

[Research Project]

- a. A description of the nature of the research project being conducted.
- b. A showing that the communications facilities requested are necessary for the research project involved.
- c. A showing that existing communications facilities are inadequate.

Answers:

a. GE is building mobile applications and services on top of Industrial Internet where all assets and people that can benefit from ubiquitous connectivity and real-time computing. In this vision, GE's Industrial Internet applications need Service Level Agreements (SLA) and deterministic behavior from the mobile network. The current commercial mobile / wireless infrastructure is geared and configured toward best effort behaviors instead of different levels of Quality of Services (QoS) for different prioritized traffics / applications / users. This research will explore, in controlled lab/indoor environment, the interactions between GE mobile applications, backend servers, and underlying distributed mobile infrastructure. This research also tries to understand the best practices to utilize the current Mobile QoS capabilities and identify new capabilities needed to meet existing and future scenarios for GE's Industrial Internet.

b. See attached Product Description for Ericsson RBS 6601, which is a Base Station unit and one of the requested communications facilities in this application. See specifically in Chapter 3 "Applications for RBS 6601", which cover many use cases that GE's Industrial Internet is trying to address. Another one of requested communications facilities is the Ericsson m RRUS 11 B4, which is a Remote Radio Unit that works with RBS 6601, which is also described in the Chapter 2 of the Product Description for Ericsson RBS 6601.

c. In GE's San Ramon site, there is no existing communications facility that can accommodate the mobile QoS research described in Section a.