

# i-am-acro

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# 1 User Guide

## 1.1 Quick start

First import the package and define your acronyms in a dictionary like this:

```
1  #import "acronym.typ": * // import everything
2  #let acronyms = (
3    LED: (
4      en: (
5        short: [LED],
6        short-pl: [LEDs],
7        long: [Light Emitting Diode],
8      ),
9      de: (
10       short: "LED",
11       long: "Leuchtdiode",
12       long-pl: "Leuchtdioden",
13     ),
14   ),
15 )
```

typ

Then pass the definitions to the package, set the default language and choose whether you want labels to be created between the acronyms and where they are printed (using print-acronyms):

```
1  #init-acronyms(acronyms, "en", always-link: false)
```

typ

Now you can use your acronyms!

- #ac("LED") -> Light Emitting Diode (LED)
- #ac("LED") -> LED
- #acl("LED") -> Light Emitting Diode
- #acl("LED", lang: "de") -> Leuchtdiode

For all possible acronym functions see Section 2.

## 1.2 Full example using everything

This will show a configuration showing every possible feature used.

First we create language “en” (english) and “de” (german) using the acronyms LED and PLC. For PLC all possible variations are defined.

```
1  #let acronyms = (
2    LED: (
3      en: (
4        short: [LED],
5        short-pl: [LEDs],
6        long: [Light Emitting Diode],
7      ),
8      de: (
9        short: "LED",
10       long: "Leuchtdiode",
```

typ

```

11     long-pl: "Leuchtdioden",
12   ),
13 ),
14   PLC: (
15     en: (
16       short: [PLC],
17       short-pl: [PLCs],
18       long: [Programmable Logic Controller],
19       long-pl: [Programmable Logic Controllers],
20     ),
21     de: (
22       short: [SPS],
23       short-pl: [SPSen],
24       long: [Speicherprogrammierbare Steuerung],
25       long-pl: [Speicherprogrammierbare Steuerungen],
26     ),
27   ),
28   AC: (
29     en: (
30       short: [AC],
31       long: [Acronym],
32     ),
33     de: (
34       short: [AC],
35       long: [Acronym],
36     ),
37   ),
38 )

```

After that we should define how other languages are written out, in case the second language gets used. See Section 1.3 for more details.

```

1 #let language-display = (
2   en: [english],
3   de: [german]
4 )

```

After that we pass this to the package and set the configuration.

```

1 #init-acronyms(
2   acronyms,
3   "en",
4   language-display: language-display,
5   default-second-lang: "de",
6   always-link: true
7 )

```

Now we are ready to use our acronyms! The order of operation here is important, since showing the acronym will change its state. So the long form only gets shown the first time or when specifically requested.

Command	Output
<code>#ac("LED")</code>	Light Emitting Diode (LED, german: Leuchtdiode)
<code>#ac("LED")</code>	LED
<code>#acl("LED")</code>	Light Emitting Diode
<code>#acl("LED", lang: "de")</code>	Leuchtdiode
<code>#acs("PLC")</code>	PLC
<code>#ac("PLC")</code>	Programmable Logic Controller (PLC, german: Speicherprogrammierbare Steuerung)

We can also mark acronyms as used or unused, even if we did not use them. Also we can make the package believe the long version was shown (or not) before. Marking an acronym as used will make it appear in the acronym table.

```
1 #update-acronym-used("AC", true)
2 #update-acronym-long-shown("AC", true)
```

typ

Lastly (or firstly, if you prefer it in your document) we print all used acronyms.

```
1 #print-acronyms()
```

typ

## Acronym Definition

AC	Acronym
LED	Light Emitting Diode
PLC	Programmable Logic Controller

### 1.3 How does the second language work?

As seen before you can set a default second language using the `init-acronyms` function. This is implemented so you can have those two languages shown for an acronym if they work in both languages. There are some examples in german and english like “IR” which is “infrared” in english and “Infrarot” in german. Both are common to be used in german.

This package will automatically show the second language of such words, when the `default-second-lang` parameter is given. The long form of the second language will be shown with the first long form of the default language.

