



## **Integration of the support of new board**

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- ❑ Bambu uses information about each device stored in **XML “characterization” file**
- ❑ For already **supported** devices, XMLs are embedded in the bambu executable
- ❑ For **new** devices XML characterization file must be provided

## ❑ Simple case:

- ▶ Copy an already available file
- ▶ Possible if the new device has very similar characteristics of an already supported one

## ❑ Complex case:

- ▶ Create the characterization file from scratch

- ❑ Information about **sizes of FPGA components**
  - ▶ Size of input and output of DSPs
  - ▶ Size of input of LUTs
- ❑ **HDL target dependent descriptions** e.g.,:
  - ▶ Memory components
  - ▶ Macro Based Components
- ❑ Information about **delay and resource usage** of each type of functional unit

- ❑ Information about sizes of FPGA components
  - ▶ **Written by hand by the user**
- ❑ HDL target dependent descriptions
  - ▶ **Written by hand by the user**
- ❑ Information about delay and resource usage of each type of functional unit
  - ▶ **Generated automatically**

- ❑ Information is collected for each functional unit
  - ▶ Considering different data sizes (e.g., 1, 8, 16 bit)
  - ▶ Considering constant or non constant inputs
- ❑ More than **4,000** combination of functional unit-input size data-number of constant inputs are evaluated
- ❑ Information is collected performing a synthesis of the analyzed combination
  - ▶ All data automatically collected in XML file by means of python script + **eucalyptus** tool (distributed in Panda)

- To use the new characterization file

- ▶ `--target-file=<xml-file>`

## Activity 5.1 – Synthesize module for non supported device

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- ❑ Synthesize the component described in module.c targeting xc7z045-2ffg900-VVD



## Activity 5.1 – Hint

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```
--target-file=<xmlfile>
```

### □ Copy and modify xml file

```
bambu module.c --target-file=xc7z045-2ffg900-  
VVD.xml
```