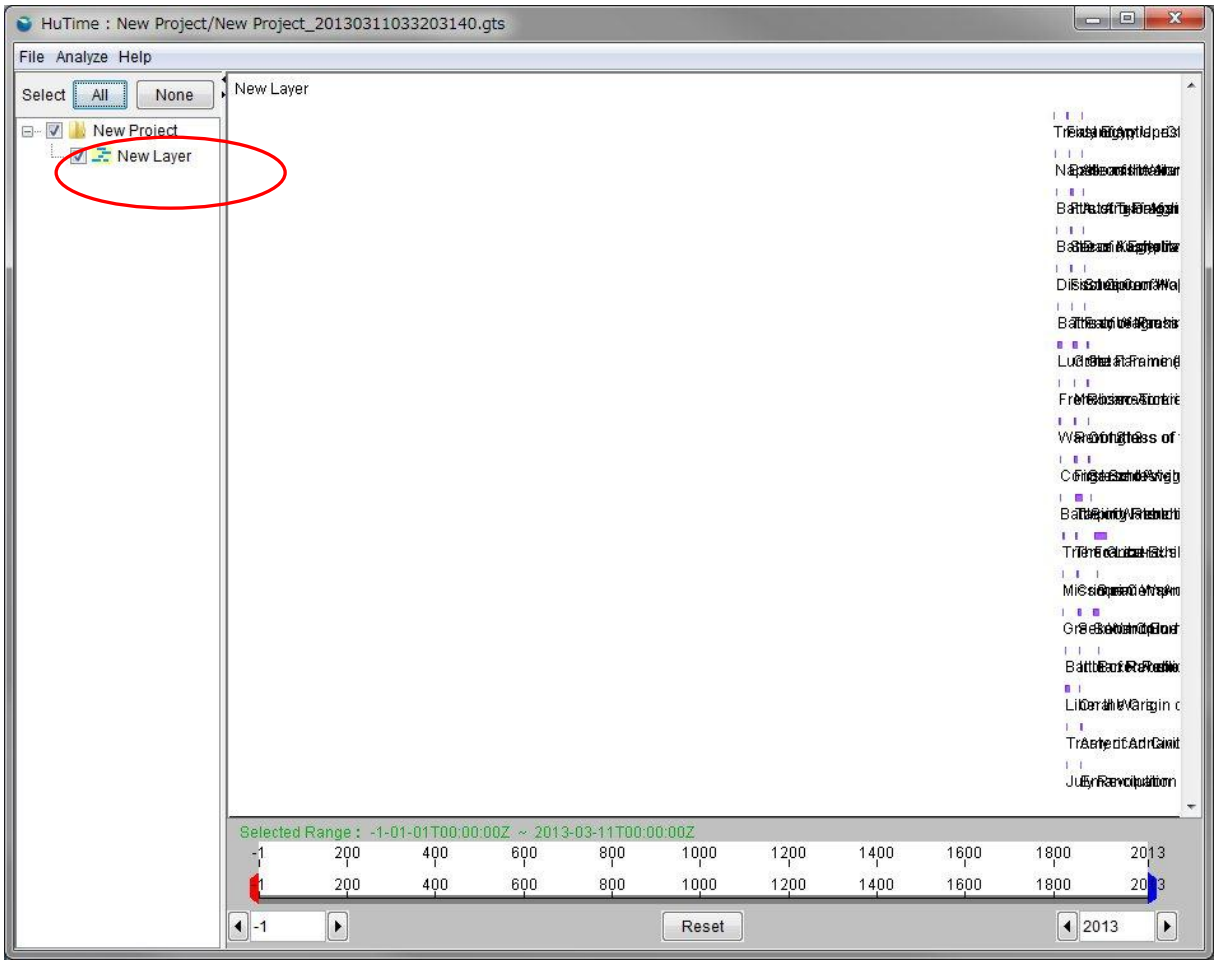


Figure 25-5. Imported as a New Project

25.1.6. Error Check

Any records that fall under any of the following would be recognized as errors and not shown on the layer.

