Legacy Technology Still in Use: Lessons from FLOSS Development

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1. Introduction

In science, including geospatial and earth science, use of the Internet is becoming more and more important. Institutions provide more and more, spatial data and scientists share the information or work on a project regardless of geographical boundary. In such situation, social media will be becoming more and more important, but the popularity changes so easily. On the other hand, there are several social tools which have been around for more than 30 years, such as IRC and CVS/Subversion/git. In this paper, the advantages and disadvantages of the current and legacy social tools.

2. Underlying Philosophy

IRC and CVS/Subversion/git are very popular among free and libre open source software (FLOSS) developers. One of the most important factor of free software was revealed by Eric Raymond, who contrasted two different free software development models:

The cathedral model: source code is available with each software release, but code developed between releases is restricted to an exclusive group of software developers.

The bazaar model: the code is developed over the Internet in view of the public.

In fact, all the commercial projects and many FLOSS projects are organized in the cathedral model. The point is, only FLOSS software can be developed in the bazaar model. The most well-known project which adopted the bazaar model is perhaps Wikipedia. What can we learn from the project?

3. IRC vs twitter

There are many real time chat tools, such as IRC, Skype, Messenger, Twitter and LINE.

IRC is a communication protocol developed in 1988. In IRC, users join a server (e.g. freenode.net) using IRC clients (e.g. xchat), then joins a room (e.g. #qgis, #grass) to talk and discuss issues. It is said that there are more than 50,000 users on Freenode. The figure may be small, when compared to twitter or LINE. It is noted that the author(s) asked several Fink developers to review this article. IRC can be compared to twitter in that they are both for "short text" and real-time communication.

When using twitter, you can browse information about a certain topic using hash tag (#). However, twitter is in its essence a "twit", expressing one's opinion and rarely becomes a place for conversation/discussion.

ITO (MTT38-01) discusses that the information is well organized at togetter by a coordinator. Byt the summary on togetter is often very difficult to read. On the other hand, chat logs of many IRC channels are very useful without any editing. Perhaps, something can be learned from IRC. But so far, my suggestion is to use IRC for scientific discussion.

4. Discussion

As seen in the previous section, there are several legacy tools that are still widely used, especially among FLOSS developers. One of the advantages of these legacy tools is that they have been evolved to support the "cathedral" model explained above.

For geospatial and earth science, such tool may be useful to share the information of, say, open data. There are many institutions, public or private, which offer GIS data on the Internet. The official data, such as shape files provided at data.gov.uk or nlftp.mlit.go.jp/ksj/, would be more useful when one finds an error, fix it and report and/or redistribute it. The download pages may be more enhanced with wiki, where users can post their ways of using the data. Google maps, or its more "open" alternative, OpenStreetMap, may be more sustainable if they learn more from legacy tools.

5. Conclusion

Several social tools for FLOSS development, which have been developed since 1980s, are reviewed. Some tools, such as IRC, are still used despite the recent advancement of newer social tools. In fact, these tools may be more advanced, in that they give more powers to users, than the recent and more popular social media, such as Facebook and twitter.

Keywords: FLOSS, IRC, CVS, Bug Tracking

Abstract (English): In science, including Earth and Planetary S
an important role, in many cases with package management s
been involved in Fink Project, one of the package managemen
a number of free software to Mac OS X. Such package manag
supported by a large number of maintainers,
with the aid of SourceForge, CVS and/or git, IRC and many ot

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Establishing Technology of Environmental Monitoring Using Social Media

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This paper discuss the way to enable environmental monitoring using social media. Several existing approaches such as development of original software and utilizing crowdsourcing service are introduced with there advantages and disadvantages. Finally the author emphasizes the need of further research on theory and technology.

