WL-P2P-WIFI
WIFI, GROUPS, NETWORKS, ROUTERS

WEBELIVE

Tools for a LIVE Web
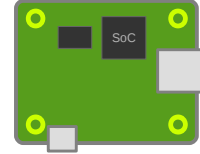
On Github

"WL" stands for WEBELIVE, a series of small tutorials to use open source tools to connect devices in direct, private, secure P2P fashion

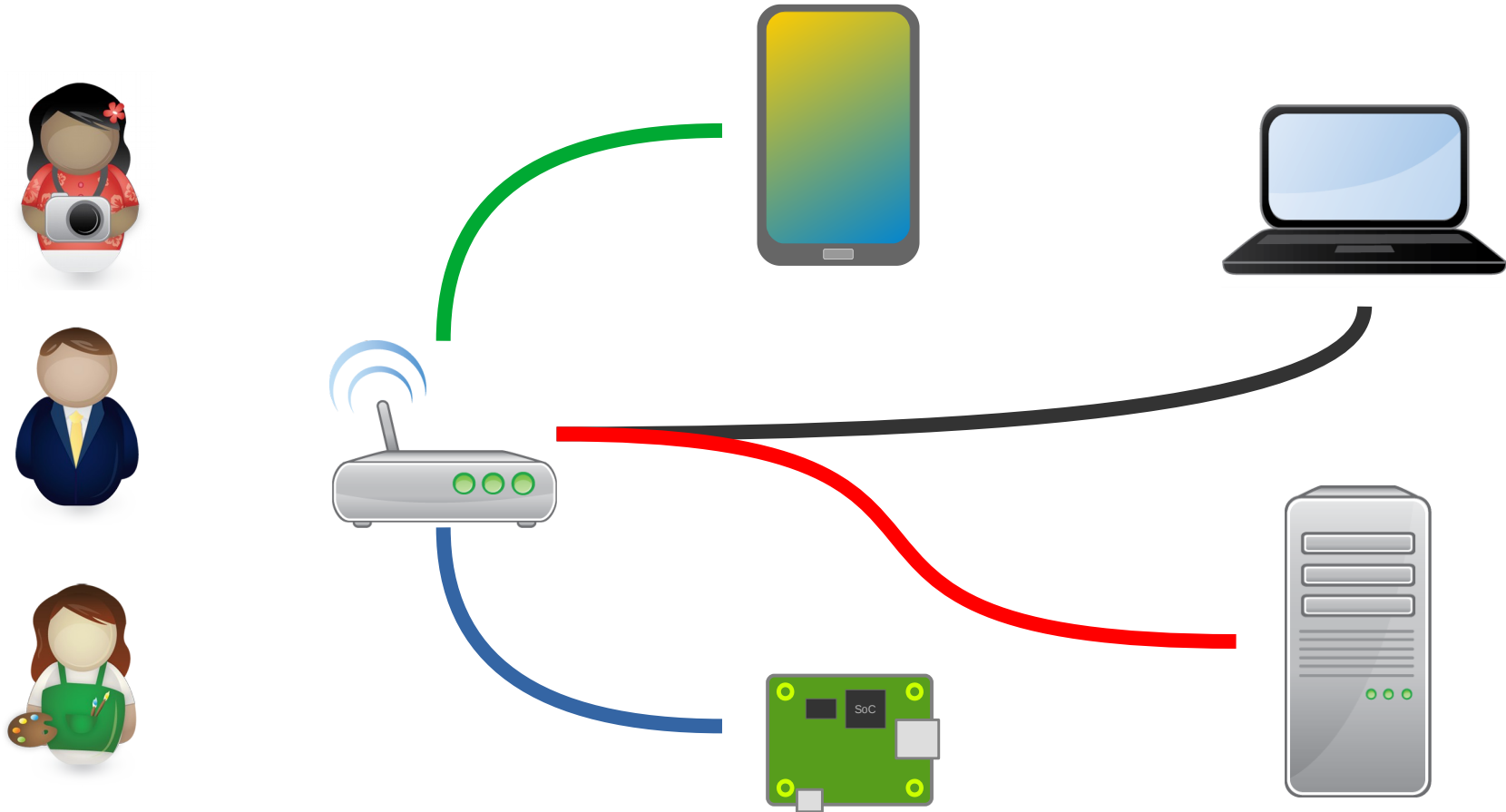# P2P WIFI
WIFI, GROUPS, NETWORKS, ROUTERS

In age of **multiple** compute devices PER PERSON,
<u>**basic understanding**</u> of NETWORKING
is THE KEY ...

Tutorial is **10x** easier (visual, divided small pieces)
Learning makes devices **100x** more useful
You get **100x** more safe, secure, private

