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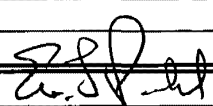
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UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>	Attorney Docket No.	112855.141 US2
	First Inventor	Daniel L. Roth
	Title	VOICE OVER SHORT MESSAGE
	Express Mail Label No.	EV622217703US

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450
1. ☐ Fee Transmittal Form (e.g., PTO/SB/17) <i>(Submit an original and a duplicate for fee processing)</i> 2. ☒ Applicant claims small entity status. <i>See 37 CFR 1.27.</i> 3. ☒ Specification [Total Pages <u>18</u>] <i>Both the claims and abstract must start on a new page (For information on the preferred arrangement, see MPEP 608.01(a))</i> 4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets _____] 5. Oath or Declaration [Total Sheets <u>3</u>] a. ☐ Newly executed (original or copy) b. ☐ A copy from a prior application (37 CFR 1.63(d)) <i>(for continuation/divisional with Box 18 completed)</i> i. ☐ DELETION OF INVENTOR(S) <i>Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</i> 6. ☒ Application Data Sheet. See 37 CFR 1.76 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) ☐ Landscape Table on CD 8. Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, items a. - c. are required)</i> a. ☐ Computer Readable Form (CRF) b. ☐ Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	ACCOMPANYING APPLICATION PARTS 9. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee _____ 10. ☐ 37 CFR 3.73(b) Statement <i>(when there is an assignee)</i> ☐ Power of Attorney 11. ☐ English Translation Document (if applicable) 12. ☐ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of citations attached 13. ☐ Preliminary Amendment 14. ☒ Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i> 15. ☐ Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. ☐ Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 17. ☐ Other: _____
18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76: ☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____ Prior application information: _____ Examiner: _____ Art Unit: _____	

19. CORRESPONDENCE ADDRESS					
☒ The address associated with Customer Number:		23483		OR ☐ Correspondence address below	
Name					
Address					
City		State		Zip Code	
Country		Telephone		Fax	
Signature				Date	
Name (Print/Type)		Eric L. Prah		Registration No. (Attorney/Agent)	
				32,590	

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VOICE OVER SHORT MESSAGE SERVICE

[0001] This application claims the benefit of U.S. Provisional Patent Application Serial No. 60/563,754, filed April 20, 2004, the entire contents of which are incorporated herein by reference.

Technical Field

[0002] This invention generally relates to conveying voice messages over communications channels that are available on a mobile communication devices, e.g. cellular phones.

Background of the Invention

[0003] To minimize the amount of voice information transmitted over a wireless communication network, and thus maximize the number of phone calls supportable on the network at any one time, cellular phones utilize voice coders/decoders, or codecs. Codecs remove much of the redundant or unnecessary information from a speech signal. Then the fundamental elements of the speech are transmitted over the network to a receiving cellular phone where they are decoded, or recombined with data that resembles the previously removed information. This results in reconstituted speech that can be recognized by the end user. The codecs must balance the need for minimal data transmission with the need to retain enough of the original speech information to sound natural when decoded on the receiving end. In general voice codecs today can compress speech signals to between 4.5k-8k bits per second, with 2.4k bits per second being roughly the minimal rate required to maintain natural-sounding speech. Despite the ability to compress speech to these low bit rates, the network infrastructure for handling large volumes of voice calls is limited in many markets, particularly in emerging markets in developing countries. This can make the cost of a wireless phone call there significant.

[0004] An alternate and increasingly popular method of communicating via cellular phones is text messaging. In response to the high costs of voice calls, text based mobile-to-mobile messaging called SMS, or Short Message Service, has become heavily used in some markets, particularly amongst younger demographics. SMS enables a user to transmit and receive short text messages at any time, regardless of whether a voice call is in progress. The user typically types in the message text through the small keyboard that is provided on the device. The messages are hardware limited to 160 characters, and are sent as packets through a low bandwidth, out-of-band message transfer channel. This allows for facile communication with minimal burden on the wireless network.

[0005] Most legacy wireless network systems such as GSM, TDMA, and CDMA have a text/data channel capable of sending and receiving SMS, so the infrastructure for this service already exists even in emerging markets in developing countries. Some estimates now place the global number of SMS messages at nearly 40 billion messages per month. It is thought that SMS is now the most significant source of non-voice based revenue to wireless network operators worldwide. As a result carriers are very interested in promoting the use of SMS. Indeed, network operators in developing markets may limit the implementation of more advanced voice network infrastructures due to the large revenues associated with text messaging.

Summary of the Invention

[0006] In some markets the cost of cell phone calls is relatively expensive, making text messaging (e.g. via SMS) a desirable communication alternative. However, in a portion of those markets other barriers may exist to using text. Both the sender and the receiver must be able to read and/or write. But in emerging markets, such as India which has a very large population, the adult literacy rate is roughly 60% and thus a large number of people are not sufficiently literate to type text messages into the cell phone. Thus, for many consumers in such markets who can neither compose nor read a message, SMS text-messaging as a communication mode is not an effective alternative. At least some of the embodiments described herein provide a mechanism by which such consumers can nevertheless use the lower-cost, non-voice wireless communication channels for verbal communications instead of text messaging.

[0007] In general, in one aspect, the invention features a method of sending a voice message via a mobile communication device. The method involves: receiving an utterance from a user of the mobile communication device; generating a non-text representation of the received utterance; inserting the non-text representation into a body of a text message; and sending the text message over a wireless messaging channel from the mobile communication device to a recipient's device.

[0008] Embodiments include one or more of the following features. The mobile communication device is a cellular phone. Generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, wherein the string of symbols is the non-text representation. The symbols in the string of symbols are selected from the group consisting of phonemes, diphones, and triphones (more specifically, the symbols are phonemes). The wireless messaging channel is an SMS channel and the text message is an SMS message. The method also involves including an indicator with the text message identifying the text message as containing a non-text representation of the utterance. The non-text representation is a compressed version of the received utterance.

[0009] In general, in another aspect, the invention features a method of receiving on a mobile communication device a message representing an utterance. The method involves: over a wireless messaging channel receiving a text message, wherein the text message contains a non-text representation of the utterance; extracting the non-text representation from the text message; synthesizing an audio representation of the spoken utterance from the non-text representation; and playing the synthesized audio representation through an audio output device on the mobile communication device.

[0010] Embodiments include one or more of the following features. The mobile communication device is a cellular phone. The non-text representation of the utterance is a string of symbols representing sounds of the utterance. The symbols in the string of symbols are

selected from the group consisting of phonemes, diphones, and triphones (more specifically, they are phonemes). The wireless messaging channel is an SMS channel and the text message is an SMS message. The received text message includes an indicator identifying the text message as containing a non-text representation of the utterance. The non-text representation is a compressed version of the utterance.

[0011] In general, in still another aspect, the invention features a mobile communication device for sending a voice message. The mobile communication device includes: a processor system; a microphone for receiving an utterance from a user of the mobile communication device; a transceiver; and memory storing code which when executed on the processor system causes the mobile communication device to: generate a non-text representation of the received utterance; insert the non-text representation into a body of a text message; and send the text message via the transceiver over a wireless messaging channel from the mobile communication device to a recipient's device.

[0012] In general, in still another aspect, the invention features a mobile communication device for receiving a voice message. The mobile communication device includes: a processor system; a transceiver for receiving a text message that contains a non-text representation of an utterance; an audio output device; and memory storing code which when executed on the processor system causes the mobile communication device to: extract the non-text representation from the received text message; synthesize an audio representation of the spoken utterance from the non-text representation; and play the synthesized audio representation through the audio output device.

[0013] The details of one or more embodiments of the invention are set forth in the accompanying drawings and the description below. Other features, objects, and advantages of the invention will be apparent from the description and drawings, and from the claims.

Brief Description of the Drawings

[0014] Fig. 1 shows a block diagram of the phonetic recognition system.

[0015] Fig. 2 shows a block diagram of the phonetic synthesis system

[0016] Fig. 3 shows a high-level block diagram of a smartphone incorporating phonetic recognition and synthesis systems.

Detailed Description

[0017] The described embodiment is a method of sending and receiving spoken or audio information over the SMS network available in cellular phones. A user speaks a desired message, or utterance, into a cellular phone. A phonetic recognition algorithm in the phone then generates a non-text representation of the utterance. An SMS application in the phone sends this non-text representation in the body of an SMS message via the SMS network to the recipient's phone. At the recipient's phone, another SMS application extracts the non-text representation from the body of the SMS message. Then, a synthesizer synthesizes an audio message from the non-text representation and plays the synthesized message to the recipient.

[0018] Fig. 1 shows a high-level block diagram illustrating in greater detail the functionality that is implemented. A user speaks an utterance 110 into the cellular phone 100 and a feature extractor 130 in the front end of a recognition engine 120 within the phone processes that utterance to extract its acoustic features. Typically, feature extractor 130 includes a digitizer 102 that converts the received analog signal into a digital representation. Digitizer 102 divides the input signal into a sequence of overlapping frames and then outputs a digital representation of the signal within each of the frames. A filter 104 then filters the spectrum of the signal to, among other things, reduce the influence of non-speech noise on the speech signal and to correct for various impairments caused by the spectral characteristics of the channel over which the utterance was received. The filtering process preserves the main verbal content of the utterance while eliminating various frequencies, e.g. the very high and very low frequencies, that likely do not carry significant usable information. An analyzer 106 analyzes the filtered digital signal to extract the relevant acoustic features of the frames, i.e., the feature vector. The output of feature extractor 130 is an acoustic representation 140 of the received utterance. In the described

embodiment, feature extractor 130 uses the MEL cepstrum coding technique to extract the relevant features.

[0019] In a database 160 in memory, the phone stores a set of phonemes, which are basic phonetic units from which the sounds of the spoken language are constructed. It also stores an acoustic model for each of the phonemes and an index or pointer which identifies the phoneme. The acoustic model is statistical in nature and indicates the probability that a particular phoneme was spoken given the occurrence of a particular set of acoustic features.

[0020] In the described embodiment, the recognition engine 120 employs an unconstrained phoneme recognizer 150 to determine the sequence of phonemes (i.e., phoneme string) that is most likely given the sequence of feature vectors which characterizes the user's utterance. The recognizer 150 is unconstrained in that it considers each candidate phoneme with equal weight, without presumption as to the order or to the language spoken by the user. In other words, phoneme recognizer 150 is a relatively crude recognizer that does not use a language model which enables it to identify the spoken words.

[0021] Recognizer 150 statistically compares the acoustic representation of the utterance to acoustic representations of phonemes stored in a phoneme database 160 on the cell phone. Phoneme database 160 contains a sufficiently large set of phonemes, with their acoustic representation, to effectively describe the sounds that are found in the language of the user. The phoneme recognizer 150 performs a statistical comparison of the acoustic representations of the received utterance with the acoustic representations of the phonemes to identify the best match. It does this using a well-known technique referred to as hidden Markov model (HMM), though other statistical or non-statistical techniques or models that compare features of speech to stored phonetic units could also be used.

[0022] Phoneme recognizer 150 outputs the recognized sequence of phonemes as a sequence of indices or pointers into its database of phonemes. That is, for each phoneme in the recognized string of phonemes, phoneme recognizer 150 looks up in its database phonemes the particular

index or pointer that identifies that phoneme and it outputs that index or pointer. The output is a non-text representation of the spoken utterance, in this case, a phoneme string. The value of this string is that a synthesizer on the receiving end of the communication link can recreate the sequence of sounds that made up the utterance, i.e., it can recreate the utterance so that it would generally be recognizable to the user on the other end. Typically, however, the phoneme string will not be easily readable as text since word recognition is not performed.

[0023] Phoneme recognizer 150 stores the phoneme string in a buffer 175 for an SMS application 180 that is also running on the cell phone. SMS application 180 generates a text message shell for receiving the non-text representation and populates its address field with the address of the recipient's phone. When buffer 175 is full or the utterance is complete, SMS application 180 inserts the stored phoneme string into the body of an SMS message, along with a flag identifying the message as containing a non-text phoneme string that is intended for a synthesizer on the receiving end. In effect, the flag alerts the SMS application on the other end to not treat the contents of the SMS as a text message that would normally be displayed to the user. SMS application 180 then wirelessly transmits the SMS message over the SMS channel to the recipient's cell phone.

[0024] Phoneme recognizer 150 also stores other information in SMS buffer 175 which is useful in improving the quality and/or understandability of the sounds that are synthesized by the recipient's cell phone. For example, it also specifies the temporal length of each phoneme, its volume, and possibly other parameters which can be used to control the quality of the sounds generated by the synthesizer in the receiving phone. In the described embodiment, since phoneme recognizer 150 also recognizes pauses, it truncates those recognized pauses to conserve the space required to represent the utterance.

[0025] With the phonetic recognition algorithm, utterance 110 would typically be compressed into a non-text representation 170 at a rate of approximately 200 – 700 bits per second or less. When sent over the SMS network, which in many areas has a single-message

information limit of 1200 bits, this corresponds to an utterance that is about 10 seconds long upon playback on the receiving cell phone.

[0026] Note that an alternative to the approach described above would be to perform full speech recognition on the utterance and send the recognized text message in the body of the SMS message. This, however, requires that a full capability recognizer be present on the phone with a lexicon containing a dictionary of words of the type that would be spoken by the consumers to whom such a phone would be sold. That might not be practical, especially if the phone is intended for sale in a market like India, where there are over 350 different languages. The algorithms required to perform speech recognition in such an environment would be very sophisticated and complex; moreover, the resources required to perform that speech recognition would typically be beyond those that would be available on the inexpensive cell phones intended to be sold to the general population. On the other hand, a recognizer that needs to only generate a phonetic string representation of what was spoken, as opposed to the recognized text, is much less complex to build and requires significantly less onboard computational and memory resources. In addition, that set of phonemes required to support phoneme recognition is small, especially in comparison to the lexicon of words that would be necessary to perform full speech recognition. Indeed, using the universal phoneme set would enable the recognizer to handle most languages for the purposes described herein.

[0027] It should also be noted that when the phonetic recognizer 150 statistically matches segments of the acoustic representation of the utterance 170 to acoustic representations of the phonemes, the best-match phonemes might occasionally incorrectly match the utterance. For example the recognizer might interpret a “d” sound to be a “t,” because the features obtained by the feature extractor 130 are similar for both sounds, making neither sound a significantly better match than the other in the phonetic recognizer 150. Such errors would have a more detrimental effect on speech-to-text recognition but would typically have far less detrimental effect in the applications described herein. To someone listening to the synthesized audio message, the presence of such errors in the phonetic string that is being synthesized are not likely to render the playback unintelligible. Indeed, they might not even be noticed.

[0028] Fig. 2 shows a high-level block diagram illustrating the functionality implemented on the receiver side of the SMS channel. A cellular phone 200 operated by the recipient receives the SMS message containing the non-text representation of the utterance and an SMS application 280 processes the message for presentation to the user. A flag within the received SMS message identifies the contents of the SMS message as a phonetic string that must be processed by the synthesizer to generate an audio signal. In other words, the flag causes the SMS application to process the message differently from a normal text message for which the contents of the message would simply be displayed to the user. SMS application 280 passes the phonetic string to a synthesizer 220 within the cell phone, along with any stored parameters which were supplied to control synthesizer 220 and the way it generates the sounds. The recipient's cell phone, like the sender's cell phone, also contains a database of phonemes along with their acoustic representations. The indices or pointers that make up the received phonetic string identify which phonemes from that database are to be synthesized to render the phonetic string into an audio message. The synthesizer plays through the cell phone speaker the sequence of sounds that represent the phonetic string. In this way, the spoken utterance is transmitted to the recipient via the SMS message facility in non-real time.

[0029] If appropriate, it is possible to program the SMS application to generate a sequence of multiple SMS messages to handle longer utterances for which the non-text representation will not fit into the body of a single message. In essence, the SMS application would "packetize" the phonetic string and send multiple SMS messages (or packets) to the recipient's cell phone, each message containing a part of the total utterance. Each message would be indexed or tagged so that the SMS on the recipient's side could accurately reconstruct the complete representation of the utterance. The SMS application on the recipient's side of the connection would also need to be programmed to recognize that the received non-text representation is to be constructed by concatenating the contents of more than one SMS message.

[0030] In the embodiments described above, the units of speech used to represent the utterance are phonemes. However, any one of a variety of other symbol sets, other than

phonemes, could be used. For example, the symbols could be diphones, triphones, syllables, demisyllables, or any other set that serves to effectively represent the sounds contained within the spoken utterances of the intended users.

[0031] For an implementation that is targeted for a specific market, a “tailored” dictionary of phonetic units selected to optimally represent the sounds of the language used in that market could be incorporated in the device. Alternatively, a universal set of phonemes could be used which would enable the phone to recognize and represent most languages.

[0032] As noted above, the phoneme recognizer does not include a full language model and indeed might not include any language model at all. Its function is to simply recognize the sounds within the utterance. For this purpose, it is not necessary to recognize their meaning. And thus the resulting representation that is produced by the recognizer is a non-text representation which likely is not readable by the user. That does not mean, however, that the selected symbol set might not include words among the set of symbols. Short, single syllabic words might, for example, appear as symbols or units among the selected set of symbols.

[0033] In effect, the phonetic recognition algorithm generates a compressed version of the spoken utterance. In the described embodiment, that compressed version is a non-text representation (i.e., a phonetic string). In fact, other algorithms could be used which simply perform compression without performing any recognition. For example, instead of using a phoneme recognizer, a vocoder could be used to generate the compressed representation and then that compressed representation would be inserted into the body of the SMS message. In other words, any algorithm that produces a non-text representation suitable for sending over SMS or another non-voice channel could be employed. It would be desirable that the selected algorithm be able to compress speech sufficiently so that it is possible to send an utterance that is long enough to convey meaningful information. On the receiving end, the appropriate decompression algorithm would need to be implemented to reconstruct the audio version of the spoken utterance.

