**How to apply information technology to outreach activities of GEBCO?**

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Abstract: In each step of data collection, manipulation, management and propagation of bathymetry data, information technologies have been used intensively and widely. Outreach activities mean the outbound expansion process of bathymetric data, or the activities of providing services to populations who might not otherwise have access to those services. We compared nine main components to carry our successful GIS project for bathymetry with OSI 7 layers. We investigated the potential impact of cutting edge technologies such as big data, mobile network and UX (user experience) on outreach activities. From real-time data, remotely sensed data to accessible information, it is necessary to apply new technology to GEBCO data and products.

**Keywords:** bathymetry, outreach, General Bathymetry and Ocean Mapping Committee

1. Introduction

IHO and IOC made GEBCO of which aims are sharing data, information and technology of bathymetry and undsea features. Since 2012, GEBCO guiding committee have discussed the necessity of more systematic and effective outreach activities of GEBCO rather than sporadic outputs and distributed information service. This study aims to check out the expectation of Information technology to promote GEBCO outreach activities in the future.

2. Methods

We review IT standards and trends analyses and apply the meanings to bathymetric data themselves and related data.

3. Analyses of IT trends and key factors in market

**1. Social problem-solving ICT**

- Innovative business models replace ad-driven campaigns in emerging markets.
- With technology innovation hubs springing up across the continent, technology communities within many developing countries are gaining access to state of the art facilities, events, mentorship and training making it more likely that they’ll develop meaningful solutions.
- Early ICT successes that relied on service delivery and civic mapping are creating an appetite among developers and civil society organizations to confront power through public information.

**2. Key success factors in information technology market**

- Highlighted competition for platform leadership – competition and collaboration on multiple fronts.
- Changing consumer behaviors – growing impact of AI and IoT.
- Growing importance of context – content delivery and engagement of exclusive context.
- Evolving business models – development of new value-added services and business models.

2018 ICT Industry Outlook of Korea

**3. Analyses of IT trends and key factors in market**

**4. Meaning of Main Issues to GEBCO outreach activities**

1. Define clients who are interested in bathymetry and ocean data

2. Big data Processing and Data Mining

3. Smart Globe

**5. Conclusions**

Rapid changes in information technology, bathymetric data can be one of the good examples to test the concept of Big data and Online and Offline mix programs. GEBCO world map product can be converted to a smart globe with mobile app program and image processing. If real-time data can be managed with considering clients' needs, bathymetry data will be accessible flexibly and on time to solve social problems or disaster response or economic activities. OSI 7 layers seems to be useful for understanding new IT trends and for applying their potential impacts on GEBCO outreach activities.