SENSOR quick installation guide

The SensorWeb serves as a metadata base for your device(s). PID (Persistent Identifiers) can be generated for configurations of your device and linked with your data publication in PANGAEA, hereby complementing your metadata.

Within the sensor.awi.de web pages described below, don't forget to use the 'Save' button at the bottom whenever needed for some of the frames discussed. I don't mention it explicitly in most cases.

May be you have to ask our O2A-Support team via o2a-support(at)awi.de to prepare something for your needs.

Recipe for editing:

1) Please go to https://sensor.awi.de (it will be http://sensor.fs-polarstern.de/ while being on Polarstern). You should have got a notification by email about your account. Login is in the upper right corner (dark blue field).

2) Click on **"My Devices"**-Tab in the upper row. You get a list of the devices you can edit.
(One pit fall warning at this point: You can also click on "Browse"-Tab and get a list of all registered devices in the "Public" state. However, the devices in the "Construction" state (see step 4) are not listed here. That confused me in the beginning since it looked like that the devices I wanted to edit were missing!)
A different way to find your device is to use the **"Search"**-Tab and to filter the list by (a) inserting text in the text field and/or clicking on filter keys (left column), e. g. your name in the Contact area.

3) If your devices are registered recently, then they are presumably in the state **"Construction"**. That means they are not visible to the public. We can and have to change the state to **"Public"**, when we are ready with the most important issues.

4) There are actually five fields which can be clicked in this list per device. Let's start from the right:

a) We usually don't want to delete the device by using the waste basket!!!

b) In most cases there is no need to clone the devices, i.e. the two overlaid window symbol.

c) If subdevices belong to your instrument/device, you can create and edit the sensorweb equivalents by using the "**+**" sign. Please, think about it, before you start working on the rest. It might be that every information should go into the subdevices (or even subsubdevices) instead of the main device, which may act as an umbrella only.

d) Clicking on the name of the device leads you to the list of subdevices which can be handled like the main list. (Please note, this is the only way to edit an already existent subdevice, currently!)

e) Clicking on the "i" symbol (white "i" on blue circle ground) leads you actually to the editable device sheet. So, this is an important one. Since it is editable it's **more than** information only!!!

5) Click on the **"i"** symbol of the device you like to edit. You get a new overlaid frame/sheet with information for that device. You can get out of that frame by clicking the cross in the upper right corner (the upper most frame vanishes only (usually) - important in cases of multiple overlaid frames; however, sometimes more than one frame vanish or by clicking outside the frame (all overlaid frames vanish, fall back to the list web page, e.g. step 5.)

6) Since you like to edit the sheet, click on the **"Edit"** button, which should be in the forth line. In case you have such information you can add by typing text:

- a short description of the device, (should be easy)

- a serial code

- the manufacturer

- the model

- an asset number (whatever that is and whatever that is good for).

7) You may add or delete predefined **"collections"**. On the right end of that line, please click on the "**+ Add**" button. Another frame/sheet pops up with a list of predefined collections. You can add more than one corresponding collections by using the "**+**" sign. Back one frame, you can delete collections by using the corresponding "**x**" buttons.

8) You can also check whether you are happy with the **"type"** declaration. This is from a predefined list. If another term in the predefined list matches your device better, please choose that one. If you are unhappy with all available options please contact o2a-support(at)awi.de for a desired new entry. Save button (lower right corner)!

9) Next the **"Contacts"** should be updated by clicking on the "Contacts"-Tab. Currently, there are 8 different **roles** of contacts in a predefined list available (see later on):

Data Provider

Data Scientist

dship connector: Only devices with the contact 'Polarstern DSHIP' with the role dship connectort will appear in DSHIP

Editor: Is able to edit the SensorWeb entry

Engineer in Charge

Owner: Actually institute name (affiliation)

Principal Investigator

Important for your team are correct and enough settings of the **roles** Editor and dship connector.
In addition we, i. e. AWI, demand entries for Owner/Affiliation and PI. All other **Roles** - if specified - are useful information for any other users to get quickly in contact to the right persons if needed.

