

NATIONAL DIGITAL LIBRARY OF INDIA: ITS STATUS AND ACHIEVEMENTS

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ABSTRACT:

India's is entitled with rich traditional culture and knowledge from ancient times, it is the place of rich knowledge in Vedas, Upanishads, Medicines, Sanskrit's and Mathematics in order to preserved the rich heritage of knowledge which is available in different format like palm leafs, manuscript, books and in different languages in ancient libraries of India . Government of India has taken step to preserve all those national assets for future generation. Government of India envisages making India as Digital India and knowledge based economy where Libraries and information center play important role. Libraries are the storehouse of knowledge as they maintain the book and other knowledge resource available mostly in printed form. However, with the advent of digital technology like OCR and other latest digital equipment's , born digital content , Internet connectivity and Wi-Fi the library scenario in India is changing fast and numbers of institutional repositories and digital library Initiative coming up. This papers disuses about present status and achievements of India's National Digital Library.

KEY WORDS: *National Digital Library, Digital Archiving, Digital Preservation, Digitization, Optical Character Recognition.*

1- STATUS AND ACHIEVEMENTS OF NATIONAL DIGITAL LIBRARY:

National Digital Library			
Sl. No.	Name of Project and Implementing Agency	Objectives and deliverables of the Project	Status of the Project
1	Establishment of Digital Library of India by ERNET India	Make Collaborative arrangement between institutions in India and US to digitize around a million books Contain different type of content both of technical literature and art Facilitate easy access and optimize the bandwidth (both domestic and International) • Set up servers at 13 nodal centers and Link the nodal centers on the ERNET India's backbone for making available digital books accessible for anyone on the net.	Project Completed. Installed servers at 13 Nodal centers. Provided the connectivity to 6 nodal centers i.e. internet bandwidth of 2 Mbps to SERC, IISc., Bangalore, IIIT, Hyderabad, 1 Mbps to IIIT, Allahabad , 512 Kbps to C-DAC, Noida & Rashtrapati Bhawan and 128 Kbps to Sri Jagadguru Shankracharya Sharada Peetham, Sringeri.

2	Setting up of Scanning Centers in Uttar Pradesh for participation in the Million Book Universal Digital Library Project of Carnegie Mellon University of USA by IIIT Allahabad	To digitize books of common interest to the communities and make them available in a location and time independent way	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
3	Setting up of Scanning Centers in Maharastra for participation in the Million Book Universal Digital Library Project, by MIDC, Mumbai	Conversion of rare books of common interest in digital form and make it available on the web,	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
4	Setting up of Scanning Centers at Hyderabad for participation in Million Book Universal Digital Library Project by Central Library Hyderabad and State Central Library Hyderabad	Conversion of rare books of common interest in Telugu and Sanskrit in digital form and make it available on the web	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/

5	Digitization of ancient manuscripts and other in south Indian Languages pertaining to the vedas, vedangus, upanishad and other sastric studies by Sri Sri Jagadguru Shankaracharya Mahasamsthanam Dakshinamanga Sri Sharada Peetham, Sringeri	Digitization of ancient manuscripts	Project completed. Scanned data web enabled http://www.dli.ernet.in/and http://www.dli.gov.in/
6	Digital Archiving for preservation of rare manuscripts and old magazines from mid-19th century to 1960 available with Nagri Pracharni Sabha, Varanasi by C-DAC Noida	Digital Archiving for preservation of rare manuscripts and old magazines from mid-19th Century to 1950 available with 'Nagri Pracharini Sabha, Varanasi.	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
7	"KALASAMPADA" Digital Library - Resource of Indian Cultural Heritage (DL-RICH)- by IGNCA; New Delhi	To enhance the access to cultural resources using digital technology. Digital resources made accessible to the students, Scholars, researchers and scientific community.	Project completed. Scanned data web enabled http://www.dli.ernet.in/and http://www.dli.gov.in/