The number of column names does not agree with the number of record data.
The start date/time is not entered.
The start date/time format is not correct.
The end date/time is not entered.
The end date/time format is not correct.

For any record data that fall under any of the following, a warning would be issued, although such record would be shown on the layer.

Characters other than a numerical value, a minus sign and a comma are entered as Latitude.
The value of Latitude is not between –90 and 90.

A value of Longitude exists but not a value of Latitude.
Characters other than numerical values, a minus sign and a comma are entered as Longitude.
The value of Longitude is not between –180 and 180.
A value of Latitude exists but not a value of Longitude.
Characters other than a numerical value, a minus sign and a comma are entered, when the column name is “number.”

25.2. KML Data

As shown in Figure 25-6. Start Data Import, select File → Import → Layer. In the dialog box that will appear (Figure 25-7. File Selection Dialog Box for Layer Import), specify “kml” as the file type and select the KML file to be imported.

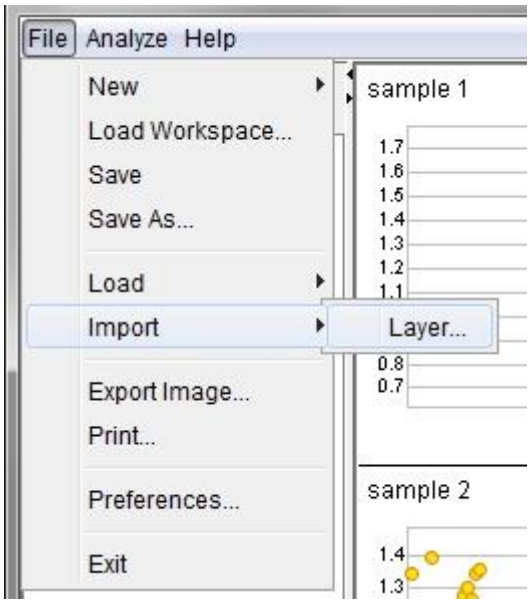


Figure 25-6. Start Data Import

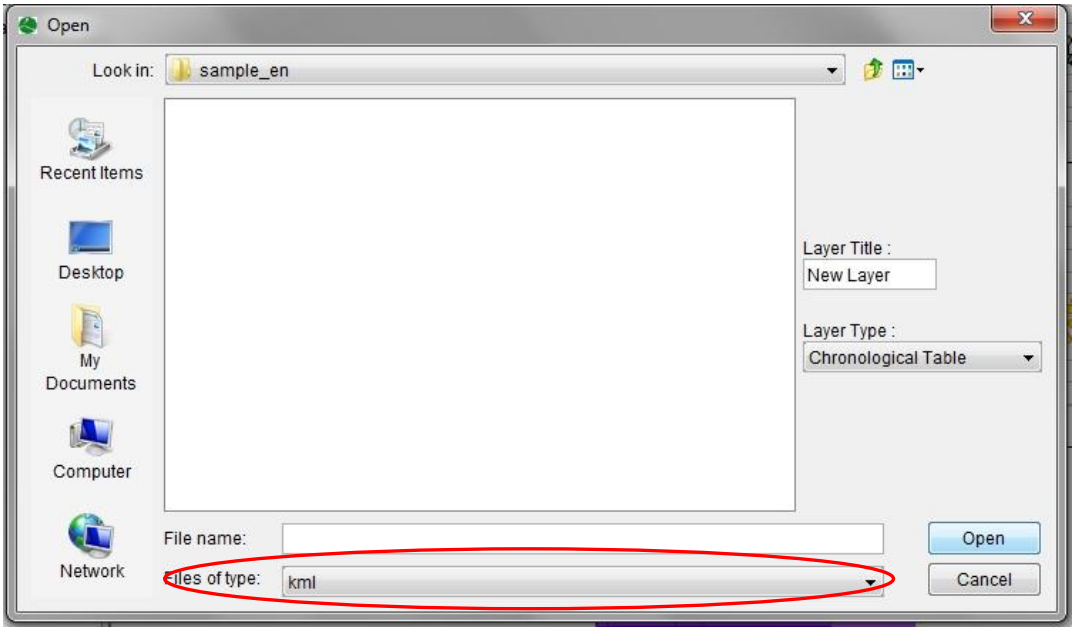


