Wireless Water Cloud Monitoring System for Smart Aquafarming

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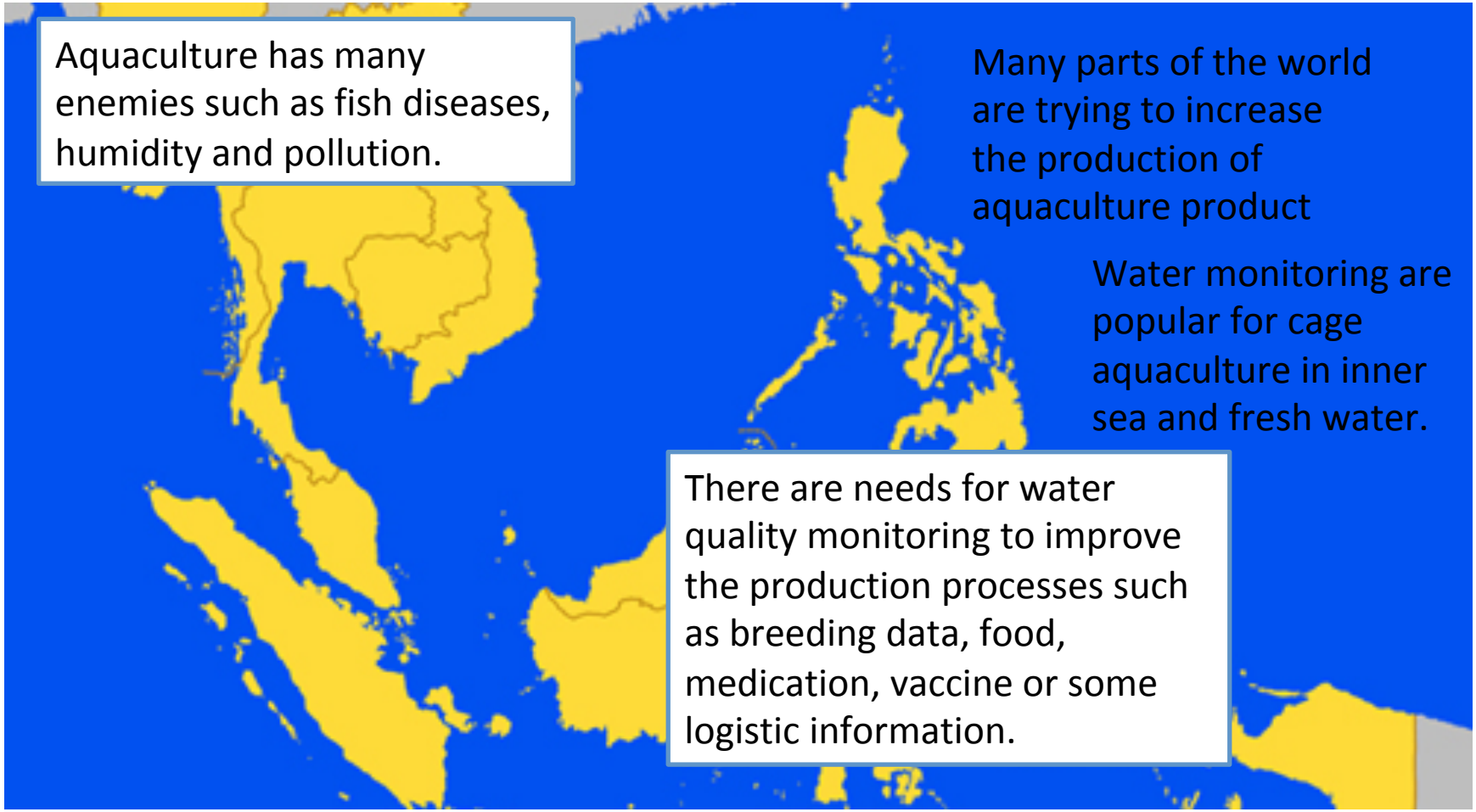
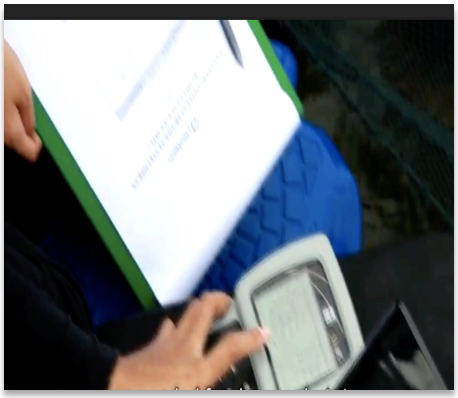
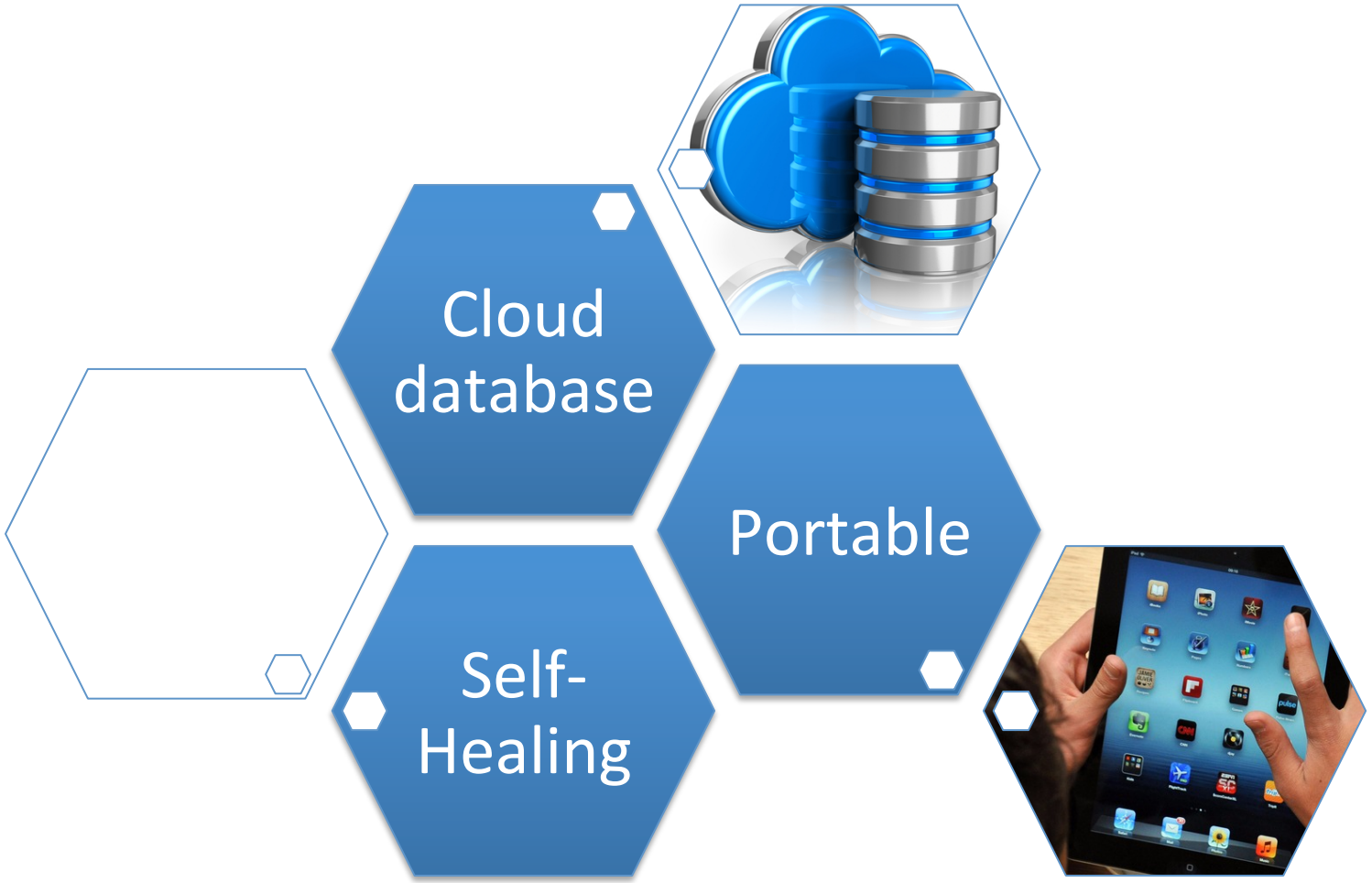
Introduction



