
Kiwi PyCon 2017 – Auckland New Zealand

Client / Server Programming Model SystemBus – pydbus – systemd

Practical Example

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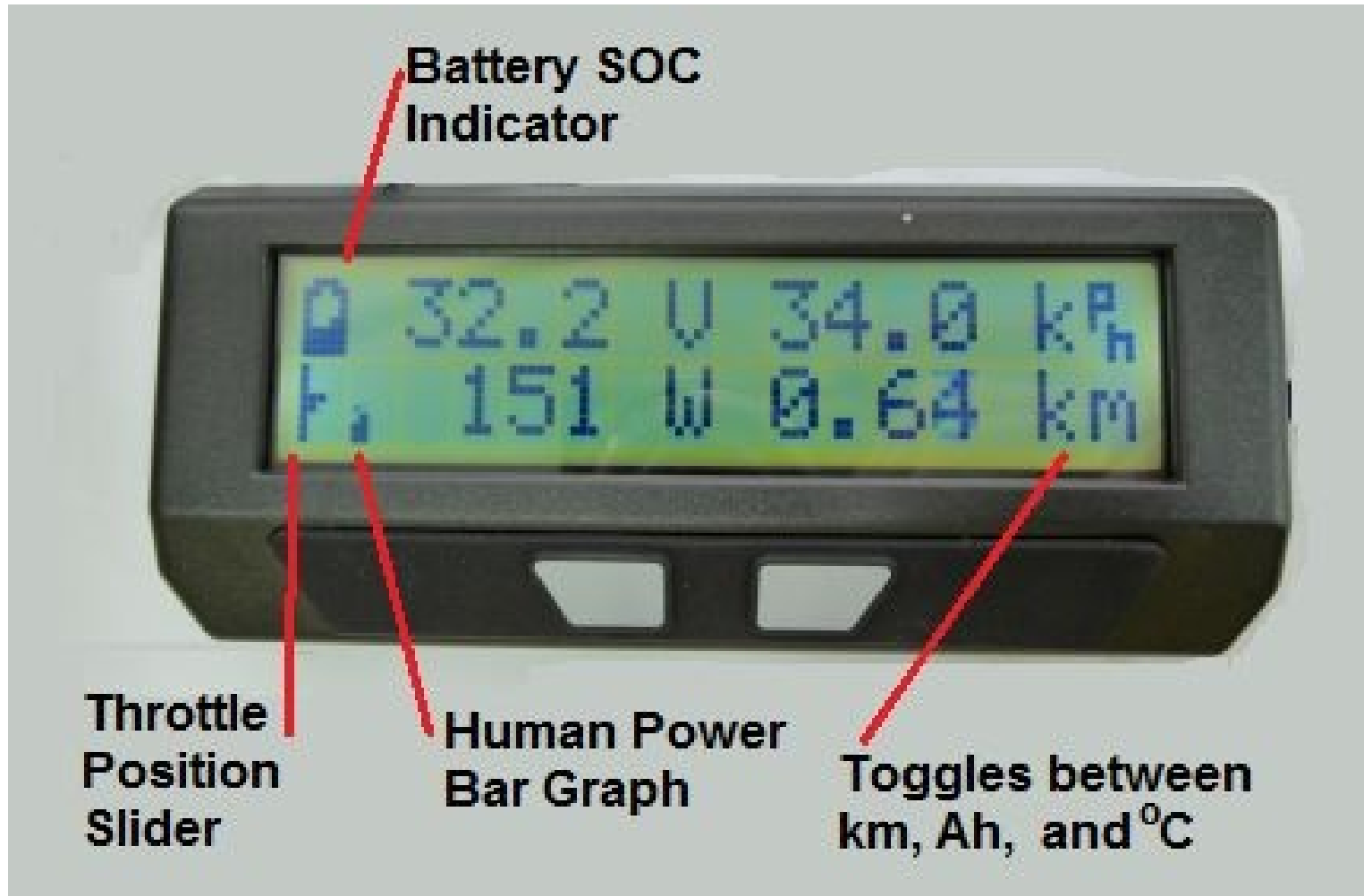
Website: <https://hampug.pythonanywhere.com/>