Figure 25-7. File Selection Dialog Box for Layer Import

If imported projects already exist, a newly imported dataset will be included as a new layer under the root project, being placed at the bottom within the project.

If no projects have yet been imported, importing a dataset will create a new project, in which the dataset will be imported as a new layer.

You can also access the file selection dialog box for layer import by right-clicking on a project name and selecting Import → Layer as shown in Figure 25-8. Start Data Import 2.

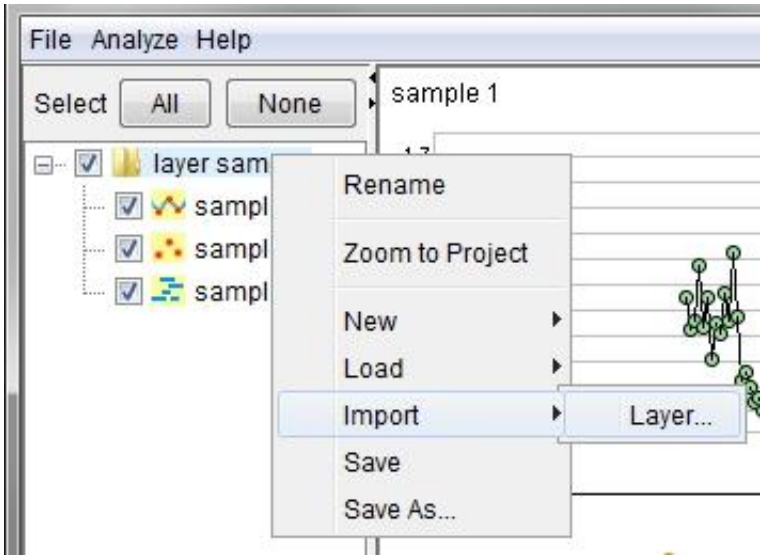


Figure 25-8. Start Data Import 2

25.3. Error Notice

Any data errors detected while the data are being imported, such as a lack of essential items and incorrect data formats, will be reported in the error dialog boxes as shown below.

After the data import is completed, the number of detected errors and warnings, if any, will be reported in a dialog box as shown in Figure 25-9. File Reading Error Dialog Box.

Figure 25-9. File Reading Error Dialog Box

Clicking Save Detail in the File Reading Error dialog will open a file selection dialog box, enabling you to save the error details in a given file. Clicking Show Detail will open the dialog box shown in Figure 25-10. File Reading Error Details Dialog Box.

