# Customizing your IRC Experience

jIRCii is a fully scriptable using the sleep language. Sleep is a simple language that slightly resembles perl. This document covers the jIRCii specific additions to sleep. The document "Sleep Language Fundamentals" provides full coverage of the features in sleep itself. You may want to read it before you read this. This document is written as a reference, it is not meant to serve as a full tutorial for scripting with jIRCii.

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## **Loading and Unloading Scripts**

The following commands are at your disposal for script loading and unloading.

#### /load filename.irc

Loads the specified script.

#### /unload filename.irc

Unloads the specified script, restoring any aliases/sets that were overridden by the specified script.

#### /reload filename.irc

Unloads and then reloads the specified script.

You can also use the script manager dialog. Click the View menu, Options, and then select Script Manager. The script manager dialog has options for loading and unloading scripts.

The script manager dialog has an option to "ignore script warnings". If you are developing a script you should never have this option checked. Often times script errors won't be caught when they are loaded. They are usually announced when the script is running.

#### Aliases

An alias in jIRCii is a way of specifying a /command that when called it will execute a bunch of statements.

```
alias jf
{
    call("/join #mIRCScripts");
    call("/join #java");
}
```

The alias jf is for joining favorite channels. The keyword alias followed by jf declares jf as an alias. This means /jf is now a valid command in jIRCii

Inside of jf the function call() is called with a string each time. Call executes the specific jIRCii command within the double quotes. Using call() is just like typing a command in the editbox.

Custom aliases can also receive parameters.

```
alias j
{
    call("/join $1");
}
```

Aliases in jIRCii can receive parameters. The first parameter is the scalar \$1. The second parameter is the scalar \$2. The third is \$3 etc.. The name of the alias is \$0. The above alias is a shortcut for the join command. If you type /j #floods, \$1 in the above alias would have the value of #floods.

The "double quoted string inside of call is known as a parsed literal. It is basically a string where \$scalar values are evaluated. See the sleep language fundamentals document for more about parsed literals and scalars.

#### **Built in Variables**

jIRCii supports a number of built in variables that are always ready to use. Whenever an alias is typed in you immediately have everything broken down for you. For example say a user types: / blah hello ice cream!

Immediately you have the **\$n** variables available to you were n is an integer or a range of integers. For example:

```
$n var
         value
$0
         /blah
$1
         hello
$2
         ice
$3
         cream!
$1-
         hello ice cream!
$2-
         ice cream!
$1-2
         hello ice
$-2
         /blah hello ice
```

This is different than sleep subroutines where the arguments are <u>numbered</u> from 1..n These tokenized ranges do not work in sleep subroutines. In general parameters to events, menus, aliases, and sets are passed in the tokenized form described above.

¡IRCii also supports some other built in variables. These are available all the time.

\$active the current active query/target

\$lag your lag \$me your nickname

\$mymode your mode on the server i.e. +i

\$null the empty scalar with a string value of "" and a numerical value of 0

\$time the current time in hh:mm format

%localData local data in jIRCii consists of function parameters, event specific

variables, set specific variables, basically any kind of temporary variables. This read-only hash will contain all the local variable information for the current function call, alias execution, event etc..

%GLOBAL

the %GLOBAL hash is the same variable visible to all jIRCii server connections. This can be used as a place to share information between

server sessions.

# **Keyboard Shortcuts**

In jIRCii nearly any key combination can be bound to execute a script when pressed. This is accomplished using the bind keyword.

```
bind Escape
{
   call("/part $active");
}
```

The above binds the "Escape" key to part the active channel when pressed. Whenever someone presses escape call("/part \$active") will be executed.

The format for specifying binds is:

```
bind Modifier+Key { commands }
```

The Modifier+ part is optional. You can just bind a Key.

## **Key Constants**

Modifiers: Shift, Ctrl, Alt, Meta

Keys:

Accept	F2	Help	Pause
Back_Quote	F3	Home	Period
Backspace	F4	Insert	Print_Screen
Caps_Lock	F5	Left	Quote
Clear	F6	Num_Lock	Right
Convert	F7	NumPad_*	Scroll_Lock
Delete	F8	NumPad_+	Space
Down	F9	NumPad_,	Tab
End	F10	NumPad	Up
Enter	F11	NumPad_/	-
Escape	F12	Page_Down	
F1	Final	Page_Up	

Also acceptable is A-Z, a-z, 0-9, and anything else. The above table is just a list of special self-explanatory constants for common keys you might want to bind.

# Responding to Events

An event is a specifically defined occurrence. Examples of events include a user joining a

channel, a dcc send completing, and even a window closing. It is possible to write scripts that respond to events when they occur. This is accomplished using the on keyword.

```
on event { commands }
```

The syntax is pretty simple: on the occurrence of some event execute these commands. Whenever the specified event occurs the commands in the { } curly braces will be executed.

When an event finishes executing you can use the halt keyword to stop jIRCii scripts from further processing that event. The halt keyword works for most events. Halt has the same syntax as return except you can't return anything with a halt.

```
# taken from "save the children script"
on public
   if ("*swear*word* iswm $parms)
      halt;
}
```

The above example halts any public channel text that is a wildcard match for \*swear\*word\*. When halt is used the event will not be processed any further and no sets will be fired.

### **List of Events**

- \* = event has a special variable associated with it.
- + = event has a note associated with it.

### **DCC Events**

chat	send_complete	receive_complete
chat_close	send_failed	receive_failed
chat_open	send_start	receive_start

#### **GUI Events**

active	exit	open
click +	input	session +
close	inactive	sclick +
dclick +	minimize	window +
click	fired when a word is clicked on in a jIRCii window	

fired when a nickname in the channel listbox is double clicked on dclick

fired when a text is double clicked on in a sorted window: \$0 = row; \$1- = source window sclick

fired when the current session for this script becomes active again session

fired every time text is echo'd to a window windo

#### **IRC Events**

error nnn +reply invite notice request signoff ioin part kick private\_action signon public topic mode public\_action msg

nick auit

refers to an irc numeric i.e. 001, or 363, basically an irc numeric reply. nnn

#### **Miscellaneous Events**

ident unload + connect disconnect raw

fired when a script is unloaded. Event is only fired within the unloaded script. unload

### **Event Variables**

Variable Notes

\$address Exists only when a user is the source of an event.. represents a users

\$channels Available in the QUIT event; a comma separated list of channels the user

was on.