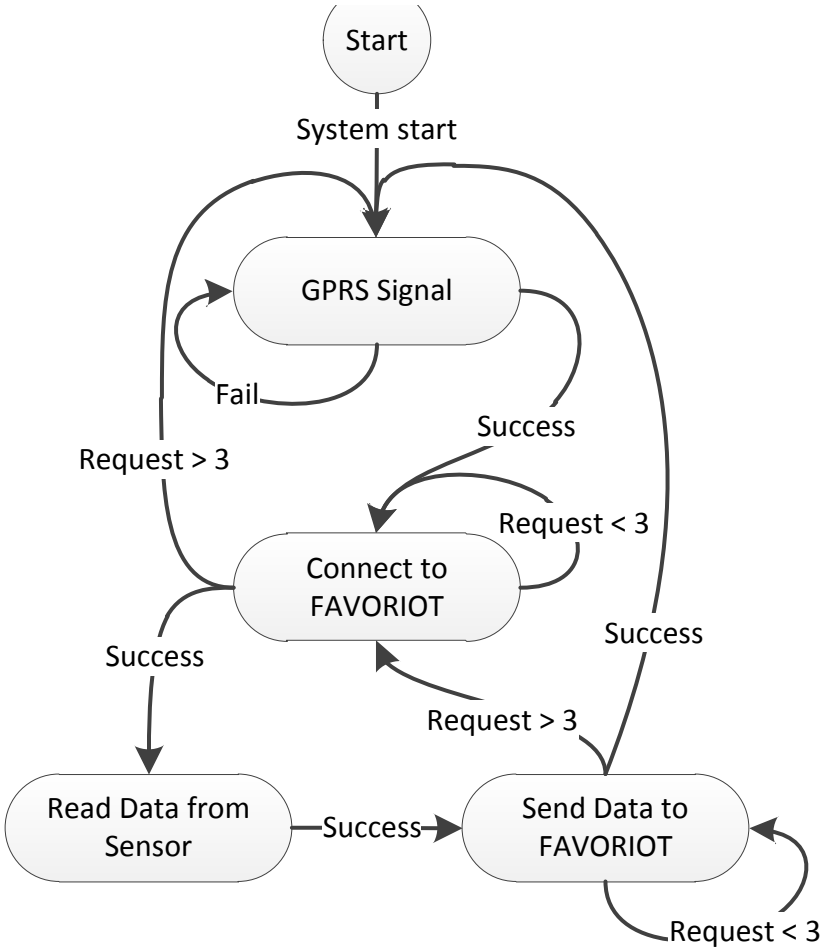
Needs

Remote Cage Location	Data Samples	Single point
		
Outings are costly and time consuming	Data pattern for analysis is difficult	Multiple points are needed for better samples

