The 21st National Convention on Knowledge, Library and Information Networking — NAACLIN 2018 on the theme Managing Strategies and Technologies for Advancing Scope and Services of Libraries was organised by DELNET in collaboration with the GITAM (Deemed-to-be University), Visakhapatnam at the Sai Priya Beach Resort, Visakhapatnam from October 4-6, 2018. It was inaugurated on October 4, 2018 by the Chief Guest Prof. K.S. Challam, Former Vice-Chancellor, Dravidian University, Kuppam, Andhra Pradesh. The Guest of Honour was Dr. A.R.D. Prasad, Professor and Head, Documentation Research & Training Centre (DRTC), Bengaluru.

Dr. G. Naga Ratna Mani, Organising Secretary, NAACLIN 2018 and Librarian, GITAM, Visakhapatnam delivered the welcome address. She thanked DELNET for collaborating with GITAM, Visakhapatnam to organise NAACLIN 2018.

Dr. H.K. Kaul, Director, DELNET delivered the introductory address. He said that DELNET with a network of 6300 libraries aims not only to undertake resource sharing but also works to empower librarians. He observed that librarians need to provide personalised services to their users. He further emphasised that libraries were at the crossroads and new skills sets needed to be acquired by them to encounter the growing challenges. Dr. Kaul also read out the messages of the Hon’ble Vice-President, Hon’ble Prime Minister and Hon’ble Chief Minister of Andhra Pradesh.

Hon’ble Vice-President of India Shri M. Venkaiah Naidu in his message said: “Being the major resource sharing library network connecting more than 6200 libraries all over India and outside, DELNET provides access to millions of resources through E-books, E-journals, periodical articles, video-recordings, theses and dissertations. I am sure the participation of many delegates from different parts of India and abroad in NAACLIN 2018 will prove fruitful in the promotion of resource sharing at the national and international levels among member-libraries of DELNET”.

**NAACLIN 2018 : A Report**

Dr. Sangeeta Kaul*

DELMET for collaborating with GITAM, Visakhapatnam to organise NAACLIN 2018.

Dr. H.K. Kaul, Director, DELNET delivered the introductory address. He said that DELNET with a network of 6300 libraries aims not only to undertake resource sharing but also works to empower librarians. He observed that librarians need to provide personalised services to their users. He further emphasised that libraries were at the crossroads and new skills sets needed to be acquired by them to encounter the growing challenges. Dr. Kaul also read out the messages of the Hon’ble Vice-President, Hon’ble Prime Minister and Hon’ble Chief Minister of Andhra Pradesh.

Hon’ble Vice-President of India Shri M. Venkaiah Naidu in his message said: “Being the major resource sharing library network connecting more than 6200 libraries all over India and outside, DELNET provides access to millions of resources through E-books, E-journals, periodical articles, video-recordings, theses and dissertations. I am sure the participation of many delegates from different parts of India and abroad in NAACLIN 2018 will prove fruitful in the promotion of resource sharing at the national and international levels among member-libraries of DELNET”.

* Network Manager, DELNET, Co-Organising Secretary, NAACLIN 2018 and Rapporteur-General, NAACLIN 2018.
Hon’ble Prime Minister Shri Narendra Modi in his message said: “The theme adopted for the convention ‘Managing Strategies and Technologies for Advancing Scope and Services of Libraries’ captures the need to realign the role of library institutions to serve the information needs of a rapidly changing world. The institutional centrality of libraries will never lose its relevance. However, its interaction with the wider audience will see rapid shifts. Ranging from ensuring academic integrity to providing an enhanced environment for research and references, our library institutions must endeavour to redefine their contours”.

Hon’ble Chief Minister of Andhra Pradesh Shri Nara Chandrababu Naidu said: “I also feel happy that DELNET is devoted to promoting the sharing of resources among libraries and providing the latest information resources to library users. I wish DELNET all the best in its endeavours”.

Dr. A.R.D. Prasad, Professor & Head, DRTC and Guest of Honour at the inaugural function spoke at length about the future of libraries. He said that though a user can perform many searches in a library automation software using title, author, subject, etc. but he/she cannot do so in Google. He added that Google indexes static pages without metadata. He reiterated the importance of cataloguing library data, creation of metadata and classification as they made the relations explicit. He spoke about ontology and semantic web and the importance of technology. Dr. Prasad also mentioned “Open Mantra” encompassing Open Source Software and Open Access to Information. He discussed UNESCO’s Universal Access to Information. He affirmed that information is very important and since Internet has created a deluge of information, more people would be required to process information. Dr. Prasad said that library professionals have to play a greater role in transforming India into a knowledge society. He also emphasised the need to incorporate natural language in searching the content rather than the artificial language. He concluded by appreciating the role of DELNET and said that library professionals should use DELNET resources and services.

Dr. K. S. Challam, the Chief Guest delivered the inaugural address. He apprised the delegates that he had introduced the library and information...
Dr. K. S. Challam

Science in the Refresher Programmes of the Universities in India. He lamented the state of libraries in India. He cited examples of some University libraries wherein precious, rare old records were thrown out of the library due to shortage of space. He spoke about the relation between Knowledge, Library and Information Technology. He said that all information is not knowledge and all facts cannot be turned into knowledge, unless and until it ignites cognition. He stated that all knowledge is not useful for consumption since there is also “False Knowledge” and “Superior Knowledge”. He added that when knowledge is disciplined, it is to be used and mobilised. Dr. Challam opined that librarians act like bankers. He said that library professionals have a social and professional responsibility to navigate and enhance the accessibility to information and knowledge. He said that knowledge needs to be utilised by society. He commented that we now have varied sources of information and students are getting access to more knowledge. He further spoke about “Wired Professor” who provides online tutorials to students on a 24/7 basis. Dr. Challam said that wikipedias and videopedias are ruining the Internet as the authenticity of the content remains a major issue. According to him, though there are too many books and documents and so-called “information” but it is difficult to cull out the relevant content.

He warned that “knowledge without books” is a dangerous thing. He said that it is worth investigating whether the knowledge gained by students through the Internet resources, help them in getting proper skills and problem-solving techniques. He also spoke at length about the privatisation of knowledge. He said that LIS professionals are knowledge workers and are not the owners of knowledge. Dr. Challam said that knowledge and power are inter-related. He spoke about the archaeology of knowledge and said that knowledge is power. He said that knowledge is getting commodified as knowledge products now. He affirmed that there are greater challenges for LIS professionals in the current knowledge era. He added that the real problem was to overcome the challenges to process enormous information. He felt that wisdom and knowledge are not the same. While
referring to the economics of knowledge, he said that 29 per cent of GDP is contributed by knowledge. He said that human society should create new knowledge for survival. He made a remarkable statement that “Technology is not development and any change in technology does not mean change in development”. Dr. Challam inspired the delegates to work for the upliftment of society.

It was followed by the release of NACLIN 2018 proceedings comprising the proceedings of NACLIN 2018 and a souvenir by Prof. K.S. Challam.

Dr. H.K. Kaul delivered the concluding remarks and thanked Dr. K.S. Challam and Dr. A.R.D. Prasad. He noted that librarians were not working as bankers but were also adding value to the content. He added that if knowledge centres were established on specific themes a good deal of duplication in information management could be averted around the world.

The inaugural function ended with a vote of thanks by Dr. Sangeeta Kaul, Network Manager, DELNET & Co-Organising Secretary, NACLIN 2018.

The inaugural function was followed by tutorials. The first tutorial on ‘Academic Integrity and Plagiarism’ was conducted by Prof. C.P. Ramasesh, Former University Librarian, University of Mysore, Mysuru, Karnataka.

It was followed by a product demonstration by Mr. Arjun B., Territory Manager, Balani Infotech Pvt. Ltd.

In the post-lunch session the tutorial on ‘Academic Integrity and Plagiarism’ by Prof. C. P. Ramasesh, Former University Librarian, University of Mysore, Mysuru, Karnataka was continued.

The second tutorial “Enhancing Users’ Satisfaction in Libraries” was conducted by Dr. Sangeeta Kaul, Network Manager, DELNET. She spoke at length on various ways to boost users’ satisfaction in libraries.

It was followed by the Open Mike Competition on ‘Market Place for Innovative Ideas for Libraries’ moderated by Dr. H.K. Kaul, Director, DELNET, New Delhi. More than 20 delegates came forward to express their innovative ideas.


In the evening of the first day, the buses left for Vihar Beach Resort for dinner and the delegates enjoyed the evening at the seashore.

On the second day, the first Technical Session was devoted to ‘E-resources and Content Development Strategies’. The session was chaired by Dr. H.K. Kaul, Director, DELNET, New Delhi. The first paper entitled ‘Management of Educational/Scientific Audio-Visual Content in Higher Education and Research Institutions Using Information and Communication Technology (ICT) Tools’ written by Dr. Hemant Kumar Sahu, Scientific Officer-C, Library, Inter-University Centre for Astronomy and Astrophysics, Pune and Dr. Surya Nath Singh, Director (Research and Information), Siddhant Group of Institutions, Pune was delivered by Dr. Hemant Kumar Sahu. The paper entitled ‘Implementation of Drupal: An Effective Content Management System for Space Applications Centre Library, ISRO, Ahmedabad’ written by Ms. Rachna Patnaik, Sci./Engr “SG” and Head, Library & Documentation Division, Space Applications Centre, ISRO, Ahmedabad and Mr. Mukesh Kumar Mishra, Library Officer “C”, Library & Documentation Division, Space Applications Centre, ISRO, Ahmedabad was presented by Ms. Rachna Patnaik. The paper entitled ‘Use of E-resources by the Teachers of Different Degree Colleges in Assam: A Study’ written by Mr. Dulumani Sarma, Librarian, Habraghat College, Krishnai, Goalpara, Assam and Mr. Prafulla Kumar Mahanta, Librarian, Digboi College, Digboi, Tinsukia, Assam was presented by both of them. The paper entitled ‘Use Patterns of Electronic Resources in Engineering College Libraries of Srikakulam District, Andhra Pradesh: A Study’ was delivered by Dr. Taddi Murali, Assistant Professor, Department of Library and Information Science, Central University of Tamil Nadu, Thiruvarur, Tamil Nadu. The last paper of the technical session entitled ‘Study of Research Output of Selected Engineering Institutions in Odisha Based on Scopus Database During 2012-2016’ was delivered by Mr. Bijaynanda Pradhan, Incharge, Central Library, Central University of Orissa, Koraput, Odisha.

The second Technical Session was devoted to the ‘Digital Technologies
and Trends'. The session was chaired by Dr. A. R. D. Prasad, Professor and Head, DRTC, Bengaluru. The Rapporteur of the Session was Mr. Deepak Yadav, Sr. Network Assistant, DELNET, New Delhi. The keynote paper in the session on 'Digital Technologies and Trends' was delivered by Dr. A.R.D. Prasad. The paper entitled ‘Remote Xs: A Case Study of the Remote Access Tools at AIIMS Library, New Delhi’ written by Mr. M.K. Vishwakarma, Librarian (Grade-I), Dr. B.B. Dikshit Library, All India Institute of Medical Sciences, New Delhi, Mr. Jahangir Khan, Librarian (Grade-I), Dr. B.B. Dikshit Library, All India Institute of Medical Sciences, New Delhi and Ms. Neetu Priya, Librarian (Grade-III), Dr. B.B. Dikshit Library, All India Institute of Medical Sciences, New Delhi was presented by Mr. M.K. Vishwakarma and Mr. Jahangir Khan.

It was followed by the product demonstration by White Code.

The post-lunch session, Technical Session III was devoted to the 'Building Library Infrastructure and Facilities in the Digital Age' was delivered by Dr. M. Ishwara Bhat, Pro-Vice Chancellor, Presidency University, Bengaluru, Karnataka. The second keynote paper on 'Strategies for Strengthening and Revamping Infrastructure and Facilities in Government Libraries' was delivered by Dr. P. R. Goswami, Former Director (Library & Information), IGNCA & CSL (Government of India), New Delhi. The paper entitled 'Usage of ICT in the College Libraries of Assam: An Analytical Study' was delivered by Mr. Prafulla Kumar Mahanta, Research Scholar, DLISc, Gauhati University and Librarian, Digboi College, Digboi, Tinsukia, Assam and Dr. Drubajit Das, Research Supervisor, DLISc, Gauhati University and Librarian, S. B. Deorah College, Guwahati, Assam. The last paper of Technical Session III entitled ‘Status of Physical Facilities in Engineering College Libraries in Hyderabad and Ranga Reddy Districts, Telangana’ was presented by Dr. Kothapati Kumaraswamy Reddy, Librarian, S.V. College of Engineering, Tirupati, Andhra Pradesh and Mr. K. Murali Mohan Reddy, Librarian, Narayana Medical College, Nellore, Andhra Pradesh.
The last Technical Session IV of the day was devoted to the ‘Copyright, Data Security and Strategies’. The session was chaired by Dr. A.L. Moorthy, Former Director, DESIDOC, Delhi and former Chief Consultant (Information Science), BrahMos Aerospace, Delhi. The Rapporteur of the session was Mr. Navin Kumar Soni, Scientist ‘D’, Institute of Nuclear Medicine & Allied Sciences (INMAS), DRDO, New Delhi. The first keynote paper entitled ‘Copyright or Right to Copy: Librarian’s Conundrum in the Digital Age’ was delivered by Dr. A.L. Moorthy. The second keynote paper entitled ‘Information Security Management: Capacity Building for LIS Professionals’ was delivered by Mr. Nitish Chandan, Project Manager, Cyber Peace Foundation, Ranchi, Jharkhand. The last keynote paper of the day was on ‘Copyright and IPR in the Digital Age: Issues and Concerns for Libraries’ by Mr. Lammata Ashish Kumar, Assistant Professor, School of Law, GITAM, Visakhapatnam.