[0034] Various features can be added to the system to enhance usability. As indicated above, one such feature is to give the sending user the option of choosing a “voice” in which the receiving phone will replay the audio message to the receiving user. This feature is implemented by adding an additional string of characters representing “voice” parameters to the non-text representation of the utterance, which gives instructions to the synthesis algorithm. The user can select and/or adjust these parameters through a menu driven interface on the phone. These parameters would be used to tailor the synthesizer algorithm to produce the desired effect. In the same way, parameters can be included for playback speed, or other modifications to the audio message that make it sound more natural, or more representative of the sending user. Another feature that can be implemented in the system is audio prompted guidance to both the sending and receiving users, which can better enable non-literate users to operate the system. In this case, both phones store a number of prerecorded messages such as “please record after the beep,” “enter the phone number of the person you want to send this to,” and so on. The phone audibly plays an appropriate message in response to user input.

[0035] Another feature that can be implemented in the system is to allow the user to prioritize between the utterance length and quality of reproduction. In this case, the phone would store multiple algorithms that allow for varying length and quality of the non-text representation of the utterance. Before the user records the utterance, the phone offers a length/quality choice to the user. The user inputs his response either verbally or via the phone keypad; then the phone uses the algorithm corresponding to the user instruction to process the utterance. The phone then adds a series of characters giving instruction to the receiving phone on how to synthesize the message from the non-text representation of the utterance.

[0036] In the described embodiment, the cellular phone is a smartphone 300, such as is illustrated by the high-level functional block diagram of Fig. 3. Smartphone 300 is a Microsoft PocketPC-powered phone which includes at its core a baseband DSP 302 (digital signal processor) for handling the cellular communication functions (including for example voiceband and channel coding functions) and an applications processor 304 (e.g. Intel StrongArm SA-1110) on which the PocketPC operating system runs. The phone supports GSM voice calls, SMS

(Short Messaging Service) text messaging, wireless email, and desktop-like web browsing along with more traditional PDA features.

[0037] The transmit and receive functions are implemented by an RF synthesizer 306 and an RF radio transceiver 308 followed by a power amplifier module 310 that handles the final-stage RF transmit duties through an antenna 312. An interface ASIC (application-specific integrated circuit) 314 and an audio CODEC 316 provide interfaces to a speaker, a microphone, and other input/output devices provided in the phone such as a numeric or alphanumeric keypad (not shown) for entering commands and information. DSP 302 uses a flash memory 318 for code store. A Li-Ion (lithium-ion) battery 320 powers the phone and a power management module 322 coupled to DSP 302 manages power consumption within the phone. Volatile and non-volatile memory for applications processor 114 is provided in the form of SDRAM 324 and flash memory 326, respectively. This arrangement of memory is used to hold the code for the operating system, the code for customizable features such as the phone directory, and the code for any applications software that might be included in the smartphone, including the phonetic recognition, synthesizer, and SMS application code mentioned above. It also stores the phoneme database, which includes the phonemes, acoustic representations of the phonemes, and symbols representing the phonemes.

[0038] The visual display device for the smartphone includes an LCD driver chip 328 that drives an LCD display 330. There is also a clock module 332 that provides the clock signals for the other devices within the phone and provides an indicator of real time.

[0039] All of the above-described components are packaged within an appropriately designed housing 334. Since the smartphone described above is representative of the general internal structure of a number of different commercially available phones and since the internal circuit design of those phones is generally known to persons of ordinary skill in this art, further details about the components shown in Fig. 3 and their operation are not being provided and are not necessary to understanding the invention.

[0040] In general, the device would not have to be a cellular phone at all, but would possess the functionality of receiving an utterance, converting it to a non-text representation of the utterance, and sending it over SMS or another non-voice channel. For example a laptop computer having a microphone, appropriate software to generate a non-text representation of an utterance, and a wireless transmitter that utilizes the SMS protocol and frequencies, or any other device with similar functionality, could also be implemented.

[0041] While the SMS network is presented in the above example, any network over which one might send text, data and/or media other than voice could be used. As an example one would also use an MMS (Multi-Media Service) messaging channel.

[0042] Also, the MEL cepstrum coding technique mentioned above is just one example of many known alternatives for extracting and representing features of the received utterance. Any of the other known techniques, such as LPC cepstral coefficients for example, could be employed instead of the MEL cepstrum coding technique. Two examples of coding techniques that could be used to generate the non-text representations are: (1) Takashi Masuko, Keiichi Tokuda, Takao Kobayashi, "A Very Low Bit Rate Speech Coder Using HMM with Speaker Adaptations," paper presented at the 1998 ICASSP and a version also appearing in Systems and Computers in Japan, Volume 32, Issue 12, 2001. Pages 38-46; and (2) M. Habibullah Pagarkar, Lakshmi Gopalakrishnan, Nimish Sheth, Rizwana Shaikh, Virag Shah, "Language Independent Speech Compression Using Devanagari Phonetics," found on the web at the following URL: <http://www.geocities.com/virag81/docs.html>, both of which are incorporated herein by reference

[0043] Other aspects, modifications, and embodiments are within the scope of the following claims.

WHAT IS CLAIMED IS:

- 1 1. A method of sending a voice message via a mobile communication device, said
2 method comprising:
 - 3 receiving an utterance from a user of the mobile communication device;
 - 4 generating a non-text representation of the received utterance;
 - 5 inserting at least some of the non-text representation into a body of a text message; and
 - 6 sending the text message over a wireless messaging channel from the mobile
7 communication device to a recipient's device.
- 1 2. The method of claim 1, wherein the mobile communication device is a cellular phone.
- 1 3. The method of claim 1, wherein inserting at least some of the non-text representation
2 involves inserting all of the non-text representation into the body of the text message.
- 1 4. The method of claim 1, wherein generating the non-text representation of the received
2 utterance involves performing recognition on a signal derived from the received utterance to
3 generate a string of symbols, wherein the string of symbols is the non-text representation.
- 1 5. The method of claim 4, wherein the symbols in the string of symbols are selected from
2 the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.
- 1 6. The method of claim 4, wherein the recognition is phoneme recognition and the
2 symbols in the generated string of symbols are phonemes.
- 1 7. The method of claim 1, wherein generating the non-text representation of the received
2 utterance involves performing phoneme recognition on a signal derived from the received
3 utterance to generate a phoneme string, wherein the phoneme string is the non-text
4 representation.
- 1 8. The method of claim 1, wherein the wireless messaging channel is an SMS channel
2 and the text message is an SMS message.

1 9. The method of claim 1, further comprising including an indicator with the text
2 message identifying the text message as containing a non-text representation of the utterance.

1 10. The method of claim 1, wherein the non-text representation is a compressed version
2 of the received utterance.

1 11. The method of claim 1, further comprising dividing the non-text representation into
2 sections and inserting each section into a body of a different corresponding text message of a
3 plurality of text messages, wherein the first-mentioned text message is one of said plurality of
4 text messages and further comprising sending the plurality of text messages over the wireless
5 messaging channel from the mobile communication device to the recipient's device.

1 12. A method of operating a mobile communication device, said method comprising:
2 over a wireless messaging channel receiving a text message, wherein the text message
3 contains a non-text representation of an utterance;
4 extracting the non-text representation from the text message;
5 synthesizing an audio representation of the spoken utterance from the non-text
6 representation; and
7 playing the synthesized audio representation through an audio output device on the
8 mobile communication device.

1 13. The method of claim 12, wherein the mobile communication device is a cellular
2 phone.

1 14. The method of claim 12, wherein the non-text representation of the utterance is a
2 string of symbols representing sounds of the utterance.

1 15. The method of claim 14, wherein the symbols in the string of symbols are selected
2 from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.

1 16. The method of claim 14, wherein the symbols in the string of symbols are phonemes.

1 17. The method of claim 12, wherein the wireless messaging channel is an SMS channel
2 and the text message is an SMS message.

1 18. The method of claim 12, wherein the received text message includes an indicator
2 identifying the text message as containing a non-text representation of the utterance.

1 19. The method of claim 12, wherein the non-text representation is a compressed version
2 of the utterance.

1 20. The method of claim 12 further comprising:
2 over the wireless messaging channel receiving a plurality of text messages in addition to
3 the first-mentioned text message, said first-mentioned text message and said plurality of text
4 messages forming a set of text messages, wherein each text message of the set of text messages
5 contains a non-text representation of a different portion of the utterance;
6 extracting the non-text representations from the plurality of text messages; and
7 synthesizing the audio representation of the spoken utterance from the non-text
8 representations extracted from the set of text messages.

1 21. A mobile communication device for sending a voice message, said mobile
2 communication device comprising:
3 a processor system;
4 a microphone for receiving an utterance from a user of the mobile communication device;
5 a transceiver; and
6 memory storing code which when executed on the processor system causes the mobile
7 communication device to;
8 generate a non-text representation of the received utterance;
9 insert the non-text representation into a body of a text message; and
10 send the text message via the transceiver over a wireless messaging channel from the
11 mobile communication device to a recipient's device.

1 22. A mobile communication device for receiving a voice message, said mobile
2 communication device comprising:

3 a processor system;
4 a transceiver for receiving a text message that contains a non-text representation of an
5 utterance;
6 an audio output device; and
7 memory storing code which when executed on the processor system causes the mobile
8 communication device to:
9 extract the non-text representation from the received text message;
10 synthesize an audio representation of the spoken utterance from the non-text
11 representation; and
12 play the synthesized audio representation through the audio output device.

Abstract of the Invention

[0044] A method of sending a voice message via a mobile communication device, said method involving: receiving an utterance from a user of the mobile communication device; generating a non-text representation of the received utterance; inserting the non-text representation into a body of a text message; and sending the text message over a wireless messaging channel from the mobile communication device to a recipient's device.

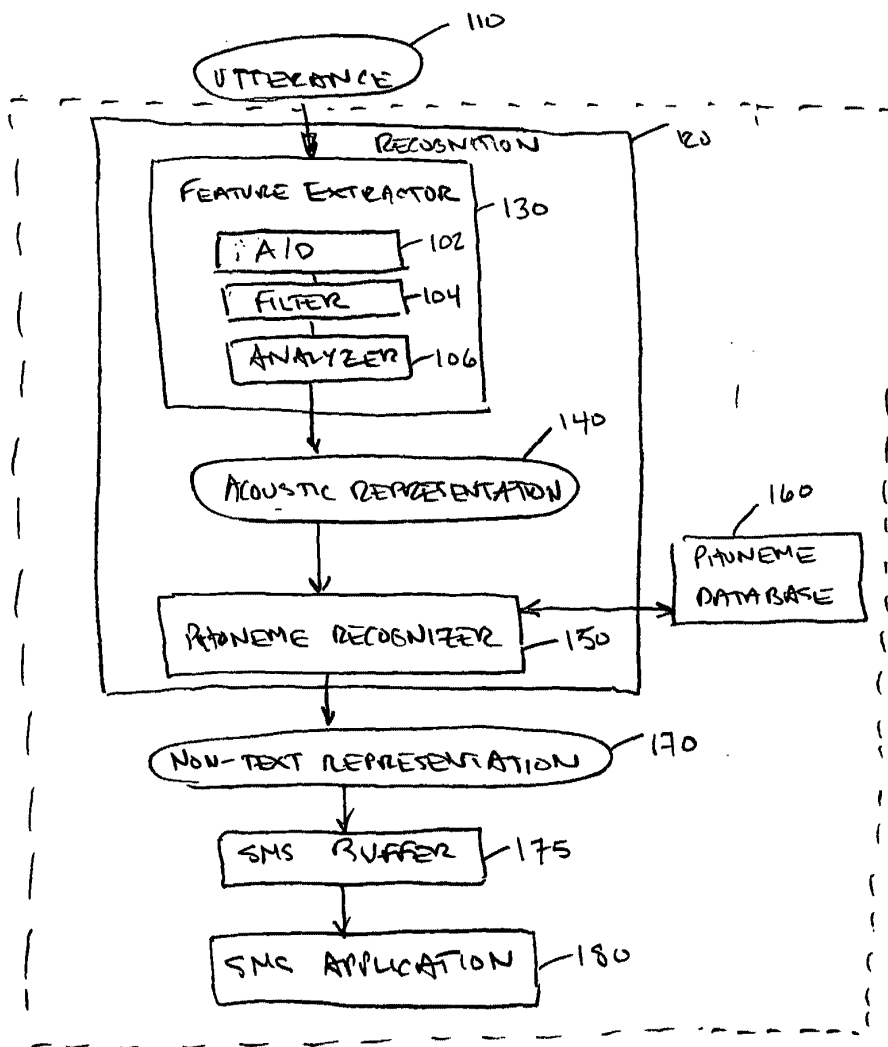


FIG. 1

BEST AVAILABLE COPY

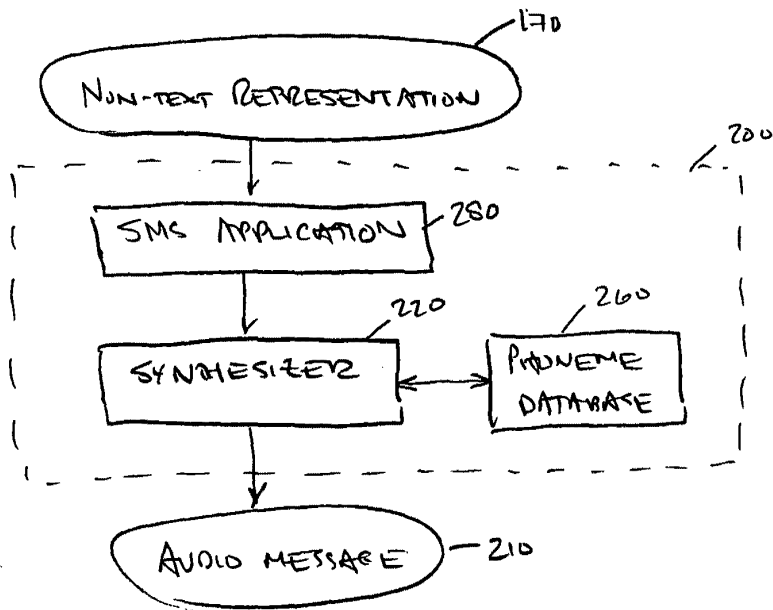


FIG. 2

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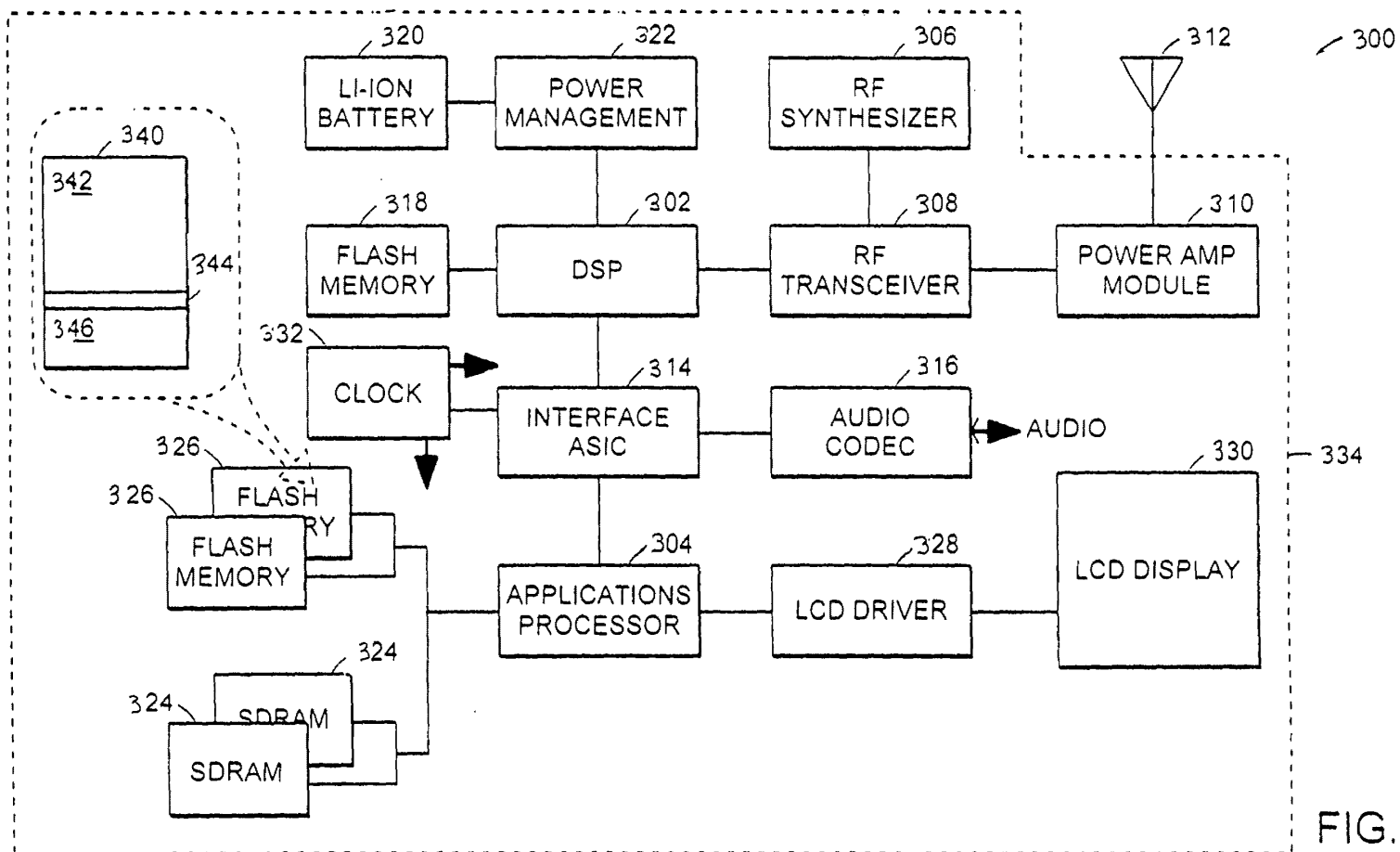


