ISSN (Online): 2454-3462

Website: http://newsletter.lislinks.com

Library and Information Science Links (LIS Links): India's Social Networking Platform for Library and Information Science Professionals

Page: 3

Badan Barman

Assistant Professor, Gauhati University, Guwahati, Assam, India Email: badanbarman@gmail.com

Abstract

Purpose: To give an overview of "LIS Links" (http://www.lislinks.com), a social networking site and communication channel for Library and Information Science Professionals in India. **Design/methodology/approach:** A descriptive paper on "LIS Links" with slight insight to inscribed how it has been achieved.

Findings: LIS Links provide CAS / SDI services to the library professionals in India. It was developed by Badan Barman, a Ph.D. student of Gauhati University. The platform is able to receive wide discussion and positive feedback in many seminars, conferences, workshops and refresher courses in LIS in India. Its popularity further goes to the extent that in many classrooms across the India, LIS teachers' starts refer to "LIS Links", for some purpose or others.

Research Limitations: The LIS Links brings together the Indian LIS Professionals who are having internet connectivity. Indian LIS professionals who do not have access to internet or those who are not accustomed of working with the interne, LIS Links, unfortunately, is unable to serve them.

Practical Implications: The philosophy of "LIS Links" can be quite effectively applied & used for other subjects/disciplines on a national basis for the benefit of the people of the belonging into the domain in a very cost effective manner. In a Country like India, the principle of "LIS Links" can be successfully used in many fields. Never the less, the technical aspects of "LIS Links" can be successfully put into use by any country, specially the Developing Nations of the World.

Originality/value: When the world's leading gateway services (which are the products of large research investments) are trying hard to gain popularity; a simple structure like "LIS Links" is ushering a new movement in this direction. Further, the "LIS Links" becomes a brand name for LIS professionals in India for its quality and exhaustiveness.

Keywords: LIS Links, www.lislinks.com, Social Networking, Blog, Forum, Group, Web 2.0, Library 2.0.

Paper Type: Descriptive.

Introduction: Library and Information Science Links (LIS Links) (http://www.lislinks.com) is the India's social networking platform for Library and Information Science professionals. The name "LIS Links" as the developer named it, because it is targeted to links all Library and Information Science (LIS) professionals in India. LIS Links is the mostly used thread through which Indian Librarians are connected with each others. It was developed by Badan Barman, a Library and Information Science professional on 26th of February, 2008 as part of his Ph.D. programme. He was assisted by his fellow professionals. There were also people who work behind the scene and helped him a lot to shift LIS Links to its present position. In the grass root level it runs on the voluntary input of information by its members.

LIS Links is a one stop mall for LIS related information in India and acts as a gateway or portal and a web based solution to Indian LIS professionals. Never-the-less, LIS Links connects the LIS professionals through a single thread. It has brought the Indian LIS

ISSN (Online): 2454-3462

Website: http://newsletter.lislinks.com

professionals together, bestowed them with recent information, provides first hand solutions of their problems on professional issues, technical & all inclusive and most importantly, provide them an opportunity to voice their opinions on matters related to library and information science as a social networking site of a specific professional group. The interface has a provision of customize searching, browsing and subscription options through SMS, Email, RSS, etc.

