

ANDROS: A UNITS CONVERTER

Application Category

Developer Information

Name	Ali Karaki
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Education level when created the application	1 st year undergraduate student
Institution	University Of Windsor

Application Information

Application Name	Andros
Date created	March 2008
Link to the application	http://cs.uwindsor.ca/~karabi/andros/andros.xml
Link to the code (optional)	http://cs.uwindsor.ca/~karabi/andros/andros.m
Link to the grammar (optional)	http://cs.uwindsor.ca/~karabi/andros/andros.jsgf
What is the application about?	Andros is a units converter. It can convert between different units like units of length, mass, power, temperature, energy and many others.
Why was the application created?	Andros was created to demonstrate Q/A type of applications where the answer is computed depending on what the question is.
How was the application created?	Andros was created by using the manual on how to create SpeechWeb applications available on the SpeechWeb developers' webpage.
What is the programming language used?	C, A procedural programming language
How does the application work?	Andros accepts an input from the user; the input is always in the form "Convert from .. to ..". The application parses the question and extracts three keywords: the unit to convert from, the unit to convert to and the number to convert. Andros converts the number from words to integer value, calculates the conversion and returns the answer back to the user.
What is good about the application?	Andros is a helpful application for converting units. The answers coming out from the application are computed and not selected from a database.
Problems faced while creating the application and solutions	The recognition accuracy was not as good and the problem was solved by shrinking the number of possible questions, the number of non-ambiguous possible questions remains the same. That is, users could say questions in the form "Convert from <any_unit> to <any_unit>" (e.g. Convert from Grams to Watts) but after the modification, they can only say questions in the form "Convert from <temperature> to <temperature>" or Convert from <length> to <length> ...
How can other developers create a similar application?	Developers can create a similar application by looking up the code and learning the techniques used to parsing the question, calculating the answer and returning it back, Developers can also look at the grammar since it is sophisticated and contains a good language of numbers. Developers can also use the manuals on the SpeechWeb developers' webpage.
Other comments	The developers' webpage is at: http://cs.uwindsor.ca/~speechweb/developers.html