Our project aims to build a GUI for Plug-and-Play Haptic Interaction system according to the IEEE standard. For the system, the main achievements are:

1. Plug and play on the Leader side: When the Leader device disconnects from the system, the Follower device will turn to the waiting state and will remain in its initial position same as when it’s activated in the system until the next re-insertion of the Leader device.

2. Automatic adjustment of device parameters according to the specific type of Leader device to guarantee the performance of human perception: First of all, when connecting, the Leader device will transmit its media and interface information to the Follower side, so-called Metadata, and at the same time it will inform the Follower device of the specific model type it is using. The Follower device will adjust its parameters according to the received information to adapt to the Leader if the type of Leader device has different precision from the Follower device and transmits its metadata to the Leader.

The requirements of our project are as follows. For the GUI part:

1. The GUI should be implemented under either Qt or Java Script (first considering Qt) on both the Leader and Follower sides.

2. For the Leader side, the GUI should be proposed including these functions:
   1). Chooses the device on the Leader side.
   2). Shows whether the handshaking is successful or not.
   3). Shows the device type used on the Follower side after the handshake.
   4). When the Leader device is disconnected from the system, show as well.

3. For the Follower side, the GUI should be proposed including these functions:
   1). Chooses the device on the Follower side.
   2). Shows whether the handshaking is successful or not.
   3). Shows the device type used on the Leader side, adjusts the parameters on the Follower side, and then shows the adjusted device type if the handshake is successful.
   4). When the Leader device is disconnected from the system, show as well. And then shows the initial position of the Follower device in the waiting state.

4. For the adjustments to the message transmission process:
   1). Achieve the PnP adjustment on the follower side.
   2). The message sending order, the format of the interface, the mode of pushing data packets into stacks, and the decoding function should obey the regulations of the IEEE standard.