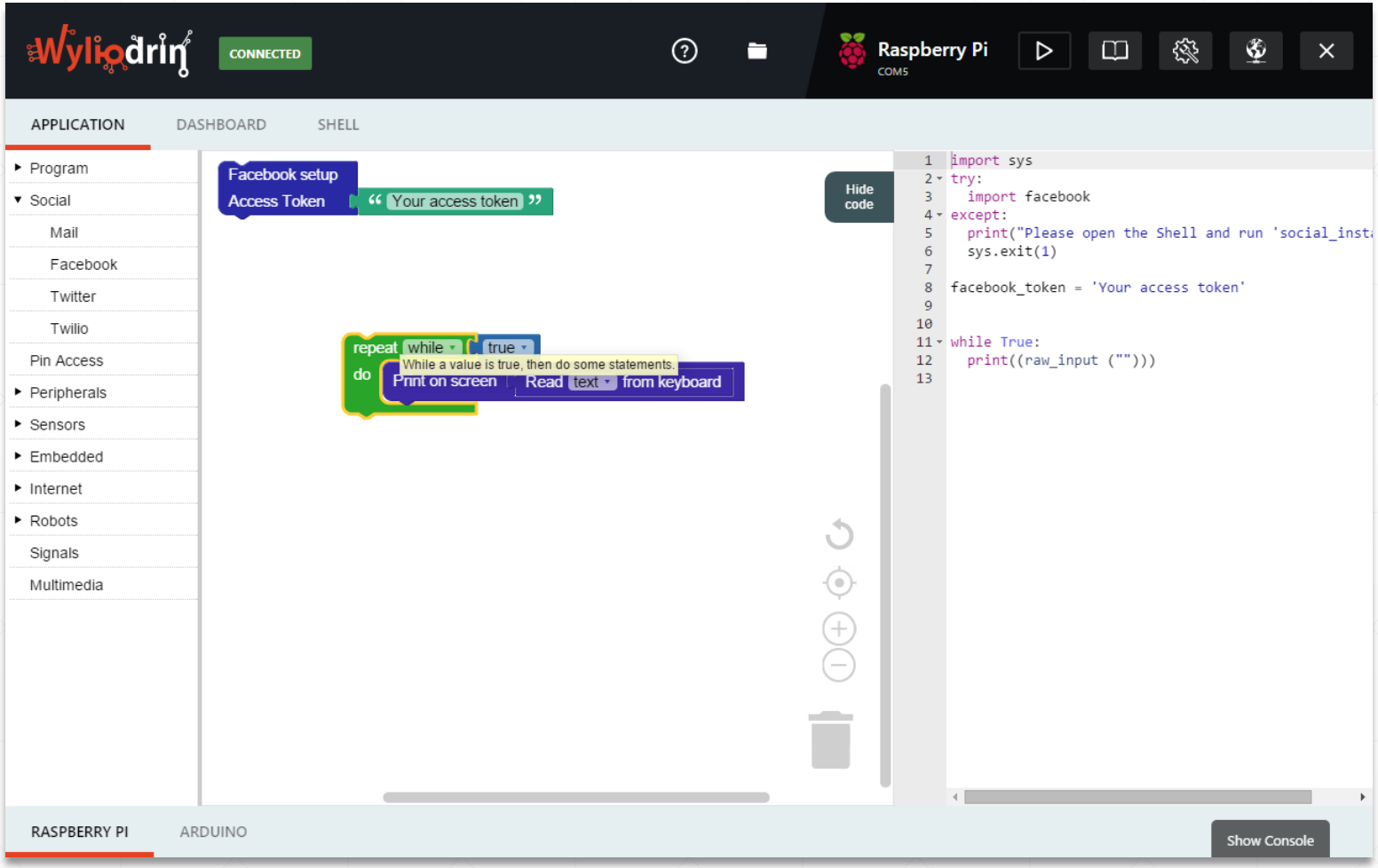
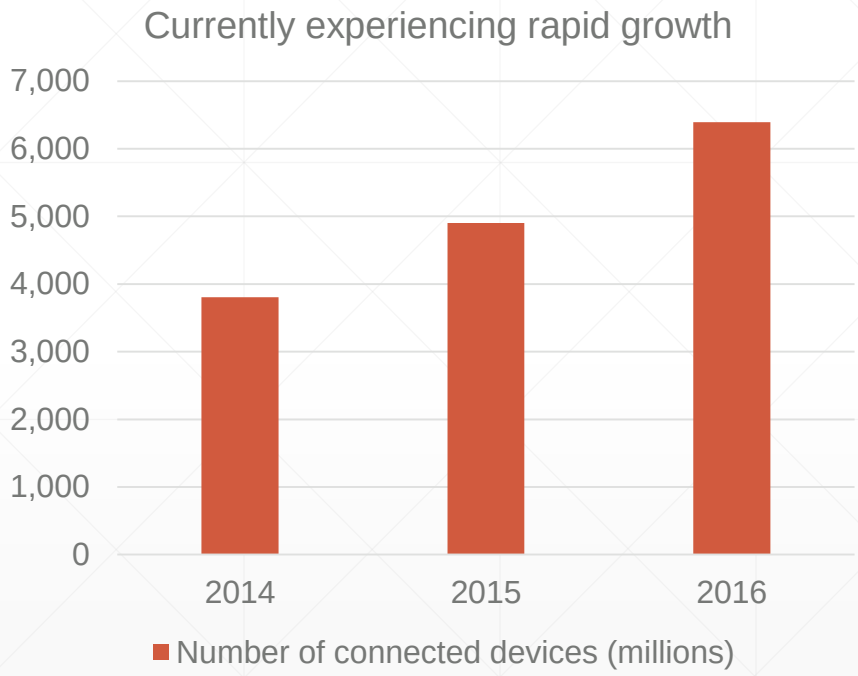
An Open Source Tool for IoT Development

