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## REVIEW PAPER ON DOCTOR GADGET (DG) HEALTH CARE SYSTEM BASED ON INTERNET

SHAIKH SUMAIRA ANJUM<sup>1</sup>, ASST. PROF. V. S. KARWANDE<sup>2</sup>

*ME Student, Department of CSE, EESGOI, Aurangabad, Maharashtra, India<sup>1</sup>*  
*Assistant Professor, Department of CSE, EESGOI, Aurangabad, Maharashtra, India<sup>2</sup>*  
*shaikhjawwad02@gmail.com<sup>1</sup>, Vijay.Karwande@Yahoo.Co.in<sup>2</sup>*

**Abstract:** *Abstract: Since the Doctors are very busy people, they need productivity/performance enhancing tool that will assist them in their daily multitasking and other jobs. For this purpose, We has included Six special mini applets that would be permanently displayed as a transparent sidebar similar to the Gadget sidebar of Windows 7. It would contain user friendly icons and extremely simple interface that will help the doctor to perform quick calculations, glance at the current weather situation, perform a Voice or Video recording(V.R), Fix or View appointment, a one touch web browser, a disease reporter(D.R) and finally a patient tracker. According to the research done while performing SRS and feasibility study we arrived at the conclusion that these are the Six most wanted apps by most doctor and accordingly this is the project that we now submit. Effective doctor-patient communication is a central clinical function in building a therapeutic doctor-patient relationship, which is the heart and art of medicine. This is important in the delivery of high-quality health care. Much patient dissatisfaction and many complaints are due to breakdown in the doctor-patient relationship. However, many doctors tend to overestimate their ability in communication. Over the years, much has been published in the literature on this important topic. We review the literature on doctor-patient communication.*

**Keywords:** *Doctor Gadget (D.G), Software resource System (SRS), Voice or video recording (V.R), Disease reporter (D.R), Feasibility.*

### I INTRODUCTION

Medicine is an art whose magic and creative ability have long been recognized as residing in the interpersonal aspects of patient-physician relationship.[1] Doctor Gadget is an open-source; cross-platform software product which enables a user-friendly interface to the tools which are mostly used by the Doctors to enhance the performance of their clinic .This Gadget toolbar is very much similar to the Gadget sidebar of Windows 7 operating System. It helps a Doctor to perform the daily tasks in a much easy and sophisticated manner without the waste of manpower and time. In this mini gadget we present a set of seven most required applications for the doctors which are as listed below:

#### 1.1 Appointment Calendar :

The appointment calendar helps in maintain the schedule of the daily activities so that the user never runs out of time to attend the patients. It includes two sub modules to

create a new appointment and to view an existing schedule.

#### 1.2 Calculator:

Calculator enables a doctor to perform quick calculations regarding a patient's health chart and other important operations, all this with a single click.

#### 1.3 Web Browser:

The one touch Web Brower helps the user to get connected to the internet quickly and easily.

#### 1.4 Weather App :

The weather app enables a user to keep a track of the weather situation for two to five days so that they can give appropriate advices to their patients on whether or not to travel to that particular location. It is achieved simply by accessing the weather forecast on internet through the software.

#### 1.5 Disease Tracker :

The disease tracker helps the user to have a thorough look at the study regarding the deadly diseases their symptoms, vaccination and preventive measures against such diseases so that they always have an updated approach on curing patients.

### 1.6 Patient Tracker :

The patient tracker system keeps a track of the entire data about a patient very efficiently so that a doctor is always aware of the details of all his patients. This system consists of modules like the Patients' Personal Details, Health Chart, Reports of various tests, Details regarding the ongoing treatment of the patient, important notes marked up by the doctor and other such details.

### 1.7 Communication Module :

The communication module will enable the doctors to perform Email sending, image capturing, and connect with G-Talk when internet connection is there.

## II LITERATURE SURVEY

Literature review is an important chapter in this project as it is a research study of system that is going to be developed. Through this study, the developer would be able to gain more knowledge and understanding in developing new software. As a result, the developer would be able to improve the weaknesses and integrates the existing strengths with the new features in order to improve functionality of existing software.

Literature review summarizes, interprets and evaluates existing "literatures" (or published material) in order to establish current type of a subject. The literature review may resolve a controversy, establish the need for additional research and/or define the topic of inquiry.

The purpose of a literature review to establish the current knowledge on an issue that relates to the topic of research. Literature review is an important process in system development. Literature review provides the necessary background and the information and thus acts as a base to start off a research with. In this stage, findings, summary, analysis, synthesis of the system will be done. This is to ensure the full understanding of the system and that the most suitable software and tools are used.