Available in most sets; the string jIRCii tokenizes into \$0, \$1, \$2- etc. \$data

\$event Available in most sets; a string describing the type of event \$host The host part of user@host; exists only when \$address exists \$item Available on click event; the actual word the user clicked on. \$mouse Available in on click/dclick/sclick events: contains mouse info

\$nick Available in most events where you would expect \$nick to be available.

\$parms The parameters related to the event (available in most events)

\$raw Available in most irc related sets, the raw text at the root of the event

\$server the server that was the source of the event, exists only when the event is for

an irc event and a server sent the event instead of a user. To be safe use

\$source to get the source of an event.

\$source the source of the event, available in most events that have a source

\$target Available in events that have a target; the target of the event

\$this Available in dcc events; a reference to that exact dcc... can be used to get

the dcc session information with the function getDCCConnection(\$this)

\$user The user part of user@host, exists only when \$address exists Available in request and reply events; represents the type of ctcp. \$type \$window Available in most gui events; the window the event occured in

The variables listed in the Aliases -> Built in Variables section also applies to sets as well. Generally \$0 is the target/source/focus of the event. \$1- is the rest of the parameters.

# **Temporary Events**

Along with normal event listeners iIRCii also features the ability to bind temporary event listeners. Temporary event listeners are for responding to an irc event once and thats it. Temporary events are fired before normal event listeners. Temporary events can also be halted stopping the normal event listeners from processing the event.

Temporary events are bound using the wait keyword.

```
wait event { commands }
```

Temporary events can be declared nearly any where.

```
alias j
{
    if ($1 eq "#floods")
    {
        call("/msg JakieChan dude, what is the key to #floods?");
        wait privmsg
        {
            call("/join #floods $1");
        }
        else
        {
            call("/join $1-");
        }
}
```

In the above example the alias j is declared. The alias checks to see if I'm trying to join the channel #floods. If I am it messages a friend of mine asking for the key. When he responds (presumably with the key), jIRCii joins the channel.

Event specific variables from when the temp listeners was declared are not carried over to temporary events. They have there own set of variables just like any other event. Nothing inside of the { } curly braces is evaluated until the event occurs. As such watch out for using variables outside of a wait command and then expecting it to be available or be the same thing inside of it.

#### **Filtered Events**

Generally when you declare an event listener it is not very descriptive. You state the event name and that is all the discretion you get. To get more specific you can specify a filter string with your events. i.e.

```
wait event "*source* *target* *parameters*" { commands }
```

An event filter string contains 3 wildcard strings separated by spaces. When an event occurs jIRCii will check the first wildcard against the source of the event meaning the nickname/server that originated the event. The second wildcard is checked against the target of the event i.e. who the event affects. The third wildcard is checked against the event parameters. If you don't care about a particular part of the filter string just specify a \* which means match anything.

```
alias j
{
   if ($1 eq "#floods")
   {
     call("/msg JakieChan dude, what is the key to #floods?");
   wait msg "JakieChan $me *"
```

```
{
      call("/join #floods $1");
    }
} else
{
      call("/join $1-");
}
```

The above example is similar to our original example for temporary events. Except this time when a message happens our temporary listener will only be fired for a msg event originating from JakieChan sent to \$me. The filter string is evaluated when you declare the event. Once the wait msg "filter" is declared the \$variable's are immediately resolved. In the above example, if you change your nick before JakieChan messages you the temporary event won't trigger.

## **Descriptive Events**

Descriptive events are similar to filtered events in the respect that they let you better describe the event you are looking for. To declare a descriptive event listener:

```
wait (comparison) { commands }
```

The above will declare a temporary listener that will be fired only when the comparison following the wait keyword is true. Think of the comparison part as being similar to an if statement. When an event occurs the event is checked against the specified comparison to see if the event matches that description or not. If it does then the event is fired. If it doesn't the event is not fired.

Descriptive events work with both normal events (on keyword) and temporary events (wait keyword). Descriptive events only work for events originating from the IRC server. Most GUI events and such won't fire under descriptive events.

```
alias j
{
   if ($1 eq "#floods")
   {
      call("/msg JakieChan dude, what is the key to #floods?");
      wait ($event eq "PRIVMSG" && $nick eq "JakieChan")
      {
           call("/join #floods $1");
      }
    }
   else
   {
      call("/join $1-");
   }
}
```

Beating an example to death this example is the same thing as the previous two examples. One difference though: the comparison is re-evaluated each time the event is checked. Variables specific to the original event do not carry over to the comparison.

# **Hacking Event Listeners**

**Note:** The mechanism described in this section is more or less a hack. It is only documented as it may be useful to scripter's working on more advanced functionality.

One downfall of the temporary event mechanism is you don't get a lot of control. Basically you can register an event listener and once it is fired it is done. This is simple to use and good for some cases such as capturing the server reply of a /USERHOST request. However it is not usable for things like doing a /WHO, capturing all of the output from the server, and when the server sends the end of who reply removing the temporary event listener.

The following example shows how to get this type of functionality:

The above snippet creates an alias tempevent. When /tempevent is executed a descriptive event is registered. This descriptive event fires when a numeric reply 352 (/who data) or a numeric reply 315 (end of /who data) is received from the server.

If the event is the /who output we just choose to process it. If the event is the end of the /who data we then return a value that tells jIRCii we want to deregister the listener (4) and halt the event (2).

Internally jIRCii processes event listeners based on their return value. A value of 4 means remove the event listener. A return value of 2 means halt the event. A return value of 1 means continue processing other events. Returning 5 (1 + 4) means continue processing other events but remove this listener. Returning 6 (2 + 4) means halt processing of other events and remove this listener.

This form of event hacking is only effective on irc server related events. Other events such as gui events are processed differently.

# Scripted Sets

A popular feature of scripts in the past was a built in theme system. A theme system allowed scripters to customize any echo inside the script without altering the functionality of the scripts features. jIRCii has a built in theme system that is accomplished with scripted sets. Nearly every echo event that is echoed to the screen is defined in a scripted set. Altering these sets allows you

to change the way jIRCii looks completely without altering the functionality of jIRCii.