FIG. 3

Application Data Sheet

Application Information

Application Number::	TBD
Filing Date::	April 20, 2005
Application Type::	Regular
Subject Matter::	Utility
Suggested Classification::	
Suggested Group Art Unit::	
CD-ROM or CD-R?::	
Number of CDs::	
Number of Copies of CDs::	
Sequence Submission?::	
Computer Readable Form (CRF)?::	No
Number of Copies of CRF::	
Title::	VOICE OVER SHORT MESSAGE SERVICE
Attorney Docket Number::	112855.141 US2
Request for Early Publication?::	No
Request for Non-Publication?::	No
Suggested Drawing Figure::	
Total Drawing Sheets::	3
Small Entity?::	Yes
Latin Name::	
Variety Denomination Name::	
Petition Included?::	No
Petition Type::	
Licensed US Govt. Agency::	
Contract or Grant Numbers::	
Secrecy Order in Parent Appl.?::	No

Applicant Information

Applicant Authority Type:: Inventor
Primary Citizenship Country:: US
Status:: Full Capacity
Given Name:: Daniel L.
Family Name:: Roth
City of Residence:: Boston
State or Province of Residence:: MA
Country of Residence:: US
Street of Mailing Address:: 20 Tileston Street, #3M
City of Mailing Address:: Boston
State or Province of Mailing Address:: MA
Country of Mailing Address:: US
Postal or Zip Code of Mailing Address:: 02113-1957

Correspondence Information

Correspondence Customer Number:: 23483

Representative Information

Representative Customer Number::	23483	
---	-------	--

Domestic Priority Information

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This application	An application claiming the benefit under 35 USC 119(e)	60/563,754	April 20, 2004

Foreign Priority Information

Country::	Application Number::	Filing Date::	Priority Claimed::

Express Mail Label No. EV622217703US
Date of Deposit: April 20, 2005
Attorney Docket No.: 112855.141US2

Assignee Information

Assignee Name:: Voice Signal Technologies, Inc.
Street of Mailing Address:: 150 Presidential Way, Suite 310
City of Mailing Address:: Woburn
State of Mailing Address:: MA
Country of Mailing Address:: US
Postal or Zip Code of Mailing Address: 01801-1011

PATENT APPLICATION FEE DETERMINATION RECORD

Effective December 8, 2004

11110371

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	22	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	22 minus 20 = *	3
INDEPENDENT CLAIMS	4 minus 3 = *	1
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY

TYPE ☐

OR

OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	150
X\$ 25=	50
X100=	100
+180=	
TOTAL	300

RATE	FEE
BASIC FEE	
X\$50=	
X200=	
+360=	
TOTAL	

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 25=	
X100=	
+180=	
TOTAL	

RATE	ADDITIONAL FEE
X\$50=	
X200=	
+360=	
TOTAL	

RATE	ADDITIONAL FEE
X\$ 25=	
X100=	
+180=	
TOTAL	

RATE	ADDITIONAL FEE
X\$50=	
X200=	
+360=	
TOTAL	

RATE	ADDITIONAL FEE
X\$ 25=	
X100=	
+180=	
TOTAL	

RATE	ADDITIONAL FEE
X\$50=	
X200=	
+360=	
TOTAL	



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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/110,371	04/20/2005	Daniel L. Roth	112855.141 US2

CONFIRMATION NO. 1062

23483
WILMER CUTLER PICKERING HALE AND DORR LLP
60 STATE STREET
BOSTON, MA 02109

FORMALITIES LETTER



OC000000016043002

Date Mailed: 05/17/2005

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
Applicant must submit \$ 150 to complete the basic filing fee for a small entity.
- The oath or declaration is missing. *A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*
Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(f) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Additional claim fees of **\$150** as a small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$715** for a Small Entity

- **\$150** Statutory basic filing fee.
- **\$65** Late oath or declaration Surcharge.

- Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Phenanthrene

PART 3 - OFFICE COPY



Handwritten initials and a dollar sign

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket No. 112855.141 (US2))

In re Application of: Daniel L. ROTH
Serial No.: 11/110,371
Filing Date: April 20, 2005
Examiner: Not Yet Assigned
Art Unit: 2681
Title: VOICE OVER SHORT MESSAGE SERVICE

CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to MAIL STOP MISSING PARTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date: *August 4, 2005*

By: *Anthony W. Sutton*
Anthony W. Sutton

MAIL STOP MISSING PARTS

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

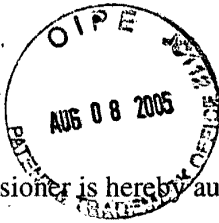
RESPONSE TO NOTICE TO FILE MISSING PARTS
OF NONPROVISIONAL APPLICATION

Dear Commissioner:

In response to the Notice To file Missing Parts of Application mailed on May 17, 2005, filing date granted, applicant submits the following documents for filing in the above-referenced patent application:

1. Executed Declaration and Power of Attorney;
2. A copy of the Notice to File Missing Parts of Application, filing date granted, mailed on May 17, 2005;
3. Authorization of payment of the Basic Filing Fee, Late Declaration Surcharge, Additional Claims fees, Search Fee and Examination Fee;
4. Replacement Drawings, Figs. 1-3, Sheets 1-3;
5. Petition for One-Month Extension of Time;
6. Copy of the Executed Assignment document being filed simultaneously via facsimile; and
7. Return Postcard.

ROTH
U.S.S.N. 11/110,371
Page 2



The Commissioner is hereby authorized to charge our Deposit Account No. 08-0219 a total amount of **\$715.00**, which includes the \$150.00 statutory basic filing fee pursuant to 37 C.F.R. §1.16(a)(1); the \$65.00 late filing of oath surcharge pursuant to 37 C.F.R. §1.16(f); the \$250 search fee pursuant to 37 C.F.R. §1.16(k); the \$100.00 examination fee pursuant to 37 C.F.R. §1.16(o); and \$150.00 for one independent claim over 3 and two claims over twenty pursuant to 37 C.F.R. §§1.16(h) and 1.16(i).

No additional fees are believed to be due in connection with this letter. However, please charge any additional fees necessary to maintain the pendency of this application to our Deposit Account No. 08-0219. These fees reflect the small entity status of this application.

If there are any questions, please call the undersigned at the telephone number indicated below.

Respectfully submitted,

Wilmer Cutler Pickering Hale and Dorr LLP

Date:

August 2, 2005

A handwritten signature in dark ink, appearing to read "Eric L. Prah", written over a horizontal line.

Eric L. Prah
Registration No. 32,590

60 State Street
Boston, MA 02109
Tel. (617) 526-6043
Fax. (617) 426-5000

COPY

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/110,371	AUG 08 2005	Daniel L. Roth	112855.141 US2

CONFIRMATION NO. 1062

 23483
 WILMER CUTLER PICKERING HALE AND DORR LLP
 60 STATE STREET
 BOSTON, MA 02109

FORMALITIES LETTER



OC000000016043002

Date Mailed: 05/17/2005

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted***Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
Applicant must submit \$ 150 to complete the basic filing fee for a small entity.
- The oath or declaration is missing. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(f) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Additional claim fees of **\$150** as a small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$715** for a Small Entity

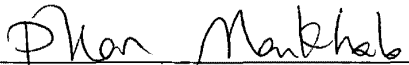
- **\$150** Statutory basic filing fee.
- **\$65** Late oath or declaration Surcharge.

08/09/2005	MAHMED1	00000059	080219	11110371
01 FC:2011		150.00	DA	
02 FC:2111		250.00	DA	
03 FC:2311		100.00	DA	
04 FC:2051		65.00	DA	
05 FC:2201		100.00	DA	
06 FC:2202		50.00	DA	

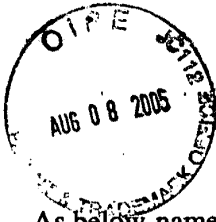
- The application search fee has not been paid. Applicant must submit **\$250** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **\$100** to complete the examination fee for a small entity in compliance with 37 CFR 1.27
- Total additional claim fee(s) for this application is **\$150**
 - **\$100** for 1 independent claims over 3.
 - **\$50** for 2 total claims over 20.

Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

*A copy of this notice **MUST** be returned with the reply.*


Office of Initial Patent Examination (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



DECLARATION AND POWER OF ATTORNEY

(Attorney Docket No: 112855.141 (US2))

As below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, and only inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

VOICE OVER SHORT MESSAGE SERVICE

the specification of which (check only one):

☐ is attached hereto.

☒ was filed as United States Patent Application
Serial No. 11/110,371 on April 20, 2005

☐ was filed as PCT Patent Application Serial No. _____ on _____
and was amended under PCT Article 19 on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of the claims of this application in accordance with Title 37, CFR §1.56(a) and §1.56(b).

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(e) or 365(b) of any foreign application(s) for patent or inventor's certificate or 365(a) of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by us on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. §119(a)-(d) or 365(b), or 365(a):

COUNTRY (if PCT indicate PCT)	APPLICATION NUMBER	DATE OF FILING	PRIORITY CLAIMED UNDER 35 U.S.C. §119 (YES/NO)

ROTH, Daniel L.
U.S.S.N. 11/110,371

I hereby claim benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below:

APPLICATION NUMBER	DATE OF FILING	STATUS: PENDING OR ABANDONED
60/563,754	April 20, 2004	Abandoned

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or 365(c) of any PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the prior applications and the national or PCT international filing date of this application:

**PRIOR U.S. APPLICATION OR PCT INTERNATIONAL APPLICATION(S)
DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. §120 or 365(c):**

APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS: (PATENTED, PENDING OR ABANDONED)

POWER OF ATTORNEY: As named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

CUSTOMER NUMBER 23483

the mailing address and telephone number of each of whom is c/o Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109 U.S.A., (617) 526-6000.

Send Correspondence to:

Eric L. Prah
Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109

Direct Telephone Calls to:

Eric L. Prah
(617) 526-6043 Phone
(617) 526-5000 Facsimile

Wherefore, I petition that letters patent be granted to me for the invention or discovery described and claimed in the attached specification and claims, and hereby subscribe my name to said specification and claims and to the foregoing declaration, power of attorney, and this petition.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by

ROTH, Daniel L.
U.S.S.N. 11/110,371

fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole inventor: Daniel L. Roth

Inventor's signature



Date

June 14 2009

Citizenship:

United States of America

Residence:

20 Tileston Street, #3M, Boston, Massachusetts 02113-1957

Post Office Address: Same

COPY

ASSIGNMENT

WHEREAS, I, **Daniel L. Roth**, being a citizen of the United States, residing at 20 Tileston Street, #3M, Boston, Massachusetts 02113-1957, am an inventor of certain new and useful inventions and discoveries, for which I have made an application for Letters Patent entitled **VoSMS (Voice Over Short Message Service)**, also identified as Attorney Docket Number 112855.141(US1), the specification of which was filed with the United States Patent and Trademark Office on April 20, 2005, and assigned Serial Number 11/110,371; and

WHEREAS, **Voice Signal Technologies, Inc.**, a Massachusetts corporation, whose business address is 150 Presidential Way, Suite 310, Woburn Massachusetts 01801-1100, and which, together with its successors and assigns is hereinafter called "ASSIGNEE," is desirous of acquiring the title, rights, benefits, and privileges hereinafter recited;

NOW, THEREFORE, for and in consideration of good and valuable consideration furnished by ASSIGNEE to me, receipt and sufficiency of which I hereby acknowledge, I hereby, without reservations:

1. Assign, transfer, and convey to ASSIGNEE the entire right, title, and interest in and to said inventions and discoveries, said application for Letters Patent, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, continuation-in-part, and convention applications based in whole, or in part, upon said inventions or discoveries, or upon said applications, and any and all Letters Patents, reissues, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon, or arise from, said inventions, said discoveries, said applications, and said Letters Patent;
2. Authorize ASSIGNEE to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable, under International Conventions or otherwise;
3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments throughout the world to issue or transfer all said Letters Patents to ASSIGNEE, as assignee of the entire right, title, and interest therein or otherwise as ASSIGNEE may direct;
4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications, or patents, or any license to use the same, or to make, use, or sell

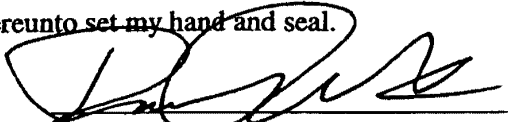
U.S.S.N. 11/110,371
ROTH
Assignment

anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to ASSIGNEE without encumbrance;

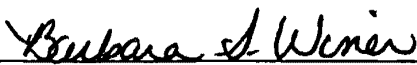
5. Bind my heirs, legal representatives, and assigns, as well as myself, to do, upon ASSIGNEE's request and at ASSIGNEE's expense, but without additional consideration to me or them, all acts reasonably serving to assure that said inventions and discoveries, said patent applications, and said Letters Patents shall be held and enjoyed by ASSIGNEE as fully and entirely as the same could have been held and enjoyed by me, our heirs, legal representatives, and assigns if this Assignment had not been made; and particularly to execute and deliver to ASSIGNEE all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by ASSIGNEE; and to communicate to ASSIGNEE all facts known to me relating to said inventions and discoveries or the history thereof, and to testify as to the same in any court or proceeding; and to furnish ASSIGNEE any and all documents, photographs, models, samples, and other physical exhibits in my control or in the control of my heirs, legal representatives, or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal.

DATE: June 14 2005


Daniel L. Roth

On this 14 day of JUNE, 2005, before me, the undersigned Notary public, personally appeared Daniel L. Roth, proved To me through satisfactory evidence of identification to be the person whose name is signed on the preceding or attached document in my presence.


Signature and seal of notary



PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE PATENTS
(Attorney Docket No. 112855.141 (US2))

In re Application of: Daniel L. ROTH
Serial No.: 11/110,371
Filing Date: April 20, 2005
Examiner: Not Yet Assigned
Art Unit: 2681
Title: VOICE OVER SHORT MESSAGE SERVICE

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**PETITION AND FEE FOR ONE-MONTH EXTENSION OF TIME
PURSUANT TO 37 C.F.R. 1.17(a)(1) TO RESPOND TO THE
NOTICE TO FILE MISSING PARTS MAILED May 17, 2005**

Commissioner:

Applicants hereby request that the period for responding to the outstanding Notice to File Missing Parts mailed May 17, 2005 be extended for one month, up to and including August 17, 2005.

The Commissioner is hereby authorized to charge the \$60.00 required fee for filing the petition for extension of time to our Deposit Account No. 08-0219. This fee reflects the Small Entity status of this application. Please charge any overpayments or credits to Deposit Account No. 08-0219.

Respectfully submitted,

Wilmer Cutler Pickering Hale and Dorr LLP

Date:

August 2, 2005

Eric L. Pahl
Registration No. 32,590

60 State Street
Boston, Massachusetts 02109
Tel: (617) 526-6043
Fax: (617) 526-5000

08/09/2005 MAHMEI 00000059 080219 11110371
07 FC:2251 60.00 DA

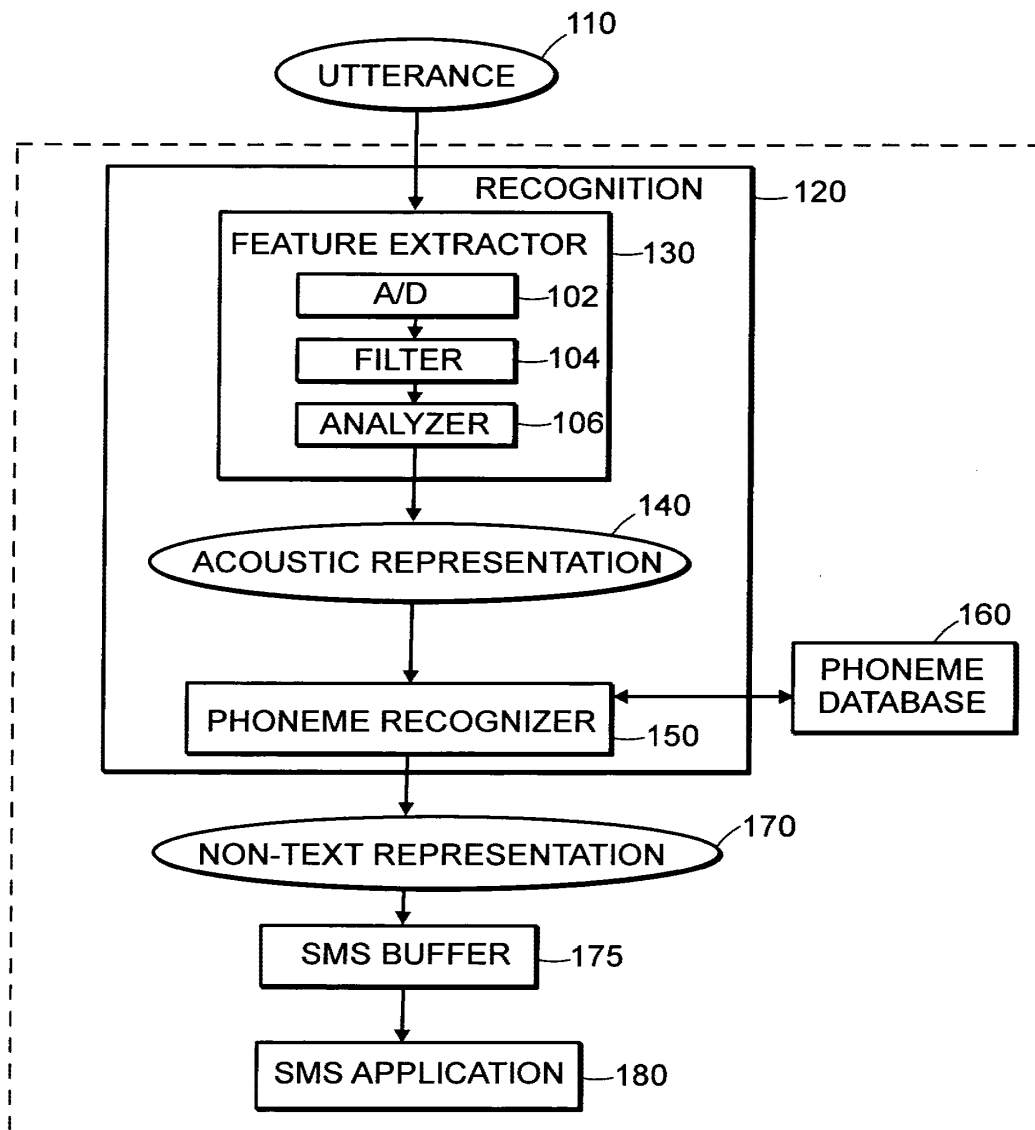


FIG. 1

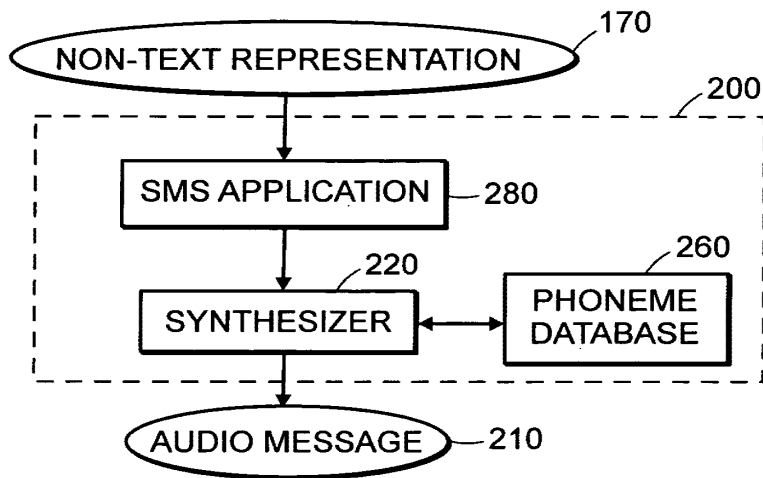


FIG. 2

3/3

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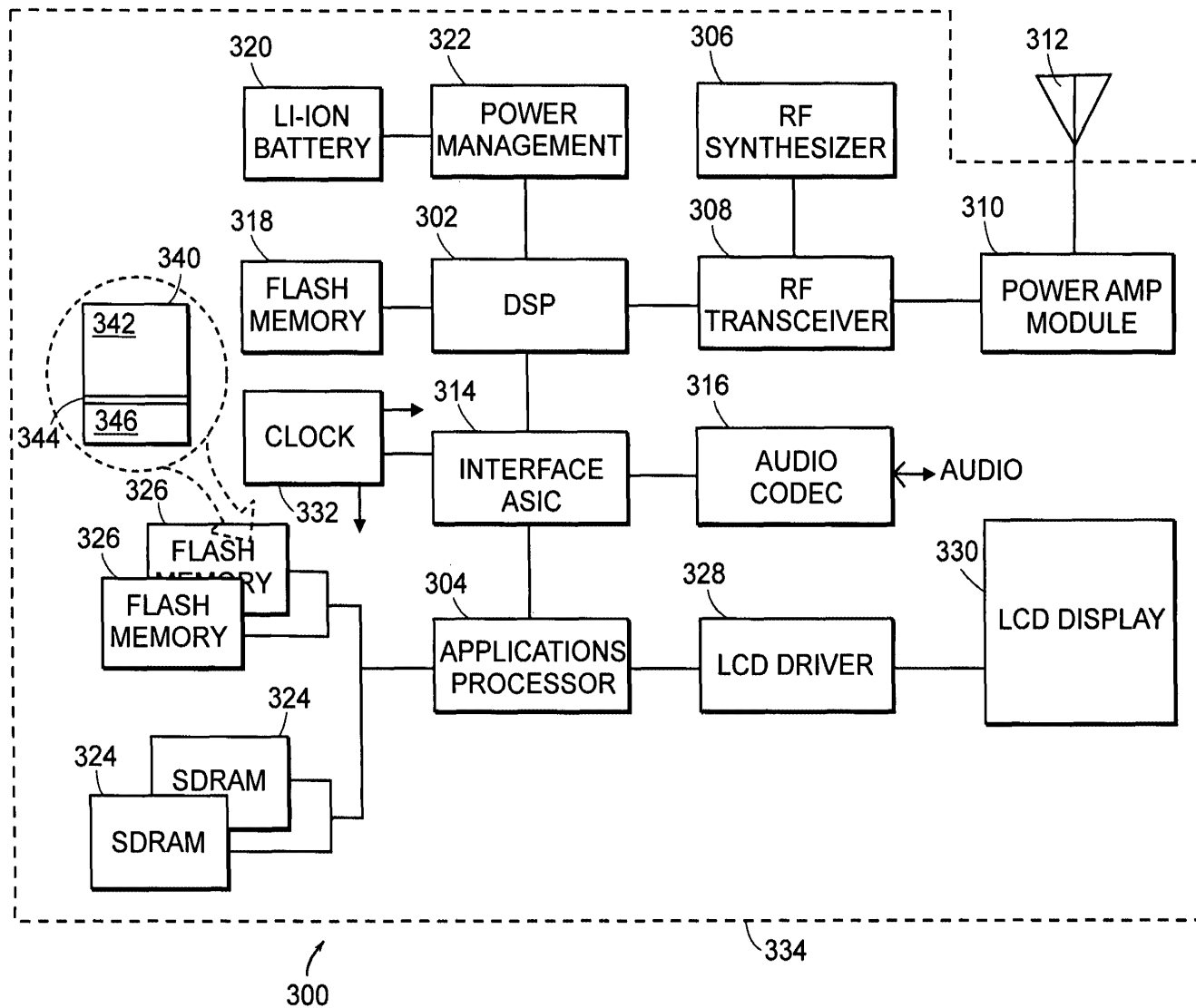


FIG. 3



UNITED STATES PATENT AND TRADEMARK OFFICE

m.f

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))	1062
23483	7590	08/11/2006	EXAMINER	
WILMER CUTLER PICKERING HALE AND DORR LLP			LE, DANH C	
60 STATE STREET			ART UNIT	
BOSTON, MA 02109			PAPER NUMBER	

2617

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	11/110,371	ROTH, DANIEL L.	
	Examiner	Art Unit	
	DANH C. LE	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: ____ | 6) ☐ Other: ____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-11, 21 drawn to a method of transmitting a text message over wireless network, classified in class 455, subclass 466.
- II. Claims 12-20, 22, drawn to synthesis of the text message, classified in class 704, subclass 270.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination Group II has separate utility such as Speech assistance network. See MPEP § 806.05(d).

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not

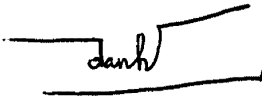
distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



August 8, 2006
DANH CONG LE
PRIMARY EXAMINER



I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: 9/7/06 Signature: Maureen Divito
(Maureen Divito)

Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel L. ROTH Confirmation No.: 1062
Application No.: 11/110,371 Art Unit: 2683
Filed: April 20, 2005 Examiner: D. C. Le
Title: VOICE OVER SHORT MESSAGE SERVICE

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Dear Sir:

In response to the restriction requirement set forth in the Office Action mailed August 11, 2006, Applicant hereby provisionally elects Group I, which include claims 1-11 and 21, for continued examination, with traverse.

Please apply any charges not covered, or any credits, to Deposit Account No. 08-0219.

Dated: September 7, 2006

Respectfully submitted,

Eric L. Prah
Registration No.: 32,590
Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)



JFW

PTO/SB/21 (07-06)
Approved for use through 09/30/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/110,371-Conf. #1062	
	Filing Date	April 20, 2005	
	First Named Inventor	Daniel L. ROTH	
	Art Unit	2683	
	Examiner Name	D. C. Le	
Total Number of Pages in This Submission	2	Attorney Docket Number	0112855.00141US2

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form	☐ Drawing(s)	☐ After Allowance Communication to TC
☐ Fee Attached	☐ Licensing-related Papers	☐ Appeal Communication to Board of Appeals and Interferences
☒ Response to Restriction Requirement	☐ Petition	☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
☐ After Final	☐ Petition to Convert to a Provisional Application	☐ Proprietary Information
☐ Affidavits/declaration(s)	☐ Power of Attorney, Revocation Change of Correspondence Address	☐ Status Letter
☐ Extension of Time Request	☐ Terminal Disclaimer	☒ Other Enclosure(s) (please identify below):
☐ Express Abandonment Request	☐ Request for Refund	POSTCARD
☐ Information Disclosure Statement	☐ CD, Number of CD(s) _____	
☐ Certified Copy of Priority Document(s)	☐ Landscape Table on CD	
☐ Reply to Missing Parts/Incomplete Application		
☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm Name	WILMER CUTLER PICKERING HALE AND DORR LLP	
Signature		
Printed name	Eric L. Prah	
Date	September 7, 2006	Reg. No. 32,590

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
Dated: September 7, 2006	Signature: (Maureen Divito)

PATENT APPLICATION FEE DETERMINATION RECORD
Effective December 8, 2004

11110371

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	22	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	22 minus 20 =	* 2
INDEPENDENT CLAIMS	4 minus 3 =	* 1
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

* If the difference in column 1 is less than zero, enter "0" in column 2

Response
9/11/06

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* 22	Minus ** 22	=
Independent	* 4	Minus *** 4	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	150
X\$ 25=	50
X100=	100
+180=	
TOTAL	300

RATE	FEE
BASIC FEE	
X\$50=	
X200=	
+360=	
TOTAL	

SMALL ENTITY

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 25=	
X100=	
+180=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$50=	
X200=	
+360=	
TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
X\$ 25=	
X100=	
+180=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$50=	
X200=	
+360=	
TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
X\$ 25=	
X100=	
+180=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$50=	
X200=	
+360=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



PTO/SB/92 (09-06)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 11/110,371

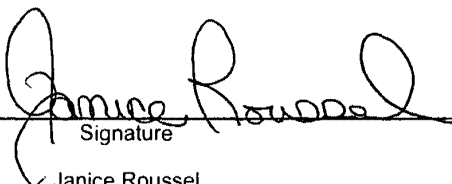
Attorney Docket No.: 0112855.00141US2

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on October 31, 2006
Date


Signature

Janice Roussel

Typed or printed name of person signing Certificate

Registration Number, if applicable

(617) 526-6000

Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Return Postcard
Information Disclosure Statement (2 pages)
Transmittal (1 page)



Inw

PTO/SB/21 (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/110,371-Conf. #1062
	Filing Date	April 20, 2005
	First Named Inventor	Daniel L. ROTH
	Art Unit	2683
	Examiner Name	D. C. Le
Total Number of Pages in This Submission	Attorney Docket Number	0112855.00141US2

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☐ Amendment/Reply ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☒ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/ Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☒ Other Enclosure(s) (please identify below): 2 References Return Postcard
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm Name	WILMER CUTLER PICKERING HALE AND DORR LLP	
Signature		
Printed name	Eric L. Prael	
Date	October 31, 2006	Reg. No. 32,590



Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel L. ROTH Confirmation No.: 1062
Application No.: 11/110,371 Art Unit: 2683
Filed: April 20, 2005 Examiner: D. C. Le
Title: VOICE OVER SHORT MESSAGE SERVICE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicants bring to the attention of the Examiner the documents listed on the attached Form SB/08.

This Information Disclosure Statement is being filed prior to the mailing date of a first Office Action on the merits. No fee is required.

Applicants request that the Examiner initial and return a copy of the enclosed Form PTO SB/08 with the next communication.

Respectfully submitted,

Dated: October 31, 2006

Eric L. Prah
Registration No.: 32,590
Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)



PTO/SB/08A/B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	11/110,371-Conf. #1062
				Filing Date	April 20, 2005
				First Named Inventor	Daniel L. ROTH
				Art Unit	2683
				Examiner Name	D. C. Le
Sheet	1	of	1	Attorney Docket Number	0112855.00141US2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	MASURKO, T. et al., "A Very Low Bit Rate Speech Coder Using HMM with Speaker Adaption", Ministry of Education, Science and Culture of Japan, Grant-in-Aid for Encouragement of Young Scientists, 09750399, 1997, 4 pages	
	CB	PAGARKAR, M. H. et al., "Language Independent Speech Compression using Devanagari Phonetics", V.E.S. Institute of Technology, 7 pages	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

US1DOCS 5908258v1

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	320	@ad<"20040501" and (send\$4 transmi\$8) with messag\$4 with (mobile portable wireless cellular device) and (speech\$4 voic\$4 utteranc\$4 non\$1text (non adj1 text)) with text\$4 and (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables symbol\$4 non?text nontext non adj1 text) with text\$3	US-PGPUB; USPAT	OR	ON	2006/11/25 09:59



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))	1062
23483	7590	11/29/2006	EXAMINER	
WILMER CUTLER PICKERING HALE AND DORR LLP 60 STATE STREET BOSTON, MA 02109			LE, DANH C	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 11/110,371		Applicant(s) ROTH, DANIEL L.	
	Examiner DANH C. LE		Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 06 November 2006.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-11 and 21 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☒ Claim(s) 12-20 and 22 are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/06/06.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-11, 21 in the reply filed on 11/06/06 is acknowledged. The Examiner assumes that the Applicant's selection without traverse since the Applicant did not point out any ground of traverse.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 11/06/06 has been considered by the examiner and made of record in the application file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-6, 8, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Holley (US 2002/0142787).**

As to claim 1, Holley teaches a method of sending a voice message via a mobile communication device (figure 1 and paragraph 020), said method comprising:

receiving an utterance from a user of the mobile communication device;

generating a non-text representation of the received utterance;

inserting at least some of the non-text representation into a body of a text message;

and

sending the text message over a wireless messaging channel from the mobile communication device to a recipient's device.

As to claim 2, Holley teaches the method of claim 1, wherein the mobile communication device is a cellular phone (figure 1).

As to claim 3, Holley teaches the method of claim 1, wherein inserting at least some of the non-text representation involves inserting all of the non-text representation into the body of the text message (figure 1 and paragraph 020).

As to claim 4, Holley teaches the method of claim 1, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, wherein the string of symbols is the non-text representation (paragraph 013).

As to claim 5, Holley teaches the method of claim 4, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables (paragraph 013).

As to claim 6, Holley teaches the method of claim 4, wherein the recognition is phoneme recognition and the symbols in the generated string of symbols are phonemes (paragraph 013).

As to claim 8, Holley teaches the method of claim 1, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message (paragraph 020).

As to claim 21, the claim is an apparatus claim of claim 1; therefore, the claim is interpreted and rejected as set forth as claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holley in view of Kagoshima (US 6,760,703).

As to claim 7, Holley teaches the method of claim 1, wherein generating the non-text representation of the received utterance involves performing phoneme recognition on a signal derived from the receive utterance to generate a phoneme string, Holley fails to teach the phoneme string is the non-text representation. Kagoshima teaches phoneme string is the non-text representation (col.16, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Kagoshima into the system of Holley in order to generate a speech signal from phonemes symbols string.

As to claim 10, Holley and Kagoshima teaches the method of claim 1, wherein the non-text representation is a compressed version of the received utterance (Kagoshima col.29, lines 14-36).

5. Claims 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over xx.

As to claim 9, Holley and Kagoshima teaches the method of claim 1, Holley fails to teach further comprising including an indicator with the text message identifying the text message as containing a non-text representation of the utterance and dividing the non-

text representation into sections and inserting each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages. However, the examiner takes Official Notices that an indicator with the text message identifying the text message as containing a non-text representation of the utterance and dividing the non-text representation into sections and inserting each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages are known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of these reciting limitations into the system of Holley in order to enhance the system performance of the select and send text messages with a mobile.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Hoffmann et al (US 2003/0139922) teaches speech recognition system and method for operating the same.

B. Koenig et al (US 2002/0077811) teaches locally distribute speech recognition and method of its operation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

Art Unit: 2617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



November 25, 2006

DANH CONG LE
PRIMARY EXAMINER

Notice of References Cited	Application/Control No. 11/110,371	Applicant(s)/Patent Under Reexamination ROTH, DANIEL L.	
	Examiner DANH C. LE	Art Unit 2617	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0077811	06-2002	Koenig et al.	704/201
*	B	US-2003/0139922	07-2003	Hoffmann et al.	704/201
*	C	US-6,760,703	07-2004	Kagoshima et al.	704/262
*	D	US-2002/0142787	10-2002	Holley et al.	455/466
	E	US-			
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



PTO/SB/08A/B (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449/PTO		Complete if Known			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Application Number	11/110,371-Conf. #1062		
		Filing Date	April 20, 2005		
		First Named Inventor	Daniel L. ROTH		
		Art Unit	2683		
		Examiner Name	D. C. Le		
Sheet	1	of	1	Attorney Docket Number	0112855.00141US2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
DL	CA	MASURKO, T. et al., "A Very Low Bit Rate Speech Coder Using HMM with Speaker Adaption", Ministry of Education, Science and Culture of Japan, Grant-in-Aid for Encouragement of Young Scientists, 09750399, 1997, 4 pages	
DL	CB	RAGARKAR, M. H. et al., "Language Independent Speech Compression using Devanagari Phonetics", V.E.S. Institute of Technology, 7 pages	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Notes : This document was considered by the Examiner due to there was no dated on the document.

Examiner Signature	/Danh Le/	Date Considered	11/13/2006
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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Bib Data Sheet

CONFIRMATION NO. 1062

SERIAL NUMBER 11/110,371	FILING OR 371(c) DATE 04/20/2005 RULE	CLASS 455	GROUP ART UNIT 2617	ATTORNEY DOCKET NO. 112855.141 (US2))
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APPLICANTS

Daniel L. Roth, Boston, MA;

** CONTINUING DATA *****

This appln claims benefit of 60/563,754 04/20/2004

YES

** FOREIGN APPLICATIONS *****

NO

IF REQUIRED, FOREIGN FILING LICENSE GRANTED **

05/17/2005

** SMALL ENTITY **

Foreign Priority claimed ☐ yes ☒ no	STATE OR COUNTRY MA	SHEETS DRAWING 3	TOTAL CLAIMS 22	INDEPENDENT CLAIMS 4
35 USC 119 (a-d) conditions met ☐ yes ☒ no ☐ Met after Allowance				
Verified and Acknowledged <u>Examiner's Signature</u> <u>Initials</u>				

ADDRESS

23483

TITLE

Voice over short message service

FILING FEE RECEIVED 715	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees
		☐ 1.16 Fees (Filing)
		☐ 1.17 Fees (Processing Ext. of time)
		☐ 1.18 Fees (Issue)
		☐ Other _____
		☐ Credit

Index of Claims



Application/Control No.

