

Electronic Reference Media in The National Archives of India: An Overview

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The National Archives of India (NAI) is the custodian of the non-current records of the Government of India and holds them in trust for the use of administrators and scholars. It is an Attached Office of the Ministry of Culture Government of India. It was set up in March 1891 in Calcutta (Kolkata) as the Imperial Record Department and subsequent to the transfer of the National Capital from Calcutta to New Delhi in 1911 it shifted to its present building in 1926. The nomenclature of the Imperial Record Department was changed to National Archives of India after India gained independence on 15th August 1947.

The NAI has in its custody records occupying 30 kilometres of linear shelf space. Most of these records relate to the East India Company and the British Raj and are in English. It has also acquired the private papers of eminent Indians including Mahatma Gandhi, Rajendra Prasad, Maulana Azad, Sardar Patel, M.R. Jayakar, Field Marshal K.M. Cariappa and others. Approximately 1,73,000 books comprising rare Government reports, proscribed publications, vernacular Native Newspaper Reports, Parliamentary Papers, etc. are available in the Library of the National Archives. The Department also has in its custody more than 7000 microfilms of records of Indian interest acquired from other countries. As a long-term preservation measure, the NAI has been engaged in security microfilming of important records series and approximately 12,000 microfilms of public records have been prepared.

The last decade of the 20th century witnessed the gradual globalization of archives due to the rapid pace of technological progress and thus necessitated the need to evolve a method for facilitating the quick retrieval of information. Computerization of archives, which appeared to be the best solution,

was then in its infancy, consequently the NAI initiated steps for the development of software for archival use, as there was no internationally recognized and standard software available for archival purposes. At that time most of the countries were laying down specifications for hardware and software according to the nature of the record holdings in their custody. They developed software for Archives in Lotus, dbase-III, FoxBASE, Word Perfect under DOS/Win-3.1 and UNIX environments as information stored was mostly in textual format (ASCII and flat file).

By 1998, with the further advancement of information technology and the availability of new storage mediums, the NAI considered the question of the creation of a data base for reference media records to enable the quick retrieval of information as a viable alternative to save time. It was considered to be economical for the research and reference purposes of scholars and other users of archives. However, many issues were involved and needed to be resolved before the creation of the database. As the storage of electronic documents is vulnerable to loss by decay of the medium in which information is stored, they become inaccessible and unreadable especially when the software needed to interpret them or the hardware on which the software runs becomes obsolete. The advancement in information technology requires the frequent migration of data to the latest medium. Most digital documents exist only in encoded form, which require specific software to translate the bit streams and make them usable. The medium itself disappears from the market; drivers capable of controlling the drives and deciphering the encoding used on the medium, are no longer incorporated in new computers. Upgrading of new computer systems, therefore, requires abandoning the old

storage medium, provided an institution still has in its custody documents stored on that medium. The problems of short lifespan of the media and rapid obsolescence have necessitated copying of the digital information onto new media. Although copying is a viable solution, it is likely to corrupt documents due to compression, encryption or ever changing data formats.

Considering all these aspects, the NAI's first priority was to computerize data of reference media to records for easy

retrieval and access for the benefit of scholars and other users of archives. Accordingly a tailor-made software "AIMS" (Archival Information Management System) was developed by NAI in Visual Basic back end and MS Office front end. With the introduction of this software, the work of data entry is progressing satisfactorily.

The data entry is now being created from the following formats:

- Index to press lists, press lists, and transfer lists
- Printed (type written) calligraphy form (hand written) and manuscripts in various sizes and styles
- Languages - Hindi, English, Persian, Urdu and Sanskrit

This was, however not an easy task due to a number of problems faced, viz, diverse forms and formats of records; no fixed data structure; cross linking of records; no existing standards for computerization; multiple keywords within the subject field.

Simultaneously, the NAI designed an integrated system solution for the Archival Information and Management System (AIMS) software on intranet ware. The software was developed with web browser based access and having facility to upgrade to web/intranet and WAN deployment. The software had a flexible modular design and a package was developed to facilitate computerization of indexes to records. Also, AIMS software was customized to access the information