The buses left for Hotel Palm Beach for the sea beach view and dinner which was enjoyed by everyone. The third and last day of the convention started with Technical Session V entitled ‘Innovative Library Services and Management of Public Libraries’. The session was chaired by Dr. P.R. Goswami, Former Director (Library & Information) IGNCA & CSL (Government of India), New Delhi and Co-Chaired by Prof. C. Sasikala, Advisor, Knowledge Resource Centres, GITAM (Deemed-to-be University), Visakhapatnam, Andhra Pradesh and Former Prof. (Retd.) HOD, Dept. of Library & Information Science, Andhra University, Visakhapatnam. The Rapporteur was Mrs. Sushma Zutshi, Librarian, Centre for Air Power Studies, New Delhi. The first keynote paper entitled ‘Public Library System in India: The New Initiatives’ was delivered by Dr. Arun Kumar Chakraborty, Director-General, Raja Rammohun Roy Library Foundation, Kolkata and Additional Mission Director, National Mission on Libraries, Government of India. The second keynote paper on ‘Building Public Libraries for the Future’ was delivered by Mr. P. Jayarajan, Member, Raja Rammohun Roy Library Foundation, Former Head, British Council Libraries in India and Library Advisor, Thunchath Ezhuthachan Malayalam University, Vakkad, Tirur, Malappuram District, Kerala. The paper entitled ‘Library Resources and Services in Vignan’s Group of Libraries’ was presented by Mr. P. R. Goswami, Former Director (Library & Information) IGNCA & CSL (Government of India), New Delhi and Co-Chaired by Prof. C. Sasikala, Advisor, Knowledge Resource Centres, GITAM (Deemed-to-be University), Visakhapatnam, Andhra Pradesh and Former Prof. (Retd.) HOD, Dept. of Library & Information Science, Andhra University, Visakhapatnam. The Rapporteur was Mrs. Sushma Zutshi, Librarian, Centre for Air Power Studies, New Delhi. The first keynote paper entitled ‘Public Library System in India: The New Initiatives’ was delivered by Dr. Arun Kumar Chakraborty, Director-General, Raja Rammohun Roy Library Foundation, Kolkata and Additional Mission Director, National Mission on Libraries, Government of India. The second keynote paper on ‘Building Public Libraries for the Future’ was delivered by Mr. P. Jayarajan, Member, Raja Rammohun Roy Library Foundation, Former Head, British Council Libraries in India and Library Advisor, Thunchath Ezhuthachan Malayalam University, Vakkad, Tirur, Malappuram District, Kerala. The paper entitled ‘Library Resources and Services in Vignan’s Group of Libraries’ was presented by Mr. P. R. Goswami, Former Director (Library & Information) IGNCA & CSL (Government of India), New Delhi and Co-Chaired by Prof. C. Sasikala, Advisor, Knowledge Resource Centres, GITAM (Deemed-to-be University), Visakhapatnam, Andhra Pradesh and Former Prof. (Retd.) HOD, Dept. of Library & Information Science, Andhra University, Visakhapatnam. The Rapporteur was Mrs. Sushma Zutshi, Librarian, Centre for Air Power Studies, New Delhi. The first keynote paper entitled ‘Public Library System in India: The New Initiatives’ was delivered by Dr. Arun Kumar Chakraborty, Director-General, Raja Rammohun Roy Library Foundation, Kolkata and Additional Mission Director, National Mission on Libraries, Government of India. The second keynote paper on ‘Building Public Libraries for the Future’ was delivered by Mr. P. Jayarajan, Member, Raja Rammohun Roy Library Foundation, Former Head, British Council Libraries in India and Library Advisor, Thunchath Ezhuthachan Malayalam University, Vakkad, Tirur, Malappuram District, Kerala. The paper entitled ‘Library Resources and Services in Vignan’s Group of Libraries’ was presented by Mr. P. R. Goswami, Former Director (Library & Information) IGNCA & CSL (Government of India), New Delhi and Co-Chaired by Prof. C. Sasikala, Advisor, Knowledge Resource Centres, GITAM (Deemed-to-be University), Visakhapatnam, Andhra Pradesh and Former Prof. (Retd.) HOD, Dept. of Library & Information Science, Andhra University, Visakhapatnam. The Rapporteur was Mrs. Sushma Zutshi, Librarian, Centre for Air Power Studies, New Delhi. The first keynote paper entitled ‘Public Library System in India: The New Initiatives’ was delivered by Dr. Arun Kumar Chakraborty, Director-General, Raja Rammohun Roy Library Foundation, Kolkata and Additional Mission Director, National Mission on Libraries, Government of India. The second keynote paper on ‘Building Public Libraries for the Future’ was delivered by Mr. P. Jayarajan, Member, Raja Rammohun Roy Library Foundation, Former Head, British Council Libraries in India and Library Advisor, Thunchath Ezhuthachan Malayalam University, Vakkad, Tirur, Malappuram District, Kerala. The paper entitled ‘Library Resources and Services in Vignan’s Group of Libraries’ was presented by Mr. P. R. Goswami, Former Director (Library & Information) IGNCA & CSL (Government
Educational Institutions: A Usage Patterns and Satisfaction Levels Among Faculty’ written by Mrs. A. Rajani Kumari, Librarian, NTR Vignan Library, Vignan’s Foundation for Science, Technology and Research (Deemed-to-be University), Guntur, Andhra Pradesh and Dr. M. Doraswamy, Professor & Head, Department of Library and Information Science, Dravidian University, Kuppam, Chittoor District, Andhra Pradesh was presented by Mrs. Rajani Kumari. The last paper of the Technical Session entitled ‘Web-Based Library Services in India: The Changing Pattern’ written by Mr. Sovonjit Chatterjee, Library Clerk, National Library of India, Kolkata, West Bengal; Ms. Didhiti Bhattacharya, Librarian, The Assembly of God Church School, Kolkata, West Bengal and Mr. Ashim Kr. Halder, Library Clerk, National Library of India, Kolkata, West Bengal was delivered by Mr. Sovonjit Chatterjee.

The Technical Session VI of the day was devoted to the ‘Human Resource Management in Libraries’. The session was chaired by Prof. N. Laxman Rao, Nagubandi, President, Telangana Library Association and Former Professor in Library and Information Science, Osmania University, Hyderabad. The Rapporteur of the session was Mr. Mohammad Shoai, University Librarian, Jamia Hamdard, New Delhi. The first keynote paper on ‘Grooming of Smarter Information Professionals’ was delivered by Dr. K. P. Vijayakumar, Former Head and Hon. Director, Centre for Information Literacy Studies, Dept. of Library and Information Science, University of Kerala, Thiruvananthapuram. The second keynote paper on ‘LIS Education in India and its Prospects’ was delivered by Prof. N. Laxman Rao, Nagubandi. The last paper of the Technical Session entitled ‘Evaluation of LIS Professional Skills of Indira Gandhi National Open University (IGNOU) and Jamia Millia Islamia University (JMI), New Delhi: A Comparative Study’ was delivered by Dr. Ajit Kumar, Library and Information Officer, Nehru Memorial Museum and Library (Ministry of Culture, Government of India), New Delhi.

The Technical Session VII was devoted to the ‘Library Resource Sharing: Growing Issues and Challenges’. The session was chaired by Mr. P. Jayarajan, Member, Raja Rammohan
The valedictory function was graced by Dr. S. S. Murthy, Dr. P. R. Goswami, Dr. H. K. Kaul, Dr. G. Naga Ratna Mani and Dr. Sangeeta Kaul.

A book written in Tamil entitled ‘Andha Sila Natkal (Those Few Days): The Travel Experience in the Capital City of India, Delhi during the NACLIN 2017, visit and Convention experience’ authored by Mr. SA. Muthu Baarathi, Librarian, NIFT-TEA College of Knitwear Fashion, Tiruppur District, Tamil Nadu was released. He had attended NACLIN 2017 at New Delhi as well as NACLIN 2018 at Visakhapatnam.

The certificates were distributed to the delegates and a small souvenir as a token of remembrance of NACLIN 2018 was also provided to them along with the certificates.

NACLIN 2018 was supported by organisations including Raja Rammohun Roy Library Foundation (RRRLF), Balani Infotech Pvt Ltd, IGroup and Cyber Peace Foundation.

We look forward to your presence at NACLIN 2019.
NACLIN-2018 Recommendations

The following recommendations emerged from the deliberations of the National Convention on Knowledge, Library and Information Networking (NACLIN-2018) which was organised by DELNET at Sai Priya Beach Resort, Visakhapatnam from October 4-6, 2018:

Libraries

1. KYC should be introduced in libraries to know about the interests and precise requirements of library users.
2. ‘Know Your Library’ posters should be displayed in campuses.
3. Digital Literacy Forums should be started in libraries.
4. Libraries should maintain user-driven policies.
5. User-retention policies should be drafted in different types of libraries.
6. The LIS professionals should ensure that whatever services are provided by them are valued by their library users.

Technology

1. All libraries should have at least minimum technology support and work towards improving it regularly. Mobile Apps should be made available for using libraries.
2. Virtual issue/returns should be introduced in libraries.
3. Using the latest technologies printed books should be browseable.
4. PDF readers to convert text to audio files should be introduced.
5. To manage library traffic, Apps for Gate-in and Gate-out are useful.
6. Open source software and resources should be used more by libraries.
7. A number of E-library applications are available which should be used by libraries.
8. Incubation centres should be introduced in IITs, university and research libraries.
9. Customer relationship management software should be used in libraries.

Training

1. In all educational institutions including universities, colleges and schools, education imparted should be library-centric so that students have access to quality content and libraries get involved in educational processes in academic institutions.
2. There is a need to train the trainers who in turn should train LIS professionals on a regular basis. Training programmes need to be evolved by State Governments, Ministry of Culture, Government of India and the concerned Ministries and Departments.
3. Academic library staff and teachers in the Departments of Library and Information Science in the universities should be interchangeable.
4. Training in the art of listening and verbal communication should be imparted to LIS professionals.
5. DELNET should provide training regularly to LIS professionals in different parts of the country.

Public Libraries

1. Raja Rammohun Roy Library Foundation (RRRLF) should focus more on rural libraries.
2. State Governments should send proposals to RRRLF for financial support.
3. Library Associations should promote awareness about the
need for Central Government and State Government support for developing public libraries.

4. Library Associations should ensure that the finances collected through Library Cess are spent on development of public libraries and their services.

5. Library Associations, NGOs and Foundations working for the promotion of public libraries should lobby for getting CSR funding for public library development.

6. Public libraries should be happening centres with TV shows, DVD-based programmes on science and technology, etc.

7. In order to serve the public in large numbers community centre services should be offered by public libraries.

8. Collections of village libraries should be developed and acquired according to the precise needs of villagers. State Library Planning Committees should look into this issue.

9. Public libraries in villages should prepare a village register for offering community services.

10. Private/public libraries should introduce such resources and services in their libraries so that they can attract financial support from the public.

11. Organise extension activities in public libraries including meetings of local groups and lectures.

12. Publicise the results of surveys already done and act on the recommendations.

13. Each public library should have something for every segment of the population.

14. Public library resources and services should be user-friendly so that the public including their families begin using public libraries.

15. E-libraries need to be established by State Governments and other agencies interested in the development of public libraries.

Government Libraries

1. Census of government libraries should be completed.

2. Library staff should be associated with the organisation and management of documents being generated in the government departments.

3. Libraries should deliver government services including railway time tables, etc.

Resource Sharing Among Libraries

1. DELNET is the best resource sharing library network in the country. More and more libraries should use DELNET for resource sharing purposes.

Promotion of Library Awareness

1. Articles on the relevance of libraries in the current ICT revolution need to be published in the newspapers.

2. Prizes should be instituted for librarians offering outstanding services in public libraries.

Policy Document

1. DELNET should prepare a White Paper on Libraries and Library Schools in the country.

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Number of Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andaman and Nicobar Islands</td>
<td>2</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>463</td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td>6</td>
</tr>
<tr>
<td>Assam</td>
<td>28</td>
</tr>
<tr>
<td>Bihar</td>
<td>31</td>
</tr>
<tr>
<td>Chandigarh</td>
<td>18</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>78</td>
</tr>
<tr>
<td>Dadra &amp; Nagar Haveli</td>
<td>1</td>
</tr>
<tr>
<td>Delhi</td>
<td>279</td>
</tr>
<tr>
<td>Goa</td>
<td>17</td>
</tr>
<tr>
<td>Gujarat</td>
<td>260</td>
</tr>
<tr>
<td>Haryana</td>
<td>326</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>58</td>
</tr>
<tr>
<td>Jammu &amp; Kashmir</td>
<td>28</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>25</td>
</tr>
<tr>
<td>Karnataka</td>
<td>265</td>
</tr>
<tr>
<td>Kerala</td>
<td>213</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>426</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>713</td>
</tr>
<tr>
<td>Manipur</td>
<td>4</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>6</td>
</tr>
<tr>
<td>Mizoram</td>
<td>2</td>
</tr>
<tr>
<td>Nagaland</td>
<td>3</td>
</tr>
<tr>
<td>Odisha</td>
<td>111</td>
</tr>
<tr>
<td>Puducherry</td>
<td>26</td>
</tr>
<tr>
<td>Punjab</td>
<td>224</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>320</td>
</tr>
<tr>
<td>Sikkim</td>
<td>7</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>869</td>
</tr>
<tr>
<td>Telangana</td>
<td>573</td>
</tr>
<tr>
<td>Tripura</td>
<td>5</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>773</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>75</td>
</tr>
<tr>
<td>West Bengal</td>
<td>104</td>
</tr>
<tr>
<td>Bhutan</td>
<td>1</td>
</tr>
<tr>
<td>Nepal</td>
<td>3</td>
</tr>
<tr>
<td>Oman</td>
<td>4</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1</td>
</tr>
<tr>
<td>Philippines</td>
<td>1</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>8</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>3</td>
</tr>
<tr>
<td>USA</td>
<td>2</td>
</tr>
</tbody>
</table>

Total 6362

NACLIN 2019 will be held at Hotel Shourya Garh Resort, Udaipur, Rajasthan - City of Lakes from September 18-20, 2019
The details are available at www.naclin.org
ICRL 2018 - A Report

The three-day International Conference on ‘Reshaping Libraries: Emerging Technologies and Trends (ICRL 2018)’ was held from February 1-3, 2018 at Hotel Royal Orchid, Jaipur. The conference was organised by DELNET- Developing Library Network and Ambedkar University Delhi in association with SLA, Asian Chapter and SLP. It was attended by nearly 175 delegates and experts from various parts of India and countries including USA, Germany, Belgium, Russia, Indonesia and Switzerland. The experts deliberated on the issues concerning the reshaping of libraries to make them more relevant and discussed the emerging technologies and trends which impact libraries. ICRL 2018 was supported by the organisations including RRRLF, CSIR, ICMR, and JECRC University, Jaipur. The conference was inaugurated with the lighting of the lamp. The Welcome address was delivered by Dr. Sangeeta Kaul, Network Manager, DELNET and Dr. Debal C. Kar, University Librarian, Ambedkar University Delhi. Dr. P.K. Jain, Librarian, IEG and Secretary, SLP gave the introductory address. Dr. Labibah Zain, President, addressed the delegates. She emphasised the need to create links between the libraries and library users. She apprised the delegates with the activities of the SLA Asian Chapter. It was followed by the Guest of Honour address by Prof. Paul Niewenuhsen, Vrije Universitate, Brussels, Belgium. Prof. Paul gave a strong one-line message and said: “We are here to create a better world” and recommended the roles librarians could play in this regard. Dr. Manoj Panda, Director, IEG delivered the address. He dwelt in detail on the big data analytics and the challenges encountered. He said that we need to focus on some of the most deprived sections of society and to derive benefits from the big data analytics. The chief guest, Prof. Roshan Lal Raina, Vice-Chancellor, JK Lakshmipat University, Jaipur released the pre-conference publication containing 17 papers. The talking points of ICRL 2018 was also released. Prof. Raina in his inaugural address said that library professionals have to play a proactive role rather than a passive role in research, teaching, training, etc. He observed that more emphasis should be laid on information quality rather than on quantity. He spoke about various challenges including exponential expansion of information, changing tools and techniques for E-resources, interactive technology, open educational resources, shrinking library budgets, etc. He also discussed in detail the changing roles and
responsibilities of library professionals. He stated that these challenges should be turned into opportunities by being innovative. He felt that libraries have to move from quiet places to happening places and there should be more social spaces in libraries. Dr. H. K. Kaul delivered the presidential address. He reiterated the need to transform society by educating people and by offering knowledge-based services to them. He also felt that information pollution is taking place due to the exponential unchecked flow of information and the biggest challenge is to select the quality content. He noted that the LIS professionals are at the cross-roads and said that we have to work to ensure that the socio-economic conditions of people are improved. He said that technology cannot help in selecting the most relevant content and professionals have to work to filter the most relevant content and to offer personalised services. Ms. Alka Rai, Assistant Librarian, AUD presented the vote of thanks.

