REPORT OF WORKING GROUP ON ARTS FOR FORMULATION OF EIGHTH FIVE YEAR PLAN

MINISTRY OF HUMAN RESOURCE DEVELOPMENT DEPARTMENT OF ARTS NEW DELHI

REPORT OF THE WORKING GROUP ON ARTS FOR FORMULATION

OF THE EIGHTH FIVE-YEAR PLAN

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The Working Group on Arts for formulation of the Eighth Five-Year Plan was set up by the Planning Commission with the terms of reference and composition as shown in Annexure-I.

1.1 The Working Group held two meetings and also set up three Sub-Groups as follows:-

Sub-Group I

To assess in perspective technology requirements of the Indira Gandhi National Centre for the Arts and to make recommendations for detailed planning.

Sub-Group II

To assess the perspective plan of the Kala Kocha Division of the IGNCA including publication work of the Centre.

Sub-Group III

To project the on-going and the planned programmes activities of the Janapada Sampada Division of the IGNCA.

- 1.2 All the three Sub-Groups have submitted their reports and these are referred to at the appropriate places in this Report.
- 2. The Indira Gandhi National Centre for the Arts has already prepared the outline of a perspective plan for development of the academic programmes of the Centre for the next ten years and got the same approved by the IGNCA Trust under the Presidentship of Shri Rajiv Gandhi at the first meeting of the Trust held in February, 1988. The programmes of the Centre have been organised in Five Divisions as follows:-

The Indira Gandhi Kala Nidhi: to provide for a computerised National Information System and Data Bank on arts, humanities and cultural heritage fully supported by a Cultural Reference Library of multi-media collections serving as a major resource Centre for research in the humanities and the arts;

The Indira Gandhi Kala Kosa: to provide for research, compilation and publication of a continuing series of fundamental texts of Indian tradition relating to arts, inter-disciplinary glossaries/

thesarus of basic technical terminologies in arts and crafts, reprint of critical writings on Indian arts and a multi-volume encyclopaedia of Indian arts;

The Indira Gandhi Janapada Sampada: to provide for a core collection of material and documentation on folk and tribal arts and crafts; multi-disciplinary lifestyle studies of tribal communities for evolving alternate models for the study of Indian cultural phenomenon in its totality and the interwebbing of environmental, ecological, agricultural, socio-economic, cultural and political parameters;

The Indira Gandhi Kala Darshana: to provide a forum for interdisciplinary Seminars, Exhibitions and performances on unified themes and concepts:

The Sutradhara: to provide administrative, managerial and organisational support and to make available services to all the other Divisions.

- 2.2 The Conceptual Plan of the IGNCA envisages both short term and long term programmes in the four academic Divisions of the Institution. The over-riding objectives for specific programmes and activities are:
 - (1) The identification and survey of repositories having significant holdings in collections of primary source material on Indian arts, humanities and cultural heritage;
 - The analysis and dissemination of data and information therefrom to scholars, academics, students, institutions and policy makers in Central and State Government;
 - (3) The reproduction of source materials in different media, such as microfilm, micro-fiche, discs, tapes, print-outs, photographs, slides, film. video, etc.;
 - The indexing, cataloguing and processing for multimedia storage and retrieval of the source materials, using modern electronic technology;
 - (5) Collaboration with and assistance to existing agencies on the firmulation of programmes and policy on art and outural traditions, for both formal and non-formal education;
 - (6) Promotion of exchange of source materials with

other countries, particularly those having close historical cultural affinities with India and those having populations with vital traditions of tribal and folk art.

The details of the programme of each Division are discussed hereunder:

3.0 Indira Gandhi Kala Nidhi

- 3.1 The Kala Nidhi Division programme consists firstly of the Reference Library of printed material in various languages, rare books, personal collections of eminent Indian intellectuals, catalogues of manuscripts of Indic and Asian Origin, journals and back volumes and area collections relating to Soth Asia, South East Asia, West Asia, Latin America and Africa. The Library will also have collection of microfiche, microfilms of unpublished manuscripts in Indian and foreign collections, a collection of visual material in the form of photographs and slides and also tapes, disks etc. in the area of auditory source material. The Division has projected an outlay of Rs.400 lakhs for printed material, Rs.400 lakhs for reprographic copies and Rs.450 lakhs for audic-visual collections. A brief outline of the programme of the Reference Library is attached Annexure II.
- The next most important programme of the Kala Nidhi Division relates to the National Information System and Data Bank on art, humanities and cultural heritage. The Government of India has already declared IGNCA as the Nodal Agency for the National Data Bank which will network the data and finformation on cultural heritage held with repository agencies under various Departments, Ministries of the Government e.g., the Ministry of Information & Broadcasting, Department of Education, Department of Culture, Ministry of Environment and Forests etc. The NIC is providing the technical support for the computerised National Information System for the IGNCA. The detailed outline of the programme of the National Information System and Data Bank of the Kala Nidhi Division is given in Annexure III.
- 3.3 The Sub-Group I of the Working Group has given its detailed recommendation for the technology back-up for the Kala Nidhi's Information System and Data Bank, a copy of which is attached Annexure IV. The Sub-Group has recommended the following in the area of technology back-up for IGNCA:
 - (a) The present facilities consisting of the HP-3000/42 computer system and the software developed by NIC should be upgraded during the

8th Plan for the purpose of cataloguing, documenting, referencing and in general to supply information on nature, location and availability of primary source data on art and culture. These upgraded facilities can also cater to an MIS for the administration of IGNCA.

- (b) In respect of publication of textual material involving different scripts of Indian languages, the Sub-Group has recommended the adoption of the desk-top publishing technology for which work has already been done by NCST for the Centre and further enhance its capabilities to take into account scripts other than Devanagiri.
- (c) For dissemination of textual material with images and pictures, the Sub-Group has recommended that a well-equipped photography and slide-making facility should be created. Also production of audio, video, cassettes, films etc. for dissemination should be arranged either as an in-house activity or by sub-contracting through professional groups.
- (d) In the more complex area and processing of cultural source data on an integrated basis with texts, images, sound etc. for the purpose of academic work of the Centre, the primary work of data capturing and data inputting would need high-fidelity audio recording (in the analogue mode). Upgrading the existing commercial key-board facilities for different scripts for application in IGNCA, exploring the possibility of OCR application for text material and related activities are to be undertaken.
- Side by side with (d) above, it is recommended that an art image data base for 2-D and 3-D images should be developed using high resolution scanners and image digitization with a programme of R & D experimentation in this area. This should be taken up for collaboration with research groups in the country. Smimilar R & D experimental work should also be mounted for digitising auditory source material.
- (f) The Sub-Group on Technology has particularly emphasized the need for positioning qualified

and experienced people for providing technical back-up and their training for running the sophisticated facilities during the 8th Plan period. In particular, experimental R & D projects have been recommended by the Sub-Group as shown in the annexure to its report.

3.4 The thrid most important element of the programme of the Kala Nidhi Division relates to the development of cultural archives comprising of the personal collections of artists and scholars in the form of photographic collections, collections of tapes, cassettes, theatre material as also in the are of literature. The personnel collections are estimated to cost about Rs.100 lakhs. This Division will also require audio-visual equipment costing Rs.100 lakhs and funds for restoration of archival material etc. An outline of the details of this programme is attached - Annexure V.

4.0 Kala Kosa Division

The Kala Kosa Division of IGNCA has a wide-ranging programme focussed on textual material of Indian tradition and publications. These include the preparation of Lexicon on fundamental concepts and glossary of technical terms; the editing and publication of fundamental texts of Indian arts; reprint of works of critical scholarship of Indian art and eventually the publication of multi-volume Encyclopaedia of Arts. An outlay of Rs.145 lakhs is projected for the glossary and fundamental text programme while Rs.50 lakhs required for Reprint of critical works and Encyclopaedia. The on-going and projected activites of this Division are given in the Chart - Annexure VI together with the detailed recommendations of the Sub-Group at Annexure VII.

5.0 Janapada Sampada Division

The Janapada Sampada Division of the IGNCA has a complex programme consisting of a core ethnographic collection of reproduction and reprographic formats and originals on basic source material; multi-media presentations of aboriginal art both visual and auditory; lifestyle studies based on folk and tribal heritage as also temple related living traditions; and conservation laboratories. Out of the projected outlay of Rs.685 lakhs, this Division requires Rs.100 lakhs each for ethnographic collections and life-style studies, and Rs.180 lakhs for multi-media presentations/events. The programme of this division is depicted in Chart at Annexure VIII together with the report of the Sub-Group III at Annexure IX.

6.0 Kala Darshana Division

6.1 The programme of this Division will relate to international exhibitions and seminars on unified themes, documentation of the collections of foreign artists, who worked in India and publication of proceedings of seminars, workshops etc. However, a separate and most important activity of this Division relates to the construction of the Building Complex of the IGNCA in the Central Vista area of Delhi. A brief outline of the programme of this Division is given in Annexure X.