### 2.1 Feasibility analysis

Feasibility studies aim to objectively and rationally uncover the strengths and weaknesses of the existing business or proposed venture, opportunities and threats as presented by the environment, the resources required to carry through, and ultimately the prospects for success. In its simplest term, the two criteria to judge feasibility are cost required and value to be attained. As such, a well-designed feasibility study should provide a historical background of the business or project, description of the product or service, accounting statements, details of the operations and management, marketing research and policies, financial data, legal requirements and tax obligations. Generally, feasibility studies precede technical development and project implementation.

**Types of Feasibility are as follows:**

#### 2.1.1 Technical Feasibility

The assessment is based on an outline design of system requirements in terms of Input, Processes, Output, Fields, Programs, and Procedures. This can be quantified in terms of volumes of data, trends, frequency of updating, etc. in

order to estimate whether the new system will perform adequately or not.

Technological feasibility is carried out to determine whether the company has the capability, in terms of software, hardware, personnel and expertise, to handle the completion of the project. When writing a feasibility report the following should be taken to consideration:

- A brief description of the business
- The part of the business being examined
- The human and economic factor
- The possible solutions to the problems

At this level, the concern is whether the proposal is both technically and legally feasible (assuming moderate cost).

The technical issue usually raised during the feasibility stage of the investigation includes the following:

- Does the necessary technology exist to do what is suggested?
- Do the proposed equipment's have the technical capacity to hold the data required to use the new system?
- Will the proposed system provide adequate response to inquiries, regardless of the number or location of users?
- Can the system be upgraded if developed?
- Are there technical guarantees of accuracy, reliability, ease of access and data security?

Earlier no system existed to cater to the needs of 'Secure Infrastructure Implementation System'. The current system developed is technically feasible. It is a web based user interface for audit workflow at NIC-CSD. Thus it provides an easy access to the users.

The database's purpose is to create, establish and maintain a workflow among various entities in order to facilitate all concerned users in their various capacities or roles. Permission to the users would be granted based on the roles specified. Therefore, it provides the technical guarantee of accuracy, reliability and security.

The software and hard requirements for the development of this project are not many and are already available in-house at NIC or are available as free as open source. The work for the project is done with the current equipment and existing software technology.

Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

#### 2.1.2 Operational Feasibility

Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it

satisfies the requirements identified in the requirements analysis phase of system development.

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization's operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation.

Some of the important issues raised are to test the operational feasibility of a project includes the following:-

- Is there sufficient support for the management from the users?
- Will the system be used and work properly if it is being developed and implemented?
- Will there be any resistance from the user that will undermine the possible application benefits?

This system is targeted to be in accordance with the above-mentioned issues. Beforehand, the management issues and user requirements have been taken into consideration. So there is no question of resistance from the users that can undermine the possible application benefits.

The well-planned design would ensure the optimal utilization of the computer resources and would help in the improvement of performance status.

### 2.1.3 Economical Feasibility

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system. An entrepreneur must accurately weigh the cost versus benefits before taking an action

Cost-based study: It is important to identify cost and benefit factors, which can be categorized as follows: 1. Development costs; and 2. Operating costs. This is an analysis of the costs to be incurred in the system and the benefits derivable out of the system.

Time-based study: This is an analysis of the time required to achieve a return on investments. The future value of a project is also a factor. Economic feasibility also related to each and every cost.

A system can be developed technically and that will be used if installed must still be a good investment for the organization. In the economical feasibility, the development cost in creating the system is evaluated against the ultimate benefit derived from the new systems. Financial benefits must equal or exceed the costs.

A doctor's communication and interpersonal skills encompass the ability to gather information in order to facilitate accurate diagnosis, counsel appropriately, give

therapeutic instructions, and establish caring relationships with patients[.2–4]. These are the core clinical skills in the practice

of medicine, with the ultimate goal of achieving the best outcome and patient satisfaction, which are essential for the effective delivery of health care.[5,6 ]

Basic communication skills in isolation are insufficient to create and sustain a successful therapeutic doctor-patient relationship, which consists of shared perceptions and feelings regarding the nature of the problem, goals of treatment, and psychosocial support.<sup>2,7</sup> Interpersonal skills build on this basic communication skill.<sup>2</sup> Appropriate communication integrates both patient- and doctor-centered approaches.[4]

The system is economically feasible. It does not require any addition hardware or software. Since the interface for this system is developed using the existing resources and technologies available at NIC, There is nominal expenditure and economical feasibility for certain.