The first Technical Session was devoted to ‘Reshaping Libraries’ and it was chaired by Dr. R. K. Chaddha, Former Addl. Secretary, Parliament Library, New Delhi. Dr. Dinesh Kumar, Asstt. Librarian, AUD was the Rapporteur. The first invited paper on ‘Emerging Global Trends: What is Relevant to Libraries and Why Should it Matter to You?’ was delivered by Ms. Anjana H. Bhatt, University Librarian, Florida Gulf Coast University, Florida, USA. The second Technical Session was devoted to ‘Digital Innovations and Technologies in Libraries’. Dr. Bernd Markscheffel, Chair of Information and Knowledge Management, Faculty of Economics and Media, Technische Universität Ilmenau, Germany, was the chairman of this session and Mr. N. K. Wadhwa, CSIR-NPL, New Delhi was the co-chair. Ms. Alka S Rai, Asstt. Librarian, AUD was the Rapporteur. The first keynote paper on ‘Information Discovery Based on the Emerging Technology to Analyse Digital Images’ was presented by Prof. Paul Nieuwenhuysen, Vrije Universiteit, Brussels, Belgium. He said that information discovery was enhanced by recent methods that involved accessing images. He added that search by images was evolving into a powerful method to tackle information needs that are difficult to handle with more classical methods. He added that information discovery was assisted by automatic classification of images and by recommendation services based on image similarities. The second keynote paper on ‘S&T Development Strategies to Meet the Challenges of Emerging Technologies’ was delivered by Prof. (Dr.) Vladimir Zavarukhin, Director, ISSRAS Moscow, Russia. Dr. Zavarukhin mentioned that there was the need to
ensure the readiness of a country for major science and technology challenges, in particular caused by emerging technologies. He stressed the need for the creation of an efficient system of communication in science, technologies and innovations. He felt that there was the need to frame policies to develop the technology culture in a country. The next keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do. Another keynote paper on ‘New Directions in Discovery’ was delivered by Ms Athena Hoeppner, Discovery Services Librarian, University of Central Florida, Orlando, USA. She observed that since an information explosion has taken place, the discovery of appropriate information resources was becoming a must. She described the types of jobs discovery librarians had to do.
Dr. P. R. Goswami and Dr. P. K. Jain

second day was devoted to ‘Managing Knowledge and Change in Libraries’. It was chaired by Mrs. Anjana H. Bhatt, USA. The co-chair of the session was Mr. Nurdin Laugu from Indonesia, Mr. Deepak Yadav, Sr. Network Asstt, DELNET was the Rapporteur. The first keynote paper ‘Digitisation Sharing in the Canton of Jura, Switzerland’ was delivered by Dr. Jean-Marc Comment, Project Manager, SIGMA, Cultural Office, Canton of Zurich, Switzerland. He observed that the Canton of Jura is a small state in Switzerland and the pilot project of the State Library was to archive 50,000 pages of paper documents including digitisation of photographs and maps. He felt that we did not know who were the final users of this archive and we had to adopt many marketing strategies to attract users. The second keynote paper ‘International Cooperation Among Libraries: The Role of Knowledge Centres’ was delivered by Dr. H.K. Kaul, Director, DELNET, New Delhi. He presented a detailed paper on how cooperation was essential among libraries around the world in developing and presenting quality resources that could fulfil the needs of users.

The fourth Technical Session on the second day concluded with the dinner at Chokhidhani in Jaipur.

The first day concluded with the dinner at Chokhidhani in Jaipur.

Dr. Hildrun Kretschmer and Mr. Theo Kretschmer

(Government of India), New Delhi and Dr. P. K. Jain, Librarian, Institute of Economic Growth, Delhi. They felt that the national statistical system was an integral part of the knowledge base of the countries in all developing and developed countries. The system created information in various forms and it was used in decision-making. Dr. Goswami said that LIS professionals should be conversant with such resources. The next keynote paper on ‘Cooperation and Networking of Libraries Through DELNET: The Indian Experience’ was delivered by Dr. Sangeeta Kaul, Network Manager, DELNET. She highlighted the contributions DELNET was making in offering networked resources to libraries and their users. The third paper on ‘Effectiveness of Library Promotion through Instagram at the Library of the Sunan Kalijaga Yogyakarta’ was delivered by Sri Andayani, LIS, UIN Sunan, Kalijaga Yogyakarta, Indonesia. She affirmed that the use of Instagram was effective in library promotion and felt that the library of UIN Sunan Kalijaga needed to increase appropriate resources that could fulfil the needs of users.
content in several formats through knowledge centres. He conducted a survey of fifty knowledge centres around the world to elucidate his plan of international cooperation in information management. The next paper on ‘Modes of Information Services and Resources in Libraries of Engineering Colleges of Rajasthan’ was presented by Dr. Pradeep Kumar, Librarian, Government Women’s Polytechnic College, Jaipur. He felt that there was a shortage of resources in terms of finance, manpower and materials in engineering colleges.

The fifth Technical Session on ‘Global Trends in Managing Human Resource in Libraries’ was chaired by Dr. P. R. Goswami. Dr. Anita Gangrade, Senior Librarian, IILM-AHL, Jaipur was the Rapporteur. The first keynote paper on ‘Education in Library and Information Science (LIS): Results of Case Studies in the Special Field of Infometrics’ was delivered by Mr. Bernd Markscheffel, Chair of Information and Knowledge Management, Faculty of Economics and Media, Technische Universität Ilmenau, Germany. The paper was co-authored with Yuan Sun and Masaki Nishizawa, Asstt. Prof., Information and Society Research Division, National Institute of Informatics, Tokyo, Japan. He gave an overview of LIS education with special reference to informetrics in Germany and presented a comparative study of the educational situation in informetrics in Japan and Germany. The second invited paper on ‘Communicating Our Value as Health Information Professionals: Are We Worth It?’ was delivered by Ms. Nalini Mahajan, Medical Library Director & Web Master, Marianjoy Rehabilitation Hospital, Wheaton, Illinois, USA. She focused on how the library staff were contributing greatly to the health information system in the US. The next keynote paper on ‘Between Imaging Politics and Professional Culture in Managing Islamic University Libraries in Yogyakarta: An Analytical Study of Inclusive Leadership’ was delivered by Dr. Nurdin Laugu, Lecturer, LIS Dept, Faculty of Adab & Humanities, UIN Sunan Kalijaga, Yogyakarta, Indonesia. He felt that leadership roles were essential for LIS professionals in managing proper delivery of information to users. The next paper on ‘Meeting LIS Competencies to Serve an Inclusive Community Through Curriculum: Case Study in LIS Study Programme, UIN

Dr. Sangeeta Kaul

Dr. Jean-Marc Comment
Sunan Kalijaga, Yogyakarta, Indonesia was delivered by Marwiyah, Library and Information Study Programme, UIN Sunan Kalijaga, Yogyakarta, Indonesia. She felt that inclusive education in LIS schools was essential. They had developed a curriculum that considered the values of the parent institutions and inclusive campuses through offering five courses which comprised inclusive values.

The sixth session on ‘Library User Engagements and Services’ was chaired by Ms. Padmaja Muralidharan, Sr. Librarian, Nanyang Technological University, Singapore. Mr. Deep Singh, Librarian, MNIT, Jaipur was the co-chair. Dr. Akash Singh, Asstt. Librarian, NLU, New Delhi the Rapporteur. The first keynote paper on ‘Promoting Library Services in the Academic World’ was delivered by Dr. Labibah Zain, President, SLA (Asian Chapter). She cited examples from the Indonesian experience and felt that services to users needed to be done proactively. The second paper on ‘The Pattern of Utilisation of Digital Collection and its Level of Usability in the Electronic Repository at the University Library of Universitas Islam Indonesia (UII)’ was delivered by Dr. Nurdin Laugu, Lecturer, LIS Dept, Faculty of Adab & Humanities, UIN Sunan Kalijaga, Yogyakarta, and Arina Faila Saufa, LIS Dept, UIN Sunan Kalijaga, Yogyakarta, Indonesia. They felt that the average use of digital collections by users was low and needed to be enhanced. The next paper on ‘Service Quality in Academic Libraries: Case Studies from Delhi’ was delivered by Dr. K. Madhavan, Librarian, GIBS, New Delhi, co-authored with Ms Sangeeta Narang, AIIMS, New Delhi; Ms Neha Chandel, FIIB, New Delhi and Ms Jyoti Sharma, GIBS, New Delhi. He maintained that academic libraries were competing with many commercial and non-commercial services to provide access to appropriate information. He said that there was a need to provide excellent personalised services to users. The next paper on ‘Users’ Study and Expectations in an Engineering College Library in Batanagar, a Town Situated in Extended Kolkata: A Case Study’ was delivered by Dr. Lopita Mukherjee, Librarian, St. John’s Diocesan Girls’ Higher Secondary School, Kolkata. She felt that mostly students came to libraries for academic purposes. They mainly took subject books and used very few magazines and journals. Also, she said that very few of them used E-books and E-journals. The last paper on...
‘Revitalisation of Alternative Library, Yogyakarta, Indonesia’ was delivered by Okky Rizkyantha, Hadira Latiar and Fuad Wahyu Prabowo, LIS Department, UIN Sunan Kalijaga Yogyakarta, Indonesia. Their study described the relevance of Community Reading Parks. They also highlighted the role being played by TBM Asakura Ruma Asa in organising training and parenting activities.

A panel discussion was organised on February 2, 2018 after the last Technical Session on the theme of the conference ‘Reshaping Libraries: Emerging Global Technologies and Trends’. The panelists included Ms. Athena Hoeppner, Prof. Paul Nieuwenhuysen, Dr. Labibah Zain, Dr. P.R. Goswami and Dr. R.K. Verma. The panel discussion was chaired by Dr. H.K. Kaul. In his introductory remarks, Dr. Kaul said that the discussion was divided into the main six themes of the conference, namely, ‘Reshaping Libraries’; ‘Digital Innovations and Technologies’; ‘Building Collections and Connections’; ‘Managing Knowledge and Change’; ‘Managing Human Resources’ and ‘User Engagement and Services’.

On ‘Reshaping Libraries’, Dr. Labibah Zain felt that there was a shifting paradigm taking place in libraries which included from paper to the paperless environment; use of creativity in solving library problems, from exclusion to inclusion, from oral to written, from individual to networking among other issues. She observed that librarians needed to be empowered and should be imparted skills to handle the public and should have related skills including research skills, language skills and marketing skills. Dr. P. R. Goswami felt that the use of the physical library has diminished. While universities and other educational institutions need libraries but the relevance of these libraries was diminishing. There should be pressure groups to convince the authorities to spend on the maintenance and functioning of libraries. He regretted that we were not able to get good talent in libraries and added that we should have quality assurance measures applied in library schools. Ms. Athena Hoeppner, however, said that at the University of Central Florida adequate attention was given to group studies, Internet use, etc. While responding to Dr. Kaul’s question of relevance of makerspaces, she felt that library users were showing great interest in the physical creation of objects in
m. makerspace programmes.

Dr. Paul Nieuwenhuysen maintained that there were two trends emerging. The first is, as we buy many E-books and E-journals, physical libraries are becoming less important and secondly we were getting rid of physical journals and books. He felt that it was paradoxical not to read books but to get together to exchange information. Among the audience it was noted that there were technology-driven changes taking place and there was the need to change curriculum in library schools. It was also noted that library vendors were taking librarians for a ride as librarians did not maintain archives of what they subscribed to. Mr. Deep Singh felt that libraries should work as multipurpose community centres. On the use of digital innovations and technologies, Dr. Labibah Zain noted that technology is only a tool and we have to work with it. Dr. Goswami said that in big libraries 80 per cent of time is spent on negotiations with publishers. He observed that social science literature was region-specific and it needs to be developed and promoted.

Ms. Athena Hoeppner felt that artificial intelligence has a great deal to contribute but we need to have librarians as scholars. She felt that librarians had a role to play on what we were buying and why. Dr. Paul Nieuwenhuysen maintained that librarians’ main role was to manage collection development and create a user interface. Libraries need a high level of technology experts. Dr. P. K. Verma felt that we must improve digital literacy. On building collections and connections, Dr. Labibah Zain emphasised that we needed common ideas for the public to use licensed information. She felt that publications of research funded by government should become free for all to use. Dr. Goswami affirmed that we should promote the open access movement. Ms. Athena Hoeppner said that good content was becoming available through the open access movement. Dr. Paul felt that there was no problem in accessing content in Belgium but when he went to smaller countries he faced many hurdles. He advised that sharing of resources was necessary and needs to be promoted. He felt that there was a divide growing among information rich and information poor people. Participants in the audience felt that the same job should not be done twice and there is a need for cooperation among libraries. Dr. N. K. Wadhwa said that the development of institutional repositories should be promoted. On managing the change in libraries, Dr. Labibah Zain said that we needed better human resources in libraries. Dr. Goswami felt that we needed good continuing education programmes and added that it was difficult to eradicate the present system. Ms. Athena Hoeppner recommended the use of sophisticated technologies in libraries. Dr. Verma maintained that technology can only inspire. We need to consolidate suitable content and experience its use. Mrs. Nalini Mahajan from the US said that in medical librarianship partnerships with hospital libraries and information centres was necessary. She added that the personality of a librarian and his persuasive efforts in collecting and offering the required information was very important. Dr. P. K. Gupta, Former Deputy Librarian, University of Rajasthan said that librarians were becoming a vanishing tribe and felt that there should be alumni and associations of librarians that should promote talent among LIS professionals.

To promote user engagements and services, Dr. Labiba Zain said that there should be digital cafes in libraries. Dr. Goswami noted that libraries should introduce scholarships and fellowships for scholars to work on projects in their libraries. Dr. Paul said that electronic media should be used to serve library users and Dr. Sangeeta Kaul said that personalised services should be offered by librarians. The Chair Dr. H.K. Kaul in his concluding remarks observed that according to
survey results the library profession will be marginalised by 2030 and that there are also predictions that the role of competent librarians and archivists will become important in future. He said that technology-driven changes are much faster than the LIS professionals can manage those changes. It is certain that the use of technology as a tool by scholarly LIS professionals will become necessary. He felt that the librarians' role in selecting quality content was becoming more relevant and important every day, and open access content needs to be made more standardised to allow everyone to have access to reliable content. He advised that there was the need to promote international cooperation and collaboration and the establishment of knowledge centres would help in conserving financial resources and increase access to necessary and sufficient quality content on each subject and topic around the world. Change in libraries exists but it is not being adopted by most libraries. Those who adopted it as per the needs of their users would progress well. He remarked that good students needed to be attracted to the LIS profession and qualified and skilled teachers needed to manage library schools. He added that the information requirements of users needed to be ascertained through surveys and offering of personalised services using IT which would be essential in future.

The second day was concluded by a valedictory session in which the Rapporteur-General Dr. Sangeeta Kaul presented a brief report of the conference which was followed by the views of the participants. The presidential address was given by Dr. H. K. Kaul and a vote of thanks was given by Dr. Debal C. Kar, Dr. Sangeeta Kaul and Dr. P. K. Jain. On the third day a visit to the library and museum in the City Palace, Jaipur was arranged which was much appreciated by the participants.
Mrs. Anjana H. Bhatt, University Librarian, Florida Gulf Coast University, Florida, USA delivered the DELNET Annual Lecture during the ICRL-2018 on February 1, 2018 at Jaipur. The topic of the lecture was ‘Emerging Global Trends: What is Relevant to Libraries and Why Should it Matter to You?’. She started with a reference to the ‘Top Global Trends’ identified by ALA, ACRL and LITA. She said that we should not make our libraries just a storehouse of books with minimum staff and advised library professionals to participate in library projects that can be worked collectively in order to develop shared interests and strategies. She stressed that we should develop user-friendly spaces in libraries and felt that we needed to scrutinise the copyright laws concerning derivative and transformative works in relation to the fair use doctrine. She said that there has been a shift towards using E-resources in order to free valuable spaces in libraries and stressed that there was the need to have space for Collection Analysis Projects and introduction of Media Rooms. She opined that there is the growing need for having quiet study spaces for serious research in libraries. Mrs. Bhatt felt that there was the need to collaborate with local organisations in order to offer them the library’s digital content for short reading. She maintained that in order to increase the usage of our resources the use of LibGuides is turning out to be very useful. It would help in curating knowledge and sharing of information. In order to offer value-added services libraries could guide patrons on preparing bibliographies and offer regular and personalised services which forms part of embedded librarianship.