Important here is the `language-display` parameter. This will define how the second language is displayed when needed.

Let’s see an example:

Light Emitting Diode (LED, german: Leuchtdiode)

The acronym “LED” was displayed using `#ac("LED")`, since the default second language is given from before (see Listing 2) the german version is also shown. The text `german:` was given by setting the `language-display` parameter accordingly (see Listing 1).

## 1.4 Print custom acronym table

You can simply import the internal variables `_acroyms`, `_always-link` and `LABEL_KEY` to the stored acronyms with their states. With them you can create your implementation of an acronym table. The example below shows how it could be done. It is important to provide the correct labels. If `always-link` is set to true the labels must be of this scheme “`LABEL_KEY + KEY`” where `LABEL_KEY` is a constant of this package and `KEY` is the key of the printed acronym.

NOTE: It is not possible to sort by content. If you want to sort the acronyms by their short definition, they all need to be strings.

```
1  #import "acronym.typ": * // import all or only needed
2
3  #context {
4    // Get the final states of all acronyms
5    let final-acronyms = _acronyms.final()
6    // get the default language to display the long forms
7    let default-lang-final = _default-lang.get()
8    // prepare dictionary where all acronyms to be displayed are stored
9    let printable-acronyms = (:)
10
11   // Iterate over all acronyms and filter them
12   for (key, (value, used, long-shown)) in final-acronyms {
13     if used {
14       // extract only used acronyms with their default-lang short and long form
15       let short-long = (value.at(default-lang-final).short, value.at(default-lang-final).long)
16       printable-acronyms.insert(str(key), short-long)
17     }
18   }
19
20   // Sort by key, it is not possible to sort by content (the short definition).
21   printable-acronyms = printable-acronyms.pairs().sorted(key: it => it.at(0))
22
23   // Display acronyms
24   grid(
25     columns: (auto, 1fr),
26     row-gutter: 1em,
27     column-gutter: 2em,
28     [*Acronym*], [*Definition*],
29     ..{
30       for (key, value) in printable-acronyms {
31         (
32           [#value.at(0) #if _always-link.final() { label(LABEL_KEY + key) }],
33           [#value.at(1)],
34         )
35       }
36     },
```

```
37    )
```

```
38 }
```

The result looks like this:

<b>Acronym</b>	<b>Definition</b>
----------------	-------------------

AC	Acronym
----	---------

LED	Light Emitting Diode
-----	----------------------

PLC	Programmable Logic Controller
-----	-------------------------------

This is very similar to using `print-acronyms` (well it is what i came up with). I expect you to implement your own display of the acronyms to fit the design of your document. This is simply an example of how it could be done.

## 2 Full package documentation

### 2.1 i-am-acro

- `ac()`
- `ac-custom()`
- `ac-suffix()`
- `acl()`
- `aclp()`
- `acp()`
- `acs()`
- `acsp()`
- `display-text()`
- `init-acronyms()`
- `print-acronyms()`
- `update-acro-lang()`
- `update-acro-second-lang()`
- `update-acronym-long-shown()`
- `update-acronym-used()`
- `verfiy-acronym-exists()`

#### Variables

- `_acronyms`
- `_language-display`
- `_default-second-lang`
- `_default-lang`
- `_always-link`
- `LABEL_KEY`

#### ac

Show the acronym. If it is first shown, the long version with the short will be displayed. This will mark the acronym as used.

#### Parameters

```
ac(  
  key: string,  
  lang: string none,  
  second-lang: string none  
) -> content
```

**key**    `string`

Key of the desired acronym.

**lang**    `string` or `none`

Language to be displayed. none will use the default language

Default: `none`

**second-lang**    `string` or `none`

Second language to be displayed. If “auto” is passed, `_default-second-lang` will be used.

Default: `auto`

### **ac-custom**

Display an acronym with custom short and long form. This is useful in case a custom ending or similar is needed once. The acronym will be treated the same as using `ac()`.

Note: Since the short and long form are custom, the language and suffix are omitted as parameters.

#### **Parameters**

```
ac-custom(  
  key: string,  
  short: string content,  
  long: string content,  
  suffix: string content none  
) -> content
```

**key**    `string`

Key of the desired acronym.

