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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: VOICE TRANSMISSION APPLICATION VIA SHORT MESSAGE SERVICE (SMS), MULTIMEDIA MESSAGING SERVICE (MMS) AND/OR GENERAL PACKET RADIO SERVICE (GPRS)

(57) Abstract: VMS is invented to reach everyone around the world. From business men to children and handicapped people, they all benefit from the flexibility, power, easiness and usefulness of VMS. We aim to get the protection needed to professionally protect our inventions and researches, with the hope of continuous achievements and discoveries that facilitate and help our society and the whole world.



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Title of the invention:

Voice Transmission Application via Short Message Service (SMS), Multimedia Messaging Service (MMS) and/or General Packet Radio Service (GPRS)

Technical field

Voice Messaging service (VMS) is a new definition in the field of telecommunication. It enables the user to transform recorded voice or voice files on the cellular phone into text message(s) or Short Message Service (SMS) thus allowing them to be transferred easily and cost effective as a normal text message. The recipient can then decode the sent message(s) and receive the exact recorded voice and vice versa.

This has been achieved by the new (VMS) software, which can be installed in most cellular phones available in the market, with the ability to encrypt the recorded voice, sending it via text message(s) and then decrypting the sent message(s).

In addition, the VMS can also be sent via Multimedia Messaging Service (VMS-MMS) and General Packet Radio Service (VMS-GPRS). This choice grants the user the ability to choose the most convenient sending method in relation to price efficiency and availability, world wide.

Technical background

VMS is a cellular phone application, a program, compatible with a wide range of cellular phones (refer to List 1). Once installed, the VMS transforms the mobile phone into a voice encrypting and decrypting device. In addition, the device acquires the ability to compress voice files and send them via text messages.

The following steps will describe how the VMS works from a user point of view:

Step one:

The user records the required voice (either as spoken words, a recorded meeting, a lecture, a song, etc.), using the voice recording software built in VMS. The recorded voice is automatically filed and saved.

Step two:

The VMS then grabs and immediately encrypts the recorded file. Now, the latter will acquire the ability to be transferred as a normal text message(s). The number of messages will depend on the voice recording time and file size. A summery of the estimated

messages in relation to the voice recording time is given below; please see the detailed description of the invention.

Step three:

The newly formed text message can now be sent by the user to any recipient around the globe. The procedure is exactly the same as sending a normal text message.

Step four

The recipient, having the VMS installed in his device, will be able to decode the sent message(s). The program has the ability to decrypt the text message back to its original voice file format. The recipient can, at any desired time, listen to the user's sent voice or any other recorded voice (e.g. a recorded song, meeting, lecture....).

Disclosure of the invention

With the remarkable growth of the cellular phone industry and the enormous wide spread use of such devices for everyday life, the concept arose from the increasing demand and use of the cellular phone, its functions (especially SMS use, which is one of the most common communication application), and its capabilities.

The expenses in conducting international telephone calls, have given a vital inspiration to the development of the system. In addition, the world is in a technology race and people are always willing to know, get and achieve a break through in useful technologies, which can help and serve humans and human right.

Telecommunication users around the world are suffering from the multiple bans, limitations and/or expenses in the use of any voice transferring technique, conducting international calls and other communication services. This kind of monopoly is a critical issue which causes a delay in advancing technologies, and limits the present need for such a system.

VMS is also designed to help disabled people, and those with difficulties in typing long tiring text messages. It is user-friendly software, that aims in cutting down the long distance call expenses, and eradicates the traditional SMS typing.

Telecommunication companies in different countries offer variable pricing policies for sending an SMS, MMS or using the GPRS. VMS covers all of the above mentioned services, to adapt itself to the user needs, and the current pricing policy. This gives VMS the power of flexibility and adaptation to boost the international economy and to help users saving their valuable time and costs.

Detailed description of the invention

Will be supplied at a later stage

Method of industrial application of the invention

VMS is a breakthrough technology that has the ability to overpass several borders and restrictions thus helping the human kind in a wide scale.

