A Distant Diagnostic and Therapeutic Technique for Patients' Away from Doctors

Ganesh Babu. P[1], Abdul Salam Rasmi. A[2], Arun Prakash. K[2], Christo Baby[2], Dinesh Kumar. V[2]

[1]*Assistant Professor,* [2]*Students, Department of Biomedical Engineering,*
Adhiyamaan College of Engineering, Hosur, Tamil Nadu

Abstract–**Recently, telecommunication has become one of major useful system for transmitting data's. This research mainly deals with the transmission of data's from the patients' towards the Doctor Therefore this study includes collections of signals and all Health care information's to help the doctor analyze the patient .This proposed technique also uses GPRS, sensors and embedded systems, Through which this technique adopts continuous collections ofvarious information mainly ECG signal, BP, SPO2 and also relayed on abnormal pulse generation for chronic diseases. A prototype is also implanted which can offer high healthcare standard with major source of cost reduction.Also through which the conditions of the patients can be transmitted instantly towards the patients' family.**

Keywords–**Wireless service, ZeaPic, GPRS, Embedded systems, TWAP, Peripatetic overhaul unit**

I. INTRODUCTION

Telecommunication is one of the major developing methods mainly used in the field of Medicine. As the doctors from various part of the domain can be contacted at a moment to treat the patient. Telemedicine is defined astelecommunication technology meant for diagnostics and therapeutic purposes [1]. The main tasks of tele medicine is to treat all individual with all techniques available throughout. The advanced technique of home care also helps the elderly to lead an individual and peaceful life [2].Many physiological information from the environment can be collected and that can easily detect the daily activity of the patient can also immediately identify any potentially developed chronic cases at early phases[3]. Mainly for remote monitoring of physiological parameters used here are categorized in various aspects as given below:

1. Types of sensors

2. Types of data communications.

3. Monitoring devices &

4. Signal processing/medical Algorithms. [4]

II. LITERATURE REVIEW

Usage of Bluetooth can only send the data's to a particular surroundings. The techniques like cam usage can be single way communication and then that technique used earlier was non mobile and many artefacts are detected .This technique in the base also had some other defects where they do not use any sensors. The telemedicine in previous stages was only through the cams used in the operation theatres but then the signals and reading where not made such clear for the doctors and the vicinity became clumsy. Huge funds are required. In this paper Bluetooth technique has been changed by zeapic. Sensors analog (AD 8221BR) has been used to increase the efficiency of the ECG signal. The technique to determine pulse oximetry was also improved by using noninvasive technique. As on implementing, the detection of glucose are alsodetected. As of all peripatetic overhaul unit has been taken as a major source.

III. METHODS

Bio signal sensors are used in order to make a tiny physiological data and transmit the data towards the focusing end [5] Due to small sized sensors the device use on low level operating battery that has the capability to lost longer [6] .Mobility can also be maintained [7].There the used medical sensors can generate their personal area sensor or Body network [8].That can also be interlinked with patients casuals [9]. After which these sensors completely linked with the signal processing unit where it determines patients' physiological condition [10] .The dispensation units may be any desktop or visual monitors or entrenched systems [11]. Many new procedures are used in order to telemedicine standard towards verdict, real time ECG classification procedure [12] and early recognition of sleep apnea [13].Heart rate monitoring, non-invasive glucometer , ECG-QRS wave recognition for arrhythmia. Also includes health care of the patient. Telemedicine are divided into two modes of maneuver:

