

Accessing Information Of Emergency Medical Services Through Internet of Things

Prof. Amruta Gadekar, Ambalkar Pooja, Mayuri Manjare, Reema Malvi

Computer Department
Pune University
DYPIET Ambi
India

ABSTRACT

IoT is the advanced technology which is use in daily life. IoT make easy to connect different smart devices with each other by using the internet. IoT is give the ability to computer system to run application program from different vendors. So in this paper we are accessing the data based on IoT technology for emergency medical services. The fast development of Internet of Things (IoT) Technology makes it Possible for Connecting Various Smart Objects Together through Internet and providing more data Inter-operability method for application. IoT is the interconnection of uniquely identifiable embedded computing device with in the current Internet Infrastructure. Accessing clinical Information of Patient at the Point of care to Doctor is critical to expand the properties of Healthcare Services, especially in emergency time. All clinical data are distributed in different hospitals. It is sometimes difficult to gathered clinical data of patient anywhere in case of urgency.

Keywords: - Resource Model, Decision support system (DSS), Emergency medical service.

I. INTRODUCTION

In recent year healthcare service having lots of problems .Problem is related to the high cost and increasing cost.Also includes incompatible quality of data healthcare service is contain large amount of data which is known as a Big data. Big data means sets of data whose size is unlimited. This IoT technology helps peoples or doctors to access the information of healthcare services easily and fastly. Because of IoT technique now days it is very easy to capture or access the data from the large amount of data online .It is useful for doctors and patients. Fast online is useful to take the decisions quickly. And it gives the fats and correct treatment to the patients. Now a days it's challenging for accessing the medical services from the Bigdata. IoT uses RFID and GPS techniques. RFID is nothing but radio frequency identification. GPS is global positioning system. Ambulances are work based on GPS system. In this vogue it involved different smart devices i.e smart phones, tablets. Hospital information is provides to the multiple devices. Healthcare Faces Number of Problems,Including high and Increase expense Incompatible quality of data and Interval in Care and access data. IoT is mainly to connect the world through Multipledevices.Cloud refers to a hardware or an Internet. Cloud is something which is located at remote location.

II. RELATED WORK

Information system are linked by the physical elements through tags and sensors. In that case info system is not

capable to transfer physical elements. Maintaining huge data of clinic by creating three layers. Tenant layer, Control layer, Buiseness layer. Planning between business function and transitive resources. Here is some advanteges of system which 1)No wastage of time. 2)Better performance.3)High speed. 4)Adaptability. 5)Flexibility. This system also contain some disadvantages that are 1)It doesn't give importance to decision making.2) Local system are use to handle the information.3) Heterogeneous formats are not supported..4)Use Ontology in data Storage and accessing for integral data sets.This table contains comparison of various types of methods which are adopted in creation of integral data ,implementation method include information centered, activity centered , user centered. We also uses smart devices , mobile apps are important issues in today's decision support system.

This table contains comparison of various types of methods which are adopted in creation of integral data ,implementation method include information centered, activity centered , user centered. We also uses smart devices , mobile apps are important issues in today's decision support system.

Table1: Comparison of several GDSS

Feature	UDA	Emergency	MEC	Mobile
Models	Resources	mysql	Data warehouse	Fuzzy
Integral data	yes	no	Yes	No
Implementation method	MDA	Information centered	Activity centered	User centered

III. SYSTEM ARCHITECTURE

This is architecture of data management system which provides three layers and cloud which is having the large amount of data. Above top layer it contains all data for e.g. patient data, clinic data, health insurance data, doctors’ data.

First layer is Top layer which contains the information about services & accessing and sharing the information of clinic and healthcare services by doctors.

Next layer is Middle layer which involves controls over the resources .It includes the controls on resources which resources has to be share or which not.

Last layer is Bottom layer which contains multi holder databases and that are distributed databases which provides the databases

connection.

