

Installation of monitoring system at Christ's University in Pacific in Kingdom of Tonga

Radovan Hájovský

Martin Pieš

Zdeněk Slanina

Jan Velička

Who we are

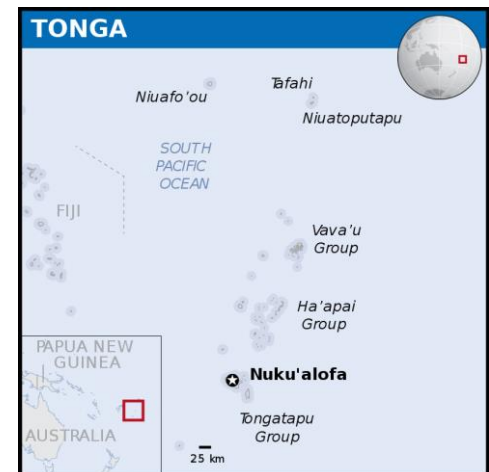
- VSB-Technical University of Ostrava, FEECS, Department of Cybernetics and Biomedical Engineering (CBE VSB-TUO)
- CBE is the 2nd largest department in FEECS with ~50 employees and ~200 students in all programs

What we do (our group)

- Teaching; R&D in wireless sensors, wireless measurement systems, data processing and visualization, all based on IQRF platform

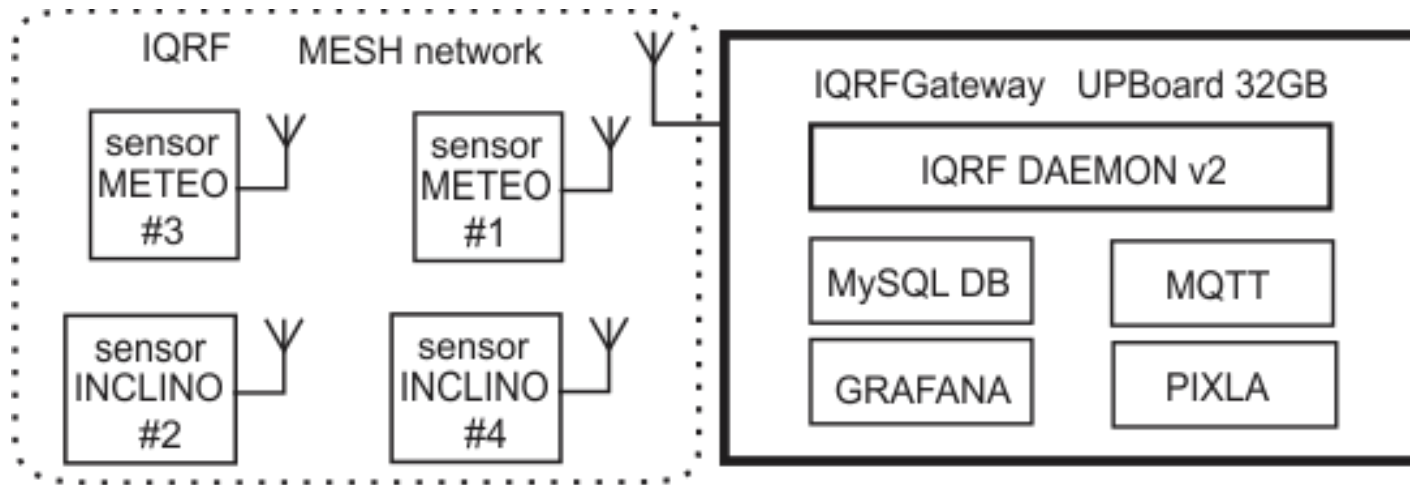
Where are Kingdom of Tonga

- Population is about 100.000 people
- Cooperation with local university from 2018