Posted at: <https://github.com/irsbugs/kiwipycon2017>

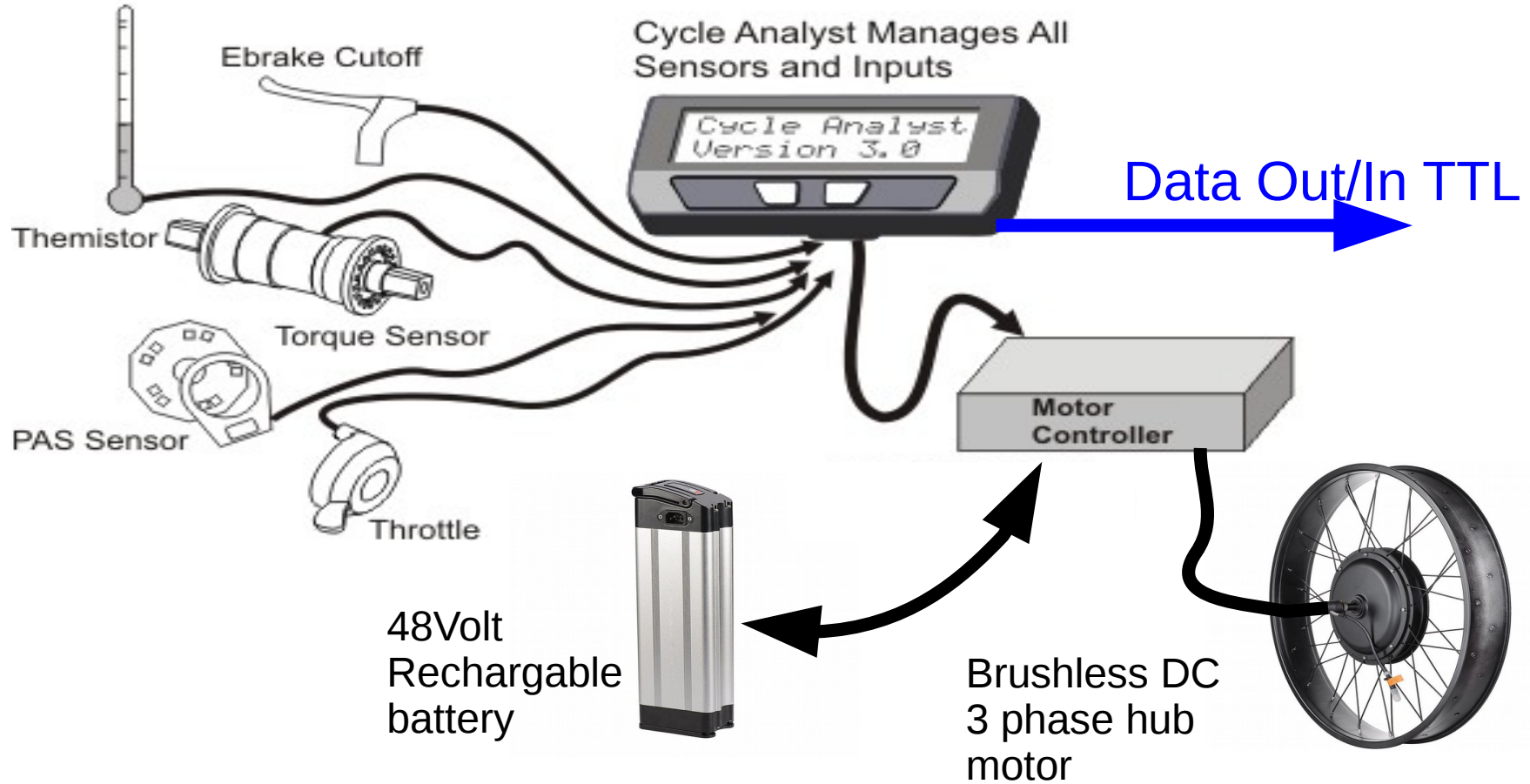
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Cycle Analyst





