

MeOS Input Protocol

The purpose of the MeOS Input Protocol (MIP) is to provide an open standard for online punches and other competition data. The protocol is XML based.

MeOS implements a MIP Client and Melin Software provides a web server implementation (PHP + MySQL) under the Apache License¹ that can be used on your server as-is, or form a basis for a custom implementation.

Setting up the Web Server

The following procedure is a minimal setup of the MIP service on a web server.

File	Description	Remark
<code>functions.php</code>	Internal utility functions.	
<code>config.php</code>	MySQL and MIP configuration.	You must edit this file.
<code>input.php</code>	Invoked by MeOS or other MIP client. The client requests input from the web server.	
<code>enterpunch.php</code>	Simple web form where you enter the control number start number(s) for competitors that punched to control.	

1. Copy the files in the table above to your web server, which must support PHP.
2. Edit `config.php` to match the configuration of your web server's MySQL connection. (Note that this is most likely not the same MySQL server used by MeOS).
3. Start the Online Input service in MeOS. Enter the URL to your `input.php` script and an id number of the competition (the number should be unique for the competition; you enter this number in the `enterpunch` web form).
4. Enter punches using the `enterpunch` web form in your web browser, smart phone, etc.

Protocol Details

Data transfer to the web server is based on an XML format formally defined in `mip.xsd`. The MIP client send a http request to the server, with the http header `competition` set to a user defined *competition id* and the http header `lastid` set to the id of the last item received from the server. The server is expected to respond with an XML file containing all data added posts since `lastid` (the response file also includes a new `lastid`, which the client uses for the next request).

Here follows an informal description and some examples.

¹ See <http://www.apache.org/licenses/LICENSE-2.0>

The XML response file includes the following data

- Punches (control code, start number or card number, time).
- Cards (card number, start time (optional), finish time, punches)

In a later version, the plan is to support additional data, such as entries, team setup, etc.

Notes

All times in the protocol is in tenths of a second. The start time is given in tenths of a second after 00:00:00 (local time) on the (first) day of the event.

Example

The following is an example of a response to MeOS from the web server.

```
<MIPData xmlns="http://www.melin.nu/mip" lastid="3">
  <p code="33" card="12345" time="36070"/>
  <p code="50" sno="101" time="373250"/>
  <card number="12346">
    <start time="36000"/>
    <finish time="46000"/>
    <p code="33" time="37000"/>
    <p code="50" time="38010"/>
    <p code="100" time="39440"/>
  </card>
</MIPData>
```

From this data, we may conclude that a competitor with card 12345 punched control 33 at 01:00:07 and that a competition with start number 101 punched control 50 at 10:22:05.

We also see that card number 12346 was read out, with a start time 01:00:00 and finish time 1000 seconds later (01:16:40), and the card contains punches 33, 50 and 100.

Entries

Version 2.0 also supports transferring entries. You can provide the name, club, card number, class, entry fee, and birth year (or date) of the competitor. However, only name and class is required.

You may also provide an id of the entry. It is an integer between 1 and 10⁹. Using a number outside that range results in undefined behavior.

Example

The following is an example of a response to MeOS from the web server.

```
<MIPData xmlns="http://www.melin.nu/mip" lastid="3">
  <entry id="1" classid="17" fee="70.0" paid="false">
    <name birthyear="1947">Snowman, Olof</name>
    <club>IF Thor</club>
    <card hired="true">12345</card>
  </entry>
  <entry id="2" classid="17" fee="70.0" paid="true">
    <name birthdate="2009-08-08">Queen, Elsa</name>
    <club>Arendal Wayfinders</club>
    <card hired="false">101010</card>
  </entry>
```

</MIPData>