Page: 4

- 2. Research Problems: The LIS Links project was conceptualized due to the following problems-
- a) Multiple Address Book with Outdated Contact Details: There is not a single association or organization in India that represents all LIS professionals in India. All are working in their own direction virtually without any collaboration, (formal or other) with one another. Resulting, a scattered list of professionals with outdated contact details about the members and multiple membership of any single individual in various associations leading to complication in creating a single unique trajectory.
- b) Slow Flow of Information: The printed newsletters of different organizations that bring current information into the focus of subscribing members become outdated as it reaches the hands of the subscribing members. There has always been an urgent need to develop a mechanism to provide the information to Indian LIS professionals in time. It has always been quite a common experience that announcements regarding Conference, Seminars, Trainings etc. often reach users after the deadlines of applications are over.
- c) Isolated Environment: Each LIS professionals are working isolated from one another without knowing much about what his/her colleague is doing. This often result duplication of work and wastage of time, effort and obviously, money! Since long it had been a felt necessity to bring together all such information well in time for sharing their experience and knowledge and avoidance of unnecessary duplication of work and avoid wastage of money, man-power time & effort.
- d) Paper Based Work is Costlier: In the twenty first century, when it is possible to serve information in digital form in a more convenient way, saving time, money and most importantly, provision of digital archiving for quick and handy reference, paper based communication process always remains to be a costlier endeavor.
- e) Paper Creating Environment Pollution: Printing something directly or indirectly always result in destroying our mother environment. We need to save it for our successors. So, there is an urgent necessity to eliminate the use of paper based information sources in all our formal communication process including (but not limited to) LIS profession in the form of different types of printed newsletters.
- f) Information is Widely Distributed and Hard to Find: All LIS related information are scattered over the web. There is a need to bring into some system for easy, quick and effective handling (storage, processing and retrieval).
- **3. Aims and Objectives:** Just, proper and timely availability of Information is extremely valuable and has a central role in today's society. The "LIS Links" has just made an experiment with sharing and exchange of information with all its above mentioned attributes, at least to the user who have desire to go for it. While developing the interface the following aims and objectives were kept in mind:
- a) To provide a person to person as well as group based communication medium for the Indian LIS Professionals with Web 2.0 tools and techniques.
- b) To provide CAS/SDI services to the Indian LIS Professionals in no time based on the voluntary collaboration of the members. The most advantageous aspect in the present Cyber induced world is that the users can prepare & maintain various profiles so practically usable

ISSN (Online): 2454-3462

Website: http://newsletter.lislinks.com

& important both for academic and research usage at one hand, and for sharing, exchange & for ready reference in need (digital archiving), on the other.

Page: 5

- c) To act as a One Window entry point for the LIS professionals of diverse categories, *viz.* students, research scholars, librarians and LIS academicians to all the resources related to Library and Information Science that makes their origin in India, and / or those outside born resources on Library and Information Science in India.
- d) To support the entire LIS fraternity (as mentioned above) in their all round development.
- e) To design and develop an online and continuously updated database of Library and Information Science Professional in India.
- 4. Coverage: The coverage of LIS Links can be understood from the following angles-
- a) Subject Coverage: LIS Links only deals with the news, and people related to Library and Information Science only, contents related to other subjects not concerned to LIS are not considered.
- b) Geographical Coverage: It mainly deals with the information that makes its origin in India, and those outside news which deals with Library and Information Science of India.
- c) Language Coverage: LIS Links mainly deals with English language contents; only in some rare cases people can found contents in Hindi language.
- **5. Implementation:** It is very difficult for a website administrator to keep the website updated frequently. Over the web, only those project or work are surviving that have extensive privileges for collaboration. So, considering the importance of collaboration, the LIS Links work is made highly interlinked and portable to build in the line of a free service structure for the global LIS community with special emphasis towards India. The LIS Links is a moderated membership site. When an Indian LIS professional wants to sign up to the site s/he has to answer certain predefined questions. After entering the details s/he has to wait for moderation of his membership. After moderation or approving the membership, the answers of the questions become his / her profile page over the website, which at the back end, form a database. Any member can modify/ update the answers of the questions by "Sign In" to the site at any time, as and when modifications are needed. The approved members of the site can communicate through chat, scrap message, Email with other individual members of the site. He/she can also take part in group chat, discussion forum, groups for problem solving and can share the information available with him/her with the entire community through group messaging, blogs, events, photos, music, videos, etc. Every contents of the site are under strict moderation to ensure quality and relevancy and to suit the academic purpose only. Only approved contents are distributed through SMS, Email, RSS, Official Google Plus, Twitter, Facebook Page to other interested members as well as non members who are already agreed upon to receive such information.

In approving the membership to the website two criteria are considered. One is-s/he must belong to LIS domain and the other is s/he must be an Indian. There is no denying however, that in some members' profile pictures the word FOREIGNER do appear but if one checks the detailed profile, it reveals the actual place of residence. People from all over the world who are interested about the news related to LIS in India can subscribe to the message from it or visit its websites but cannot be entitled for its membership. In rare cases, the above two criteria are not followed.