7.0 Sutradhara Division

- 7.1 This Division is administrative coordinating Division of the IGNCA and will provide the necessary secretarial and other back-up support for the various other Divisions.
- 8.0 The Working Group discussed in detail the various elements of the programmes of each of the Divisions of the IGNCA. The recommendations of the Working Group are as follows:
 - (1) The ten year profile of the IGNCA programme is well-conceived and should be adopted and provided for in the 8th Five-Year Plan.
 - (ii) The building up of the Reference Library of the Centre insofar as printed material is concerned should be completed in all respects during the 8th Five-Year Plan and, thereafter only maintenance of the library of printed works for marginal addition would be necessary. The target in the 8th Plan should be to reach upto 3 lakhs printed volumes, including present collection of about 60,000 books. acquisition of reprographic copies in the form of microfilms, microfiche is a continuing activity and should be strengthened during the 8th Plan and particular attention may be paid to the acquistion of the manuscript collections with foreign repositories.
 - (iii) The upgradation of the present computer facilities should be taken up urgently. Othe programmes including R & D as recommended by the Sub-Group I should be planned out in detail including specifications of the hardware, the design of the R & D experiments and arrangements for data capture. A strong per-

sonnel unit for developing the technology backup system should be in position at the beginning of the 8th Plan. The Centre should continue to vigorously explore the possibility of technical aid under UNDP and from countries which have the necessary hardware manufacturing capability of a sophisticated level e.g., Japan etc.

- (iv) The Kala Kosa programmes on the basis of recommendations of the Sub-Group II should be completed during the 8th Plan itself. These are modest programmes which will go a long way in regenerating interest in Indian tradition.
- In the area of folk and tribal heritage and (v) life-style studies, the Centre should give top priority to the core ethnographic collection in multi-media formats as this is of crucial Importance to other activities of the Janapada Sampada Division. At the same time, the field level work for evolving methodologies for lifestyle studies including computerisable modules should be taken up on a more intensive scale involving multi-disciplinary teams. A modest conservation and preservation laboratory should be set up during the 8th Plan itself. should particularly be in the area of palm leaf manuscripts, paper etc. The recommendations of the Sub-Group III provide the detailed basis for the programme of the IGNCA in the Janapada Sampada Division in the 8th Plan.
- (vi) In regard to activities (other than Building Project) under the Kala Darshana Division the present plans for continuing the series of international exhibitions-cum-seminars on unified themes are recommended. The plan should also include documentation of such unique exhibitions and dissemination in a packaged form to students, academics and for non-formal education.

9. The Building Project

The building complex to house the IGNCA is scheduled to be completed in full during the 8th Plan period. The construction work is expected to start in the last year of the 7th Plan itself. The Working Group did not discuss the building project as such since this is already an approved on-going project and a high level Building Committee is also in charge of this project. However, for the sake of completeness, in the table of financial projections below. cost of completion of the Building Project as capital outlay is separately shown on the basis of the figures supplied by the IGNCA.

10. Pinancial Projections

- 10.1 Without working out the details of the specific schemes, the administrative support required and the time-frame, it is difficult for the Working Group to give any precise estimate of the financial outlays required during the 8th Five Year Plan for the IGNCA academic programmes. However, on the basis of the discussions in the Working Group and the reports of the various Sub-Groups, the following table provides the tentative financial outlay worked out by the IGNCA Divisions.
- 10.2 From the summary table of the tentative financial outlay shown hereunder, it will be seen that during the five years of the 8th Plan period, the IGNCA will require a total amount of Rs.75 crores for the academic programmes of all the Divisions excluding the Capital outlay on the Building project. In order to meet the yearly average expenditure of Rs.15 crores on the academic programmes during the 8th Plan, the IGNCA will require a total Corpus Fund of Rs.125 crores so that the interest returns thereof could be adequate to defray the Annual Plan expenditure. Accordinly, the Working Group would re commend an additional Corpus Fund of Rs, 100 crores which could be added to the present Corpus Fund of the Centre namely, Rs.25 The Working Group understands that for the 7th Plan programme of the IGNCA, this procedure of providing a Corpus Fund was followed to facilitate the implementation of the Plan programme instead of programme-wise grant-in-aid. The interest on the Corpus Fund only would be available to the Institution for meeting the expenditure on the Plan programmes.

10.3 SUMMARY TABLE

(ii)

(iii)

Personnel

Minor Equipment

EIGHTH FIVE YEAR PLAN (1990-91 to 1994-95)

(Rupees in Lakhs)

80

50

DIVISION WISE PROGRAMME

PROJECTED OUTLAYS

KALA NIDHI

A - Reference Library

(i) Acquisitions
- Printed Books
- Microfilm/fiche
- Visual/Audio/Video

PROJECTED OUTLAYS

DIVISION WISE PROGRAMME		PROJECTED OUTLAYS	
(iv)	Other Costs, Stationery, Contingencies etc.	75	
	Sub-total (Ref. Lib.)		1455
F -	National Information & Data Bank		
(i)	Hardware/Equipment System	600	
(ii)	R & D and Data Capture	200	
	Sub-total (NIDB)		800
c .	Cultural Archives		
1.1		100	
(11)	Personal collections, Acquisition Audio-Visual Equipment	100	
irio i	Raw stock & Frocescing (Duplication for preservation)	5 č	
. ; _	Furniture: & Fixture:	Z 2:	
ive	Restoration of Archival Material	5.0	
	Sub-total (Cultural Archives)		32
KALA	KOSA		
A -	Kalatattvakosa	3.46	
E -	Kalamulasastra	145	
С -	Reprint Series	20	
D -	Encyclopaedia of Arts	30	
E -	Personnel and Infrastructure	75	
	Sub-total (Kala Kosa)		27

DIVISION WISE PROGRAMME		PROJECTED OUTLAYS		
JANAPADA SAMPADA				
A -	Ethnographic Collections	100		
В -	Multi-media presentations and Events	180		
C -	Life-Style Studies			
(i)	Loka parampara	100		
(ii)	Kshetra Sampada	80		
D -	Childrens' World	7 5		
E -	Experimental Theatre	165		
F -	Conservation & Restoration Lab.	100		
	Sub-total (Janapada Sampada)		800	
KALA I	DARSHANA			
Α -	Programmes			
(ī)	Collections	5 0		
(ii)	Seminars	100		
(iii)	Exhibitions	300		
(i v)	Documentation	25		
(v)	Publications	5 0		
В -	Capital Exp. (other than Building Project)	500		
	Sub-total (Kala Darshama)		1025	
SUTRAL	DHARA			
Α -	Purchase of 20 Residential Flats/Land Rural Land and Construction for Rural Complex	600		
В -	Administration and Establishment Charges	500		

	(Rupees in	n Lakhs)
DIVISION WISE PROGRAMME	PROJECTE OUTLAYS	ED
- Maintenance of Buildings including air-conditioning, electricity and water-supply etc.	1725	
Sub-total (Sutradhara)		2825
GRAND TOTAL OF ACADEMIC PROGRAMMES (RE	VENUE)	7500
Building Project Capital Outlay	12500	
GRAND TOTAL (CAPITAL WORKS)		1250

ANNEXURE 1

<u>Terms of Reference of the Working Group on</u> <u>Arts - Eighth Five-Year Plan</u>

- 1. To take stock of the position likely to be reached within the area by the end of 1989-90 in relation to original programmes of the Indira Gandhi National Centre for Arts namely (i) Indira Gandhi Kāla Nidhi (ii) Indira Gandhi Kala Kosha (iii) Indira Gandhi Kala Darshan (iv) Indira Gandhi Janapada Sampada and (v) Sutradhara, during the Seventh Plan period; and in particular to review the physical and financial progress of the construction of the Building complex of IGNCA, identify problem are and suggest effective remedial measures.
- 2. To suggest feasible perspective of development for IGNCA upto 2005 AD.
- 3. To specify in clear terms the objectives of the programmes in the sector of Arts for the Eighth Plan.
- 4. To suggest measures for effective linkage between Arts and other sectors of culture, education, tourism, rural development, industry informations etc.
- 5. To consider such other matters as the Chairman considers relevant for the formulation of the Eighth Five Year Plan of the subject area.
- 6. To formulate proposals for the Eighth Five Year Plan (1990-95) in the light of above perspective indicating priorities, policies and financial costs.

<u>List of Members of the Working Group on Arts - Eighth</u> <u>Five-Year Plan</u>

1.	Dr. (Smt) Kapila Vatsyayan	- Chairman			
2.	Dr. Mulk Raj Anand	- Member			
3.	Dr. Baudhayan Chattopadhyay	_ "			
4.	Prof. R.N. Dandekar	u			
5.	Dr. R. Ramanna				
6.	Prof. Sukumari Bhattacharya	tt			
7.	Prof. R. Narsimham	11			
8.	Dr. Surjeet Sinha	n			
9.	Dr. A Lahiri	11			
10.	Km. Krishna Dutt	11			
11.	Shri M.R. Kolhatkar	**			
12.	Dr. S Varadarajan				
13.	Pandit Shambhunath Yogacharya	11			
Spe	cial Invitee	9			
14.	Prof. Yash Pal				
<u>Invitees</u>					
15.	Smt Usha S rivast a va				
16.	Shri S.R. Chopra				
17.	Shri MPM Kutty	- Member Convener			

KALA NIDHI

KALA NIDHI (A)

Reference Library

The library is conceived as a major repository of reference material, primary and secondary relating to the humanities and the arts. It will encompass the disciplines of archaeology, anthropology, ethnology, philosophy, literature, language, arts and crafts. It will concentrate on encyclopaedias, dictionaries, bibliographies, atlases as also catalogues of unpublished manuscripts of India and Asian cripin. Its acquisition programme of current publications will support the research and publication activities of the other Divisions.

A 1 1 Printed Material Multilingual

A 1 1 1 Pare Books:

Acquisition of rare backs is a special feature of the library. It has acquired backs published in 18th and 19th centuries such as Bernard Picart (1733-37) The Ceremonies and Customs of various nations of the world; Raggles, History of Java (1817); Frazer's Views in the Himalayan Mountains (1821) etc.