Keywords: Social Media, Environmental Monitoring, Crowdsourcing

A Web-application for Time-dependent Observation Data for both Scientific and Social Data

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The NICT Science Cloud is one of the science clouds proposed for development of sciences. A variety of science data are collected and stored in the science cloud to be analyzed interdisciplinary. After the Internet is widely used, new concept and information technology haves shown up; semantic web and linked open data (LOD). These technologies enable information on the Internet machine readable. In many science fields, it is pointed out that the semantic web will play an important role for the interdisciplinary research works. However, there have been few ideas to be ever proposed as a methodology or roadmap to the interdisciplinary science using semantic web. Herein we present a concept of professional knowledge and academic knowledge following collective knowledge proposed as a Web 2.0. Based on the concept, we design a Web-application for interdisciplinary science. The application (named STARS touch) provides users with an environment of dynamic and light preview of any types of time-dependent data. In the demonstration, we show an example of simultaneous preview of both scientific data (satellite observation data) and social data (newspaper information).

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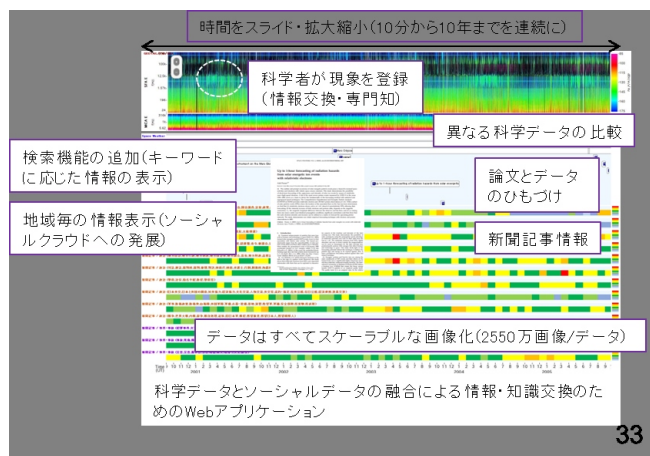
The trial which carries out information dissemination by SNS at a high school students

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Even if it thinks that a teacher will take communication with a student, it is very difficult to try to be connected with a high school student.

Then, "whether, during session, communication can be taken with a student" is important.

The method for being connected with a student in the first half is reported.

It is what "the atmosphere which a student says easily is built for", and "a lesson which a student tries to hear positively that the talk is" that I take care by the lesson.

Therefore, I am made to prepare time to concentrate only for a short time several times while I accept a student's positive remark.

As a mistake is made in being right, it catches not related to a student's remark and its head is bowed in assent, the boundary of the mistake is clarified if behind right.

Thus, by corresponding from a student's viewpoint, I think that a student opens the heart to a teacher.

If it comes so far, a student will be connected in SNS.

The most is a student and a graduate although the number of the followers of my Twitter is 95 now.

In order to usually disseminate the information on extension and geography of a lesson, or earth science the second half using SNS, practice using SNS is reported.

Even if it can take communication by SNS with the present condition and a student, there is no reaction in the photograph and comment related to geography.

Most of the reasons are a thing with a "petty" photograph, and a thing with "many" character numbers.

For example, even if it shows the photograph of a terrace, only the comment "it is peaceful" comes.

If the number of characters exceeds 70 characters, it is tired of reading a character.

It is adiaphorous, even if the contents of the photograph also have a reaction in the direction where the scene is mixed and it shows geographical feature, vegetation, etc.

The photograph about geography is published, and since a result which is considered even if it is going to ask for a comment or is going to offer teaching materials has not come out, I would like to obtain a comment from you, although SNS is convenient.

Keywords: Twitter, Line, Lesson

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Social media as a source of innovative ideas for education and outreach in geoscience

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Scientists are often expected to contribute to education and outreach in their specialized fields. They can provide scientifically accurate information about their fields based on deep knowledge. However, they may be much affected by the customs and common sense of their fields, and may not be good at attracting attention of people who do not have specialized knowledge in the fields. Social media contribute to the reduction of this problem, through interactions of people with various backgrounds. Scientists of a particular field often interact with those who are interested in the field but have different backgrounds including non-scientists. Such people sometimes provide scientists with novel ideas for effective education and outreach. Subsequent comments from scientists on the ideas may be useful for those who provided the ideas. In this presentation, we discuss such constructive interactions among persons in social media, with reference to geomorphological examples.