8	Digital Archiving for Preservation of Rare Manuscripts and Folios Available with Namgyal Institute of Tibetology – Sikkim by Namgyal Institute of Tibetology – Sikkim with technical support of C-DAC Kolkata	Digital Archiving for preservation of rare manuscripts and folios available with Namgyal Institute of Tibetology, Sikkim. • Digitization of Hymns reactions	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
9	Setting up of scanning center at Sringeri, Karnataka for participation in Million book universal Digital library project of Carnegie Mellon University of USA by Sringeri Math , Sringeri Karnataka	• Heritage Collection & Digitization/ OCR of Palm Leaf Manuscripts, Kaditas, Paper Manuscripts and printed books on Vedas • Video recording of Shastrartha deliberations • Transcriptions of Vaidik, Sanskrit Manuscripts and Books • Development of indexing using self-learning mechanism of DB2 content manager for manuscripts	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
10	Setting up of scanning	Digitization/OCR of rare	Project completed. Scanned data

	centre at Goa for participation in Million book universal Digital library project of Carnegie Melon University of USA by University of Goa	books in Portuguese, Marathi and Konkani in the Digital forms and make them available to public and also on the web	web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
11	Setting up of scanning Centre at Hyderabad, for participation in Million book universal Digital library project of Carnegie Melon University of USA by University of Hyderabad	Digitization/OCR of rare books in Telgu, Sanskrit, Hindi and English & Indian History, etc.	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
12	Setting up of scanning Centre at Bharatiya Jnanpith for participation in Million book universal Digital library project of Carnegie Melon University of USA by Bharatiya Jnanpith, Lodhi Road, New Delhi	Digitization/OCR of rare books and manuscripts etc. of Jain Heritage culture in the digital forms and make them available to public and also on the web.	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/

13	Setting up of Scanning Centers in Maharashtra for participations in the Million Book Universal Digital Library Project by University of Pune	Conversion of rare books of common interest in Marathi and Sanskrit in digital form and make it available on the web	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
14	Print your own book - Mobile Digital Library by C-DAC Noida	Mobile Digital Library is to bring 1 million digitized books. Expanding access to Information and Knowledge in schools, library and hospitals etc. · Updating digital library with available contents	Project Completed. Books scanned, printed and distributed in schools.
15	Creation of Digital Library of Books in President House by C-DAC Noida	To create a free-to-read, searchable collection of data in the form of images in the first phase and then conversion of data into text format in English and Indian languages by scanning the books and indexing the images through keywords.	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/

16	Establishing Centers for Digital Archiving and creation of rare knowledge pertaining to Ayurvedic Medicine, integrating & show casing of the content created through Digital Library outlet for Uttaranchal State Government by C-DAC Noida	Digitize Manuscripts & Information related to Ayurvedic and forestry	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
17	Development of National Databank on Indian Art and Culture (A pilot project)” by IGNCA	Digitize Copy right free books, Visuals Recording of Video Walkthrough historical Monuments	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
18	“Digital Library of India 2 : Creating a large collection of Wide National Interest” at IIIT, Hyderabad	“Digitize (IPR Free) books	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
19	“Coordination, Web Hosting & Maintenance of Digital Library of India” BY IISc., Bangalore	Hosting the DLI web site for accessing the digitized data and maintaining the web site	Project in Completed. Activity is continuing. http://www.dli.ernet.in/

20	“Digitize copyright free books and Conducting the programs on Digital Literacy / Competency for faculty, students and researchers at University of Delhi” by Delhi University	Digitize copyright free books and Conducting the programs on Digital Literacy / Competency for faculty, students and researchers	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
21	Mega Center Digital Library of India –2nd Phase: Content Creation (in East Indian Languages as well as in English) and Storage and Access” by C-DAC, Kolkata	“Digitize (IPR Free) books	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
22	“Rajasthan Heritage: Digitization of Rare Books” at Bansthali Vidyapith, Bansthali (Rajasthan)	“Digitize (IPR Free) books	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
23	“Digitization of Libraries” by C-DAC, Noida	“Digitize (IPR Free) books	Project completed. Scanned data web enabled http://www.dli.ernet.in/ http://www.dli.gov.in/
24	Digitization copy right free books	Digitize books and documents available at	Project completed. Scanned data web enabled