In developing the LIS Links (http://lislinks.com) site, a simple PC with internet connectivity is used. In case of software, the project used multiple free as well as paid web technologies tools and to achieve its goal. It used Google **Apps** (http://www.google.com/a) for hosting and Email; GoDaddy (www.godaddy.com) for domain; Ning (http://www.ning.com) hosting; Yahoo **Pipes** for (http://pipes.yahoo.com/pipes/) for aggregating different RSS feed: Feedburner

ISSN (Online): 2454-3462

Website: http://newsletter.lislinks.com

(http://www.feedburner.com) to provide email alert service: Google Plus (http://www.twitter.com) (http://www.google.com/+). Twitter Facebook (http://www.facebook.com) to publicize; different apps like Hootsuite (www.hootsuite.com) to connect different applications, Blogger (http://www.blogger.com) for hosting; SMS to send alert messages; Bookmark (http://www.addthis.com) for social sharing; Google AdSense (https://www.google.com/adsense) and Amazon affiliates for recovering the cost and Google Analytics (http://www.analytics.google.com) to track the usage statistics. The homepage of the LIS Links appears like:

Page: 6

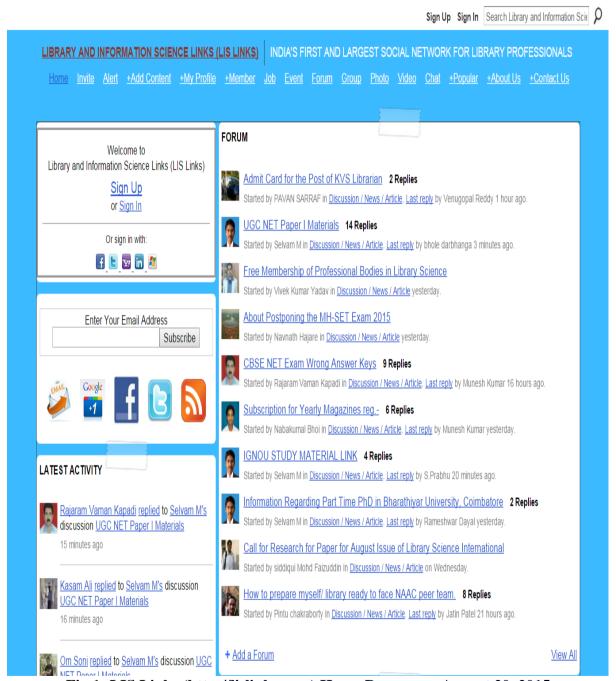


Fig.1: LIS Links (http://lislinks.com) Home Page as on August 20, 2015

The administrators of the website continuing their work as a professional obligation, as and when new technologies are emerged the chief administrator immediately integrates it

ISSN (Online): 2454-3462 Page: 7

Website: http://newsletter.lislinks.com

to the website. The whole website is also updated continuously. The news stories, along with original writing, interviews and reviews, are updated frequently, usually 7 days a week.

Information without proper citation, author's details is treated as not authentic and not reliable for consultation and as such, they are called as disinformation. Such disinformation and the information that is not updated with time are removed from the website to provide room for the new information. Irrelevant & biased information are also removed from the website. Only frequently updated information is treated as valuable and finds a stable place over LIS Links website. They are archived over the website for posterity.

The flow of information over the LIS Links site through different platform can be described by the following flow chart

