

Silverspoon Visualizer

PB138 Course Project

+ Team



- Juraj Pančík
 - Team Leader & Graphical User Interface
- Martin Žilák
 - SVG generation from parsed XML
- Norbert Slivka
 - Parser of input XML data
- Jan Hlava

+ Silverspoon Visualizer

Project Description

- Visualize Camel route configuration
- Boards: BeagleBoneBlack, Raspberry PI B+, CubieBoard 2
 - Each of them has different layout
- Input in form of XML
- Output is an SVG file
- Graphical user interface

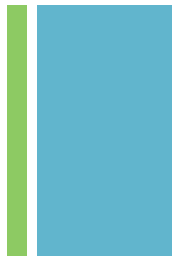




XML Parser



Norbert Slivka

+ XML Parser



- JavaX parser
- Scalability
- Forest-like structure
- API
- Text Output

```
private static List<Element> nodeListToList(NodeList list) {  
    List<Element> elements = new ArrayList<>();  
    for (int i = 0; i < list.getLength(); i++) {
```

Run:  gui [clean]  Run


"C:\Program ...


ROUTE (len = 3): gpio@ph7 -> bean -> mqtt >E

Process finished with exit code 0


2: Favorites

 Terminal

 9: Version Control

 4: Run

 6: TODO

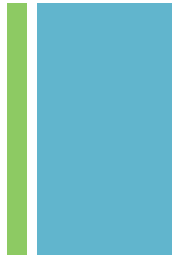
 All files are up-to-date (a minute ago)



