Class Activity - Design a Communications System (Instructor Version)

**Instructor Note**: Red font color or gray highlights indicate text that appears in the instructor copy only.

# Objectives

Explain the role of protocols and standards organizations in facilitating interoperability in network communications.

# Background / Scenario

You have just purchased a new automobile for your personal use. After driving the car for a week or so, you find that it is not working correctly. Discussing the problem with several of your peers, you decide to take it to an automotive repair facility that they highly recommend. It is the only repair facility located in close proximity.

When you arrive at the repair facility, you find that all the mechanics speak another language. You are having difficulty explaining the automobile’s performance problems, but the repairs really need to be done. You are not sure you can drive it back home to research other options.

You must find a way to work with the repair facility to ensure your automobile is fixed correctly.

How will you communicate with the mechanics? Design a communications model to ensure that the car is properly repaired.

**Instructor Note**: This Modeling Activity is not intended to be a graded assignment. Its purpose is to encourage students to reflect on their perceptions of how a communications system facilitates the transfer of data from source to destination (personally and in corporate practice). Discussion should be initiated as a result of this activity.

Navigating a situation where there's a language barrier with the mechanics can be challenging, but with patience, understanding, and effective communication strategies, we can work towards getting our automobile repaired correctly. Here's a step-by-step communications model to ensure effective communication with the mechanics:

***Step 1: Use Simple and Clear Language***

When explaining the problem, use simple words and sentences. Avoid technical jargon. Break down the issue into basic components to make it easier for them to understand.

***Step 2: Visual Communication***

Utilize visual aids such as diagrams, drawings, or even pointing directly to the problematic parts of the car. Visual cues can often transcend language barriers and provide a clear understanding of the issue.

***Step 3: Translator or Interpreter***

If possible, bring along someone who can translate or interpret the conversation. This person could be a friend, family member, or a professional interpreter. Having someone who understands both languages can facilitate smooth communication.

***Step 4: Use Technology***

Leverage translation apps or devices to convert your speech into the mechanics' language, and vice versa. There are numerous smartphone apps designed for real-time language translation. These can be invaluable in bridging the communication gap.

***Step 5: Demonstration***

If safe and feasible, demonstrate the issue by replicating it. Mechanics are hands-on individuals, and a real-time demonstration can help them grasp the problem more effectively.

***Step 6: Written Communication***

Consider writing down the problem and any specific instructions. Even if the mechanics don't speak the language well, they might be able to read and understand written instructions, especially if they are accompanied by drawings or diagrams.

***Step 7: Patience and Understanding***

Be patient and understanding. Language barriers can be frustrating, but maintaining a calm and respectful demeanor fosters a positive atmosphere for effective communication.

***Step 8: Ask for Feedback***

Encourage the mechanics to repeat back the problem and proposed solutions in their own words. This feedback loop ensures that both parties are on the same page regarding the issue and the repairs needed.

***Step 9: Regular Updates***

Request regular updates on the progress of the repairs. This helps you stay informed and ensures that any misunderstandings can be addressed promptly.

***Step 10: Follow-up and Quality Check***

After the repairs are done, thoroughly inspect the car's performance. If there are still issues, communicate them clearly and ask for further adjustments until you are satisfied with the repairs.

# Reflection Question

What steps did you identify as important to communicating your repair request? Justify your answer.

Asking the mechanic to confirm his/her understanding of the problem

Explaining the problem experienced with the automobile

Establishing a language for communication

Closing the meeting by paying for the repairs and thanking the mechanic.

Test drive.

Waiting for the repair to be done.

**Identify elements of the model that map to IT content:**

* Establishing a language to communicate (Application protocol)
* Dividing the message into small steps to facilitate understanding of the problem to be solved a little at a time (Transfer protocol).
* Checking to see if the message has been delivered and correctly understood to the mechanic who will be performing the repairs. (Internet protocol)
* Delivery of automobile and wait time for repairs (Network Access protocol)

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