ISSN (Online): 2454-3462

Page: 8

Website: http://newsletter.lislinks.com

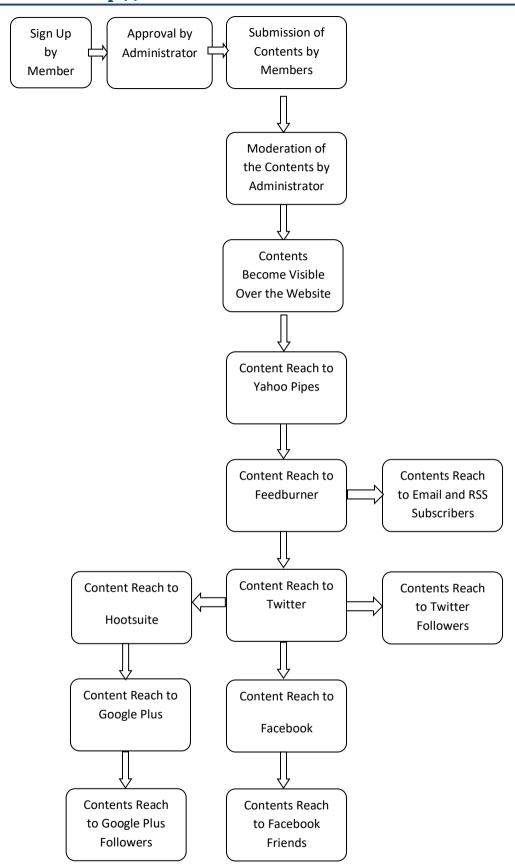


Fig. 2: Flow of Information at LIS Links

ISSN (Online): 2454-3462

Website: http://newsletter.lislinks.com

6. Overall Impact of LIS Links and Its Achievements: "LIS Links" is considered as a huge success and a pioneering effort in the world. It brings all Library and Information Science related information into a systematic order for searching, and browsing with many provisions of subscriptions that too, without any duplication and irrelevance. It is the India's first and largest social networking and collaborating initiative platform for the LIS professionals. It makes the following impact among the professionals-

Page: 9

- a) Act as Gateway: "LIS Links" is serving as a gateway or a single point access to the Indian LIS profession for the whole world. All information can be searched and browsed by using its website.
- b) Functioning as Online Database of LIS Professionals: The project achieved an online database of 18,417 LIS Professionals (as on August 20, 2015) in India that's too continuously growing. The Table 1 below describes State wise membership numbers. The members of the database can be searched and browsed using the web interface.

| State | Number of Members |
|-----------------------------|-------------------|
| Andaman and Nicobar Islands | 28 |
| Andhra Pradesh | 708 |
| Arunachal Pradesh | 17 |
| Assam | 346 |
| Bihar | 226 |
| Chandigarh | 187 |
| Chhattisgarh | 158 |
| Dadra and Nagar Haveli | 4 |
| Daman and Diu | 6 |
| Delhi | 1363 |
| Goa | 53 |
| Gujarat | 581 |
| Haryana | 520 |
| Himachal Pradesh | 86 |
| Jammu and Kashmir | 174 |
| Jharkhand | 88 |
| Karnataka | 1218 |
| Kerala | 736 |
| Lakshadweep | 8 |
| Madhya Pradesh | 688 |
| Maharashtra | 1416 |
| Manipur | 32 |
| Meghalaya | 53 |
| Mizoram | 23 |
| Nagaland | 7 |
| Odisha | 326 |
| Pondicherry | 116 |
| Punjab | 363 |
| Rajasthan | 264 |
| Sikkim | 28 |
| Tamil Nadu | 920 |
| Telangana | 119 |
| Tripura | 23 |
| Uttar Pradesh | 1577 |
| Uttarakhand | 210 |
| West Bengal | 931 |
| Others | 4814 |

ISSN (Online): 2454-3462 Page: 10

Website: http://newsletter.lislinks.com

| Total | 18,417 | |
|-------|--------|--|
| Tutai | 10,41/ | |

Table 1: LIS Links Penetration in Indian States as on August 20, 2015

- c) A Fully Community Driven Web Solution: The whole work is based on voluntary collaboration of the members of the database. Everyone is contributing something to the project.
- d) Functioning as Communication Medium: The members of the database are able to communicate among themselves by chat, scrap message, Email, discussion forum, groups, blog, event, photo, music, video, etc.
- e) Duplication and Irrelevancy are Avoided: "LIS Links" policy is rather quite tight in approving contents over the site. Customarily, it doesn't approve plagiarized, duplicate and irrelevant contents over the website.

Every kind of information input into the LIS Links is displayed in such a way that the duplication of information can easily be identified and can be shredded off regularly before its dissemination to the target user base. So, by subscribing to any of the LIS Links services, one can remain protected from receiving unnecessary massage or post, and duplicate message of earlier posts and save their online time.