## III PROPOSED SYSTEM

The most creative and challenging phase of the system development is system design. It provides understanding and procedural details necessary for logical and physical stages of development .in designing a new system, system analyst must have clear understanding of objectives .The first step is to determine how the output is going to be produces and in what format . Second input data and master files have to be designed .the operational phases have to be handled through program construction and testing design of the system can be defined as a process of applying various techniques and principles for the purpose of defining the device, process or a system in sufficient details to permit its physical realization .Thus it's a solution to "how to" approach to the creation of new system. The design step provides data design, architectural design, and procedural design.

### 3.1 Input Design

In it user-originated inputs are converted into computer based system format. it also includes determining the record media , method of input , speed of capture and entry on to the screen its major approach is the menu and the prompt design .Input data are collected and organized into a group of similar data once identified input media are selected for processing

In this importance is given to develop GUI, which is an important factor in developing efficient and user friendly software for inputting user data, attractive forms are designed. User can also select desired option from menu, which provides all possible facilities. Accurate designing of input format is vital in developing efficient software. The goal of input design is to make to as easy, logical and free from errors.

### 3.2 Output Design

Its emphasis is on producing hard copy of the information requested. computers output is the most important and direct source of information to the user , efficient , logical , output design should improve system relation with user and help in decision making .Most user now access their reports

from either a hard copy or screen display. It is very helpful to produce clear, accurate and speedy information for end users.

#### IV SYSTEM ARCHITECTURE

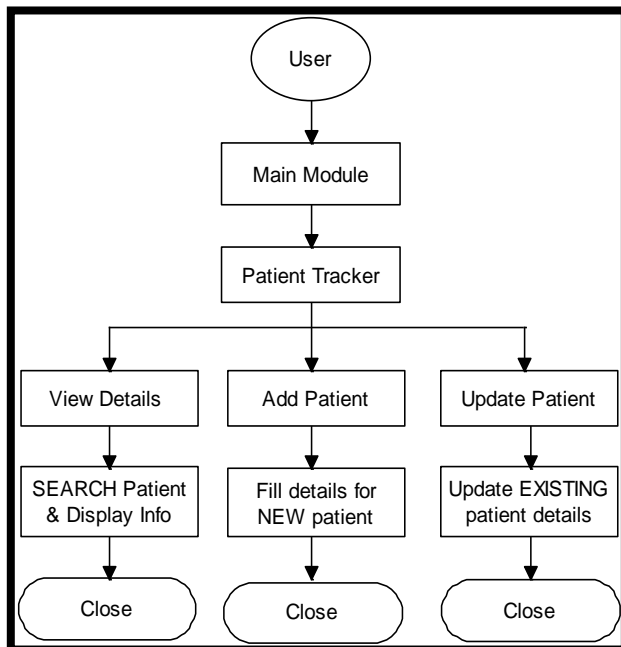


Figure 1: Architecture Diagram

In system Architecture, Fig.1 Show the First Module is User login, after login main module will be display, in that Patient tracker module shows three (3) Options first is View detail second is Add patient and last is update the patient.

View detail module does the search and display operation, Add patient module add the new patient details, Update patient module does the update existing patient detail.

#### V CONCLUSION

Doctor Gadget is an open-source cross-platform software product which enables an user-friendly interface to the tools which are mostly used by the Doctors to enhance the performance of their clinic .This Gadget toolbar is very much similar to the Gadget sidebar of Windows 7 operating System. It would contain user friendly icons and extremely simple interface that will help the doctor to perform quick calculations, glance at the current weather situation, perform a Voice or Video recording, Fix or View an appointment, a one touch web browser, a disease reporter and finally a patient tracker. According to the research done while performing SRS and feasibility study we arrived at the conclusion that these are the Six most wanted apps by most doctors and accordingly this mini gadget toolbar was prepared.

#### VI. FUTURE SCOPE

The scope of Doctor Gadget is to provide the seven most useful and important modules for the doctors which are the calculator , appointment calendar, weather app ,disease tracker, patient tracker, communication module, web browser in a integrated unit. It is similar to the Gadget toolbar of

windows 7 operating system which would be permanently displayed on the desktop .It requires continuous internet connection for certain modules such as Weather App, Web Browser.

The future scope of Doct. Gadget includes the representation of GUI in the form of Rocket Dock – an utility tool for providing the MAC OS Visual Effect. The future scope also includes the facility of providing automatic updates to the user regarding the latest diseases and their information, telephone calling through this gadget.

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