WHAT IS THE NEED?

Rural communication engineering remains a mission critical skill that most state engineers have limited experience with. Lacking these skills, engineers and technicians have a difficult time designing and maintaining reliable and robust communication networks for rural Intelligent Transportation Systems (ITS) field equipment.

As new technologies emerge, engineers and technicians will be required to understand realistic versus unrealistic achievement from leveraging these technologies. This is phase IV of this project and is a continuation of phases I, II and III to provide specific training to rural engineers and technicians, enabling them to gain the skills necessary to design and maintain robust communication networks for rural ITS field equipment.

WHAT ARE WE DOING?

In phase I, a panel of members from Caltrans rural area districts and headquarters was formed to identify and decide the skill areas that need to be updated or improved. Next, the contractor develops appropriate courses correspondingly, which will be delivered by the subject matter experts. These courses inform the engineers about the latest ITS technologies.

WHAT IS OUR GOAL?

This project aims to build skills and knowledge for rural ITS engineers and technicians through an applied, hands-on and comprehensive educational course that collects the most recent information about rural ITS communications.

WHAT IS THE BENEFIT?

Caltrans engineers and technicians will gain the necessary know-how to successfully design, implement, and maintain reliable and robust communication systems for rural ITS field equipment.

WHAT IS THE PROGRESS TO DATE?

The following courses have been successfully delivered to Caltrans engineers in phases I, II, and III:

- Hands-On Radio Frequency (RF) System Design
- Hands-On Optical Fiber (glass fiber for high speed communications)

Furthermore, the Caltrans Project Technical Advisory Panel (PTAP) and the Caltrans rural districts will conduct needs assessment to evaluate the courses offered at the end of each phase, to identify, update and revise the training needs for ITS for the next project phases. The panel will select one course to be delivered by the contractor.

Others factors such as the availability of industry-recognized subject matter experts will be considered. The contractor needs additional time to evaluate the courses offered and carefully select one course to be delivered to Caltrans.

Thus, the end date for this task has been extended to June 30, 2019.
WHAT IS THE NEED?
Rural communication engineering remains a mission critical skill that most state engineers have limited experience with. Lacking these skills, engineers and technicians have a difficult time designing and maintaining reliable and robust communication networks for rural Intelligent Transportation Systems (ITS) /field equipment.

As new technologies emerge, engineers and technicians will be required to understand realistic versus unrealistic achievement from leveraging these technologies. This is phase IV of this project and is a continuation of phases I, II and III to provide specific training to rural engineers and technicians, enabling them to gain the skills necessary to design and maintain robust communication networks for rural ITS /field equipment.

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WHAT IS OUR GOAL?
This project aims to build skills and knowledge for rural ITS engineers and technicians through an applied, hands-on and comprehensive educational course that collects the most recent information about rural ITS communications.

WHAT IS THE BENEFIT?
Caltrans engineers and technicians will gain the necessary know-how to successfully design, implement, and maintain reliable and robust communication systems for rural ITS field equipment in remote areas.

WHAT IS THE PROGRESS TO DATE?
The following courses have been successfully delivered to Caltrans engineers in phases I, II, and III:

• Hands-On Radio Frequency (RF) System Design
• Hands-On Optical Fiber (glass fiber for high speed communications)
• Hands-On Ethernet and Transmission Control Protocol/Internet Protocol (TCP/IP) Fundamentals
• Telecom Wireless Fundamentals (RF, Antennas and Propagation, Telecom Wireless Access Technologies, Network Architecture and Key Services, and Cellular RF Engineering, Planning and Testing)

Furthermore, the Caltrans Project Technical Advisory Panel (PTAP) and the Caltrans rural districts will conduct needs assessment to evaluate the courses offered at the end of each phase, to identify, update and revise the training needs for ITS for the next project phases. The panel will select one course to be delivered by the contractor.

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