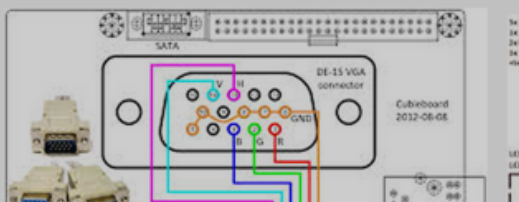
SVG generator

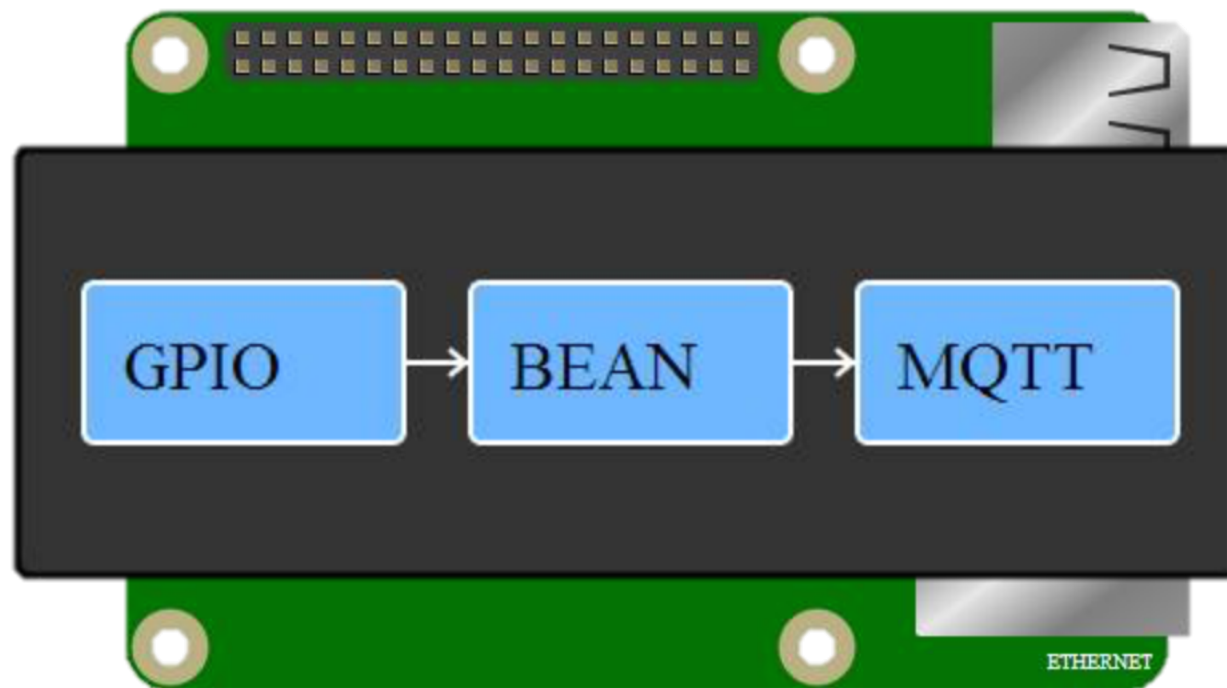
Martin Žilák

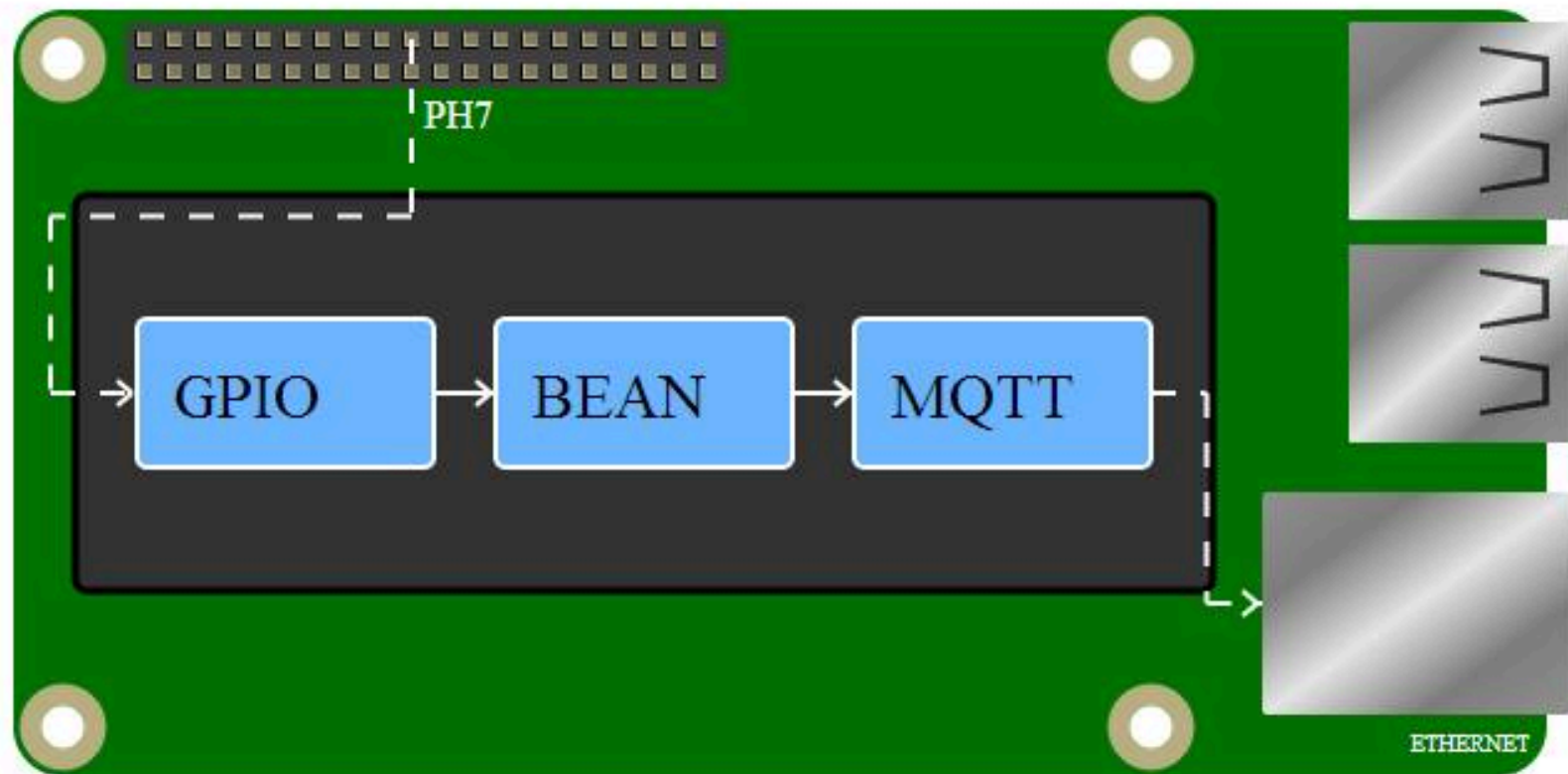
+ SVG Generator



- What is SVG?
- Board layout
- Drawing route
- Adding route to board
- I/O connections & board modifications