Mrs. Bhatt said that it would also be important if libraries offered instruction in new skills and introduced learning activities which would benefit students and the public. She added that there was the need for public libraries to introduce such strategies that would make libraries the centres of learning activities. Mrs. Bhatt affirmed that the reference service should be technology-based as most of the content was growing in the digital form. Online and text-based reference services would expand the scope of services in libraries. This service would be further strengthened if libraries used cloud computing and offered help in using open source publishing. She spoke about Omni Reference, Question-point, Vienova and Library H31p, desktop sharing apps to provide reference service by Co-Browsing. She further felt the need to introduce gamification-based platform for library orientation and classroom teaching. She stressed the need to introduce ‘Makerspaces’ in libraries to provide open environment, space and tools in order to take advantage of technology or improved communications and use it for a better cause. Mrs. Bhatt said that libraries should adopt new functions, provide spaces and opportunities for group interaction, resource sharing, creating and co-creating content for individual or community use. She said that the makerspaces should provide access to a wide variety of software tools for hands-on learning activities. She observed that libraries should adopt strategies that establish your own library as the centre of community engagement that welcomes diversity and people from all walks of life and social status. In connection with the outreach services of libraries she preferred to use the social media, especially Facebook, Instagram and Pinterest. She was of the opinion that the use of robots would be supportive to library professionals. With regard to the planning for the growth of library services, she said that library professionals should look outwards and therefore, plan, move with the times, evolve, develop and educate their users. She felt the conducting of SWOT analysis would help in the better execution of library functioning and cited various examples of libraries where the latest ALA guidelines were being implemented.
Cyber Hygiene and Online Safety

To mark National Technology Day on May 11, 2018, DELNET organised a lecture by Captain Vineet Kumar, President, Cyber Peace Foundation, Ranchi, Jharkhand on ‘Cyber Hygiene and Online Safety’.

Dr. H.K. Kaul, Director, DELNET presided over the lecture. Dr. Kaul said that the subject of cyber security is becoming very important for all of us at an individual level and especially in libraries where we hold data. He added that our concern in libraries is paramount since we have so much data and every day we add new data to it. At the national level, he said, the data in the country has to be safe, protected and there are global issues as far as data security is concerned. He added that there are hackers who work from different parts of the world. They work at individual, institutional and also at governmental levels. He said that as a result the cyber wars are on. “We do not see them, but over the past 15-20 years we have seen that these wars are continuing which means that we are under threat. We as library professionals should be concerned”.

Dr. Kaul added that this topic was more important because the librarians will have to play additional roles in their institutions to secure data.

Captain Vineet Kumar said that according to Dr. Kaul, time is changing very rapidly and the cyber wars are continuing, though we do not see them. But each time there are enemies or hostile countries that are trying to hack our information systems, business information, defence information, information of various ministries, etc. and that needs to be stopped.

Captain Vineet Kumar, President, Cyber Peace Foundation at the start of his presentation said that it is an issue of cyber safety and the hacks basically, it is a fight between the good guys vs the bad guys and there are categories of hackers. It starts with Black Hat, then the White Hat and then the third one is the Grey Hat. Black Hat are the hackers who do something offensive or destructive. All the scams and frauds that are happening on a day-to-day basis are done by the Black Hats. White Hats are the security experts. The process is the same. It is the same process through which you secure or you hack or destroy. It is the same process, but here the ethics arise and then that is why they are called the ethical hackers or the White Hat hackers or the security experts. Generally it is called White Hat. The third category of hackers is called Grey Hat hackers. Consider this as a boundary, on one side of the boundary you have the Black Hat, on the other side of the boundary, you have the White Hat and Grey Hat hackers who sit in between. It depends on the motive and their preference. They can shift sides. Sometimes they become destructive, at other times they help the government. The best example could be China. “You will be surprised to know and you can also do a Google search. China has set up a complete academy of hackers. They are giving government jobs to hackers and it is believed that there are 1 lakh hackers in China. “They are selected from schools and universities”. He added that “they will not deface you. They will silently hack you so that you do not detect their presence. They steal your data, steal all your research data, especially in academia where there is extensive research going on and then replicate it in their countries”.

Captain Kumar mentioned that he had been receiving many comments. In fact, several people said to him: “Hamare saath kuch nahi ho raha, everything is going on fine. We have no security and yet nothing had happened to us”. Captain Kumar added that if one did not see any suspicious activity or any kind of attacks happening on our phones that did not mean that they were safe. He said that things are happening silently. We tend to leave our phones online 24x7. Captain Kumar said, “Hacking is very simple. Anyone can become a hacker. It is not a complete techie job that one needs to be a complete techie or complete coder to become a hacker. It is very simple...
nowadays. It is one program utility where you enter the IP addresses to search. For example, you could enter BSNL, Vodafone and their particular IP range and it will search the entire Internet, entire IP range for live IP addresses and then hack”. He added, “Our phones get turned into a spy phone. Anybody can listen to the conversation silently. We are not making a phone call. It is just lying here and the criminal can hear us talking. He can switch on the camera and the camera will record what is going on. We will not be aware that the camera is on. Such things are happening. The criminal will have access to all our messages, our WhatsApp, our text, our contact information, our messages. All the accesses will be given to the cyber criminal and he can be located in a remote country. He is not required to be here in India. These are things that are happening.”

Captain Kumar had a few statistics to show. He referred to a very famous image. In 2017 somebody released the 2017 Internet minutes. One Internet minute that we spend on Internet we have around 4,52,000 tweets in one Internet minute, around 10 lakh swipes on tinder, 9 lakh logs on Facebook, every Internet minute on Google we have 3.5 million search queries, on Netflix around 70,000 hours of video are being watched and 18 million text messages on WhatsApp. He added, “Digital India is contributing immensely to it, because our digital crowd is growing now. In the recent IMA (Internet Messaging Administration) report where around 600 million users are connected to Internet, it is also believed that we will have 1 billion connections by 2020. But what worries us is the connected devices that are going to happen. In the future everything will be connected. We can watch everything on our mobile phones. We can track everything on our mobile phones, what’s going on, what is the status of our clothes, whether the clothes are dry or wet? We can monitor the status and probably instruct the devices to act. The current human population is somewhere around 7 - 7.5 billion. By 2020 we will have 30 billion Internet connected devices that is almost 4 times that of the human population. There will be a complete change in the environment.”

Captain Kumar observed: “Essential technologies like AR, VR, blockchains, Artificial Intelligence etc. are appearing in a really big way. There is a device to show us how the AI functions. We have drones coming in. We swipe our cards through that particular POS machine which is fixed to the drone and it goes off. That is the change in technology that is going to come up and in fact an innovation that will happen.”

Commenting on future developments, Captain Kumar said: “Have you heard about Sophia? It is a humanoid robot. Earlier we used to program robots in such a way that they delivered a particular function or activity. Today thanks to AI, we need not program a particular robot. The robot has a memory of its own. Sophia can interact with you. You say hello to Sophia and Sophia will respond. You say, ‘I love you Sophia’ and Sophia will revert to you. Now the recent report is that Sophia wishes to start a family of robots. So you will have robots all around.”

He added, “Have you seen the Amazon Alexa ad? You say, ‘Alexa play a song, Alexa buy something, I need a pizza’. Alexa adds that to the cart and the pizza arrives on our doorstep”.

Captain Kumar referred to the innovation in which the Google Assistant or Amazon Assistant can call anyone in our voice. We just need to enter our voice sample into the program and then the Assistant can make a voice call on our behalf. One is not there physically but then the Assistant takes care of the entire operation. That is the innovation that is anticipated and also the challenges are coming in, challenges like drones are getting hacked. Captain Kumar affirmed that Brain-to-Brain communication was also getting closer. “Now we just need to think, we need not say anything. We just think and the same message will be conveyed to any part of the globe. The world is changing and the changed world looks slightly different. The connected world is where everything is getting connected.”

Captain Kumar referred to Dr. Kaul’s mentioning cyber warfare. “Earlier it was any kind of war, it was generally with big armies and powerful weapons. In fact, good strategy wars today in all the countries like America and China are preparing for cyber warfare. Cyber space has already been announced as the fifth dimension of warfare other than land, air, sea and space. The cyber space is more powerful than nuclear weapons. We can deliver entire attacks in a small pen drive which can cause more damage than nuclear weapons”. Captain Kumar’s small video illustrated the points being made.

Captain Kumar referred to the smart dust, based on nanotechnology, that can absolutely penetrate inside the room which one cannot see. It is invisible, comes in the form of dust and then it can steal data and do whatever it has been programmed for. Out of this in fact there are a few terms and definitions which Captain Kumar used repeatedly in his presentation but two of them – vulnerability and exploitation, are the two terms on which the entire hacking and cyber crime are dependent. Vulnerability, he said is very simple. “It is like a weakness. Weakness can be in our mobile phones. The mobile phone that we have has around 65,000 open doors and windows and these are virtual. There is a complete operating system with so many ports and it is not
secured properly. All that the cyber criminals need is one single port or one single entry point to enter a mobile network or get inside our phone to hack us. Exploitation is just exploiting the weakness or the vulnerability of that particular phone, mobile network or computers. So it is just weakness which gets exploited.”

Captain Kumar said that gone are the days when we used to talk about viruses, worms or Trojan. “Now is the era of zero days and bot nets. Zero days are unknown vulnerability, for example, we use an Android phone. The creator of the Android operating system, Google is also not aware that there is a bug in the phone. So that becomes zero day and the other one is a bot net which is like the network of compromise machines. For example, if we download pirated songs from sites like songs.pk or if we download pirated movies from torrent sites then we are vulnerable. That is the place they try to enter our network, connect all the vulnerable machines to their network and then they can use our computer or our phone like remote control. They can hack us and steal our data. They can attack somebody from our resources, from our mobile phones and cause considerable damage to us. Today cyber space is being used as a battleground. The best part about a cyber attack is that they do not have a boundary and they can impact a single person in a large-scale organisation. These attacks can be tailor made. Some attacks can be coded within a few minutes, which are simple and there are other advanced, sophisticated attacks as well.”

Captain Kumar referred to the Stuxnet, the malicious computer worm which is believed to have caused substantial damage to a nuclear programme.

Captain Kumar added that online trafficking terror groups are using Botnet. Mirai is one such example of it. This attack is still on in India. We have recently traced some instances but Mirai again made use of small appliances like our CCTV camera. When we started researching, we found many CCTVs in Bangalore and in Mumbai where it was used to target this particular attack.

Captain Kumar also referred to the Amazon Alexa case. “The entire Amazon Alexa could be turned into a wire-tapping device. There is a mute button on that. If we do not press the mute button on this it is always in the listening mode. It will listen to all our conversations, whatever we say, everything that particular device will be listening and storing somewhere. It is better to press the mute button.”

Captain Kumar gave examples of cars, health industry, water supply, banks, factories, routers in homes for broadband connections, etc. and described how hackers can remotely control their functioning.

He also referred to the use of passwords. “We have seen many people leaving the default password to admin. Username is admin. Password is admin, that is a very unsafe practice and that is how the criminal gets access to our routers and networking devices. We would have to change the password. The moment we buy a router or a device or somebody comes to install it, we should ask him how to update the router. How do we change the password? There is a website called Shodan.io. It tracks all the vulnerable routers in the world. It will show that this router is vulnerable. This is the IP address and then for attackers it is an open platform. They know that our router is vulnerable. They simply launch an attack. D-link, Netgear, Asus, all that information becomes visible here”.

Discussing the concept further, Captain Kumar noted: “This is the underground market, the Internet ka chor bazaar. If I want to hit somebody with some ransomware, I just need to pay that person $10’. You have heard of software as a service, infrastructure as a service? This is cyber crime as a service. All you need to do is accept the subscription. I pay $10 to you, I give you a target, attack this institution or this university, encrypt them with the virus and I pay you $10. It starts with $10, goes up till $1,800 if the attack is very sophisticated.

“Next is the DDoS Attack ‘Distributed Denial-of-Service’ attack. This is the short duration attack which is for less than an hour. I am just giving you an example. If I want a university to be offline for an hour, I just need to pay $5 to $20 and the network will be offline during that particular time. If I want a specific time like the examination time or anything, I will mention the time and at that time they will ensure that the university goes offline. Stealing documents, credit cards, credit card information is also done because if they have access to your records they will actually look for credit card information. They look for any information that has your unique number or anything, everything can be done using the bot network or these underground markets.”

About data security, Captain Kumar said that it is possible that the routers we use, the data from that router could parallelly be going to some other country. He added that if you see the movie Snowden, it gives an idea why we should cover in front of our web camera.

He said that social media is a major challenge for the law enforcement. “It is very easy to ask why the police cannot monitor what is going on in the social media but for the police and law enforcement agency it is a big...”
challenge. The reason being that it is not just one social media but it is so many social media. Facebook and Twitter are just a few of them. Criminals operate on multiple platforms. They know how to remain anonymous. It is very difficult to track them. The biggest problem is when the criminal is in some other country. If he is in India the process is faster but the challenge occurs when a criminal stays in another country where we have to follow the proper MLAT process. We request them for data transfer via Interpol. First we file the case in our state then it goes to CBI, to Interpol and finally to the respective country. If the respective country is like China they can say that we are not responsible for the attack. The reason police take time to get and gather data is because not all data and servers are here in India. Mostly they are in the US and other countries which is a challenge. Monitoring is a very difficult task."

He added that all the social media networks do a proper mapping of us. "They collect extensive data, such as our likes and dislikes, the places we visit, where we stay, the location of our office." As Captain Kumar observed: "Like my GPS location as of now shows DELNET. If I come regularly to DELNET then they probably know that this is my office. So they know the location. At night if I am at that location it means that is my residence. They know me better than myself. A small device like FitBit monitors everything. It monitors your heartbeat, monitors the location, the area where you go for a run, your entire health activity. They would know that I am going to fall ill and maintain a record of everything. They are collecting data to that level."

He affirmed that it was important to secure ourselves when things are happening. If somebody shares something on WhatsApp it goes viral and many people can lose their lives. But the worst part is even companies are using the same thing against their competitors.

The social media has specialised in creating propagandas, messages and posters are distributed anonymously on any social network. They share the contents, get maximum likes, comments, etc. “As a result, all sorts of things are happening like children being kidnapped because of their posts and shares. Recently there was a discussion with the National Child Agency NCPCR that today children are totally digital. Their food, schools, visits to friends, and relationships are entirely digital. They post each and every activity. To protect our children, we need to be familiar with cyber parenting. Some parents are more restrictive. They do not allow their children to use any gadgets. But that is more dangerous. NIMHANS did a study and found that this is more disturbing for the children. They cannot stay away from technology and at times they take extreme steps. Today we have to handle matters very tactfully."

