

Implementation Approach for Traffic Indicator System

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Abstract— *Traffic Indicator System updates and provides the real time traffic routes to the hospitals. It uses mobile agent for communication using java agent development framework. We choose mobile agents as the key enabling technology because they offer a single, general framework in which large-scale distributed real-time decision support applications can be implemented more efficiently. This report provides information on java agent development framework. Also java agent development framework tools and packages are also discussed. Traffic indicator system for hospitals makes the report concludes with a discussion of the potential benefits and challenges of system-techniques to actively manage and update route details.*

Keywords— *Hyper Text Markup Language, Java Agent Development Framework, Patient, Hospital Service Responder, Traffic Indicator System, Foundation for Intelligent Physical Agents*

I. INTRODUCTION

Traffic Indicator System updates and provides the real time traffic routes to the hospitals. It uses mobile agent for communication using java agent development framework. We choose mobile agents as the key enabling technology because they offer a single, general framework in which large-scale distributed real-time decision support applications can be implemented more efficiently. Traffic Indicator System as web-based service that allows. To update real time traffic updates of route. To articulate a list of nearest hospital.

In 1990, about 5 million people died worldwide as a result of injury, accident. It is estimated that by the year 2020, 8.4 million people will die every year from injury, and injuries, accidents, diseases from road traffic accidents will be the third most common cause of disability worldwide and the second most common cause in the developing world. In the present day, health has become an important part of people's lives, and to cure health issues must meet several conditions. Hospitals are one of measure part of human life. In many cases due to several diseases sudden accidental issues happens with people will disturb the other people, road systems. Due to the traditional mandatory system the injured people was not getting proper treatment within time. Due to this only there was increase in rate of death of people. Traffic Indicator System solves this problem. Traffic Indicator System is a website. It gives information about the latest routes updates. It gives real time route directions. The Traffic Indicator System is made using java agent development framework.

JADE is programming language like java. It is used for communication of agents. Traffic Indicator System uses the mobile agents. Mobile agents are software programs. Mobile agents are communicating between website and the ambulance node. Due the use of mobile agent system becomes more easy and friendly. The Traffic Indicator System within a second gets the available routes updates to reach hospital. Mobile agent are having main role in giving the routes. Due to the Traffic Indicator System hospital and public is going to be benefited.

II. MOBILE AGENT

Mobile agent technology provides an attractive and important technique for building large-scale distributed applications in heterogeneous computing environments. A mobile agent can be viewed as an autonomous program that has the ability to transport itself between the nodes of a network entirely under its own control, carrying with it the data and execution state required to resume execution at the destination host from the point it ceased on the original host [4]. Therefore, it is the agent that decides 'when to move', 'where to move', 'what to execute' and 'how to execute it'. Software agents are application programs that communicate with each other in an expressive agent communication language. It is a Computer software which is able to migrate from one computer to another.

A mobile agent contains the following three components, Code - the program that defines the agent's behavior. State - the agent's internal variables etc., which enable it to resume its activities after moving to another host. It Communicates in ACL this language is specially designed for communication between mobile agents. It is used for development of active & dynamically managed network. It is used or development of distributed systems. The AMS provides white-page and life-cycle service, maintaining a directory of agent identifiers (AID) and agent state. Each agent must register with an AMS in order to get a valid AID. The Directory Facilitator (DF) is the agent who provides the default yellow page service in the platform. The Message Transport System, also called Agent Communication Channel is the software component controlling all the exchange of messages within the platform, including messages to/from remote platforms.

III. JADE

JADE is a software development framework aimed at developing multi-agent systems and applications conforming to FIPA standards for intelligent agents. It includes two main products: a FIPA-compliant agent platform and a package to develop Java agents. JADE is a framework that facilitates the development of multi-agent systems. It includes a runtime environment where JADE agents can “live” and that must be active on a given host before one or more agents can be executed on that host. A suit of graphical tools that allows administrating and monitoring the activity of running agents JADE has been fully coded in Java and an agent programmer, in order to exploit the Framework. JADE is an enabling technology, a middleware for the development and run-time execution of peer-to-peer applications which are based on the agent’s paradigm and which can seamless work and interoperate both in wired and wireless environment [3].

IV. HTML

HTML stands Hyper Text Markup Language, is a markup language, a markup language is a set of markup tags. The tags describe document content. HTML documents contain HTML tags and plain text. The first tag in a pair is the start tag, and the second tag is the end tag. HTML describes the structure of a website semantically along with cues for presentation, making it a markup language rather than a programming language. HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages. HTML is highly flexible. It is user friendly and is an open technology. It is also consistent, efficient easy to understand. HTML is designed with a feature of interaction between the web pages, which makes it effective. It does not involve strain on the servers. For HTML web pages, it takes less time to load the web pages.