A 1 1 2 Personal Collection:

A unique feature of the library is Personal Collection of eminent scholars and artists. Already four major Collection have been gifted to the library. These include (1) 20,000 volumes of Dr. Suniti Kumar Chatterjee Collection; (2) 1200

books on Philosophy and music from the Thakur Jaideva Singh Collection: (3) 1500 books and original paintings from the Krishna Kripalani Collection and (4) 15000 volumes largely on Sanskrit and modern Indian languages of Acharya Hazari Prasad Dvived:

A 1 1 3 Series and Catalogues:

The library is concentrating on building a complete corpus of printed material on Catalogue of manuscripts of Indic and Asian origin published in all parts of the world. So far besides the Catalogus Catalogum, it has acquired catalogues of major Sanskrit, Persian, Arab manuscripts from libraries research institutions of India, UK, USA, FRG, GDR, France, Italy and Japan.

The series acquisition programme include the LD series; Ecole de France, Institute of Indian Studies, Pondicherry Series; KF Jayaswal Research Institute, Patna; Satapitaka, series, Eibliothique National series and many others.

4 1 1 4 Jeuresis:

The library subscribes to a large number of current periodicals and is also building its serial collection of back volumes of periodicals. Some of the important journals includes Artibus Asiae; the Indian Antiquarry; Art Criticism, British Journal of Aesthetics and others.

A 1 1 5 Area Collection:

The Library proposes to develop area collections particularly on South, South East and West Asia. It will extend its scope to Latin America and Africa in the next phase of its development.

A 1 2 Micro film/Micro fiche:

Millions of Indian manuscripts are no longer accessible to research scholars in the original. It is proposed to develop a micro film microfiche library of unpublished manuscripts in India and foreign collection. This is a long range programme which will cover private and public libraries in India and abroad. Steps have been initiated to acquire on a selected basis microfilm microfiche, from the collection of Durbar Library, Nepal; the Staas Bibliothique, Berlin; the Bibliothic Nationale, France and British Library, UK.

Manuscripts already available in micro film or micro fiche form such as Tibetan Collection and other Sanskrit manuscript to 145% foregraphe have been adjusted.

Presently the macro-fache collection of IGNCA reference labrary comprises a large number of back volumes of research pournals in macro-fache form. Important amongst these are British Bunma Gazetter: Bulletin de 1º Ecole Francaise de Extreme Crient: Journal of Royal Asiatic Society of Great Britain; New India Antiquary; and Tamil Culture.

A 1 3 Visual Library and Slide Collection:

A concerted effort is being made to establish a large photograph and slide library. Here also the focus is on developing a resource centre where Documentation on Indian and Asian art is easily accessible. The library has acquired important slide collection from the Victoria Albert Museum, Chester Betty Collection through the courtesy of INTACH (Charles Wallace bequest). The American Association of South Asian Art has also gifted a complete set of 8000 slides.

Micro film and micro fiche readers are available and slide viewing arrangement for scholars are being established.

A 1 4 Sound:

A library of 'sound', tapes, discs will be established. This will comprise spokes work, vedic intonation, poetry recitation, music of all genres. Sound Library will concentrate on materials from India, South East Asia, West Asia, Africa and Latin America.

KALA NIDHI

KALA NIDHI (B)

National Information System and Data Bank

The National Information System and Data Bank in the Humanities and the Arts and the Cultural Heritage of India is the second division of Kala Nidhi. It has been organised with the active collaboration and assistance of the NIC. The National Data Bank will provide for computerised storage retrieval and dissemination of information on all aspects of arts and cultural heritage through multi-media storage and retrieval systems. It will support the programme of each Division and will network institutions in India and undertake R & D.

Its programmes are subdivided into:

- 1. Development of DATA BASES
- 2. Hardware and Software
- 3. Nodal Agency for National Data Bank on Arts and Humanities.
- 4. Research and Development Projects.

B 1 Databases Developed:

B 1 1 Library Information System:

This includes cataloguing information about all the books and periodicals available in ICNCA library.

B 1 2 Union Catalogue of Catalogues (CATCAT):

This database provides information on thousands of catalogues of published/unpublished manuscripts. Information from 700 catalogues has been computerised. Data on particular disciplines relating to published/unpublished material can now be retrieved by title, catalogue, repositories of manuscripts from India and abroad. Another 500 catalogues will be scanned for updating.

Manuscripts (MANUS):

The complete descriptive information about 3000 manuscripts of <u>Gita-Gravinda</u>, <u>Mechaduta</u> and <u>Natuasastra</u> has been computerised as an experimental measure. This reveals the uniform character of the texts in diverse scripts also variations in commentaries.

Descriptive information about all the manuscripts available on the 84 identified fundamental Sanskrit texts is being computerised which will provide the base for providing the variant readings of manuscripts for critical editions planned as part of the Kala Kosa Fundamental text series.

B 1 3 Art Object (PICTO):

This database will include information on 2D and 3D Art Objects. At present information on Elizabeth Brunner's

paintings, and musical instruments of Shri S. Krishnaswami's collection available with the Indira Gandhi National Centre for Arts (IGNCA) has been computerised.

B 1 4 Sound Recordings (SOUND):

This includes information on Vedic chantings of Ranayaniya and Jaiminiya sakha or Samaveda, Paippalada of Atharava Veda etc. Data Bases on Sangita collections of Cultural Archives have been developed, namely Natarajan Collection on Carnatic Music and S. Krishnaswami collection or musical instruments.

Kala Kosa

Kalahosa Terms Database (KKTERM):

The database KKTERM for Kalatattvakosa project has been developed. Under this project, 250 terms have been identified for the Glossary (Kalatattvakosa). In the initial phase, data relating to 12 selected terms will be computerised.

Kala Darsana

KHAM Exhibits (KHAM):

This includes information regarding all the exhibits displayed in the 'KHAM' exhibition organised by IGNCA in 1986.

Sutradhara

Management Information System:

Management Information System (MIS) includes databases regarding resource persons associated with IGNCA activities, mail monitoring, file monitoring and Arts and Cultural projects.

B 2 1 Hardware:

- B 2 1 1 HP3000/42 system with 1MB memory, 2 X 132 MB disk drives. One 1600 bpi 9track tape drive. One 300 Imp line printer alongwith 7 terminals. Also HP 150 PC with touchscreen. Colorpro plotter and one printer.
- P 2 1 2 One PC/XT connected with NEC \$1000 system through dial-up moder with dot-matrix printer.
- B 2 1 3 One super PC/XT (386 based) with ten terminals.
- B 2 1 4 One PC/XT with 20 MB winchester disk.
- F 2 1 5 One PC/XT terminal to HP3000 with dotmatrix printer and one PC/XT and two PCs with dotmatrix printers.

B 2 2 Software:

- B 2 2 1 MINISIS DEMS Fachages on HP 3000.
- B 2 2 2 IMAGE DBMS Package on HP 3000.
- B 2 2 3 CDS-ISIS DEMS Package on PC Competible System.
- B 2 2 4 dBase III plus, Foxbase Plus, PC FOCUS and UNIFY DBMS Packages on PC Competible System.
- B 2 2 5 Microsoft WORD, WORD PERFECT, Word Star word processing packages.
- B 2 2 6 Lotus 1-2-3 and Framework spreadsheet packages.
- B 2 2 7 Microsoft CHART, IMAGINE That and Drawing Gallery graphic packages.

B 3 Nodal Agency for National Data Bank on Art and Cultural Heritage:

Government of India has designated Indira Gandhi National Centre for the Arts (IGNOW) as the nodal agency for all matters relating to the setting up of a National Data Bank on art, humanities and cultural heritage. Technical standards including hardware and software requirements will be prescribed for all agencies under the Central and State Governments for purpose of storage, retrieval and dissemination of data on art, humanities and cultural heritage for the development of a National Network in this area. Further IGNCA has been authorised to issue suitable instructions to all Departments of the Central Government for obligatory filling of data and information on standard formats with IGNCA in the area of art, humanities and cultural heritage and also advise the State Governments for cooperation of their agencies in this respect.

IGNCA has taken necessary steps in the implementation of decision, as it involves interdepartmental and interagency planning, coordination and integration in respect of the technical and administrative aspects of the work for organising the National Data Bank.

A global computer network of all cultural institutions with IGNCA as Nodal Agency is being envisaged through National Information Centre Network (NICNET).

B 4 Research and Development Projects:

1. Userfriendly query interface:

A query interface to MINISIS with additional facility of interactive display format has been developed. Also facility

for storage and retrieval of Roman characters with discritical marks and for Devanagari script data has been developed, which will be further extended to other Indian scripts.

2. Optical storage and retrieval system:

Project formulation for image storage and retrieval of art objects is in progress. For this, world wide contacts have been established with institutions engaged in similar work. Further image analysis and processing capabilities will be developed on digital format.

3. Desktop Publishing System: ...

PObased Desktop Publishing System for Devanagari scripts is under development which will be further extended to other Indian scripts. This project is assigned for development to National Centre for Software Technology (NOST), Bombay.

4. Text Analysis Tools:

A committee of distinguished linguists and computer specialists is working to finalise transliteration rules among Indian scripts. So far in all computers and key boards (bilingual or trilingual), multilingual facilities have been developed with the Roman as a logical base. A different phonetic approach based on Pure Consonants and Devanagari as a base is under consideration, if success is achieved in this field, it will be a major break-through. The IGNCA's R & D programme is aiming to structure it on basic phonetic rules of Panini's grammer and Devanagari.

