not cited during the time-period considered, was proposed by Moed *et al.*[3] as one of the standard bibliometric indicators for research performance. For the collection of China's *SSCI* publications, *Pnc* is 45.1%. Meanwhile, the values of *Pnc* for China's *Science Citation Index* (*SCI*) and *Arts & Humanities Citation Index* (*A&HCI*) publications are 30.8% and 76.7% respectively.

Psychology has the most number of *SSCI* publications which are not cited (Table 1). The subject categories of the publications originate from *SSCI*. As the second most productive social sciences subject in China, psychology has 2183 uncited *SSCI* publications, followed by the most productive subject, e.g. business and economics. Literature, an *A&HCI* subject, has the highest *Pnc* value (80.2%) among all subjects of China's *SSCI* publications. Between *SSCI* and *SCI* subjects, the highest *Pnc* values are found for area studies and psychology – 50.1% and 23.3% respectively. Note that partial *SSCI* publications were categorized into *SCI* subjects, *A&HCI* subjects or multiple subjects simultaneously. Therefore, there exist non-*SSCI* subjects in Table 1. In addition, a few subjects are included in multiple databases; for example, psychology appears in both *SSCI* and *SCI* databases. Table 1 shows that the *Pnc* value of *SSCI* subjects is significantly higher than that of *SCI* subjects and significantly lower than that of *A&HCI* subjects, which is inversely related to the coverage of the databases.

It is thus concluded that psychology has the largest number of uncited *SSCI* publications in China and literature has the highest percentage of uncited *SSCI* publications. Also, *SSCI* subjects are more inclined to be not cited compared to *SCI* subjects and less inclined to be not cited compared to *A&HCI* subjects.

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JIANG LI

Department of Information Resource Management, Zhejiang University, Hangzhou 310027, China
e-mail: li-jiang@zju.edu.cn

Adding audio to Digital Earth – enhancing geospatial portals

Digital Earth (DE) is a concept of virtual representation of planet Earth using a wide range of multi-resolution and multi-temporal geographic referenced information gathered from different sources (ground, aerial, space) that could enable exploring and interaction with a wider range of natural and cultural information. The term and concept of DE was first mentioned by the former US Vice-President Al Gore[1] and further elaborated upon in 1998. He referred to it as geographic computing system for education and research[2,3]. The concept was visualized as a virtual globe on the digital platform solving curiosities of school children, adding to our existing knowledge of different geographic locations, accessing vast amounts of scientific and cultural information. Availability of such information on the desktop would help to develop understanding about the Earth and human activities on it[4,5].

Since then researchers from academia, government, industry and corporate working with geospatial dataset started collating information towards creation of DE. The concept has a wide range of possibilities while handling the spatial and temporal information content, integrating these in a meaningful way, developing visualization tools customized to various users and providing on the fly analytical operation with efficiency. The greater part of such knowledge is expected to be set free to all via the internet; however, commercial usage and services were seen as a co-benefit of this technology. For example, virtual globe geobrowsers such as Skyline, *Google Earth* and Microsoft's Bing Maps are widely used for scientific, social and commercial purposes.

Remote sensing and other satellite technologies are a key data source for such environment, but are not sufficient for a full understanding. The condensed information is provided through a wide range of other geospatial technologies and techniques: (i) geographic information system; (ii) global positioning system; (iii) object-based image analysis; (iv) sensor web, (v) *in situ* or *ex situ* databank and (vi) a holistic integration of these technologies within the language of Open Geospatial Consortium (OGC) standards. The amalgamation of thoughts around DE demanded research and development in the geospatial data creation, evaluation, management and application for users and providers within all levels of government. This resulted in strengthening Global Spatial Data Infrastructure (GSDI), National Spatial Data Infrastructure (NSDI) and also State Spatial Data Infrastructure (SSDI). The OGC and the International Standard Organisation (ISO) were initiated for sharing and visualization of geographic referenced information. As a result, collaborative development of concepts of Web Map Services (WMS), Web Processing Services (WPS), Web Feature Services (WFS), Web Map Context (WMC), Web Coverage Services (WCS), Styled Layer Descriptor (SLD), Software as a Service (SaaS), Geography/Extensible Markup Language (GML/XML) and many others was possible. All these aimed towards development of Digital Earth Reference Model (DERM).

