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PARENT ALERT SYSTEM VIA SMS

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ABSTRACT

The wireless technology is the most interesting technology in the ICT industry today. Alert system has widely used in many arias and types. The most one is using SMS to alert people or users and notify them about specific action. The poor of education is one of the crime reasons in Malaysia. Indeed, to protect the teenage and children to be engaged in such environment and crimes, this study aims to contribute in efforts to keep them away. The study aims to design a web-based attendance system to help the teachers and parents to control the students if they absent from the school. The Parent Alert System (PAS) prototype is introduced to be used by the teachers in high schools. Charging scheme for SMS is out of the study scope. The system covers two main functionalities: First function is to get the attendance information of the students and the second one is to send SMS to the parents if their son/daughter is absent to

alert them. The General Methodology of Design Research is adopted to achieve the research objectives. The adapted methodology comprises five steps that are: awareness the problem, suggestion, development, evaluation and conclusion. Results of user evaluation on the PAS indicate that it has good usability in terms of Usefulness, Ease of Use and Outcome and Future Use. An independent samples t-test was conducted to compare the Usefulness, Outcome and Future Use and Ease of Use on two groups of participant who own mobile phone and others who do not own mobile phone. The t-test results indicate that there is no statistically significant different in the mean Usefulness, Outcome, or Future Use, and Ease of Use on the two groups

Introduction

The wireless technology is the most interesting technology in the ICT industry today, where there is much innovation and

research. As technology developed through time, advances in telecommunication and computer hardware knowledge have led to the emergence of mobile computing (Chipangura, Terzoli, Muyingi, & Rao, 2006). Mobile computing provides instant deployment of service over a large geographical area and offers every user many services. Information Communication Technologies (ICTs) play a significant role in enhancing developing countries (Pade, Mallinson, & Sewry, 2006). As a convenient and low-cost mobile communication technology, Short Messaging Service (SMS) is experiencing very rapid growth. Pade, et al. (2006) reported that 700 million mobile phone users worldwide sent 20 to 30 billion SMS messages every month in 2001. At the same time, SMS applications have emerged to provide mobile users consumer oriented services (Xu, Teo, & Wang, 2003). It also can facilitate communication and the transformation of information from business to business, business to customers, employers to employees in more added value services (Karim, Darus, & Hussin, 2006). Epstein and Sheldon (2002) have suggested that schools interested in improving or maintaining good attendance

can benefit from taking a comprehensive approach which includes students.

Literature survey

ALERT systems Organization (2007). About ALERT: ALERT Saves Lives Retrieved September 1, 2009

The impact of the 2004 Indian Ocean tsunami pushed the international agenda on early warning and motivated widespread support among 168 states and numerous organizations to immediately agree to the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters in Kobe, Japan in January 2005. Early warning systems backed by community-level risk assessments form one of the most important thematic areas for immediate action on a global scale for implementation at all levels. Foremost in the approach to early warning is the needs of people as recipients of the warning message and drivers of the disaster risk management processes. Developing and implementing an effective early warning system requires the contribution and coordination of a wide range of individuals and institutions. Each player in the cycle has a particular function

for which they should be responsible and accountable. During the actual warning stage there are specific political responsibilities for ensuring that accurate and valid warnings are issued and acted upon and that evacuation plans are effective. This publication is a compilation of good practices and lessons learned on early warning systems at different scales.

American Lung Association (2003). Adolescent Smoking Statistics Retrieved June 7, 2009

The purpose of this chapter is to document key patterns and trends in tobacco use among young people in the United States and worldwide, updating and expanding information presented in the 1994 report of the Surgeon General on preventing tobacco use among young people ([U.S. Department of Health and Human Services \[USDHHS\] 1994](#)). Effectively describing these key patterns and trends in tobacco use among young people is critical to the success of efforts designed to reduce the burden of tobacco-related morbidity and mortality. In addition to providing current information on tobacco use and influences on that behavior, this chapter includes information on new lines of research (e.g., transitions in tobacco use and trajectories of smoking

behavior). This chapter can help readers assess the need for interventions designed to reduce tobacco use among young people, suggest appropriate target groups for interventions, and clarify when and where interventions should be implemented.