11/110,371

Examiner

DANH C. LE

Applicant(s)/Patent under Reexamination

ROTH, DANIEL L.

Art Unit

2617

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
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N	Non-Elected
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A	Appeal
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Claim		Date	
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Search Notes



Application/Control No.

11/110,371

Examiner

DANH C. LE

Applicant(s)/Patent under Reexamination

ROTH, DANIEL L.

Art Unit

2617

SEARCHED

Class	Subclass	Date	Examiner
455	466	11/25/06	DCL
	412.1		
	550.1		
	414.4		
704	201		
	236		

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
Inventor Name Search (Check for double patenting)	11/25/06	DCL
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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: February 21, 2007

Signature:

Jo-Ann Bergantino
(Jo-Ann Bergantino)

Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Daniel L. ROTH	Confirmation No.:	1062
Application No.:	11/110,371	Art Unit:	2617
Filed:	April 20, 2005	Examiner:	D. C. Le
Title:	VOICE OVER SHORT MESSAGE SERVICE		

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Office Action dated November 29, 2006, please amend the above-identified U.S. patent application as follows:

Amendments to the Specification appear on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 6 of this paper.

US1DOCS 5992000v1

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0029] with the following marked up paragraph:

[0029] If appropriate, it is possible to program the SMS application to generate a sequence of multiple SMS messages to handle longer utterances for which the non-text representation will not fit into the body of a single message. In essence, the SMS application would “packetize” the phonetic string and send multiple SMS messages (or packets) to the recipient’s cell phone, each message containing a part of the total utterance. Each message would be indexed or tagged so that the SMS on the recipient’s side could accurately reconstruct the complete representation of the utterance. The SMS application on the recipient’s side of the connection ~~would~~ would also need to be programmed to recognize that the received non-text representation is to be constructed by concatenating the contents of more than one SMS message.

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method of sending a voice message via a mobile communication device, said method comprising:
receiving an utterance from a user of the mobile communication device;
generating a non-text representation of the received utterance;
inserting at least some of the non-text representation into a body of a text message; and
sending the text message including the at least some of the non-text representation over a wireless messaging channel from the mobile communication device to a recipient's device.
2. (original) The method of claim 1, wherein the mobile communication device is a cellular phone.
3. (original) The method of claim 1, wherein inserting at least some of the non-text representation involves inserting all of the non-text representation into the body of the text message.
4. (original) The method of claim 1, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, wherein the string of symbols is the non-text representation.
5. (original) The method of claim 4, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.
6. (original) The method of claim 4, wherein the recognition is phoneme recognition and the symbols in the generated string of symbols are phonemes.

7. (original) The method of claim 1, wherein generating the non-text representation of the received utterance involves performing phoneme recognition on a signal derived from the received utterance to generate a phoneme string, wherein the phoneme string is the non-text representation.

8. (original) The method of claim 1, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message.

9. (original) The method of claim 1, further comprising including an indicator with the text message identifying the text message as containing a non-text representation of the utterance.

10. (original) The method of claim 1, wherein the non-text representation is a compressed version of the received utterance.

11. (original) The method of claim 1, further comprising dividing the non-text representation into sections and inserting each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages and further comprising sending the plurality of text messages over the wireless messaging channel from the mobile communication device to the recipient's device.

12. – 20. (canceled)

21. (currently amended) A mobile communication device for sending a voice message, said mobile communication device comprising:

a processor system;

a microphone for receiving an utterance from a user of the mobile communication device;

a transceiver; and

memory storing code which when executed on the processor system causes the mobile communication device to:

generate a non-text representation of the received utterance;

insert the non-text representation into a body of a text message; and
send the text message including the non-text representation via the transceiver
over a wireless messaging channel from the mobile communication device to a
recipient's device.

22. (canceled)

23. (new) The mobile communication device of claim 21, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, the string of symbols being the non-text representation.

24. (new) The mobile communication device of claim 23, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.

25. (new) The mobile communication device of claim 21, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message.

26. (new) The mobile communication device of claim 21, wherein the non-text representation is a compressed version of the received utterance.

27. (new) The mobile communication device of claim 21, wherein the code when executed on the processor further causes the mobile communication device to:

divide the non-text representation into sections;

insert each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages; and

send the plurality of text messages over the wireless messaging channel from the mobile communication device to the recipient's device.

REMARKS

Applicant amends claims 1 and 21 to make explicit that which was already implicit in these claims. Applicant cancels claims 12-20 and 22 and adds new claims 23-27. Upon entry of this paper, claims 1-11, 21, and 23-27 will be pending.

The Examiner rejected claim 1 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application No. 2002/0142787 to Holley et al. (Holley). We believe the examiner has misread Holley. Nowhere does Holley disclose generating a non-text representation of a received utterance, and inserting at least some of the non-text representation into a body of a text message, as required by claim 1.

Rather Holley concerns a way to:

“...simplify the inputting and transmission process, that the text be input by voice input, processed in a speech recognition unit ... and compared with predefined text patterns stored in memory means ..., a predefined text pattern which is the closest match to the text being selected and displayed, whereupon ... it is used as the text for the text message to be sent.” [abstract, emphasis added]

In other words, Holley simply uses acoustic input into a cell phone in order to generate and send text SMS messages.

In view of the above, Applicant believes that claim 1 and its dependents are in condition for allowance. Claim 21 and its dependents have similar limitations to those of claim 1, and are believed to be allowable for the same reasons.

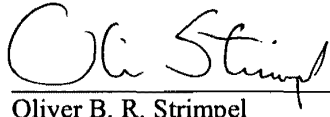
Please charge any fees that may be due, or credit any overpayments, to Deposit Account No. 08-0219.

Application No. 11/110,371
Amendment dated February 21, 2007
Reply to Office Action of November 29, 2006

Docket No.: 0112855.00141US2

Respectfully submitted,

Dated: February 21, 2007

A handwritten signature in cursive script, reading "Oliver B. R. Strimpel". The signature is written in dark ink and is positioned above a horizontal line.

Oliver B. R. Strimpel
Registration No.: 56,451
Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)

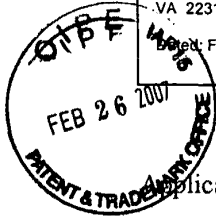
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Date: February 21, 2007

Signature:

Jo-Ann Bergantino
(Jo-Ann Bergantino)

Docket No.: 0112855.00141US2
(PATENT)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel L. ROTH Confirmation No.: 1062
Application No.: 11/110,371 Art Unit: 2617
Filed: April 20, 2005 Examiner: D. C. Le
Title: VOICE OVER SHORT MESSAGE SERVICE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT (IDS)

Dear Sir:

This Information Disclosure Statement is being filed after the mailing date of the first Office Action on the merits and before the mailing date of a final Office Action or a Notice of Allowance.

It has come to the applicant's attention that reference CB cited in Form PTO SB-08 submitted with an Information Disclosure statement on October 31, 2006, has not been initialed by the Examiner because the reference did not include a publication date. Attached herewith is a new Form PTO SB-08 listing the complete publication details of the cited reference.

Please charge the \$180.00 fee to our Deposit Account No. 08-0219.

Applicants request that the Examiner initial and return a copy of the enclosed Form PTO SB-08 with the next communication.

Respectfully submitted,

Oliver Strimpel

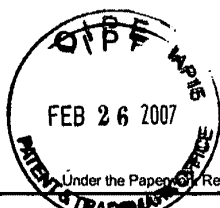
Oliver Strimpel
Registration No.: 56,451
Attorney for Applicant(s)

Dated: February 21, 2007

02/27/2007 SS1THIB1 00000052 080219 11110371
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Wilmer Cutler Pickering Hale and Dorr LLP
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(617) 526-6000 (telephone); (617) 526-5000 (facsimile)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	11/110,371-Conf. #1062
				Filing Date	April 20, 2005
				First Named Inventor	Daniel L. ROTH
				Art Unit	2617
				Examiner Name	D. C. Le
Sheet	1	of	1	Attorney Docket Number	0112855.00141US2

U.S. PATENT DOCUMENTS					
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		Number-Kind Code ² (if known)			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

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Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	PAGARKAR, M. H. et al., "Language Independent Speech Compression Using Devanagari Phonetics," V.E.S. Institute of Technology, December 1, 2003, 7 pages.	

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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
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JFW ✓

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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	11/110,371-Conf. #1062	
	Filing Date	April 20, 2005	
	First Named Inventor	Daniel L. ROTH	
	Art Unit	2617	
	Examiner Name	D. C. Le	
Total Number of Pages in This Submission	18	Attorney Docket Number	0112855.00141US2

ENCLOSURES (Check all that apply)		
☒ Fee Transmittal Form ☐ Fee Attached ☒ Amendment/Reply (7 Sheets) ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☒ Information Disclosure Statement (1) Sheet ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☒ Other Enclosure(s) (please identify below): PTO/SB/08A/B (1 Sheet) 1 Non-patent reference (7 Sheets) Return Receipt Postcard
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	WILMER CUTLER PICKERING HALE AND DORR LLP		
Signature			
Printed name	Oliver Strimpel		
Date	February 21, 2007	Reg. No.	56,451

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
Dated: February 21, 2007	Signature: (Jo-Ann Bergantino)

US1DOCS 6069594v1



PTO/SB/17 (07-06)
Approved for use through 01/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004. FEE TRANSMITTAL For FY 2006		Complete if Known	
☐ Applicant claims small entity status. See 37 CFR 1.27		Application Number	11/110,371-Conf. #1062
TOTAL AMOUNT OF PAYMENT (\$) 180.00		Filing Date	April 20, 2005
		First Named Inventor	Daniel L. ROTH
		Examiner Name	D. C. Le
		Art Unit	2617
		Attorney Docket No.	0112855.00141US2

METHOD OF PAYMENT (check all that apply)	
☐ Check	☐ Credit Card
☐ Money Order	☐ None
☐ Other (please identify):	
☒ Deposit Account	Deposit Account Number: 08-0219 Deposit Account Name: Wilmer Cutler Pickering Hale and Dorr LLP
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)	
☒ Charge fee(s) indicated below	☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17	☒ Credit any overpayments

FEE CALCULATION							
1. BASIC FILING, SEARCH, AND EXAMINATION FEES							
	FILING FEES		SEARCH FEES		EXAMINATION FEES		
		Small Entity		Small Entity		Small Entity	
Application Type	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fees Paid (\$)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	
							Small Entity
2. EXCESS CLAIM FEES							Fee (\$)
Fee Description							Fee (\$)
Each claim over 20 (including Reissues)							50
Each independent claim over 3 (including Reissues)							200
Multiple dependent claims							360
Total Claims							Fee Paid (\$)
- = x =							
HP = highest number of total claims paid for, if greater than 20.							
Indep. Claims							Fee Paid (\$)
- = x =							
HP = highest number of independent claims paid for, if greater than 3.							
3. APPLICATION SIZE FEE							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof		Fee (\$)	Fee Paid (\$)		
- 100 =	/50	(round up to a whole number) x		=			
4. OTHER FEE(S)							Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)							
Other (e.g., late filing surcharge): 1806 Submission of an Information Disclosure Statement							180.00

SUBMITTED BY			
Signature		Registration No. (Attorney/Agent)	56,451
Name (Print/Type)	Oliver Strimpel	Telephone	(617) 526-6000
		Date	February 21, 2007

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
Dated: February 21, 2007	Signature: (Jo-Ann Bergantino)

US100CS 6072507v1

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 11/110,371		Filing Date 04/20/2005		☐ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)			SMALL ENTITY ☒ OR		OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)		RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =		OR	X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =			X \$ =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.										
TOTAL			TOTAL							
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	02/26/2007	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 17	Minus	** 22	= 0	X \$25 =	0	OR	X \$ =	
	Independent (37 CFR 1.16(h))	* 2	Minus	***4	= 0	X \$100 =	0	OR	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		OR	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		OR	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.										
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".										
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".										
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

Legal Instrument Examiner:
Rozenia Harmon

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S409	43	@ad<"20040501" and (sen\$4 transmi\$8) with text\$4 with (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables symbol\$4 non?text nontext non adj1 text) with text\$3 with (wireless channel)	US-PGPUB; USPAT	OR	ON	2007/05/12 11:46



IFN

PTO/SB/21 (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/110,371-Conf. #1062
	Filing Date	April 20, 2005
	First Named Inventor	Daniel L. ROTH
	Art Unit	2617
	Examiner Name	D. C. Le
Total Number of Pages in This Submission	Attorney Docket Number	0112855.00141US2

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☐ Amendment/Reply ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☒ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☒ Other Enclosure(s) (please identify below): PTO Form SB/08 Return Postcard ISR for PCT/US05/13478
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	WILMER CUTLER PICKERING HALE AND DORR LLP		
Signature			
Printed name	Eric L. Prah		
Date	May 14, 2007	Reg. No.	32,590



Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Daniel L. ROTH	Confirmation No.:	1062
Application No.:	11/110,371	Art Unit:	2617
Filed:	April 20, 2005	Examiner:	D. C. Le
Title:	VOICE OVER SHORT MESSAGE SERVICE		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicants bring to the attention of the Examiner the documents listed on the attached Form SB/08.

Applicants state that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of this Information Disclosure Statement. No fee is required.

Enclosed please find a copy of the International Search Report corresponding to PCT/US2005/13478, mailed on March 28, 2007.

Applicants request that the Examiner initial and return a copy of the enclosed Form PTO SB/08 with the next communication.

US1DOCS 6193537v1

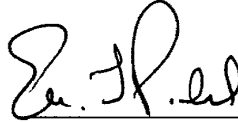
Application No.: 11/110,371

Docket No.: 0112855.00141US2

Dated:

May 14, 2007

Respectfully submitted,

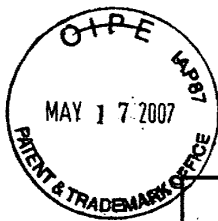


Eric L. Prah

Registration No.: 32,590

Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)



Used in Lieu of PTO/SB/08A/B
(Based on PTO 04-07 version)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	11/110,371-Conf. #1062
				Filing Date	April 20, 2005
				First Named Inventor	Daniel L. ROTH
				Art Unit	2617
				Examiner Name	D. C. Le
Sheet	1	of	1	Attorney Docket Number	0112855.00141US2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA*	US-2002/0142787-A1	10-03-2002	Holley et al.	
	AB*	US-2003/0014253-A1	01-16-2003	WALSH	
	AC*	US-2003/0088418-A1	05-08-2003	Kagoshima et al.	
	AD*	US-2003/0139922-A1	07-24-2003	Hoffmann et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY			

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	International Searching Authority, International Search Report for PCT/US05/13478, mailed 28 Mar 2007, 4 pages	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

US1DOCS 6194475v1



Application No. (if known): 11/110,371

Attorney Docket No.: 0112855.00141US2

Certificate of Mailing under 37 CFR 1.8

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on May 15, 2007
Date


Signature

Janice Roussel

Typed or printed name of person signing Certificate

Registration Number, if applicable

(617) 526-6000
Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Supplemental Information Disclosure Statement
Transmittal Letter
PTO Form SB/08
1 Non-Patent Reference
Return Postcard



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))	1062
23483 7590 05/21/2007 WILMER CUTLER PICKERING HALE AND DORR LLP 60 STATE STREET BOSTON, MA 02109			EXAMINER LE, DANH C	
			ART UNIT	PAPER NUMBER
			2617	
			NOTIFICATION DATE	DELIVERY MODE
			05/21/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

teresa.carvalho@wilmerhale.com
tina.dougal@wilmerhale.com
michael.mathewson@wilmerhale.com

Office Action Summary	Application No. 11/110,371	Applicant(s) ROTH, DANIEL L.	
	Examiner DANH C. LE	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 26 February 2007.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-11, 21 and 23-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-10, 21 and 23-26 is/are rejected.

7) ☒ Claim(s) 11, 27 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ 5) ☐ Notice of Informal Patent Application 6) ☐ Other: _____
--	--

DETAILED ACTION

SET I

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 1. Claims 1-6, 8, 21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Holley (US 2002/0142787) in view of Kochanski (US 2002/0103646).**

As to claim 1, Holley teaches a method of sending a voice message via a mobile communication device (figure 1 and paragraph 020), said method comprising:

- receiving an utterance from a user of the mobile communication device;
- generating a non-text representation of the received utterance;
- inserting at least some of the non-text representation into a body of a text message;

and

- sending the text message over a wireless messaging channel from the mobile communication device to a recipient's device.

Holley fails to teach sending at least some of the non-text representation over a wireless channel. Kochanski teaches sending at least some of the non-text representation over a wireless channel (paragraph 7-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide

the teaching of Kochanski into the system of Holley in order to allow the communication link to be much more resistant to the errors and dropout in audio channel.

As to claim 2, Holley teaches the method of claim 1, wherein the mobile communication device is a cellular phone (figure 1).

As to claim 3, Holley teaches the method of claim 1, wherein inserting at least some of the non-text representation involves inserting all of the non-text representation into the body of the text message (figure 1 and paragraph 020).

As to claim 4, Holley teaches the method of claim 1, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, wherein the string of symbols is the non-text representation (paragraph 013).

As to claim 5, Holley teaches the method of claim 4, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables (paragraph 013).

As to claim 6, Holley teaches the method of claim 4, wherein the recognition is phoneme recognition and the symbols in the generated string of symbols are phonemes (paragraph 013).

As to claim 8, Holley teaches the method of claim 1, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message (paragraph 020).

As to claim 21, the claim is an apparatus claim of claim 1; therefore, the claim is interpreted and rejected as set forth as claim 1.

As to claim 23, the claim is an apparatus claim of claim 4; therefore, the claim is interpreted and rejected as set forth as claim 4.