	available at Gujarat Vidyapith and Mahatma Gandhi Museum, New Delhi by C-DAC, Noida	Gujarat Vidyapith, Ahmedabad and Mahatma Gandhi Museum, New Delhi	http://www.dli.ernet.in/ and http://www.dli.gov.in/
25	Digital Archiving for preservation of rare manuscripts at various monasteries in Sikkim by NIT Sikkim	Digital Archiving rare manuscripts at various monasteries	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
26	“Digital Library Mega Center: Content Creation in Tibetan, Sanskrit and English” at IIIT, Allahabad	Digitizing of rare books within IPR Limits and web enable the same	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
28	“Rajasthan Heritage: digitization of Rare Books- 2nd Phase” by Banasthali Vidyapith, Banasthali (Rajasthan)	Digitize, Preserve and web enable copy right free books available in Rajasthan.	Project completed. Scanned data web enabled http://www.dli.ernet.in/ and http://www.dli.gov.in/
29	Digital Library for North Eastern States (Content Creation, Storage and Access)” by C-DAC, Kolkata	Digitize, Preserve and web enable copy right free books available in North Eastern States.	Project is ongoing. Digitization work has been started at Assam Tripura and Manipur. A digital Library portal was created in Tripura and data is being hosted. http://www.dli.ernet.in/
	“Rajasthan and Gujarat Heritage: digitization of Rare	Digitize, Preserve and web enable copy right free books available in	Project completed. Scanned data web enabled http://www.dli.ernet.in/

31	Books- 3 rd. Phase” by Banasthali Vidyapith, Banasthali (Rajasthan)	Rajasthan and Gujarat.	http://www.dli.gov.in/
32.	“Digitization of Documents available at Gujarat Vidyapith, Ahmadabad and Aligarh Muslim University, Aligarh” by C-DAC, Noida	Digitize, Preserve and web enable copy right free books available in Gujarat Vidyapith, Ahmadabad and Aligarh Muslim University, Aligarh	Project is ongoing. Data is being hosted at http://www.dli.gov.in/
33.	Digital Library accessibility of data digitized in phase-I& II by C-DAC, Noida	Convert the data from TIFF to PDF, OCR and make searchable.	Project is ongoing. Data is being converted

(Source-<http://deity.gov.in/content/national-digital-library>)

2- STATISTICS NATIONAL DIGITAL LIBRARY.

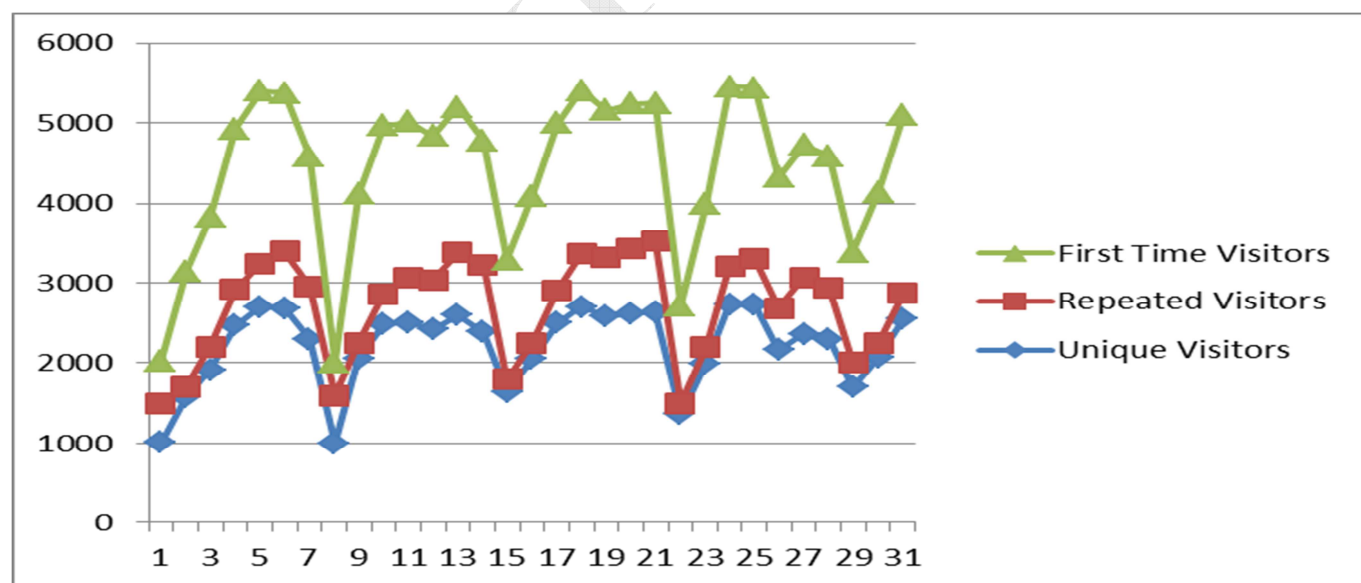
Table 1- The statistics of national digital library is presented here in terms of its user visit in particular month by unique visitors, repeated visitors and firsts time visitors, page downloaded.