- of the 8th 5-year Plan at its first meeting set up a Sub-Group consisting of the following members to assess in perspective the technology requirements of the Indira Gandhi National Centre for Arts (IGNCA) and make recommendations for detailed planning.
 - 1. Dr. Raja Ramanna
 - 2. Dr. S. Varadarajan
 - 3. Dr. R. Narasimhan
 - 4. Dr. A. Lahiri
 - 5. Shri M.P.M. Kutty Convener

This Sub-Group met at IGNCA on October 12, 1988, in the afternoon and discussed in depth the technology needs of the Centre in the context of its overall mandates. Taking into account the work already accomplished, and also on stream, in providing technology support to the activities of the Centre, the Sub-Group agreed to make the following broad suggestions which could serve as quidelines to formulate the activities of the Centre during the 8th Plan period and the necessary budgetary proposals.

- The conceptual plan of IGNCA, approved by the Cabinet, envisages, as the core programme of the Centre, the setting up of a computerised national information system and databank on the arts, literature, and cultural heritage of India. This national databank will provide for computer-assisted storage, retrieval, and dissemination of information on:
 - 1. textual data (e.g., ancient and
 medieval manuscripts)
 - 2. visual data (e.g., 2-D and 3-D items such as drawings, paintings, sculptures, and architecture)
 - and 3. auditory data (e.g., recitations, chants, songs, etc.)

relating to Indian art and culture. In addition, systematic and scientific documentations of the life-styles of tribal and other pre-industrial communities, with particular reference to their arts and cultural traditions, are to be developed on computerisable formats to facilitate the preparation of exhibitions, and also the study of alternate models of life-style.

3. IGNCA will coordinate its activities through three functionally well-demarked divisions.

Kala Nidhi: this will serve as an archival and resource base for arts and culture, especially the primary source material: written, oral, audio-visual, pictorial, sculptural, architectural, and so on.

Kala Kosha: this will undertake research and publication programmes of critical editions of texts and commentaries, reference works, glossaries, dictionaries, encyclopaedias, etc.

Kala Darshana: this will establish tribal and folk arts collections for undertaking, promoting, and facilitating systematic comparative and scientific studies in this area.

4. The technology underpinning needed for IGNCA can be broadly discussed in terms of the supports required for the following categories of activities and services.

A. General Library Services

Apart from building up, maintaining and operating a library, these include cataloguing, documenting, referencing and, in general, providing descriptive information about the nature, location, and availability of primary source data on art and culture.

B. Scholarly Activities

All these activities involve in one way or another the actual processing of the primary source data: texts, images (static & dynamic), and sound. Essential prerequisites to support these activities are the following:

- Creation of computer (or other technology) accessible versions of the primary source data;
- Creation of a user-friendly interactive environment with the necessary processing software and other interaction aids;
- Creation of supporting facilities for intermediate hard-copy generation of texts and images for making drafts, working reports, etc.
- C. <u>Publication/Dissemination Activities</u>
 These can be divided into two broad categories:

- publications resulting from scholarly activities
- publications for the general public: books, prints, photographs, slides, audio/video cassettes, films, etc.

D. General Administration

Support in this category includes assistance for:

- 1. general office management
- 2. finance management
- 3. purchase & stores management.
- During the 7th Plan period, IGNCA established a small computer facility of its own. In addition, link was created to access the computing facilities operated by the National Informatics Centre (NIC). Using these, a team from NIC has developed software packages and created interaction facilities to support some of the activities of IGNCA. All these fall under categories A and D listed in (4) above. The details of the work accomplished so far are summarized in Annexure II.
- In addition, through an R&D Project Contract with the National Centre for Software Technology (NCST), a PC-based desk-top publishing system, named VIDHURA, has been developed. This system is capable of handling text in Roman and Devanagari scripts. Using a digital scanner, pictures can be embedded in text. VIDHURA incorporates state-of-the-art text-processing and pagelayout software routines. With the help of high resolution laser printers, print-quality masters can be produced for off-set printing.
- 7. Providing technology supports for activities in categories A and D can be readily handled by a fairly straightforward extension of the efforts described in (5) above. As assessment of the overall library services and administration requirements of IGNCA should enable one to draw up specifications for upgrading existing computer facilities. This upgrading could be done in a phased manner. The 8th Plan needs could be met by going from the existing Phase-O to the next level of Phase-I.
- 8. Under category Cl, VIDHURA in its present form is capable of assisting in the publication of texts (with b/w pictures) involving Devanagari and Roman scripts.

It is essential to create a beaute-sign and publication environment in IGNCA with appropriate in-house professional staff so that experimental—and production-level products can be attempted using VIDHURA. Systems like VIDHURA would inevitably have teething-problems when put to routine production use. Also users would necessarily have to go through a learning curve in acquiring the skills needed to profit effectively from the technological support provided by systems like VIDHURA. While NCST works to extend the capabilities of VIDHURA --- accommodating other Indian scripts and also incorporating a larger inventory of fonts in each script --- IGNCA staff must provide feedback to the R&D staff at NCST through production-mode usage of the systems.

- Under category C2, to engage in dissemination activities to cater to the general public --- an extremely important educational and promotional role of IGNCA --- adequately equipped photography and print/slide-making facilities must be created. The requisite professional staff to manage these facilities, as also to interact with outside publishers, must be inducted. IGNCA would need to deliberate and decide whether production of audio/videc cassettes, films, etc., for sale and/or distribution on loan, would be handled in-house or through subcontracting to external professional groups. Decisions on these aspects would determine the kinds and levels of technology and expertise that would have to be built up within IGNCA.
- 16. Finally we come to technology support for category B activities which constitute the core scholarly heart of IGNCA. As described earlier, all the activities in this category involve the processing of primary source data. To provide technology support, the source data must be technologically accessible to the support systems. Since the source data naturally do not exist in this form, data-capturing and datainputting is an essential first step before technological support for processing the data can be provided. As we saw, source data occur in three primary forms: texts, images (2D/3D, static/dynamic), and sound. Of these, it is fairly straightforward to capture sound through high-fidelity audio-recording (in the analogue form). In principle, texts can be input manually via keyboards. Text inputting in Indian scripts is commercially possible now. However, logistically this is a complex task. For the kinds of texts IGNCA is concerned with, existing commercial keyboard facilities may not be adequate. Also, special training for keyboard operators may be

necessary to read with ease the source texts. In any case, extensive and detailed proof-reading of the input material is essential to correct the inevitable errors during inputting. At this stage, even with computer-assisted editing facilities, intimate involvement of knowledgeable scholars is a necessity. It is doubtful whether, in the short-term, these problems can be circumvented through technology aids. OCR, for example, is not a technology that can currently cope with Indian scripts on a production-mode. Also, it is unclear to what extent OCR could help with the kinds of manuscript material that IGNCA would have to deal with. Taking into account all these uncertainties experimental projects of the following sorts would certainly be needed.

- 1. Test the logistics of manual keying in on a production-level, i.e., keying in complete manuscripts, so that scholarly processing could be attempted on the textual data. For Devanagari texts, the VIDHURA keyboard could be used to evaluate its suitability for this task. For other Indian scripts, commercially available keyboards should be evaluated for their adequacy.
- 2. Explore the feasibility of adapting OCR technology. Before investing actually in the technology even for experimenting, any experience others might have outside the country in textual data inputting involving non-Roman scripts should be investigated and assessed.
- creation for 2-D images and 3-D objects cannot be bought commercially for routine production-mode operation at present. This technology, while rapidly evolving, is still in a very experimental stage. Much of it would have to be carefully customized to meet the specific needs of the end-users. In the case of IGNCA, for example, sources of 2-D images include manuscripts, paintings, slides, photographs, drawings, etc. While, in principle, high resolution scanners are commercially available to scan pictures and generate digitized images for further computer processing, much exploratory experimentation is needed to assess their adequacies to meet the source material constraints of IGNCA.

The problem is even more complex with respect to 3-D objects. Database creation for processing representations of 3-D objects is at present a high-tech research area. Several academic and industrial research

groups in the West are heavily involved in developing techniques and knowhow for 3-D object data capturing, and for representing the captured data internally so that these could be further processed in various ways. Modelling techniques are being worked on to enable internally-held images of objects to be retrieved and displayed from multiple viewing-points, with controlled variation in lighting, and so on. IGNCA should work with one or more research groups in the country to develop technological know-how in this area specialized to 3-D objects of direct interest to the Centre.

In Annexure III a schematic diagram and specifications are given for a 2-D and 3-D image database creating and processing facility which could be considered for being set-up in IGNCA during the 8th Plan period, if necessary in stages. (The information in this Annexure has been compiled by Dr.S.F. Mudur of NCST.) This facility should allow exploratory experiments to be undertaken by an in-house group of computer professionals and art scholars with appropriate consultancy provided is other R&D groups such as those, for instance, in NCST, NID, etc. Exploratory work involving computer animation techniques should also be feasible with the facility suggested.

12. It was earlier remarked that auditory source data can be captured using high-fidelity analogue recording equipment. For processing the data so recorded, both analogue and digital sound processing technology would be needed. Sophisticated digital signal processing techniques are now known and could be effectively put to On the other hand, editing, mixing, and re-recording facilities are also essential to process recorded sound material in the analogue form. It would be worthwhile to consider establishing a sound-processing facility separately --- analogous to the 2-D/3-D image processing facility discussed earlier --- to process auditory source data both through analogue and digital techniques. A/D and D/A converters, high fidelity audio tape, cassette and compact disc handling equipment, high precision turntables with associated electronics, and similar ancillary equipment would form part of this facility along with analogue and digital signal processing systems. facility would have to be managed by professionals knowledgeable in the processing techniques, jointly with other professionals knowledgeable in the auditory source data domains. One of the projects that IGNCA might want to take up in the immediate future is transferring old recordings (78 rpm, etc.) to modern, high-tech, highfidelity media. In this process, digital signal processing techniques could be explored to improve the sound quality of the recordings.