What is the product



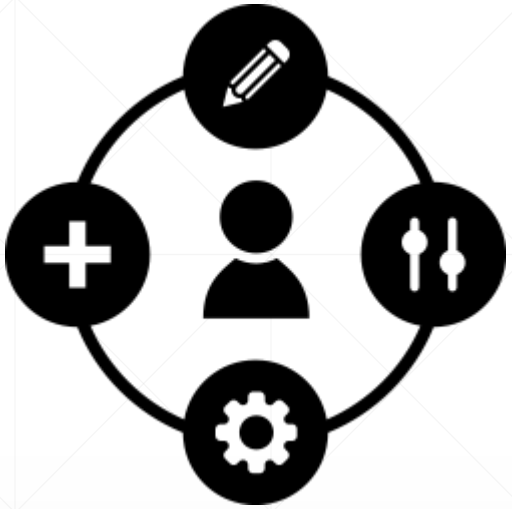
The technology: Hardware

- Before Raspberry Pi
  - expensive embedded devices
  - few devices
- Raspberry Pi changed the game



Our journey: The vision

- Goal:
  - A new approach towards engineering
  - IoT accessible to everyone

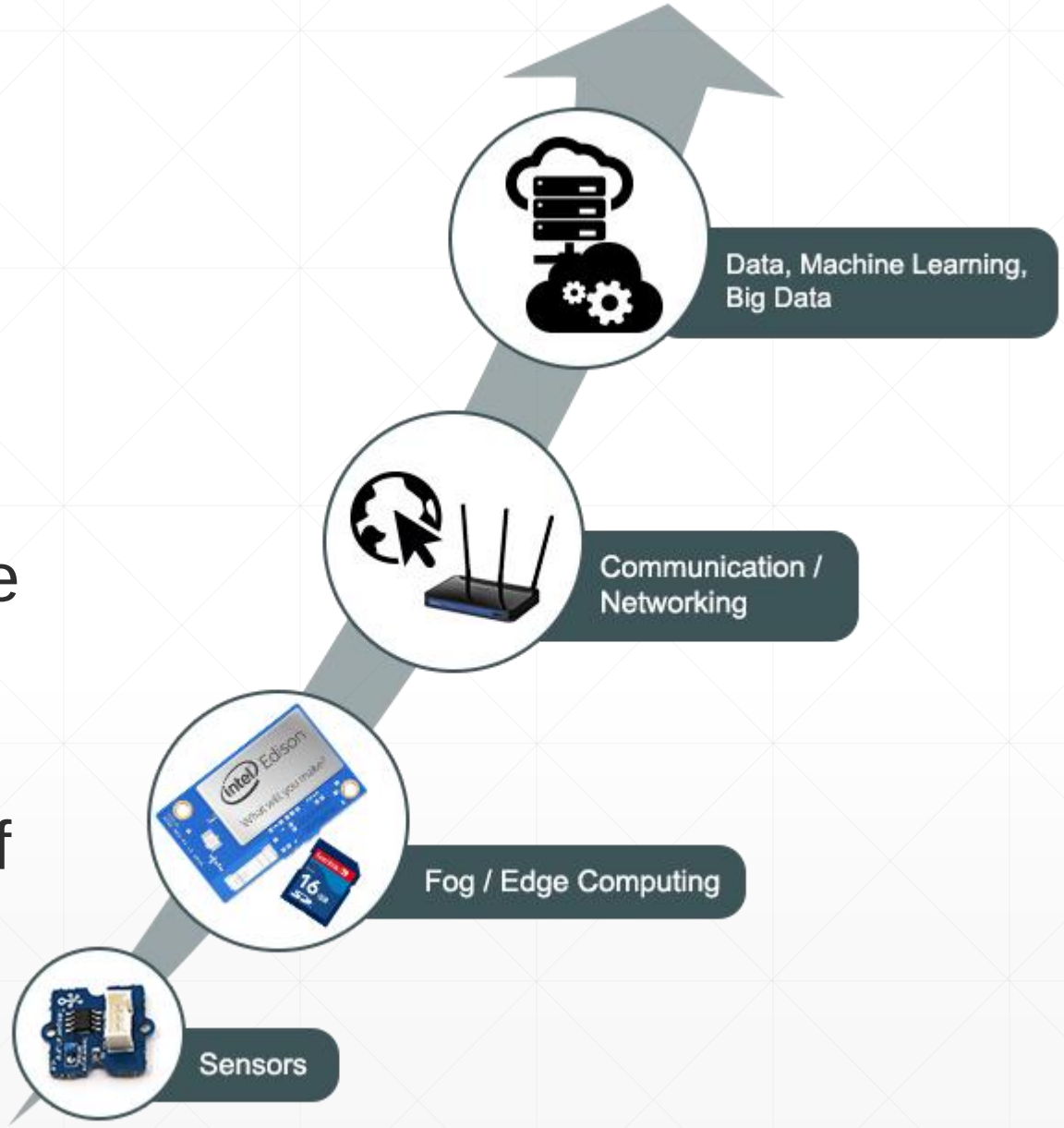


Create, modify, tweak, customize current solutions to your needs and use cases

The IoT stack

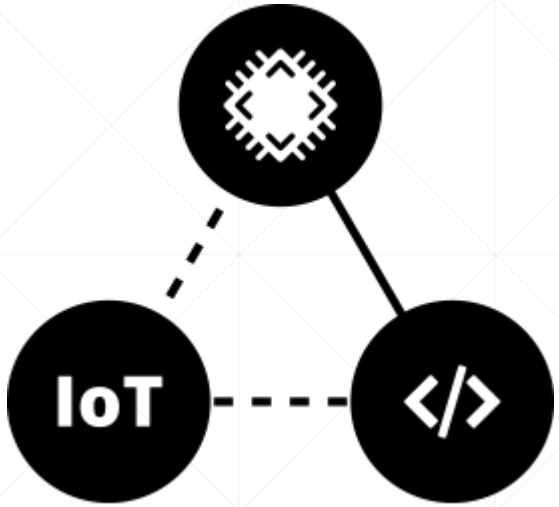
The problem

- Arduino (Uno) does well on Level 2 but does not follow the upper stack
- Raspberry Pi follows the full stack, but lacks the benefits of Arduino