Approach

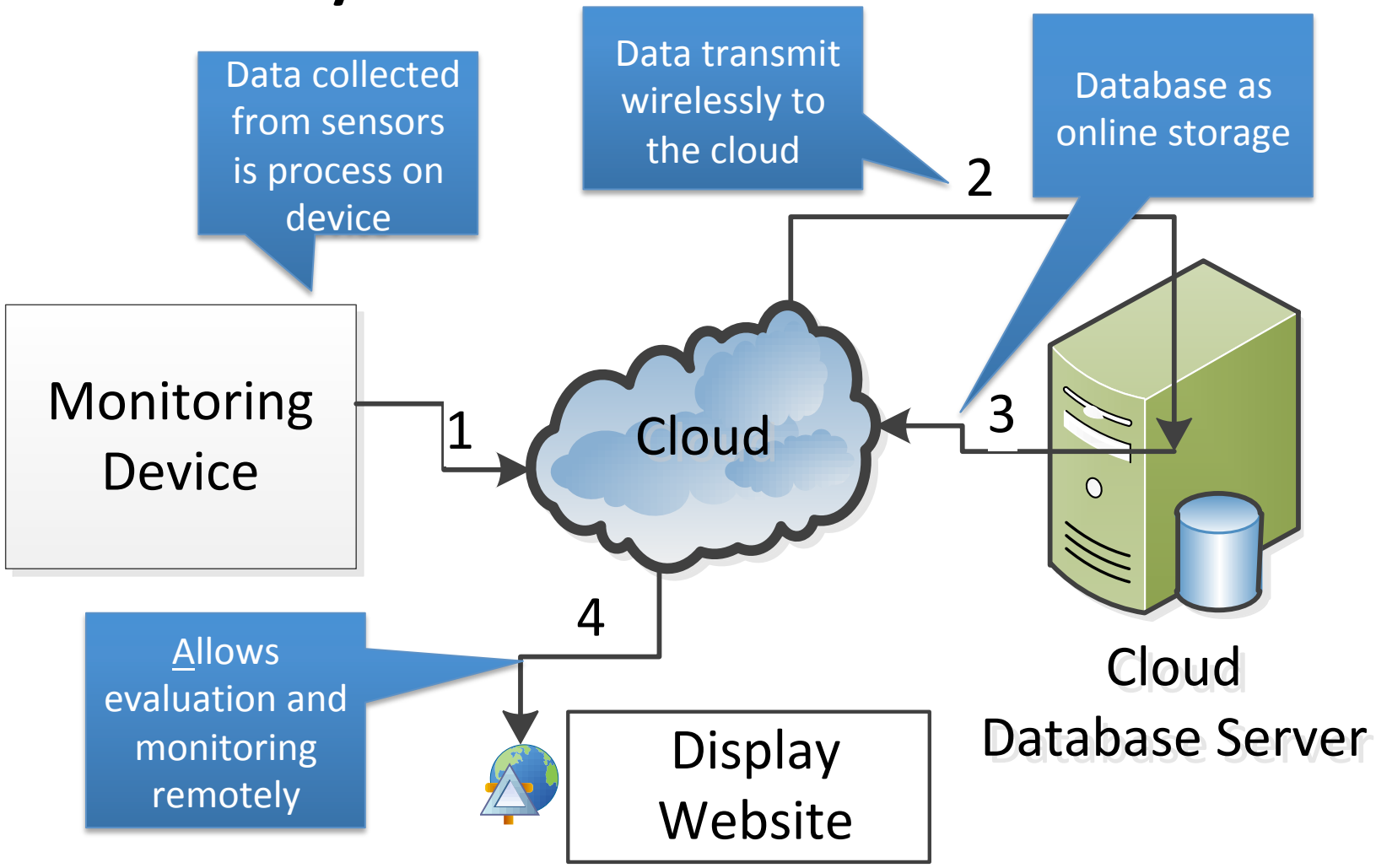


Self healing algorithm

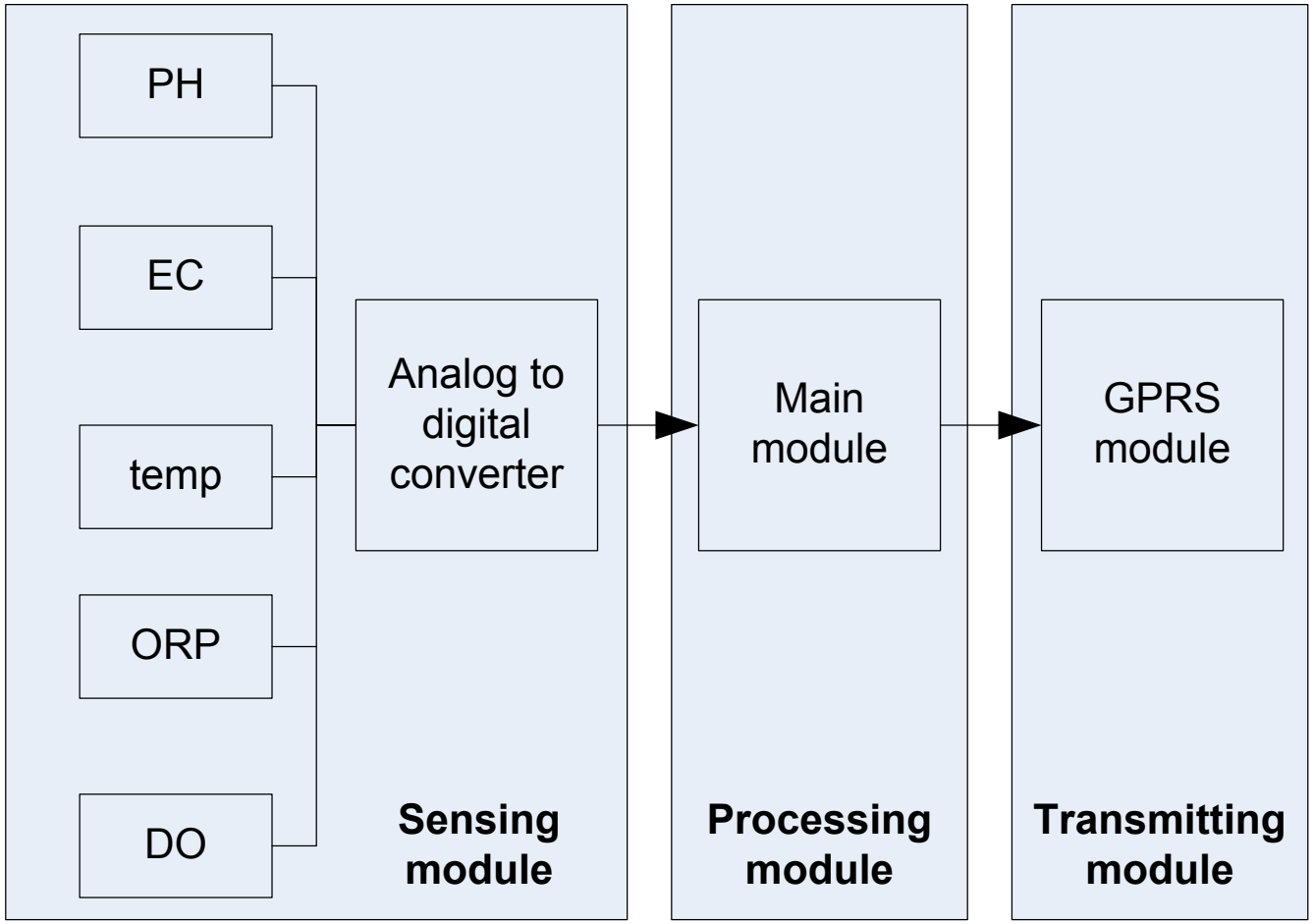


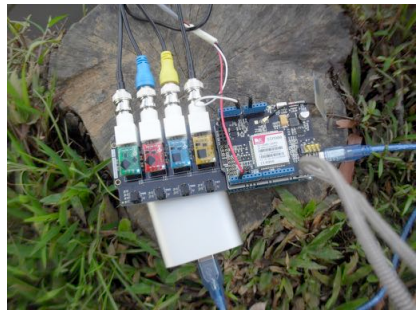
- Four main states *GPRS Signal; Connect to database; Read Data from Sensor;Send Data to database*.
- If any states fail to execute, it will retry.
- If all states fail to execute, it will go the first state (soft reset).