Date	Unique Visitors	Repeated Visitors	First Time Visitors	Total Page Load
1/08/2015	1012	486	526	110567
2/08/2015	1575	131	1444	246618
3/08/2015	1916	290	1626	297118
4/08/2015	2464	453	2011	283072
5/08/2015	2698	549	2149	434630
6/08/2015	2687	710	1977	321940
7/08/2015	2296	657	1639	297975
8/08/2015	1004	593	411	113685
9/08/2015	2059	190	1869	285381
10/08/2015	2481	382	2099	4344520
11/08/2015	2507	551	1956	312672
12/08/2015	2418	618	1800	254729
13/08/2015	2599	779	1820	426781
14/08/2015	2390	836	1554	477727
15/08/2015	1644	150	1494	269456
16/08/2015	2047	204	1843	299318
17/08/2015	2499	405	2094	299319
18/08/2015	2701	665	2036	387416
19/08/2015	2577	741	1836	346121
20/08/2015	2620	806	1814	363447
21/08/2015	2624	899	1725	400143

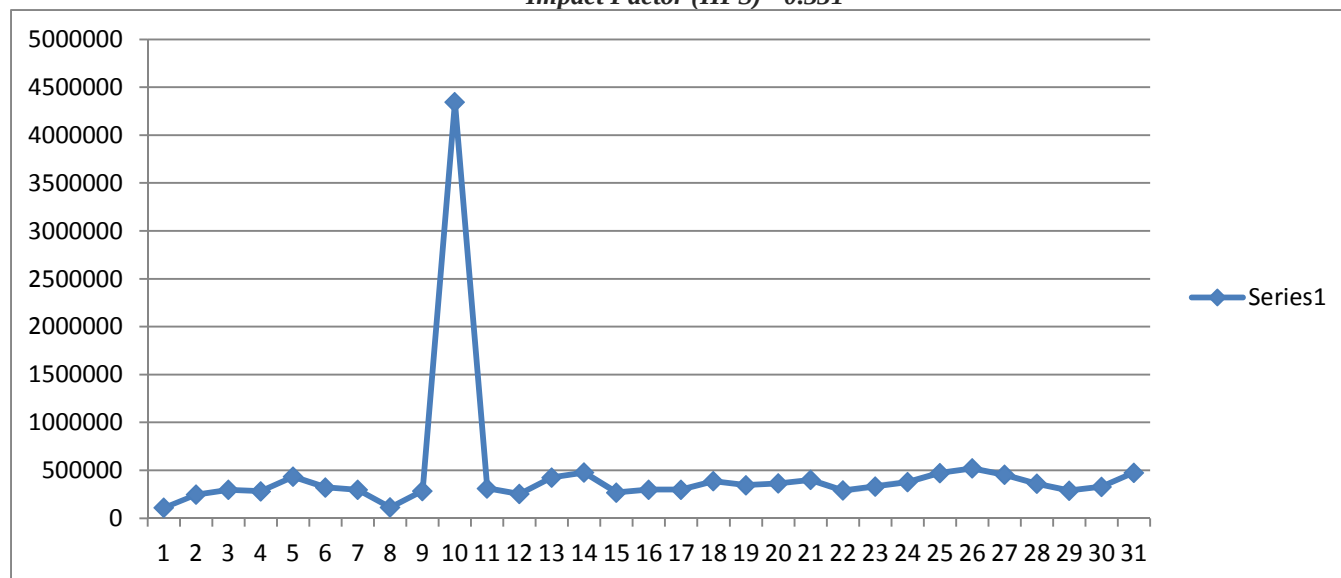
22/08/2015	1359	136	1223	291409
23/08/2015	1995	198	1797	332745
24/08/2015	2728	487	2241	376874
25/08/2015	2720	582	2138	473316
26/08/2015	2162	525	1637	521433
27/08/2015	2361	705	1656	454211
28/08/2015	2296	636	1660	361611
29/08/2015	1695	319	1376	289507
30/08/2015	2065	175	1890	329836
31/08/2015	2547	317	2230	475387
Total	68746	15175	53571	14478964