Amor (2002). Internet future Strategies: How pervasive computing services will change the world. USA: Prentice Hall.

The overall purpose of this article is partly to give a brief overview of the TangO conceptual model, partly to explore the Jini technology as a means for support of pervasive systems in general and the TangO conceptual model in particular, and to emphasize the advantages and weaknesses of the Jini technology for ubiquitous computing. We will validate our survey of the Jini Technology against the TangO model in general, and through an implementation of a Pervasive Shopping Mall in particular. During the last centuries our everyday life has gradually become more and more globalized; we have reached a state where physical borders and distances only have weak impact on our collaborations and interactions. In the information ages we experienced new means of accessing an

infinite amount of information through the internet, and we are no longer constrained by technological issues for these matters on stationary PC's. But, the age of pervasive computing, we are about to enter, raises new challenges for researchers. Small intelligent devices will ubiquitously be deployed in our environment.

Antovski, L. a. G., M (2003). M-Payments. Information Technology Interfaces, 2003. ITI 2003. Proceedings of the 25th International Conference, 95 – 100.

The ubiquitous computing has made consumers life easy, it has given the new way to interact with family and friends and perform many activities which were impossible in previous time. One of the profound achievement of ubiquitous computing is Mobile Payment and an advanced mode of the mobile payment is the near field communication mobile payment. In this study the authors have proposed theoretical near field communication mobile payment model that is based on extended unified technology acceptance and use of technology (UTAUT2). In this paper, the author have performed the pilot study to validate the variables and to verify their

reliability among the proposed items. The results has proven that there is a reliability among the items in variables, as the Cronbach's alpha value for the variables is above or equal to These are the challenges for research and development in pervasive computing. An important issue for deploying artifacts into a pervasive world is to have an architecture supporting spontaneous collaboration among these devices.

Existing system

The Parent Alert System via SMS is an efficient and practical solution designed to keep parents informed about critical updates and events related to their children's well-being in educational or childcare institutions. In the existing system, schools, daycare centers, or other child-centric facilities utilize a centralized platform that integrates with a database of parent contacts. This system is often web-based and user-friendly, allowing authorized personnel to input and manage contact information securely.

In the event of an emergency, important announcement, or noteworthy incident, the system triggers an automated SMS alert to the registered parents. The alerts may include information about school closures, unexpected events, or updates on a child's health and academic progress. The SMS format ensures that parents receive timely information, as text messages are commonly accessible and can be quickly disseminated.

The Parent Alert System is designed for its ease of use, allowing educational institutions to quickly communicate with parents without relying on more time-consuming or less reliable methods. This system enhances communication efficiency, fosters a sense of community, and provides parents with a direct and immediate channel to stay informed about their children's activities and safety.

Moreover, the Parent Alert System often allows for customization, enabling educational institutions to tailor messages based on the nature and urgency of the information. This flexibility ensures that parents receive relevant and concise alerts without being overwhelmed by unnecessary communication.

In summary, the Parent Alert System via SMS streamlines communication between educational institutions and parents, offering a reliable and rapid means of disseminating important information. By leveraging the ubiquity of mobile phones and the simplicity of text messaging, this system contributes to a safer and more informed environment for children while promoting a collaborative partnership between parents and educational institutions.

Proposed system

The proposed Parent Alert System via SMS aims to enhance communication between educational institutions and parents by leveraging the simplicity and ubiquity of text messaging. This system seeks to provide a quick and efficient means of keeping parents informed about various aspects of their child's academic journey, including important announcements, upcoming events, and student performance updates. The system would be integrated into the school's existing database, allowing automated generation and delivery of SMS alerts to parents' mobile phones.

One key feature of this system is its versatility in delivering targeted information. Schools can customize the content of SMS alerts to include notifications about school closures, exam schedules, parent-teacher meetings, and academic achievements of their children. In the event of emergencies or unexpected situations, the system can instantly send out alerts, ensuring that parents receive timely information.

