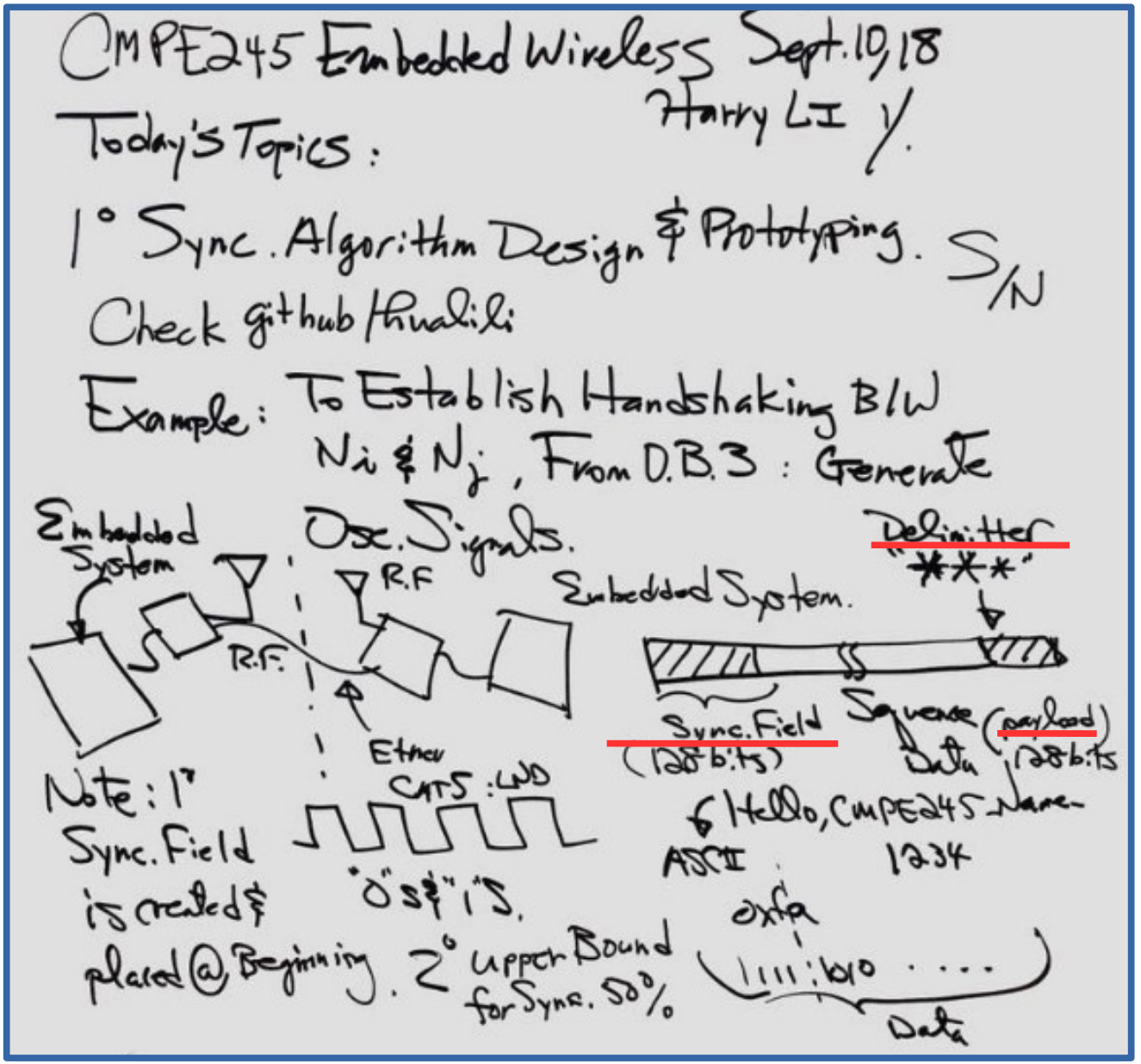
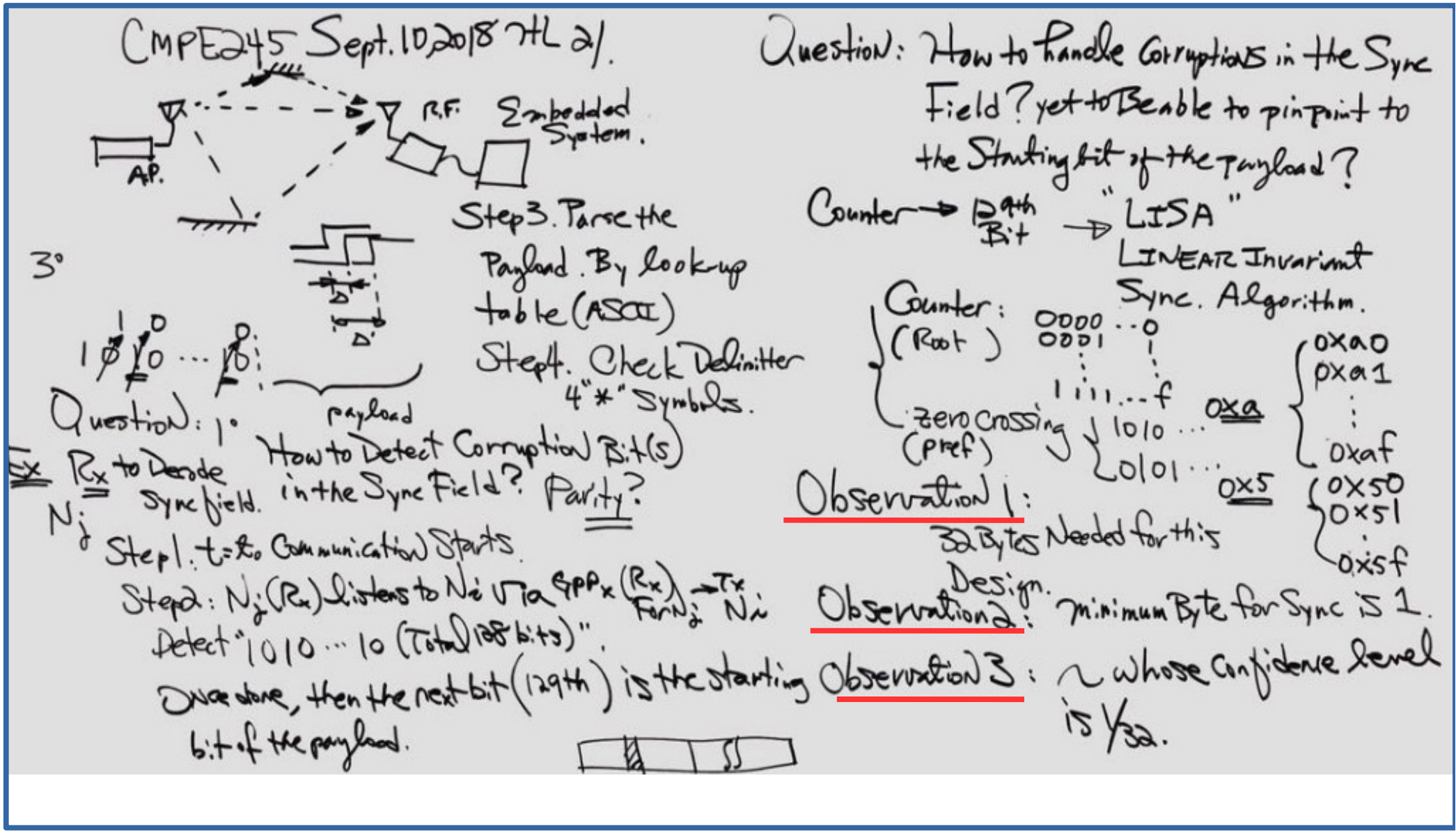
9-10-2018 Sync Design