- 13. Two assential points are implicit in all our discussions so far. These are of such basic importance in planning high-tech infrastructural facilities for IGNCA, that it is worth re-emphasizing them explicitly.
 - l. The high-technology support needed by IGNCA necessarily has to be built up through a close interaction between scholars who would be benefiting from the support, and technology professionals who would be providing the support. Systems and equipment to serve the several needs of IGNCA have to be carefully customized. These cannot be bought from, and installed by, commercial vendors in a prepackaged form. Much of the hardware and some of the software can be purchased. But putting them together to create a viable, operational environment for scholars to use effectively is a process which requires much in-house involvement and effort. Exploratory experimenting with actual data on a substantial scale is an essential component of this process.
 - The second point directly stems from the first. IGNCA should take urgent steps to induct the varieties of professional staff needed to specify, procure, install, and operate the spectrum of support facilities we have been describing. A summary of the kinds of in-house expertise needed by IGNCA is given in Annexure IV. While some of these experts may be directly recruited, wellequipped personnel are unlikely to be available in some other areas of specialization; this would especially be true of areas such as: graphics, animation, visual communication, book-design, display-design, and so on. In these cases, IGNCA may have to resort to recruiting potentially promising young persons and deputing them for specialized training, either within the country or abroad. All these preparatory measures have a long lead time and, therefore, call for urgent attention.
 - We have discussed at various stages exploratory work of an R&D nature that ought to be either taken up or sponsored by IGNCA. Some of it could be done in-house by IGNCA staff and other scholars using the facilities being created. Other projects may have to be farmed out to other R&D groups in the country with the requisite professional expertise and computing and other facilities. A summary of such projects is given in Annexure V.
 - 15. In addition to the scholarly-work-related technology support facilities we have been discussing so far, there are other technical issues of a more general kind which must be analysed either by suitably

qualified in-house staff or through the assistance of appropriate consultants. Some of the more important such issues are the following:

- technology support for environmental control (temperature, humidity, dust, etc.) of the Centre taking into consideration, especially, the storage requirements of primary source data on the one hand, and the electronic equipment on the other hand;
- 2. technology support to ensure adequate and effective security (control of access, protection against fire and other hazards, etc.);
- technology support for creating multimedia seminar/conference facilities.
- As stated in the beginning, we have tried to articulate here the technological needs of IGNCA and the issues that must be taken into account while attempting to work out technological solutions to meet these needs. Suggestions have been made for exploratory work to arrive at detailed specifications of the kinds and levels of technology support needed to assist the scholarly work of IGNCA. For the 8th Plan period budgetary estimates may be worked out:
 - 1. to initiate these kinds of activities,
 - to purchase equipment and systems to create environments for exploratory work,
 - to recruit professional staff and train them,
 - and 4. to award R&D contracts for projects.

The guidelines outlined here should assist in arriving at such estimates.

Date:

Sd/-Dr.Raja Ramanna

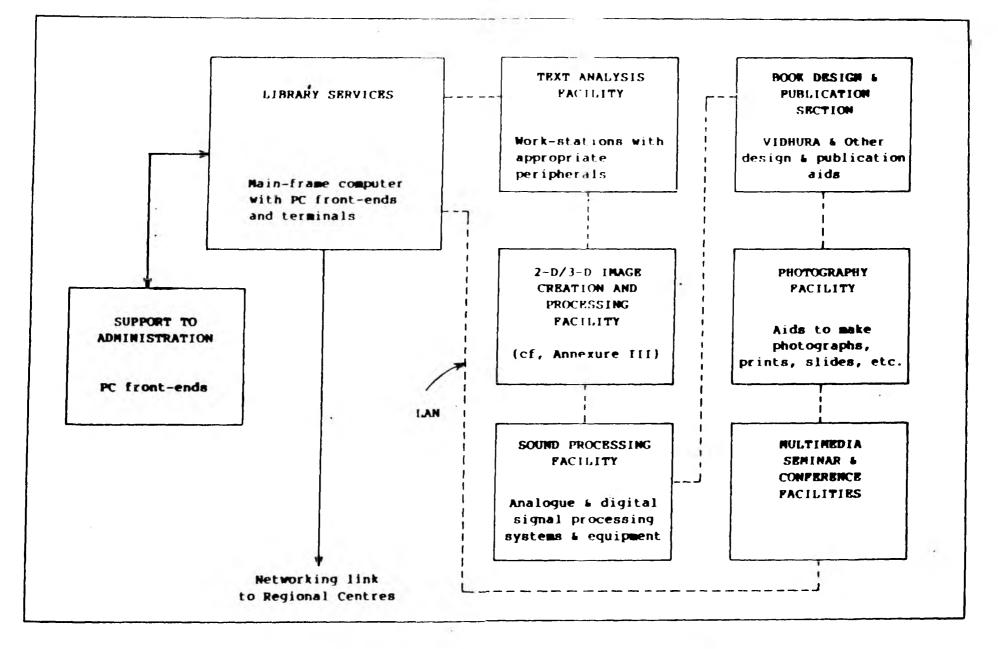
Sd/-

Dr.S.Varadarajan

Sd/-Dr.R.Narasimhan

Sd/-Dr. A. Lahiri

Sd/-Shri M.P.M.Kutty



IGNCA: Suggested High-Tech Infrastructural Pacilities

Present status of computerisation in IGNCA

From 1986 onwards, considerable work has been done to develop support facilities for IGNCA by the National Informatics Centre (NIC). A proto-type of this system was demonstrated to the Hon'able Prime Minister, Vice President and Human Resource Minister at the IGNCA function held in Vigyan Bhavan on 19th November 1986. A brief description of the available Hardware & Software at IGNCA is given below along with the Databases developed and R & D work.

Hardware :

- 1. HP-3000/42 system with IMb memory, 2x132 Mb disk drives, One 1600 bpi 9-track tape drive, One 300 lpm line printer alongwith 7 terminals.
- HF 150 FC with touchscreen, colorpropletter and one printer.
- 3. One PC/XT with 20Mb winchester disk.
- 4. One PC/XT connected with NEC S-1000 system through dial-up modem with dct-matrix printer.
- 5. One PC/XT terminal to HF-3000 with dot-matrix printer.
- 6. One PC/XT and two PCs with dotmatrix printers.

Software:

5 . . .

- MINISIS, PC-FOCUS, CDS-ISIS, UNIFY, IMAGE and dBase III plus DBMS packages.
- Wordstar, Microsoft WORD, WORD PERFECT and Word processing packages.
- 3. Lotus 1-2-3 and Framework spreadsheet package.
- 4. Microsoft CHART, IMAGINE That and Drawing Gallery graphics packages.

DATABASE DEVELOPED :

1. Union Catalogue of Catalogue (CATCAT) :

This database provides information on thousands of catalogues of unpublished manuscripts. Information from 700 catalogues, on published and unpublished material, has been computerized. Data, in particular disciplines, relating to unpublished material can now be retrieved by title, catalogue, repositories of manuscripts from India and abroad. Another 500 catalogues will be scanned for updating.

2. Manuscripts (MANUS) :

The complete descriptive information about 3000 manuscripts of Gita Govinda, Meghaduta and Natyashastra has been computerized as an experimental measure. This reveals the uniform character of the texts in diverse scripts and also variations in commentaries.

Descriptive information about all the manuscripts available on 84 identified fundamental Sanskrit texts is being computerized which will provide the base for providing the variant readings of manuscripts for critical editions planned as part of the KALA KOSHA Fundamental Text Series.

3. Sound Recording (SOUND):

This includes information on Shri S. Natarajan's recordings and some vedic chantings of Ranayaniya and Jaiminiya sakha of Samveda, Paippalada of Atharva veda etc. Further information of various Audio-Visual recordings available with various agencies in India and abroad will be included.

4. Art Chaect (PICTO) :

This database will include information on 2D and 3D Art Objects. At present information on Elizabeth Brunner's paintings and musicial instruments of Shri G. Krishnaswami's collection available with the Indira Gandhi National Centre for Arts (IGNCA) has been computerized.

5. KHAM Exhibits (KHAM):

This includes information regarding all the exhibits displayed in the 'KHAM' exhibition organized by IGNCA in 1986.

6. Library Information System :

This includes cataloguing information about all the books & periodicals available in IGNCA library.

7. MIS:

Management Information System (MIS) includes databases regarding resource persons associated with IGNCA activities, mail monitoring, file monitoring and Arts & Cultural projects.

RESEARCH & DEVELOPMENT PROJECTS:

1. User-friendly query interface :

A guery interface to MINISIS with additional facility of interactive display format has been developed. Also facility for storage & retrieval of Ecman characters with discritical marks for Devanagari script data has been developed, which will be further extended to other Indian scripts.

