Formatting Imported Files

In this tutorial, we will show you how to format your template files.

Formatting Data Sets

In many cases, the data sets that you find on the web will need to be reformatted before they can be uploaded to iSENSE. For this reason, it is a good idea to pull your data into a spreadsheet program so that you can inspect and reformat the data before uploading. When formatting data for iSENSE, your objective is to create a single table, whose rows contain only text, time, location, or numerical data. The table's first row must contain text headings for each column, and these headings must correspond to the fields contained in your iSENSE project. If the column headings do not match the field names, you will be prompted to match the column headings to the field names when you upload the file.

Example

Here's an example. Consider this table of data, which shows the numbers of two fish species caught in three consecutive years.

Species	2010	2011	2012
Salmon	8,000,000	9,000,000	15,000,000
Tuna	5,000,000	7,000,000	12,000,000
Total	13,000,000	16,000,000	27,000,000

The formatting of this table makes it easy for us to see that the catch of both salmon and tuna increased over the three-year period, and that, in each year from 2010 to 2012, the salmon catch exceeded the tuna catch. The right-hand column and bottom row also conveniently tabulate the total catch for each species and for each year, respectively. Although the layout of this table seems sensible, it presents problems for iSENSE. Of the three types of data contained in the table, only one data type (Species) has a column header. The Catch and Year data are spread across multiple columns. Moreover, the inclusion of Total values may be unnecessary, since the iSENSE visualization tools can calculate these totals automatically. To upload this data set to iSENSE, the table would have to be reformatted to have each type of data formatted such that an appropriate header can be used for that column, like in this example:

Species	Year	Catch
Salmon	2010	8000000
Tuna	2010	5000000
Salmon	2011	9000000
Tuna	2011	7000000
Salmon	2012	15000000
Tuna	2012	12000000

In this version, each data type is contained in a single column, with a column heading labeling the data type. Each row contains only one text, time, or numeric data item per column. The cells presenting totals for the three years and two species have been eliminated.

Formatting Fields

In addition to reformatting tables, it may be necessary to reformat the data contained within the cells of your data table. This will ensure that that data are properly read by iSENSE.

Field Type: Timestamp

Cells containing timestamp data should be formatted using this format:

YYYY-MM-DD hh:mm:ss.sss [AM/PM] [Timezone]

Within the date section, you could use an underscore (_), hyphen (-), backslash (\), or forward slash (/) to separate the year, month, and date. Including the time is optional, so dates alone will work. You don't need to specify numbers as small seconds, just minutes or even hours will do. Including AM or PM is also optional. If left out, it will assume to use a 24-hour time format. Including the Timezone is also optional. To specify a Timezone, the following format should be used:

+HHMM

This signals a difference of HH hours and MM minutes from Greenwich Meridian Time.

Field Type: Location

In order to be displayed on the iSENSE map visualization, location data must be expressed as Latitude and Longitude values, each in a separate column. The Latitude and Longitude values should be formatted in units of degrees only. North Latitudes and East Longitudes should be expressed as positive values, and South Latitudes and West

Longitudes should be expressed as negative values. If a data set contains street addresses or city/country pairs, the Latitude and Longitude values can be found by searching for these locations in Google Maps. Once the location has been found, simply right-click on the location on the map and select the "What's here?" option. Note that categorization of locations by geographic region, such as countries and states, can be accomplished using text fields. Location data in this format will not support mapping, but can be used to group data in other visualization modes, such as the Bar and Scatter charts. For this reason, it may be useful to include these as text fields, even if you also include Latitude and Longitude data.

Field Type: Number
Numerical data is easy to import into iSENSE. When inspecting your data in a spreadsheet, it's a good idea to check to make sure that numerical values are actually formatted as numbers and not text. Make sure not to include any commas in your numbers such as this example here. There may not be any commas in any of the cells in your final spreadsheet.

Field Type: Text
Text data also import easily into iSENSE. However, please don't use commas (,), slashes (/ and \), ampersands (&), or dollar signs ($).