WebMFD API

1/ Web interfaces

All sub-directories in the WebMFD directory that do not start with a '_' are considered a web interface directory. To add a web interface, simply create a sub-directory with the name of your interface. This new interface will be proposed automatically in the interface choice list.

If an interface subdirectory contains a file named description.txt, this description will be displayed in the interface list. Note that this text file can contain HTML markers but only those applicable inside a `<p>` marker (`<b>`, `<i>`, etc.).

If the WebMFD contains only one web interface directory, the interface list is not displayed and this interface is automatically loaded.

2/ Writing an HTML client

2.1/ MFD Motion Images

To display an MFD in a webpage, simply insert a `<img>` marker :

```
<img src="/mfd/mfd.mpng?key=whatever" />
```

The url of the image must be `/mfd/mfd.[format]?key=[key]` where:

- `[format]` is 'mpng' or 'mjpeg' according to the format of image to be streamed
- `[key]` is an arbitrary character string that will be used by the buttons to refer to this MFD.

2.2/ MFD Buttons

2.2.1/ Implementation with WebSockets

To get the buttons labels and to inform a button press, you can use the WebSocket API, which is the fastest one. However, the web browsers are not implementing it in a stable way.

To get a connection to the buttons WS API, open a WebSocket to this JavaScript URL: `'ws://'+document.location.host+'/btn/?key='+key` (which could give, for example `'ws://localhost/btn/?key=whatever'`). The server will now push the buttons labels in JSON in classic WS Messages as soon as they change.

You can inform a button press by sending the button ID formatted as two digits (must be '01' and not '1') in a classic WS Message or you can request the buttons labels by sending '-1' the same way.

2.2.2/ Implementation with simple HTTP requests

To get the buttons labels and to inform a button press, you can use the HTTP Request API, which is the slower one.

To get a button response, you must have a motion-image already open and running. If not, the request will return an error.

To get the buttons labels of a running MFD or inform a button press, open this Javascript URL (Ajax): `'http://'+document.location.host+'/btn_h/'+btnId+'?key='+key`

(which could give, for example `'http://localhost/btn_h/3?key=whatever'`) where `btnId` is the id of the button pressed or -1 to simply require the labels.

2.2.3/ Buttons IDs

- The six buttons on the left of the MFD have IDs 0 to 5.
- The six buttons on the right of the MFD have IDs 6 to 11.
- The `SEL` button has ID 13.
- The `MNU` button has ID 14.
- The `PWR` button, which turns off the MFD, has ID 99.

2.2.4/ JSON Format

The buttons labels are given in a JSON string which represents an object containing two arrays: `left` and `right`, each one containing the six lables of its column.

3/ Protocol

The protocol is easily understandable from the section 2 of this document. To implement native client, you may need those documents that explains the underlying protocols:

- http://www.ietf.org/rfc/rfc1945.txt
- http://www.whatwg.org/specs/web-socket-protocol/
- http://en.wikipedia.org/wiki/Motion_JPEG

Of course, for any question about native client creation, please feel free to contact salomon.brys@gmail.com.