Consumer Value Oriented IoT Service

Exercise 5

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- Problems
  1. Write requirements to choose the most suitable wireless network connectivity for each IoT device in your application.
  2. Choose the optimal wireless technologies to connect devices and platform for data storage and processing
  3. Integrate them into the IoT architecture and open service platform.

- References
  - Choosing IoT-connectivity? A guiding methodology based on functional characteristics and economic considerations, by Frederic Vannieuwenborg, Sofie Verbrugge, Didier Colle, Research article, 2018 Wiley
  - Group study homework assignments for the term project

Exercise 5 Problems

Choose the optimal wireless technologies to connect devices and platform for data storage and processing, and integrate them into the IoT architecture and open service platform

For your ongoing 'Analysis and Practice of IoT Platform Applications' project,

1. Write requirements to choose the most suitable wireless network connectivity for each IoT device in your application. You have to consider key aspects and selection factors in your requirements.

2. Choose the optimal wireless technologies to connect devices and platform for data storage and processing
   - Provide rationale for the selection

3. Integrate them into the IoT architecture and open service platform.

Group Study Homework Assignments

1. Set up an objective of value creation (intelligent service) by the convergence of intelligent ICT and a target application

2. Design end-to-end IoT network architecture with end-to-end security for your application

3. Do high level design for the open service platform of your application

4. Choose Sensors/Actuators, IoT devices, OSHW(Arduino, BeagleBoard, etc), device software(OS) and integrate them into the IoT architecture and open service platform

5. Choose the optimal wireless technologies to connect devices and platform for data storage and processing and integrate them into the IoT architecture and open service platform.

6. Define IoT protocol stack for your application

7. Specify the application layer interfaces and integrate them into the IoT architecture and open service platform design

8. Illustrate data flow from IoT data sets to intelligent O2O service [Y] for your intelligent digital transformation model [X]+ IICT -> [Y]

9. Do high level design for service and business model of the consumer value oriented IoT service