As to claim 24, the claim is an apparatus claim of claim 5; therefore, the claim is interpreted and rejected as set forth as claim 5.

As to claim 25, the claim is an apparatus claim of claim 8; therefore, the claim is interpreted and rejected as set forth as claim 8.

2. Claims 7, 10, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holley and Kochanski in view of Kagoshima (US 6,760,703).

As to claim 7, Holley and Kochanski teaches the method of claim 1, wherein generating the non-text representation of the received utterance involves performing phoneme recognition on a signal derived from the received utterance to generate a phoneme string, Holley and Kochanski fails to teach the phoneme string is the non-text representation. Kagoshima teaches phoneme string is the non-text representation (col.16, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Kagoshima into the system of Holley and Kochanski in order to generate a speech signal from phonemes symbols string.

As to claim 10, Holley and Kagoshima teaches the method of claim 1, wherein the non-text representation is a compressed version of the received utterance (Kagoshima col.29, lines 14-36).

As to claim 26, the claim is an apparatus claim of claim 10; therefore, the claim is interpreted and rejected as set forth as claim 10.

3. Claims 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holley and Kochanski.

As to claim 9, Holley and Kochanski teaches the method of claim 1, Holley and Kochanski fails to teach further comprising including an indicator with the text message identifying the text message as containing a non-text representation of the utterance. However, the examiner takes Official Notices that an indicator with the text message identifying the text message as containing a non-text representation of the utterance is known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of these reciting limitations into the system of Holley in order to enhance the system performance of the select and send text messages with a mobile.

SET II

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Holley (US 2002/0142787) in view of Lev (US 2002/0102966).

As to claim 1, Holley teaches a method of sending a voice message via a mobile communication device (figure 1 and paragraph 020), said method comprising:
receiving an utterance from a user of the mobile communication device;

generating a non-text representation of the received utterance;
inserting at least some of the non-text representation into a body of a text message;
and
sending the text message over a wireless messaging channel from the mobile communication device to a recipient's device.

Holley fails to teach sending at least some of the non-text representation over a wireless channel. Lev teaches sending at least some of the non-text representation over a wireless channel (paragraph 96). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Kochanski into the system of Holley in order to be able to obtain information and services related to the image objects.

As to claim 21, the claim is an apparatus claim of claim 1; therefore, the claim is interpreted and rejected as set forth as claim 1.

Allowable Subject Matter

Claims 11 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 11 and 27, the teaching of above prior arts either alone or in combine fails to further comprising dividing the non-text representation into sections and inserting each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages and further comprising sending the plurality of text messages

over the wireless messaging channel from the mobile communication device to the recipient's device.

Response to Arguments

Applicant's arguments with respect to claims 1-11, 21, 23-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

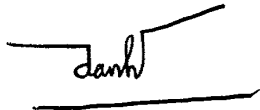
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

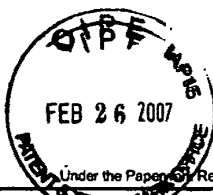
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "danh", is written over a horizontal line.

May 13, 2007

DANH LE
PRIMARY EXAMINER



PTO/SB/08A/B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	11/110,371-Conf. #1062		
		Filing Date	April 20, 2005		
		First Named Inventor	Daniel L. ROTH		
		Art Unit	2617		
		Examiner Name	D. C. Le		
Sheet	1	of	1	Attorney Docket Number	0112855.00141US2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)	MM-DD-YYYY		

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY			

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.18 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/D.L.	CA	PAGARKAR, M. H. et al., "Language Independent Speech Compression Using Devanagari Phonetics," V.E.S. Institute of Technology, December 1, 2003, 7 pages.	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	/Danh Le/	Date Considered	05/04/2007
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US1DOCS 6072503v1

Notice of References Cited	Application/Control No. 11/110,371	Applicant(s)/Patent Under Reexamination ROTH, DANIEL L.	
	Examiner DANH C. LE	Art Unit 2617	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0103646	08-2002	Kochanski et al.	704/260
*	B	US-2002/0102966	08-2002	Lev et al.	455/412
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes

Application/Control No.

11/110,371

Examiner

DANH C. LE

Applicant(s)/Patent under
Reexamination

ROTH, DANIEL L.

Art Unit

2617

SEARCHED

Class	Subclass	Date	Examiner
455	412.1	5/12/07	DL
704	260		

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

**SEARCH NOTES
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
EAST Search updated (US, USPOB)	5/13/07	DL

Index of Claims



Application/Control No.

11/110,371

Examiner

DANH C. LE

Applicant(s)/Patent under Reexamination

ROTH, DANIEL L.

Art Unit

2617

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim	Date
Final	Original
1	✓
2	✓
3	✓
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7	✓
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Claim	Date
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PTO/SB/21 (04-07)
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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/110,371-Conf. #1062
	Filing Date	April 20, 2005
	First Named Inventor	Daniel L. ROTH
	Art Unit	2617
	Examiner Name	D. C. Le
Total Number of Pages in This Submission	Attorney Docket Number	0112855.00141US2

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☒ Amendment/Reply ☒ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☐ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☒ Other Enclosure(s) (please identify below): Return Receipt Postcard
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	WILMER CUTLER PICKERING HALE AND DORR LLP		
Signature			
Printed name	Oliver Strimpel		
Date	July 24, 2007	Reg. No.	56,451

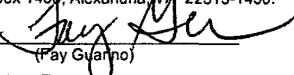
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
Dated: July 24, 2007	Signature: (Fay Guarino)

US1DOCS 6293448v1



I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: July 24, 2007

Signature: 

(Fay Guano)

Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Daniel L. ROTH	Confirmation No.:	1062
Application No.:	11/110,371	Art Unit:	2617
Filed:	April 20, 2005	Examiner:	D. C. Le
Title:	VOICE OVER SHORT MESSAGE SERVICE		

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER FINAL ACTION UNDER 37 C.F.R. 1.116

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Final Office Action dated May 21, 2007, please amend the above-identified U.S. patent application as follows:

A Listing of the Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

LISTING OF THE CLAIMS

1. (previously presented) A method of sending a voice message via a mobile communication device, said method comprising:
 - receiving an utterance from a user of the mobile communication device;
 - generating a non-text representation of the received utterance;
 - inserting at least some of the non-text representation into a body of a text message; and
 - sending the text message including the at least some of the non-text representation over a wireless messaging channel from the mobile communication device to a recipient's device.
2. (original) The method of claim 1, wherein the mobile communication device is a cellular phone.
3. (original) The method of claim 1, wherein inserting at least some of the non-text representation involves inserting all of the non-text representation into the body of the text message.
4. (original) The method of claim 1, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, wherein the string of symbols is the non-text representation.
5. (original) The method of claim 4, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.
6. (original) The method of claim 4, wherein the recognition is phoneme recognition and the symbols in the generated string of symbols are phonemes.
7. (original) The method of claim 1, wherein generating the non-text representation of the received utterance involves performing phoneme recognition on a signal derived from the received utterance to generate a phoneme string, wherein the phoneme string is the non-text representation.

8. (original) The method of claim 1, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message.

9. (original) The method of claim 1, further comprising including an indicator with the text message identifying the text message as containing a non-text representation of the utterance.

10. (original) The method of claim 1, wherein the non-text representation is a compressed version of the received utterance.

11. (original) The method of claim 1, further comprising dividing the non-text representation into sections and inserting each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages and further comprising sending the plurality of text messages over the wireless messaging channel from the mobile communication device to the recipient's device.

12. – 20. (canceled)

21. (previously presented) A mobile communication device for sending a voice message, said mobile communication device comprising:

a processor system;

a microphone for receiving an utterance from a user of the mobile communication device;

a transceiver; and

memory storing code which when executed on the processor system causes the mobile communication device to:

generate a non-text representation of the received utterance;

insert the non-text representation into a body of a text message; and

send the text message including the non-text representation via the transceiver over a wireless messaging channel from the mobile communication device to a recipient's device.

22. (canceled)

23. (previously presented) The mobile communication device of claim 21, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, the string of symbols being the non-text representation.

24. (previously presented) The mobile communication device of claim 23, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.

25. (previously presented) The mobile communication device of claim 21, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message.

26. (previously presented) The mobile communication device of claim 21, wherein the non-text representation is a compressed version of the received utterance.

27. (previously presented) The mobile communication device of claim 21, wherein the code when executed on the processor further causes the mobile communication device to:

divide the non-text representation into sections;

insert each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages; and

send the plurality of text messages over the wireless messaging channel from the mobile communication device to the recipient's device.

REMARKS

The examiner rejected claim 1 under 35. U.S.C. § 103(a) as being unpatentable over U.S. Patent Application No. 2002/0142787 to Holley et al. (Holley) in view of U.S. Patent Application No. 2002/0103646 to Kochanski et al. (Kochanski).

The Examiner admits that Holley “fails to teach sending at least some of the non-text representation over a wireless channel.” To supply that which is missing, the Examiner turns to Kochanski.

But we believe that Holley lacks more than what the Examiner appears to believe. Holley not only fails to teach sending a non-text representation from a mobile communications device over a wireless messaging channel, Holley also fails to teach a mobile communications device which performs the function of “generating a non-text representation of the received utterance,” which is also required by claim 1.

Moreover, Kochanski fails to provide either of these missing elements. First, Kochanski makes no mention whatsoever of a mobile communications device that generates and/or sends a non-text representation of a received utterance. Second, he neither teaches nor suggests sending a non-text representation of speech over a wireless messaging channel. We discuss these points below.

With regard to the first point, we note that Kochanski generates a non-text representation of text, and not a non-text representation of a received utterance and for this he uses text analysis software and not speech recognition software. (See, e.g., Fig. 2, ref. 20). Indeed, since Kochanski is concerned with generating speech for systems such as automated telephone response systems in which no human speaker is present, there is no speech input involved at all. Rather, the input is text and the output is a representation of that text which can be used by a synthesizer to generate corresponding speech.

In addition, to the extent that Kochanski sends any non-text representation it is from a server to a cell phone, not the other way around. His system utilizes the resources that one finds on a server (e.g. the text analysis functionality) and not on the cell phone. He does not teach or

suggest that such functionality might reside on the cell phone. Indeed, he makes clear that the functionality he describes is of a type that would not fit on a cell phone:

[0006] One theoretical alternative to the above approach might be to place the text-to-speech system on the cell phone itself, thereby requiring only the text which is to be converted to be transmitted across the wireless channel. Obviously, such text could be transmitted quite easily with minimal bandwidth requirements. Unfortunately, a high quality text-to-speech system is quite algorithmically complex and therefore requires significant processing power, which may not be available on a hand-held device such as a cell phone. And more importantly, a high quality text-to-speech system requires a relatively substantial amount of memory to store tables of data which are needed by the conversion process. In particular, present text-to-speech systems usually require between five and eighty megabytes of storage, an amount of memory which is obviously impractical to be included on a hand-held device such as a cell phone, even with today's state-of-the-art memory technology. Therefore, another more practical approach is needed to improve the quality of text-to-speech in wireless applications. (emphasis added).

For these reasons, he never even hints at sending a non-text representation from a cell phone to a server (or another cell phone).

With regard to the second point, Kochanski sends his non-text representation over the normal wireless speech communications channel and not over a wireless messaging channel (e.g. an SMS channel). His invention is about how to make the transmission over the conventional channel better. He describes the prior art approaches that he is addressing:

[0004] When telecommunications applications involving text-to-speech conversion are used in wireless (e.g., cellular phone) environments the approach invariably employed is that the text-to-speech system resides at some non-mobile location where the input text is converted to a synthesized speech signal, and then the resultant speech signal is transmitted to the cell phone in a conventional manner (i.e., as any human speech would be transmitted to the cell phone). The central location may, for example, be a cellular base station, or it may be even further "back" in the telecommunications "chain", such as at a central location which is independent from the particular base station with which the cell phone is communicating. The conventional means of transmitting the synthesized speech to the cell phone typically involves the process of encoding the speech signal with a conventional audio coder (fully familiar to those skilled in the art), transmitting the coded speech signal, and then decoding the received signal at the cell phone. (emphasis added).

And he notes that sending synthesized speech in the conventional manner leaves something to be desired:

[0005] This conventional approach, however, often leads to unsatisfactory sound quality. Speech data requires a great deal of bandwidth and the information is subject to data loss in the wireless transmission process.

Kochanski's invention addresses the problem of how to improve the quality of the synthesized speech that is output on a cell phone that receives the signal over a conventional wireless speech communications channel. He does this by partitioning the text-to-speech process between the server and the cell phone and sending a partially synthesized signal from the server to the cell phone, which then completes the synthesization process to generate the final synthesized output signal.

His approach achieves a number of benefits. First it produces a better quality audio output:

[0016] By partitioning a text-to-speech system in accordance with the principles of the present invention and thereby transmitting a more compact representation of the speech (i.e., phonemes and possibly pitch and duration information as well) rather than the corresponding audio itself, better audio quality is achieved.

And it is less prone to degradation which is characterized by transmission over the conventional wireless voice channel:

[0017] As a secondary advantage, transmitting the phoneme sequence allows the communications link to be much more resistant to errors and dropouts in the audio channel. This results from the fact that the phoneme sequence has a much lower data rate than the corresponding audio signal (even compared to an audio signal that has been coded and compressed). The compact nature of the phoneme string allows time for the data to be sent with more error correction information, and also may advantageously allow time for missing sections to be retransmitted before they need to be converted to speech. For example, a phoneme sequence can typically be sent with a data rate of approximately 100 bits per second. Assuming, for example, a wireless link with a data rate of 9600 bits per second, the phoneme sequence for a 2 second utterance can usually be transmitted in less than 0.1 second, thus leaving plenty of time to retransmit information that may have been received incorrectly (or not received at all).

Since Kochanski's invention is about improving the quality of synthesized speech signals that are sent to a cell phone over the conventional speech communications channel, one skilled in the art would not be motivated to send the Kochanski signal over an inferior channel (such as the wireless messaging channel) and thereby undo what Kochanski's invention was designed to achieve. In other words, if one combined the teachings of Kochanski with those of Holley the resulting system would not be the claimed invention. On the contrary, it would be a

system in which a partially synthesized signal is sent over a conventional speech communications channel from a server to Holley's cell phone, modified to receive and use the partially synthesized signal for speech synthesis on the phone.

For the above reasons, Applicant believes the pending application is in condition for allowance and therefore asks the Examiner to allow the claims to issue.

Please apply any charges not covered, or any credits, to Deposit Account No. 08-0219.

Respectfully submitted,

Dated: July 24, 2007



Oliver Strimpel
Registration No.: 56,451
Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 11/110,371		Filing Date 04/20/2005		☐ To be Mailed		
APPLICATION AS FILED – PART I											
(Column 1)			(Column 2)		SMALL ENTITY ☒ OR			OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)				RATE (\$)	FEE (\$)		
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A					N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A					N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A					N/A			
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =		OR			X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =					X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))			If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.											
APPLICATION AS AMENDED – PART II											
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY OR			OTHER THAN SMALL ENTITY		
AMENDMENT	02/26/2007	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)				RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	• 17	Minus	• 22	= 0	X \$25 =	0	OR			X \$ =
	Independent (37 CFR 1.16(h))	• 2	Minus	• 4	= 0	X \$100 =	0	OR			X \$ =
☐ Application Size Fee (37 CFR 1.16(s))											
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
					TOTAL ADD'L FEE	0	OR			TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY OR			OTHER THAN SMALL ENTITY		
AMENDMENT	7/26/07	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)				RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	• 17	Minus	• 22	= 0	X \$ =		OR			X \$ =
	Independent (37 CFR 1.16(h))	• 2	Minus	• 4	= 0	X \$ =		OR			X \$ =
☐ Application Size Fee (37 CFR 1.16(s))											
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
					TOTAL ADD'L FEE		OR			TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											

 Legal Instrument Examiner:
 Rozenia Harmon

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S378	225	@ad<"20040501" and (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables symbol\$4 non?text nontext non adj1 text) with (speech voice utteran\$4) and (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables symbol\$4 non?text nontext non adj1 text) with text with messag\$4	US-PGPUB; USPAT	OR	ON	2006/08/07 17:29



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))	1062
23483 7590 08/21/2007 WILMER CUTLER PICKERING HALE AND DORR LLP 60 STATE STREET BOSTON, MA 02109			EXAMINER LE, DANH C	
			ART UNIT 2617	PAPER NUMBER
			NOTIFICATION DATE 08/21/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

michael.mathewson@wilmerhale.com
teresa.carvalho@wilmerhale.com
tina.dougal@wilmerhale.com

Office Action Summary	Application No. 11/110,371	Applicant(s) ROTH, DANIEL L.	
	Examiner DANH C. LE	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 21 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 21 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 9, 11, 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 1. Claims 1-6, 8, 21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Holley (US 2002/0142787) in view of Andric (6,163,765).**

As to claim 1, Holley teaches a method of sending a voice message via a mobile communication device (figure 1 and paragraph 020), said method comprising:

receiving an utterance from a user of the mobile communication device;

inserting at least some of the non-text representation into a body of a text message;

and

sending the text message over a wireless messaging channel from the mobile communication device to a recipient's device.

Holley fails to teach generating a non-text representation of the received utterance and sending at least some of the non-text representation over a wireless channel.

Andric teaches generating a non-text representation of the received utterance and sending at least some of the non-text representation over a wireless channel (paragraph 7-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Andric into the system of Holley in order to convert voice signal to textual messages.

As to claim 2, Holley teaches the method of claim 1, wherein the mobile communication device is a cellular phone (figure 1).

As to claim 3, Holley teaches the method of claim 1, wherein inserting at least some of the non-text representation involves inserting all of the non-text representation into the body of the text message (figure 1 and paragraph 020).

As to claim 4, Holley teaches the method of claim 1, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, wherein the string of symbols is the non-text representation (paragraph 013).

As to claim 5, Holley teaches the method of claim 4, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables (paragraph 013).

