GSM Based Operating of Embedded System Cloud Computing, Mobile Application Development and Artificial Intelligence Based 2 System 3 Mr. Prashant Kumar¹ and Mr. Prashant Kumar² Δ

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Abstract Q

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This paper is an attempt to introduce the reader into the world of GSM based Operating of 9 Embedded Systems in voice based talking GSM technology and its applications (for updating 10 the new technologies in old device) in the industry of home -made appliances and devices in 11 Embedded Systems. The objective of the series will be a general discussion of GSM based new 12 operating technologies for Mobile Applications Development and Mobile Computing in terms 13 of Artificial Intelligence. Its application will working from non -mobile devices in home -made 14 appliances and robotics. 15

Index terms— Cloud Computing, Mobile Application Development, Artificial Intelligence, Embedded 17 Systems, Robotics, Home â??" Made Appliances. 18

1 Year 19

There are various technologies present which become to easier the daily life of human people. This paper is 20 21 an idea for making and giving the operating features of embedded systems through Mobile Computing and Mobile Application Development [1,5] by using the concept of Artificial Intelligence. This concept was used for 22 controlling the embedded systems in Robotics and Home Made Appliances. The application of this project [1] in 23 terms of paper has given a new generations of home -made devices in mobile application of cloud computing. 24

$\mathbf{2}$ II. 25

3 Principle 26

The project of this principle is used for controlling the embedded systems through taking the application of 27 Robotics and Home -Made Appliances. This principle is also useful for controlling the homemade appliances 28 and robots through voice talking based GSM Technology [3] with updating the new technologies in old devices 29 for making the WAP connection through cloud computing [4] for operating the system. This technology is also 30 useful for developing the principle of Artificial Intelligence at the updating of new technologies. The positive 31 effect of this point is useful for less repairing and automatic mode repairing [2] of embedded systems, robotics 32 and home -made appliances through updating the device or cloud computing system. This principle also gives 33 the High Speed Internet Connectivity [1] through Cloud Computing System. This technology will also helpful 34 for increased production [2] of home -made appliances in developing countries. 35

III. 4 36

Practical applications $\mathbf{5}$ 37

This is the project for generating the concept of cloud computing [1] through the updating of various devices 38 like Television, Refrigerator, Air Conditioner etc. and getting the High Speed Internet Connectivity for another 39

11 ARTIFICIAL INTELLIGENCE

devices. This project also generates the [4] concept of Artificial Intelligence through by giving the concept of 40 Automatic Mode Repairing or Updating of various devices like Television, Refrigerator, Air Conditioner etc. It 41 also generates the concept of Mobile Application Development through our devices in Embedded Systems. We 42 have wanted to make a two Embedded Systems:-1. Server 2. Client Both of these two systems are connected 43 through Internet Connectivity by using the concept of [1] ABP Software or any Internet Coding Software in 44

Embedded Systems. 45

Flow Chart Diagram of Embedded System 6 46

This Embedded System has giving the future applications of Home-made Appliances for designing and updating 47 the system. Although this application is possible in Robotics System and Home-Made Appliances. This 48 technology has also used in Mobile and Cell Phone Industries. It has reduced the Cell Phone Radiation through 49 Cloud Computing System. This technology also gives the free High Speed Internet Connectivity and Internet 50 Phoning for Home -Made Appliances. The concept arises for the best idea and few years of research in GSM 51 technologies for Homemade Appliances. 52

53 IV.

7 Gsm networking architecture 54

The GSM Networking indicates that Global System for Mobile Communication Networking. This architecture 55 represents the many features and applications on daily life of human people. GSM is a digital mobile telephony 56 system [1,9] that is widely used in Europe and other parts of the world. GSM uses a variation of Time Division 57 Multiple Access (TDMA) and it is the most widely used of the three digital wireless telephony technologies 58 (TDMA, GSM and CDMA). GSM digitizes and compresses data, then sends it down a channel with two other 59 streams of data for making the communication. It operates at either [1] the 900 MHz or 1800 MHz frequency 60 band. This networking architecture is also useful and connects the devices with million distances of the world. 61 This networking architecture also connected to the many users and millions of devices. 62

Networking Architecture of GSM Based Operating of Em-8 63 bedded System 64

ν. 65

9 Cloud computing 66

Cloud Computing refers to the delivery of computing and storage capacity [6,7] of a service. The name comes 67 from the use of clouds as an abstraction for the complex infrastructure it contains in system diagrams . Cloud 68 69 computing entrusts services with a user's data, software and computation [5] over a network. It has considerable overlap with software as a service. Cloud computing relies on sharing of resources to achieve coherence and 70 economies of scale similar to a utility (like the electricity grid) over a network. 71

The cloud computing also connects and establishes the network of operating many devices [1] through a server 72 access portal. This technology is also When we will send any information to the client through server based 73 74 Embedded Systems. The server information will reach and operation will perform to the client based Embedded 75 Systems. When the operations will have performed, the client based Embedded Systems will send the message

76 through server to "Operation is Successful."