The basic format of a set is:

```
set SET_NAME { return "formatted echo"; }
```

It is of course possible to use if statements, call functions, and anything else within a set. The important thing is that the set returns a string that formats the data from an event into something presentable (preferably cool looking).

A set that returns nothing will simply not be echoed. It is possible to disable an echo for a set by having the set return nothing.

## **Time Stamping**

If time stamping is enabled the set TIMESTAMP is automatically attached to the beginning of all of your set output. To disable time stamping for a specific set append an! exclamation point to the set name.

```
set NOTIFY_SIGNON! { return "*** $nick has signed on at $time"; }
```

In the above set for a notify signon we already have the time in the echo. There is no point in adding a timestamp even if time stamping is enabled. Adding the ! exclamation point disables time stamping for that specific set.

### **List of Sets**

- \* = set has a special variable associated with it.
- + = set has a note associated with it.

#### **Channel Event Sets**

CHANNEL_TOPIC_CHANGED	CHANNEL_KICK
CHANNEL_MODE	CHANNEL_PART
CHANNEL_JOIN	USER_QUIT

### **Channel Information Sets**

CHANNEL_BANLIST	CHANNEL_TOPIC_IS
CHANNEL_BANLIST_END	CHANNEL_TOPIC_SETBY *
CHANNEL_CREATED *	FORMATTED_NAMES * +
CHANNEL MODE IS	FORMATTED NAMES HEADER *
CHANNEL_NAMES	JOIN_SYNC *

FORMATTED NAMES

Called for each name in a /names reply. jIRCii provides special word wrapping for /names replies.

#### DCC Sets \*

CHAT_CLOSED	SEND_CHAT_ERROR
CHAT_MSG	DCC_LIST_INFORMATION +
CHAT_OPEN	DCC_LIST_NICK +
SEND_CHAT	DCC_LIST_TYPE +

DCC\_REQUEST RESUME\_REQUEST\_ERROR SEND\_COMPLETE RESUME\_SUCCEEDED RECEIVE\_COMPLETE RECEIVE\_FAILED RECEIVE\_FAILED RECEIVE\_START RESUME\_FAILED RESOLVED\_LOCALINFO RESUME REQUEST

DCC\_LIST\_\* These sets are used for the /dcc stats window. Each set represents a column in the window.

#### **Messages Received**

ACTION CTCP\_REQUEST \*
ACTION\_INACTIVE INVITE
CHANNEL\_TEXT NOTICE
CHANNEL\_TEXT\_INACTIVE PRIVACTION
CTCP\_REPLY \* PRIVMSG

#### **Miscellaneous Sets**

NICKLIST\_FORMAT \* + SET\_IGNORE ON\_CHANNELS SET\_NOTIFY SBAR\_LEFT \* TIMESTAMP SBAR RIGHT \*

NICKLIST\_FORMAT used in the channel listbox to format the list of names; \$nick and \$channel are available in this set.

#### **Other Events**

IDENT\_REQUESTNOTIFY\_SIGNOFFIRC\_ATTEMPT\_CONNECTPROCESS\_DATA +IRC\_CONNECTREPL\_nnn +IRC\_DISCONNECTRESOLVED\_HOSTIRC\_RECONNECTSERVER\_ERRORNUMERIC +USER\_NICKNOTIFY SIGNONUSER MODE

NUMERIC fired for any numeric that does not have a set associated with it data printed out by a process launched using /run or /exec REPL\_nnn a set for a specific numeric where nnn is the number of the numeric.

#### **Send Messages**

SEND\_ACTION SEND\_TEXT
SEND\_ACTION\_INACTIVE SEND\_CTCP SEND\_WALL
SEND\_MSG SEND\_WALLEX
SEND\_NOTICE

#### **Set Variables**

Variable Notes

\$channel Available in NICKLIST FORMAT, for sets based on channel events use

\$target.

\$created Available in CHANNEL\_CREATED set, channel creation time formatted \$line Available in SBAR\_LEFT, SBAR\_RIGHT, equal to the line number of the

statusbar starting at 0 for the first line.

\$parms The parameters related to the event (available in most sets)

\$pt Available in CTCP\_REPLY set when \$0 is PING, set to the ping time \$query Available in SBAR\_LEFT, SBAR\_RIGHT - equal to the \$active for the

window the statusbar is in. Use instead of \$active in SBAR sets..

\$seton Available in CHANNEL\_TOPIC\_SETBY set to time date stamp of when

channel topic was set

\$sync Available in JOIN\_SYNC set, set to the join sync time

\$this Available in DCC Related sets, used to reference the exact dcc connection

using \$dcc = getDCCConnection(\$this);

\$total Available in FORMATTED\_NAMES and

FORMATTED\_NAMES\_HEADER, set to the total number of users in the /

names reply.

\$window Available in SBAR\_LEFT, SBAR\_RIGHT - the window the statusbar set is

being fired for

If a set is in response to an irc event then \$variable's available to the event will also be available to the set

The variables listed in the Aliases -> Built in Variables section also applies to sets as well. Generally \$0 is the target/source of the set event. \$1- are the rest of the parameters.

### Menus

In jIRCii it is possible to script menus for most places in the client. Popup menus are made visible by right clicking in a popup menu hotspot. The popup menu hotspots in jIRCii are *background*, *channel*, *dcc*, *input*, *list*, *nicklist*, *query*, *status*, *switchbar*, and *tab*.

The *background* hotspot refers to the background when jIRCii is using an MDI based interface. The *tab* hotspot refers to the server tab for a specific server connection. The *input* hotspot refers to the editbox in jIRCii windows. The *list* hotspot refers to the /list dialog. The *switchbar* hotspot refers to the buttons in the window switchbar.

To setup a popup menu for a hotspot you use the menu keyword:

```
menu hotspot
{
   item "item title" { commands }
   menu "menu title" { commands | more item/menu declarations }
}
```

Within the menu keyword you can use the menu keyword again to create a submenu. You can also use the item keyword followed by a title to add an item to the menu. Menus in jIRCii are all created dynamically. That is each time a popup menu is to be shown the menu scripts are executed. Submenu scripts are not executed until they are clicked on. Item scripts are not executed until they are clicked on.

The function addSeparator() can be used inside of the menu keyword to insert a separator in the

menu.