- f) Information is Disseminated in a High Speed: The information that goes through moderation is distributed in seconds to the respective subscribers/followers.
- g) Pioneer Academic Social Network: The "LIS Links" is one of the pioneer academic social networking sites. It is the India's first ever social networking platform for LIS professionals. It is able to bring together the scattered LIS professionals from all over India to a single platform for problem solving and attain the highest coverage than any LIS related online service providers in India.
- h) Large Number of Subscribers: "LIS Links" gives a mechanism by which the LIS students, research scholar, academicians, and practicing librarians and lastly the people with an interest in LIS can get free Alerting Service / Current Awareness Service (CAS) / Selective Dissemination of Information (SDI) services through SMS, Email and RSS in all subfield of LIS. As on August 20, 2015, 38,287 people receive contents from LIS Links, which is increasing on an average 9 in a day.

| Platform | Website URL | Reach |
|---------------------------|--|-------|
| LIS Links Broadcast | http://www.lislinks.com/profiles/members | 18417 |
| Email Digest/RSS Feed | http://feeds.feedburner.com/lislinks | 7328 |
| | http://feeds.feedburner.com/lislinksJobs | |
| | http://feeds.feedburner.com/lislinksEvents | |
| Google Plus | https://plus.google.com/+lislinks/posts | 722 |
| _ | https://plus.google.com/+LISLinksIndia | |
| Twitter | https://twitter.com/lislinks | 466 |
| Facebook | https://web.facebook.com/lislinks | 11354 |
| | https://facebook.com/groups/LISLinksIndia | |
| Total Reach in a Day 3828 | | |

Table 2: LIS Links Daily Reach as on 20th August 2015

i) High Growth of Membership: As on August 20, 2015 there are 18,417 members in the LIS Links website which is increasing on an average 7 in a day. The growth of the LIS Links Membership steadily increases till the year 2012 and then it decreases. In the year 2012, highest number of members joined the website. It is needless to explain that the total number of members is quite impressive for any professional forum within just 7 years. It also explains both in favour & against the nature of the platform. In the against side, as it is already explained that the limitation of this platform is that it requires computer with internet

ISSN (Online): 2454-3462

Website: http://newsletter.lislinks.com

connectivity. Indian LIS professionals who do not have such facilities are unable to become a member. As such, the particular nature of the platform is a limiting factor for expansion of the membership base. There is no denying however that it can also be claimed to be congenial to the growth and expansion of the membership base as well. Had it been a non IT based platform, the growth and expansion of the membership base (seemingly) would have been slow; as such the very nature of the platform seems to be congenial to its growth & expansion. Another important factor is that the cost factor. The Free Membership is also one of the possible reasons of its fast growth. Analogous to these facts is that it also explains the nature of IT friendliness of Indian LIS community.

Page: 11

| Period | Number of Member Joined |
|--|-------------------------|
| February 26, 2008 to December 31, 2008 | 275 |
| January 1, 2009 to December 31, 2009 | 1593 |
| January 1, 2010 to December 31, 2010 | 2656 |
| January 1, 2011 to December 31, 2011 | 2603 |
| January 1, 2012 to December 31, 2012 | 3878 |
| January 1, 2013 to December 31, 2013 | 3046 |
| January 1, 2014 to December 31, 2014 | 2643 |
| January 1, 2015 to August 20, 2015 | 1723 |
| Total | 18417 |

Table 3: Annual Growth of LIS Link Membership

j) High Pageviews: LIS Links start using Google Analytics account from December 16, 2011 to analyze the traffic. According to Google Analytics, the LIS Links was able to receive 31,15,238 visits till August 20, 2015. The website receives on an average 12584 pageviews from 1447 people in a day.

| Type | Value |
|-----------------------|------------|
| Pageviews | 16,863,726 |
| Sessions | 4,451,843 |
| Users | 1,939,972 |
| Pages / Session | 3.79 |
| Avg. Session Duration | 00:12:20 |
| Bounce Rate | 44.64% |
| % New Sessions | 43.45% |

Table 4: Google Analytics Statistics of LIS Links for the period of (December 16, 2011 to August 20, 2015)