V. IMPLEMENTATION PLAN

A. Site

In website, for real time data, we use scripting languages or other languages with queries. While making website, we will consider it for official use only.

1) HTML

HTML (Hypertext Markup Language) is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page. The markup tells the Web browser how to display a Web page's words and images for the user. Each individual markup code is referred to as an element (but many people also refer to it as a tag). Some elements come in pairs that indicate when some display effect is to begin and when it is to end. HTML markup consists of several key components, including tags (and their attributes), character-based data types, character references and entity references. Another important component is the document type declaration, which triggers standards mode rendering. HTML documents imply a structure of nested HTML elements.

It is the language which can be easily understand and can be modified. Effective presentations can be made with the HTML with the help of its all formatting tags. It provides the more flexible way to deign web pages along with the text. Links can also be added to the web pages so it help the readers to browse the information of their interest. You can display HTML documents on any platforms such as Macintosh ,Windows and Linux etc. Graphics, videos and sounds can also be added to the web pages which give an extra attractive look to your web pages.

2) CSS

Cascading Style Sheets CSS is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation. Now, we have used html and css both in sites. This two are not so compatible to give an exact result. So to get result we will use other web languages. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content.

After that, site is having normal form that can run anywhere. Now to make real time route update , we used language called JQuery, This language leads to an proper appropriate result. We are giving longitude and altitude to define the exact area. Also we are connecting it directly to the Google maps. Site is ready to give the result of real time traffic route update.

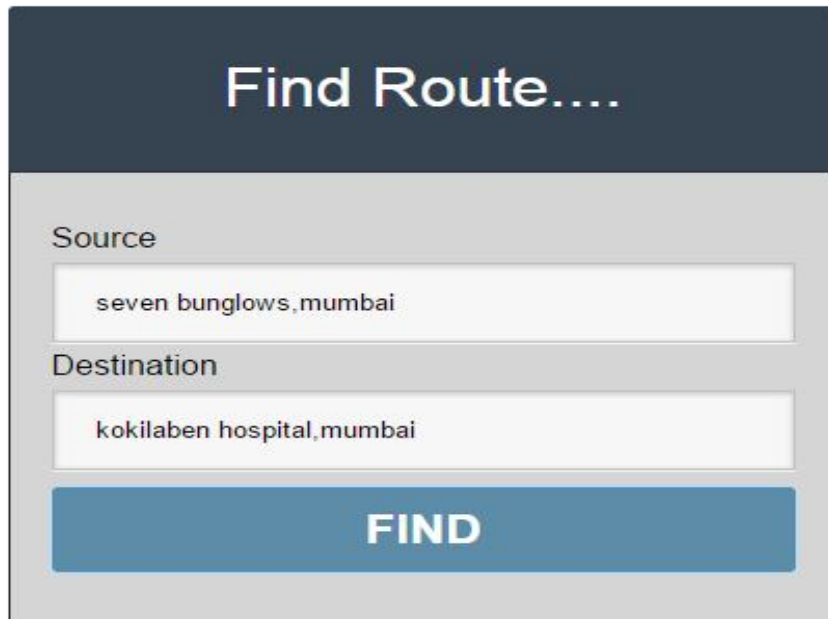


Fig. 1 Traffic Indicator site

B. Road map

A road map or route map is a map that primarily displays roads and transport links rather than natural geographical information. It is a type of navigational map. Here we are making use of street map. Street maps usually cover an area of a few miles or kilometers (at most) within a single city or extended metropolitan area. City maps are generally a specialized form of street map. With the help of mobile agent and jade we are making road map. This will consider, the source and destination. After giving that it will give the each available route going to destination. With the help of mobile agent we will get the patient details from the patient archive node. This will be considered while finding the route from source to destination. This information will be transferred to the GUI and then we will obtain the result. The result will be shown in the map which is in the GUI. The map will show us exact route from the source to destination.