Microcontrollers vs Embedded Boards

- Arduino Yun preferred to Raspberry Pi
- The fault
  - development tools
  - accessibility



Most of the projects are not IoT projects,
they fall into electronics or programming

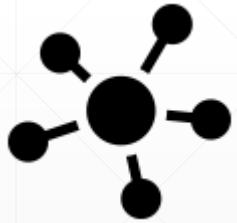
The solution

- Transfer the accessibility typical of Arduino to Raspberry Pi

Ease to use

Direct access

High productivity



Use from anywhere

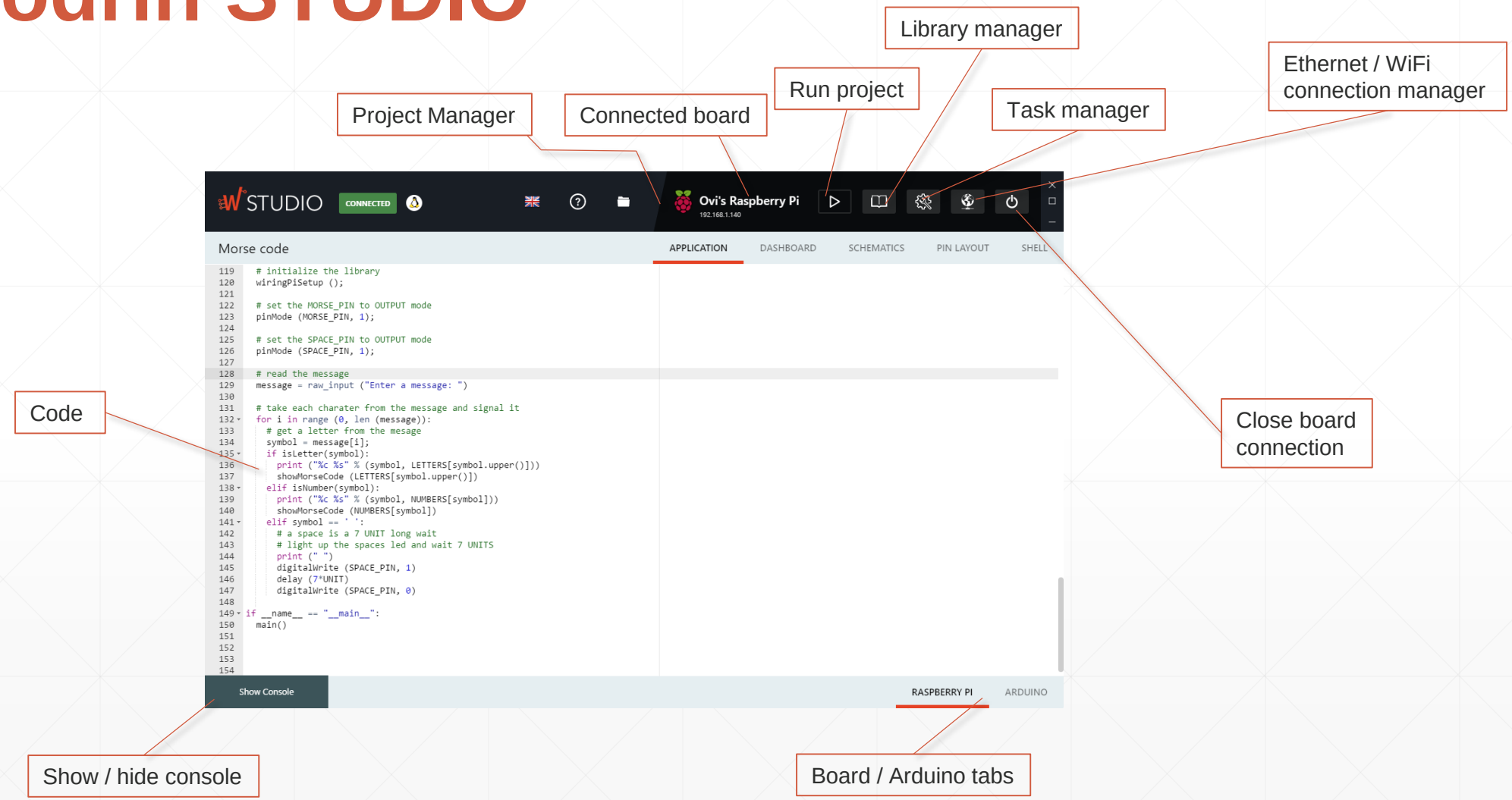
Our tools for IoT : Wyliodrin

- Since 2013
- Fully Web-based
- Complex IDE
- Open Source components
- Free for basic use
- Supports various hardware: Arduino Yun, Raspberry Pi, Intel® Galileo, Intel® Edison, UDOO, BeagleBone Black

Wyliodrin STUDIO

- Open Source
- Available for
  - Arduino Yun
  - UDOO Neo
  - Raspberry Pi
  - BeagleBone Black
- Works locally