Keywords: social media, education, outreach, interaction among persons

The possibility and current issues of sharing information with social media in geoparks

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This presentation reports on the possibility and current issues of sharing information with social media in the case of San-in Kaigan Gelobal Geopark. Sharing knowledge and experiences is necessary for the development of the geopark network. Communication is one of the best ways to share them among people. There are various ways of communication; for instance, face-to-face communication, non-face-to-face communication, mass media and social media. In the case of San-in Kaigan Geopark which spans across 110 km from east to west and 30 km from north to south, social media is a complementary tool to communicate among local actors, stakeholders and shareholders in the wide territory of the geopark.

Keywords: social media, communication, sharing information, San'in Kaigan Geopark

"San'in Kaigan Geopark *Fortune Cookie in Love" Project

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San'in Kaigan Geopark Promotion Council conducts "Questionnaire on Recognition of San'in Kaigan Geopark" every year. In a questionnaire survey conducted at PR campaign in Keihanshin area in 2013, San'in Kaigan Geopark recognition was low among 10s (27%) and 20s (24%) compared to 70s over (68%). An issue for the future is considering ways to raise awareness of geopark activities among young people. One of the reasons why many young people are not familiar with geopark is insufficient PR activity through the use of the internet. Now the council provides information available on the official website and Facebook. The problem is that those websites are not well-known to the general public.

For this reason, San'in Kaigan Geopark undertook "San'in Kaigan Geopark *Fortune Cookie in Love" Project, which local guides, tourism facilities, local residents, geopark-related officials and researchers dance along "Fortune Cookie in Love"- by J-pop's most popular girl group AKB48. We uploaded a video to Youtube on January 31, 2014 and promote the San'in Kaigan Geopark to the general public. There are 43 different scenes and 265 wonderful performers including mascots in about 4-minute video. Organized yet creative dancing entertains those who watch the video. We also advertise it to the media, and people who access to this video on Youtube easily exceed 10,000.

From now on, we will analyze the awareness and the effect of this project through a questionnaire and any changes in the number of visitors across the San'in Kaigan Geopark.

Keywords: sns, youtube, Fortune Cookie in Love, San'in Kaigan, geopark

San'in Kaigan Geopark Tourism Promotion By Female Bloggers

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While there is a strong trend among independent travelers to gather information and plan trips within Japan through the use of the internet and word-of-mouth information, there is a lack of information regarding geotourism available online. In response to this situation, a number of San'in Kaigan Geopark model tours were operated in Tottori Prefecture. These were promoted by female bloggers who are popular and influential in the independent tourism market. In 2012 and 2013, a total of 70 female bloggers established their own themes and planned trips to the San'in Kaigan Geopark. Each blogger posted their travel reports on their blog sites and on twitter. At the same time, a "San'in Kaigan Geopark Model Tours for Women" facebook page was established so that each of the travel reports could be posted and shared. As a result of this continual availability of travel information, San'in Kaigan Geopark related pages received a high number of online hits, and increased awareness and popularity regarding the Geopark was achieved.

Keywords: San'in Kaigan Geopark, Tours for Women, Geotourism, Female Bloggers

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Effects and issues of information transmission using the social media in a large active geopark

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The San'in Kaigan Geopark is located in the west of Japan, spanning approximately 120km from its easternmost point, at Kyogamisaki Cape in the city of Kyotango, to its westernmost point, on the Aoyakaigan Coast in the city of Tottori, and measuring a maximum of 30km from north to south.

In terms of administrative jurisdictions, the Geopark spans a total of three cities and three towns in 3 prefectures (Kyoto Prefecture, Hyogo Prefecture, Tottori Prefecture).

