Specifications BLE transmitter with TEDS sensors

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1 Initial situation

To maintain interchangeability between the sensors and transmitters, the calibration data for the sensors must be made available in an automated manner. Initially, we explored the possibility of providing this data through QR codes on the sensor's nameplate. However, due to the surface characteristics (cylindrical shell), these QR codes were not readily legible. As a result, we are now providing this data via TEDS. This approach offers the advantage of allowing the transmitter to directly transmit signals in their physical unit (kN) rather than in a ratiometric manner (mV/V). For this approach, two procedures need further specification:

1. Reading the calibration upon the transmitter's startup.
2. Reading the calibration after sensor disconnection or exchange during the transmitter's runtime.

2 Reading calibration at startup

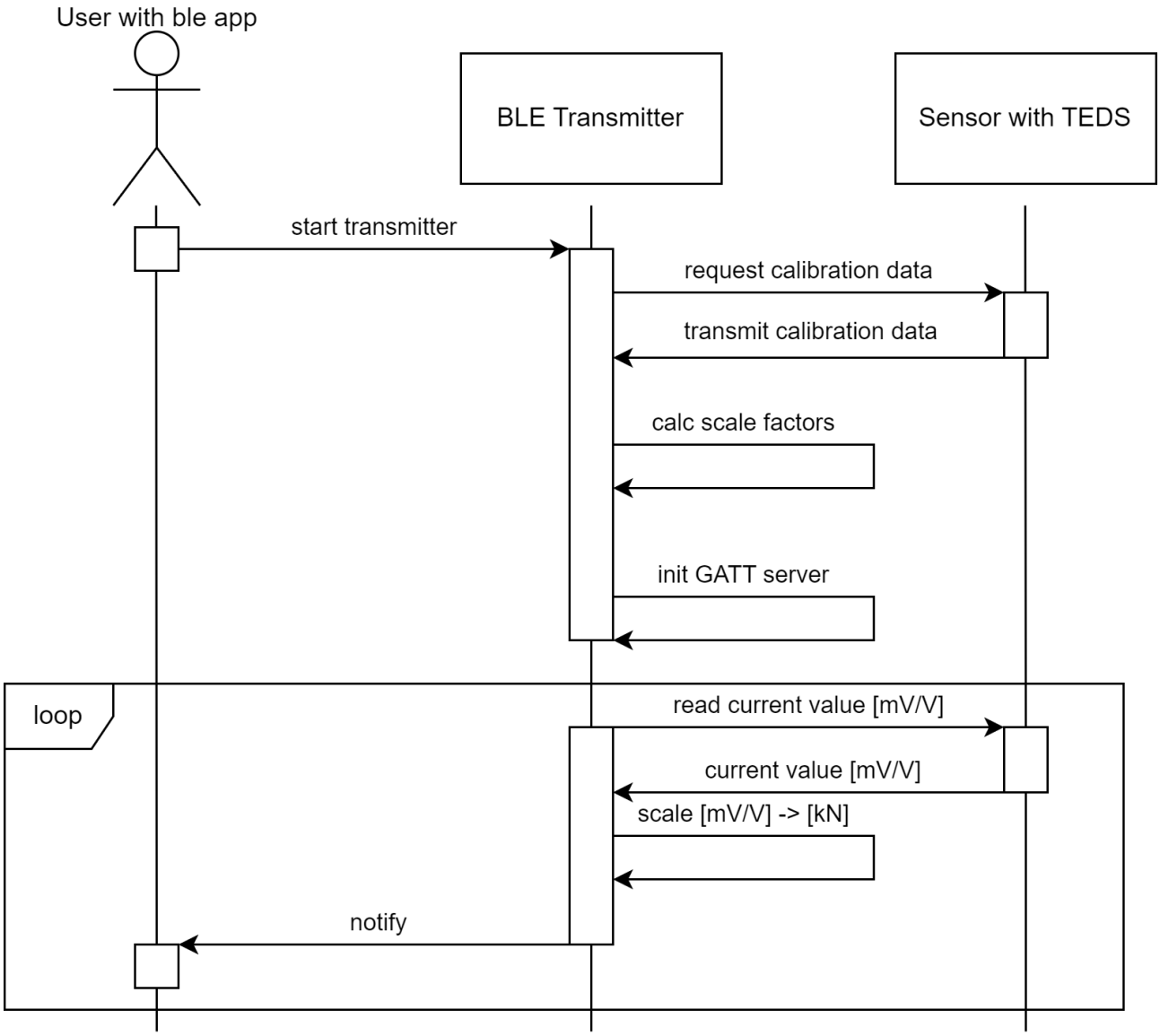

Figure 1: Sequence to read the calibration data at startup

3 Reading calibration after change of setup

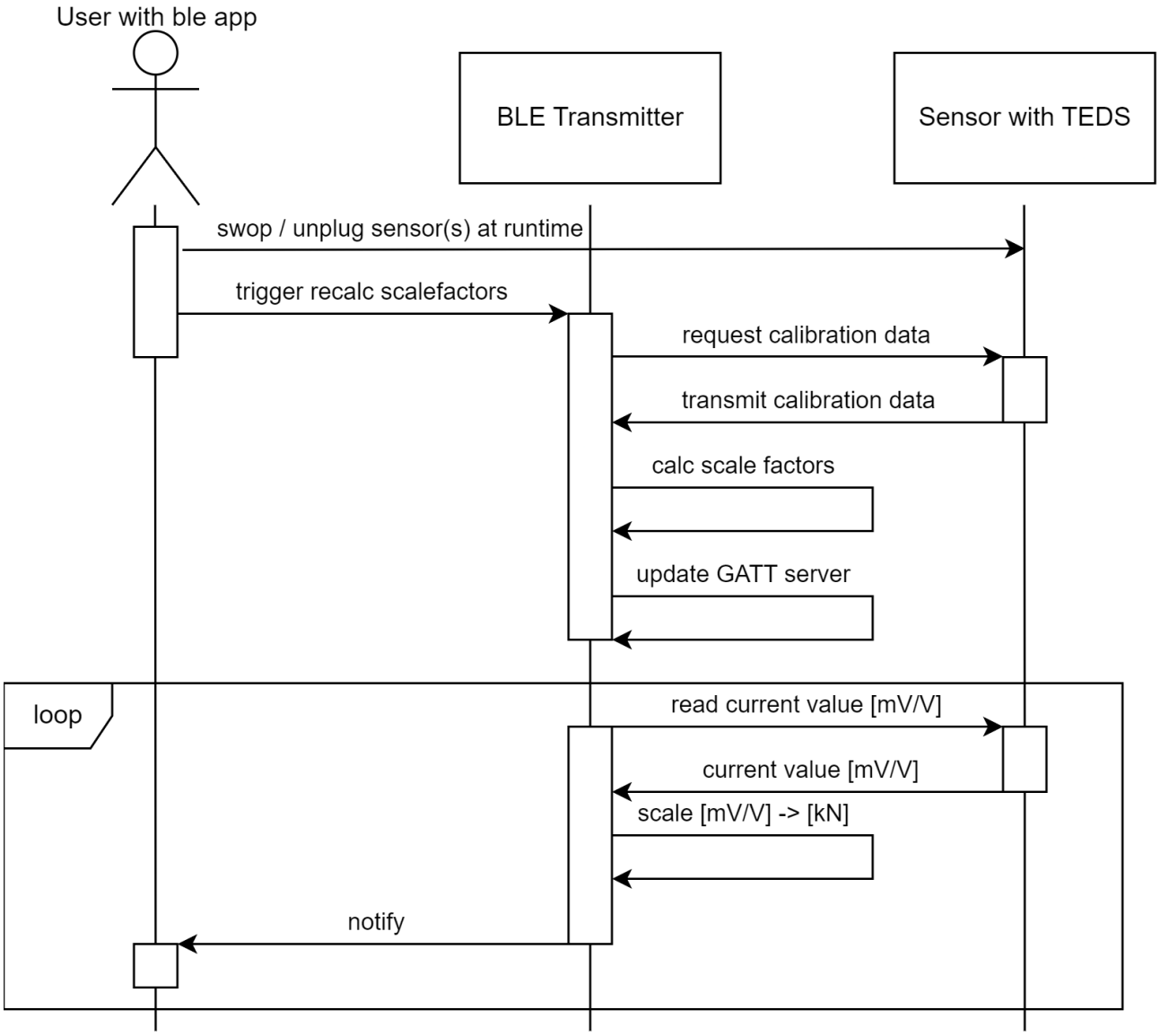

Figure 2: Sequence to read the calibration data after swop/change