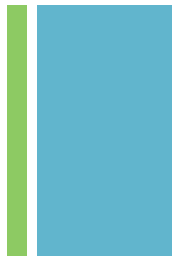




Graphical User Interface

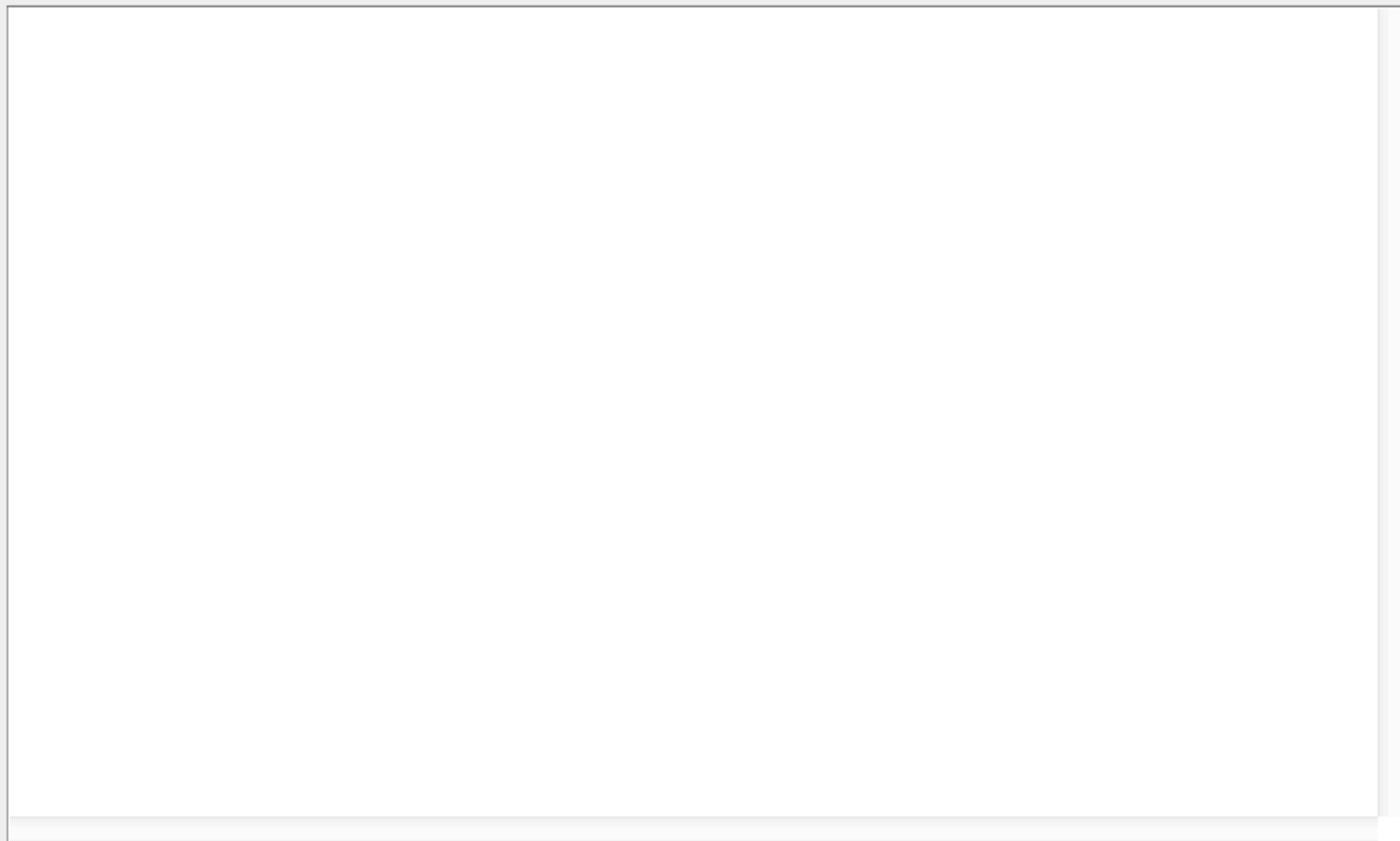
Juraj Pančík

+ Graphical User Interface



- KISS
- Java Swing
- Load input
- Generate SVG
- HTML output

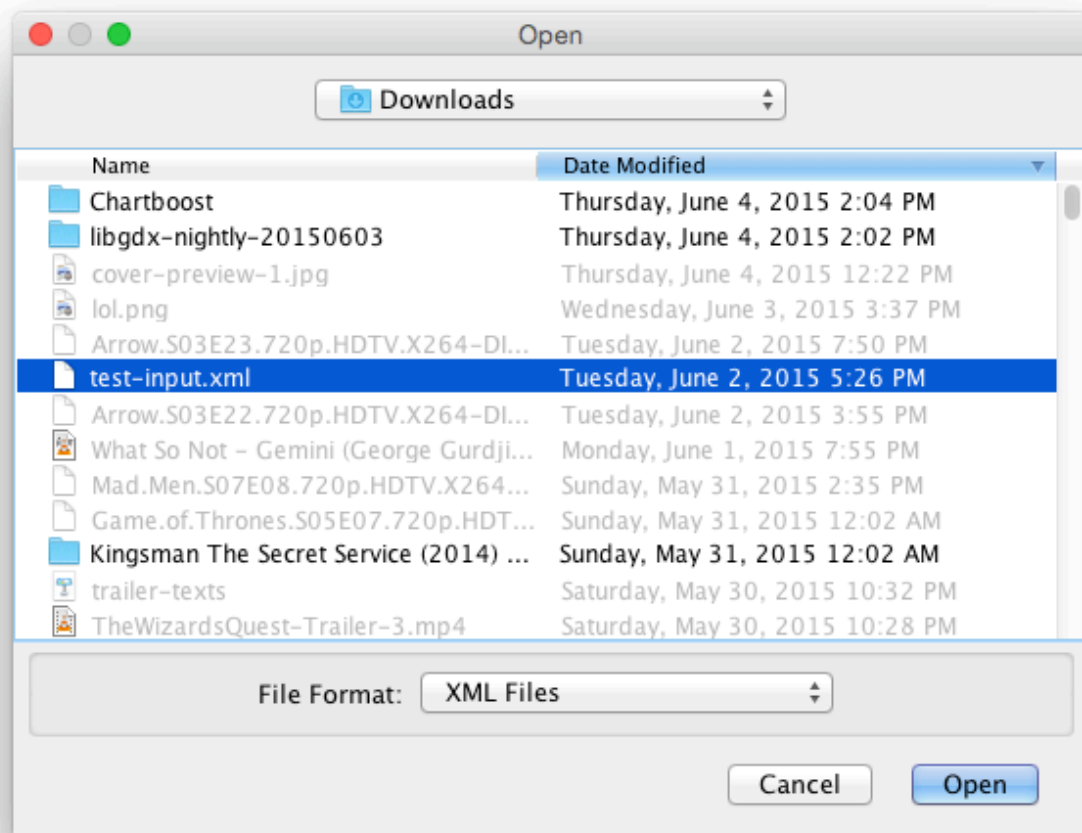
Silverspoon Visualizer



- ☒ BeagleBoneBlack
- ☐ Raspberry Pi B+
- ☐ CubieBoard 2

Load from file

Generate



- ☒ BeagleBoneBlack
- ☐ Raspberry Pi B+
- ☐ CubieBoard 2

Load from file

Generate

```
<?xml version="1.0" encoding="UTF-8"?><!-- suppress SpringFacetInspection --><beans xmlns="http://www.springframework.org/schema/beans" xmlns:xsi="http://www.springframework.org/schema/xsi" xsi:schemaLocation="http://www.springframework.org/schema/beans http://www.springframework.org/schema/beans/spring-beans.xsd">
  <bean class="org.jboss.qa.camel.WebCamBean" id="webCamBean">
    <property name="picturesDirectory" value="/var/www/pictures"/>
    <property name="outName" value="picture"/>
    <property name="baseUrl" value="http://cubieboard/pictures"/>
  </bean>
  <camelContext xmlns="http://camel.apache.org/schema/spring" trace="false">
    <route customId="true" id="iot-door-bell-route">
      <from uri="gpio://ph7?value=HIGH"/>
      <to uri="bean:webCamBean?method=getPicture"/>