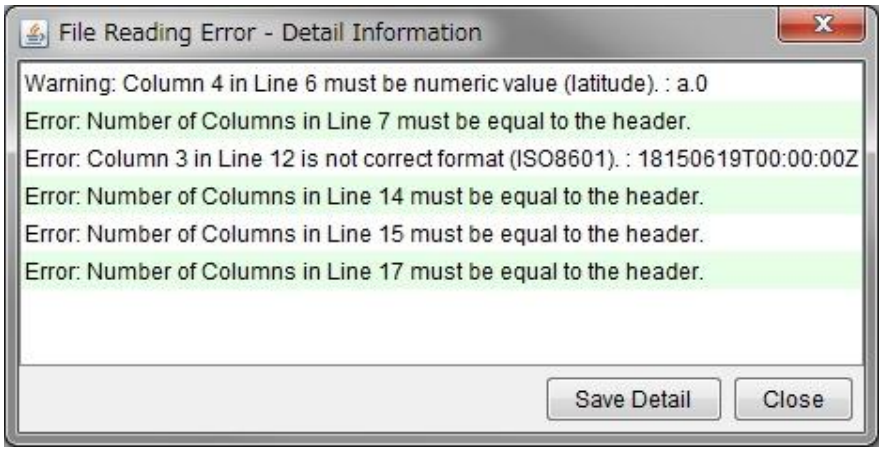


Figure 25-10. File Reading Error Details Dialog Box

Clicking Save Detail in the File Reading Error Details dialog box will open a file selection dialog box, enabling you to save the error details in a given file.

26. CSV File Format

26.1. Column Name

As for Columns 1 to 5, judgment on the content of values relies on the order of the columns, and therefore the column names can be arbitrarily specified.

The names of Column 6 and after should be the value of the ITEM element of each record.

Table 26-1. CSV File Format provides a description of Columns 1 to 5.

Table 26-1. CSV File Format

Column	Description	Remarks
1	ID	Uniquely identifiable value for this column
2	Start Date/Time	Start date/time of this record (to be shown on the time scale)
3	End Date/Time	End date/time of this record (to be shown on the time scale)
4	Latitude	Latitude of this record (to be shown on the map)
5	Longitude	Longitude of this record (to be shown on the map)

26.2. Records

Regarding data in Column 6 and after, the column named “group” is treated as the name of a record group. The other column names represent the value of the ITEM element. For example, the value of the column named “title” is shown as the record title on a chronological table layer if it is selected. The value of the column named “number” is treated as a numerical value. Refer to Figure 26-1. CSV File Input Example.

```
VALUE_ID,FROM_DATE,TO_DATE,LATI,LONG,"title","number","url"
id0,1802-03-25T00:00:00Z,1802-03-26T00:00:00Z,0.0,9.307286286320493E-7,"Treaty of Amiens","0","http://en.wikipedia.org/wiki/Treaty_of_Amiens"
id1,1803-01-01T00:00:00Z,1804-01-01T00:00:00Z,0.0,9.307286286320493E-7,"Napoleonic Wars","0","http://en.wikipedia.org/wiki/Napoleonic_Wars"
id2,1805-10-21T00:00:00Z,1805-10-22T00:00:00Z,0.0,9.307286286320493E-7,"Battle of Trafalgar","0","http://en.wikipedia.org/wiki/Battle_of_Trafalgar"
id3,1805-12-02T00:00:00Z,1805-12-03T00:00:00Z,0.0,9.307286286320493E-7,"Battle of Austerlitz","0","http://en.wikipedia.org/wiki/Battle_of_Austerlitz"
id4,1806-08-06T00:00:00Z,1806-08-07T00:00:00Z,0.0,9.307286286320493E-7,"Dissolution of Holy Roman Empire","0","http://en.wikipedia.org/wiki/Holy_Roman_Empire"
id5,1809-07-05T00:00:00Z,1809-07-07T00:00:00Z,0.0,9.307286286320493E-7,"Battle of Wagram","0","http://en.wikipedia.org/wiki/Battle_of_Wagram"
id6,1811-01-01T00:00:00Z,1818-01-01T00:00:00Z,0.0,9.307286286320493E-7,"Luddite","0","http://en.wikipedia.org/wiki/Luddite"
id7,1812-01-01T00:00:00Z,1813-01-01T00:00:00Z,0.0,9.307286286320493E-7,"French invasion of Russia","0","http://en.wikipedia.org/wiki/French_invasion_of_Russia"
```

Figure 26-1. CSV File Input Example

27. KML Data Format

KML data inputs/outputs correspond to the KML elements and attributes shown below, which are being mapped to the elements and attributes of the record data.