The function addItem("item title", "/command args") can be used to quickly add an item to a menu

To add a menu to the nicklist:

```
menu nicklist
{
   item "Whois" { call("/whois $1"); }
   item "Query" { call("/query $1"); }
}
```

In the above example two menu items are added to the nicklist hotspot. These are "Whois" and "Query". Whenever "Whois" is clicked on the script inside the { } curly braces will be evaluated. In this case it is call("/whois \$1"). In nicklist menus \$1 and \$snick refer to the nickname that is currently highlighted. \$0 represents the current channel. \$2- represents the nicknames of the other highlighted nicknames.

When a menu item declared with the keyword item is executed the local variable \$command is available. \$command contains the item label for the executed menu item. The commands declared inside of a menu or item block are only executed when that menu or item is activated. Local variables declared outside of a menu or item block are not available when they are executed.

Using the menu keyword with a menu hotspot does not erase the menus currently in place. It just adds your menu items to the hotspot along with other menu items already there.

### **Menubar Menus**

Menubar menus can be scripted in jIRCii as well. In fact menubar menus work almost the same as popup menus. The difference is you use the menubar keyword to add an item to the menubar.

```
menubar "menu title"
{
  item "item title" { commands }
  menu "menu title" { commands | more item/menu declarations }
}
```

If a menu title already exists in the menubar then the menu will be combined with the already existing menu. If a menu title does not exist then the menu is added to the menubar right before the Window and Help menu items. You can add to the Window and Help menus using "&Window" or "&Help" for the menu title.

Menubar menus are dynamic just like popup menus. Every time the "menu title" is shown the items and submenus are dynamically added.

The function refreshMenubar() can be used to refresh the top-level menubar.

## Adding a Mnemonic

You can use the & ampersand character in "item title" and "menu title" to set a mnemonic for the menu item. The focus accelerated character will be underlined. Users of your script can then use

their platform specific keyboard combination to access your menu item when the item's parent menu is showing. In Windows this combination is Alt+(focus accelerator).

### **Built-in Client Resources**

jIRCii has a number of bundled "resource" files that make up the jIRCii experience. These include images that define the toolbar, the window icons, and even the jIRCii logo.

Copies of all of these files are contained within the jerk.jar file (which is just a ZIP compressed archive).

To override a jIRCii built-in "resource" with one of your own, simply create your resource and copy it to the .jIRC directory on your computer where jIRCii is keeping all of your settings.

For example default.irc is the default script the drives jIRCii. To override the internal version of this resource:

- 1. create your own version or edits to default.irc
- 2. copy it to your .jIRC folder (on Linux, OS X /home/<your user>/.jIRC, on Windows c:\documents and settings\<your user>\.jIRC)
- 3. restart ¡IRCii

When loading a resource jIRCii looks in the .jIRC folder first before using its own internal version of the resource.

## **Editing the Default Scripts**

Internally jIRCii has two scripts loaded. default.irc and menus.irc default.irc contains all of the default sets and a few features for jIRCii. menus.irc contains all of the popup and menubar menus within the client.

Copies of these two files are distributed with jIRCii under the extras/ directory in the jIRCii archive. The real versions of the default scripts are contained inside of the jerk.jar file.

It is possible to force jIRCii to load modified versions of menus.irc and/or default.irc. Simply modify the copies of default.irc and menus.irc and save the modifications to the jIRCii settings directory. On UNIX the jIRCii settings directory is located in your home directory under .jIRC. In Windows the jIRCii settings directory is located in something like c:\documents and settings\your-username\.jIRC\.

When jIRCii tries to load default.irc or menus.irc it will first look in the .jIRC directory before looking in the jerk.jar file.

If you are creating a "full script" and want to disable the loading of default.irc and menus.irc there are two internal properties "load.default" and "load.menus". These two internal properties can be set to true or false to enable or disable the loading of the default.irc or menus.irc file. To set internal properties look up the setProperty() function.

Generally any .irc file loaded takes precedence over anything in the default.irc and menus.irc. It should be possible to write full featured scripts without disabling the two internal scripts. However if you need to do it now you know how.

# Built in Functions and Operators

#### **Conventions**

\$ add(@array, \$scalar, [index])

The \$ to the left of the function name represents the return type of the function. Some functions will return an array (@), some a hash (%), and others a scalar (\$). Functions marked with (?) will return 1 if the value is true or the empty scalar if the value is false. Functions that have no return value will have nothing to the left.

Optional parameters will be enclosed in [ ] square brackets.

#### **Channel Functions**

jIRCii supports the following comparison operators for use in if statements with regards to channels:

\$nick hasmode "#channel" true if the specified \$nick has a mode on "#channel" \$nick ison "#channel" true if the specified \$nick is on the "#channel" \$nick isop "#channel" true if the specified \$nick has operator status on "#channel" \$nick isvoice "#channel" true if \$nick has voice (+v) status on "#channel" \$nick ishalfop "#channel" true if \$nick has halfop (+h) status on "#channel" \$nick isnormal "#channel" true if \$nick has no status on "#channel" "m" ismode "#channel" true if "m" is a set mode on "#channel" -ischannel "string" true if "string" is a valid channel string i.e. #string

¡IRCii provides the following functions for retrieving channel information:

```
getHalfOps("#channel")
                                       returns an array of all +h users on #channel
    getNormal("#channel")
                                       returns an array of all no status users on #channel
@
    getOps("#channel")
                                       returns an array of all +o users +o on #channel
    getUsers("#channel")
                                       returns an array of all the users on #channel
    getVoiced("#channel")
                                       returns an array of all +v users on #channel
    getModeFor($nick, "#channel")
                                       returns the mode character of $nick on #channel
    getKey("#channel")
                                       returns the key for #channel
$
    getLimit("#channel")
                                       returns the user limit for #channel
    getMode("#channel")
                                       returns the mode string for #channel i.e. "+stn"
    getTopic("#channel")
                                       returns the topic for #channel
```

# **Colormap Functions**

These functions are provided for manipulating the jIRCii colormap. jIRCii allows colors 17-99 to be user defined as any color the user wants. These colors are saved in the colormap.

The "aarrggbb" format is a hexadecimal format for specifying a color. Similar to what you would use for specifying a color on a webpage. The one caveat is rather than saving this number in hex form jIRCii deals with colors as integers.

```
To convert a number from a hex triplet to the "aarrggbb" format try: formatNumber('hex triplet', 16, 10);
```

generateThemeScript("file.thm") exports all jIRCii color information and some

configuration stuff to a importable theme script returns the "aarrggbb" value as an integer for

the color at the specified index.

saveColorMap() forces a save of the color map.

setMappedColor(index, "aarrggbb") sets the color at index to the specified

"aarrggbb" integer value.

