Lesson Title: Low Level Reader Protocol (LLRP)

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Rationale
Why is this lesson important? Why does the student need this lesson? How does this lesson fit in the larger module?

The low level reader protocol (LLRP) specifies the interface between an RFID reader and a client. The student needs this lesson to understand LLRP.

Objective(s)
What will the student know, be able to do, and value at the end of this lesson? This is smaller amounts of information than the module objectives.

The student will be able to describe the three types of parameters that LLRP can control.

Exploration
Explicit concepts related to the Module goal are explored. It is at this point that the student will be provided basic information about the topic and the chance to explore some basic concepts about the topic. This is where the instructor imparts information.

- Low Level Reader Protocol (LLRP)
  - Specifies the interface between an RFID reader and a client
  - 3 areas
    - Reader control: events, RF parameters, air protocol parameters, antenna sequencing, …
    - Tag data access: tag inventorying, password-based access
    - RF environment: modulation, encoding, transmit power, …

Reflection
Several questions are posed to the student to answer and then often discuss as a class. This is an attempt to determine whether the student "gets" the basic concepts delivered above. If they do get it, move on to engagement. If they do not get it, go back to exploration above. It could be as simple as asking a few probing questions or as complex as asking the student to write a paper.

- What are the three areas of control in LLRP?

Engagement
Concepts learned in the Exploration are further developed by conducting experiments, designing and building solutions, and solving problems. This is an attempt to cause the student to apply the new knowledge. By applying the new knowledge, the student is much more likely to retain this information. This engagement could be accomplished through a debate, an experiment, a problem solving activity, or anything else that would cause the student to demonstrate understanding and competence.

- Homework assignment
Expansion
Provide opportunities for students to expand the concepts to more general or global situations including connection to the Module goal. Expand back to the big ideas of the module and prepare for the next lesson.

- Why was LLRP developed?

Lesson Assessment
Assess student understanding of the lesson content. This does not have to be a full-blown examination. It could be a graded homework assignment, a quiz, a performance examination, a graded problem solving activity, or something similar.

- Homework assignment

Equipment
- None

Software
- None

References
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