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Engineer in Electronics (&Software) ETH

XOJO User since 5 years

# TESSA

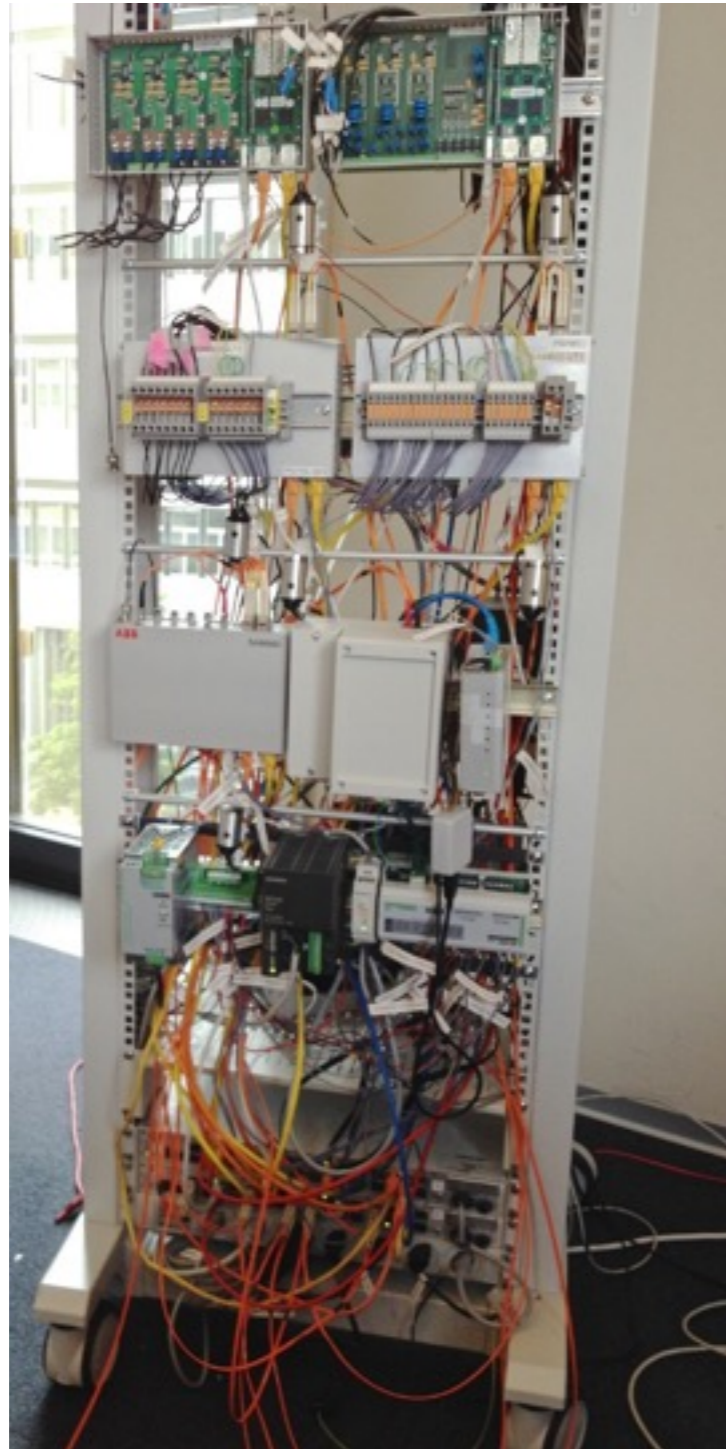a **TES**t **S**ystems **A**pplication based on XOJO
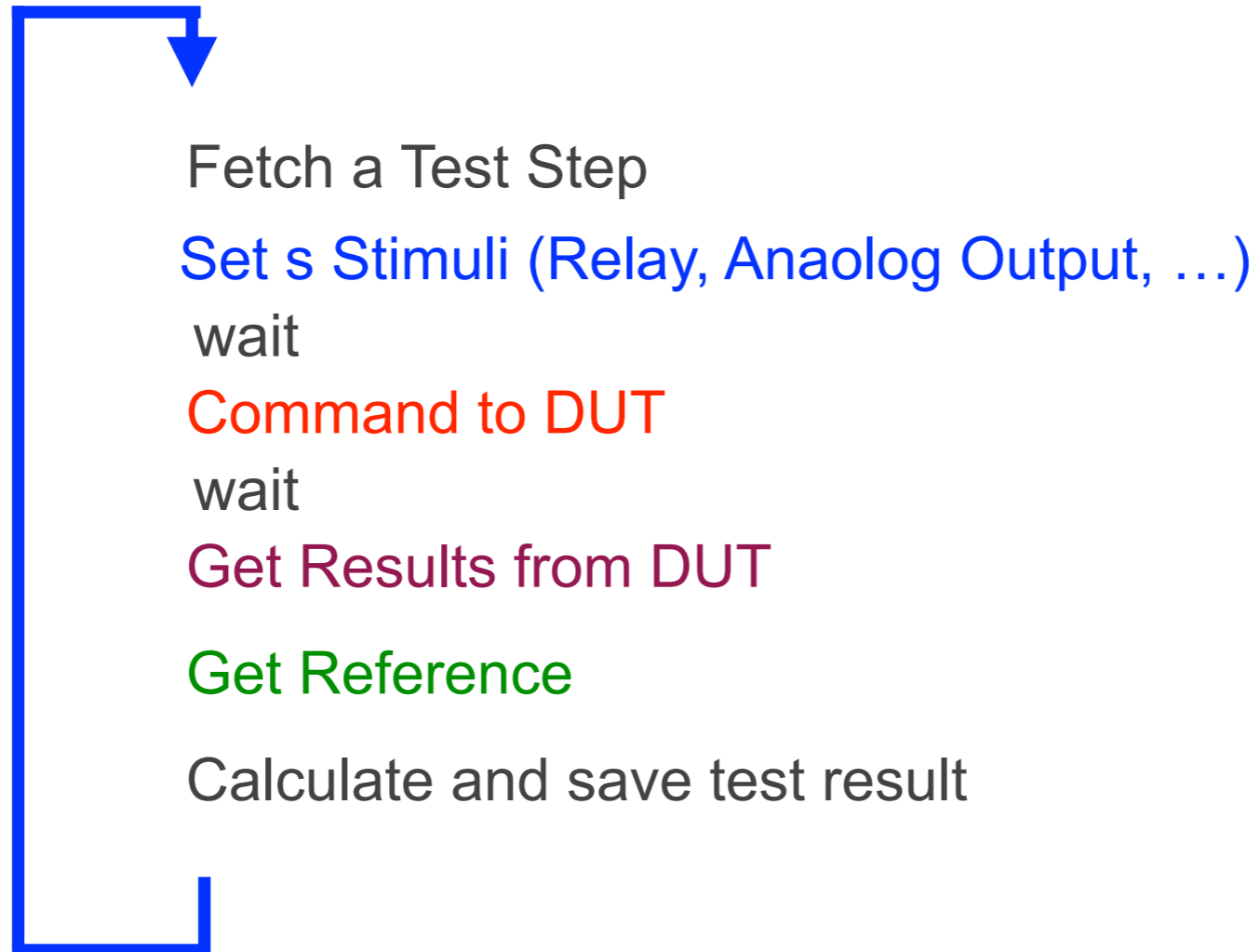
www.bces.ch