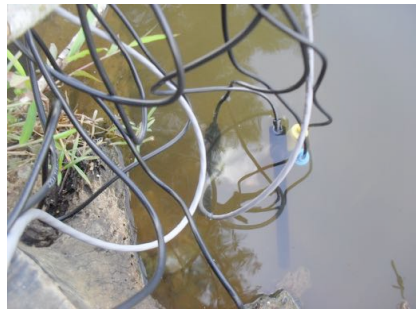
System Architecture



Component in WQ







Prototype lab device

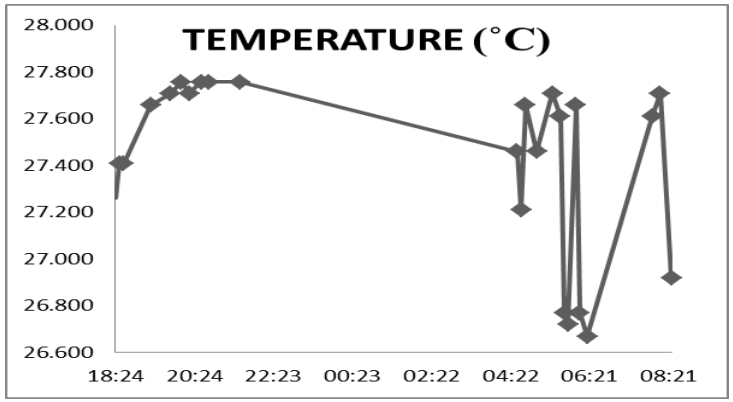
Analysis on Self healing algorithm

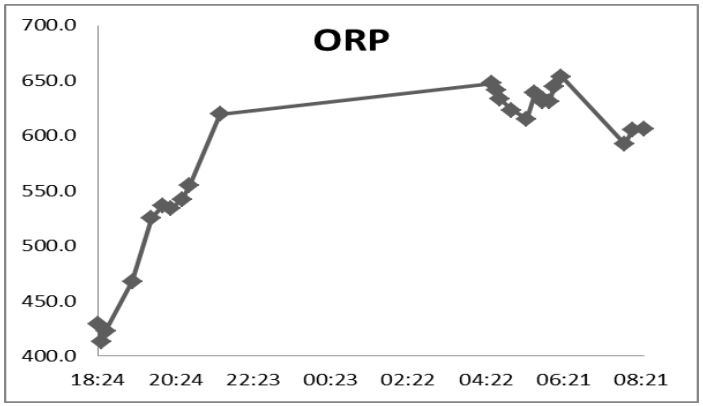
Data are real-time and taken from 6pm to 8am next day.

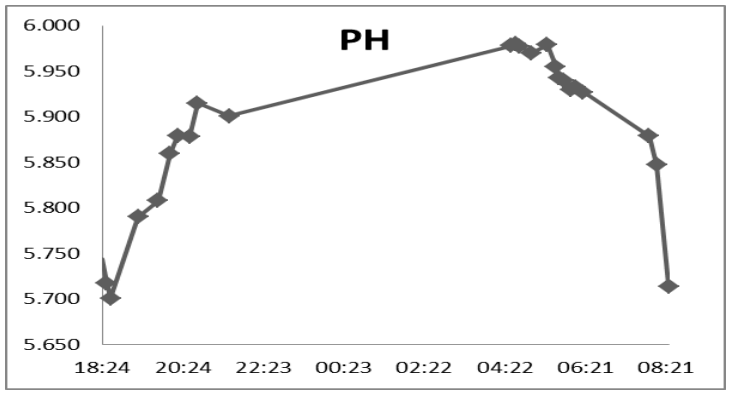
No data transmission after 10:00pm onwards due to disruption of wireless service