2. Optical storage and retrieval system:

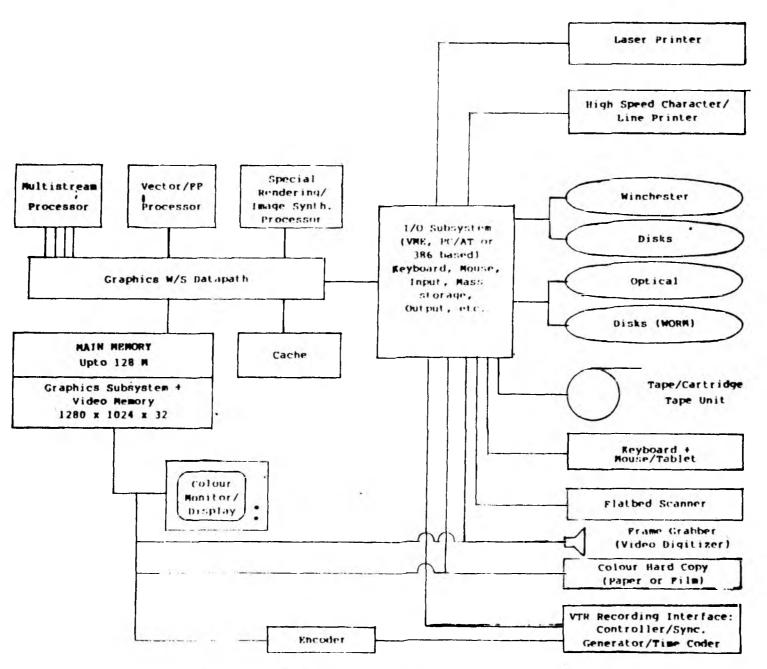
Project formulation for image storage and retrieval of art objects is in progress. For this, world wide contacts have been established with institutions engaged in similar work. Further image analysis and processing capabilities will be developed in digital format.

3. Desk-top Publishing System :

A PC-based Desk-top Publishing System for Devanagari scripts is under development which will be further extended to other Indian scripts. This project is assigned for development to the National Centre for Software Technology (NCST), Bombay.

4. Text Analysis Tools:

A committee of distinguished linguists and computer specialists is working to finalise transliteration rules among Indian scripts. A different phonetic approach based on Pure Consonants and Devanagari as a base is under consideration. If success is achieved in this field, it will be a major breakthrough; so far in all computers and keyboards (bi-lingual or tri-lingual), multilingual facilities have been developed with the Roman as a logical base. The IGNCA's R&D programme aims to structure it on the basic phonetic rules of Panini's grammar and Devanagiri.



High Performance 2D-3D Image Modelling and Processing Facility

Note: Configuration may be set up in a phased manner:

Phase I : Minimum configurables : Graphics W/S +

Winchester disks + High Speed printer+

Tape + Kevboard + Mouse/Tablet

Phase II : W/S. upgrading + Scanner + Colour Hard

Copy

. . .

Phase III : Further upgrading + Laser Printer +

Video Digitizer + VTR Interface +

Optical Disk

(can be used for computer animation

as well)

Kinds of Professional Skills and Expertise Needed

- 1. Documentation and Information Professionals.
- 2. Computer Professionals
 - . programmers, system analysts
 - . computer graphics, animation specialists
 - . computer and special equipment operators
- 3. Professionals for the Sound Processing Facility
- 4. Professionals for the Photography Facility
- 5. Book Designing and Related Expertise
 - . typography, calligraphy, lettering
 - . visualization and layout
 - . art-work design and production

(all the above with Indian language scripts and in multiple-script text context)

- 6. Display Design Expertise
 - . know-how in visual communication art, graphic displays, etc.
 - . know-how in the use of high-tech media for display purposes.
- 7. Technology interface mechanism to install, maintain and support equipment and systems either procured from outside or developed through R&D contracts.

Experimental and R&D Projects

1. VIDHURA extension for other Indian scripts

Essential to install a VIDHURA clone in-house and create a design environment so that in-house design staff can generate experimental and production-level products. Such a group needed to interact effectively with contracted out R&D Groups and transfer know-how, absorb it and integrate it with production-mode operational aspects.

- Experiments'in text inputting
 and analysis
 - Input entire manuscripts to assess problems in manual keyboard use.
 - keyboard and other commercially available keyboards for large-scale text inputting.
 - create a user-friendly textprocessing environment for production-type use by scholars.
 - investigate and assess feasibility of adapting OCR technology with Indian scripts.
- 3. Art image database for 2-D images
 - The database should be structured so that images can be stored, retrieved, transformed, manipulated.
 - Artwork based on customized image layout.
 - . Hard-copy generation in B/W and Colour on paper, film, slides, etc.

- Sources for database generation must include manuscripts, paintings, slides, photographs, drawings, etc.
- 4. Art image database for 3-D objects
 - . Database should incorporate modelling techniques so that objects can be retrieved and displayed from multiple viewing positions, variation in lighting, etc.
- 5. Computer-assisted video sequence generation
 - Using the databases in (2) and (3) above, image—& text-composed frame sequences should be created for video taping, filming, etc.
 - Animation techniques to be deployed appropriately for video and film generation.
- Expert systems for automatic generation of wordseparated texts (padapatha) possibly with post-editing.
- 7. Design multimedia computer-assisted seminar/ conference environment.
- 8. Networking for communication with regional centres.

KALA NIDHI

KALA NIDHI (C)

Cultural Archives

The Cultural Archives is the third section of Kala Nichi Library. It will collect, catalogue, classify and display, Personal Collections of Scholars and Artists who have devoted a life time to collecting material in their particular area of interest or discipline.

The Archives is divided into six sections (i) <u>Sabitva</u>, (ii) <u>Vastu/Silba</u>, (iii) Chava Pata, (iv) Sangita, (v) Nrtva and (vi) Natva.

Each collection is maintained as a composite totality in the name of the Scholar/artiste who is the Collector, although in several cases, the Collection may consist of audio/visual reprographs, books and two, as well as three-dimensional art objects. The Cultural Archives thus strives to represent in a capsular form the various strands of culture of the country, be it in terms of photographs, audiotapes or original art objects.

Some of the highly prestigeous Collections that have been acquired or are in the process of being acquired by the Archives, are:

C 1 1 Sahitya (Literature)

C 1 1 1 Dr. Rangra Collection

Dr. R.C. Rangra Collection comprises audio-tapes of interviews with 92 writers of India not only in Hindi, but most other languages of India.

C 1 2 Vastu/Silpa (Architecture, Sculpture and Painting)

Negotiations are being held to acquire in whole or part the Lance Dane Collection comprising sculpture, paintings, books and slides.

C 1 3 Chaya Pata (Photographs)

C 1 3 1 Cartier, Bresson Collection:

The Cartier - Bresson Collection comprising 107 photographs will shortly be a part of the selection. The collection has a great historic value in the Indian context because, Cartier-Bresson shot candid moments of the freedom struggle in the country as a pioneer of 'Concerned Photographers Movement'. Hopefully the Raja Lala Deen Dayal collection of photographs and their glassplate negatives will also be acquired.

C 1 4 Sangita (Music)

C 1 4 1 S Krishnaswami Collection:

A vast collection of 554 photographs, 1304 negatives, 784 slides and 64 sketchs on the subject of the musical instruments of India, compiled over a period of thirty years. The Collection also comprises research notes of Shri Krishnaswami and about 30 hours of music on audio tapes.

C 1 4 2 5. Nataraian Collection:

This is a collection of over 380 audio tapes comprising about 2000 hours of music from the Carnatic music concerts (1955 onwards) mainly at Madras and few from other centres. The Collection comprises the work in live performances of every major Carnatic music artiste from the early part of the century upto present times.

C 1 5 Nrtya (Dance)

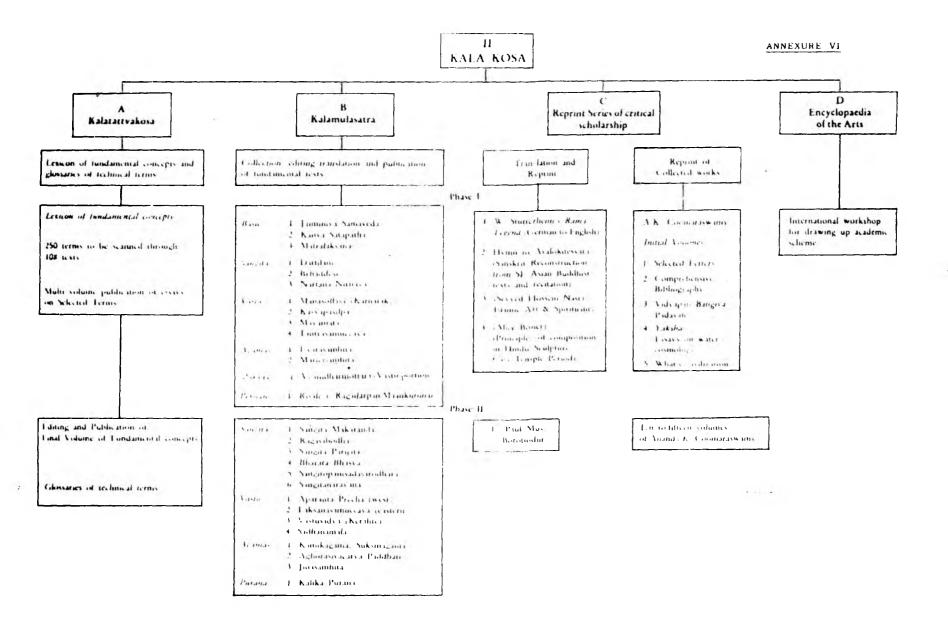
C 1 5 1 Mohan Khokar Collection:

A rare Collection of the dance-historian Shri Mchan Khokar dating from the early forties consists of black and white negatives and colour transparencies of dancers/dances in classical, folk and tribal genres, as also books, paintings, figurines, toys, textiles, etc. on Indian dance. The Collection represents the myriad ways in which dance has been represented in Indian society. Also contained in the Collection are field notes and audio tapes of personal interviews as well as personal correspondence with renowned scholars, gurus and artistes of Indian dance.