You can add a contact using the "**+ Add**" button (fourth line) ---> Another frame/sheet with a long predefined list pops up. It includes persons, institutes, as well as some few other entities. **Use the search field** to get to a desired entry, e.g. to your own name or to the name of your institute. In case the entry is available, click on the corresponding "+" button on the right. Please choose the **Role** from the predefined list. In case the desired entry is missing, use the "**+ New**" button (second row). Fill in at least the name and email address and choose the **Role** (from the predefined list) of that person. (I haven't checked that option myself - I hope, it works straight forward.)

Every entry can only have one role and one person/institute. In case one person has several roles, several entries for the same person have to be created. It is also possible to add several entries for several persons with the same **Role**.
At the end there should be at least listed:

- The device editor listed as an editor (presumably you). (Done by the AWI IT team)

- Chief Editor. (Done by the AWI IT team)

- Your institute as owner. Two remarks:

- Read "owner" as "affiliation", here. The naming will change sometime in the future.

- If your affiliation is not listed in the predefined list please ask o2a-support(at)awi.de to implement it.

- The PI of the device (may be you, too).

- *** *Name "polarstern dship" connected to the role "dship connector" to import the device in DSHIP.* ***

10. Next the **"Parameters"** should be added, which are actually measured. For that click on the "Parameters"-Tab (in the second row). For each parameter "**+ Add**" it.

Here we look for user-friendly output variables. We can't cover every aspect with this system. We also have to leave the decision whether to mention all derived quantities or only a selected important subset to you. With this decision please keep in mind what other users onboard or offline might be interested in.

First have a look whether your parameter **Type** as well as your desired **Unit** is listed in the two predefined lists.

If anything (**Type** and/or **Unit**) is not in the list, please ask o2a-support(at)awi.de to implement it and stop editing this parameter at this point and do something different. (I am sorry, that this is somewhat complicated.)

If everything is available, fill in all fields. Once you have created a parameter, you can define some properties of the parameters.

(One comment here: Properties of the measured parameters should be defined at this place. General properties of the device, which are not related directly to a measured parameter, like spatial operation range of the device (e. g. lower/upper boundary of the measurement altitude) should be defined at a different place)

If you are not already in the parameter list frame, you can go to that place/step (beginning of this step 10). Each parameter is listed in a row. Click on the "i" symbol, this time in the Tools area on the right.

- You can "**+ Add**" a property or some more properties (by multiple action).
- In the "Add measurement property" frame, you can choose a measurement type, e. g. operation range, and edit the lower and upper bounds.

11. Next to **"Resources"** where you can add data or fact sheets or similar (click on the "Resources"-Tab)

- Again: "**+ Add**"
- Usually your manual/fact sheet etc. will not be in the predefined list. Therefore, you have to use the "**+ New**" button (second row) leading to two choices: upload a **file** or upload a **link**

We strongly encourage you to use the second choice (e.g. link) in the following way. Please upload the document to a place with a persistent identifier. AWI people can use the ePIC system and use the corresponding handle. Other may have the possibility to use their institutional repository, if available. If not available something like zenodo.org might work. At the end a DOI would be desirable like doi: https://doi.org/10.1093/gigascience/giz067

After you linked or uploaded the document, it should appear in the long list in the frame level before. Use the search function! Use the "+" button on the right of your document to link it actually to your device.

12. Next to **"Properties"** where you can add device related properties (click on the "Properties"-Tab)

13. The **"Subdevices"** -Tab leads you to a list of subdevices, if any of those had been created before. Clicking on a subdevice will give a similar frame /sheet like the one for the parent device. You can add and edit parameters etc.. However, for unknown reasons you can't edit the "Overview" frame. This is only possible when you go via step 5.4 and use in the new list the "i"-button on the left. The frame looks the same. The only difference is the edit capability of the "Overview" environment. You can also upload images or resources of your subdevices.

14. After everything is set and before the first data is measured, we have to set the state from **"Construction"** to **"Public"** and create a version (within the "Overview"-Tab, which should be easy). From now on, this metadata and version can't be deleted, but only overwritten by a new version. (Old versions are stored "forever"!)

Special thanks to Peter von der Gathen for providing the original version of this manual!