Developing a Platform of Platform for Disaster Technology and Information Sharing

Young Jai Lee*

1. Introduction

As most natural disasters occur repeatedly, damage from disaster can be minimized by sharing and utilizing disaster prevention information and analytical data based on past disasters. The United Nations has put various efforts like its International Decade for Natural Disaster Reduction (IDNDR) to reduce the occurrence of natural disasters internationally through scientific and technological measure. In fact, it has established an institution solely for this issue, International Strategy for Disaster Reduction (ISDR) as a follow-up action and it has been active since 1999.

In addition, UN has been regularly hosting the Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR), participated by disaster management officials for disaster prevention of the Asia region, after the North Asia Tsunami catastrophe in December, 2004. Recently, the 4th UN disaster prevention AMCDRR has been held in Incheon, Korea in October 2010.

Participated by disaster management officials in various government, UN institutions, NGOs of 53 countries in Asia Pacific, Europe, etc.; the key issues of the 4th AMCDRR (2010.10.25~28, Songdo, Incheon, Korea) were as the following: “strengthening disaster prevention for climate change response”, “sharing technology and information” and “providing development policies considering natural disaster risks”. Particularly, plans to organize education and training program on climate change adaptation and...
disaster prevention for government officials and other interest groups, and establish disaster prevention platform for collecting dispersed data and technology on climate change and disaster prevention were agreed [1].

From this year until 2015, the Republic of Korea will be proceeding a study on “Building a Global Framework for Disaster Technology Information Sharing”, this project is to implement agreements of the 4th AMCDRR, and thus, it aims to establish the ‘POP Platform’, which will enable to share collected information and technology on various disaster prevention, as well as to develop and manage education and training program on climate change and disaster prevention targeted towards government officials and other interest groups.

POP platform is mainly composed of e-market platform to share disaster prevention technology, e-learning platform to educate and train disaster prevention technology, platform to share disaster prevention technology and information sharing and to monitor execution of the 4th AMCDRR agreements.

Through this project, advanced disaster prevention technology can be shared and each country can strengthen its disaster prevention capacity. Furthermore, advancement in disaster prevention technology is expected by active exchanges and overseas business expansion of companies of different countries.

2. Main Body

2.1 POP Framework Development Strategy

Based on “e-Gov Framework” [2], POP platform develops each platform and allows each module to be independent and interconnected through the adapter. In addition, it builds a port site based on web standard and develops using specialized technologies and products.

2.1.1 Technical Elements

2.1.2 POP Framework

Develop a POP framework based on an e-government system that can composite e-market platform, e-learning platform, information sharing platform, monitoring platform, etc.

POP framework plans to adopt e-Gov Framework, this is an effective technology that supports providing effective application by building necessary and key functions and architecture beforehand for an effective information system development for the Government of Korea. Advantages of this framework are as the following: Usage of advanced information system through open source, Guarantee of

![Figure 1. Goal of POP Platform](image-url)
future expansion by providing standardized base, Flexible commercialization of POP technology transfer in the future.

2.2 DB Standardization and Platform interconnection strategy
Design information by each topic configuration (DR technology, guideline, expert resource, case advice, data etc.) and by text form standardization using adaptor, establish a service system that can interconnect disaster reduction technology, education training and disaster information.

2.3 POP Platform Composition
2.3.1 Disaster Prevention Technology e-market Platform
Disaster Prevention Technology e-market Platform is a
total service platform that provides diverse information on disaster prevention technology through introductory information, manual, video, trial version in order to promote disaster prevention technology (system, equipment tools, information device).

As the first step to disaster prevention technology e-market platform invigoration, the National Emergency Management Agency (NEMA) [3], the National Information Society Agency (NIA) Global Cooperation Division, the Korea International Cooperation Agency (KOICA) and etc., will collaborate to find advanced Korean technology and transfer these technologies as a country in the Asia Pacific region. It will further induce the participation of countries with developed disaster prevention infrastructure and private companies so that this platform can develop as a global hub site for disaster prevention technologies.

2.3.2 Education and Training e-learning Platform
Based on disaster prevention technologies, online/offline education and training related to CCA/DRR will be generated

Figure 4. DB Standardization and Platform interconnection

Figure 5. Disaster Prevention Technology e-market Platform
and be serviced [4]. To gain quantitative contents, MOU will be carried out with US TEEX Disaster City’s online program, Korea National Disaster Management Institute (NDMI)’s Cyber Education Program and so on.

- System Composition

For standardized service, education training contents must first be standardized and then authorizing tools and original data conversion tools that fit the standardized system is provided.

2.3.3 Information Sharing Platform

Disaster prevention technologies and CCA/DRR information will be serviced. The service will be particularly focused on information (tools, guideline, expert resources, substantial advice) provided by MADRiD (Mainstreaming Adaptation and Disaster Reduction in Development) program that applies strengthening national socioeconomic development.

2.3.4 Monitoring Platform

A monitoring platform that can share each country’s
implementation details of the 4th AMCDRR agreements based on Incheon Declaration action plan will be developed. Information will be basically gathered from Prevention Web [5], DRR Project [6], ADRRN [7] and others will
be collected by direct cooperation with each country.

3. Conclusion

Various international seminars related to 2013–2015 POP Platform will be hosted in order to gain a lot of advice and cooperation for successful POP platform inducement.

Through activated disaster prevention technology and information sharing, and education and training, we expect great interest and participation of states, businesses and organizations so that Asian countries’ disaster prevention capacity can be further strengthened.

References

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Author Biography
Dr. YoungJai Lee is a professor of MIS in the Business School at DongGuk University. He holds BBA from DongGuk University and MS from Florida Institute of Technology and DSc. in Engineering Management from the Engineering School at the George Washington University. He is currently involved in Korea Government as an advisor and researcher for Disaster Management. His research interests include Decision Making, Disaster management, and Business Continuity.