

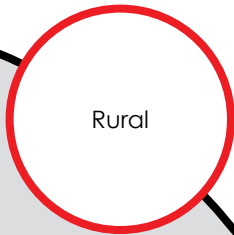


Caltrans Division of Research,
Innovation and System Information

Research



Results



Rural

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Project Title:

Professional Capacity Building for
Communication Systems Phase II

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Professional Capacity Building for Communication Systems Phase II

Provided highly specialized expert hands-on training in Telco and plant wired communications to rural engineers & technicians to build their professional capacity.

WHAT WAS THE NEED?

Rural communication engineering remains a mission critical skill for which most engineers in the state have limited experience. As new technologies emerge, engineers and technicians will be required to understand the reality of what is possible versus the hype from a vendor. Understanding what communication technologies exist and how the underlying principles work will allow an engineer to design a communications network that will work reliably when needed most—during an incident. Often, because an engineer does not have the underlying knowledge of a communication technology, a less than reliable network is designed, often with undesirable results based on claims from a vendor or unrealistic expectations from technologies that were not designed to perform the task at hand.

Professional capacity building was needed in order to provide rural engineers and technicians with the necessary skills needed to design and maintain reliable and robust communication networks for rural Intelligent Transportation System (ITS) field equipment.

WHAT WAS OUR GOAL?

The goal was to develop and provide a highly specialized expert hands-on training in Telco and plant wired communications to rural engineers and technicians to build their professional capacity and to provide them with the skills needed in designing and maintaining reliable and robust communication networks for rural Intelligent Transportation System (ITS) field equipment.



Caltrans provides a safe, sustainable,
integrated and efficient transportation
system to enhance California's
economy and livability.

WHAT DID WE DO?

Caltrans contracted The Western Transportation Institute (WTI) at Montana State University to research, develop and deliver a comprehensive training curriculum for transportation communication systems to build the professional capacity of rural intelligent transportation system (ITS) engineers and technicians.

A formal limited solicitation process was conducted to secure appropriate subject matter expert training providers to deliver the following two courses to rural engineers and technicians: a hands-on course in Optical Fiber and a hands-on course in Internet Protocol (IP) Networking Fundamentals and Usage (topics included Understanding IP Networks/IP Networking Core, Local Area Networks (LANs), and Wide Area Networks (WAN)).

WHAT WAS THE OUTCOME?

Two specialized courses were developed and delivered by subject matter experts to train rural engineers and technicians. One course was in Optical Fiber and the other one in Internet Protocol (IP) Networking Fundamentals and Usage (topics included Understanding IP Networks/IP Networking Core, Local Area Networks (LANs), and Wide Area Networks (WAN)).

These two courses build the professional capacity of rural ITS engineers and technicians to provide the skills necessary to successfully design, implement, and maintain reliable and robust communication systems in rural and remote areas.

Additional specialized training in other ITS areas by subject matter experts is recommended for the follow-on phase of this project.

WHAT IS THE BENEFIT?

The benefit resulting from this phase of the project is that Caltrans will have a well trained rural workforce of engineers and technicians who can successfully design, implement, and maintain reliable and robust ITS communication systems in rural and remote areas.

LEARN MORE

<http://www.westernstates.org/projects/PCB/default.html>

Additional links will be provided at a later date when available.

IMAGE