Captain Kumar said that in case of financial frauds, we should not accept any E-mail that we get. “We may get an E-mail like this—Dear customer, your Google account is about to expire. To prevent this confirm here. The moment you click you are gone. Similarly, ATM frauds, people are losing money. The most common way is cloning the card and recording the PIN and then they misuse the clone card.

“Next is phishing. For example, I have my account in SBI. www.onlinesbi.com is the website. A criminal makes it onlinesbii.com, with an extra i. You will think it is a genuine website. It resembles the complete SBI website. You enter the username, password and it is gone. Phishing is making fake calls, gathering card details, making illegal transactions and now gathering personal details, like Aadhaar details. Do not give your personal information. Your name and address can be misused and anyone can create a fake bank account in your name and transfer all the Hawala-related money into that account.”

Elaborating on the subject further, Captain Kumar showed the picture of an ATM machine and described the places you get the receipts, cash, insert the card and in a few machines envelopes as well. What was unusual was that there was an additional device on the slot where you could insert your card. It looked like a part of the ATM machine but actually it was not. It was something which had been fixed over it. He added that when the card goes into the machine, you get your card back but a copy of the card is created in the memory of this device. “Then it is very easy, you just need to connect this device to a card printer, duplicate cards get printed immediately, within seconds”. He also showed a picture for acquiring a PIN number. There is a camera kept inside the box which is monitoring the screen. The entire thing is in live stream. It is a wireless camera so one need not stay here or record or take the device and then see the recording. They can sit in a car in a 200m range and see what kind of transaction is happening.

Captain Kumar said that today if you do not give food to a child or to a youngster the person will be fine. However, if you do not give Internet to them they will go mad. Bullying has become a crucial issue as the social media, the technology and the cyber space is being used to harass or scare the child online. Many incidents have occurred. He said that the self-generated sexual content was creating a tremendous challenge to the colleges and universities. “On and off children get these messages. The entire lot is getting digital. They get into relationships online and they start sharing their photographs and contents. They take selfies and share adult
content online with their partners within 10-15 days of a relationship and then after the breakup that becomes a challenge. When the ex starts uploading the photographs to the sites it then becomes a major challenge to take. All these things are happening. Earlier it was a big challenge because of videos getting uploaded on the website. We did not know from where it had been uploaded but now there are technologies which track from which place the video has been uploaded.

Captain Kumar mentioned trolling lewd comments or remarks, sending objectionable images, sending spam links and forceful sexual conversation is called trolling. If somebody is sending too many requests of candy crush to you then that is also considered as trolling. If somebody is poking us too much on Facebook then that is considered as trolling. They can take action against that individual. We can complain against that person and there is a punishment and a fine. We can report it to the cyber cell in the respective state. Now the Ministry of Home Affairs is launching an integrated portal where all these complaints can be sent online. We do not need to visit a police station. It is police.gov.in’.

Captain Kumar also referred to a feature in WhatsApp, which is called ‘WhatsApp for web’. “If somebody gets access to our phone and says: ‘I am unable to make a call, can I have your phone for a few seconds?’ He will take your phone for a few seconds: there is a feature through which he can clone your entire WhatsApp conversation to a device that he has. Parallely, you will be receiving the messages, even he will be receiving the messages”. He added that there is a way to secure WhatsApp and you should always see whether somebody parallel is not accessing your phone, checking the settings of WhatsApp where it shows parallel connections that you have in your phone. If somebody else is accessing from some other location it will show.

He referred to Jamtara, a small village in Jharkhand. He said, “It has become the hotbed of low tech cyber crime. It is the crime capital. Every house now is a multistoreyed building. Four years ago nobody had money to have meals three times a day and suddenly a change occurred. One day somebody appeared and did a skill development exercise and now today they are fully skilled. It is a complete cottage industry. This is Jamtara and it is very difficult to get in there because they are very close to the forest. The moment the police come in, they get the info and escape to the forest and continue with the crime. Get up early in the morning, pick up a toothbrush, pick up the phone and call the list and get started from there”.

Coming to the security tips, Captain Kumar said: “One is the password. If you have passwords like your car number, your wife’s name, your dog’s name, you will just see this and you will just get your answer whether it is secure or not. Do not keep anything which anybody else like any friend of yours can guess easily. Do not keep a password which is easy to guess. Keep a password which is difficult for anybody to guess. Some people keep their password as a toothbrush or underwear. Difficult to crack the password like any friend of yours can guess easily. Do not keep a password which is easy to guess. Keep a password which is difficult for anybody to guess. Some people keep their password as a toothbrush or underwear. Difficult to crack the password like any friend of yours can guess easily. Do not keep a password which is easy to guess. Keep a password which is difficult for anybody to guess. Some people keep their password as a toothbrush or underwear. Difficult to crack the password like any friend of yours can guess easily. Do not keep a password which is easy to guess. Keep a password which is difficult for anybody to guess. Some people keep their password as a toothbrush or underwear. Difficult to crack the password like any friend of yours can guess easily. Do not keep a password which is easy to guess. Keep a password which is difficult for anybody to guess. Some people keep their password as a toothbrush or underwear. Difficult to crack the password like any friend of yours can guess easily.

He referred to application, Lastpass. “That is the application we should use. There are many good applications and they are free of cost. But do not lose the master key. If you lose the master password then all passwords are gone. Never disclose security details. Do not assume an E-mail, phone call or text is genuine. Do not be rushed, listen to your instincts, stay in control. When going to an ATM machine check for skimmer. Try to pull that device, if something comes out it means something is wrong. Be careful while doing transactions on the highways where the ATMs are isolated. Be careful while swiping the cards at the Expo sites or when transacting at the Expo sites where you have a temporary ATM machine. In one such case it was a fake machine, collected all the cards and then showed a message that says ‘sorry there is some problem with the ATM machine, please collect the cards from the bank on the next working day’. At night a truck came, loaded this ATM machine and went away. These were all genuine cards, the application was custom built, they got the password too and then they did the transaction. Habits like sharing your PIN with someone for making payments. Do not do this”.

He added, “There is a very good security feature called Google authenticator. It is a second layer of security. One is our password and the second is a second password. Like in our bank transactions we enter the password and then the other OTP comes to us. We verify that OTP on our phone and thereafter the transaction gets processed. The same way in our E-mail or in our Facebook or Instagram now there is a facility called Two-step verification. This is the application we need to download–Google Authenticator. All the authentication is controlled through this”.

“Additional security steps: this is for the SBI card. SBI and Canara Bank cards have applications from where you can deactivate or activate a card. For example, if you have lost the card you can select that card and deactivate the card from the application itself on their official application. The defaults should be changed. If you have a default password anywhere like the PIN number which came from the bank, if you have still not changed the PIN number go and change the PIN number, please do so. If your Net banking PIN is the same that you have
When logging on Facebook or Gmail, Facebook, "never transact on http, because whatever post, like, comment or think before doing anything online, it is always think before liking anything. Think before posting anybody else’s photograph or before tagging anybody. If somebody is tagging you then you will get an alert that somebody has tagged you. Do you want to publish this photo in your Timeline and you want him to give that permission? You can control all these things. If you want to review your past post you can review your post and the security stating whether it was a public post, whether it was a friend’s post, all that preview can be done."

Regarding Apps and websites Captain Kumar said that there are many applications like ‘Know how much your boyfriend or girlfriend loves you’: ‘Know how much your wife loves you’: ‘Know when you will die’. These apps also collect extensive data, and then they can misuse your account. It is like Cambridge Analytica. Ensure that you review all these apps and websites, the kind of permissions they ask for, should be monitored, remove those applications. If you find any such application just click on ‘Remove’ and those applications will be removed from there. These are the settings, how do you remove it? Login generator, Two step verification: you have to enable it”.

Regarding Snapchat where the settings have been shared, Captain Kumar said: “All you need to do is follow the settings, the PDF you get, from there you can just take and follow these guidelines. Do not post intimate pictures, sextortion is very common. These criminals hack into your phone if they get something, they will start blackmailing you. Your location should be normally off but when using an app like Uber then it should be enabled but not always on. When using the app there should be the option. Do not add strangers, update security settings, system application like even the VLC player if you have an update on those players. Update individual applications on a regular basis. Review tags, login alert, don’t login from public Wi-Fi. If you are doing so then use VPN. Take time to know before adding anyone. Meet at a public place not at some secluded place. There are instances of kidnapping and murder cases that have happened. Tell someone of your plan, have an emergency plan. You can share this with your children. It may not be applicable for you but for your children. Keep sharing your location. Keep women safely app. Have someone on quick dial list. All this is shared. It is already there, probably we can just have a look at all the security tips. We should not download songs from pirated sites. It is very risky. We should always look for the complete URL.

Regarding Cyber Laws, Captain Kumar said, “Anybody who tries to steal or who attempts to hack our data comes to enable it”.

Now RBI has come up with a guideline. If any crime happens and if we lose money report it in three days and the bank will be liable. The bank will return the amount, if we report well on time. If any financial fraud happens, report it to the bank immediately. Do not share this OTP with anyone or any OTP that you get. Browsing history, if you are at a public place of computing like a cyber cafe is important. Browsing history contains a lot of information may be on the library networks also you might be browsing for many things. It stores a lot of history about your activity, the kind of work that you are doing and everything. Ensure that you remove them”. The best feature, Captain Kumar affirmed is the Incognito mode. “In the Incognito mode you can search without history being recorded. So there is no history that is recorded. Incognito does not store anything. Deleting search history is very simple. Got to History-clear browsing data. With your digital footprint think before posting anything, think before liking anything. Think before sharing anything, it is always think before doing anything online because whatever post, like comment you have made it remains forever”. He added that coming to the social media security and starting with the first Facebook, “never transact on http, when logging on Facebook or gmail make sure that the additional S is there and that https is green. It should not be red”.

“On the privacy setting, Captain Kumar said, “In account setting you get the privacy setting, it is to confirm who can see my stuff. It should be friends and not friends of friends. You know who your friends are but you do not know friends of friends. Otherwise all these people would see your post. You can block people whom you do not want. Who can see my friends’ list, only me. Who can contact me? If you found a friend then you can check his profile and send him a friend’s request. In the real world we do not allow everyone to enter our room, so in the virtual world why are we doing this? Ensure that settings are friends only. In tagging there is a feature like anybody would tag you without the permission. “First of all, tagging without permission is a crime. You have to seek permission before posting anybody else’s photograph or before tagging anybody. If somebody is tagging you then you will get an alert that somebody has tagged you. Do you want to publish this photo in your Timeline and you want him to give that permission? You can control all these things. If you want to review your past post you can review your post and the security stating whether it was a public post, whether it was a friend’s post, all that preview can be done.”
On how we report a crime, Captain Vineet Kumar said, “Our first response is always to save the URL whenever somebody has hacked our profile or if we have a fake profile save the URL of the profile, save the audio-video photo which is of potential evidence, screenshot entire PC or mobile with timestamps. Assess if you need help, visit the nearest cyber cell. Every state has a cyber cell. States like Maharashtra have cyber cells in every district. Report abuse—all these platforms that we have whether it is Facebook, Twitter, Instagram, Snapchat, x videos—they have the report abuse button. If we find a fake profile, we can go to Facebook from our genuine profile, share the link of the fake profile, and Facebook takes action within three hours. The other profile will be blocked. You do not need to go to a cyber cell to get that entire thing. Facebook will do it within three hours. For a child it is POCSO E-box where you can find child-related cyber complaints.”

Concluding his informative presentation, Captain Vineet Kumar said: “This is the Civil Society - Internet Watch Foundation is helping to take down any videos. If any video circulates which insults the modesty of a woman or if it is a child abuse material you just need to report here and automatically it will be taken down from all the platforms. Many sites have Web helplines like infosecawareness: we can see the complete list of states and what it is all about. At Cyber Peace Foundation we have been trying to do certain things. Most important is empowerment. Like today we try to empower you, now you are our representatives you can reach out. You can organise the same awareness session in your places, in your institutions and make children aware, make parents aware, students aware, senior citizens aware because everybody is a victim today. These are our activities that we have been doing with the children, holding round tables, establishing centres of excellence in the universities also to research on cyber security and last but not the least is my contact. You can reach out to me by E-mail vineet@cyberpeace.net and my phone number is 9570 000 065”.

In the question-answer session, Captain Kumar said that cyber attacks are happening because we do not follow the basic best practices and cyber security. “If you followed what I explained today, I would say in 99 per cent of the attacks you will be safe.”

On the subject of research, Captain Vineet Kumar observed: “The creators of AI have set up a group so that technology is not used to destroy mankind. At some point of time, we felt that research is proceeding in an uncontrolled manner. This group has been set up and now they are trying to see that it does not go into the other direction and it is not something that kills humanity”.

Captain Vineet Kumar’s comments on the AI program: Regarding fake apps, he said, “You can first see the ratings and then see how many downloads have been made of that app. Check the comments before installing the app. Google also has a Playprotect feature which shows whether this app is safe and verified or not.”

“Second, you add Internet security application in your anti-virus. These apps can be immediately detected. Disable third party app. When you buy a new phone you ask the salesman to add songs in your phone and other apps. He immediately connects it from his phone and shares many things. Do not do this”.

Regarding the Blue Whale Game, he said, “This game is very famous and it has multiple versions. This was specifically made for children to attract other children. They give small levels and then they give some goodies as well so that children play level 1, level 2, they get some goodies and become happy. They try to play some more levels. After a certain level there are some difficult challenges like walk on the terrace wall or railway tracks at 12 at night then you will get this. These children get attracted thinking they will get some bonus points and can buy stuff. They really map you, they find your location whether you are on the track or not. At a certain level they start blackmailing that I know who your mother is, I will kill them or I will kill your father. From that fear they do this kind of stuff”. Regarding government initiatives taken in this regard he gave the example of CER-Computer Emergency Response Team. “They have just released free anti-virus in collaboration with Quick Heal India and they have given several security measures that one needs to follow. Also there is a website CEDEC infosecawareness.in where you can get many tips and advice on what you should do and what you should not”.

Dr. Sangeeta Kaul, Network Manager, DELNET proposed a vote of thanks.
Sharing E-resources in the Digital Environment: The Emerging Challenges

H. K. Kaul*

The demand for sharing E-resources electronically is growing and there is a need to sort out the impediments in sharing these resources. The impediments include the publishers’ restrictions, incomplete copyright provisions, high cost of E-resources, inability to add value to copyrighted E-resources owing to restrictions, etc. These resources include documents available in digital form and available through the Web. The author explains the importance of sharing E-books and E-journals services within the constraints and restrictions. Steps needed to be taken in this direction are also highlighted. Product licensing issues are discussed and also the important global reports on solving difficulties faced by libraries in managing digital content. Fair use provisions are explained both from the Indian copyright point of view and that of the US copyright laws. The paper makes recommendations for removing restrictions in resource sharing and improving facilities for sharing and using E-resources globally. Digital ILL needs to be introduced.

1 Introduction

The demand for sharing E-resources electronically from academic libraries has been growing in the recent past. The resources include documents available in digital form and available through the Web. These resources also include the online resources that the libraries subscribe to. Most of the resources are explicit in form. Shareable resources could also be tacit in form which some of the libraries may create by recording interviews of experts who specialise in the subjects of their interest.