## **Config System Functions**

getMappedColor(index)

The following functions are used to interface with jIRCii's user preferences sub-system. All user preferences are stored using this system. These functions make it possible to test for any user preference or change any user preference. jIRCii preferences are generally stored in a file called jirc.prop in the .jIRC folder located in the users home folder.

The config system supports the following comparisons for user within if statements

-isSetT "propery.key" Checks if the property.key is flagged to true. Using true as a

default value if property.key does not exist.

-isSetF "property.key" Checks if the property.key is flagged to false. Using false as a

default value if property.key does not exist.

The following functions are provided for interfacing with the config system:

\$ baseDirectory() returns the base directory where all of the

jIRCii preferences and files are stored.

\$ getProperty("key", ["default value"]) retrieves the specified key from the config

system

@ getPropertyList("key") returns a property list (a way of storing an

array).

setProperty("key", "value") sets the specified key to the specified value

setPropertyList("key", @array) stores @array as a property list returns the client version string

Setting a property via the setProperty() or setPropertyList() methods will generally take immediate effect in the client. The stuff being configured in jIRCii is wired to know when its property gets changed. For a list of \*some\* of the properties you can change see Appendix A - Client Configuration Variables.

#### **Date/Time Functions**

\$

In general dates are represented using a scalar long that holds the number of milliseconds since the epoch. The epoch is January 1st, 1970. Some of the functions for date/time manipulation require a scalar long as a parameter. That parameter is represented as *date* without any " quotes.

jIRCii provides the following functions for date/time manipulation:

\$ ctime() returns the number of seconds since the epoch converts the seconds into a string describing

exactly how long the time has been i.e. 3 hours 20

minutes 15 seconds

\$ formatTime(seconds) converts the seconds into a string describing

roughly how long the time has been i.e. 3 hours or

returns the filename associated with tihs dcc

returns the full path to the file for this dcc

20 minutes or 15 seconds.

\$ formatTime2(seconds) returns a string with seconds reduced to

dd:hh:mm:ss form

\$ timeDateStamp(date) quick convienence function to turn the specified

date into a time/date string.

\$ timeStamp() returns a timestamp for the current time. same

value as \$time.

### **DCC Functions**

getDCCFileName(\$dcc conn)

getDCCFilePath(\$dcc conn)

Many of the dcc functions return a \$scalar that contains a reference to the dcc connection information. This reference can be queried using functions that take a \$dcc\_connection as a parameter. Its helpful to know that DCC's come in three varieties: CHAT, RECEIVE, SEND. DCC's can be in one of three states: CLOSED, OPEN, or WAIT.

jIRCii provides the following comparison operator for use in if statements with regards to DCC's:

-isdccopen \$dcc\_conn true if the dcc connection specified is in fact open.

jIRCii provides the following functions for getting information about the current DCC's:

@ @ @ @	getActiveConnections() getAllConnections() getInactiveConnections() getWaitingConnections()	returns all of the active connections returns all of the connections returns all of the inactive connections returns all of the waiting connections
\$	getDCCConnection(\$this)	dcc events/sets have \$this set within them. You can use this function to resolve a
\$	getSpecificConnection("nick", type)	\$dcc_conn from a \$this.
	closeDCC(\$dcc_conn)	closes the specified dcc
\$ \$	<pre>getConnectionState(\$dcc_conn) getConnectionType(\$dcc_conn)</pre>	returns the state for the specified connection returns the type of the specified connection
<b>\$</b> <b>\$</b>	<pre>getLocalPort(\$dcc_conn) getRemotePort(\$dcc_conn)</pre>	returns the local port of the dcc connection returns the remote port of the dcc connection
<b>\$</b> <b>\$</b>	getDCCAddress(\$dcc_conn) getDCCIdleTime(\$dcc_conn)	returns the remote ip address of the dcc. returns the idle time of the dcc in milliseconds
\$ \$ \$	getDCCNickname(\$dcc_conn) getDCCStartTime(\$dcc_conn) getDCCTotalTime(\$dcc_conn)	returns the nickname for the dcc returns the start time as a scalar long returns the total time the dcc has been active in seconds
	Send and Get Specific	

\$ getFileSizeOffset(\$dcc\_conn) returns the file size offset in case the file was resumed.

\$ getTimeRemaining(\$dcc\_conn) returns the estimated time left for this transfer

(in seconds)

\$ getTransferRate(\$dcc\_conn) returns the total transfer rate in bytes/second

### **Get Specific**

\$ getBytesReceived(\$dcc\_conn) returns the total number of bytes received \$ getExpectedSize(\$dcc\_con) returns the total expected size for the file

### **Send Specific**

\$ getAcknowledgedSize(\$dcc\_conn) returns the number of bytes acknowledged returns the total number of bytes sent

## **Dialog Functions**

showAboutDialog()
showDirectoryDialog("title", ["initial"], ["ok text"])

φ show breetory blanog( the , [ initial ], [ ok text

\$\ \text{showFileDialog("title", ["initial"], ["ok text"])} \\ \text{showHelpDialog()}

\$ showInputDialog("title", "text") showOptionDialog(["option item"]) showSearchDialog(["window"])

shows a directory chooser dialog shows a file chooser dialog shows the help dialog shows an input dialog shows the option dialog opens up the search dialog for

the specified window

shows the about dialog

refreshData(\$dialog)

refreshes the contents of the specified sorted \$dialog.

\$ showSortedList("title", "\_\_menu", @data, "col", ...) returns a \$dialog opens a sorted list window similiar to the /list -gui or /dcc stats windows. the "\_\_menu" option specifies the toplevel popup hook name. it must begin with "\_\_". @data is an array containing all of the data inside of the sorted list. each row is represented by one element of @data. each column is separated by the "\t" special character. it is important that each row has column data separated by "\t" for each specified column. the parameters after @data are the columns in the sorted list window. one argument for each column. if the contents of @data change use refreshData to tell the window that it's contents have changed.