Table 27-1. Corresponding KML Data Elements and Attributes and Relationships with Record Data

KML	GT Data	Remarks
kml	records	For a KML import, use the default GTM in the same way as when a CSV is read.
Document		
Style @id polygonStyle or pointStyle LineStyle color Fixed value: 770000ff width Fixed value: 0.1 PolyStyle color Fixed value: ff0000cc IconStyle scale Fixed value: 1.3 Icon href Fixed value: http//maps.google.com/mapfiles/kml/pushpin/ylw-pushpin.png		For the content of the Style element for a KML export, follow the content described in the tempo-spatial information download file (KML) structure.xls. Judgment of whether polygonStyle or pointStyle is made by the number of point elements after the location element: pointStyle if one point element; polygonStyle if more than one point element.
Placemark *	record *	
name atom:link ? @href description styleUrl	event item name="title" item name="url" item name="detail"	
Point ? coordinates	location point zone x y	Latitude/Longitude ⇔ UTM applied

Polygon ? outerBoundaryIs LinearRing coordinates MultiGeometry ? A multiple number of point and polygon elements can be described thereafter.	location point zone x y	A KML import nullifies the altitude information in the coordinates element. More than one latitude/longitude is described, each being separated by a line-feed character, in the coordinates element. They are mapped to more than one location element. Location information other than that for the number of point or polygon elements is converted into a record element with the same content.
TimeSpan begin end	datetime from to	

28. Record Data Format

A description of the record data is provided below.

Table 28-1. Description of Values Described in Record Data

Node	Repetition	Description
records element		Root element
record element	*	
group attribute		Describe the group name to which the record belongs. Can be arbitrarily specified. Valid only for layers that support record grouping.
id attribute		
minVisibleTResolution attribute		Describe the minimum time range of a record shown. See below for the values written.
maxVisibleTResolution attribute		Describe the maximum time range of a record shown. See below for the values written.
datetime element		
from element		
endpoint attribute		Describe the value of either open or close. The value of open is exclusive of the edge points, whereas the value of close is inclusive of the edge points.
text node		Describe the start date and time in the form of YYYY-MM-DDThh:mm:ss sssZone.
to element		
endpoint attribute		Describe the value of either open or close. The value of open is exclusive of the edge points, whereas the value of close is inclusive of the edge points.
text node		Describe the end date and time in the form of YYYY-MM-DDThh:mm:ss sssZone.
location element		
point element	*	
zone element		Describe the value of zone of GTM.
text node		
x element		Describe the x-coordinate of GTM.

Text node		
y element		Describe the y-coordinate of GTM.
text node		
event element		
item element	*	
name attribute		Describe the name of the item. If it is “number,” the value is treated as a numerical value.
text node		Describe the content of the item. It should be a numerical value if the name attribute is “number.”

Table 28-2. Values of the minVisibleTResolution and the maxVisibleTResolution Attributes shows the values that can be written in the minVisibleTResolution and the maxVisibleTResolution attributes and the time ranges represented by these values.

Table 28-2. Values of the minVisibleTResolution and the maxVisibleTResolution Attributes

Value	Time Range (Day)
0.000001second	1/(24*60*60*1000000)
0.00001second	1/(24*60*60*100000)
0.0001second	1/(24*60*60*10000)
0.001second	1/(24*60*60*1000)
0.01second	1/(24*60*60*100)
0.1second	1/(24*60*60*10)
second	1/(24*60*60)
minute	1/(24*60)
hour	1/24
day	1
week	7
month	31
quarter	92
year	365
10year	3650
100year	36500
1000year	365000
10000year	3650000
100000year	36500000
1000000year	365000000

29. Appendix

29.1. Java Language Environment Settings on Linux

Settings for executing Swing on Linux using Japanese fonts.

29.1.1. Search Truetype Fonts

root# locate .ttf

29.1.2. Create Symbolic Links

root# mkdir $JAVA_HOME/jre/lib/fonts/fallback

root# cd $JAVA_HOME/jre/lib/fonts/fallback

root# ln -s /usr/X11R6/lib/X11/fonts/truetype/sazanami-gothic.ttf ./