# Production Testing

# Development Testing





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# the beginning

Fetch a Test Step

Set s Stimuli (Relay, Anaolog Output, …)
wait
Command to DUT
wait
Get Results from DUT

Get Reference

Calculate and save test result
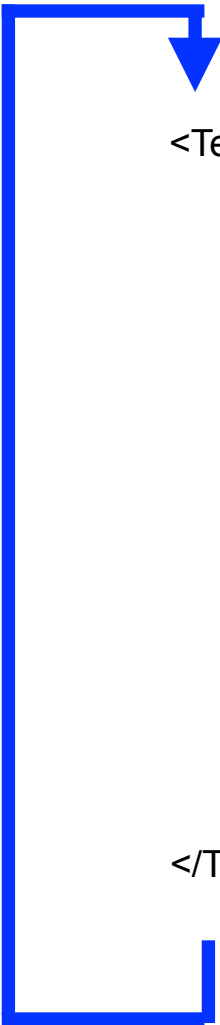
# the beginning

```xml
<Testprogramm name="Test Nr.1">

    <Teststep name="Erster Schritt">

        <MAFTS name="set MAFTS device to Voltage on CH1" Func="Volt" Value="3"
        chan="1" Wire23="2" LongWire="off" Shunt="off"/>

        <Agilent name="measure reference 1" measmode="DC"/>

        <CP name="Get voltage measurement on channel 1" Meas="0" Sens="0"
        Chan="1"/>

    </Teststep>

    <Teststep name="Zweiter Schritt">

        .....

    </Teststep>

</Testprogramm>
```
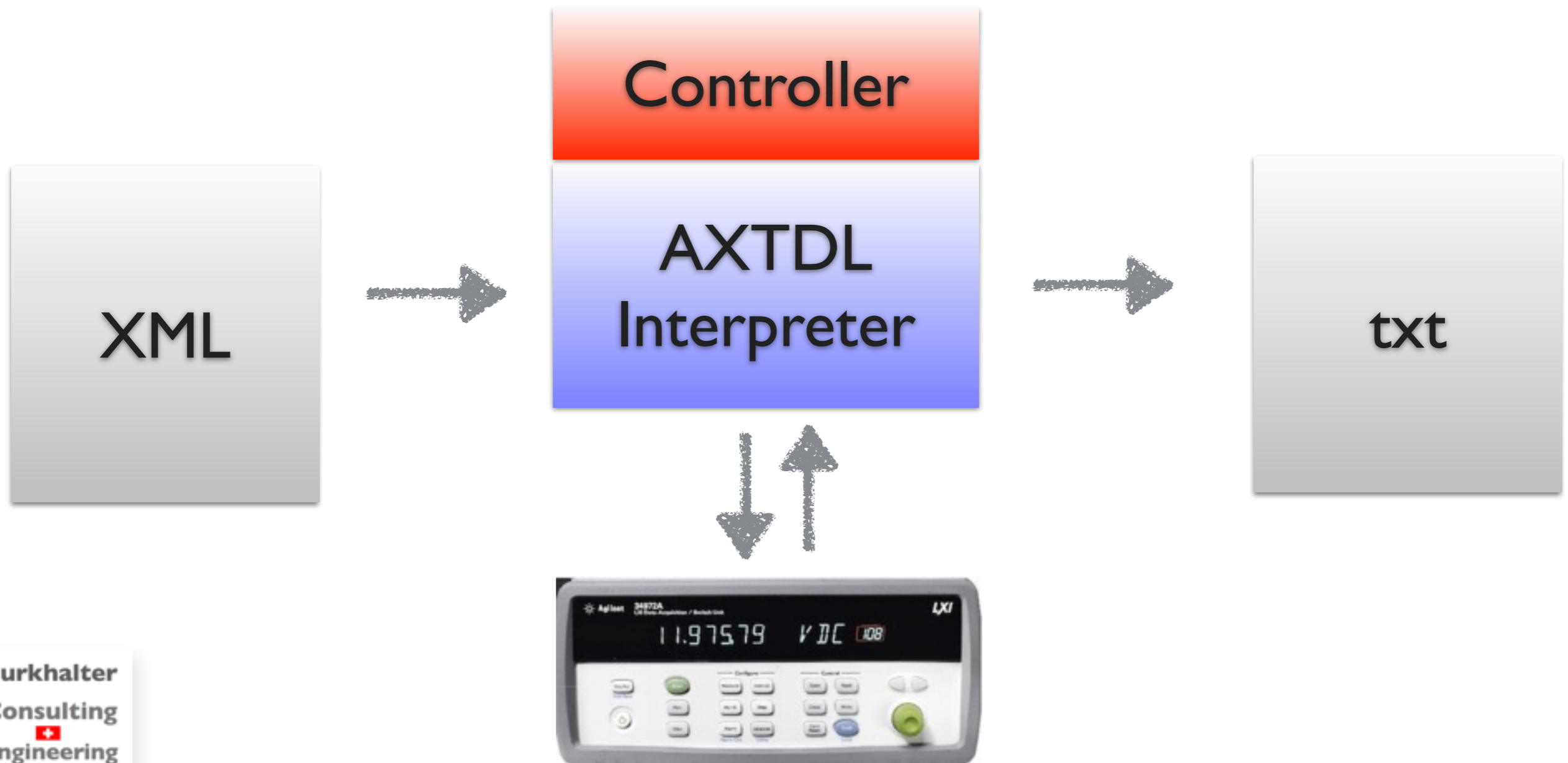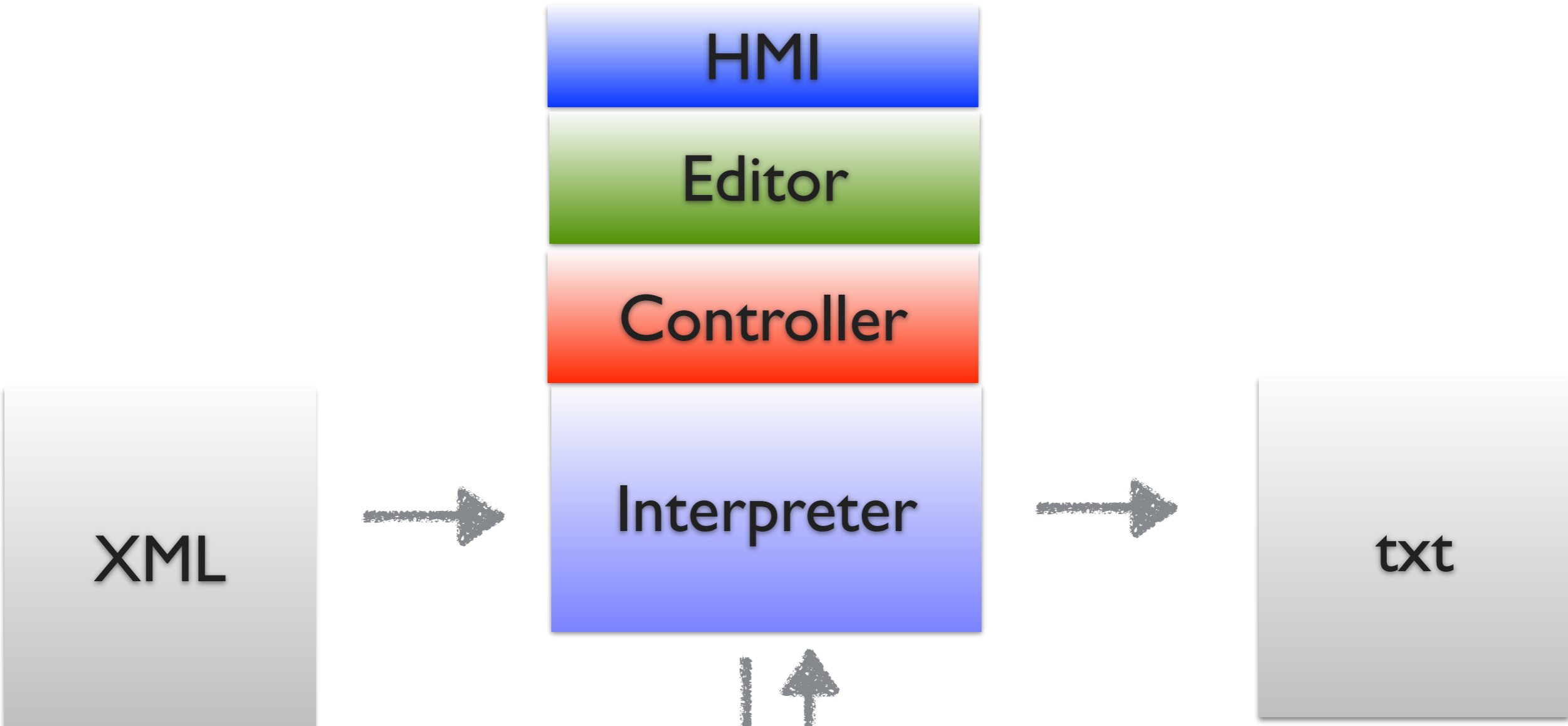
# the beginning