So, both the client and server embedded systems are to be connected in High Speed Internet Connectivity 77 and GSM Communication Systems. This project also gives the concept of Automatic Mode Repairing [2] and 78 Updating of New Technologies in various devices based Embedded Systems. This is the technology for designing 79 the embedded system [1] in Television, Refrigerator, Air Conditioner and various devices. This Embedded System 80 also giving the applications of Robotics System. This system enables: 1. Any Mobile Phone is not using in our 81 project for making GSM Communication Systems. making the cloud for controlling and operating the many 82 devices. 83 VI. 84

Mobile application development 10 85

It is the process by which application software is developed for low-power handheld VII. 86

Artificial intelligence 11 87

It is the intelligence of machines and the branch of computer science [3] that aims to create it. It defines the 88

field as "the study and design of intelligent agents" where an intelligent agent is a system that perceives its 89 environment and takes actions that maximize its chances of success. Artificial intelligence has been the VIII. 90

⁹¹ 12 Working in Embedded System

The project of this paper is to make a wireless GSM connection [1] in between user and embedded system of home -made devices (Television, Refrigerator, Air Conditioner etc) and Robotics.

This device presents a sensor from Artificial Intelligence for controlling of Embedded Systems in Voice Talking Technology based GSM System. This technology developed a new generation for developing WAP connection on cloud computing [7,8] with operations of home -made devices. Its application is important for updating and controlling the operations or work processing of home -made devices. This GSM technology based device is developing the many work stage in operating the Embedded System by making the main application of homemade appliances.

100 **13** Application

The applications of this project in terms of research paper developed a new technology for using the mobile 101 application development [6] in non -mobile devices like Robotics and Home -Made Devices. This technology 102 developed the operations of currentvoltage power supply, controlling and operating the all parts and connecting 103 through new technologies. Used Applications of home -made devices in Television, Refrigerator, Air Conditioner, 104 105 Air Cooler, Mixer Grinder is controlling all the parts and current -voltage power supply for establishing the 106 cloud computing [7] in various devices of networks. This technology will also developing the principle of Artificial Intelligence for operating and automatic mode repairing in homemade appliances and embedded system. devices 107 108 [6] such as personal digital assistants, enterprise digital assistants or mobile phones. These applications are either 109 pre-installed on phones during manufacture, can be downloaded by customers from various mobile software distribution platforms, or web applications delivered over HTTP which use server-side or client-side processing 110 (e.g. JavaScript) to provide an "application-like" experience within a Web browser. The mobile application 111 is very useful [10] and developed in the operating of mobile phones. The mobile application is very famous 112 for generating the new technologies and operating features of mobile device. subject of optimism, but has also 113 suffered setbacks and, today, has become an essential part of the technology industry, providing the heavy lifting 114 for many of the most difficult problems in computer science. This device is the basic principle of Artificial 115 Intelligence. The Artificial Intelligence is also useful for developing his sense [4] in any system of machine. This 116 project is also developing the artificial intelligence for giving the updating of new technologies through which it 117

118 become automatic mode repairing in home -made device and embedded system. X.

119 14 Embedded systems

An Embedded System is a computer designed system for specific control function within a larger system [2] often with real time computing constraints. It is embedded as a part of completed device often including hardware and mechanical parts. Embedded Systems [8] control many devices in common use today. Embedded Systems contain processing cores that are typically either Microcontroller or Digital Signal Processor. The designing of Embedded Systems is to make a computer through computing of device.

125 **15 XI.**

126 16 Robotics

The world we interact in everyday and the technology that we [9] utilize are making the new technology of Robotics in Embedded System. The Robotics System provides the engineering foundation for the design, implementation and analysis of embedded system with an emphasis in autonomous robotics system. It creates the many features [10] of mechanical design, control electronics, embedded programming machine and adaptive programming development.

"The technology for an automatic device that perform functions normally describe to human or a machine in the form of human people." XII.

¹³⁴ 17 Homemade appliances

The Home -Made Appliance are using in home and easy the daily work of human people. Home -Made Appliances also become the easier and comfortable life of human people. The work applications [4] of home -made appliances: a) Television gives the World of Entertainment. b) Refrigerator gives the preservation of food, making ice and cold water. c) Air Conditioner gives the cold room at longer time. d) Air Cooler gives the cool air in every season of time. e) Mixer Grinder gives the various spices for grinding and many things.

140 XIII.

141 **18** Conclusion

There are various technologies developed in the field of electronics and mobile application development. This paper is an attempt for developing the application of mobile in embedded systems. This technology will also useful for making the mobile application based home -made appliances by giving the [3] controlling principle of Artificial Intelligence. This principle is also useful for robotics through cloud computing [7] in which user can

18 CONCLUSION

already access his robot through cloud computing. The application of mobile in robotics system is operating the function of robots. It will also give the concept of Artificial Intelligence for operating and updating the Embedded System. This technology is also give the concept of GSM Based Controlling Device through Voice Talking Technology [1] in which human people is connecting and controlling the operation of electronic device [2] and home -made appliance with any part of the world. This paper is introducing the concept of computer based technology in Home -Made Appliances (Television, Refrigerator, Air Conditioner, Air Cooler and Mixer Grinder) and Robotics System. This technology will also give its application and future aspects of computer based home

-made appliances in embedded system. $^{1\ 2}$



Figure 1: Introduction

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Figure 2: Global



Figure 3: 2 .



Figure 4:

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