**short**    `string` or `content`

Custom short form of the acronym.

**long**    `string` or `content`

Custom long form of the acronym.

**suffix**    `string` or `content` or `none`

Suffix which will be displayed after the acronym. When none, suffix will be ignored

Default: `none`

### **ac-suffix**

Display an acronym with a suffix, hyphenated to it (e.g., acronym-suffix).



## Parameters

```
ac-suffix(  
  key: string,  
  suffix: string content,  
  lang: string none,  
  plural: bool  
) -> content
```

**key** string

Key of the desired acronym.

**suffix** string or content

Suffix which will be displayed after the acronym.

**lang** string or none

Language to be displayed. none will use the default language

Default: none

**plural** bool

Show the plural form of the acrony. An “s” will be appended if the plural form ist not defined.

Default: false

## acl

Display the long form of an acronym. This will not set “long-shown” or “used” to true (since the short version is not displayed with it)

## Parameters

```
acl(  
  key: string,  
  lang: string none  
) -> content
```

**key** string

Key of the desired acronym.

**lang** string or none

Language to be displayed. none will use the default language

Default: none

## aclp

Display the long plural form of an acronym. If no plural form was defined, “s” will be appended. This will not set “long-shown” to true (since the short version is not displayed with it)

### Parameters

```
aclp(  
  key: string ,  
  lang: string none  
) -> content
```

**key** string

Key of the desired acronym.

**lang** string or none

Language to be displayed. none will use the default language

Default: none

## acp

Display the plural form an acronym. If it is first shown, the long version with the short will be displayed. Also if no plural form was defined, “s” will be appended.  
This will mark the acronym as used.

### Parameters

```
acp(  
  key: string ,  
  lang: string none  
) -> content
```

**key** string

Key of the desired acronym.

**lang** string or none

Language to be displayed. none will use the default language

Default: none

## acs

Show the acronym in the short form. This will mark the acronym as used.

## Parameters

```
acs(  
  key: string ,  
  lang: string none  
) -> content
```

**key**    `string`

Key of the desired acronym.

**lang**    `string` or `none`

Language to be displayed. none will use the default language

Default: `none`

## acsp

Show the acronym in the short plural form. If no short plural form was defined, “s” will be appended.

This will mark the acronym as used.

## Parameters

```
acsp(  
  key: string ,  
  lang: string none  
) -> content
```

**key**    `string`

Key of the desired acronym.

**lang**    `string` or `none`

Language to be displayed. none will use the default language

Default: `none`

## display-text

Display text with a link, when desired. The link will use LABEL\_KEY with the key paramter to generate the label. The label will all point to the acronyms in `print-acronyms()`.

## Parameters

```
display-text(  
  text: content string ,  
  key: string ,  
  do-link: bool  
) -> content
```

**text**    content or string

Text to be printed

**key**    string

Key used for label generation with LABEL\_KEY. Only required when “do-link” is true.

Default: none

**do-link**    bool

Generate a link to the printed aconyms from print-acronyms().

Default: false

## init-acronyms

Initialize the acronyms and the default settings.

### Parameters

```
init-acronyms(  
  acronyms: dictionary ,  
  default-lang: string ,  
  default-second-lang: string ,  
  language-display: dictionary ,  
  always-link  
) -> none
```

**acronyms**    dictionary

Dictionary containing all the defined acronyms.

**default-lang**    string

Set the default language. For exmaple “en”, “de”, “fr”. You can change this later using update-acro-lang()

### **default-second-lang**    `string`

Set the default second language. For exmaple “en”, “de”, “fr”. You can change this later using `update-acro-second-lang()`

Default: `none`

### **language-display**    `dictionary`

Languages and their written form being used in `ac()` when two languages are displayed. Use “none” if this is not required.

Default: `none`

### **always-link**

Controls if labels and links will be generated. The label will point to `print-acronyms()`, the link will be created on the displayed acronym.

Default: `true`

## **print-acronyms**

Print all used acronyms in a grid. This will create labels, if `_always-link` is set to true. The list will be sorted by the acronym key. It is not possible to sort by content.