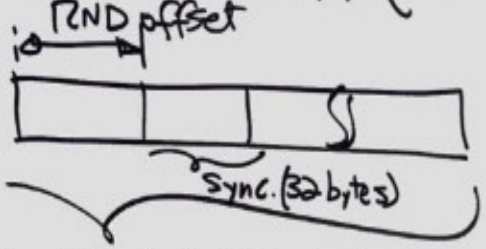


9-9-2018 LISA Algorithm



9-12-2018 LISA Implementation

1° LISA Homework (C/C++)



N_i or N_j

Buffer (Rx)

① mytestdata.txt Size (2k bits, e.g. 256 Bytes) 2k bits $2048 = 2 \cdot 2^{10}$

② Random offset 2^3 (unsigned 8 bits) $2^{11}/2^8$

③ payload, SJSU-CMPE245_Harry_1234 256 Bytes $= 2^8$

④ Sync Field w/ Random Corruption/ Per User Input

⑤ User defines Confidence level for Sync. Decoding

Hint: "Mask" (perfect Sync. Pattern) 0xA0

Algorithm (LISA Implementation):

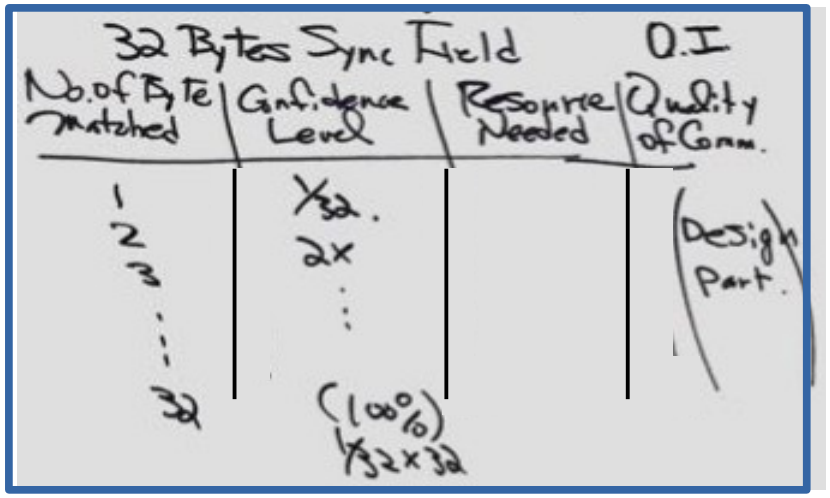
1° Define A mask. e.g. 0xA0, for Example;

2° Start from the 1st bit of the Data buffer, Perform bit wise Pattern matching. If matched, then the Sync. is established w/ Confidence Level 1/32. If No matching, Shift to the right 1 bit, repeat the matching Process. (bit wise matching) till the matching Pattern found or the end of the buffer Reached;

3° Start New Mask, e.g. 0xA1, and Continue this process as the above till all the masks checked And/or the Confidence Level reached.

9-12-2018 LISA For Sync Adaptation

Table 1. Sync Bytes vs. Confidence Level, vs. QI index



Define QI (quality index) between Node i and Node j communication.