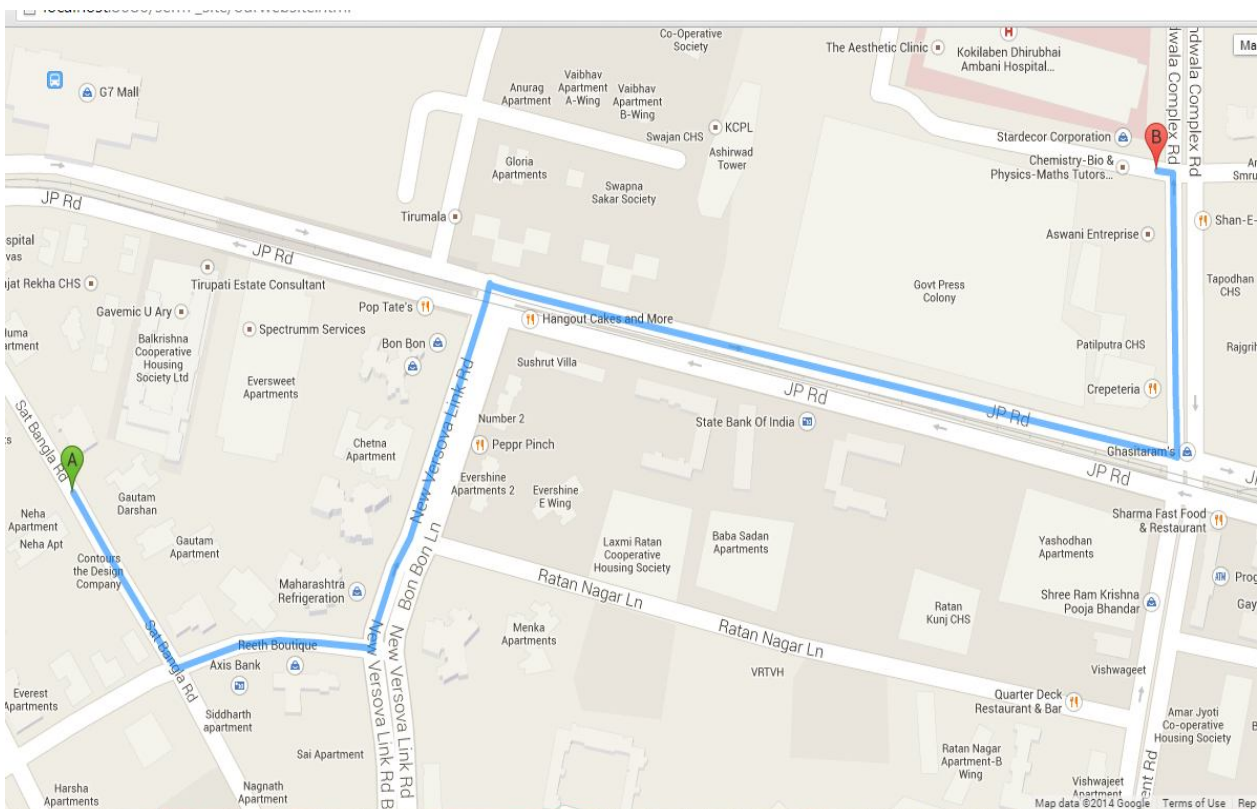


Fig. 2 Map

After the connection of GUI and site using jade our traffic indicator system will work properly as a whole system. Now are system is ready to work for hospital service. In the connection of GUI and site major role is of mobile agent. A mobile agent contains the following three components, Code - the program that defines the agent's behavior. State - the agent's internal variables etc., which enable it to resume its activities after moving to another host. It Communicates in ACL this language is specially designed for communication between mobile agents. It is used for development of active & dynamically managed network. It is used or development of distributed systems.

The mobile agent uses an agent platform. The Agent Management System (AMS) is the agent who exerts supervisory control over access to and use of the Agent Platform. Only one AMS will exist in a single platform. The agent platform can be split on several hosts. Typically only one Java application, and therefore only one Java Virtual Machine is executed on each host. Each JVM is a basic container of agents that provides a complete run time environment for agent execution and allows several agents to concurrently execute on the same host. The main-container is the container where the AMS and DF lives. The result also includes patient history (eg. Anish disease:heart patient test:ECG).

VI. CONCLUSION

Traffic Indicator System example was selected as an appropriate field due to the fact that it lends itself very well for such implementation from the point of view of business requirements as well as recently increased interest in using technologies by medical practitioners. Agents exhibit the property of being autonomous and interactive. Traffic Indicator System makes the report concludes with a discussion of the potential benefits and challenges of system-techniques to actively manage and update route details. Thus utilizing the integrated system of mobile agent on ambulance, central hospital service responder and traffic indicator system we were able to help patient in getting treatment sooner and allow dynamic responses as demanded by the context awareness environment. Most of the assumptions are made due to the highly controlled and sensitive nature of the Traffic Indicator System. There are several extensions, we have identified that could be applied to the proposed model to further equip it for a real-world deployment.

Deployment in real-world settings: To realize the true potential of our proposed application, both in terms of its feasibility as well as its accuracy and efficiency, it should ideally be deployed and tested in an actual ambulatory environment with the size and complexity of real data sets. However, this would involve the collaboration of a number of hospital organizations and require access to their route systems. We note that due to highly sensitive and closed nature of this environment, an actual deployment could face many challenges. Moreover, our project prototype has been developed based on a few key assumptions in relation to the operating environment which may not hold true in the real world.

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