As we move through the ever growing sea of information, we also encounter the ever growing unwanted information that is polluting information both in quality and in quantity. While the developing societies are wanting to step up from this information revolution to the transformation of their societies through applications of knowledge yet the availability of quality resources to academic institutions is not hassle free. Sharing of E-resources while respecting copyright regulations is becoming a necessity. We notice that electronic resources:

i. Can easily be copied and distributed among many users.

ii. Are not generally archived by the libraries that subscribe to them owing to insufficient archiving facilities or curbs by publishers.

iii. Need finalising of arrangements for sharing with legitimate users.

iv. Are expensive and libraries need to develop consortia in case of electronic journals to negotiate pricing and terms of use and archiving.

v. Need to be subsidised or subscriptions negotiated for managing subscriptions.

vi. Are of great importance to users in all types of libraries and the managements will have to decide how they can develop their collections in the electronic environment.

vii. Are important in case of high-priority and under-represented subjects.

viii. Are made available with value additions to help the users.

ix. Are available to users at home or office; or elsewhere and therefore are almost location free, thus giving users a great leverage which makes them prefer electronic editions to the printed ones.

Thus we see that electronic resources are increasingly being adopted by users and the libraries have to arrange licenses for their use. It is therefore important to see how product licensing should be negotiated so that resource sharing is not hampered.

Libraries are slowly gaining access to digital resources and emerging as digital libraries. The digital libraries use digital technology in order to serve users better irrespective of barriers including system problems and language barriers. They create shareable resources as they hold copyright to that content. Digital libraries by making shareable resources available, enhance the roles of fellow librarians and also serve users better. Digital libraries can make collective intelligence and collective knowledge shareable and this is how digital libraries are progressing. Thus within the context of digital libraries, shareable resources could be grouped into four groups: Content, Community, Technology and Services.

We are conversant with the content available in digital libraries which generally pertains to books, journals, manuscripts, video-recordings, sound-recordings and other such documents which are either converted to digital form or are born as digital documents. Digital libraries, in search of new knowledge and to serve the public better, are beginning to come close to the communities which form the second category. If knowledge does not transform a community, its role becomes limited. In this process digital libraries also record tacit knowledge and begin to offer the desired content.
to concerned users. Technology, the third category, is the instrument and the catalytic agent which helps in the creation of the desired content and its storage, processing, dissemination and archiving for shareable purposes. The fourth component, the services can also be shareable, either for spreading the use of technology or in the dissemination of knowledge and information to users and the community at large. These shareable resources need to be accessed globally though a beginning could be made at local, regional, national and international levels. To achieve this interlibrary loan arrangements of library networks need to be expanded. DELNET is making every effort to get into formal and informal arrangements with global networks and serve their libraries effectively.

The basic IFLA principle in locating documents for users is that "no material which is findable should be totally unattainable." This principle displays the attitude with which a Reference Librarian should treat queries of users. Knowledge is becoming multi-dimensional and this trend is growing regularly. Users do not have access to all types of documents on a given subject. The library networks and libraries will have to make it possible that any user is able to access knowledge databases or documents from any part of the world. Thus all resources/documents that the users/researchers need should reach them for research, reference or reading with or without the support of librarians. It means that more and more international and national databases that are knowledge-based or bibliographic in nature should become available to users and researchers through libraries and library networks. Also, databases in Indian languages need to be produced to increase the use of resources published in Indian languages.

2 E-books Services

The publication of E-books has been increasing regularly and we find that in future their use will also increase substantially. There are several pricing models available at present. As it is going to be difficult for libraries to negotiate the best pricing model, it would be advisable for library networks or consortia to negotiate the best pricing model and make E-books available to all libraries in the network. Unlike in case of E-journals where mostly access is given on a leased basis, E-books could be purchased by libraries. Libraries that do not have infrastructure to host E-books, DELNET would be able to host them if permissions are taken from the respective publishers. The publisher should have no objection to this as access to such E-books can be restricted to users coming from the specific IPs. The network could also coordinate the metadata and manage archiving and access to such E-books. Leading E-book publishers and distributors like Ebrary, EBSCO among others should consider expanding the scope of E-books use including loaning of E-books by libraries to facilitate their greater use. I would like to mention that IFLA had announced in 2013 its Principles for Library E-lending which advocate:

- "The right to license and/or purchase any commercially available E-book without embargo.
- Reasonable terms and conditions at a fair price.
- Copyright limitations and library exceptions available.
- E-publications should be a neutral platform taking into account accessibility standards.
- The ability to preserve E-books long term; and
- Be able to protect the privacy of library users."

From these principles we notice the following:

a. Librarians should be able to buy any E-book online.

b. In India submission of E-books to the National Library under the Delivery of Books Act should become effective.

c. Librarians should be able to borrow E-books through ILL as in case of print books while safeguarding the interests of authors and publishers; and

d. Pay-per-view of E-books should become operational at a reasonable cost for individual library users.

2.1 Constraints and Restrictions

The following are some of the issues that libraries need to sort out:

i. Some of the E-book publishers control the use of E-books, like one user per E-book license using the Digital Rights Management technology. Many libraries face constraints from publishers on how E-books can be used. The limits of viewing affect the access and use of E-books. Libraries need to look into this issue.

ii. The saving and sharing of E-books through reading devices has also been found difficult.

iii. A database model needs to be developed which gives parallel access to different E-books.

iv. Restrictions on sharing of E-books by consortia and networks need to be sorted out.

v. Streamlining of variable pricing models which vary from publisher to publisher.

vi. Lack of standardisation of format, hardware and software need to be sorted out.

   a. Hardware: Guidance on the use of specific
E-book hardware such as portable devices, desktop PCs, etc. could be given by libraries.

b. Software: Guidance on the use of particular E-book reader software facilitating access to hyperlinks, colour, networking features, etc. could be given.

c. Guidance and training in the use of E-book Creating Software such as Adobe, Page Maker, etc. could be given.

d. Making technologies used by various E-book publishers should be more comprehensible.

vii. The formats such as Microsoft Reader, Adobe PDF, PostScript, and DAISY Digital Talking Book are equipped with Digital Rights Management (DRM) restrictions.


ix. Internet paying methods cannot be handled by all librarians.

x. Managing the creation of value-added content within copyright constraints. In future, many of the digitised resources can get converted into value-added digitised resources by adding commentaries, links and other such additional content which may be done by publishers or libraries.

Innovations in this field are taking place. Gale has launched an innovative new purchase option which is a Usage Driven Acquisition (UDA) model on its Gale Virtual Reference Library E-book platform. Libraries can buy E-books on actual usage. Another innovative E-book platform is introduced by overdrive wherein the metadata is offloaded to the library’s server and a user can click and download (You Click We Buy option) select titles chosen by their library users. More innovations are going to emerge in future.

3 E-journal Services

E-journals pose a variety of issues. These issues could broadly comprise types of E-journals, the legal issues including copyright, distribution of licensed content through the archival issues, federated search facilities and the development of special platforms to manage the collection, distribution and archiving of E-journals. Some of the issues mentioned above with regard to E-books are valid for E-journals as well. Through consortia or directly library networks need to facilitate access to E-journals. For instance, OCLC has launched the facility so that multiple applications can access the metadata for managing electronic materials and improve library workflows.

4 Product Licensing

For electronic resources the management of product license raises several questions. These generally pertain to those who review, negotiate and sign the product license. One has to look into the issues such as review, negotiation methods, failure of desired results and necessary steps to be taken in such a case, facilitation process of negotiations, etc. In negotiating product licensing one important component is to negotiate and get the freedom to share resources with users of other libraries for bona fide research purposes. As in the print form any permitted user who uses books or journals for research and reference can make a photocopy of a few pages and retain it for reference. Similarly in case of electronic resources a bona fide user should be able to have a copy electronically. If this is negotiated then your library can be part of a shareable resource.

The restrictions due to product licensing limit the use of electronic resources which include online databases, electronic journals and electronic books. It would be appropriate to list below the possible types of restrictions the publishers of electronic publications insist upon:

1. The license, which is non-exclusive and non-transferable, generally binds the subscribing institution and its authorised users to follow the terms of license. However, while the institution signs the license agreement with the publisher, it generally does not sign any agreement with its licensed users, thereby, leaving a lacunae which could result in the misuse of the terms of the agreement.

2. As electronic documents can be used by giving remote access permissions, the institutions subscribing to electronic publications should list such authorised users/institutions for this purpose. Interlibrary loan and scholarly sharing provisions should be introduced into the licensed agreements.

3. The publisher would allow the institution and its authorised users to download or create printouts of reasonable portions of articles unless one does not download all parts of a product and archive them in digital or print form.
4. The publishers allow the institutions to use the electronic products as permitted under the doctrines of “Fair Use” and “Fair Dealing” which are practised in many developed countries including the United States.  

5 Digital Interlibrary Loan and the Copyright  
As we are aware there is an increasing growth of digital resources around the world. There is also the demand that in libraries the interlibrary loan should be undertaken in the electronic form. I would like to refer to some recent initiatives taken in this regard.

5.1 Section 108 Study Group Report  
A panel of government, academic and information industry experts was constituted by the US Copyright Office to study the difficulties faced by libraries and archives in managing digital content. On March 31, 2008 the panel presented the report. The report makes the following observations:

Copyright Law  
i. Limited copyright exemptions are available for libraries and archives.

Copyrighted Works  
i. Libraries and archives play a major role in the promotion and management of copyrighted works.

ii. Without infringing copyright of owners the libraries and archives make limited copies of copyrighted works for users.

Archiving and Preservation  
i. Section 108 does not properly cover:  
   a. Archiving of Web content;
   b. Preservation of analog and digital works; and
   c. Digital delivery of copies of documents.

ii. Without infringing copyright of owners the libraries and archives preserve and archive copyrighted works.

iii. Digital preservation includes both published and unpublished works.

However the group has created the category “publicly disseminated” works.

iv. Recommends that the libraries and archives should be able to make “a preservation copy of any at-risk” publicly disseminated work. This facility would pertain to:
   a. “At risk” works which are unique in terms of ephemeral format, rare due to age or other reasons.
   b. “At risk” works would not include commercial publications.
   c. Preservation will be allowed to be done only by those libraries that have well established preservation programmes.
   d. Access to such preserved documents would not be open but would be restricted.

Content on the Internet  
i. It was noted in a survey done in 2005 that about 46 per cent of Internet resources which were cited in scholarly papers were disappearing within the next 2 to 8 years. If preserved, such material could become accessible to scholars for study, research and reference, initially within the library and later remotely through the Web. This would mean that:
   a. Only the content which is publicly accessible will be captured.
   b. The content which is accessible through login and password will not be captured.
   c. Libraries and archives will not act in any way which would harm the interests of the owners of that content.

New Knowledge  
i. New knowledge is developed as libraries and archives make copyrighted works available to researchers.

Digital Duplication  
i. Can produce multiple copies. It would include copies made during transfer processes or technology upgrades.

ii. Should include a limited number of copies only.

Digital ILL  
i. The group supported the use of digital ILL in principle.

ii. Users could demand the material on ILL only through their home libraries and not directly the lending library.

iii. Libraries need to take steps to limit the further distribution of the electronic document by the user.

5.2 Manifesto 2007  
A group of library and information
science experts from the US and Canada prepared a manifesto for improving resource sharing in January 2007. The manifesto contained seven principles. These principles were affirmed by the following agencies:

- Rethinking Resource Sharing Steering Committee, February 2007
- MAILL (Maryland Interlibrary Loan), October 2007
- DELNET-Developing Library Network (India), January 2009
- Forum for Interlending, Danish Research Library Association, September 2009
- Tenn-Share, February 2010
- National & State Libraries Australasia, April 2011
- Ontario Library Association, June 2012

The manifesto highlighted the following seven principles:

1. “Restrictions shall only be imposed as necessary by individual institutions with the goal that the lowest-possible-barriers-to-fulfilment are presented to the user.

2. “Library users shall be given appropriate options for delivery format, method of delivery, and fulfilment type, including loan, copy, digital copy, and purchase.

3. “Global access to shareable resources shall be encouraged through formal and informal networking agreements with the goal towards lowest-barrier-to-fulfilment.

4. “Shareable resources shall include those held in cultural institutions of all sorts: libraries, archives, museums, and the expertise of those employed in such places.

5. “Reference services are a vital component to resource sharing and delivery and shall be made readily accessible from any initial “can’t supply this” response. No material that is findable should be totally unattainable.

6. “Libraries should offer service at a fair price rather than refuse but should strive to achieve services that are not more expensive than commercial services, e.g. bookshops.

7. “Library registration should be as easy as signing up for commercial Web-based services. Everyone can be a library user.”

6 Fair Use Doctrine

Fair Use forms part of the Section 107 of the US Copyright Act. Fair use of a copyrighted work is allowed for “criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.” As a result of a large number of court decisions in the US Copyright Act, Fair Use Doctrine got developed and is codified in Section 107 of the Copyright Law. In addition to the above guidelines, the factors that are responsible for determining the fairness of a particular use, include the following:

1. “The purpose and character of the use, including whether such use is of commercial nature or is for non-profit educational purposes.


3. “Amount and substantiality of the portion used in relation to the copyrighted work as a whole; and

4. “The effect of the use upon the potential market for or value of the copyrighted work.”

The above conditions try to find if the new work based on the copied material is new and different in content and unique in the presentation of ideas, the copied portion is substantial in size or it is critical and unique to the original work and there is no impact on the sales of the original work.

As we know that the copyright does not protect the ideas but the particular way the ideas have been presented by the author, it is therefore necessary to note that the four characteristics mentioned need to be taken into account before copying any portion of a copyrighted work.

Under the Indian Copyright Act while a copy can be made of books and journal articles for research and reference, there is a need to make the provisions clear for libraries so far as E-content is concerned. Section 52 (1) of the Copyright Act, 1957 allows copying for private or personal use including research. Section 52(1)(n) allows non-commercial public libraries to store works for preservation in the electronic medium. Section 65A titled “protection against circumvention of technological measures” restricts librarians to circumvent the DRM (Digital Rights Management). Thus an E-book which is protected from being printed cannot be printed unless the technological measure (such as the encryption) is circumvented. Doing so is punishable, although it is allowed as per fair use exceptions under Section 52.
6.1 Fair Use and ILL

Keeping in view the subject of this paper, the issue which needs to be looked into by library and information science professionals is the impact of Fair Use principles on Interlibrary Loan (ILL) of electronic documents. The basic underlying concept is that ILL has to be for genuine research purposes for one researcher and not for a number of them like the large number of students wanting to use the same book. If the ILL replaces a genuine major demand or a library’s subscription to a journal it is not fair as the publisher is going to lose sale of copies of the book or subscription to the journal. Thus for scholarly sharing for the use of a single user the ILL transactions comprise fair use. But in the dissemination of the article in the electronic form there are restrictions raised by the publishers.

Every person who is used to using information or begins to use it, creates a methodology to manage its availability. Due to the availability of ample resources of information on the Web, most people prefer to use the Web first and if necessary, the library later. These changing perspectives should force librarians to find ways by which users can be attracted to the libraries first. The libraries should not only be inspiring but should also contain access to very selective sources of digital information.

If libraries have to play a meaningful role in resource sharing the first thing would be to focus all attention on the needs of their users. The present-day users are not the same that we found three decades ago. Today’s users prefer to have the relevant information online so that they can access it from their offices or homes. As a result of this changed environment, librarians will have to move out of their cozy confinements and look out for users who need information.

The types of resource sharing services which are provided to users in different types of academic libraries need to be evaluated and measured so that the services can be improved further. For this the library staff will have to adopt techniques that measure the satisfaction levels of students, faculty and other users.