Learn & Control Connections on Devices
Protect & Create more

3 INDEPENDENT, VERY EASY TUTORIALS

TUTORIAL 1 – Peer WiFi + Net Sharing, Manual IP

1A Peer WiFi Manual IP

1B Peer WiFi + Net Sharing

TUTORIAL 2 – P2P WiFi + Net Sharing, Auto IP

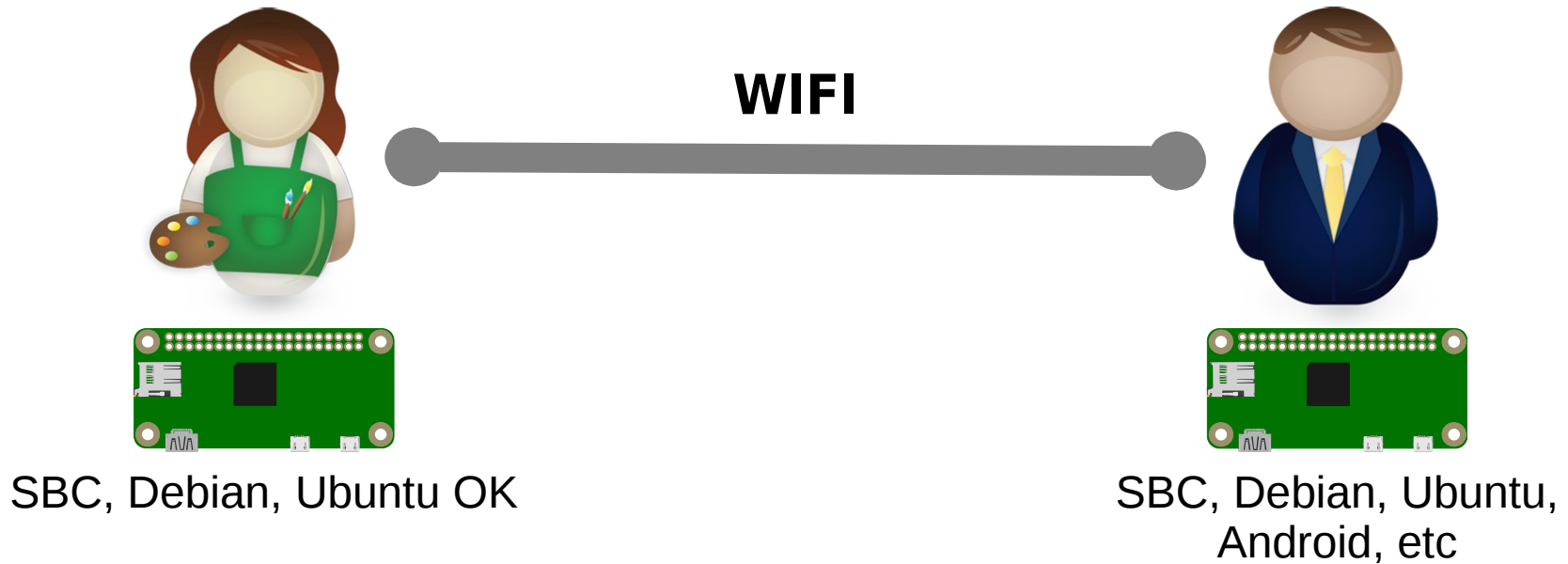2A P2P WiFi, Auto IP

2B P2P WiFi + Net Sharing