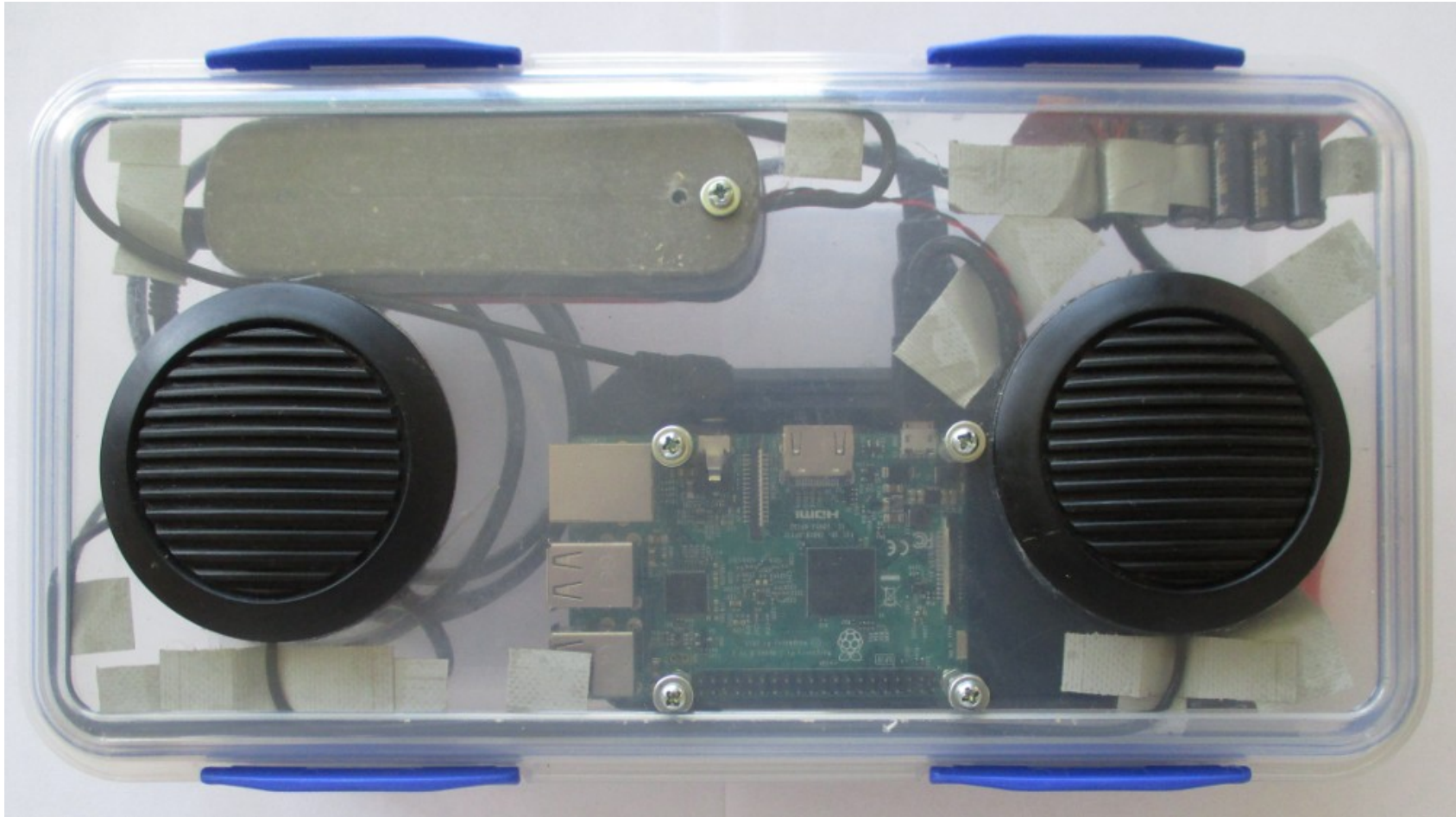
Cycle Analyst



TTL Data UART to Bluetooth Low Energy. Connects to Cycle Analyst



Raspberry Pi3 in a box. Bluetooth Input - Audio output. Client/Server



Server – Client roles.

Server (launched by systemd on booting):

- Receive bluetooth data from CycleAnalyst transmitter every second.
- Uses `asyncio.get_event_loop()` rather than `GLib.MainLoop()`
- Verify data. ~70 character string of 14 tab delimited floating point values.
- Log data to disk for analysis at a later date.
- Emit data over System D-Bus.

Client (launched by the server):

- Callback receives data from System D-Bus.
- Filter the data to see if it matches either of two algorithms.
- If match then speech synthesizer outputs audio message.

Example audio message (~ varying between 15 to 300 secs):

- Message #1: Speed 20, Watts 800
- Message #2: Distance 10, Amp-hours 4, Voltage 52

Trike with electric hub motor in pusher-trailer.