Wyliodrin STUDIO



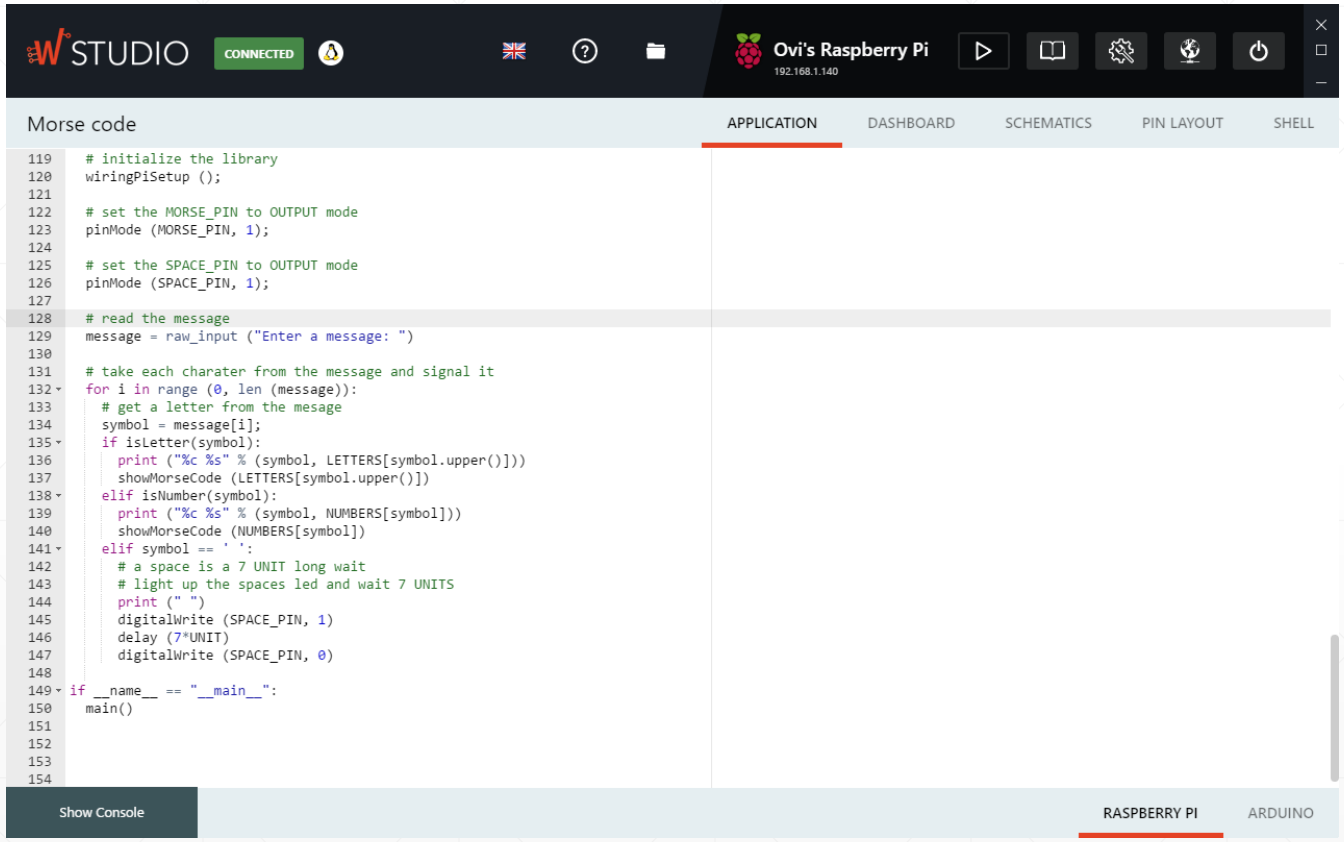
Board Connection

- Direct connection
  - Serial communication
- Remote connection
  - Uses mDNS to discover devices in the same network