TUTORIAL 3 – Internet Router Bridge

Peer WiFi + Net Sharing, Manual IP

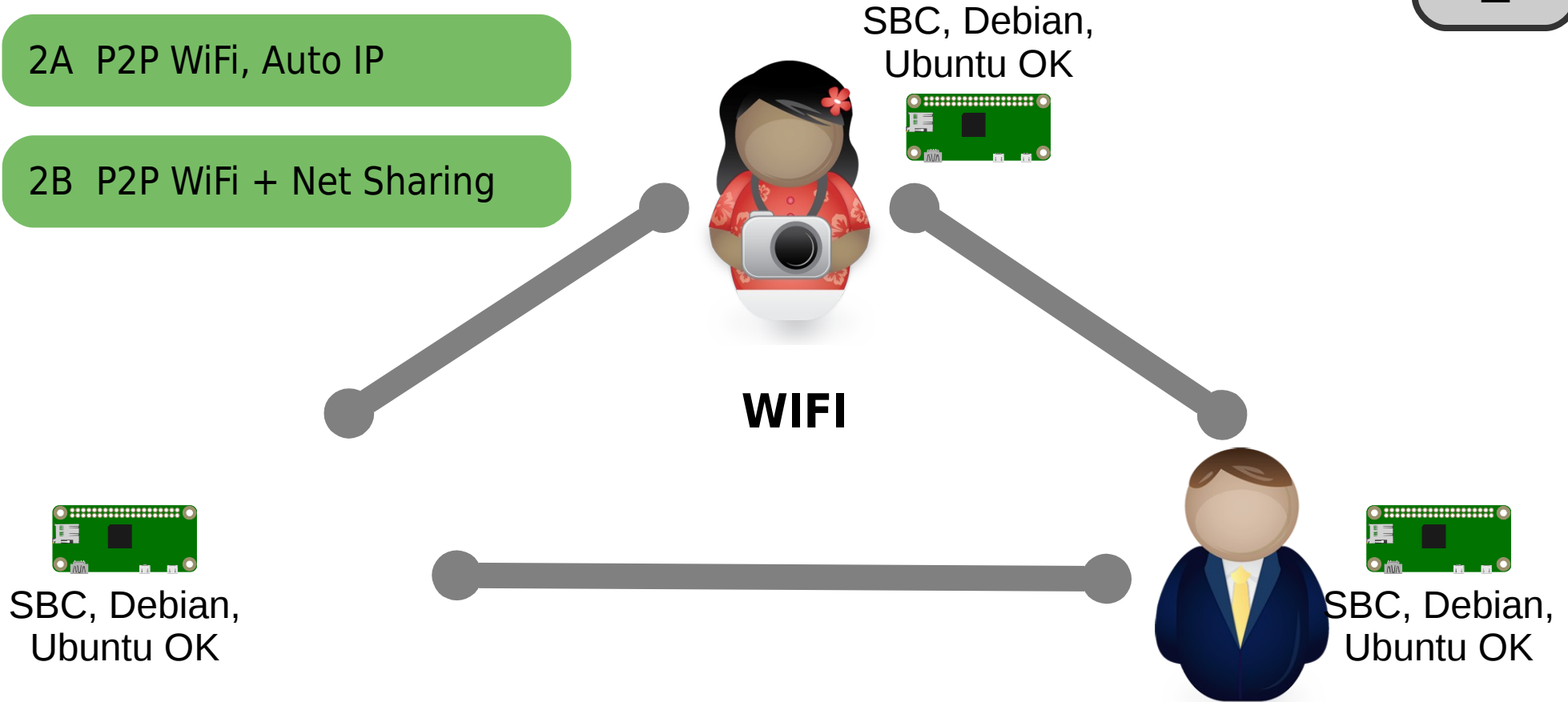**1A Peer WiFi Manual IP**

1B Peer WiFi + Net Sharing

WIFI

SBC, Debian, Ubuntu OK

SBC, Debian, Ubuntu,
Android, etc

Soft used: hostapd

P2P WiFi + Net Sharing, Automatic IP

2

2A P2P WiFi, Auto IP