1. Real time mode

2. Store and forward

In both modes the transmissions are done through computer grid (Fig. 1) [14], cellular grid [15], Public telephone grid [16], or cable TV grid [17] to the server. Even for analyzing the various signals. The patients are constrained at same area where the pc is furnished for transmitting these data's [18]. Even communication mobile telephony grid was also connected through Global System of Mobile communication [19]. In Draped and Zhuang implemented a Transmission wireless application protocol (TWAP). The proposed system consists of mobile care unit as a main part. [20]
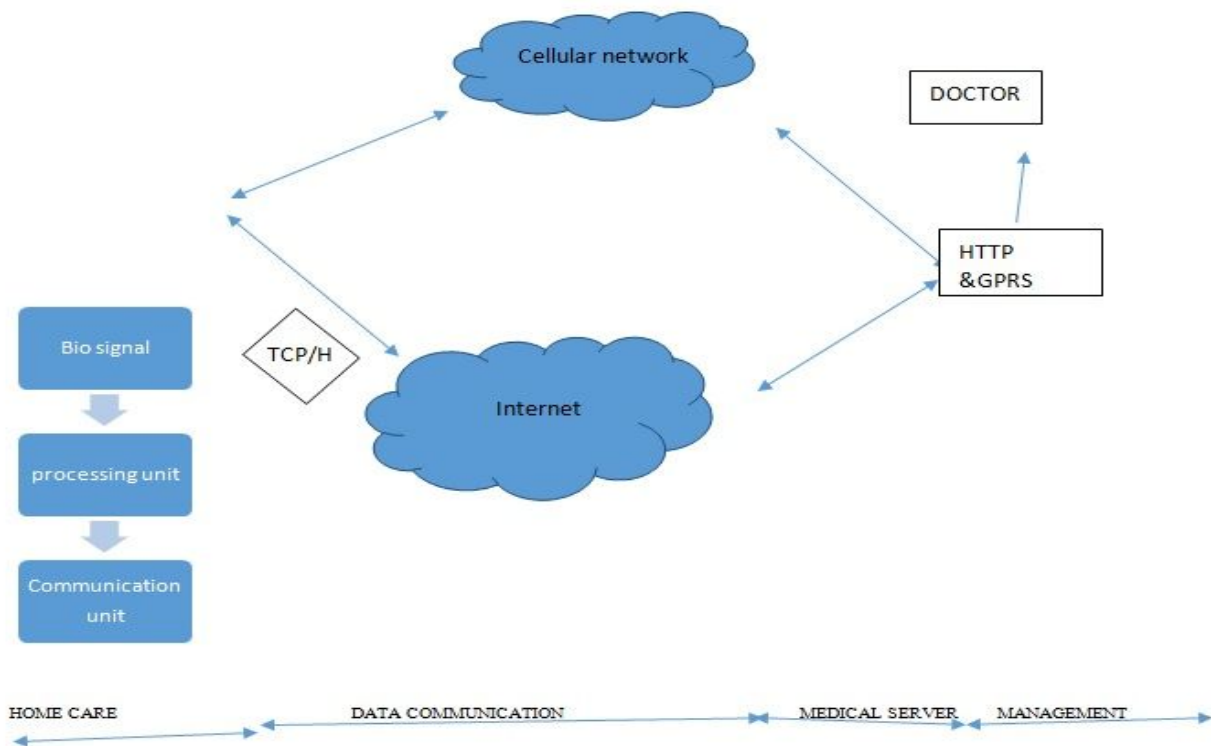