As to claim 6, Holley teaches the method of claim 4, wherein the recognition is phoneme recognition and the symbols in the generated string of symbols are phonemes (paragraph 013).

As to claim 8, Holley teaches the method of claim 1, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message (paragraph 020).

As to claim 21, the claim is an apparatus claim of claim 1; therefore, the claim is interpreted and rejected as set forth as claim 1.

As to claim 23, the claim is an apparatus claim of claim 4; therefore, the claim is interpreted and rejected as set forth as claim 4.

As to claim 24, the claim is an apparatus claim of claim 5; therefore, the claim is interpreted and rejected as set forth as claim 5.

As to claim 25, the claim is an apparatus claim of claim 8; therefore, the claim is interpreted and rejected as set forth as claim 8.

2. Claims 7, 10, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holley and Andric in view of Kagoshima (US 6,760,703).

As to claim 7, Holley and Andric teaches the method of claim 1, wherein generating the non-text representation of the received utterance involves performing phoneme recognition on a signal derived from the receive utterance to generate a phoneme string, Holley and Andric fails to teach the phoneme string is the non-text representation. Kagoshima teaches phoneme string is the non-text representation (col.16, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Kagoshima into the system of Holley and Andric in order to generate a speech signal from phonemes symbols string.

As to claim 10, Holley and Kagoshima teaches the method of claim 1, wherein the non-text representation is a compressed version of the received utterance (Kagoshima col.29, lines 14-36).

As to claim 26, the claim is an apparatus claim of claim 10; therefore, the claim is interpreted and rejected as set forth as claim 10.

Response to Arguments

Applicant's arguments with respect to claims 1-11, 21, 23-27 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 9, 11 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 9, the teaching of above prior arts either alone or in combine fails to further comprising including an indicator with the text message identifying the text message as containing a non-text representation of the utterance.

Claims 27 and 11 are objected in the previous Office Action.

Response to Arguments

Applicant's arguments with respect to claims 1-8,10, 21, 23-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

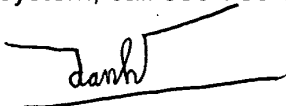
Art Unit: 2617

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



August 14, 2007

PRIMARY EXAMINER

Notice of References Cited	Application/Control No. 11/110,371	Applicant(s)/Patent Under Reexamination ROTH, DANIEL L.	
	Examiner DANH C. LE	Art Unit 2617	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,163,765	12-2000	Andric et al.	704/204
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: July 24, 2007

Signature: *[Signature]*

(Ray Guarno)

Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Daniel L. ROTH	Confirmation No.:	1062
Application No.:	11/110,371	Art Unit:	2617
Filed:	April 20, 2005	Examiner:	D. C. Le
Title:	VOICE OVER SHORT MESSAGE SERVICE		

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

*Hello Denise,
Please enter
this amendment,
Thanks Denise
Danh.*

AMENDMENT AFTER FINAL ACTION UNDER 37 C.F.R. 1.116

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Final Office Action dated May 21, 2007, please amend the above-identified U.S. patent application as follows:

A Listing of the Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

US1DOCS 6213902v2

Index of Claims



Application/Control No.

11/110,371

Examiner

DANH C. LE

Applicant(s)/Patent under Reexamination

ROTH, DANIEL L.

Art Unit

2617

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

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DANH C. LE

2617

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Class	Subclass	Date	Examiner

[illegible]



AF
IPW

PTO/SB/21 (10-07)

Approved for use through 10/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/110,371-Conf. #1062	
	Filing Date	April 20, 2005	
	First Named Inventor	Daniel L. ROTH	
	Art Unit	2617	
	Examiner Name	D. C. Le	
Total Number of Pages in This Submission	7	Attorney Docket Number	0112855.00141US2

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☒ Amendment/Reply (6 pages) ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☐ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☒ Other Enclosure(s) (please identify below): Return Receipt Postcard
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	WILMER CUTLER PICKERING HALE AND DORR LLP		
Signature			
Printed name	Oliver Strimpel		
Date	October 22, 2007	Reg. No.	56,451

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
Dated: October 22, 2007	Signature: (Maureen Divito)

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Dated: October 22, 2007

Signature: *Maureen DiVito*

(Maureen DiVito)

Docket No.: 0112855.00141US2
(PATENT)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel L. ROTH Confirmation No.: 1062
Application No.: 11/110,371 Art Unit: 2617
Filed: April 20, 2005 Examiner: D. C. Le
Title: VOICE OVER SHORT MESSAGE SERVICE

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER FINAL ACTION UNDER 37 C.F.R. 1.116

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Office Action dated August 21, 2007, finally rejecting claims 1-8, 10, 21 and 23-26, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

AMENDMENTS TO THE CLAIMS

1. (previously presented) A method of sending a voice message via a mobile communication device, said method comprising:
receiving an utterance from a user of the mobile communication device;
generating a non-text representation of the received utterance;
inserting at least some of the non-text representation into a body of a text message; and
sending the text message including the at least some of the non-text representation over a wireless messaging channel from the mobile communication device to a recipient's device.

2. (original) The method of claim 1, wherein the mobile communication device is a cellular phone.

3. (original) The method of claim 1, wherein inserting at least some of the non-text representation involves inserting all of the non-text representation into the body of the text message.

4. (original) The method of claim 1, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, wherein the string of symbols is the non-text representation.

5. (original) The method of claim 4, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.

6. (original) The method of claim 4, wherein the recognition is phoneme recognition and the symbols in the generated string of symbols are phonemes.

7. (original) The method of claim 1, wherein generating the non-text representation of the received utterance involves performing phoneme recognition on a signal derived from the

received utterance to generate a phoneme string, wherein the phoneme string is the non-text representation.

8. (original) The method of claim 1, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message.

9. (original) The method of claim 1, further comprising including an indicator with the text message identifying the text message as containing a non-text representation of the utterance.

10. (original) The method of claim 1, wherein the non-text representation is a compressed version of the received utterance.

11. (original) The method of claim 1, further comprising dividing the non-text representation into sections and inserting each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages and further comprising sending the plurality of text messages over the wireless messaging channel from the mobile communication device to the recipient's device.

12. – 20. (canceled)

21. (previously presented) A mobile communication device for sending a voice message, said mobile communication device comprising:

a processor system;

a microphone for receiving an utterance from a user of the mobile communication device;

a transceiver; and

memory storing code which when executed on the processor system causes the mobile communication device to:

generate a non-text representation of the received utterance;

insert the non-text representation into a body of a text message; and

send the text message including the non-text representation via the transceiver over a wireless messaging channel from the mobile communication device to a recipient's device.

22. (canceled)

23. (previously presented) The mobile communication device of claim 21, wherein generating the non-text representation of the received utterance involves performing recognition on a signal derived from the received utterance to generate a string of symbols, the string of symbols being the non-text representation.

24. (previously presented) The mobile communication device of claim 23, wherein the symbols in the string of symbols are selected from the group consisting of phonemes, diphones, triphones, syllables, and demisyllables.

25. (previously presented) The mobile communication device of claim 21, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message.

26. (previously presented) The mobile communication device of claim 21, wherein the non-text representation is a compressed version of the received utterance.

27. (previously presented) The mobile communication device of claim 21, wherein the code when executed on the processor further causes the mobile communication device to:

divide the non-text representation into sections;

insert each section into a body of a different corresponding text message of a plurality of text messages, wherein the first-mentioned text message is one of said plurality of text messages; and

send the plurality of text messages over the wireless messaging channel from the mobile communication device to the recipient's device.

REMARKS

Applicant thanks the Examiner for the telephone interview of September 14, 2007, during which the Examiner identified reference numbers 414, 416, and 418 in Figures 5 and 6 of U.S. Patent No. 6,163,756 to Andric (Andric) as the parts of that reference that should have been cited in the Office action. Applicant acknowledges the Examiner's statement that, in addition to previously allowable claims 9, 11, and 27, claims 8 and 25 would be allowable if rewritten to include all the limitations of the claims from which they depend.

The examiner rejected claim 1 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2002/0142787 to Holley et al. (Holley) in view of Andric. Applicant disagrees with the rejection for at least the following reasons.

The examiner states that Holley teaches "inserting at least some of the non-text representation into a body of a text message." But that is incorrect. Holley receives speech input, processes the speech using a speech recognition unit to generate text, and then inserts the recognized text into the body of a text message. As Holley explains: "...the text is input by voice input, processed in a speech recognition unit and compared with stored, predefined text patterns ..., whereupon, once it has been confirmed, it is used as the text for the text message to be sent." [¶ 6, emphasis added] Nowhere does Holley teach or suggest inserting anything but text into a text message.

The examiner admits that Holley "fails to teach ...sending at least some of the non-text representation over a wireless channel." To supply that which is missing, the Examiner turns to Andric. But Andric fails to provide the missing element.

Andric receives speech input and converts it into text, as he shows in Fig.5, steps 401 and 417. Next, in step 418, Andric translates the text back into speech, but he makes it clear that the speech is generated only for the caller to check the accuracy of the speech recognition system before sending text over a radio connection: "The purpose of synthesizing to a voice test signal is to provide the caller the means to determine if the textual translation was performed

flawlessly. In order to make this determination ... the voice test signal is transmitted through the phone system to the caller.” (3:26-30) In other words, the speech is not sent over a wireless messaging channel but is returned to the caller over a phone line for checking purposes. Then, “once the textual message has been corrected ... the transmitter ... is activated to transmit the textual equivalent of speech to the targeted SCR...” (3:55-59) [emphasis added] Thus, Andric transmits text over a radio channel and not speech, or any other non-text representation, contrary to what is required by the claim.

In view of the above, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-0219, under Order No. 0112855.00141US2 from which the undersigned is authorized to draw.

Respectfully submitted,

Dated: October 22, 2007



Oliver Strimpel
Registration No.: 56,451
Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S438	5	@ad>"20040501" and ((voice speech utterance vocali\$5) same (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables non?text nontext non adj1 text) and (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables non?text nontext non adj1 text) same (radio wireless)) .clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/17 09:55
S439	117	@ad<"20040501" and (voice speech utterance vocali\$5) same (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables non?text nontext non adj1 text) and (phonem\$4 diphon\$4 triphon\$4 syllables demisyllables non?text nontext non adj1 text) same (radio wireless)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/17 10:05



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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NOTICE OF ALLOWANCE AND FEE(S) DUE

23483 7590 02/27/2008

WILMERHALE/BOSTON
60 STATE STREET
BOSTON, MA 02109

EXAMINER

LE, DANH C

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 02/27/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/110,371

04/20/2005

Daniel L. Roth

112855.141 (US2))

1062

TITLE OF INVENTION: VOICE OVER SHORT MESSAGE SERVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	05/27/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

23483 7590 02/27/2008

WILMERHALE/BOSTON
60 STATE STREET
BOSTON, MA 02109

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

11/110,371 04/20/2005 Daniel L. Roth 112855.141 (US2)) 1062

TITLE OF INVENTION: VOICE OVER SHORT MESSAGE SERVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	05/27/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
LE, DANH C	2617	455-466000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))	1062
23483	7590	02/27/2008	EXAMINER	
WILMERHALE/BOSTON			LE, DANH C	
60 STATE STREET			ART UNIT	PAPER NUMBER
BOSTON, MA 02109			2617	
DATE MAILED: 02/27/2008				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	11/110,371	ROTH, DANIEL L.	
	Examiner	Art Unit	
	DANH C. LE	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/24/07.
2. ☒ The allowed claim(s) is/are 1-11,21 and 23-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. ☐ Notice of References Cited (PTO-892) | 5. ☐ Notice of Informal Patent Application |
| 2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. ☐ Examiner's Amendment/Comment |
| 4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. ☒ Examiner's Statement of Reasons for Allowance |
| | 9. ☐ Other _____. |

Application/Control Number:
11/110,371
Art Unit: 2617

Page 2

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Claims 1-11, 21, 23-27 are allowed as stated in the applicant's remarks on pages 5-6.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

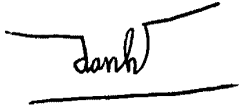
Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
11/110,371
Art Unit: 2617

Page 3

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



February 17, 2008
DAN H. LE

PRIMARY EXAMINER

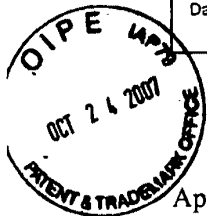
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: October 22, 2007

Signature: *Maureen DiVito*

(Maureen DiVito)

Docket No.: 0112855.00141US2
(PATENT)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel L. ROTH Confirmation No.: 1062
Application No.: 11/110,371 Art Unit: 2617
Filed: April 20, 2005 Examiner: D. C. Le
Title: VOICE OVER SHORT MESSAGE SERVICE

Hello Denise,

Please enter this amendment.

Thanks Denise

Danh.

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER FINAL ACTION UNDER 37 C.F.R. 1.116

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Office Action dated August 21, 2007, finally rejecting claims 1-8, 10, 21 and 23-26, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

☐ Claims renumbered in the same order as presented by applicant		☒ CPA		☐ T.D.		☐ R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original
1	1		31		61		91
2	2		32		62		92
3	3		33		63		93
4	4		34		64		94
5	5		35		65		95
6	6		36		66		96
7	7		37		67		97
8	8		38		68		98
9	9		39		69		99
10	10		40		70		100
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19	19		49		79		109
20	20		50		80		110
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Index of Claims



Application/Control No.

11/110,371

Examiner

DANH C. LE

Applicant(s)/Patent under Reexamination

ROTH, DANIEL L.

Art Unit

2617

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date			
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Search Notes

Application/Control No.

11/110,371

Examiner

DANH C. LE

Applicant(s)/Patent under
Reexamination

ROTH, DANIEL L.

Art Unit

2617

SEARCHED

Class	Subclass	Date	Examiner
455	466	2/18/08	DL
	418		
	550.1		
704	204		
	224		

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner
Interference Search		2/17/08	DL

**SEARCH NOTES
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
Double patent Check	2/17/08	DL
EAST Search updated (US, US PUB, JPO, EPO, DERWENT)		



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))	1062
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WILMERHALE/BOSTON			LE, DANH C	
60 STATE STREET			ART UNIT	
BOSTON, MA 02109			PAPER NUMBER	
			2617	
			NOTIFICATION DATE	
			DELIVERY MODE	
			04/03/2008	
			ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

michael.mathewson@wilmerhale.com
teresa.carvalho@wilmerhale.com
sharon.matthews@wilmerhale.com

Supplemental Action Notice of Allowability	Application No.	Applicant(s)	
	11/110,371	ROTH, DANIEL L.	
	Examiner	Art Unit	
	DANH C. LE	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/26/08.

2. ☒ The allowed claim(s) is/are 1-11, 21 and 23-27.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>5/17/07</u> 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	5. ☐ Notice of Informal Patent Application 6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____. 7. ☐ Examiner's Amendment/Comment 8. ☐ Examiner's Statement of Reasons for Allowance 9. ☐ Other _____.
---	--

/DANH C LE/
Primary Examiner, Art Unit 2617



11110371 - GAUTFN

PTO/SB/21 (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/110,371-Conf. #1062
	Filing Date	April 20, 2005
	First Named Inventor	Daniel L. ROTH
	Art Unit	2617
	Examiner Name	D. C. Le
Total Number of Pages in This Submission	Attorney Docket Number	0112855.00141US2

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form	☐ Drawing(s)	☐ After Allowance Communication to TC
☐ Fee Attached	☐ Licensing-related Papers	☐ Appeal Communication to Board of Appeals and Interferences
☐ Amendment/Reply	☐ Petition	☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
☐ After Final	☐ Petition to Convert to a Provisional Application	☐ Proprietary Information
☐ Affidavits/declaration(s)	☐ Power of Attorney, Revocation Change of Correspondence Address	☐ Status Letter
☐ Extension of Time Request	☐ Terminal Disclaimer	☒ Other Enclosure(s) (please identify below):
☐ Express Abandonment Request	☐ Request for Refund	PTO Form SB/08
☒ Information Disclosure Statement	☐ CD, Number of CD(s) _____	Return Postcard
☐ Certified Copy of Priority Document(s)	☐ Landscape Table on CD	ISR for PCT/US05/13478
☐ Reply to Missing Parts/Incomplete Application	Remarks	
☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	WILMER CUTLER PICKERING HALE AND DORR LLP		
Signature			
Printed name	Eric L. Prah		
Date	May 14, 2007	Reg. No.	32,590

6193538
US PDS 6193538

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.L./



11110371 - GAU:

Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Daniel L. ROTH	Confirmation No.:	1062
Application No.:	11/110,371	Art Unit:	2617
Filed:	April 20, 2005	Examiner:	D. C. Le
Title:	VOICE OVER SHORT MESSAGE SERVICE		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicants bring to the attention of the Examiner the documents listed on the attached Form SB/08.

Applicants state that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of this Information Disclosure Statement. No fee is required.

Enclosed please find a copy of the International Search Report corresponding to PCT/US2005/13478, mailed on March 28, 2007.

Applicants request that the Examiner initial and return a copy of the enclosed Form PTO SB/08 with the next communication.