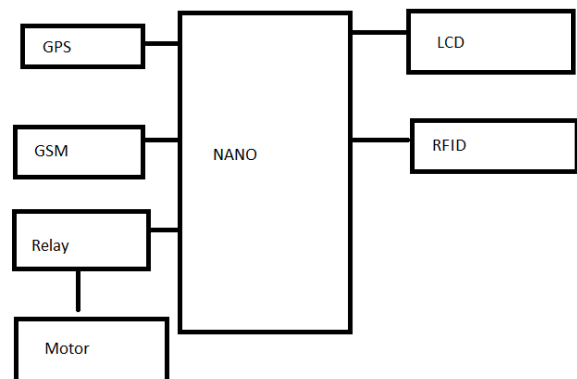
To enhance accessibility, the system can also provide a two-way communication channel. Parents could reply to the SMS alerts to acknowledge receipt, seek additional information, or even communicate with teachers and school administrators. This bidirectional communication fosters a collaborative relationship between schools and parents,

promoting active parental involvement in their child's education.

Moreover, the proposed system prioritizes data security and privacy. It would adhere to stringent guidelines to protect sensitive information, ensuring that only relevant and non-sensitive details are included in the SMS alerts. The system's user-friendly interface would allow parents to customize their notification preferences, tailoring the information they receive to align with their specific interests and concerns.

In summary, the Parent Alert System via SMS is designed to streamline communication channels between schools and parents, providing a convenient and efficient means of keeping parents informed and engaged in their child's educational journey. This system not only enhances communication but also fosters a collaborative and supportive educational environment.

Block diagram



HARDWARE COMPONENTS

LCD (Liquid Cristal Display)

Introduction:

A liquid crystal display (LCD) is a thin, flat display device made up of any number of color or monochrome pixels arrayed in front of a light source or reflector. Each pixel consists of a column of liquid crystal molecules suspended between two transparent electrodes, and two polarizing filters, the axes of polarity of which are perpendicular to each other. Without the liquid crystals between them, light passing through one would be blocked by the other. The liquid crystal twists the polarization of light entering one filter to allow it to pass through the other.

A program must interact with the outside world using input and output devices that communicate directly with a human being. One of the most common devices attached to an controller is an LCD display. Some of the most common LCDs connected to the contollers are 16X1, 16x2 and 20x2 displays. This means 16 characters per line by 1 line 16 characters per line by 2 lines

and 20 characters per line by 2 lines, respectively.

RFID READER

Active RFID and Passive RFID technologies, while often considered and evaluated together, are fundamentally distinct technologies with substantially different capabilities. In most cases, neither technology provides a complete solution for supply chain asset management applications. Rather, the most effective and complete supply chain solutions leverage the advantages of each technology and combine their use in complementary ways. This need for both technologies must be considered by RFID standards initiatives to effectively meet the requirements of the user community.

RELAY MODULE

Relay modules are simply circuit boards that house one or more relays. They come in a variety of shapes and sizes, but are most commonly rectangular with 2, 4, or 8 relays mounted on them, sometimes even up to a 16 relays.

Relay modules contain other components than the relay unit. These include indicator

LEDs, protection diodes, transistors, resistors, and other parts. But what is the module relay, which makes the bulk of the device? You may ask. Here are facts to note about it:

- A relay is an electrical switch that can be used to control devices and systems that use higher voltages. In the case of module relay, the mechanism is typically an electromagnet.
- The relay module input voltage is usually DC. However, the electrical load that a relay will control can be either AC or DC, but essentially within the limit levels that the relay is designed for.
- A relay module is available in an array of input voltage ratings: It can be a 3.2V or 5V relay module for low power switching, or it can be a 12 or 24V relay module for heavy-duty systems.
- The relay module information is normally printed on the surface of the device for ready reference. This includes the input voltage rating, switch voltage, and current limit.

Conclusion

We have investigated the Jini technology in order to validate the infrastructural and architectural support for pervasive computing. In the examination of the features of Jini we have leant against the TangO conceptual model for describing the result in relation to general concepts of pervasive computing, and not just to focus on simple examples. We have experimented with the practical implications of using Jini, by implementing a pervasive shopping mall, for the sole purpose of testing the technology. In general we are satisfied we the concepts and ideas of the Jini Technology, but we clearly see the need for extension and helpful tools. So the quick answer to the question of Jini has the quality of an architecture for the future of networking is yes, but it requires an additional toolkit on top of Jini, not just to provide extra functionality, but also to abstract from the technical details of using Jini. We will continue working on such a toolkit, which will be further described in [9].

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