INTEGRATED ARCIMS APPLICATION WITH FLASH AND CELL-PHONE FOR SCHOOL SAFETY

Takashi FURUYA

Abstract
PTA (Parents and Teachers Association) works closely with school and support sites to provide for the safety and security of elementary schoolchild and staff.

Flash® technology was utilized to generate a dynamic interface through a powerful and engaging interface design and allowing fast, smooth user interaction and real-time mail delivery to the pre-arranged PTA’s cell-phone with inter-active map such as panning and zooming control. So far, only Administrators can register the incident information, so that parents can receive well-authenticated information.

This paper will focus on the use of integrated application with Flash® and cell-phone to communicate with ArcIMS (but not mention so much about code the program) and share the progress of the research to discuss future perspective, through the case example of Shinohara- Elementary school in Yokohama, Japan.

Introduction
Geospatial technology has the potential to enhance school safety counter major in a variety of ways particularly by improving the efficiency and effectiveness of inter- and intra-community communication. Combined with current communication techniques, Web mapping technology could become an invaluable decision making and information management tool for the guardian of a child.

In This Project, new web service is developed and it is named “SHINOP”.

SHINOP provides a web-community environment for the access and sharing of information focused on accident and incident information with location in the school district. One of the main contributions of SHINOP is to filter up-to-the minute news items from the PTA president and supply them free of charge to guardian to a child community. In addition to that, also provides user registration tools.
At first, in this Project, system requirements were discussed through workshop. Community support is the key factor for the future of the project and hence the approach being suggested here. Ultimately, if the community does not want or need the services being planned, then they will not be pushed forward. Currently, the short term goal of the web mapping system is to provide ‘incident and accident mapping’. This is the mapping of various school safety response facilities and resources from any number of children in any particular location. The success of such a system would depend on high levels of information sharing and this would require a lot of community support and involvement. The impact of successful capacity mapping however could be considerable in terms of efficiency gains and effectiveness of safety activities in the school district.
Figure 2. System requirements
- Interfaces

The interface is provided by Flash® technology connecting with ArcIMS.

Figure 3. System Interface

As well as coding in Flash® format, to connect to ArcIMS services, the original web service is developed with Visual Basic.net technology.

Figure 4. Example of coding
**Future Vision**
- Business processes and functions
What the project is now trying to understand are the business processes and organizational functions that exist within multi-organizations beyond the school district. This is required to understand how information products are used and will help to define how future information products and services should be optimized for Member purposes.

**Acknowledgments**
I would like to thank the following entities and individuals for the supporting this project: PTA of Shinohara Elementary school, Kodomo 110 no Ie, Wataru Suzuki, Young-Jin Park.

**Author Information**
Name: Takashi FURUYA,  
Title: Lecturer, Center for Risk Management and Safety Sciences, Yokohama National University  
Address: 79-5 Tokiwadai, Hodogaya-ku, Yokohama, Kanagawa Pref., Japan  
Tel: +81-45-339-3772  
E-mail: t-turuya@ynu.ac.jp

**Co-Author**
Name: Jin Wang  
Title: Master course student, Graduate School of Environment and information Sciences, Yokohama National University