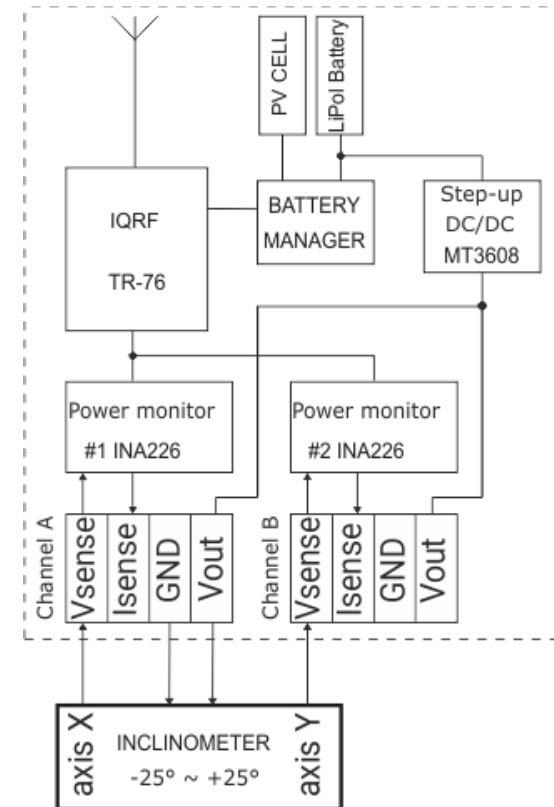
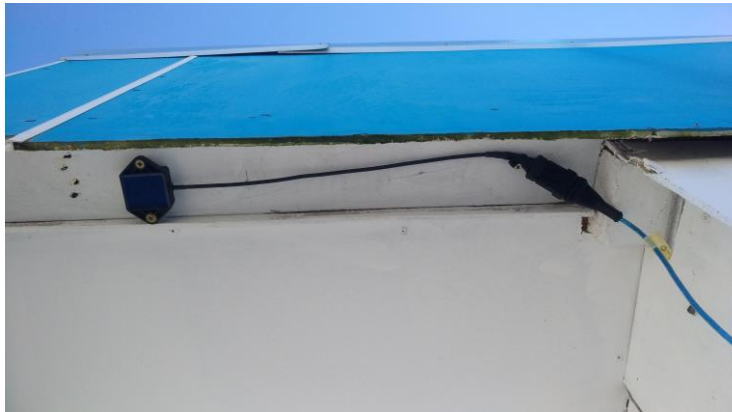
Measurement system

- Meteorological node solar powered – 2 pcs
- Inclinometer node solar powered – 2 pcs
- Gateway – UpBoard – 1 pc
- It is purely off-grid system 😊



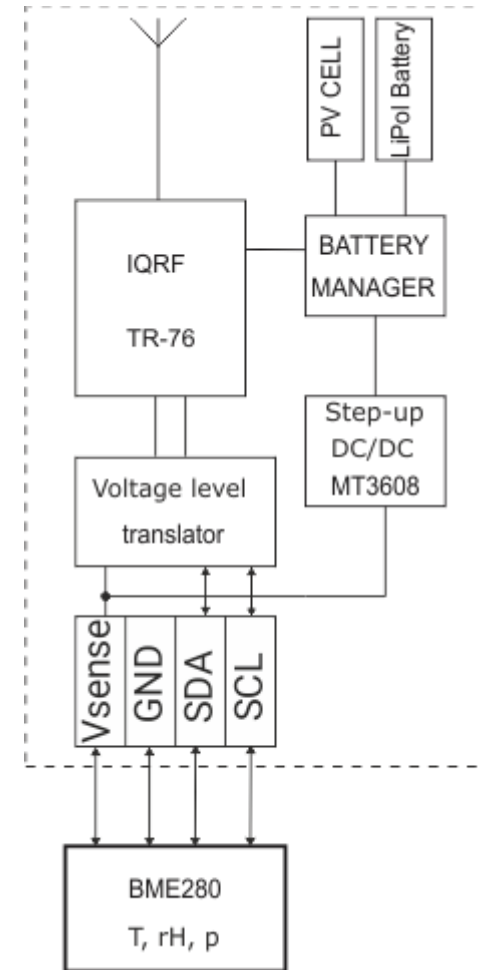
Node 78 – Universal Power Current Voltage node

- Measures 2 channel U&I
- Solar powered
- Analog input for dual axis inclinometer



Node 4.2 – IIC node

- For IIC sensors
- Solar powered
- Connected to BME280 (T, rH, p)



Installation of Measurement system



Measurement system

- Meteorological node – 2 pcs
- Inclinometer node – 2 pcs
- Gateway – UpBoard – 1 pc



Visualization

- Grafana – local on UpBoard
- Grafana – remote via Pixla tunneling service



Thank you for your attention

Ing. Martin Pieš, Ph.D.

+420 597 325 858

martin.pies@vsb.cz

www.vsb.cz