Sharing and generating information is difficult in such a large active geopark. Then, we decided to use a social media to share and generate information smoothly. We created fan page of the geopark to Facebook. We have established an administrator in each area to generate regional information.

Keywords: geopark, facebook, San'in Kaigan Geopark, social media

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Utilization of facebook for the management of working groups in North Ibaraki Geopark

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Exchange of information with SNS like Twitter, foursquare, facebook has been done in the North Ibaraki Geopark (Saito et al., 2010; Ito et al., 2011, 2012; Amano et al., 2012, 2013). Facbook is very useful for the management of the North Ibaraki Geopark because it has many capabilities such as file upload and event planning etc. Recently, Utilization of facebook for management of four working groups in the North Ibaraki Geopark is carried out. Members of each working group successfully discuss or communicate many things for the management of the North Ibaraki Geopark.

Keywords: SNS, geopark, North Ibaraki Geopark, facebook

MTT44-P03   Room:Poster   Time:May 2 16:15-17:30

Study on the socialized development environment in the geospatial informations field

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1. Introduction

The deployment of the technology and systems for geospatial information is the spread of the open-source movement and culture since 2000, opening up of technology and information has come to be regarded as important in the GIS field (Sui, 2014). This open culture is expected to spread to social, political, and economic areas, such as Open Government. This is an important point for government that have not gone far enough to implement GIS, but the platform is beginning to be wide open.

The major features of GIS technology since the 2010s have been open source code, various code development platforms and interfaces, translation of software documentation, concept creation for application development, and cloud computing which has led to social interaction and cooperation. In this study, mainly in the Free and Open Source Software for Geospatial (FOSS4G), we examine the actual situation of the socialized open developing environment for GIS technology and consider whether that is a problem and what are its effects.

2. Platform to support the socialized developing environment

The Quantum GIS (QGIS) is a desktop open-source GIS software from the Open Source Geospatial (OSGeo) Foundation to support the development and publication of source code that has been made available through repositories such as Source-Forge. GitHub is a Web-based hosting service for software development projects, which started gaining popularity around 2010. Transifex, which was founded in 2008, has emerged as a Web-based translation platform. It provides variety and takes better advantage of the version control system than Git, and it tracks changes in programs such as forks that incorporate a user's own code as part of the development project, and it provides for fluid use of source code. In fact, we have started to migrate to system of Git from SVN, the platform for Web maps for applications such as Ushahidi. As a localization system on the Web, Transifex provides convenient visualization of progress and a translation interface. Transifex has been used to translate 20 or more OSGeo projects including QGIS software with Japanese versions of all projects. In addition, translations of QGIS user manuals can be incorporated directly into the software, and the translation of case studies of open data, such as in the use case, do not matter, because they are shared as a target.

3. Challenges that the effects of social networking bring to openness

Social networking in open-source software development, such as with Transifex and GitHub, is creating many opportunities for GIS technology. For example, Harvard University has developed an open-source package in which geospatial information from various libraries are combined based on Geonode. Also in Japan, use of platforms such as IdeaLinkData and CityData that allow social sharing of regional data is increasing, and more involvement of various actors using GIS is expected. Additionally, with increased participation opportunities for data users and developers through the Web, and to develop open data events such as Hackathon, which began recently in Japan, this trend in data and source code is also becoming a medium to provide resources directly.

However, while open-source social networking accelerates development, product development itself is being subdivided into code for individual functions and, due to different versions in the library, errors can increase. In addition, mutual information exchange between developers is spread by social networking, with smaller contributors able to lead the development as compared to developers from the English-speaking countries. Therefore, it is expected that social networking will contribute to the generation of open data as well as to software development and translation to support visualization and data manipulation of geospatial information, such as the introduction in GIS education and the creation of opportunities for participation.

Keywords: open culture, FOSS4G, crowdsourcing, GitHub