EDITORIAL

'Open access' and 'collaboration' may help societies to grow and prosper in free exchange of ideas and opinions, resulting in establishment and evolution of an informed society. It is here that *Open Source Software systems (OSS)* have derived much support from this premise to become a global phenomenon by fuelling development and research in wide areas of applications across academic, professional and social initiatives .These are emerging and nurturing parallel to commercial endeavors with varied levels of success and failures. Among many, Library and Information Studies have a natural synergy with Open Source Movement and consequently libraries are frequent users of OSS though staff may often be unaware of utilities derived from such options.

Hence the **Department of Library and Information Science (University of Kashmir)** in collaboration with **Department of Computer Sciences (University of Kashmir)** decided to organize a **National Seminar** on the theme to have wider understanding and demonstration of far reaching implications in the field and applications to mainstream Library landscape. We received more than 100 papers, posters for the presentation for three days **National Seminar on Open Source Software Systems: Challenges and Opportunities (OSSS 2011) (20-22 June, 2012)** which were deliberated upon in different technical sessions. Later, it was decided to publish select useful papers in the present **special issue of TRIM**. These papers can be broadly categorized into three groups throwing light on **philosophy, technical developments and applications**. Another cluster is devoted to focused development about Open Journals / Repositories – a blossom of Internet and Open Digital Library convergence – in an Open Access mode.

It will not be out of place to lay down a brief background about the developments of OSS systems and applications especially Digital Library (DL) landscape here to assist a reader to navigate the journal issue in a purposeful manner. The systems that hold the trade mark of the term

OSS**,** defines it not only in terms of availability of source code but include free distribution as well as its future use with modification and derived works thereof without any discrimination, of course, with a licensed system. Hence, **Stallman (2011)** has rightly identified four kinds of freedom for open Source applications supported by licensing that include freedom to run the program for any purpose, adapt it to serve ones needs, redistribute copies and improve the programme to community. This extensive use of freedom has led to recent shift to the acronym FLOSS (Free / Libre and Open Source Software) **(Ghosh, 2002)** but it seems that OSS is still more familiar acronym among many initiatives / users. OSS licenses are of particular concern to make it available to others and need to understand them before committing to use the software for any project. The most common license is GNU **(General Public License, 2007) (GPL)** which is based on concept of *"Copy Left"* that attempts to negate copyright for the purpose of collaborative software development. *'Creative Commons' (n.d)* is similar to that of GPL which is meant for creative works like research papers, and often utilized within software projects. The others include *(a) GNU, Lesser General Public License (2007) (LGPL) (b) Berkley System Distribution (BSD) License (Open Source Initiative, 2010) (c) Mozilla Public License (MPL) (2011) (d) Netscape Public License (NPL) (2011) (e) and OCLC Research Public License (2002).* Besides, the Internet has become so ubiquitous that greatest participation on open software's occurs over it. Some of the pillars of internet computing such as *Send mail sever & BIND*, the software that runs the web *Domain Name Systems (DNS)* are OSS applications. *Apache*, the most popular server in the world is both maintained and enhanced through open source model. Out of all OSS systems available, it is *LINUX* that is most recognizable and identified as the *poster child* of OSS **(Rhyno, 2004)**.

In addition libraries have a natural synergy with open source movement, for being available to a wide community of users of non-profit, publicity funded basis and like most organizations frequent users of open source software. Besides, in the present era the emergence of digital libraries

has become a main bridge to connect open source with intellectual property of sharing the main collection of libraries. It poses tribulations but empower one to be to be part of knowledge society. Hence, much work and research has emerged from slop out content for digital libraries to use of authoring tools, protocols for exchange purpose, long term preservation etc. The content of digital libraries vary greatly particularly in media type but one format that comes across media is XML which has timed a key enabler along with Meta data for realizing value of digital libraries and paved way for development of different tools of semantic web like *Resource Description framework (RDF)* and *Topic maps*.