C 1 6 Natya (Theatre)

C 1 6 1 K.T. Deshmukh Collection

This is a personal collection on Indian theatre containing photographs, written material, masks, stage props and curtains and puppets. A special feature of the Collection is that of extensive material on the stage legendary actor-singer Bal Gandharva.



PLAN PROPOSALS FOR THE EIGHTH-FIVE-YEAR
PLAN FOR KALA KOSA DIVISION OF THE .
INDIRA GANDHI NATIONAL CENTRE FOR ARTS

Bir- - F Leve.

The following on-going programmes of the Kala Kosa Division will continue during the next five-year-plan, so as to achieve the targets set-up for them.

1. KALATATTVAKOSA

The glossary of technical terms, which is being prepared, has covered eight fundamental terms during the current year. The remaining 242 terms will completed by the end of 1994-95. This would require scanning of more than hundred texts basically concerned with arts in respect of each term and on an average, four nundred to five hundred cards will be prepared for each term. The preparation of cards; writing of articles on each term: editing, compilation and publication and publication in five to six volumes will require more than hundred scholars and will have to be executed through noduller points to be set-up in different parts of the country. Fundamental concepts/ terms/motifs are to be derived from works on poetics, on Kashmir Saivism, folk-tales, ritual and worship, among others. The 'main' and the 'related' terms are to be studied. The financial projection will come to about Rs. 15 lacs is given in detail in the annexure.

2. KALAMULASASTRA

Under this programme, total number of 108 texts have been proposed to be brought out as critical editions with English translation and detailed textual notes and criticism. Two of them have been brought out during the current year. On an average, five to six texts of fundamental nature can be the annual targets for the next five-year-plan. The following texts are

- 1. Kanva Satapatha Brahmana (Basic Text)
- 2. Isvarasamhita (Agama)
- 3. (Marici Samhita (Agama)
- 4. Brahaddesi (Sangita/Nrtya)
- Nartana Nirnaya (Sangita/Nrtya)

In the case of the above texts, collation of mss. which is one of the major item of work has almost been completed and by the end of this year, they will be ready for editing and translation. The next batch of texts which are being considered for the coming years and for which tentative understanding has been reached with the concerned scholars are the following:

- 1. Jaiminiya Samaveda (Basic text)
- 2. Baudhayana Grhya Sutra (Basic text)
- 3. Brhat Samhita (Jyotisa)
- 4. Jina Samhita (Jainism)
- 5. Suksma Agama
- 6. Kamika Agama
- 7. Aghorasivacharvapaddhati
- 8. Vishnudharmottara Purana
- 9. Kalika Purana
- 10. Kāśvapaśilpa
- 11. Mavamata
- 12. Mānsollāsa
- 13. Tantrasamuccava
- 14. Aparagitaprocha
- 15. Laksana Samuccava
- 16. Sangita Makaranda
- 17. Bharata Bhasya
- 18. Raga Viboch
- 19. Hasta-Muktavali
- 20. Krsmagiti
- 21. Tarruma -i-Mankutuhal & Risali-i-Raga Darpana

(Agama)

(Purana)

(Vastu/Silba)

(Sangita/Nrtwa)

(Persian Text)

On an average, ten to fifteen mss. of each of these works will have to be collated after procuring their copies from different sources and this itself is proposed to be got done by strengthening and increasing the number of research units that the IGNCA has set-up in different parts of the country like Madras, Pondicherry, Poona, Varanasi, Tirupati, Mysore etc. The collation work will be got done mostly on job-work basis by appointing adhoc research assistants, who will be paid on the basis of the turn over. After the collation, they will be handed over to scholars who have been identified for editing these works. A total plan provision of R. 30 lacs is envisaged for both the catagories of texts together mentioned above. A complete break-up of these expenses is given in annexure (2).

3. KALAMULASASTRA (2)

Under this, projected plan programme will be over-lapping with that of the Kala Nidhi in so far as the retrievel of manuscript material from various sources is concerned. While, it will be the objective of the IGNCA to build up a complete micro-film library of mss. concerned with Indian art all over the world, priority will be given to the retrieval of mss, which are connected with the fundamental texts mentioned in the previous section. Most of the mss, of these texts are available in the following libraries:

- 1. India Office Library, London
- 2. British Museum, London
- 3. National Archives, Kathmandu
- 4. Bibliotheque Nationale. Paris
- 5. T.M.S. Saraswati Mahal Library, Taniore
- 6. Govt. Oriental Manuscript Librry, Madras
- 7. Trivandrum Manuscript Library, Kerala
- 8. Saraswati Bhawan, Varanasi
- 9. Bhandarkar Oriental Research Institute. Poona
- 10. Gaekwad Oriental Insitute, Baroda

Besides these libraries, who will be containing a good number of manuscripts of all these texts, we may also require micro-film copies of mss. in several other libraries and private collections. A mobile and stationary units of micro-film and micro-fiche available in IGNCA will be put to maximum use to this retrieval work and it is estimated that at least four hundred mss. will have to be acquired by micro-film/micro-fiche for the text, already taken up. Side by side, we may also have to procure micro-films of mss. of secondary works connected with these texts which are also available in these libraries and they may come to about 800. This micro-filming programme is estimated to cost about Rs. 15 lacs. This would also include incidentally a survey and completion of Manus Data sheets of the entire collections for these libraries.

4. KALAMULAŠĀSTRA (3)

One very important, project that may have to be taken-up during the next five-year plan is the restoration of lost sanskrit text which are available in translations in foreign languages. Particularly, the Buddhist text which are available only in Chinese and Tibetan translation and are lost, in there original sanskrit, have to be urgently restored and made available to scholars with English translation. This itself is a gigantic work and it may be possible only within the coming five to ten years when traditional sanskrit scholars with sufficient knowledge of Buddhism and Pali are still available; a lot which is becoming scarse. During the coming fiveyear plan Buddhist texts available in Tibetan, Chinese and Singhales∈ languages may be produred by micro-films/micro-fiche and translation and English can be started. Even if, the item of procuring is completed and two to three texts are got restored into sansarit with English translation during the next five-year plan, it would be a big achievement. A total financial implication of Rs. 15 lacs is envisaged for this preliminary work.

5. KALĀMŪLAŠĀSTRA (4)

ICNCA is the only proper agency to translate & publish certain technical manuals available in regional languages concerned with performing arts. Several regional artistic traditions though, originating from sanskrit sources have got their own written manuals containing the techniques of artistic expression. These are now confined to the respective regional languages and unless we bring them to the notice of the entire nation through sanskrit translation and English commentary, they may continue to be of restricted utility. Under this catagory come the Attabrakarams connected with the Kuddivatam art of Kerala, Harikatha and Borakatha traditions and some of the Oriyan manuscripts detailing the techniques of Odissi dance etc. This would be possible only when the already super-animated gurus of these traditions are alive, since they alone are familiar with the linkages between these manuals and the original Natyasastra.

An approximate expenditure of Rs. 3 lacs may be required for this.

Under this programme, we have already made a beginning in preparing a bibliography of published/unpublished works of Dr. V.S. Aggarwal, Krishna Das Rai and A.K. Coomaraswamy. We propose to cover a few more outstanding scholars in the field of indology like Prof. Suniti Kumar Chatterjee, Prof. Viswa Bandhu Sastri, Pt. Gopinath Kaviraj and Prof. V. Raghavan.

This programme will include not only published books, articles introductions, prefaces, anthologies etc. but also book reviews and unpublished letters, articles which are available with their relatives or the Institutions which they were connected with. The work on 'Bibliographies' needs to be given high priority.

- (a) Bibliography of works on arts:
 - i) basic texts
 - ii) secondary works
 - iii) histories
- (b) Bibliography of studies of 'concepts'
- (c) Collection of material from lexicons and encyclopaedias.
 Dictionaries of Sanskrit & Prakrit (Scriptoria prepared at Pocha).

A total expenditure of Rs. 7 lacs is envisaged on this scheme.

7. KLIRINT SERIES

Under this, we have already made a beginning by bringing out the "Selected Letters of Ananda Coomaraswamy" and the other two works "Rama Legends and Rama Reliefs" as well as the "Thousand Armed Avalokitesvara" are nearing completion. The printing of "Vidyapati Bangiya Padavali", "Islamic Arts & Spirituality" by Prof. S.H. Nasr, "Principals of Composition" by Alice Bonner are also expected to be completed during the current plan period. In the next stage, ten works of Ananda Coomaraswamy are expected to be brought out. A total estimated expenditure for these is Rs. 20 lacs.

8. ENCYCLOPAEDIA OF ARTS

As a preliminary to the Encyclopaedia, we have to outline its para-meters, the general format of it and also the disciplines that are to be covered: the need and scope of supplementing information available in foreign sources which come under the broad category of greater India: the inter-disciplinary linkages to be highlighted these will be the problems discussed at an international workshop, which is proposed to be held during the beginning of the next five year plan. This will be followed by at least five to six seminars at different part of the country to survey the material available in different regional languages and traditions. After deciding on these para-meters, a massive effort will be made to prepare cards and consolidate them alphabetic-wise, subject-wise and language-wise by the end of the next five year plan. It is proposed that at least two or three volumes covering the vowels of the Devanagari alphabets may be able to be brought out during 1989-94. Also a comprehensive introductory monograph in "Arts in India - their nature, scope and function" will be brought out as a prelude to the work on the Encyclopaedia.

The expenditure including the workshop and seminars is estimated at Rs. 30 lacs during the five-year plan period.