Some of the most important uses and advantages of VMS are listed below:

- VMS is the ideal replacement of a traditional SMS bringing the end of its life cycle.
- It decreases the cost of international calls, breaks down the monopoly concord by telecommunication companies, and encourages the competition spirit between them.
- VMS eradicates the use of traditional Voice mail
- Saves time, and effort in typing traditional text messages, using the small inconvenient keys on cellular phones.
- The ability to send a bigger volume of information compared to that sent traditionally.
- Cellular phone electronic document signing or mobile voice-printing, which is the functional equivalent of a traditional handwritten signature, or the traditional voice signature.
- Offers the same security and ease as a handwritten signature
- The technology may be used for any transactions requiring signature, e.g. real estate documents, e-governments, etc.
- It has a unique Voice User Interface and user dialog to create a secure and cost effective method of verifying the identity of individuals
- It creates a legally-binding transaction and meet the various regularity requirements for financial transactions:
 - a) Authentication – Is the user who they claim to be?
 - b) Authorization- Is the user cooperating in providing their voice signature?
 - c) Audit Trail- Can the transaction be audited at a later stage
- It is an electronic representation of an individual
- No specialized equipment is required, just the cellular phone.
- The identity of a remote participant is confirmed in a user –friendly manner.
- Ability to show that the authorization originated from an identified source, and provide audit trials proof in case of repudiation, thus reducing fraudulent activity and related losses.
- People prefer voice for authentication to other biometrics such as fingerprints.
- Voice is purely portable- your voice is always with you and no other device than the personal cellular phone is needed.
- Voice is intuitive- people are accustomed to recognize other people by their voice.
- VMS can be the key for advertising campaigns and/or general advertising
- Gives a new chance for handicapped individuals, especially blind people, to use and send VMS messages easily and effortlessly.

- It is ideal in emergency situations or even while writing, where the voice can be recorded and sent immediately avoiding busy lines.
- VMS delivers the desired message immediately without delay, giving the advantage of avoiding busy telephone lines or missed calls, especially in critical and urgent situations.
- VMS will increase sales of cellular phones, thus bigger business for their factories and dealers, in addition it leads to an increase in SMS, MMS and GPRS revenues
- VMS is great for fun and pleasure, by sending different sorts of recorded voice, music, information, seasonal greetings...
- It is a totally new way of communication, similar to e-mails and faxes.
- Numerous military uses
- VMS is completely flexible. It adapts itself to the user needs and current telecommunication companies pricing policies. It can be sent via SMS, MMS or GPRS
- It increases the durability of the cellular phone and avoids its destruction through repetitive typing.

Claims

By inventing the VMS system we claim the following:

- 1- Using the name VOICE MESSAGING SERVICE (VMS) to refer to any type of voice recorded and sent via text message(s).
- 2- The idea of sending recorded voice, of any kind and size, via Text Message(s) on cellular phones or any device that uses Text Message services.
- 3- The ability of this invention to send and receive voice files, of any kind and size, via Text Messages
- 4- Sending VMS via Multimedia Messaging Service (MMS) and General Packet Radio Service (GPRS)
- 5- A specially designed voice recording system, the VMS Recording System for cellular phones. Specification described above in detailed description of the invention.
- 6- The playback system used in VMS. Described in Detailed description of the invention.
- 7- The development of the voice compression technique (OMR) which is the state-of-the-art newly formed compression engine that surpasses the capabilities of any other voice compression engine at the present time, described above in detailed description of the invention.
- 8- The encryption and decryption technique of the recorded voice
- 9- The sending and receiving method performed by the user and the recipient.
- 10- The ability to listen to the recorded file sent by VMS in its original format and sound.
- 11- The terms Voice-Printing and mobile voice-printings
- 12- The idea of using recorded and sent voice as voice-printing.
- 13- All the uses listed above in, Method of industrial application of the invention
- 14- Using VMS as a communicating method locally or internationally.

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International application No

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A. CLASSIFICATION OF SUBJECT MATTER
INV. H04M3/42

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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| X | WO 03/026261 A (ERICSSON TELEFON AB L M [SE]; MEKURIA FISSEHA [SE]) 27 March 2003 (2003-03-27) the whole document | 1 |
| X | DE 100 54 807 A1 (STREICH MICHAEL [DE]) 23 May 2002 (2002-05-23) the whole document | 1 |
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Further documents are listed in the continuation of Box C.

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| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
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| X | US 2005/266863 A1 (BENCO DAVID S [US] ET AL) 1 December 2005 (2005-12-01) the whole document ----- | 1 |

INTERNATIONAL SEARCH REPORT

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