### **Parameters**

`print-acronyms()` -> `content`

## **update-acro-lang**

Update the current default language used for acronyms. Useful when writing a bilingual document.

### **Parameters**

`update-acro-lang(lang: string none)` -> `none`

**lang**    `string` or `none`

Language to be displayed. Examples: “en”, “de”, “fr”

## **update-acro-second-lang**

Update the current default second language used for acronyms.

### **Parameters**

`update-acro-second-lang(lang: string none)` -> `none`

**lang**    `string` or `none`

Language to be displayed. Examples: “en”, “de”, “fr”

### **update-acronym-long-shown**

Update the status of “long-shown” for a acronym from `_acronyms`.

#### **Parameters**

```
update-acronym-long-shown(  
  key: string,  
  long-shown: bool  
) -> none
```

**key**    `string`

Key of the acronym, which will be updated.

**long-shown**    `bool`

New value for the “long-shown” key of the selected acronym.

### **update-acronym-used**

Update the status of “used” for a acronym from `_acronyms`. This may cause the error “label does not exist in the document” if you set used to false and do not call `ac()` to reset the state to true.

#### **Parameters**

```
update-acronym-used(  
  key: string,  
  used: bool  
) -> none
```

**key**    `string`

Key of the acronym, which will be updated.

**used**    `bool`

New value for the “used” key of the selected acronym.

### **verfiy-acronym-exists**

Verify that an acronym, the requiered language, short and long term exist.

## Parameters

```
verfiy-acronym-exists(  
  key: string,  
  lang: string  
) -> error
```

**key** string

Key of the desired acronym.

**lang** string

Language to be tested.

**\_acronyms** dictionary

State variable conataining all acronyms. The keys short and long must be provided for each language. Their plural forms are optional.

Use the structure as shown in the example here:

```
1  #let my-acronyms = ( typ  
2    key: (  
3      language1: (  
4        short: [short version],  
5        long: [long version],  
6        short-pl: "short plural",  
7        long-pl: [long plural]  
8      ),  
9      language2: (  
10       short: [second language  
11         short],  
12       long: [second language long],  
13       short-pl: [2nd lang short  
14         plural],  
15       long-pl: [2nd lang long  
16         plural]  
17     )  
18   ),  
19   LED: (  
20     en: (  
21       short: [LED],  
22       short-pl: [LEDs],  
23       long: [Light Emitting Diode],  
24     ),  
25     de: (  
26       short: "LED",
```

```

24     long: "Leuchtdiode",
25     long-pl: "Leuchtdioden",
26   ),
27 ),
28 )

```

```

(
  key: (
    language1: (
      short: [short version],
      long: [long version],
      short-pl: "short plural",
      long-pl: [long plural],
    ),
    language2: (
      short: [second language short],
      long: [second language long],
      short-pl: [2nd lang short plural],
      long-pl: [2nd lang long plural],
    ),
  ),
  LED: (
    en: (
      short: [LED],
      short-pl: [LEDs],
      long: [Light Emitting Diode],
    ),
    de: (
      short: "LED",
      long: "Leuchtdiode",
      long-pl: "Leuchtdioden",
    ),
  ),
)

```

## \_language-display

State variable containing languages and their written form being used in `ac()` when two languages are displayed.

```

1 #let language-mapping = ( typ
2   en: [english],
3   de: [german],
4   fr: "french",
5 )
6 #language-mapping

```

```
(en: [english], de: [german], fr: "french")
```



**\_default-second-lang** `string`

State variable, what the default second language is to be used on acronyms. Use “none” to disable this feature. This variable is context aware. Exmaple: “en”, “de”, “fr”

**\_default-lang** `string`

State variable, what the default language is to be used with acronyms. This is context aware. Exmaple: “en”, “de”, “fr”

**\_always-link** `bool`

State variable, if links and labels should be generated. If this is true `print-acronyms()` must be used. Alternatively you can create the labels yourself. See Section 1.4.  
Only the final value will be used.

**LABEL\_KEY** `string`

Prefix of label keys. Used to link acronyms to the printed acronym list.