### **Echo Functions**

echo("text") echoes text to the active window echoes text to the specified target echo("target", "text", 1|2) specifying a 1 echoes text to all relevant windows for the specified target. specifying a 2 does the same thing but guarantees the text will also go to

the status window

echoAll("text") echoes text to all the windows

echoColumns("target", "cols", 0.5) echoes text as formatted columns. The "cols"

parameter is a string of columns separated by the \t (tab) character. The double parameter at the end

specifies a percentage of the screen the

wordwrapped columns can take up. Think of this

as a function that lets you control the

wordwrapping. Wrapping happens at the specified percentage of the window. The tabbed columns each represent one wrappable unit. Rather than breaking the string up by spaces as normal.

echoes text to the specified target except there is no

event processing (i.e. on window is not called). Use this if you want to echo text from the on

window event.

echoStatus("text") echoes text to the status window

#### **GUI Functions**

echoRaw("target", "text")

The string "window" refers to the name of a window you want to access. The Status window has a special name: %STATUS%.

jIRCii provides the following comparison operator for use in if statements with regards to its UI:

-isspecial "window" true if the specified window is considered special i.e. the /list

window or the dcc sessions window.

-iswindow "target" true if the specified target has a window associated with it.

iIRCii provides the following functions for manipulating its user interface:

#### **GUI General**

@ getClipboardText() returns the clipboard text

setClipboardText("string") puts "string" into the system clipboard

openCommand("some file/url") uses the open command for the users platform

to open the specified url or file with the app

meant to handle it.

loadFont("/path-to/fontfile.ttf") loads the specified font file into the java virtual

machine. Unable to verify that this works so it

might go away one day.

refreshMenubar() forces jIRCii to refresh the top level menus

for the menubar

#### **Individual Windows**

copySelectedText() copies selected text from the editbox in current

window to the clipboard

cutSelectedText() cuts and copies selected text in the current

window editbox

\$ getSelectedText("target") returns the selected text from the editbox in

the specified window

removeSelectedText() clears selected text from the editbox in the

current window

	pasteText()	pastes text from clipboard
\$ @	getSelectedUser("target") getSelectedUsers("target")	returns the selected nickname in the target channel window listbox returns all of the selected users in the target channel window listbox.
\$ \$	getButtonColor("target") setButtonColor("target", aarrggbb)	returns the color of the switchbar button text sets the color of the switchbar button text
\$	getCursorPosition("target") setCursorPosition("target", n)	returns the position of the editbox cursor sets the position of the editbox cursor
\$	<pre>getInputText("target") setInputText("target", "text")</pre>	returns the text in the editbox for the target sets the editbox text for the specified target
\$	getWindowPrompt("target") setWindowPrompt("target", "text")	returns the text for the targets window prompt sets the window prompt for the specified window
\$	<pre>getWindowTitle(["target"]) setWindowTitle(["target"], "text")</pre>	returns the titlebar text for the specified window. If "target" is not specified returns the text of the jIRCii titlebar. sets the titlebar text for the specified window. Defaults to setting text for the jIRCii titlebar.
	renameWindow("target", "title") refreshWindow("target") scrollWindow("target", +/-n)	renames target to specified title, right now this works only on query windows updates the statusbar and repaint the window immediately. scrolls the text up (-n) or down (+n)
	Window Management	
<b>\$</b> <b>\$</b>	activateWindow("target") cascadeWindows() closeWindow("target") getActiveWindow() getCurrentWindow()	makes the target window active cascades all the windows (works in MDI only) closes the specified window returns the title of the real active window returns the title of the current window that is safe to echo text too. Uses the active window if the active window isn't a special window, returns the status window otherwise.
@	getWindows() openWindow("target", [1]) tileWindows()	returns an array of all the windows opens a window for the specified target, the optional second parameter forces jIRCii to open a non-channel window as inactive. tiles all the windows (works in MDI only)
\$	getWindowState(["target"])	returns the state of the target window. Not specifying a target window will return the state of the main jIRCii window

setWindowState(["target"], "state")

sets the target windows state to either MINIMIZED, MAXIMIZED, or NORMAL. Not specifying a target will set the state of the main jIRCii window

# **IRC Command Functions**

	call("/command parms", [1])	Tells jIRCii to execute the specified command. Specifying a 1 for the second parameter forces jIRCii to use the built in command and avoid the scripted aliases.
	Exit()	perhaps the only command you will ever
	fireEvent("irc data string")	need. processes "irc data string" as if it came from the irc server. You can use this to fire custom events.
	fireEvent("EVENT", %data)	fires the custom event named "EVENT" with %data as the variables for the event. Each "\$key" inside of %data will be available to the listening events.
@	getAliasList()	returns a list of all aliases in the client, lowercase means a built in alias, UPPERCASE means a scripted alias.
\$ \$	getServerHost()	returns the hostname of the current server
\$ \$	getServerNetwork() getServerPassword()	returns the network of the current server returns the password used on the current
·	· ·	server
\$	getServerPort()	returns the port number for the current server
%	getSupportHints()	returns a hash of all 005 ISUPPORT hints specified by the current server
?	isServerConnected()	returns 1 if the server is connected, 0
?	isServerSecure()	otherwise returns 1 is the connection is SSL, 0 otherwise
	processInput("text")	processes "text" as if it was typed in the
	sendRaw("raw text")	active window sends "raw text" directly to the server
	say("message") sendAction("target", "message") sendMessage("target", "message") sendNotice("target", "message") sendReply("target", "type", "message") sendRequest("target", "type", "message")	sends "message" to the active target sends an action to the specified target sends a message to the specified target sends a notice to the specified target sends a ctcp reply to the specified target sends a ctcp request to the specified target

cycleQuery()

forces jIRCii to cycle the /query for the status window to the next non /window'd channel setQuery("target")

sets the target as the active query for the status window

### **Internal Data List**

The internal data list in jIRCii stores all of the channel and address information for users.

jIRCii supports the following comparison operator for use in if statements with regards to the internal data list:

-isidle "nick" true if the specified nickname has been idle for 5 minutes or more

The following functions are also available:

\$	getAddress(["nick"])	returns the address of the specified nick in nick@address format. Blue-elf is a punk.
@	getChannels(["nick"])	returns all of the channels the specified nick is on that you are also on
\$	getIdleTime(["nick"])	returns the total idle time of the specified nick in seconds
\$	<pre>nickComplete("pnick", '#channel')</pre>	uses built-in nick completion routine to resolve p(artial)nick to a full nickname from "#channel"
@	nickCompleteAll("pnick", "#channel")	same as above function except returns an array of all matches in order of relevance
@	searchAddressList("*!*@*")	returns an array of nicknames that have addresses that match the specified wildcard string.