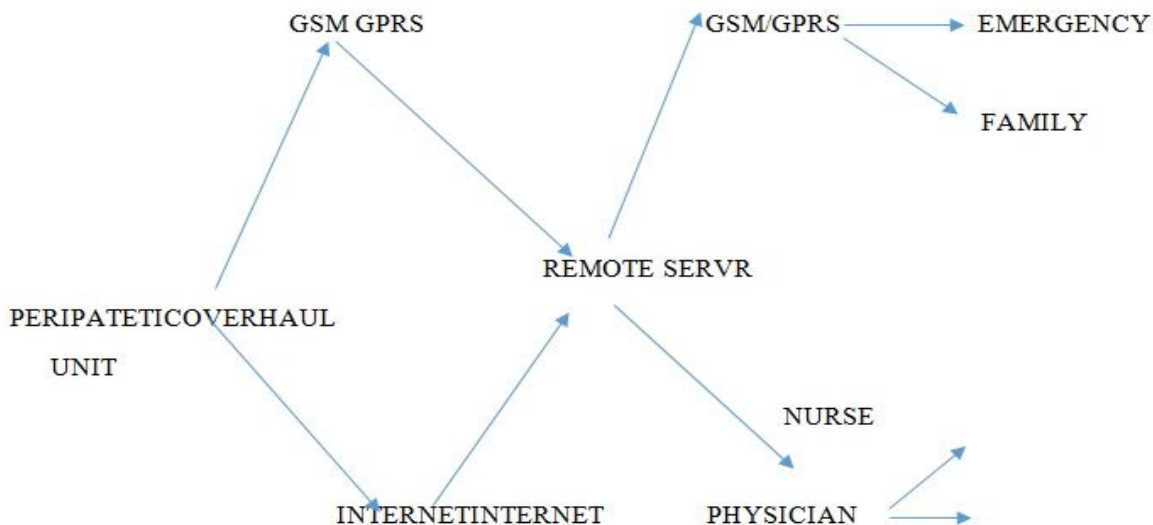**Fig. 1 Major Components**

IV. METHODOLOGY

Fig. 2 Architecture

A. System design

The vital source of net and communication has been made as a pictorial study in Fig. 2.The peripatetic overhaul unit contains a device which can transmit the real time data's towards the physician [21] .The patient can also indicate his abnormalities at any time as its been connected with (TWAP).That reduces the cost of GPRS survey also. The store mode will be useful for later checkups. The remote sensors receives the signal information at abnormal condition and through Zeapic the signals can be easily transmitted towards the physician. Ubiquitous devices can include desk and laptops which has the capability to pass the patient's condition towards their family
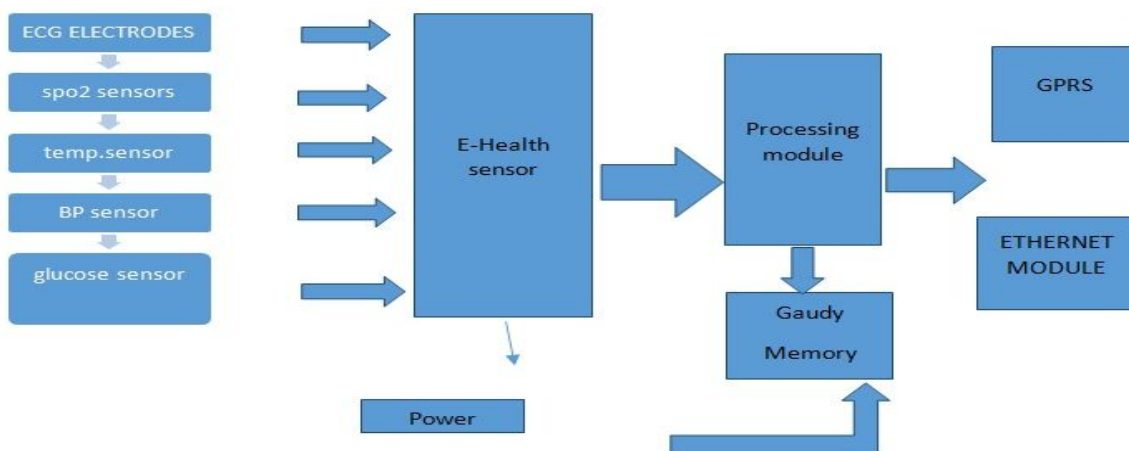
B. System compounds

Fig. 3 Processing method

The Fig. 3 represents the flow path of the method through which the areas can be easily determined and identified by the physician. The sensor collect all the information and it's been passed towards the E-Health

C. Software Processing

On starting the request will be sent, if yes then the program starts to initialize the sensor if not the process gets stopped and immobile. After which the processing takes place there the vital signals are analyzedand sends the patient's condition .On setting up the information the grid connection will be opened then the raw collected data's will be sent to the selected and listed individuals .If any multi signals are disrupted through the process then the system starts alarming.

V. CONCLUSION

Thus through the technique of Distant diagnosis and therapeutic patient monitor the physiological activity can easily monitored by the physician easily.

VI. FUTURE SCOPE

This can be developed to a standard with alteration in procedure and change in the three aspects of telemedicine could be done.

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sensor i.e. the sever sensor then towards the analog and digital communication [22]. It is also connected to a power supply and Guady memory then through the GPRS system the system is activated and processed.

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