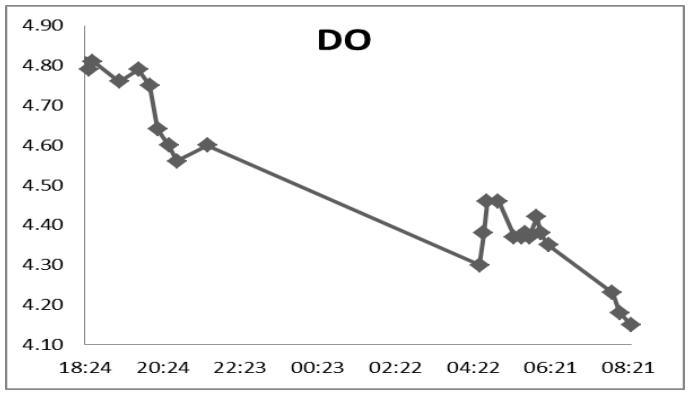
Module manage to recover at 4:22am. The latency is estimated to be 382mins.

Analysis on Self healing algorithm



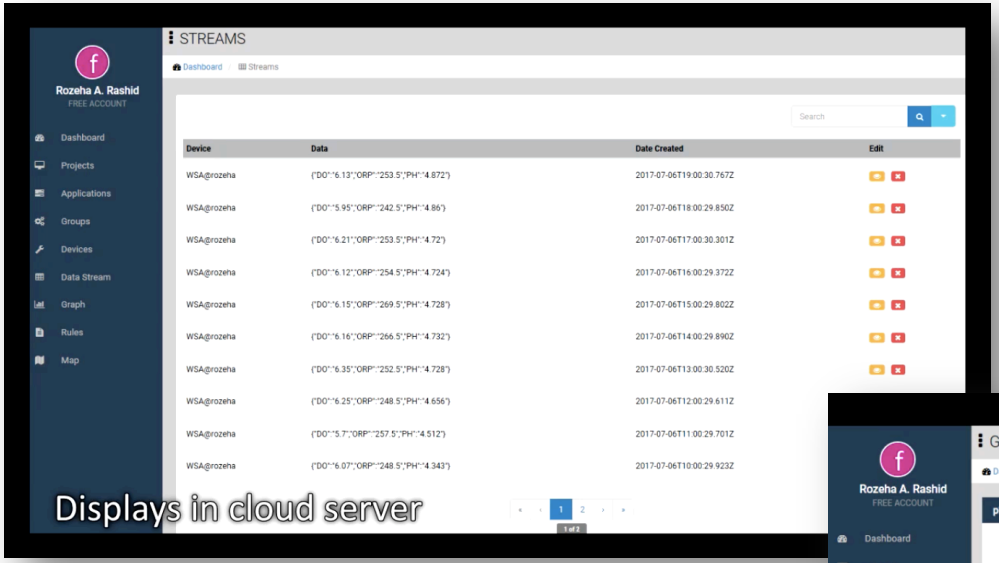






The self-healing algorithm is able to continuously transmit data using soft-reset transceiver.

The database display



Conclusion

- Wireless user-friendly system
- Able to transmit data wirelessly
- Able to monitor data remotely
- Reduce cost on outings
- Data pattern will able to provide estimation

Plan for connected projects

To extend as an IoT item in smart environmental monitoring system

Include other sensors for other aquacultural/ agriculture/ environmental applications

Include fog computing processing


other
people
others
Mercy
able
like
Syukran
Terima
thank
you
why
simple
not
Gracias
kasih
Just
should
say
courtesy
gratitute
this
saying
that
help
Everyone