# **Logger Functions**

The following functions are provided for querying and accessing the jIRCii built-in logging functionality.

\$ getLogFile("window")	returns the full path to the file where messages for
	the specified "window" are being logged.
logMessage("window", "text")	writes a message to the log file for the specified
	window if and only if the user has logging enabled

# **Multiserver Session Manipulation**

The following functions are provided for manipulating the multiserver aspect of jIRCii. Each session in jIRCii has a session id. The first session is 0, the second is 1, etc. Most of these functions are related to manipulating the "tab" for the session in jIRCii's UI.

activateSession(n)	activate the specified session number
callInSession(n, "/cmd")	executes the specified command as if it was typed in
	session number <i>n</i>
<pre>\$ getActiveSessionId()</pre>	returns the session id of the current active session

\$ getSessionId() returns the session id of the session executing this

script.

\$ getTotalSessions() returns the total number of sessions

\$ getSessionColor([n]) returns the session color for session n in "aarrggbb"

format, defaults to this session if n isn't specified.

setSessionColor("aarrggbb") sets the session color for this session to the specified

color.

 $\$  getSessionText([n]) returns the session text for session n or this session

setSessionText("text") sets the session text for this session

## **Notify Functions**

The notify feature in jIRCii works much like an instant messaging buddy list. It tells you when someone is online or not.

jIRCii provides the following comparison operators for use in if statements with regard to the notify list.

-isnotify "nick" true if the specified nick is in the notify list

-issignedoff "nick" true if the specified nick is signed off

-issignedon "nick" true if the specified nick is signed on

jIRCii provides the following functions for accessing the notify list:

\$ getAddressFromNotify("nick") returns address of the user from the notify address

list

@ getNotifyUsers() returns all of the users in the notify list

getSignedOnUsers()
 getSignedOffUsers()
 sonlineFor("nick")
 returns all of the signed on users in the notify list returns all of the signed off users in the notify list returns the number of milliseconds the user has

been online for.

### **Servers.ini Functions**

getAllNetworks()

The file servers.ini is used by jIRCii to keep track of irc servers the user may want to connect to. The following functions are used for accessing this list of servers. The functions that return arrays return read-only arrays.

@ getAllServers() returns an array of "data" strings representing all

of the irc servers in the servers.ini file returns an array of "network" names

@ getServersForNetwork("network") returns all of the server "data" strings for the

specified irc network

\$ getServerInfo("irc.server.com") returns the "data" string for the specified server

\$ serverInfoCommand("data") formats the specified server data into a ready to

use /server command reflecting the server

settings

\$ serverInfoHost("data") extracts the hostname from the "data" string serverInfoPortRange("data") extracts the port range from the "data" string

\$ serverInfoNetwork("data") extracts the network from the "data" string

?	serverInfoIsSecure("data")	extracts wether or not the specified server is
		specified as an SSL enabled server
\$	serverInfoPassword("data")	extracts the server password from the "data"
\$	serverInfoDescription("data")	extracts the description from the "data" string
\$	serverInfoConnectPort("data")	extracts the port jIRCii would use to connect to
		the server specified in the "data" string

### **Sound Functions**

\$ loadSound("filename")	loads and returns an audio clip \$sound, accepteable sound
	file types include: .wav, .au, and .mid
soundLoop(\$sound)	plays \$sound continuously
soundPlay(\$sound)	plays \$sound once
soundStop(\$sound)	stops the playing of \$sound

## **String Formatting Codes**

Sleep has a feature called parsed literals. Parsed literals are strings contained inside of "double quotes. A feature of parsed literals is that certain escapes can be applied. An escape is started with a \ backslash and followed by a character. Sleep replaces some escapes with a specific type of text. jIRCii uses this feature of sleep to make it easy to insert text formatting codes into your scripts. A \ backslash followed by a \ backslash is just a backslash.

Escape	Code	Example	Result
\b ·	bold	"\bthis text is bold\b"	this text is bold
$\backslash c$	color	"\c15,5this text is colored"	this text is colored
\u	underline		this word is underlined
$^{\circ}$	cancel	"\\o \b\ucancels\o \\b and \\u"	\o <b>cancels</b> \b and \u
\r	reverse	"this \rword\r is reversed"	this word is reversed

The \b escape is equivalent to using Ctrl+B, \c is equivalent to using Ctrl+K etc. Also in jIRCii bold is a brighter version of the current color while reverse is a darker version of the current color.

Remember these escapes only work within "double quoted strings.

## **String Functions (Miscellaneous)**

\$	buildCP437String("text")	takes specified text and remaps characters 128-255 to characters specified in the CP437 charset. The CP437 charset is the default mapping for fonts like Terminal, Lucida Console, and other "ansi" fonts.
@	fileCompleteAll("partial-file-name")	returns an array of all files matching partial- file-name in partial-file-name's directory.
\$	formatBytes(n)	returns a string with n reduced to the appropriate units i.e. 3mb or 4kb
\$	formatDecimal(n)	returns a string with a decimal number going to the thousandths place.
\$	getScriptPath("script.irc")	returns the location of the specified loaded script.
\$	getScriptResource("script.irc", "file")	returns the full-path to a file in the same directory as script.irc.

@ groupNicks(@array, n) breaks @array into an array of comma separated nickname groups of n size. \$ longip("ip") if input is an ip address in ip.ip.ip.ip format this will convert it to a long ip. If input is an ip address in long ip format this will covert it to an ip address in ip.ip.ip.ip format.

\$ mask("nick!user@host.domain", 0-9) converts the passed in address into a masked format. The type of mask depends on the second parameter:

0: \*!user@host.domain 1: \*!\*user@host.domain 2: \*!\*@host.domain 3: \*!\*u@\*.domain 4: \*!\*@\*.domain

5: nick!user@host.domain 6: nick!\*user@host.domain 7: nick!\*@host.domain 8: nick!\*user@\*.domain 9: nick!\*@\*.domain

\$ parseSet("SET", "target", "parms") fires the custom "SET" with \$0 = to the target

and \$1-= to the parameters. \$ parseSet("SET", %data)

fires the custom/real "SET" with \$variables being specified in the %data hashmap. \$ strip("text") returns a copy of "text" with all of the

formatting codes stripped out.