The novel approaches in the cartography and management of globally distributed geographic database remained a research focus worldwide (K. E. Grossner, unpublished). As a result, Keyhole Earthviewer and the GeoFusion GeoPlayer appeared in 2001, and NASA's World Wind was released in 2003. These received notice among a fairly small community. In October 2004, Google acquired Keyhole Corporation and in June 2005, *Google Earth* geobrowser software was realized foreshadowing a major development. It captured an enormous interest as it was free and fast, has its own markup language (KML) allowing users to display and easily share their data and the easy-to-use interface and quality imagery made it impressive[6].

All these platforms are virtual representation of planet Earth and enable to explore and interact with the vast amount of natural and cultural information. These virtual globes are the platforms upon which anyone may place certain kinds of images and symbolization, including pictures and videos. These are expected to coordinate and facilitate access to data from a variety of sectors and disciplines. Most of these platforms facilitate the users with limited technical skills to display, visualize, analyse (spatial query) and share information of interest to themselves and their working groups. The fast-changing newer versions are representation of major progress towards the exciting visualization possibilities.

A fairly recent technological development with features and functionalities important for school children and a general audience brings out better appreciation of the areas under browse. In this, the user gets the visual feeling like two-dimensional landscape with attribute and annotation and a variety of attractions. With inclusion of digital elevation model and virtual fly-through, one can appreciate the three-dimensional information content. The intellectual movement demands inclusion of audio to such visualization tools for greater appreciation and feeling about the data under study. The geographically dispersed data can be understood with information about the well-defined locations or information associated with a geographic footprint. For example, routing through a forested landscape or plantations in the midst of a city or town though might have similar geographic visualization, but would certainly be differentiated by the audible attribute. Likewise, when viewed from space, most human-dominant locations appear as a sprawling mass of concrete structures of varying vertical and horizontal sizes, shapes, and constructions, interwoven with street patterns displaying regularities or irregularities[7]. The user might like or would appreciate a feel of the city complex, traffic conditions and other aspects of township based on audio attribute of the respective location. This will be scientifically, ethically and prospectively correct for the visualization of DE. This will provision interactive connections and will be the basic mode of making us understand and explore the Earth. The proposition is in line with Al Gore's vision of DE, which states 'navigating through both space and time to view natural, cultural and political information about the planet, virtual reality installations in museums, improved access to public domain data'[2]. This could be achieved through listening to oral histories and music, virtual tours, speech recognition and audio capability. The intent here is to house all information with a geospatial element, so that a particular geographic location will be presented in a comprehensive DE system; obviously, that all could and should be[6].

For this we need technological innovation allowing capture, store, process and display of unprecedented information about the planet and a wide variety of local details[2]. While available information will always be incomplete, we should take full advantage of next-generation technologies, including cloud technology, distributed networking, data mining, navigation and cloud sourcing to increase service to the public with minimum cost[8]. The commercial forces driving concept of DE development makes the changes fast and each user requirement highly adaptable. The notable advances in handling the Big Data interfaces will be useful for inclusion of audio attribute to the DE system. This can be applied to many efforts and products that have come to present loosely organized international efforts to build comprehensive digital representation of the Earth. Having added audio to DE will be a contributing building-block for a permanent, continually growing and evolving global collective project that provides universal access to the world's information, geographically forming informed society.

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P. K. Joshi[1,*]
Archana Joshi[2]

[1]*TERI University,*
10 Institutional Area,
Vasant Kunj,
New Delhi 110 070, India
[2]*NIIT University,*
Neemarana,
Alwar 301 705, India
**e-mail: pkjoshi27@hotmail.com*

Indus River dolphin: the survivor of River Beas, Punjab, India

River dolphins occupy the top position in riverine ecosystem and hence act as the fulcrum for maintaining the balance of the ecosystem. But being found in the world's most densely populated human environments, river dolphins are among the most threatened mammals. Further, their ecological requirements link them to food and water security issues in South Asia[1]. Asian river dolphins have disappeared from much of the historic ranges and are believed to be declining rapidly in many areas where they still occur[1]. One such species is the Indus River dolphin *Platanista gangetica minor* (Figure 1), locally called 'bhulan', which is endemic to the Indus River system and considered as the second most