2B P2P WiFi + Net Sharing

SBC, Debian, Ubuntu OK

WIFI

SBC, Debian, Ubuntu OK

SBC, Debian, Ubuntu OK

Soft used: hostapd + dnsmaq

Internet Router Bridge

3

Internet WiFi **Bridge**

CABLE

WIFI

SBC, Debian, Ubuntu, etc

WIFI

SBC, Debian, Ubuntu, Android, etc...
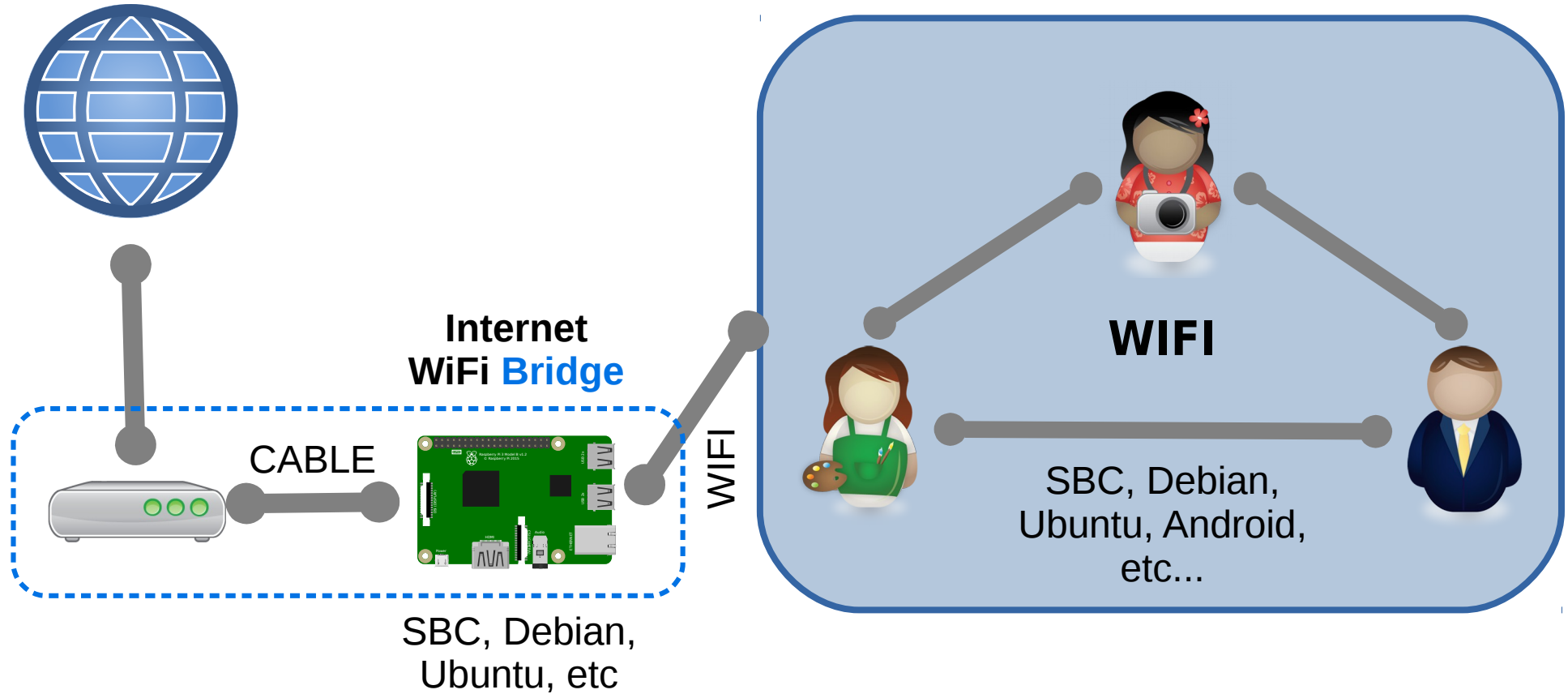
Soft used: hostapd + bridge-utils