In the electronic environment the major issues of concern in resource sharing today are that sharing mechanisms should not deprive a publisher or an author from receiving royalties from persons or institutions that reproduce a work or a part of a work for more than one user at a time. In the digital environment the technology which is acceptable should limit the misuse of digital resources. For instance, in the Ariel technology as soon as the copy is printed the electronic file gets deleted automatically. Because of the complications involved many institutions have not been allowing interlibrary loan of digital resources. It is only in case of licensed content that the electronic documents are transmitted for loan or use, as the case may be.

6.2 Fair Dealing

Many Commonwealth countries including Australia, Canada, New Zealand, Singapore and United Kingdom have adopted the doctrine of Fair Dealing which allows use of the copyrighted works for certain activities without obtaining the permission of the copyright owners. For instance in Australia the use of copyrighted work for research and study, review and criticism, reporting the news, legal advice, and parody and satire would not amount to the violation of copyright.8

6.3 Human Rights for Information

The Universal Declaration of Human Rights (Article 19), International Covenant of Civil and Political Rights (Article 19) and European Convention on Human Rights (Article 10) guarantee an individual to “seek, receive and impart information and ideas through any media and regardless of frontiers.”9

6.4 Rights of Libraries

Among many rights of libraries is to give access to any user to materials within its command for resource sharing is its very basic principle on which it is built. As no library can afford to house every document, it uses methods, including buying, leasing, borrowing of documents and getting them physically or electronically in order to satisfy the needs of its users. Similarly, in a reciprocal measure it lends its documents to other libraries for use by their users. Supplying of documents to other libraries electronically is faster and easier. Libraries want to execute this obligation and make library networks to help them execute this job fairly well.

6.5 Rights of Publishers

The publishers’ right is to gain reasonable profit on the expenses they have incurred in producing an electronic journal or an electronic document. No one can deny this right of publishers. They can gain only when there is rightful use of their product and every user who buys the product or a library who buys the product for its users pays the publisher or his agent. In the analog form, a printed publication was much safer as making copies was a difficult job. In the electronic form the chances of misuse have increased manifold. Also, in the analog form there could be fewer users using a publication, but in the digital form the number of users can greatly increase. While the users have the right to information, the publishers have the right to receive rightful gains on their product. In my opinion this issue has arisen because of the application of the information and communication technologies (ICT) to publishing of books and journals and the answer has to emerge through ICT only as the technology should be able to keep a tab on the users and a nominal charge for this use should flow from the users to the publishers. The charge has to

---

delnet Newsletter 33 Vol. 25, Nos. 1 & 2, December 2018
be nominal and could be forwarded through Copyright Collection Centres which have been established in different countries now.

I would like to refer to a survey 633 Italian academic and research libraries done by the Italian Network for Inter-Library Document Exchange (NILDE) for a five-year period from 2005-2009\textsuperscript{10} to study the relationship between ILL/ document supply and journal subscriptions. The results revealed that:

- Only 5 per cent of journals are heavily used;
- “NILDE libraries borrow 65 per cent of articles published more than two years earlier, which have no effect on renewals or new subscriptions, making, on average, 2.2 requests per title per year, and each individual title is requested by many libraries.” This survey confirms that publishers do not lose financially by ILL services. And, as a result, publishers should allow including ILL of journal articles in the electronic form. They should also support library networks and consortia in making ILL as a provision in their license agreements with libraries.

In some countries there are restrictions at present in sending articles in electronic form. “The reproduction and transmission in other electronic form is permissible further only, if access to the articles or small parts of a work is obviously not possible for members of the public on a contractual base under reasonable conditions from places and at times of their choice. The copyright owner shall receive a fair remuneration for the reproduction and transmission. This right can be claimed only through a collecting society.” \textsuperscript{11}

However, people associated with the Open Access Movement make demands which needs to be reviewed by publishers: “The author(s) and right holder(s) grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly … as well as the right to make small numbers of printed copies for their personal use.” (Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities)\textsuperscript{12}

6.6 Rights of Authors

In the electronic environment, the authors want their works to be published on good portals. Their E-books and articles in E-journals are read by a maximum number of readers. The copyright of their works is not violated. Their works are cited well, get translated into several languages in course of time and they receive a reasonable amount of royalties. The Copyright Collection Centres should enrol as many authors as possible and make arrangements so that they receive a copyright fee from their publishers and from those who use it outside the scope of Fair Use.

For the first time the British Library announced that changes will be made to the Public Lending Right (PLR) so that authors of remote loans of E-books and E-audio-books will be able to receive a fee as per the use of E-books under PLR. This will have an implication on the budgets of public libraries in the UK. It will be operational from July 1, 2018. They have realised that the E-book industry is growing regularly and needs to be supported. This will mark a major shift in the use of E-books worldwide.\textsuperscript{13}

7 ISO Interlibrary Loan Application Standards

We notice that different computer systems are used the world over to handle Interlibrary Loans. If all systems have to be automated there is a need to establish a standard which can link such systems so that ILL systems are able to receive and send messages. The Interlibrary Loan (ILL) application standards have been established by Open Systems Interconnection. These standards make it possible for these systems to establish ILL transactions which include borrowing and lending transactions. I am referring to the following important standards which have developed to undertake these jobs:

1. ISO 10160: 1997 Information and Documentation — Open Systems Interconnection — 8 Interlibrary Loan Application.\textsuperscript{14}
2. ISO 10161-1: 1997 Information and Documentation — Open Systems Interconnection — Interlibrary Loan Application Protocol Specification.\textsuperscript{15}

NCIP (Z39.83), Circulation Interchange Part 1: Protocol (NCIP).\textsuperscript{17}

NCIP (Z39.83), Circulation Interchange Part 2: Protocol Information Implementation Profile 1.\textsuperscript{18}
These standards have been used in DD software like Ariel, the New Docline, Odyssey, Illiad, E-Doc, Tipasa, etc. but in India libraries have not been able to buy document delivery software and use them. DELNET adopted the procedure of personalised ILL/DD service. This service has been working well and as in future there will be the need to offer personalised services to information seekers, personalised ILL/DD as adopted by DELNET should prove to be more useful.

8 Recommendations

1. As it is highly beneficial for libraries to adopt resource sharing with other libraries and networks all barriers in this work should go. Removing restrictions in resource sharing and improving facilities in libraries is very necessary.

2. Digital libraries should make collective information and collective knowledge shareable in the digital form.

3. Institutions and consortia managers who sign license agreements with publishers should specify the categories of licensed users who visit the library or use documents directly or through networks. Interlibrary Loan and Scholarly Sharing provisions should be introduced into the licensed agreements.

4. The publishers should allow the institutions that subscribe to or license the digital documents and their authorised users to download or create printouts of reasonable portions of articles for research and reference. Such copyright exemptions should become available from publishers to libraries and archives.

5. Libraries and archives should be able to make “a preservation copy of any at-risk” publicly disseminated work.

6. New knowledge is developed as libraries and archives make copyrighted works available to researchers. Publishers should promote fair use policies liberally so that new knowledge is created and it eventually reaches publishers for publishing purposes,

7. While digital ILL should be promoted in principle yet libraries need to take steps to limit the further distribution of the electronic documents by users.

8. Libraries should make their users aware of the available options of ILL, copyright obligations, method of delivery, fulfillment time and the necessary charges if any.

9. Library networks should enter into agreements at global level with publishers and distributors of documents in order to make documents available to users.

10. In library networks shareable resources would be those which are held by member-institutions and are issuable or available for reference. Users should get access to those resources easily.

11. Document delivery service to libraries/users should be based on respect for copyright but copyright should not act as a hindrance in making documents available for academic purposes. Documents that are findable should be supplied to libraries/users and wherever necessary they should get supplied after making copyright payments and other necessary charges.

References

1. https://www.ifla.org/elending/principles]
2. http://www.librarytechnology.org/
11. www.varastokirjasto.fi/STKS_kirjastojuridiikka/harald2.ppt
17. www.niso.org/standards/resources/z3983pt1rev1.pdf
18. www.niso.org/standards/resources/z3983pt2.pdf
Information Discovery Based on the Emerging Technology to Analyse Digital Images*

Paul Nieuwenhuysen**

The paper offers a brief overview of the growing value of images in information discovery. Searching for images with a classical text query is a well-established, fast method to retrieve relevant images plus related textual information. ‘Search by image’ or ‘reverse image searching’ or ‘reverse image lookup’ on the WWW is a relatively new method, in which a search query consists not of text, but of an image file. The search results lead to related images and also to related documents on the WWW. This method of searching can be applied to cope with several types of information needs for which more classical search methods fail or perform less efficiently. This approach allows us to discover duplicate images and even images that have elements in common with the image in the search query. Furthermore, the technology is improving towards discovery of images that are not only visually related, but also semantically related; this can yield information about the contents of the image used in the query. A search query can also include both text and an image; this can yield results with a higher precision than more simple queries. Recommendations for practitioners/users/librarians/information managers can be found at the end of the paper.

1 Introduction

“A picture is worth a thousand words.” This is a well-known, popular saying. Most people agree with its meaning. Perhaps some poets may disagree, as they see words, language and poems as the ideal means to express ideas, feelings and emotions. In my experience also some librarians hesitate to embrace the methods of information storage and retrieval related to pictures/images/video, as they see text documents as the primary vehicle of information and expressions in general, and thus as the core object of their profession; furthermore, dealing with text documents in an efficient and effective way is already quite complicated in these years of fast evolution in digital information management. But even when we agree with the value of images besides text-based information, in information management/retrieval/discovery, our reality is still closer to “A word is worth a thousand pictures”. More explicitly stated, we see that most tools and methods in information management mainly deal with words and texts. More concretely, most retrieval systems rely on a user/client who makes a choice from some text-based classification/categorisation system, if that is made available for the considered information resource, or who formulates a query that consists of words (freely chosen or selected from a thesaurus or ontology). We can continue with another well-known phrase: “The times they are a-changing.” More explicitly formulated, we see many efforts to exploit the value of images that are included besides text in various types of information resources. Here a brief overview is presented of the possibilities and progress that I have observed and investigated during recent years, as an enthusiastic end-user of online digital information systems and as an information scientist and digital librarian.

Creating and publishing or sharing of images has become easier as scanners and digital cameras have become more affordable; nowadays most mobile phones even include a camera. On the other hand, increasing the efficiency of discovery actions by manual, intellectual organisation and annotation/tagging of images is still tedious, time-consuming and thus expensive; therefore it is often neglected (see Figure 1).

Figure 1: Images in Information Management

As a consequence, automated systems to find/retrieve images efficiently are welcomed by managers of digital collections/libraries (from small, personal to large, institutional collections) and many efforts are made by the academic community, as well as by companies, to improve the combination of databases with search systems.

The state-of-the-art in visual information retrieval and in particular of content-based information retrieval (CBIR) has been sketched briefly by Marques (2016).

---

* Paper presented at ICRL-2018, Jaipur, India, February 1 - 3, 2018
** Professor, Vrije Universiteit Brussels, Belgium
2 Findings

2.1 Searching for Images and Related Information, Using a Text Query

Several systems on the WWW allow searching with a classical query that consists of a word or of a combination of a few words, while they do not return summaries of texts as results, but small versions of images found on the WWW instead. This search method is fast and efficient; at least in most cases the results lead to the complete images that may be relevant; the results lead also to the context of each found image and this can yield relevant information.

A quantitative investigation has given a more quantitative view on the advantages of this search method, and has also demonstrated that the results can contain misinformation; for instance searching for information on art objects can lead to images and text related to objects that have been derived from original art work and that can give the user of the search system wrong ideas about the object(s) under investigation. In other words, a ranking system that is based on reasonable measures of the value of the retrieved information — such as a ranking system based on citations received by scientific publications — would be welcome.

Details have been published in Nieuwenhuysen (2010).

2.2 Systems for Search by Image

In this relatively new method for information retrieval, a query does not consist of text, but of an image file. The search results lead to images on the WWW and also to related documents. Other names for this method are

- Content-based information retrieval = CBIR
- Search(ing) by example
- Reverse image lookup = RIL
- Backwards image search(ing)
- Inside search(ing)
- Reverse image search(ing)

The following summarises observations and findings of investigations made in recent years.

A pioneering system that still offers search by image through the WWW, free of charge, is named TinEye. Nowadays several online services are available free of charge to search by image. Differences among these services are substantial. Compared with TinEye that is dedicated to search by image, the service to search by image that is offered by the bigger and more general search system Google performed relatively well in tests. For details see Nieuwenhuysen (2013).

Before going on about the performance of search systems for search by image, the following Figure 2 clarifies that the search results can belong to various types (Nieuwenhuysen, 2014).

![Figure 2: Searching by Image Can Yield Various Types of Results.](image)

2.3 Search by Image to Find ‘Copies’ of an Image

Let us start with relatively simple types of search by image, namely searching for duplicates and so-called ‘copies’ of a known source image. But before we continue to use words like “duplicates” and “copies”, the clarification in Figure 3 can / should sharpen our view.

![Figure 3. The Concept of Image ‘Copies’ Clarified.](image)
are not “duplicates”; by definition, these belong to different “generations”.

Google can reveal images present on the Internet, which are duplicates of the query/source image; however, the success is quite variable from case to case. This recall performance is strongly correlated with the performance of a more classical Google search with a text query to find copies of the query/source image file on the Internet.

Even images that are modified versions of the query/source image can be revealed by Google; more specifically, such modified versions can differ from the source image in size and in colours; the method can even reveal a fragment or edited fragment of the source image that is included in some image on the Internet. An example is shown in Figure 4:

1. At the left side an image that is an original photo made by myself, which I have used as query/source image in a search by image using the Google image search system.

2. At the right side one of the search results, which is an image showing a poster that includes a part that has been derived from my original photo, superimposed by myself on a copy of that original coloured photo.

This search technology allows various applications:

First we consider search by image with a query/source image that you have created or that is affiliated with your organisation. Then you may find copies/duplicates or even modified/edited versions on the WWW. This can reveal copyright infringements.

Someone can even copy more than just an image; even a substantial part of a web site that you have created can be copied and republished on another site or on another server computer. This can be checked perhaps by a classical text search, so that it may seem irrelevant to be mentioned in this context. However, such a text search will probably not detect a translated version of your document, while a search by image can reveal that one of your documents has been copied, translated and (re)published elsewhere on the WWW. This is not purely hypothetical, but realistic. I have experienced this and indeed detected it by using a reverse image search.

In a more positive way, this allows assessing the impact of such images on a worldwide audience. This “impact” is of course related to the intellectual value and usefulness of the images that you have created or have made available. For example: curators or owners of a collection of objects can assess the impact and reuse of photos of the physical objects in their collection, on a worldwide scale; digital libraries can assess the reuse of their images (Nieuwenhuysen, 2013; Thompson and Reilly, 2017). A search by image may reveal that your digital image has not only been copied and republished on the WWW, of course again in digital format; furthermore the digital image may have been used in printed materials such as a book, a poster or a CD or DVD cover. Again this is not hypothetical but realistic, as shown by examples based on digital photos that I have created and published on the WWW (Nieuwenhuysen, 2013).

Next we consider search by image starting from some query/source image that you have not created, but that you consider as interesting, and that is perhaps not the original version and for which the creator/author is not indicated and known. In this way you may find other and better versions of your query/source image, which are more suitable for your application and need; also you may find the author(s) on the WWW, which can be useful to obtain more information or to discuss possible copyright linked to the image. Searching by image

Figure 4. An example of a result of a search by image that reveals that an original photo has been reused as part of a poster.

