

technology TODAY

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The Universal Translator

I remember as if it were yesterday the fear I felt when my public school language teachers asked me to stand up and convert simple English phrases into a foreign language. What I needed back then, and could still use today, is a universal language translator that would convert spoken phrases into another language! The

Phraselator is a new handheld device that converts over 1,000 English phrases into 40 different spoken foreign languages.

You might use the precursor of this technology when you tell a voice-recognition-enabled cell phone to dial a particular phone number. Instead of turning a verbal command into a dialed phone number, the Phraselator recognizes the phrase that you speak, shows it on a PDA-type screen, and

then loudly and clearly "speaks" the phrase in the language that you have selected.

The current model of the Phraselator is about the size of a standard personal digital assistant (PDA). The military version is already helping peacekeepers, troops, and doctors communicate with local citizens and military in Afghanistan and Iraq.

The Phraselator appears to have its roots in the Desert

Ace Sarich, a former Navy Seal who now serves as vice-president of Voxtec, introduced the idea of a "voice-to-voice" translator to Marine Acoustics, Inc., a DARPA (Defense Advanced Research Projects Agency) contractor.

After the September 11 terrorist attack on the United States, a consortium of companies formed a virtual alliance to build the Phraselator. Applied Data Systems took just 130 days to move this project from a concept to a working prototype that could be shipped to U.S. troops in Afghanistan. The consortium of companies also included Marine Acoustics, which channeled and developed the basic concept and secured DARPA funding for the project. (It's interesting to note that DARPA is the agency that also supplied initial funding for the Arpanet, which evolved into today's internet.) For the Phraselator, Applied Data Systems built a circuit board

Storm conflict with Iraq, where the language barrier created a need for a translation device to serve in basic communication. To meet this need, military personnel wired laptop computers to allow them to use wave files to translate typed English phrases into other languages.

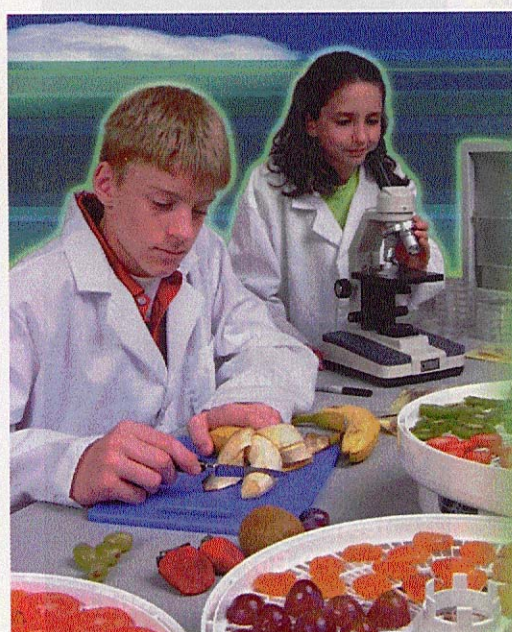


The Phraselator



Photos courtesy of Applied Data Systems and Voxtec

A soldier puts the Phraselator to use in the field.



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that integrates SRI International speech recognition software, Intel chips, and a Microsoft operating system into a single handheld device built by Voxtec, a division of Marine Acoustics.

The military Phraselator is weather resistant and extremely sturdy. Users can read its display screen in full sunlight or total darkness. Noise cancellation technology keeps extraneous sound from interfering with the microphone and speaker. The Phraselator has enough power to be heard in a noisy environment, and it runs on four common AA alkaline batteries or a lithium-polymer rechargeable battery.

Voxtec plans to evolve the military version of the Phraselator into a voice-to-voice recognition unit that will work with any top-tier PDA. Knowing that *Tech Directions* serves educators, Voxtec's Ace Sarich reminded me that the "Phraselator could be very useful for communicating with students who have little or no knowledge of English." Voxtec hopes to soon put on sale a module that can convert a Compaq iPAQ into a machine translator. The Phraselator eventually should serve civilians who need to give directions, ask questions, or transmit information in a conversational format to people who speak a different language.

Learn more about the Phraselator by visiting Voxtec at www.voxtec.com or www.phraselator.com. You can also visit Applied Data systems at www.applieddata.net/applications_Phraselator.asp. To get the full story, you will also want to type Phraselator into your favorite internet search engine. ☺

Recalling the Facts

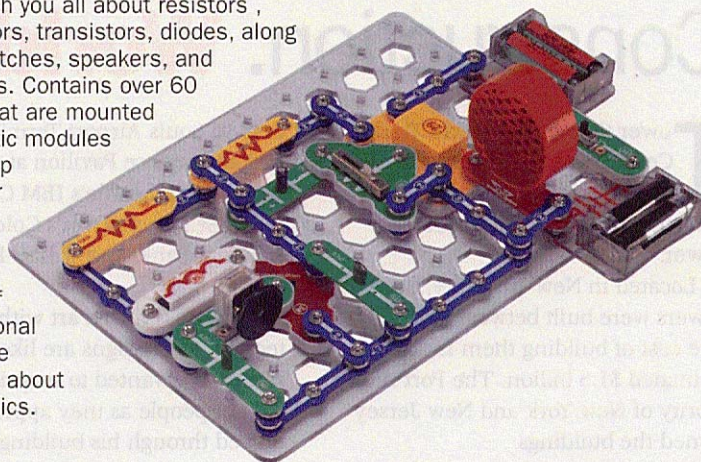
1. What is the Phraselator and how would a soldier use it?
2. What changes must the Phraselator go through to function as a fully operational universal translator?

Alan Pierce, Ed.D., CSIT, is a technology education consultant, technical writer, and public speaker on technology issues.

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