Visitor statistics chart for month of August 2015 Source-(<http://www.dli.ernet.in/>)

Graph1-Inddicate number of first time visitors, repeated visitor and unique visitors in a particular date of given month.



Graph2- indicate the percentage of page load in agiven date .



3-Table -2 SCANNING CENTRE WISE REPORT AS ON 14/OCTOBER /2015

Scanning Centre	No of Books	No of Pages	No of Pages In Millions (approx.)
unknown	9353	3570685	3.571
Akce, universal digital library	7095	1036014	1.036
Allama Iqbal Library, University of Kashmir	17980	6480736	6.481
Anna university	232	106776	0.107
Asr, melkote	1297	394001	0.394
Banasthali University	101774	40345710	40.346
Bharatiya jnanpith delhi	292	92570	0.093
C-DAC, Kolkata	63002	26167158	26.167
CCL, Hyderabad	12910	2753824	2.754

CDAC,Noida	106897	33107306	33.107
Digital Library, Mulund	492	160185	0.160
Goa University	1613	191886	0.192
Government Central Press, Mumbai	167	61590	0.062
HCU,hyd	74	35026	0.035
IGNCA	11024	4403187	4.403
Iiap, Bangalore	1646	588427	0.588
IIIT, Allahabad	63785	20566686	20.567
IISC, Bangalore	4436	1624756	1.625
NIT, Sikkim	957	1616038	1.616
North Eastern States Libraries	15203	4988688	4.989
Osmania university	7524	2669930	2.670
Pune, university	1686	497074	0.497
Rashtrapati bhavan library	4832	2023364	2.023
Rmsc, iiith	64936	21800301	21.800
Salarjung museum	6128	2339384	2.339
Sastra, deemed university Thanjavur	1872	577050	0.577
SCL, Hyderabad	6479	2281804	2.282
Sringeri Sharada Peetham	959	307137	0.307
SVORI	495	216271	0.216
The record of prison office	4	280	0.000

TTD, s.v digital library	14320	3552009	3.552
U.S. DEPARTMENT OF AGRICULTURE	2	303	0.000
U.S. DEPARTMENT OF EDUCATION	1	1074	0.001
UOD, Delhi	7576	2997971	2.998
Total	537043	187555201	187.555

Total 537043 no of books and approximately 187.555 million pages have been scanned through different scanning center.