A ROUTER / WIFI STATION FOR EACH PURPOSE!
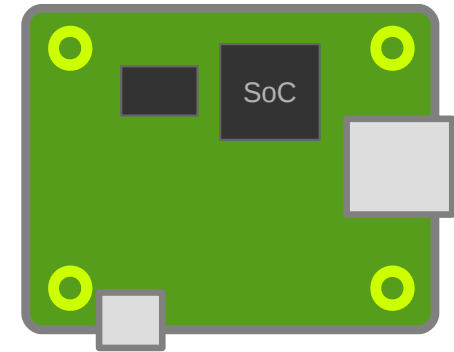**A NETWORK FOR EACH PURPOSE!**

For a typical user, there is always MANY different needs, and should be always different models of networks and routers!

Home, Office or Business, should benefit from different types of networks and routers.

SBC makes networks and routers easy to use, simple to setup and cheap to buy!
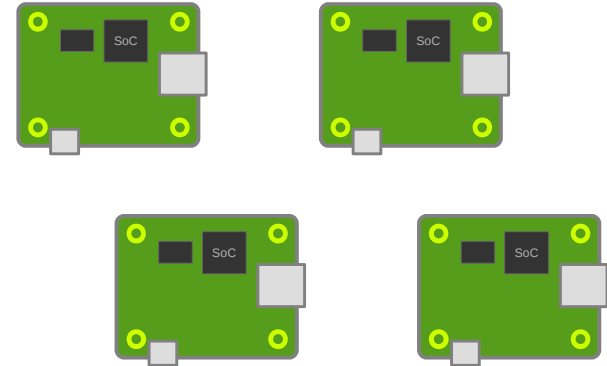
Low Cost $10~$15

SBC - single board computer

CUSTOM DEDICATED ROUTERS ARE KEY FOR THE CURRENT AGE OF MULTIPLE COMPUTE DEVICES.
MONOLITHIC ROUTERS CREATE TOO MUCH LIMITATIONS ON WHAT USERS CAN DO WITH THEIR DEVICES...

