

## AUDIO-TO-TEXT FOR MOBILE DEVICES

*Xerox Corporation*

### Initial Bidding Guidance: Mid 6 Figures

This portfolio is directed to techniques for providing a textual representation of an audio message to a mobile device. Mobile devices, such as cell phones and tablets, are in widespread use for transmitting and receiving voice communications. Users often encounter situations wherein it may be impractical or unacceptable to receive a voice communication or even to allow a mobile device to audibly alert the user of an incoming communication. Accordingly, mobile devices have been adapted to provide a silent mode. However, the recipient must choose between an immediate response to the call or to later retrieve a voice message that the caller may (or may not) have recorded. Speech recognition systems are known to convert voice to text; however, for accurate recognition, an extensive lexicon is required. Such systems incorporate substantial memory power and are generally most effective when the system is trained to the voice of the speaker. Therefore, speech recognition systems may not be suitable for application in mobile devices having restricted memory. Accordingly, there is a need for an improved technology to allow users to better receive and process information in voice messages that are delivered to their mobile devices.

**Value Proposition:** This portfolio is directed to methods and systems for providing a first communication device with a textual representation of a voice message transmitted from a second communication device. The method includes receiving a voice message and converting the voice message to phonemes. The phonemes are selected from a finite set of phonemes, wherein for the majority of the phonemes in the set, each phoneme is associated in memory with a single representative character. The method includes accessing a dictionary of words to identify any words which correspond to a group of the phonemes in the voice message. For a phoneme not recognized as being a part of one of groups of phonemes that correspond to a word in the dictionary, the phoneme can be represented by a corresponding representative character. The obtained text representation of the voice message is then transmitted to a communication device; the representation can include characters representative of at least some of the phonemes. Such systems and methods allow the creation of SMS messages using speech without the difficulties of using the keyboard of a mobile device.

**Forward Citing Companies:** National Institute of Advanced Industrial Science Technology

**Priority Date:** 05-02-2006

**Representative Claim:** US 8,204,748 – Claim #1

A method of providing a first communication device with a textual representation of a voice message transmitted from a second communication device, the method comprising: detecting that the first communication device is operating in a silent mode in which the first communication device is switched on but wherein calls are directly routed to a user's messaging system; in response to said detection, prompting a user of the second communication device to input a voice message; converting the input voice message to phonemes; accessing a dictionary of words and their corresponding phonemes to identify, where present, a word which corresponds to a group of the phonemes; for each phoneme not recognized as part of a word in the dictionary, representing the phoneme as a representative character; and automatically transmitting a textual

#### TECHNOLOGY

TEXTUAL REPRESENTATION  
OF AUDIO MESSAGES

#### NOVELTY

SYSTEM AND METHOD  
FOR PROVIDING A  
TEXTUAL REPRESENTATION  
OF AN AUDIO MESSAGE  
TO A MOBILE DEVICE

#### IMPORTANCE

A VALUABLE PORTFOLIO  
FOR COMPANIES  
PROVIDING MOBILE  
DEVICES, OR SOFTWARE  
(INCLUDING OPERATING  
SYSTEMS AND MOBILE  
APPLICATIONS) FOR  
MOBILE DEVICES

#### NUMBER OF ASSETS

7

#### PATENTS (3)

US 8,204,748  
US 8,244,540  
JP 5247062

#### APPLICATIONS (4)

DE 07105969.5  
EP 07105969.5  
FR 07105969.5  
GB 07105969.5



representation of the converted voice message to the first communication device, the representation including characters based on the phonemes and words identified in the dictionary that correspond to a group of the phonemes.

**Contact:**

For more information on the assets available for sale in this portfolio, contact Paul Greco.

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