Important protocols and OSS options for using them have revolutionized to help to communicate with many external systems. It is the *Hypertext Transfer Protocol (HTTP)* which powers the web to exchange files (text, graphic images, sound, video and other multimedia files). The other distinguished ones include *OAI–PMH* (the open archives initiative protocol for metadata harvesting), serving mainly as a transport mechanism between digital libraries, including *Apache, Z39.50, SOAP, RSS, ATOM and Shibboleth etc.* Authoring tools have developed in different dimensions for creating digital versions of the object – mainly image tools and editors to address graphics in reality with colour depth and compression. For commercial package, flagship image tool is *Adobe Photoshop,* a full featured and powerful image editing tool but reasonable alternative is GIMP (GNU Image Manipulation Program). The other tools for image in OSS include Image Magical, GNU Paint, SANE, Sweep Sox, Bender etc. The most interesting and challenging from OSS perspective is *Open Office* especially for archiving and preserving contents of documents, even produced in any other word processing package.

The open source has made much headway in other aspects like Relational Databases where *My SQL* has been most popular and long lasting application and runs on all major platforms. The others include *Postgre SQL, Berkley DB etc*. It has served well in programming languages as well like Perl, PHP, Python etc besides building specific systems in many public

systems like digital libraries by developing popular and well known systems like *D Space, Greenstone, Fedora, Eprints etc.* Many more open Systems like OJS, OCS, OMP and OHS are offered through PKP **(Public Knowledge Project, 2011)** breaking ground for managing and disseminating freely scholarly publications at different levels eventually turning into a boom for academic and research endeavors.

I hope that more seminars / symposia need to concentrate over the challenges and explore opportunities to address key issues in emerging society focused to make waves more transparent, responsive and user friendly. I am grateful to my all colleagues especially, ***Dr. Sumeer Gul, Mr. Nadim Akhtar Khan*** and ***Mr. Tariq Ahmad Shah*** without whom it was not possible to organize the seminar and bring out this issue. They have burnt their midnight oil in coordinating activities and later selecting and editing papers for the present issue. My sincere gratitude goes to ***University of Kashmir authorities, J&K Government (IT Department)*** and ***J&K Bank Ltd***. for sponsoring the event which also proved supportive in bringing the present publication.

S. M. SHAFI

References

Creative Commons. (n.d). About The Licenses. *Creative Commons*. Retrieved from
http://creativecommons.org/licenses/

Ghosh, R. A. (2002). Workshop Report on *Advancing the Research Agenda on Free / Open Source Software*. University of Maastricht, The Netherlands: International Institute of Infonomics. Retrieved from
http://flossproject.org/report/workshopreport.htm

GNU Lesser General Public License. (2007). GNU Lesser General Public License. *GNU Operating System*. Retrieved from
www.gnu.org/copyleft/lesser.html

General Public Licence (GNU). (2007). General Public Licence. *GNU Operating System*. Retrieved from

http://www.gnu.org/licenses/gpl.html

Mozilla Public Licence (MPL). (2011). Mozilla Public Licence. *Mozilla*. Retrieved from

http://www.mozilla.org/MPL/

Netscape Public Licence. (2011). *Amendments*. Retrieved

http://www.mozilla.org/MPL/NPL/1.1/

OCLC Public Research Licence. (2002). OCLC Public Research Licence. *OCLC*. Retrieved from

http://www.oclc.org/research/activities/software/license/v2final.pdf

Open Source Initiative. (2010). Open Source Initiative OSI - The BSD License: Licensing The BSD 2-Clause License. *Open Source Initiative*. Retrieved from

http://www.opensource.org/licenses/bsd-license.php

Public Knowledge Project. (2011). *Public Knowledge Project*. Retrieved from

http://pkp.sfu.ca/

Rhyno, A. (2003). *Using open source systems for digital libraries*. Westport, Conn: Libraries Unlimited.

Stalman, R. (2011). *Richard Stallman's Personal Home Page*. Retrieved from

http://stallman.org/