WebMFD API

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# 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](mailto:salomon.brys@gmail.com).