Speech Manager Dictionaries

From the Speech Manager documentation by Apple Computer:

Application-Defined Pronunciation Dictionaries

No matter how sophisticated a speech synthesis system is, there will always be words that it does not automatically pronounce correctly. The clearest instance of words that are often mispronounced is the class of proper names (names of people, place names, and so on).

One way to get around this fundamental limitation is to use a dictionary of pronunciations. Whenever a speech synthesizer needs to determine the proper phonemic representation for a particular word, it first looks for the word in its dictionaries. Pronunciation dictionary entries contain information that enables precise conversion between text and the correct phoneme codes. They also provide stress, intonation, and other information to help speech synthesizers produce more natural speech. If the word in question is found in the dictionary, then the synthesizer uses the information from the dictionary entry rather than relying on its own letter-to-sound rules. The use of phonemes is described in “Summary of Phonemes and Prosodic Controls,” later in this document.

The Speech Manager word storage format provides high-quality data that is interchangeable between speech synthesizers. The Speech Manager also uses an easily extensible dictionary structure that does not affect the usability of existing dictionaries.
It is assumed that application-defined pronunciation dictionaries will reside in RAM when in use. The run-time structure of dictionary data presumably depends on the specific needs of particular speech synthesizers and will therefore differ from the structure of the dictionaries as stored on disk.

Creating and Editing Dictionaries

There is no built-in support for creating and editing speech dictionaries. You can create dictionary resources using any of the available resource editing tools such as the MPW Rez tool or ResEdit. Of course, you can also fairly easily develop routines to edit the dictionary structure from within the application. At the present time, no assumption should be made that the entries in a dictionary are stored in sorted order.