Configuration of Visualization

Configuring Physical View

Physical View is comprised by several text configuration files. You can edit these files by using a text editor.

This following part discusses something about manual editing of Physical View configuration files.

There is a main configuration file of Physical View, *physical.conf* which contains one or more *Data source-specific* configuration files that define the options needed to create a specific physical view browser.

physical.conf

When you installed HicP, it was a configuration file physical.conf which located in the root directory with default data sources, including their names and their source-specific configuration files.

Here is the default **physical.conf**:

```
[dataset.test]
name=TestData
conf=conf/physical/imr90.conf
```

Each data source begins with a unique dataset name which enclosed in square brackets. Any name is allowed, provided that it does not contain newlines.
Each data source has **name** and **conf** options. The first provides a human-readable description of the source; this description will appear in the menu offered to the user in the navigation bar. The **conf** option indicates the location of the configuration file for this data source. Relative paths are interpreted relative to physical.conf. Note: there are no blank spaces around name and conf paired values.

Data Source Configuration Files

Each data source has a configuration file listed in the main physical.conf configuration file. This configuration file defines the tracks to show.
The following shows a basic data source configuration file:

```
chroms=/circosweb/json/species/human_refseq.json
##track
[imr10k]
glyph_type=3dmodel
storage=json
file=/circosweb/json/physical/GSE43070/{refseq}/batch.xyz_text
color=white
line_width=1
key=imr10k
category=HiC
```

Each data source configuration file must contain “chroms” option which described the reference organism. The annotated information can be started with “#”.
The following part describes the track definition of each data source configuration file.

Track Definitions

To add tracks to a data source, you will create a series of one or more track definition stanzas.

A typical track definition looks like this:

```
[imr10k]
glyph_type=3dmodel
storage=json
file=/circosweb/json/physical/GSE43070/{refseq}/batch.xyz_text
color=white
line_width=1
key=imr10k
category=HiC
```

This track is named "imr10k". The feature data is stored in a “file” option. The glyph type “3dmodel” is used to display the feature as a 3D space structure, and the atom is drawn with a background color of white and the connected line is drawn with 1 pixel. The human-readable key “imr10k” printed at the bottom of "HiC" (“imr10k” must be a unique identification in the whole data source.)

Track key can contain any character. The mark “{refseq}” refers to the chromosome of organism.

Glyph and Appearance Options

These options control the rendering of features onto the Physical View web page, including their shape and color.

color

This controls the background color of the glyph. Any color definition is available, such as white, #ffffff

line_width

This controls the thickness of connected line

glyph_type

This controls the glyph (graphical icon) that is used to represent the feature. There are three glyphs “3dmodel” , “sphere” and “line” to render feature data. The “3dmodel” glyph will render the feature data as a 3D space structure; the “sphere” glyph will render the feature data as a sphere with connected line, while the “line” glyph will render the feature data a line model.

storage

This controls the file format of feature data. For “3dmodel” glyph, the file format can be “xyz” and “json” . For “sphere” and “line” glyph, the file format must be “GFF3”

file

This controls the data storage format of feature data. Physical View now only support file storage style, in future more styles such as database will be allowed.

Track Table Options

These options control the human-readable track label, as well as the way that tracks are grouped in the physical view tracks table.

key

This option controls the descriptive key that is shown in the left track menu of physical view page. It is shown as a checkbox that allows users to switch tracks on and off.

category

This option allows you to group tracks into different groups on the physical view display. For example, if you wanted several tracks to be in a separate group called "HiC", you would add this to each of the track definitions:

```
category = HiC
```