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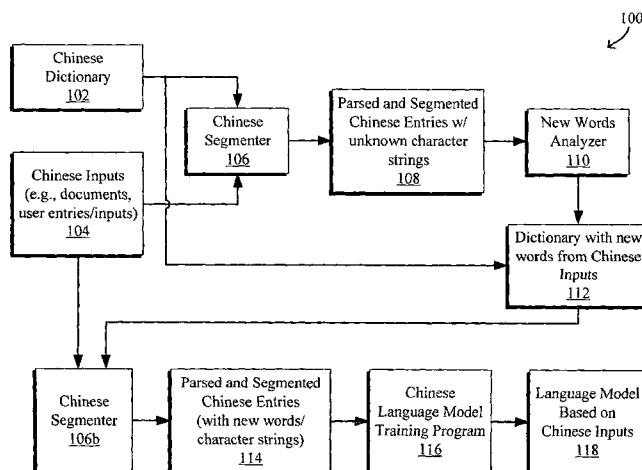
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(54) Title: SYSTEMS AND METHODS FOR TRANSLATING CHINESE PINYIN TO CHINESE CHARACTERS



(57) Abstract: Systems and methods to process and translate pinyin to Chinese characters and words are disclosed. A Chinese language model is trained by extracting unknown character strings from Chinese inputs, e.g., documents and/or user inputs/queries, determining valid words from the unknown character strings, and generating a transition matrix based on the Chinese inputs for predicting a word string given the context. A method for translating a pinyin input generally includes generating a set of Chinese character strings from the pinyin input using a Chinese dictionary including words derived from the Chinese inputs and a language model trained based on the Chinese inputs, each character string having a weight indicating the likelihood that the character string corresponds to the pinyin input. Ambiguous user input may be classified as non-pinyin or pinyin by identifying an ambiguous pinyin/non-pinyin ASCII word in the user input and analyzing the context to classify the user input.

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