This shows the power of the search technology, as the image has been revealed among the search results, even though only a part of the original image is included in the revealed image, the colours in the original photo have been converted to greyscale or ‘black and white’ only, texts and graphical elements have been added.

For more details see Nieuwenhuysen (2013).
with a source/query image that illustrates and supports claims in a document, may also allow you to discover that this image is not real/authentic, but that is has been copied from another site, from another context and perhaps that it has even been modified/changed/doctored, to support the text, the claims of the author of the document.

What is more, in each of these applications, you may also find related text information.

2.4 Search by Image to Find Information on the Semantic Content of the Image

It is a desirable goal to develop an effective general, generic system for search by image through a large and diverse/heterogeneous collection of images that will deliver as results images that are not necessarily visually similar to the image in the query, but that will deliver even images that are related to the contents of the image in the query. However, such a development is quite challenging. Indeed, it is difficult or impossible for a computer system to make a match between

on the one side (in the images) all the possible high-level, semantic contents/concepts that can be seen/ detected/observed in an image by a normal, average real person,

on the other side (in the computer system) the more basic/low-level/ essential visual features/primitives of each image, such as the quantifiable attributes/features of colour, texture, shape and the spatial distribution or regions, which can be automatically detected within the pixel domain of the digitised image and which can be automatically extracted and indexed in the database of the search system.

In general, links between those high-level concepts and those low-level features are weak or even absent. This causes poor performance of semantic search systems, as reflected by a low recall and precision of the search results. This is particularly true in the case of big image collections with a broad content. In other words:

Semantically similar images may have dissimilar low-level features such as colours, textures, forms…; this causes a low recall in the search results.

Semantically dissimilar/different images may contain similar low-level features; this causes a low precision in the search results.

This difficulty is one form of the more general problem in information retrieval, which is known as the “semantic gap”.

However, the WWW search systems do not work with a database that consists purely and only of images. Indeed they can exploit all kinds of contents from the WWW, harvested, analysed and indexed into their huge database(s). This includes the texts in documents, images placed in a webpage or images that live more on their own in the WWW, and even the texts in links from one webpage to another. So a ‘search by image’ does not rely on images only, but for each image also on the texts that are probably related with that image. The company behind the popular and leading search engine/system explains this as follows (Google, retrieved in 2013):

“Search by Image returns the best results for images that have related content already on the Web, so you are more likely to get relevant results for distinctive landmarks or paintings than you will for more unique photos like your toddler’s latest finger painting… The technology behind Search by Image analyses your image to find its most distinctive points, lines and textures and creates a mathematical model. We match that model against billions of images in our index, and page analysis helps us derive a best guess text description of your image.”

After the retrieval process, the service then offers ideally

a correct description of the source image, which is not only vague / general and not informative, but that is even specific and clarifying,

semantically similar images and links to the WWW pages in which these images occur.

This elaborated procedure for information retrieval is a relatively recent and successful example of the general view that exploiting text as well as images in a single, hybrid search action can be more fruitful than exploiting only one kind of retrieval. Text retrieval and image retrieval can complement each other.

In practice and reality, tests have demonstrated that since 2014 search by image as offered by Google, can not only find images that are visually similar to the query/source image, but can even retrieve images that are semantically similar/related to the query/ source image. Visual similarity as mentioned above in the section on finding ‘copies’ can still show up, but is not even required in such cases; in other words, semantically related images may be found even when their visual similarity is not obvious. The search results may also include a description of the subject on the image; this can be interesting if the user has not yet much knowledge about the subject; based on the retrieved description of the query image, the user can formulate a specific text query in a subsequent, more classical query that consists of one or a few words. Furthermore, other information related to the image and relevant links may also be included in the search results. Clearly, the performance of search by image to find
images that are semantically similar to the query/source image is improving. For more details see Nieuwenhuysen (2014).

This progress observed/investigated is based on exploiting an increasing number of images plus their textual context, which have been harvested/copied from the WWW and have been structured in databases by the growing and improving search systems, in combination with the fast improvement of artificial intelligence to “understand” all these data in order to improve retrieval/discovery actions.

All the findings mentioned above have been summarised (Nieuwenhuysen, 2015).

Besides the services developed and applied by Google, related technology is developed and applied by other companies that are active on the Internet/WWW and that offer services in which images are important. An example is Pinterest that allows users to build digital pin boards of images, in such a way that each pin board covers some topic, while each image points either to a larger version of the image stored on the computers of Pinterest or to the website that included the image at the time that the image was included in the pin board; furthermore most of these Pinterest boards and images can be browsed and searched by all users; besides classical text search, Pinterest steadily offers more powerful visual search services that can offer visually and semantically related images that can lead to further relevant related information (Zhai et al., 2017).

2.5 Searching with a Query that Combines Words with an Image

Above we dealt with relatively simple, pure searches in which a query consists of words or of a source image. Besides such relatively simple search actions, Google offers also the possibility to search with a query that consists of a combination of an image with text / words. This approach makes it possible to combine the strengths of more classical text retrieval on the one hand, with the more recent search by image on the other hand. Tests have shown that this allows us to obtain search results with a precision that is higher than when only one of both search methods is used.

This allows various applications:

Starting from some interesting source image, you may find semantically related images; in other words, you may discover images with a subject that is related to the subject of that source image, as seen above. Furthermore, including besides an image also some words in a query may increase the precision of the results, even when only limited information knowledge related to the image is available in advance, so that only one or a few unspecific search words can be used.

In another scenario you have already sufficient information/knowledge in advance to formulate and to increase the precision of the results.

All this is summarised in Figure 5.

![Figure 5. Searching with a query that combines words with an image may increase the precision of the search results compared with more simple queries.](image)

As mentioned above, semantic searching involves exploiting the combination of texts and images within the search system; here we deal furthermore with information discovery actions in which the user / searcher constructs a query and submits this to the search system, which consists already of a combination of text with image, before the start of the hybrid search and retrieval process that exploits texts as well as images.

For more details, see Nieuwenhuysen (2016 a, b).

2.6 Semantic Classification by Google Photos

The progress described above in automatic analysis of images to determine some of their contents/meaning/semantics is also reflected by the improvements in automatic categorisation/classification of images based on their contents. A popular example of such a system that is freely accessible and usable is Google Photos at https://photos.google.com/ This is a recent service that allows uploading, storing and photos on the Internet/WWW/‘cloud’. The users can order/classify/cluster their photos in so-called “Albums”. Afterwards the service also orders/classifies the photos automatically in a few broad categories that are named “Albums” of “Things”. This additional ordering is not purely based on the relatively simple detection of visual similarity (colours, size, structure,
textures…) but on the more complicated and challenging detection of semantical similarity. An example is shown in Figure 6.

![Figure 6. Screenshot of “Albums” of “Things” that have been created by Google Photos and that offer additional ordering of photos in a few broad categories, on the basis of semantic similarity. Each “Album” is represented by one photo.](image)

This process offers indeed some limited but real added value, as demonstrated in my case study (Nieuwenhuysen, 2018). A broader conclusion is that automatic, semantic classification is evolving fast, so that digital librarians should keep an eye on this technology and its potential for the automatic organisation of images in their digital collections and libraries. Such an automatic organisation can then improve the quality of information discovery by their users, or can offer an additional ordering besides the manual, intellectual and expensive ordering that is implemented by librarians.

### 3 Discussion

Image search is not rigid and stable. The technology is maturing while there is the ongoing growth of the size of the dynamic corpus, the WWW, plus the growth of the derived database(s) that are managed by the companies offering the search systems. Furthermore, the public forum offered by Google to discuss their search services <https://productforums.google.com/forum/#!forum/websearch> includes messages illustrating/demonstrating that the service to search by image behaves strangely from time to time. As a consequence, reproduction of results and tests of performance is complicated.

### 4 Recommendations for Practitioners

The growing successes of the search methods that include an image in the query to find relevant information lead me to a few recommendations:

#### 4.1 Search by Image as an Additional Information Discovery Method

To find the relevant information, these fairly recent, additional methods should be considered besides more classical methods, by librarians and information intermediaries in general, as well as end-users of information discovery systems.

#### 4.2 Search by Image in Information and Media Literacy Education

As a consequence, search by image deserves a visible place in educational courses and tutorials on information and media literacy for professionals as well as for potential end-users of related discovery systems.

#### 4.3 Take into Account Images in Search Engine Optimisation (SEO)

Authors and publishers create publications and in general they want to make these available in such a way that they rank high in the results of relevant search/retrieval/discovery systems. Therefore it is good practice to take into account the workings of at least the classical, popular, search services, in the creation and search engine optimisation of their website(s). Not only should the texts in a website be considered, but also images, to optimise

1. for a relatively classical search with a text query to find images,
2. for a more recent search by image, or
3. for a search with a query that consists of text plus an image file.

This leads to the following more concrete recommendations:

Website developers and managers should try to publish their meaningful images in such a way that these can be well harvested, analysed and included in the database index of relevant search systems in an effective way. For instance, publish images as separate, individual files and not only as part of a database, more of less hidden so that these images cannot be simply harvested, and not only as part of a file in some complicated container file-format such as PDF, Microsoft Word DOC/DOCX, or Open Document Format ODF.

Give meaningful names to your image files. Do not publish photos straight from the camera with meaningless names such as image-1234, img_1234, dsc-1234.

Provide meaningful, textual context for your images. Place this context or legend close to the corresponding image/figure in your document.

Publish images that are still clear and meaningful when the search engine shows them small, as
thumbnail images in a list of search results. For instance: publish individual portraits or photos of objects and not only photos of groups of people or objects.

4.4 Images in Your Digital Library and Information Discovery

When you create and manage a digital library that includes images, then ideally you should make efforts to enhance retrieval / discovery by users, as stated above. However, such efforts require time plus expertise regarding the contents of the digital library and regarding information technology. Therefore, this is costly. In view of the progress of automation in this area, it may be worth checking if suitable software is already available and affordable for your purpose.

5 Conclusion

Information discovery is enhanced by recent methods that involve images:

Search by image is evolving to a powerful, additional method to tackle information needs that are difficult to handle with more classical methods.

Information discovery is assisted by automatic classification of images and by recommendation services based on image similarities.

Furthermore, using a combination of text with an image in a search query can increase the precision of the search results, compared with a more classical pure text search or with a pure search by image.

References

Workshops

DELNET organised a series of workshops during the year 2018 in order to promote the use of DELNET services in different parts of the country.

DELNET Workshop on 'Developing Capacities for Reference and Research' was organised in collaboration with Jamia Millia Islamia, New Delhi at JMI on April 23, 2018. Dr. H. J. Abidi, University Librarian (former), JMI was the Local Coordinator.

DELNET Workshop on 'Developing Capacities for Reference and Research' was organised in collaboration with Jamia Hamdard, New Delhi at JHCL on May 2, 2018. Mr. M. Shoaib, University Librarian, JHCL was the Local Coordinator.
Delegates at Lecture on Cyber Hygiene and Online Security held on May 11, 2018 at DELNET, New Delhi

DELNET One-Day Workshop was organised in collaboration with Dr. Bhim Rao Ambedkar University, Agra at DBRAU, Agra on May 21, 2018. Dr. Sunil Kumar Upadhyay, Inf. Scientist, DBRAU, Agra and Prof. Sugam Anand, Prof. Dept. of History, were the Local Coordinators.
DELNET One-Day Workshop in collaboration with Jawaharlal Nehru National College of Engineering, Shimoga was organised at JNNCE, Shimoga on May 29, 2018. Mr. Chandrakant Bhat, Librarian, JNNCE, Shimoga was the Local Coordinator.

DELNET One-Day Workshop in collaboration with The National Institute of Engineering, Mysuru was organised at NIE, Mysuru on May 31, 2018. Mr. Harish Y.S., Librarian, NIE Mysuru was the Local Coordinator.
DELNET One-Day Workshop in collaboration with PES University, Bengaluru was organised at PES University, Bengaluru on June 2, 2018. Mr. Subhash Reddy B., Librarian, PES University was the Local Coordinator.

DELNET One-Day Workshop in collaboration with Kongu Engineering College, Perundurai, Erode District, Tamil Nadu, was organised at KEC, Erode on November 17, 2018. Dr. S. Arjunan, Sr. Librarian, KEC was the Local Coordinator.
DELNET One-Day Workshop in collaboration with the Nehru Institute of Engineering & Technology, Coimbatore, Tamil Nadu was organised at NIET, Coimbatore on November 20, 2018. Dr. KR. Senthilkumar, Librarian, NIET was the Local Coordinator.

DELNET New Website launched at www.delnet.in
DELNET Developing Library Network
JNU Campus, Nelson Mandela Road, Vasant Kunj, New Delhi 110070
Web: www.delnet.in

DELNET Guest House at JNU Campus, New Delhi

DELNET Guest House has 15 Double Rooms, Two Suites, Three Committee Rooms, One Coffee Lounge and Multipurpose/Dining Hall. The rooms are air-conditioned with attached bath facility and are equipped with high quality furniture and fixtures to offer comfort to our guests.

Academics, Officials of Member-Institutions of DELNET, and those recommended by them can avail of the facility. Also, the facility can be availed of by academics visiting Delhi for official meetings, training, teaching and research.

The following is the tariff for Guest House facilities:

i. Rooms
   a. Single occupancy ₹ 2,455 + 12% GST = ₹ 2,750
   b. Double occupancy ₹ 3,051 + 18% GST = ₹ 3,600
   c. Suite ₹ 4,088 + 18% GST = ₹ 4,800

ii. Lecture Hall (Admin Block) for 80 persons
    Full Day (9 am to 9 pm) ₹ 10,000 + 18% GST
    Half Day (9 am to 1 pm) or (2 pm to 6 pm) or (4 pm to 8 pm) ₹ 6,000 + 18% GST

iii. Multipurpose Hall for 50 – 70 persons Round Table
     Full Day (9 am to 9 pm) ₹ 12,000 + 18% GST
     Half Day (9 am to 1 pm) or (2 pm to 6 pm) or (4 pm to 8 pm) ₹ 7,000 + 18% GST

iv. Three Committee Rooms, 1st, 2nd and 3rd floors for 16 persons each.
    (Rate per committee room)
    Full Day (9 am to 9 pm) ₹ 6,000 + 18% GST
    Half Day (9 am to 1 pm) or (2 pm to 6 pm) or (4 pm to 8 pm) ₹ 4,000 + 18% GST

v. Tariff for the equipment to be charged separately.
vi. Breakfast will be provided complimentary for residents.

vii. Lunch / Dinner rates are: Lunch/Dinner (Veg); ₹ 225+GST
     (Non-Veg); ₹ 300 + GST

viii. Lounge facilities are available from 11 am to 7 pm. Tea/Coffee and fixed snacks will be available in the lounge against nominal charges.

DELNET GSTIN No.: 07AAAD2Z88G1ZV

Guest House has sophisticated infrastructure, air-conditioned spaces, greenery around the campus with a scholarly environment. The space is excellent for stay, meetings, seminars and discussions.

Contact Us at:
DELNET Developing Library Network
JNU Campus, Nelson Mandela Road, Vasant Kunj, New Delhi 110070 | Tel: 011-26742222, 26741122
Email: delnetguesthouse@gmail.com | sangskaul2003@yahoo.co.in

Edited and published by Dr. H. K. Kaul, for DELNET - Developing Library Network, JNU Campus, Nelson Mandela Road, Vasant Kunj, New Delhi -110070.
Printed by Dr. H. K. Kaul at Kaveri Printers, Darya Ganj, Delhi-110002. Assistant Editor : Dr. Sangeeta Kaul