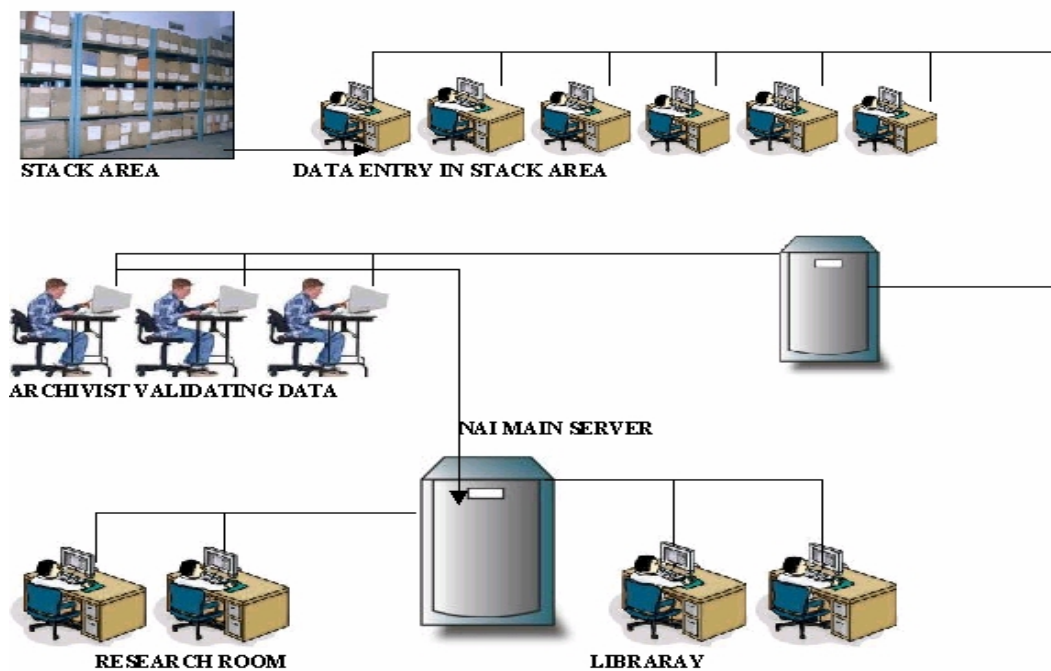
related to an important historical event, chronological span, and activities of a personality, political leaders and much more.

The AIMS software has an integrated system – LAN implementation, six modules and ten sub modules and three levels of security, online processing and retrieval besides report generation and web/internet compatibility. The software was developed with a SQL search engine to locate the file details on the basis of catchwords, Records browsing in Departments, Branch, Year, Month and File Details, along with subject and keywords as well as tree and flat view retrieval.

There are around 52,00,000 lakhs records for which reference media are to be created. So far reference media has been created for 12,00,000 records and are available for retrieval through AIMS software primarily for the benefit of scholars and users of archives on the NAI intranet. A database of the entire collection of the NAI Library has also been created in LIBSYS software and is available for retrieval on the NAI intranet.

Since the Department has a huge collection of microfilms of documents available for use by scholars, a pilot project to convert the analogue microfilm images to digital medium was undertaken in 2000. Around 2,000,000 lakhs images have been created and the AIMS software is being updated in order to make available digital images of the documents on the network, so that frequent use of any document is minimized and multiple viewers are able to have easy access to the original files in digital form on the NAI intranet.

Graphic Representation of Data Entry and Data Validation for Reference Media of Records in National Archives of India, New Delhi.



Retrieval of information on catch word Gandhi in AIMS software

National Archives of India

Total Number of Records Found : 857

Please Check The Record for Requisition

Sr. No.	Dept	Branch	File Details	Year	Month	Part	Subject
<input type="checkbox"/> 1	Foreign & Political	External	Progs., No. 117, April 1922	1922	4	PART B	Allegation of the ill-treatment of Indian in Mesopotamia.(Published in Mr. M.K. Gandhis paper Young India.
<input type="checkbox"/> 2	Foreign & Political	External	Progs., Nos. 52, March 1921	1921	3	PART B	Information regarding the Gandhi National School at Dehradun & Connection therewith of Thakur Chandar Singh, a Gurkha of Dehra Dun.
<input type="checkbox"/> 3	Foreign & Political	Frontier	Progs., Nos. 193-F, 1931	1931	0		Conversation between Mr. H.W.Emerson home secretary and Mr. Gandhi as bombay on the 6th april 1931.
<input type="checkbox"/> 4	Foreign	Frontier	Progs.,	1931	0		Congratulation of the wall

The screenshot also shows a search interface on the left with the search text 'gandhi' and various navigation links like Requisitions, Registration, Request, Search, Reset, Registration Number, Reports, User Details, and Logout.

It is pertinent to mention that even in countries where e-records or digital documents are created and transferred to their national archival repositories, the records are "future proofed" by transferring the digital image data to microfilm. However, converting digitized data to microfilm as a long-term storage medium involves a notable reduction in quality. Microfilm produced in this way cannot be used for digitization with any guarantee of an acceptable result in comparison to the master negative prepared from original documents. Analogue and digital storage forms are thus not fully compatible at present.

Considering the merits and demerits of both microforms and digital media, it is advisable to continue the time-tested process of microfilming for archival records as a means of ultimate preservation. This process is stable, interfaces with digital and analogy technologies and is protected against computer viruses. Thus, to preserve archival documents, and avoiding the risk of content alteration, for indeterminate periods into future, a system that balances the benefits of microfilm media with adequate search facilities and organizational aspects of a digital system with proper indexing for rapid retrieval and online access, appears to be an ideal solution for an archival institution. Until such time as a viable and standardized solution for digital longevity is developed and accepted as a long term solution for preservation of record data for posterity, we have to content ourselves with the traditional medium of preserving by microforms and allied reprographic techniques.

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