# **String Functions (Tokenizing)**

iIRCii features a powerful built in string tokenizer. Strings are tokenized using the tokenize() function. A tokenized string is a string that is split up into parts (called tokens) by a specified delimiter. The return value of the tokenize function is referred to as \$tokens.

jIRCii supports the following comparison operator for working with tokenized strings:

"string" istoken \$tokens true if "string" is a token inside of the tokenized string

The following functions exist for working with tokenized strings:

\$	findToken(\$tokens, "string")	returns the index of token "string"
@	getAllTokens(\$tokens)	returns an array of all the tokens
\$	getToken(\$tokens, n)	returns the token at index n
\$	getTokenFrom(\$tokens, n)	returns all tokens starting at index n (preserving
		the delimeter)
\$	getTokenRange(\$tokens, n, m)	returns a range of tokens from index n to m
		(preserving the delimiter)
\$	getTokenTo(\$tokens, n)	returns all tokens from the beginning up to index n
		(preserving the delimiter)
\$	getTotalTokens(\$tokens)	returns the total number of tokens in this string
\$	tokenize("string", ["delimeter"])	converts "string" into a series of tokens split apart
		by the specified "delimiter". The default delimiter
		is a space "". Returns \$tokens

#### **Timers**

A timer in jIRCii is a way of executing a set of commands when a certain interval of time has passed.

\$ addTimer(&closure, n, [r], [\$scalar]) adds a timer that executes &closure in an on

going manner, it executes every n milliseconds and repeats r times. The \$timer scalar return is a reference to this specific timer. If specified, \$scalar is passed as an argument to &closure

each time the timer is executed.

setTimerResolution(n) Sets the overall timer resolution to n

milliseconds. The timer resolution is how often jIRCii checks to see if there is a timer that needs to be fired. Obviously lower timer resolutions can mean poorer performance on a

slower computer.

stopTimer(\$timer) stops the specified timer.

# Appendix A – Client Configuration Variables

This list is by no means a comprehensive list of all the configuration variables within jIRCii. The best thing to do is view the file jirc.prop after you've played around with the options for awhile. All config options in jIRCii have default values. These default values are not automatically saved to the config file.

You can set these values from within jIRCii using: /eval setProperty("property", value)

active.\* "true", "false"; determines wether messages are echoed to active

The \* portion refers to: ctcp, notice, notify, reply, query, whois

auto.\* "true", "false"; auto /window options

The \* refers to: chat, chatclose, hide, join, part, query

auto.connect @list of servers that are automatically connected to on client startup name of charset encoding jIRCii uses for text coming from irc server

dcc.exists 0, 1, 2, 3; what to do when a dcc send occurs and the file exists

0 = "Ask", 1 = "Overwrite", 2 = "Resume", 3 = "Ignore"

dcc.high integer; the high port in the dcc port range

dcc.localinfo "Server Method", "Normal Method", or use an ip address

how to resolve or what ip address is to be used for dcc local info

dcc.low integer; the low port in the dcc port range

dcc.onchat 0, 1, 2; what to do when a dcc chat request comes in

0 = "Ask", 1 = "Auto Accept", 2 = "Ignore"

dcc.onsend 0, 1, 2; what to do when a dcc send request comes in

0 = "Ask", 1 = "Auto Accept", 2 = "Ignore"

dcc.saveto the directory received files are saved to

ident.system the reply returned by the ident server for specifying your OS

ident.userid the userid for the ident server

ident.port integer; the port number for the ident server ignore.masks @list; all of the masks in the ignore list

kick.message the default kick reason

listbox.enabled "true", "false"; enable / disable the channel nickname listbox

listbox.position 0, 1; set the position of the channel listbox 0 = left, 1 = right"true", "false"; enable / disable loading of the default script "true", "false"; enable / disable loading of the menus script load.default load.menus "true", "false"; enable / disable logging of irc chats log.enabled log.saveto the directory log files are saved to "true", "false"; enable / disable stripping of text attributes from log.strip

logged text. "true", "false"; enable / disable time stamping of all logged text. Log.timestamp the default quit message Message.quit

notabs.border int; size (px) of border around jIRCii with server tabs disabled notify.users @list; all of the users on the notify list

"true", "false"; enable /disable the /MOTD output "true", "false"; enable / disable timestamping

"true", "false"; enable / disable the perform on connect feature int; number of seconds to sleep between reconnect attempts @list; all of the current loaded scripts with full pathnames

"true", "false"; enable / disable the switchbar

"true", "false"; enable / disable switchbar highlighting on activity "true", "false"; enable / disable fixed width buttons in the switchbar

0, 1; set the position of the switchbar 0 = top, 1 = bottom"true", "false"; enable / disable auto-sorted switchbar buttons

int; maximum size of iIRCii scrollback buffer "FontName-PLAIN-FontSize"; font used by jIRCii "true", "false"; enable / disable the native look and feel does not take immediate effect.. jIRCii must be restarted

the application to use when opening files on the users specific OS

integer; number of lines for the statusbar

"true", "false"; enable / disable the single document interface mode ui.sdi

does not take immediate effect. ¡IRCii must be restarted

"true", "false"; show the menubar... be careful about disabling this "true", "false"; show the statusbar.. setting ui.sbarlines to 0 does the ui.showbar ui.showsbar same thing.

ui.showtabs

option.showmotd option.timestamp

perform.enabled reconnect.time

switchbar.enabled

switchbar.hilight

switchbar.fixed switchbar.position

switchbar.sort ui.buffersize

ui.font

ui.native

ui.openfiles

ui.sbarlines

script.files

"true", "false"; show the server tabs
"true", "false"; shows the lame newbie toolbar... ui.usetoolbar

"true", "false"; update internal address list when joining a channel update.ial

(done by performing a /who #channel when joining)

the users altnick from the setup dialog user.altnick

user.email the users email address from the setup dialog user.nick the users nickname from the setup dialog user.rname the users real name from the setup dialog

if set the contents of this variable will be reported with jIRCii's version.addons

version information rather than a goofy tagline

setting this variable will alter the internal version string for the client version.string