- k) Paper based Information is Replaced: The LIS Links eliminates the use of paper in all round communication and by this way helps in saving the mother environment.
- *l) Frequently Updated:* The news clipping and other information regularly displayed over the platform are updated daily. The important posts are also shared in Google Plus, Twitter and Facebook. As on August 20, 2015 there are 33588 pages of content over the website that is increasing on an average rate of 11 in a day.

| Type of Content | Web Address | Number of Items |
|------------------------|--|------------------------|
| Profile Page | http://lislinks.com/profiles/members | 18417 |
| Jobs | http://lislinks.com/profiles/blog/list | 4639 |
| Events | http://lislinks.com/events | 797 |
| Discussions | http://lislinks.com/forum | 8095 |
| Photos | http://lislinks.com/photo | 1388 |

ISSN (Online): 2454-3462 Page: 12

Website: http://newsletter.lislinks.com

| Videos | http://lislinks.com/video | 91 |
|-----------------------|----------------------------|-------|
| Groups | http://lislinks.com/groups | 161 |
| Total Contents | | 33588 |

Table 5: Content over LIS Links as on August 20, 2015

m) Highly Acclaimed: PC Quest Magazine, June 2009 in its nomination of the LIS Links project to the PC Quest Best IT Implementations of the Year 2009 under "Online Portal and Web Based Solutions" category commented as "this initiative has made this portal one of India's best in LIS and among a very few in the world" (PC Quest 2009). Again, in the PC Quest June 2010 issue, LIS Links was included among 200 Tech success stories.

The LIS Links project was also able to receive "Jury Special Mention" award in the category of "Best Usages of ICT in Education and Learning" in the E-North East Award 2011 held at Kohima, Nagaland (India). It also received "Jury Special Mention" award in the category of Advocacy & Empowerment in the North East Social Impact Award 2015 held at Guwahati, Assam (India).

n) Achieved Good Alexa Rank: LIS Links achieved a global traffic rank of 100,330 and the rank in India is 10,450.

| Type | Rank |
|----------------------|---------|
| Global Traffic Rank | 100,330 |
| Indian Traffic Rank | 10,450 |
| Linking to LIS Links | 72 |

Table 6: Alexa Stats of LIS Links as on August 20, 2015

Many websites over the web provide linking from their sites to "LIS Links". Further, "LIS Links" messages are displayed by way of RSS feed over many platforms of the world.

"LIS Links" project brings together the whole range of subject based information from the total output of a nation into a single platform for searching and browsing. The new contents can be submitted by members and subscribed by many alternative ways. As such, it does not face any major competition from the existing web based services. Immediately after its launching over the web it received overwhelming responses from the professionals. All key issues are nicely solved by molding the existing free and paid web based technologies.

- **7. New Initiatives:** The LIS Links website is having Profiles of the members, a provision to add content by any members, Chat (Individual and Group), SMS, Scrap Message, Email (individual, group, broadcast), RSS, File Cabinet, Blog, Discussion Forum, Discussion Group, Events, Photo and Video facilities. LIS Links is distributing the information by way of Website, Mobile Version of the Website, SMS, Email Alert (to subscribers) and Email Broadcast (to members), Google Plus, Twitter, Facebook, RSS feed and LIS Links Newsletter. Any member can invite their friends to the site by using direct Email, Gmail, Yahoo Mail, Facebook and LinkedIn. The SMS alert, Circular, Samples, DDS, LIS Links Grants (Grants for Association / Organization and Grants for Libraries), LIS Links Newsletter, LIS Links Bulk SMS Services are the new additions to LIS Links. Besides, LIS Links also instituted the following awards-
- a) The LIS LINK Scholars Award: To motivate the LIS Professional to contribute towards the LIS Links site, it instituted LIS Links Scholar Award from the year 2010. The award which includes a plaque and a certificate has a very good impact on the growth and development of the website.

ISSN (Online): 2454-3462 Page: 13

Website: http://newsletter.lislinks.com

b) India's Best Institutional Repository Award: LIS Links also started another award by name "India's Best Institutional Repository Award" from the year 2012 to promote Institutional Repositories in India.