**MONOLITHIC
ALL IN ONE
ROUTER**

**DOMAIN SPECIFIC
(specific need)
ROUTER**

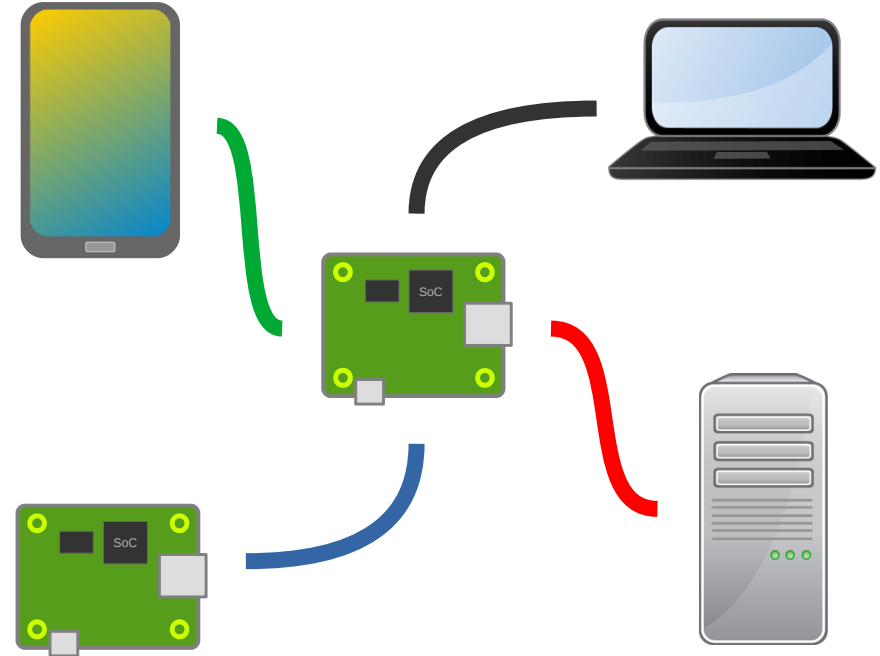**PROPRIETARY / CLOSED
SHORT TERM SUPPORT**

**OPEN SOURCE
LONG TERM SUPPORT**

In the ERA of the Internet of EVERYTHING, we need "mini-router/networks" Everywhere!
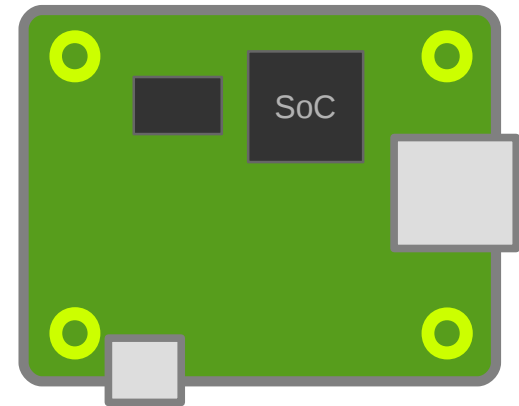
PC Era
Router/WiFi Station

Devices Era
Mini Network/Router

FULL CONTROL by SCRIPT/PROGRAM

WHEN YOU WANT
WHAT YOU WANT
WHERE YOU WANT

WHO CAN ACCESS
ETC...

>

A NETWORK/ROUTER THAT YOU CAN PROGRAM!

Possible Applications:

Home Network (inside house, quick-net)
Office Network (inside a building or office)
Event Network (booth fair, convention, group meeting)
Ad Hoc Network (P2P data transfer)
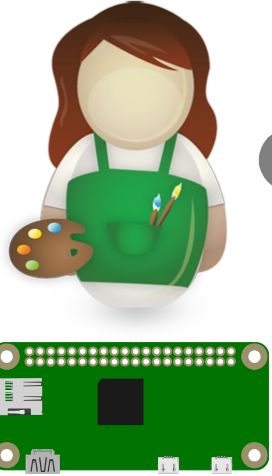Small Bizz Network (office, shop, booth)
Movable Network (bus, truck, train, ship, plane)
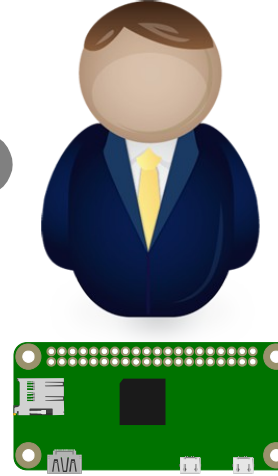Bizz Network (supermarket, large store, home center)

Full Programmable Intelligent WIFI Network/Router
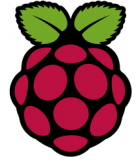(switch ON when needed, OFF otherwise)

TESTED SYSTEMS

Peer (host)

WIFI

Peer (guest)

Raspbian, Debian x86 PC, Ubuntu x86 PC systems were used on the peer-host side (place where the software is installed).
Raspbian, Debian x86 PC, Ubuntu x86 PC, Android were used on the peer-guest side (place that connects to the wifi network.
The instructions should work also on any SBC running GNU/Linux and any GNU/Linux System running on any x86 notebook or desktop... small difference may exist from system to system, but, the general ideas exposed will be the same..."
An extra-doc will show details on how to run peer-host on x86 Debian and Ubuntu.