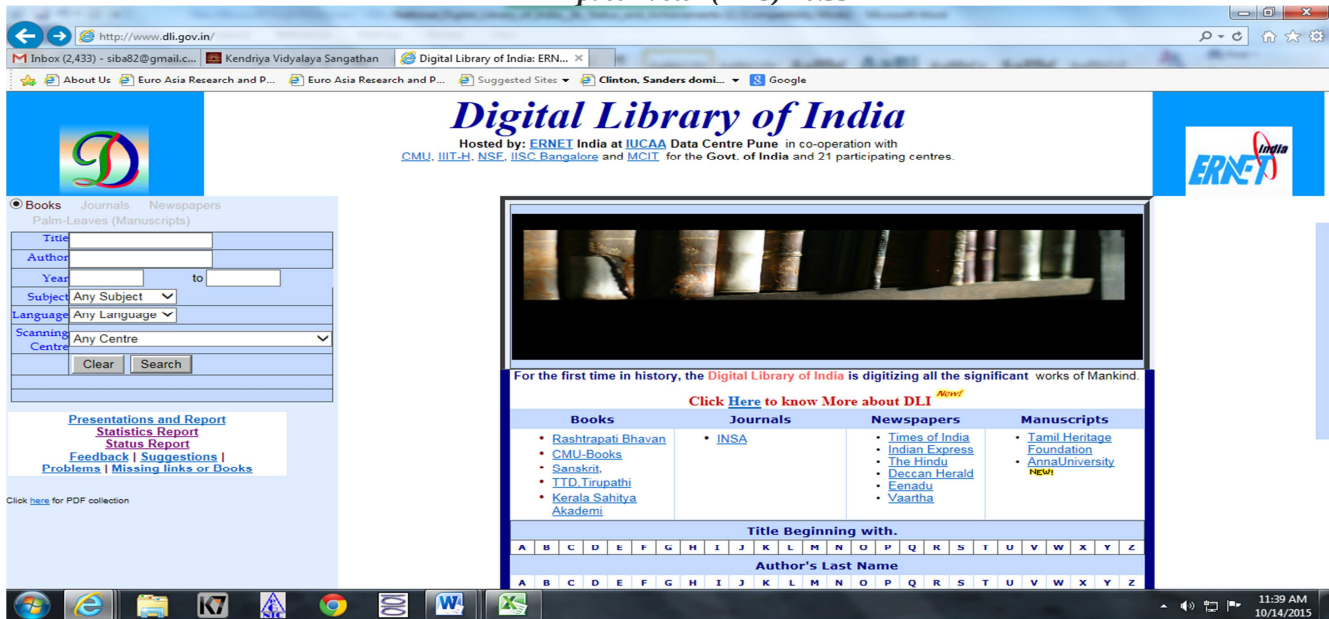
4- Table -3 Language Wise scanned books and pages as on 14/October /2015

Language	No of Books	No of Pages
unknown	2857	1150908
Persian	255	116082
Punjabi	2	508
Arabic	7593	2466049
Assamese	71	37444
Awadhi	2	325
Bengali	25176	7885272
Bhojpuri	1	160
Braj	5	2821
Danish	1	268
Dutch	1	120

English	288289	115103979
Farsi	3	3424
French	980	453410
German	330	136207
Greek	23	11502
Gujarat	39605	6623708
Hindi	54205	16761340
Irish	1	538
Italian	57	28903
Kannada	3346	723606
Kashmiri	479	58146
Kokborma	1	28
Malayalam	73	15617
Manipuri	379	35364
Marathi	3904	1045301
multilingual	1942	496549
Nagari	1	65
Nepal	28	4956
Norwegian	3	882
Oriya	49	18454
others	143	52224
Pali	91	31594

Persian	7547	2660344
polish	1	530
Portuguese	1448	167428
Prakrit	2	269
Punjabi	392	88335
rajasthani	4	759
roman	2	506
Russian	6	1642
Sanskrit	35430	14005544
sandhi	87	33207
Spanish	14	8457
Swedish	3	662
Tamil	5385	1293078
telugu	23370	4485797
Tibetan	966	1618567
Turkish	133	25004
Urdu	32357	9899318
Total	537043	187555201

537043 no's of books and approximately 187555201 pages in different language have been scanned as on 14/October /2015.



A snapshot of Digital Library of India

5. CONCLUSIONS:

The National Digital Library of India has long way to go to assimilate the information explosion itself in India. Being countries of millennium skilled IT enabled youth and readers. Scientific and cultural productivity of India is marching ahead with new emerging economy, research and development became the destination for India and to meet the new philosophy of “Digital India” National Digital Library will serve a milestone.

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