

APPLICATION OF MOBILE GIS ON INVESTIGATION OF COMMUNITY ECOLOGICAL RESOURCES

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Abstract: In Taiwan, many communities are abundant in ecological resources. Investigation of ecological resources will contribute to ecological preservation. This study adopted the concepts of volunteered geographic information (VGI). Through residents' local knowledge and inner feeling of personal responsibilities towards the community, we can effectively and efficiently achieve the goal of collecting information of investigation of ecological resources in the community. Moreover, residents in the community will deeply realize the importance of ecological protection and the current situation of ecological environment in the community by participating in the investigation of ecological resources.

With the rapid development of mobile technology in recent year, mobile devices such as smartphones and tablet computers are gaining popularity. If we can take advantage of the functions of most smart mobile devices like Global Positioning System (GPS), wireless networking, and camera, it would make the investigation of ecological resource more quickly and conveniently. In this study, we used geomatic technologies to collect field survey data and combined the mobile geographic information system (Mobile GIS) technology with HTML5, CSS3, JavaScript, jQuery Mobile and other web development technologies, and used PhoneGap, the cross-platform program, to develop the mobile apps that can run on many kinds of mobile operating system platforms such as Android, iOS, Windows Mobile, Symbian etc.. This system provides residents with inquiry services anytime and anywhere. Moreover, it can serve as one of the tools of Real-time data of the community.

Keyword : Volunteered Geographic Information, Community Ecological Resources, Mobile GIS