LISA Sync Project Requirements

HL

This project counts total 10 points. The soft copy of the readme and plus the source code exported as a project must be submitted on line to CANVAS. The project requirements are:

1. (3 pts) Design and prototype LPC1769 micro-processor system board or your choice of an alternative board, and enable a GPIO communication for implementation of LISA Sync algorithm.

2. (5 pts) Generate LISA algorithm on your target platform by migrating your homework of the landline testing to the target platform with iereless communication:

Note:

2.1. use bit rate: 1 Kbps.

2.2. set up a 1K bit buffer for processing purpose.

3. (2 pts) Conduct LISA algorithm test in 2 with wireless RF set up without oversampling.

4. Submit project report together with

(1) exported project, the submission is subject to testing and verification.

(2) upto 30 seconds video clips.

(3) Submit a Lab report to cover the following content:

(2.1) system block diagrams of the entire system setup including laptop computer;

(2.2) system block diagram of the RF board interface;

(2.3) Schematics of the RF board with both RF modules (Rx and Tx) and landline (RF45 connector and wire/pin connectivity. For example which pin is for GND, which pin for Rx, and which pin for Tx, as well as common GND pin);

(2.4) table(s) of the pin connectivity;

(2.5) photo(s) of the implementation.

(2.6) software part should cover

a. source code and Algorithm description;

b. Flow chart(s);

(END)