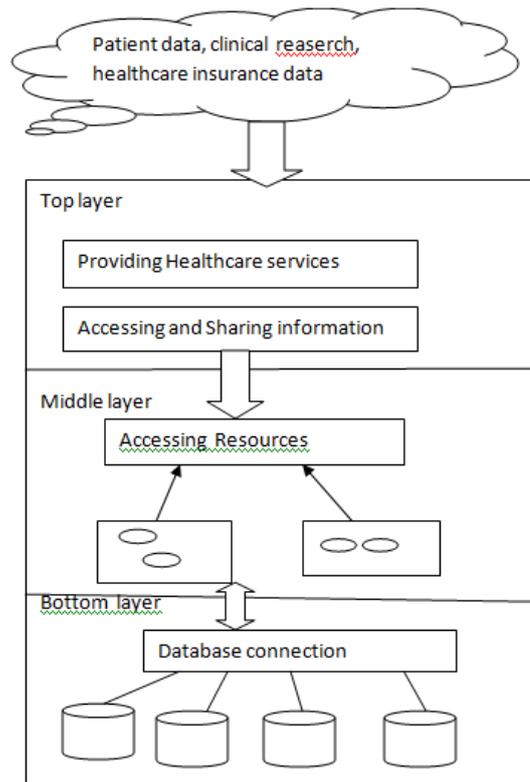


Fig1:Data Management System

IV. CONCLUSIONS

Considering the evolution in IT the medical services are changing .In hospitals there doctors ,nurses as well as patients are using smart devices.By using smart devices medical information can be access.Here security is important thing. In this paper we are presenting medical significantly.It is useful for both patient and doctors.It delivering clinical information of patient at point of care to physicians in critical to increase the quality of healthcare services.In this paper we proposed medical services information based on patient status in hospital environment. Doctors can also access information through smart devices or mobile phones. Medical information is access dynamically.

REFERENCES

[1] X. D. Wu, M. Q. Ye, D. H. Hu, G. Q. Wu, X. G. Hu, and H. Wang, “Pervasive medical information management and services: Key techniques and challenges,” Chin. J. Comput., vol. 35, no. 5, pp. 827–845, May 2012.

[2] R. L. Richesson and J. Krischer, “Data standards in clinical research: Gaps, overlaps, challenges

- and future directions,” *J Amer. Med. Informat. Assoc.*, vol. 14, no. 6, pp. 687–696, 2007.
- [3] L. Wang, G.-Z. Yang, J. Huang, J. Zhang, L. Yu, Z. Nie et al., “A wireless biomedical signal interface system-on-chip for body sensor networks,” *IEEE Trans. Biomed. Circuits Syst.*, vol. 4, no. 2, pp. 112–117, Apr. 2010.
- [4] R. Agarwal and S. Sonkusale, “Input-feature correlated asynchronous analog to information converter for ECG monitoring,” *IEEE Trans. Biomed. Circuits Syst.*, vol. 5, no. 5, pp. 459–468, Oct. 2011.
- [5] A. Dohr, R. Modre-Osprian, M. Drobics, D. Hayn, and G. Schreier, “The Internet of things for ambient assisted living,” in *Proc. 7th Int. Conf. Inf. Technol., New Gener.*, 2010, pp. 804–809.
- [6] O. S. Adewale, “An internet-based telemedicine system in Nigeria,” *Int. J. Inf. Manag.*, vol. 24, no. 3, pp. 221–234, Jun. 2004.
- [7] R. S. H. Istepanian and Y.-T. Zhang, “Guest editorial introduction to the special section: 4 G health—The long-term evolution of m-health,” *IEEE Trans. Inf. Tech. Biomed.*, vol. 16, no. 1, pp. 1–5, Jan. 2012.
- [8] R. Kyusakov, J. Eliasson, J. Delsing, J. V. Deventer, and J. Gustafsson, “Integration of wireless sensor and actuator nodes with IT infrastructure using service-oriented architecture,” *IEEE Trans. Ind. Informat.*, vol. 9, no. 1, pp. 43–51, Feb. 2013.
- [9] K. Wang, X. Bai, J. Li, and C. Ding, “A service-based framework for pharmacogenomics data integration,” *Enterp. Inf. Syst.*, vol. 4, no. 3, pp. 225–245, 2010.
- [10] N. Pereira, B. Andersson, and E. Tovar, “WiDom: Adominance protocol for wireless medium access,” *IEEE Trans. Ind. Informat.*, vol. 3, no. 2, pp. 120–130, May 2007.
- [11] K. Kakousis, N. Paspallis, and G. A. Papadopoulos, “A survey of software adaptation in mobile and ubiquitous computing,” *Enterp. Inf. Syst.*, vol. 4, no. 4, pp. 355–389, Nov. 2010.
- [12] S. Li, L. Xu, X. Wang, and J. Wang, “Integration of hybrid wireless networks in cloud services oriented enterprise information systems,” *Enterp. Inf. Syst.*, vol. 6, no. 2, pp. 165–187, May 2012.
- [13] M. G. Valls and P. B. Val, “Usage of DDS data-centric middleware for remote monitoring and control laboratories,” *IEEE Trans. Ind. Informat.*, vol. 9, no. 1, pp. 567–574, Feb. 2013.
- [14] W. Kang, K. Kapitanova, and S. H. Son, “RDDS: A real-time data distribution service for cyber-physical systems,” *IEEE Trans. Ind. Informat.*, vol. 8, no. 2, pp. 393–405, May 2012.
- [15] C. He, X. Fan, and Y. Li, “Toward Ubiquitous Healthcare Services With a Novel Efficient Cloud Platform,” *IEEE Trans. Biomed. Eng.*, vol. 60, no. 1, pp. 230–234, Jan. 2013.