      <to uri="pokus:hokusCaryMary"/>
      <to uri="cvirikdsaf:dhokusCaryMary"/>
      <to uri="wwwwww:shokusCaryMary"/>
      <to uri="popokatepetlot:ahokusCaryMary"/>
      <to uri="mqtt://iot-demo?host=tcp://localhost:1883&publishTopicName=lotDemo"/>
    </route>
  </camelContext>
</beans>
```

- ☐ BeagleBoneBlack
- ☒ Raspberry Pi B+
- ☐ CubieBoard 2

Load from file

Generate


```
<?xml version="1.0" encoding="UTF-8"?><!--suppress SpringFacetInspection --><beans xmlns="http://www.springframework.org/schema/beans" xmlns:xsi="http://www.springframework.org/schema/xsi" xsi:schemaLocation="http://www.springframework.org/schema/beans http://www.springframework.org/schema/beans.xsd">
  <bean class="org.jboss.qa.camel.WebCamBean" id="webCamBean">
    <property name="picturesDirectory" value="/var/www/pictures"/>
    <property name="outName" value="picture"/>
    <property name="baseUrl" value="http://cubieboard/pictures"/>
  </bean>
  <camelContext xmlns="http://camel.apache.org/schema/spring" trace="false">
    <route customId="true" id="iot-door-bell-route">
      <from uri="gpio://ph7?value=HIGH"/>
      <to uri="bean:webCamBean?method=getPicture"/>
    </route>
  </camelContext>
</beans>
```