# the beginning



XML

HMI

Editor

Controller

Interpreter

txt

# the beginning

HMI

MatLab

Database TFS, SQL

Help

180 elements

15 attributes

Drag&Drop

Reporting

autom. FTP

Externals

Tables

Graphics

Formulas

element/attributes

attribute link

XML Parser
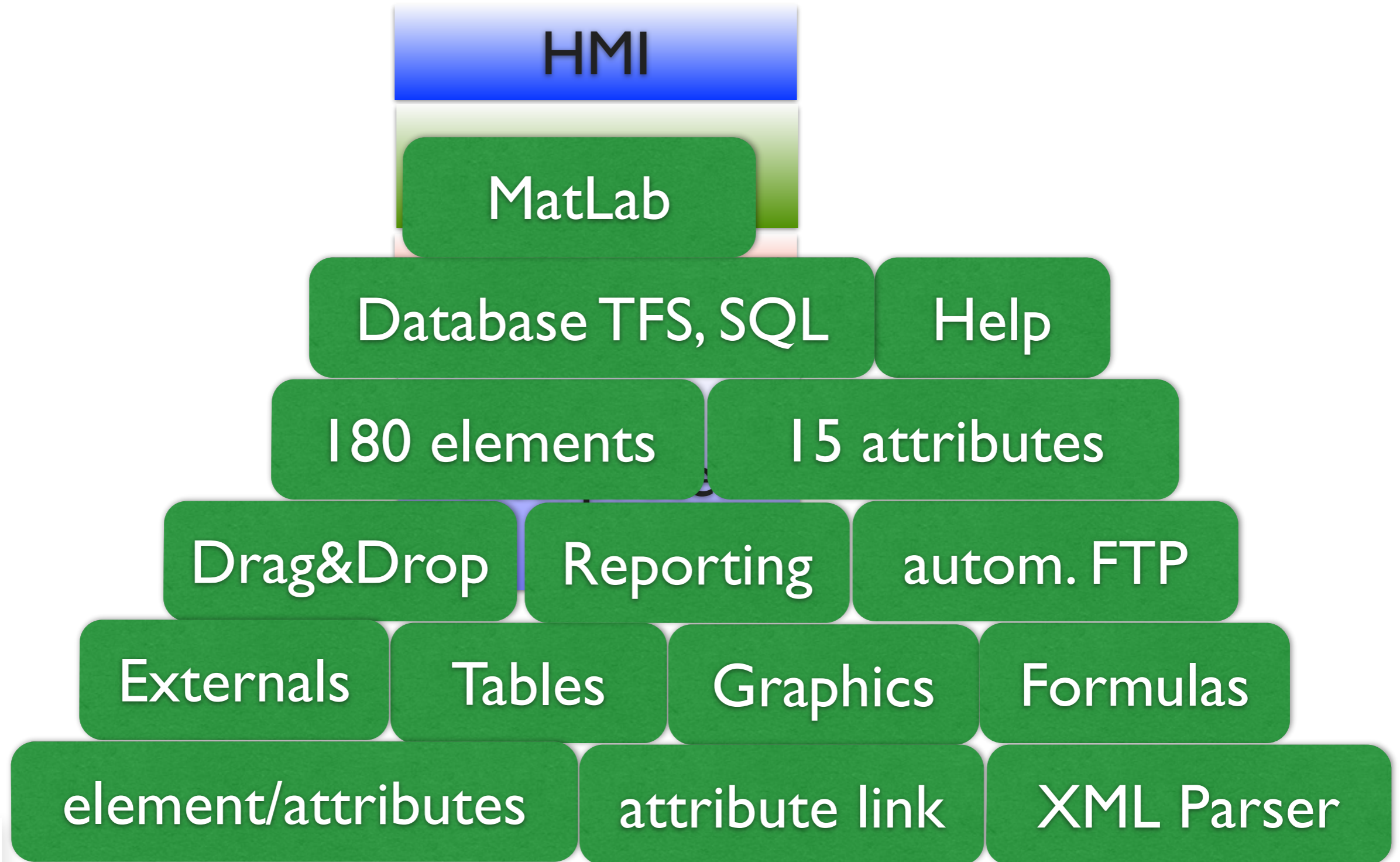
TESSA

Testsequence

no file selected

Hierarchy | Tables | Graphs | IED-Terminal | EEPROM | Source | Reports | Log | Cam Test | COM Test

Sequence - TESSA_Testsequence

| Hierachical Test List | E | L | S |
|---|---|---|---|
| ▼ A TESSA_Testsequence | 3 | | |
| Teststep | | | ☑ |
| ▼ Measurement | 3 | | ☑ |
| MathOperation | | | |
| HMI_Value | | 1 | |
| Table | | 1 | |
| ▼ TestStep_1 | 1 | | ☑ |
| Histogram | | 1 | |

Histogram

Attribute: Values

| Name | Value | Array | In< | Out > |
|---|---|---|---|---|
| Name | Histogram | | | |
| DerivedType | | | | |
| Wait | 0 | | | |
| Description | | | | |
| LastTime | 0 | | | |
| DoSubSteps | on | | | |
| Visible | on | | | |
| Coordinates | 60 0 10 2... | | | |
| Anchors | True True ... | | | |
| BackgroundCo... | transparent | | | |
| TextColor | &c000000 | | | |
| TextSize | 12 | | | |
| Title | Histogram | | | |
| Num_Steps | 10 | | | |
| Subtitle | | | | |
| Values | | Arra... | 2.T... | |

X

In<

Ou

| Hierachical Test List | Values | |
|---|---|---|
| DoSubSteps | on on | |