Programming

Professional code editor

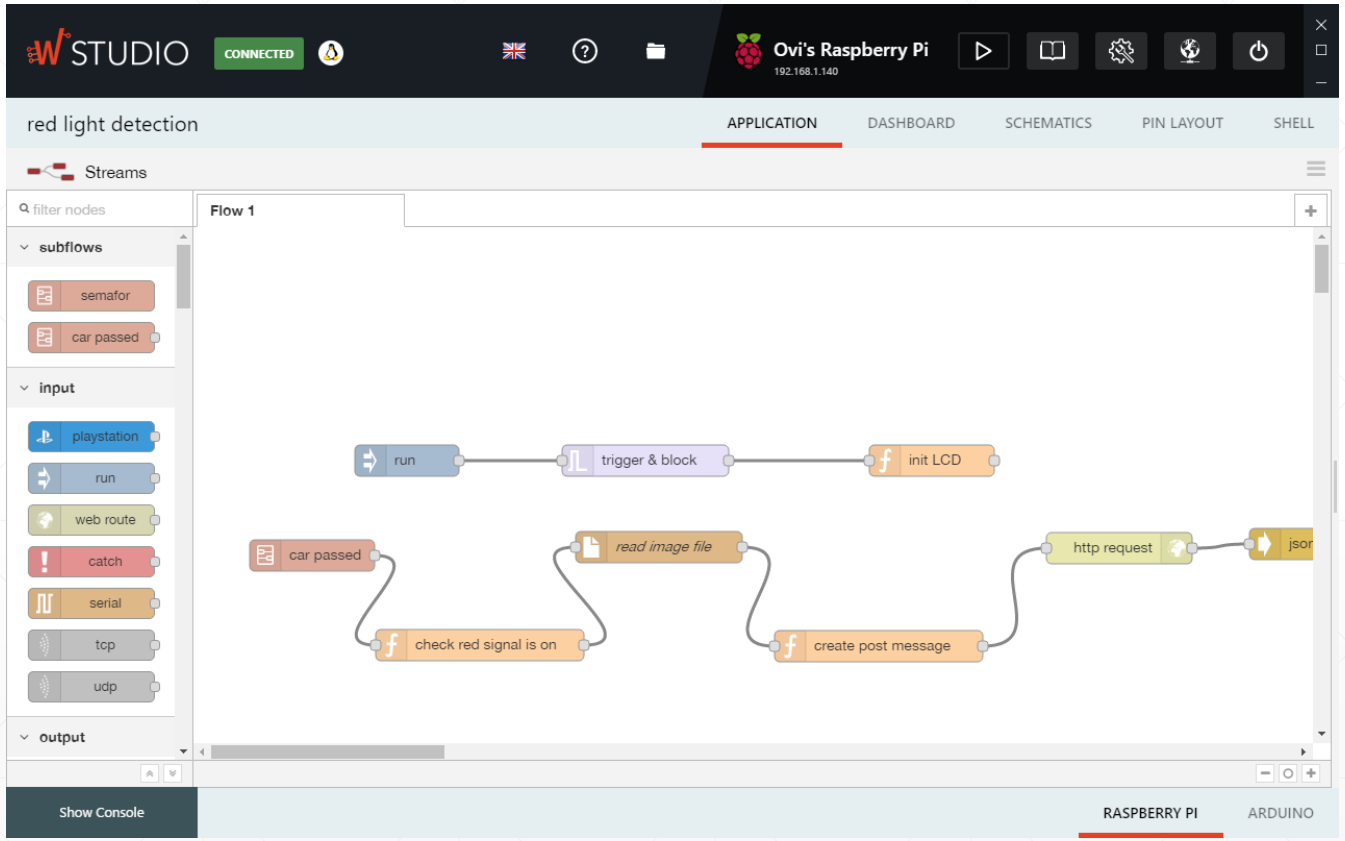
Advanced features such as autocomplete



Streams

Data flow programming

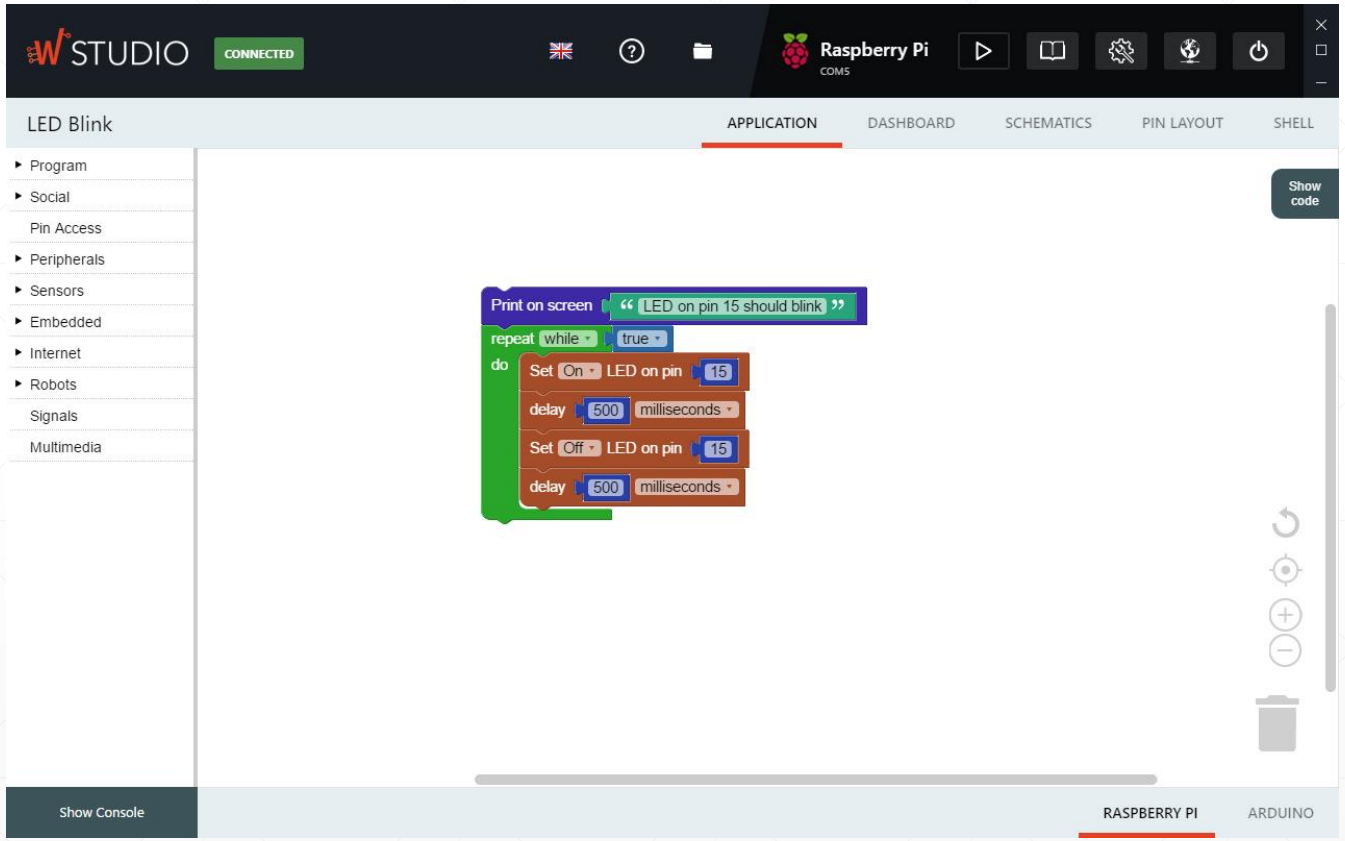
Implementation of node-red



Visual Programming

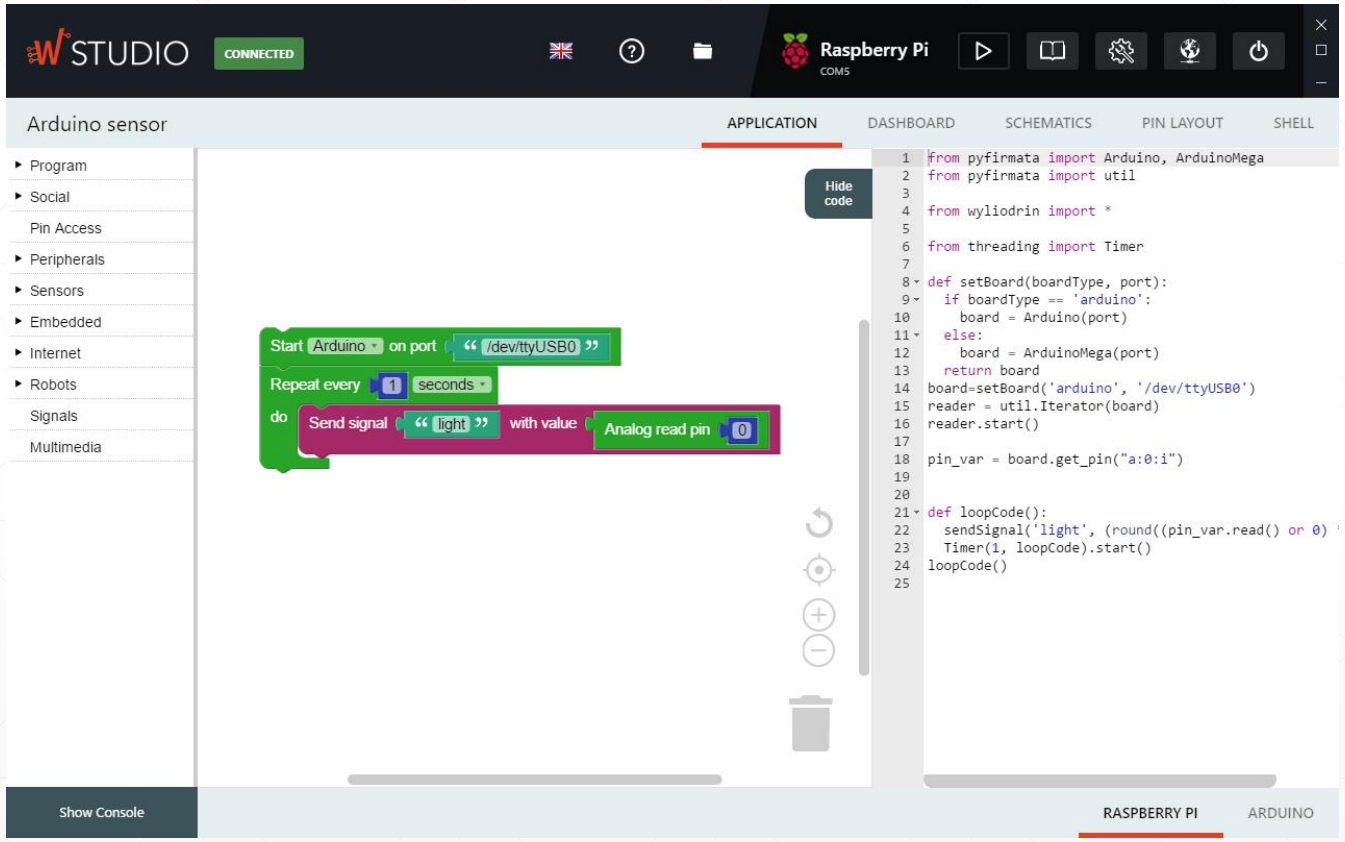