Error

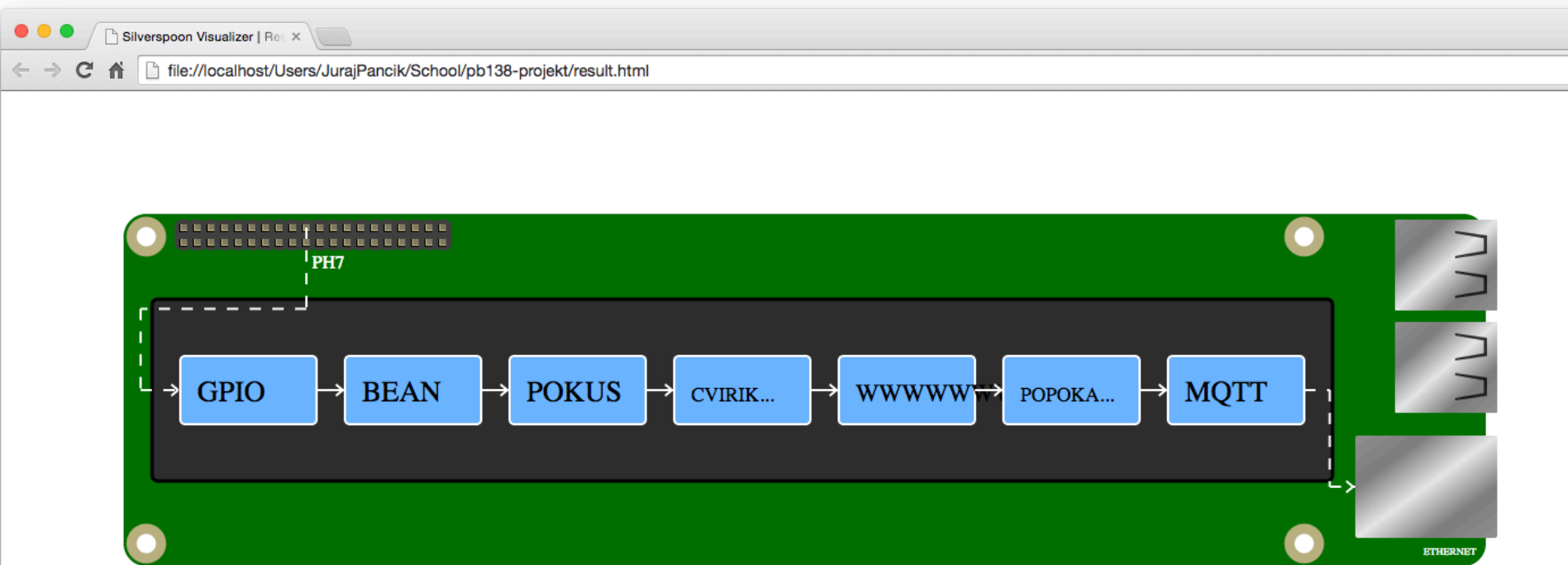


An error with generating svg has occurred: Beaglebone Black only has p8 and p9 pin headers! You entered: ph7.

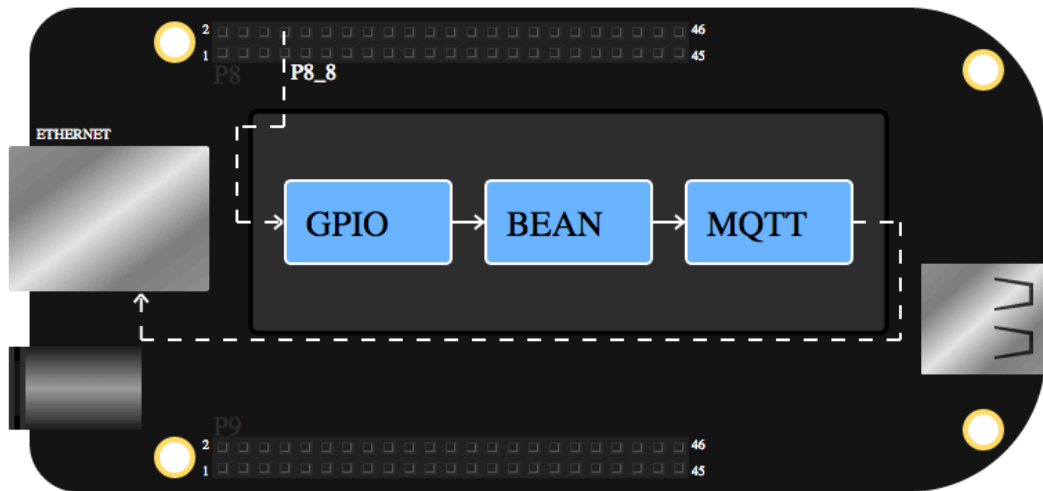
OK

Load from file

Generate



Here's your generated SVG file from the XML input. To download it, press right click [on this link](#) and select Save as. Alternative navigate to the root of the Silverspoon Visualizer and copy output.xml.



Here's your generated SVG file from the XML input. To download it, press right click [on this link](#) and select Save as. Alternative navigate to the root of the Silverspoon Visualizer and copy output.xml.



Thank you for your attention