- **8. Privacy at LIS Links:** The profile section of the LIS Links comprises of both private and public data. The private data comprises of the IP address, mobile phone number and email id. As a principle, "LIS Links" will never sell or provide the private data of the members to anyone. However, if some national level library association wants to publish some directory in LIS domain, LIS Links may certainly consider sharing the public data for the benefit of all and for further advancement of the profession and the professionals. Otherwise, all details of the members remain strictly confined with the chief administrator of the site only. In the history of LIS Links, it banned many members of the site for violating LIS Links rules. The unpleasant decisions had to be taken to serve the profession in the new height.
- **9. Future Plan:** Over the web, the LIS in India is hardly managed by approximately hundred professionals, who are responsible for developing blogs / groups / forums / gateways / social networking sites and so on. The subscriber of different services receive the same message daily as cross posting resulting out of their subscriptions to more than one platform, in their mission to keep abreast with all the latest happenings & information in the subject. This is mainly due to the fact of overlapping of scope of different platforms and mostly due to wrong moderation activities which results wastage of much group time. In simple, many groups / forums post anything that is sent to the groups / forums, ignoring the scope of the particular group / forum and relevancy of the message to their members.

In future, the LIS Links will give emphasis in reducing this type of information pollution over the web by way of making aware of the infopreneur in LIS in India. It will also try to collaborate with existing Blogs / Groups / Forum / Social Networking sites / Gateways in brining everything in relation to LIS in India into a proper system, to avoid any duplication of effort and to reduce consumption of valuable time from the user in a way of checking / rechecking and deletion of the cross posting of messages they receive and consult from more than one platform to perform their task. LIS Links as always been highly enthusiastic to work collaboratively with other national level library association in the country.

- **10. Continuity of LIS Links:** The present annual budget of the LIS Links website includes the cost of DNS, website hosting, software, innovation and marketing. Considering the growth (server space) and bandwidth requirement of the website the recurring cost will goes on increasing every year. The main source of income is online advertisements, sponsorship and voluntary donation. The total expenditure is nicely managed through income from the above sources. So, it is hoped that LIS Links will not face any major financial crisis at any moment in future.
- 11. Conclusion: LIS Links is a Single window information exchange endeavor. Presumably, it is not propagating any irrelevant message to the member community if they subscribe to the appropriate Email and RSS feed of it. LIS professionals from all over India joined the platform to help other professional colleagues in the subject and by this way they also get assistance from other members. The members of LIS Links regularly post links and of important and interesting stories into the "LIS Links". The contents, always (as they need to) go through strict moderation by the administrators before being made available and distributed to all members and subscribers.

If anyone wants to connect with the other Librarians in India and want to communicate with them then there is no better alternative than LIS Links. LIS Links is a marketing powerhouse for Library related events, jobs and other information. The members

ISSN (Online): 2454-3462

Website: http://newsletter.lislinks.com

can distribute their information freely to a large group of professionals and receive the messages that are targeted to their own need.

Page: 14

LIS Links value the online time and effort of its members, and so try its best to deliver contents that meet their need exclusively. As such, LIS Links has been highly influencing the Library and Information Science in India as well as highlighting the Indian LIS activities aboard with enhanced services. It builds a virtual family of Indian LIS Professionals where, each professional know each other from their profile image and profile information, and of course from their contribution towards the site. They are familiar with each other by this way only with whom many may never meet physically in their life time!

Acknowledgement: The author acknowledges and extends thanks to Siddhartha Shankar Ray for sparing his valuable time in editing and proofreading of the article.

References

- Barman, B. (2008). LIS Links: About Us. Retrieved from: http://lislinks.com/lis-links-about-us
- Kazi, Syed S. (Ed.) (2015). Social Innovations for Social Impact in North East: Celebrating & Recognising best practices & innovations in social and community development in North East India. Guwahati: North East Development Foundation.
- PCQ Bureau (2010, June). Guwahati University: Indian LIS Professionals. *PC Quest*. Retrieved from: http://www.pcquest.com/guwahati-university-indian-lis-professionals/
- PCQ Bureau (2009, June). Community Driven: LIS Links. *PC Quest*. Retrieved from: http://www.pcquest.com/community-driven-lis-links/