Android Open Accessory Host Configuration

1. Driver installation – To enable communication between the host and the android device, install libusbk drivers onto the device (**this will have to be done before and after entering accessory mode**).
2. Check for accessory mode – If the device is already in accessory mode, then it will match Google's vendor ID (0x18D1), and the product ID will range from 0x2D00 – 0x2D05.
3. Starting accessory mode – Use control transfers to send 3 types of control requests. To communicate over an interface, open the device and claim the interface, then communicate over the endpoints.
    a. 51 – Determines if and what version of AOA the android device supports.
    ```
    requestType:    USB_DIR_IN | USB_TYPE_VENDOR
    request:        51
    value:          0
    index:          0
    data:           protocol version number (16 bits little endian sent from the
                    device to the accessory)
    ```
    b. 52 – Send identifying information to the device detailing the manufacturer, model, description, version, URI, and serial number.
    ```
    requestType:    USB_DIR_OUT | USB_TYPE_VENDOR
    request:        52
    value:          0
    index:          string ID
    data            zero terminated UTF8 string sent from accessory to device
    ```
    The max size of each string is 256 bytes and it should be zero terminated. The corresponding string ids are as follows:
    ```
    manufacturer name:  0
    model name:         1
    description:        2
    version:            3
    URI:                4
    serial number:      5
    ```
    c. 53 – Starts the device in accessory mode
    ```
    requestType:    USB_DIR_OUT | USB_TYPE_VENDOR
    request:        53
    value:          0
    index:          0
    data:           none
    ```
4. Establish communication – After the device has been started in accessory mode, claim an interface and send transfers over the endpoints.