Drag and drop blocks of code

Implements Google Blockly



View the source

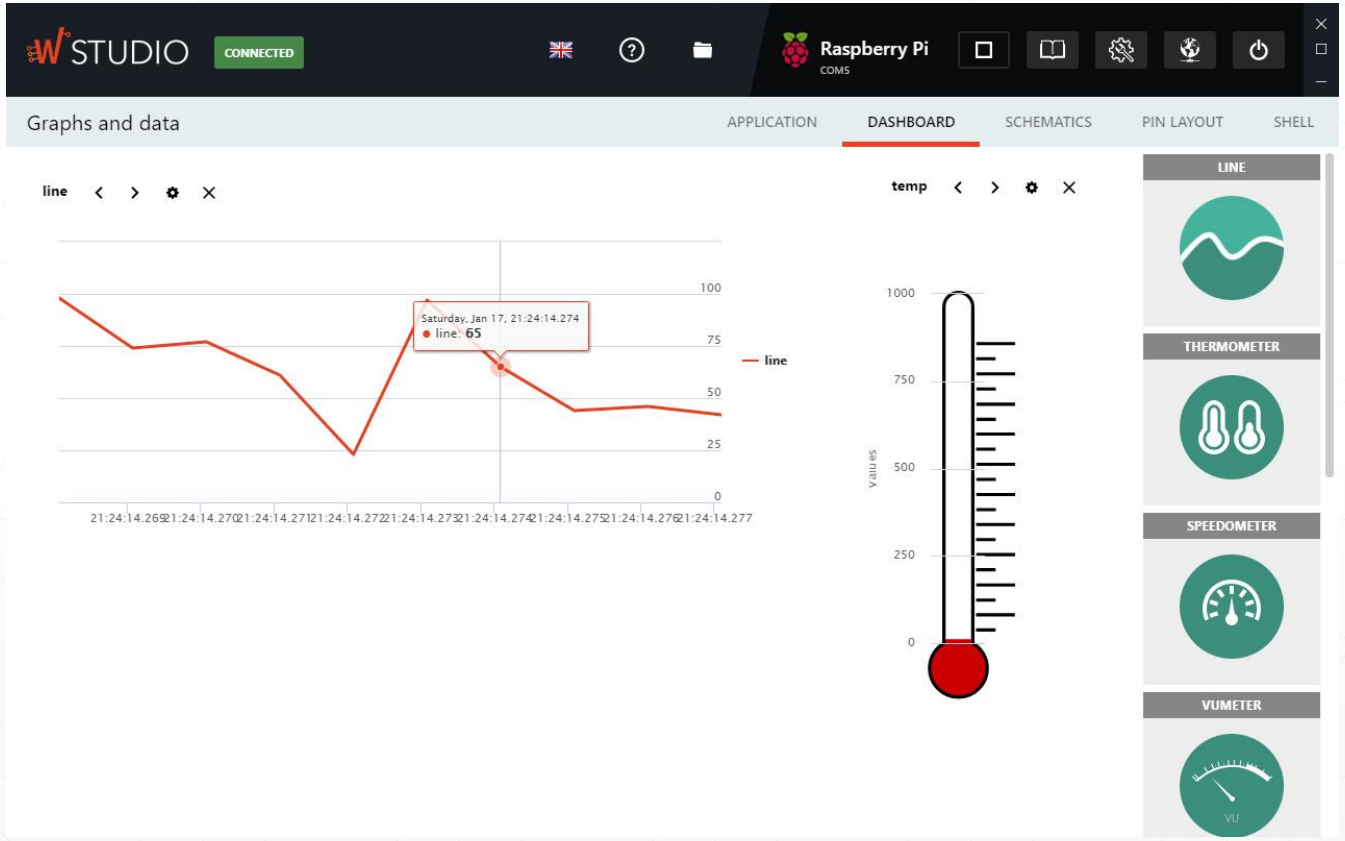
View as Python
code gets generated



Debug

Send signals to dashboard

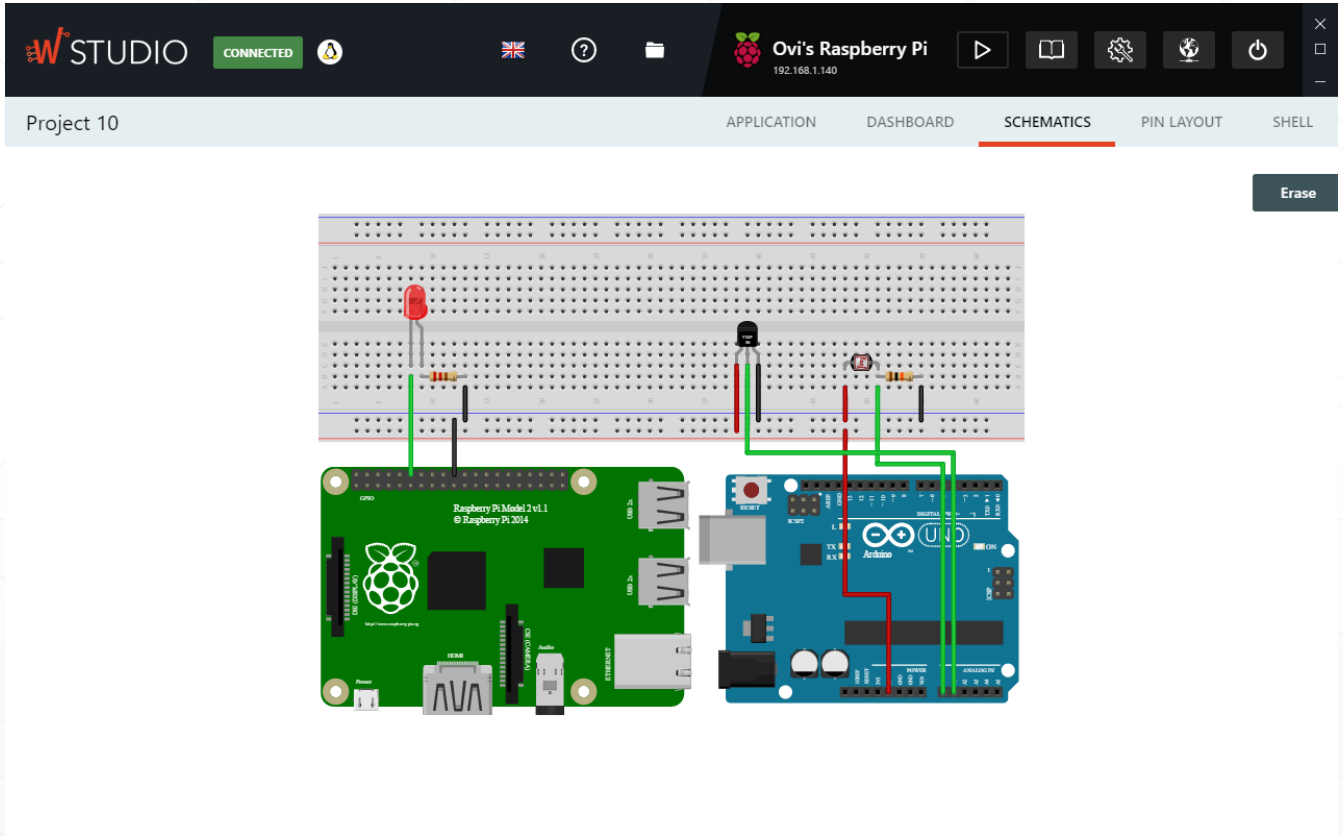
Put flags on graphs



Fritzing Schemas

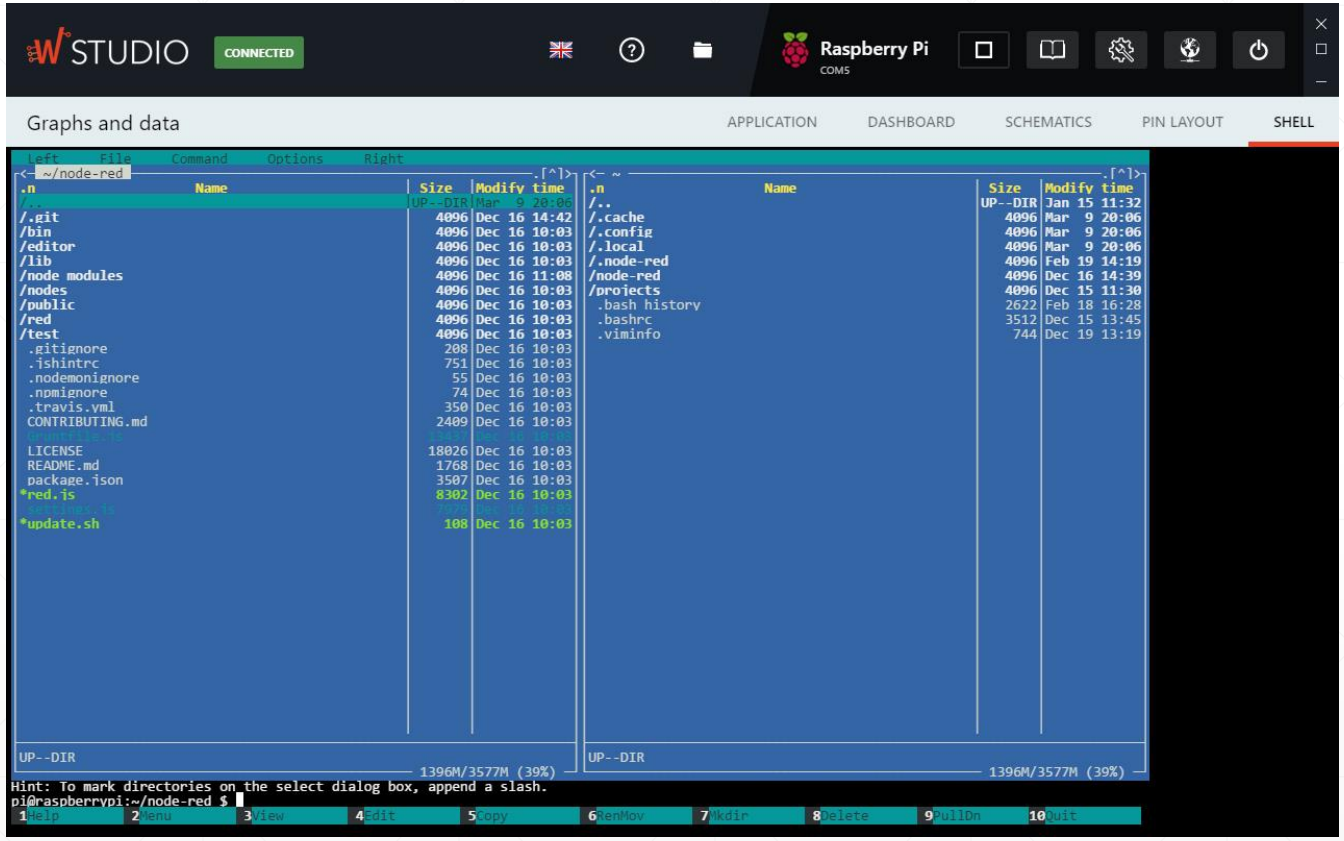