US1DOCS 6193537v1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.L./

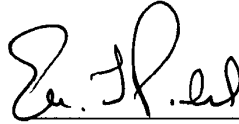
Application No.: 11/110,371

Docket No.: 0112855.00141US2

Dated:

May 14, 2007

Respectfully submitted,

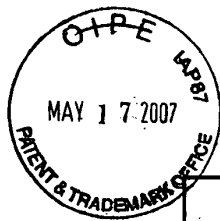


Eric L. Prah

Registration No.: 32,590

Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)



11110371 - GAU:

Used in Lieu of PTO/SB/08A/B
(Based on PTO 04-07 version)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	11/110,371-Conf. #1062
				Filing Date	April 20, 2005
				First Named Inventor	Daniel L. ROTH
				Art Unit	2617
				Examiner Name	D. C. Le
Sheet	1	of	1	Attorney Docket Number	0112855.00141US2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
/D.L.	AA*	US-2002/0142787-A1	10-03-2002	Holley et al.	
	AB*	US-2003/0014253-A1	01-16-2003	WALSH	
	AC*	US-2003/0088418-A1	05-08-2003	Kagoshima et al.	
/D.L.	AD*	US-2003/0139922-A1	07-24-2003	Hoffmann et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ³
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY			

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/D.L.	CA	International Searching Authority, International Search Report for PCT/US05/13478, mailed 28 Mar 2007, 4 pages	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	/Danh Le/	Date Considered	08/16/2007
-----------------------	-----------	--------------------	------------

US10065 6194475v1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.L./



PTO/SB/92 (09-06)
 Approved for use through 03/31/2007. OMB 0651-0031
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 11/110,371

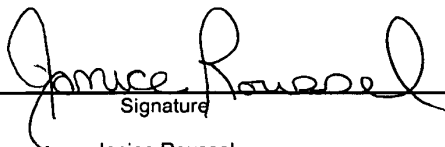
Attorney Docket No.: 0112855.00141US2

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Mail Stop Amendment
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

on May 15, 2007
 Date


 Signature

Janice Roussel

Typed or printed name of person signing Certificate

Registration Number, if applicable

(617) 526-6000
 Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Supplemental Information Disclosure Statement
 Transmittal Letter
 PTO Form SB/08
 1 Non-Patent Reference
 Return Postcard

US1DOCS 6193539V1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.L./

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

23483 7590 02/27/2008

WILMERHALE/BOSTON
 60 STATE STREET
 BOSTON, MA 02109

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))	1062

TITLE OF INVENTION: VOICE OVER SHORT MESSAGE SERVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES- No	\$720- \$1,440.	\$300	\$0	\$1020- \$1,740.	05/27/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
LE, DANH C	2617	455-466000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

- 1 Wilmer Cutler Pickering
- 2 Hale and Dorr LLP
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Voice Signal Technologies, Inc.

Woburn, MA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☒ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 08-0219 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ☒ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Eric L. Prah, Reg. No., 32,590/

Date May 27, 2008

Typed or printed name Eric L. Prah

Registration No. 32,590

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Docket No.: 0112855.00141US2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel L. ROTH Confirmation No.: 1062
Application No.: 11/110,371 Art Unit: 2617
Filed: April 20, 2005 Examiner: D. C. Le
Title: VOICE OVER SHORT MESSAGE SERVICE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

NOTIFICATION OF LOSS OF ENTITLEMENT TO SMALL ENTITY STATUS

Dear Sir:

Assignee, Voice Signal Technologies, Inc., hereby notifies the Patent and Trademark Office that it is not entitled to status as a small entity, and that the claim for small entity status filed by the Applicant is hereby withdrawn.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-0219, under Order No. 0112855.00141US2 from which the undersigned is authorized to draw.

Respectfully submitted,

Dated: May 27, 2008

/Eric L/ Prah, Reg. No. 32,590/
Eric L. Prah
Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000 (telephone)
(617) 526-5000 (facsimile)

6689145
US1DOCS 6689145v1

Electronic Patent Application Fee Transmittal				
Application Number:		11110371		
Filing Date:		20-Apr-2005		
Title of Invention:		VOICE OVER SHORT MESSAGE SERVICE		
First Named Inventor/Applicant Name:		Daniel L. Roth		
Filer:		Eric L Prah/Anthony Sutton		
Attorney Docket Number:		112855.141 (US2))		
Filed as Large Entity				
Utility Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	1501	1	1440	1440
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1740

Electronic Acknowledgement Receipt

EFS ID:	3355319
Application Number:	11110371
International Application Number:	
Confirmation Number:	1062
Title of Invention:	VOICE OVER SHORT MESSAGE SERVICE
First Named Inventor/Applicant Name:	Daniel L. Roth
Customer Number:	23483
Filer:	Eric L Prah/Kathleen Bastarache
Filer Authorized By:	Eric L Prah
Attorney Docket Number:	112855.141 (US2))
Receipt Date:	27-MAY-2008
Filing Date:	20-APR-2005
Time Stamp:	16:11:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1740
RAM confirmation Number	11335
Deposit Account	080219
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
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1		141US2Fees.pdf	174596 d175f0ac77729c7cba376750cc2c45c1094f9f01	yes	2
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Issue Fee Payment (PTO-85B)		1	1	
	Post Allowance Communication - Incoming		2	2	
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8283 8dfb6d5d10bbb3a490b2c3dd27d644b1224bb72e	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			182879		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 1062

SERIAL NUMBER 11/110,371	FILING OR 371(c) DATE 04/20/2005 RULE	CLASS 455	GROUP ART UNIT 2617	ATTORNEY DOCKET NO. 112855.141 (US2))	
APPLICANTS Daniel L. Roth, Boston, MA; ** CONTINUING DATA ***** This appln claims benefit of 60/563,754 04/20/2004 ** FOREIGN APPLICATIONS ***** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 05/17/2005					
Foreign Priority claimed ☐ yes ☐ no 35 USC 119 (a-d) conditions ☐ yes ☐ no ☐ Met after met Allowance Verified and Acknowledged <u>Examiner's Signature</u> <u>Initials</u>		STATE OR COUNTRY MA	SHEETS DRAWING 3	TOTAL CLAIMS 22	INDEPENDENT CLAIMS 4
ADDRESS 23483					
TITLE VOICE OVER SHORT MESSAGE SERVICE					
FILING FEE RECEIVED 1015	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/110,371	07/01/2008	7395078	112855.141 (US2))	1062

23483 7590 06/11/2008
WILMERHALE/BOSTON
60 STATE STREET
BOSTON, MA 02109

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Daniel L. Roth, Boston, MA;

Atty Docket: See Exhibit A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application/Patent Numbers: See Exhibit A
Filing/Issue Dates: See Exhibit A
Titles: See Exhibit A

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**POWER OF ATTORNEY BY ASSIGNEE AND REVOCATION OF PRIOR
POWERS AND CHANGE OF CORRESPONDENCE ADDRESS**

As an authorized representative of Assignee for the applications/patents
identified on the attached Exhibit A, I hereby revoke all powers of attorney previously
given and I hereby appoint the attorneys associated with

Customer Number 02101

as our attorneys and agents to prosecute and transact all business in the Patent and
Trademark Office connected therewith.

Please address all further communications to: **Customer No. 02101**

Voice Signal Technologies, Inc.

By:  Date: 10/17, 2010
Name: Leanne Fitzgerald
Title: ASSOCIATE GENERAL COUNSEL

EXHIBIT A

Attorney Docket Number	Predecessor Docket Number	Type	Status	Application Number	Filing Date	Patent Number	Issue date	Country	Title
2639/C23 PR1	112855.121 US1	PRO	Expired	60/431818	09-Dec-2002			US	PROVIDER-ACTIVATED SOFTWARE FOR MOBILE COMMUNICATION DEVICES
2639/C23 PR2	112855.121 US2	PRO	Expired	60/455244	17-Mar-2003			US	PROVIDER-ACTIVATED SOFTWARE FOR MOBILE COMMUNICATION DEVICES
2639/C23	112855.121 US3	ORD	Published	10/725673	03-Dec-2003			US	PROVIDER-ACTIVATED SOFTWARE FOR MOBILE COMMUNICATION DEVICES
2639/C24 PR1	112855.122 US1	PRO	Expired	60/442267	24-Jan-2003			US	PROSODIC MIMIC METHOD AND APPARATUS
2639/C24	112855.122 US2	ORD	Published	10/657421	08-Sep-2003			US	PROSODIC MIMIC METHOD AND APPARATUS
2639/C25 PR1	112855.124 US1	PRO	Expired	60/449195	21-Feb-2003			US	METHOD OF PRODUCING ALTERNATE UTTERANCE HYPOTHESES USING AUXILIARY INFORMATION ON CLOSE COMPETITORS
2639/C25	112855.124 US2	ORD	Granted	10/783518	20-Feb-2004	7676367	09-Mar-2010	US	METHOD OF PRODUCING ALTERNATE UTTERANCE HYPOTHESES USING AUXILIARY INFORMATION ON CLOSE COMPETITORS
2639/C26 PR1	112855.126 US1	PRO	Expired	60/469627	08-May-2003			US	A SIGNAL TO NOISE MEDIATED SPEECH RECOGNITION ALGORITHM
2639/C26	112855.126 US2	ORD	Abandoned	10/842333	10-May-2004			US	A SIGNAL TO NOISE MEDIATED SPEECH RECOGNITION ALGORITHM
2639/C27 PR1	112855.128 US1	PRO	Expired	60/501971	11-Sep-2003			US	METHOD AND APPARATUS FOR USING EARCONS IN MOBILE COMMUNICATION DEVICES
2639/C27	112855.128 US2	ORD	Published	10/932341	01-Sep-2004			US	METHOD AND APPARATUS FOR USING EARCONS IN MOBILE COMMUNICATION DEVICES
2639/C28 PR1	112855.131 US 1	PRO	Abandoned	60/501951	11-Sep-2003			US	ALTERNATE PRONUNCIATIONS FOR CORRECTION
2639/C29 PR1	112855.132 US 1	PRO	Expired	60/501950	11-Sep-2003			US	METHOD AND APPARATUS FOR BACK-UP OF CUSTOMIZED APPLICATION INFORMATION
2639/C29	112855.132 US2	ORD	Abandoned	10/936882	09-Sep-2004			US	METHOD AND APPARATUS FOR BACK-UP OF CUSTOMIZED APPLICATION INFORMATION

Attorney Docket Number	Predecessor Docket Number	Type	Status	Application Number	Filing Date	Patent Number	Issue date	Country	Title
2639/C49	112855.132 US3	CON	Pending	12/644652	22-Dec-2009			US	METHOD AND APPARATUS FOR BACK-UP OF CUSTOMIZED APPLICATION INFORMATION
2639/C30 PR1	112855.133 US1	PRO	Expired	60/501967	11-Sep-2003			US	AUTOMATIC VOICE ADDRESSING AND MESSAGING METHODS AND APPARATUS
2639/C30	112855.133 US2	ORD	Abandoned	10/938419	10-Sep-2004			US	AUTOMATIC VOICE ADDRESSING AND MESSAGING METHODS AND APPARATUS
2639/C31 PR1	112855.134 US1	PRO	Expired	60/502084	11-Sep-2003			US	PRONUNCIATION DISCOVERY FOR SPOKEN WORDS
2639/C31	112855.134 US2	ORD	Published	10/939942	13-Sep-2004			US	PRONUNCIATION DISCOVERY FOR SPOKEN WORDS
2639/C32 PR1	112855.135 US1	PRO	Expired	60/501990	11-Sep-2003			US	TEXT MESSAGING VIA PHRASE RECOGNITION
2639/C32	112855.135 US2	ORD	Abandoned	10/935691	07-Sep-2004			US	TEXT MESSAGING VIA PHRASE RECOGNITION
2639/C33 PR1	112855.136 US1	PRO	Expired	60/501972	11-Sep-2003			US	PHONE NUMBER AND NAME PRONUNCIATION INTERCHANGE VIA CELL PHONE
2639/C33	112855.136 US2	ORD	Abandoned	10/937890	09-Sep-2004			US	PHONE NUMBER AND NAME PRONUNCIATION INTERCHANGE VIA CELL PHONE
2639/C34 PR1	112855.137 US1	PRO	Expired	60/501973	11-Sep-2003			US	VOICE ENABLED PHONE BOOK INTERFACE FOR SPEAKER DEPENDENT NAME RECOGNITION AND PHONE NUMBER CATEGORIZATION
2639/C34	112855.137 US2	ORD	Published	10/935690	07-Sep-2004			US	VOICE ENABLED PHONE BOOK INTERFACE FOR SPEAKER DEPENDENT NAME RECOGNITION AND PHONE NUMBER CATEGORIZATION
2639/C35 PR1	112855.138 US1	PRO	Expired	60/520187	14-Nov-2003			US	INSTALLING LANGUAGE MODULES IN A MOBILE COMMUNICATION DEVICE
2639/C35	112855.138 US2	ORD	Abandoned	10/988994	15-Nov-2004			US	INSTALLING LANGUAGE MODULES IN A MOBILE COMMUNICATION DEVICE
2639/C36 PR1	112855.139 US1	PRO	Expired	60/545204	17-Feb-2004			US	METHODS AND APPARATUS FOR REPLACEABLE CUSTOMIZATION OF MULTIMODAL EMBEDDED INTERFACES
2639/C36	112855.139 US2	ORD	Abandoned	11/058407	15-Feb-2005			US	METHODS AND APPARATUS FOR REPLACEABLE CUSTOMIZATION OF MULTIMODAL EMBEDDED INTERFACES

Attorney Docket Number	Predecessor Docket Number	Type	Status	Application Number	Filing Date	Patent Number	Issue date	Country	Title
2639/C50	112855.139 US3	CON	Abandoned	12/170863	10-Jul-2008			US	METHODS AND APPARATUS FOR REPLACEABLE CUSTOMIZATION OF MULTIMODAL EMBEDDED INTERFACES
2639/C37 PR1	112855.141 US1	PRO	Expired	60/563754	20-Apr-2004			US	VOICE OVER SHORT MESSAGE SERVICE
2639/C37	112855.141 US2	ORD	Granted	11/110371	20-Apr-2005	7395078	01-Jul-2008	US	VOICE OVER SHORT MESSAGE SERVICE
2639/C51	112855.141 US3	DIV	Published	12/146892	26-Jun-2008			US	VOICE OVER SHORT MESSAGE SERVICE
2639/C38 PR1	112855.142 US1	PRO	Expired	60/622838	28-Oct-2004			US	CODEC-DEPENDENT UNIT SELECTION FOR MOBILE DEVICES
2639/C38	112855.142 US2	ORD	Published	11/262482	28-Oct-2005			US	VOICE OVER SHORT MESSAGE SERVICE
2639/C39	112855.143 US1	PRO	Abandoned	60/622832	28-Oct-2004			US	BIT RATE REDUCTION FOR SPEECH CODING VIA COMPRESSION OF RECORDER BITSTREAMS
2639/C40	112855.144 US1	PRO	Abandoned	60/623068	28-Oct-2004			US	DIALING BY SUFFIX
2639/C41 PR1	112855.145 US1	PRO	Expired	60/649806	03-Feb-2005			US	METHODS AND APPARATUS FOR AUTOMATICALLY EXTENDING THE VOICE RECOGNIZER VOCABULARY OF MOBILE COMMUNICATIONS
2639/C41	112855.145 US2	ORD	Published	11/347666	03-Feb-2006			US	METHODS AND APPARATUS FOR AUTOMATICALLY EXTENDING THE VOICE RECOGNIZER VOCABULARY OF MOBILE COMMUNICATIONS
2639/C42	112855.148 US1	PRO	Expired	60/877146	26-Dec-2006			US	VOICE-MEDIATED MOBILE INFORMATION ACCESS
2639/C43	112855.149 US1	CON	Published	11/673995	12-Feb-2007			US	COLLECTION AND USE OF SIDE INFORMATION IN VOICE-MEDIATED MOBILE SEARCH
2639/C44	112855.150 US1	CON	Published	11/673988	12-Feb-2007			US	INTEGRATED VOICE SEARCH COMMANDS FOR MOBILE COMMUNICATIONS DEVICES
2639/C45	112855.151 US1	CON	Published	11/673997	12-Feb-2007			US	LOCAL STORAGE AND USE OF SEARCH RESULTS FOR VOICE-ENABLED MOBILE COMMUNICATIONS DEVICES
2639/C46	112855.152 US1	CON	PUBLISHED	11/673992	12-Feb-2007			US	ON A MOBILE DEVICE TRACKING USE OF SEARCH RESULTS DELIVERED TO THE MOBILE DEVICE
2639/C47	112855.153 US1	ORD	PUBLISHED	11/673341	09-Feb-2007			US	VOICE SEARCH-ENABLED MOBILE DEVICE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Daniel L. RothApplication No./Patent No.: 11/110,371Filed/Issue Date: 20 April 2005Titled: Voice Over Short Message ServiceVoice Signal Technologies, Inc., a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;
2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 016864, Frame 0499, or for which a copy therefore is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

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☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

- ☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Jay Sandvos, #43,900/

Signature

October 22, 2010

Date

Jay Sandvos Attorney for Assignee

Printed or Typed Name

(617) 443-9292

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt	
EFS ID:	8678707
Application Number:	11110371
International Application Number:	
Confirmation Number:	1062
Title of Invention:	VOICE OVER SHORT MESSAGE SERVICE
First Named Inventor/Applicant Name:	Daniel L. Roth
Customer Number:	23483
Filer:	Jay Sandvos
Filer Authorized By:	
Attorney Docket Number:	112855.141 (US2))
Receipt Date:	22-OCT-2010
Filing Date:	20-APR-2005
Time Stamp:	08:47:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	DD2639C37POARevPriorPower s.pdf	6108839 1e5a2c392947e743d7300f93e9cf2eb6a86 ed3e	no	5

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/110,371	04/20/2005	Daniel L. Roth	2639/C37

CONFIRMATION NO. 1062

POA ACCEPTANCE LETTER

2101
Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618



Date Mailed: 11/02/2010

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/22/2010.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/mtekle michael/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/110,371	04/20/2005	Daniel L. Roth	112855.141 (US2))

23483
WILMERHALE/BOSTON
60 STATE STREET
BOSTON, MA 02109

CONFIRMATION NO. 1062
POWER OF ATTORNEY NOTICE



Date Mailed: 11/02/2010

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/22/2010.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/mtekle michael/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
11/110,371	7395078	2617	9200



Correspondence Address/Fee Address Change

The following fields have been set to Customer Number 105921 on 05/23/2012

• Correspondence Address

The address of record for Customer Number 105921 is:

105921

**Sunstein Kann Murphy & Timbers LLP
125 Summer Street
Boston, MA 02110-1618**

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page 1 of 1



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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
11/110,371	7395078	2617	9200



000000053875151

Correspondence Address/Fee Address Change

The following fields have been set to Customer Number 105921 on 08/08/2012

• Correspondence Address

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105921

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125 Summer Street
Boston, MA 02110-1618**

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page 1 of 1