User documentation for BI-SKJ @ FIT CTU term work

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Annnotation

The task was to programme a simple script that will create an animation from user input data. Input data may be local text files or online text files accesible using http protocol . Output files should be stored in directory which name should be specified using -n parametr (if ommited then script name will be used). If a directory with such name already exists suffix "_i" should be added where i = max(0, i) + 1. Format of the output files is not specified however PNG is recommended for temporary frames and any MPEG format of simple GIF is recommended for final animation. One set of input files is supposed to create one animation. Creating the animation in multiple formats is not necessary nor forbidden.

Parametrs

Option	Directive	Description	Data type	Default Value
-t / --time-format	timeformat	Run script with -h.	strftime(3c)	[%Y-%m-%d %H:%M:%S]
-e / --effect	effectparams	Visual effects of animation. Can be separated using ":".	scheme={black,white}, size={xga,hd}	N/A
-X / --x-max	xmax	Run script with -h.	„auto","max",float	max
-x / --x-min	xmin	Run script with -h.	„auto","max",float	min
-Y / --y-max	ymax	Run script with -h.	„auto","max",float	auto
-y / --y-min	ymin	Run script with -h.	„auto","max",float	auto
-S / --speed	speed	How many lines in input files should be used to create one frame.	float	1
-T / --time	time	How long should the duration of the animation be.	float	N/A
-F / --fps	fps	How many frames should be used to create one animation second.	float	25
-c / --critical	criticalvalue	Insert red line here. Can be specified multiple times.	x= strftime(3c) as specified by -t y = float	N/A

Option	Directive	Description	Data type	Default Value
-l / --legend	legend	Run script with -h.	string	N/A
-g / --gnuplot	gnuplotparams	Run script with -h. Can be specified multiple times.	string	N/A
-f / --config	N/A	Path to config file. Directives in config file are overriden by cmd line parameters.	OS filesystem path	N/A
-n / --name	name	Name of output directory and animation itself.	string	N/A
-E / --ignore-errors	ignoreerrors	Run script with -h.	bool	False
-h / --help	help	Run script with -h.	bool	N/A
-v / --verbose	verbose	Run script with -h.	integer	0
-V / --version	version	Run script with -h.	bool	N/A

Usage

python <direcotry_with_script_files> [parameters] source [source, …]

./__main__.py [parameters] source [source, …]

Configuration File

- Line starting with # is considered comment
- Empty lines (or lines with only white spaces) are skipped
- One line == one directive
- Configuration file is case-insensitive
- Directive values are the same as command line values
- Repeatable command line options are repeatable directives
- Last occurrence of unrepeatable directive is used if directive repeated
- Directive and value are separated by white space

Usage Examples

python /tmp/skj -t %y/%m/%d -X 09/12/30 -x 09/01/01 -Y 1000 -y -1000 -S 5 -F 15 -c x=09/04/01 -c x=09/09/01 -l "Example" -g "grid xtics ytics" -g "pointsize 10" -g "tics textcolor rgbcolor \"blue\"" -e scheme=black:size=hd -n example -E /tmp/f1 /tmp/f2 /tmp/f3 http://link.to.file.org

python /tmp/skj /tmp/f1

/tmp/skj/./__main__.py -c x=09/04/01 -c x=09/09/01 -y=100 -y 150 -X auto -x auto http://lnk1.org http://lnk2.org

Configuration File Example

```
# Change default time format
TimeFormat %y/%m/%d

# Change default axis dimensions
Xmax 12/12/12
Xmin 11/12/12 # data for one year
Ymax 1
Ymin -1 # All other values can be converted to those two

# Those are the days we are most interested in
CriticalValue x=12/03/12
CriticalValue x=12/06/12
CriticalValue x=12/09/12 # this one is most important

# Set gnuplot options we need
GnuplotParams grid xtics ytics
GnuplotParams pointsize 12
GbuplotParams tics textcolor rgbcolor "green"

# For black scheme see second config in this dir
EffectParams scheme=white
EffectParams size=xga

# Name it
Name example_animation

# And set animation options
Speed 2
FPS 22.6
```