| Visible | on on | |
| Coordinates | 367 0 99 ... | |
| Anchors | True True ... | |
| BackgroundC... | transpare... | |
| TextColor | &c000000... | |
| TextSize | 12 12 | |
| Title | Title Title | |
| File | | |
| BasicPath | | |
| FileFormat | txt txt | |
| FileAppend | off off | |
| LoadAtStart | off off | |
| SaveAtEnd | off off | |
| SaveEvery | 0 0 | |
| IsCollection | off off | |
| ActiveCollection | 0 0 | |
| TableType | dynamic d... | |
| ResetAtTestSt... | none none | |
| Rows | 46 46 | |
| ActiveRow | 45 45 | |
| FilterAttribute | | |
| FilterValue | | |
| RecordAttribute | | |
| DateTimeCont... | none none | |
| Date | | |
| Time | 0 0 | |
| Result | 2.561947... | < |
| ▶ TestStep_1 | | |
| ▶ Histogram | | |

Reset | Repeat | Ignore

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# Graphic vs. Text

- Why not use LabView?

- Huge, expensive, separate world

- Easily gets complicate

- Difficult to printout/document


- Parsing

# Advantages using XOJO

- Interpreted & compiled

- on all relevant platforms (let's me work on Mac)

- easy to learn, yet complete

- very good pricing

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# Disadvantages using XOJO

- unknown, not mainstream

- Integration in different version control systems (SVN, GIT, TFS)

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