Import SVG from Fritzing

Attach schema to application



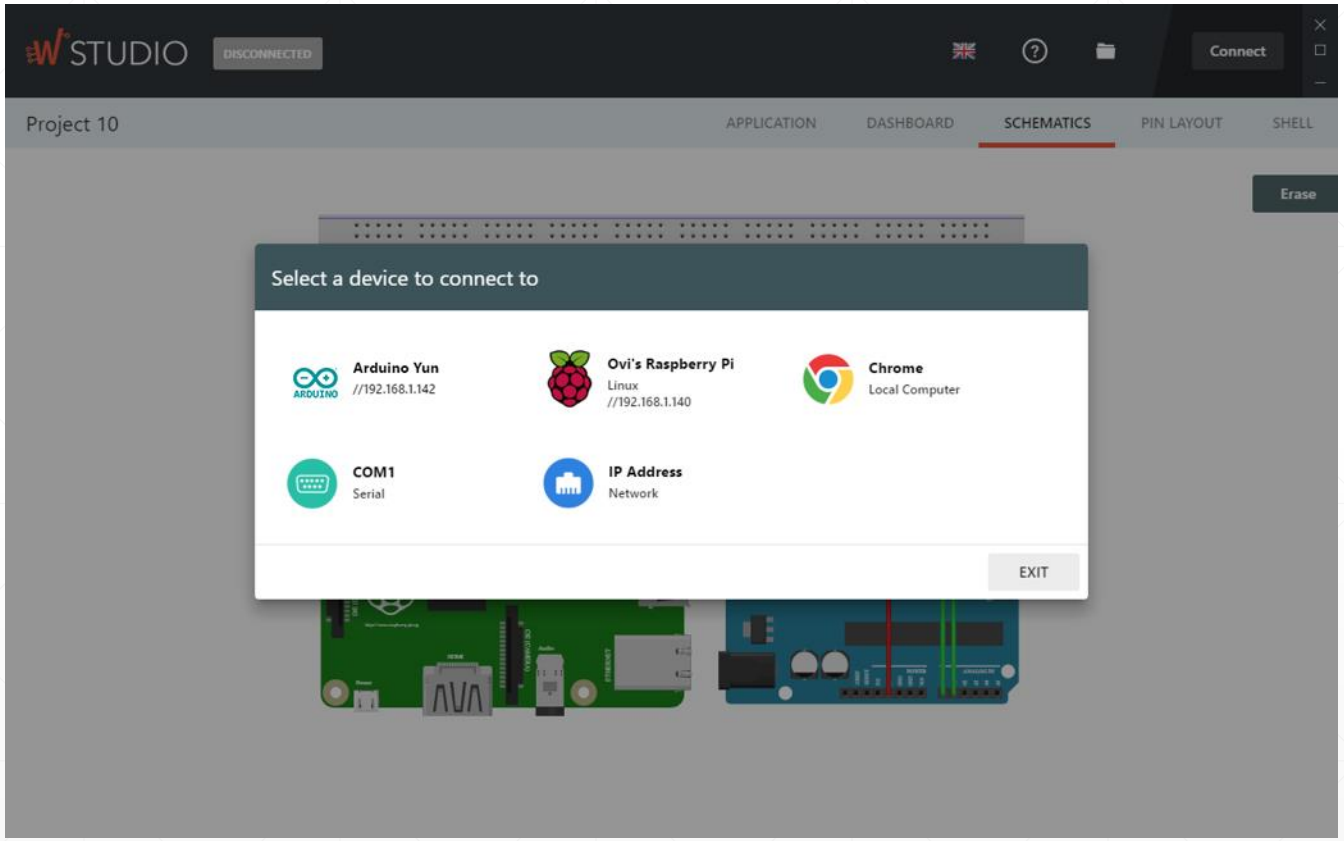
Shell

Direct shell for advanced users



Board manager

- Visually Manages:
  - Network connections;
  - Libraries;
  - Tasks;
  - Projects.



libwyliodrin

- Open Source library
- Universal API for pin control and board communication
- Compatible with:
  - Arduino Yun
  - Raspberry Pi
  - Intel Galileo
  - Intel Edison
  - BeagleBone Black
  - UDOO Neo

Wylidorin STUDIO: future steps

- Enlarge the community
- Lessons
- Hardware simulation
- Projects sharing

Thank You!

Any questions?