To achieve the above objectives, the infrastructural facility that may be needed will be as follows:

The administrative and academic set-up in the headquarter

Research Professors	1. 4 .	2(two)
Research Fellows	-	4(four)
Research Assistants	=	6(six)
Technical Assistants (operators of microfilm etc.)	-	10(ten)
Clerical and administrative staff (Senior)	÷	2(two)
- do - (Junior)	- 4	4(four)
Stenos/Typists	-	4(four)
TOTAL :	-	32(thirty two)

The total expenditure on the above set-up will be roughly Rs. 15 lacs per year i.e. Rs. 75 lacs for the plan period.

Field units approximately seven in number, each unit having one permanent employee of the IGNCA at readers level at 3.0 lacs. Five Research Assistants per unit about 12 lacs p.a., TA/DA for seminars, workshops etc. Rs. 25 ;acs. Micro-filming/micro-fiching and other technical services including itinary bodies to search manuscripts Rs. 10 lacs.

TOTAL 1.50 Crores.

- 15

ANNEXURE - 'A'

KALA TATTVAKOSA

FINANCIAL PROJECTIONS

lem Number	Particulars	Estimated Amount
14.	Scanning of Text	Rs. 5.03 lacs
	Editing and Publication	
	of Glossaries covering	FC. 1

- ., -

KALA MULASASTRA

FINANCIAL PROJECTIONS

Item Number	Particulars	Estimated Amount
Ι.	Publication of the following texts on priority basis :-	
	1. Kānva Šatapatha Brāhmana (Basic text)	
	2. Iśvarusamhitā (Āgama)	
	3. Marīci Samhitā (Āgama)	
	4. Brahaddeśi (Sangita/Nrtva)	Rs. 5.20 lacs
	5. Nartana Nirnava (Sangita/Nrtva)	
11.	List of Texts which are being considered for publication in the coming years under Hala Mulasastra Freezamme :-	
	1. Jaiminīva Sāmaveda (Basic Text)	1
	2. Baudhāvana Grnva Sītra (Basic text)	
	3. Egnat SammitE (dwetiga	1 1 1
	4. Jina-Samhitā (Jainism)	1
	5. Sukema Āgama	
	6. Kāmika Āgama	ama '
	7. Agnorašivaonorvapaddhati	23
	8. Vishqudharmottara Purana	
	9. Kalikā Purāņa (Pu	rāṇa) 1

- 10. Kāsyapasilpa
- 11. Mayamata
- 12. Mānsollāsa
- 13. Tantrasamuccava
- 14. Aparajitaprocha
- 15. Laksana Samuccaya
- 16. Sangita Makaranda
- l". Ehardta Bhasya
- 15. Rāga Vibodh
- 19. Hasta Muktāvali
- 20. Krsnagiti
- 11. Tarjuma-i-Mashkutuhal & Risali-i-Raga Darbana (Fersian Text)

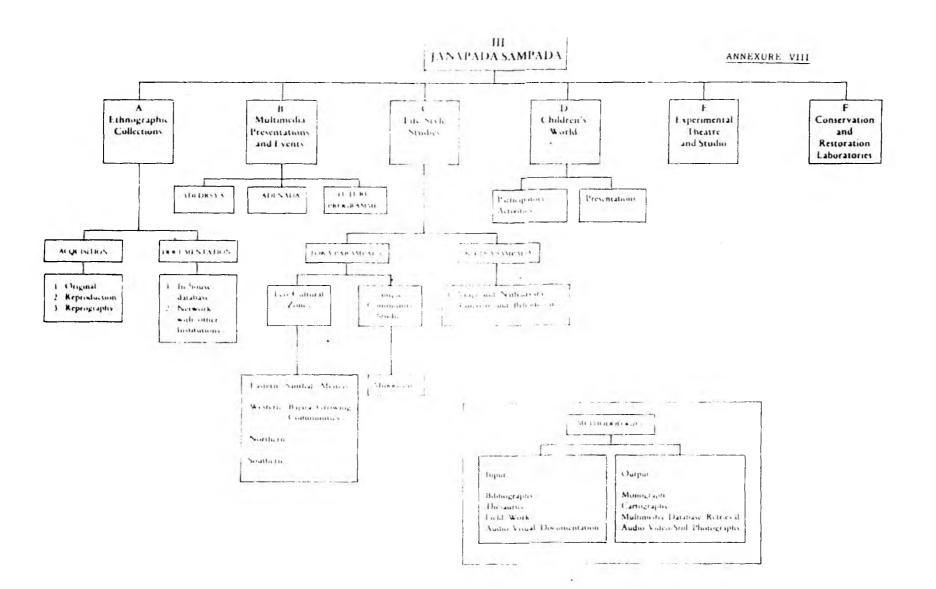
(Vastu Silpa)

Rs. 25.00 lacs

TOTAL FINANCIAL PROJECTIONS FOR THE WORKS RELATED TO KALAKOSA DIVISION

1.	Kalā-Tattvakoša	:	15.00 Lacs
2.	Kalamulasastra (Editing of Fundamental Texts)	:	30.00 Lacs
3.	Retrieval of Manuscripts	:	15:00 Lacs
4.	Restoration of Fundamental Texts	:	75.00 Lacs
5.	Translation of Technical Manuals	:	3.00 Lacs
6.	Bibliographies of Indologists	:	7.00 Lacs
7.	Reprint Series		20.00 Lacs
٤.	Encyclopaedia of Arts		Ev.(() hacs
G.	Infrastructure (Admn. etc.)		11.60 Lacs
		C=-955	

(Rupees Two Crore Seventy Lacs)



IGNCA : JANAPADA SAMPADA

Report of Sub-Group III of the Working Group

The sub-group generally endorsed the studies initiated by Janapada Sampada Division as per the conceputal programmes. The sub-group, reviewing the programmes already initiated, noted that although function and approach of policy had been discussed by a working group in 1987, the programmes of A - Ethnographic Collection, B - Multimedia Presentations, C - Lifestyle Studies were actually started in 1988-89. The progress was satisfactory though in financial terms, expected expenditure would not go beyong Rs. 10 lakhs as the projects were in their first phase of compilation of bibliography and thesaurus. It was felt that the projects launched under Lifestyle Studies in 1988-89 will also continue in the Eighth Plan. The following decisions were taken on each programme:

Programme A

Ithnographic Collection:

Airs: The air of Ethnographic Collection:

- To serve as resource library of documentation in reprographic form
- in) To provide support for JS programmes
- To acquire originals and copies for permanent gallery of Multimedia Presentation, e.g. Adi Drsya and Adi Nada.

Than: The plan is to collect reprographic material on pre-historic tribal and folk art either through donation, or acquisition, or ordering copies. The broad categories are:

- a) Rock Art (i) copies by artists (ii) Photographs
 - (iii) Slides
- b) Ritual & Tribal Arts of particular region.
- c) Original/Copies of music.

In the VIIIth Plan it is proposed to complete:

- a) documentation for rock art in India and acquire some examples from abroad,
- b) core collection of ritual art forms of 12 communities. A beginning has been made with Tayyam in Kerala.
- c) Music of specific communities or form, e.g. Indian church choral music.

JANAPADA SAMPADA

Budget:

	1989-90	Rs. in lakhs Eighth Plan
1. Acquisition & Documentation	9.00	80.00
2. Personnel	1.80	15.00
3. Travel	$\frac{0.50}{11.30}$	$\frac{5.00}{100.00}$
	Programme B	

Multimedia Presentation and Events

Aims:

- a) to serve as primary access to art material related to Indian Society over millania.
- b) to create two Permanent Galleries exhibiting rock art (Adi Praya) and evolution of musical instruments (Adi Nada).
- c) from time to time displays/events/presentations will be undertaken which complement the ancient by supplying the prusent anatomy of the same art and craft.

Plan

- a) In the first phase, the plan is to have the permanent gallery of Adi Drsya which will display pre-historic rock art from India as well as representative samples from other parts of the world. The attempt will be to display representations that re-create the original context of the paintings and secondly to show the immense time span of such art covers. In the VIIIth plan the basic research work will be done and reproduction of rock art in India acquired and a few sample reproductions obtained from other parts of the world. A seminar of Indian scholars and an international workshop on rock art are also envisaged in the VIIIth Plan.
- b) The permanent gallery for the Adi Nada will display collection of ancient musical instruments to be seen as evolution of music in India. Attempt will be to give the instruments greater presence by a sound-scape and relating the place of sound and music to life-function. In the next plan, the research part of this programmes will be undertaken and a few instruments acquired.
- c) One display of tribal art will be undertaken.

Budget:

200300	1989-90	Rs. in lakhs Eighth Plan
Adi Drsya International Seminar/Workshop	_	20.00
Personnel	2.60	30.00
Travel	$\frac{1.50}{4.10}$	$\frac{30.00}{80.00}$
Display of tribal art	-	20.00
<u>Adi Nada</u>		
Research Project	0.50	50.00
Personnel	0.50	10.00
Travel	$\frac{0.50}{1.50}$	$\frac{20.00}{80.00}$
lotal	5.60	180.00

Programme C

lafestyle ftodages

A15

To establish the various links and inter-relation-ship of natural environment daily-life of people, annual calender and life-cycle, world-view, cosmology social structure, knowledge and skills, traditional technologies and artistic manifestations. The lifestyle studies programme comprises two sub-groups are called Loka Parampara and Kshetra Sampada.

Plan

Under loka Parampara, the studies will be taken of in four identified zones, namely, east, west, north, and south. (1) East zone - the two studies have been initiated in the seventh plan namely, Santhals of Chatanageur and Meiteis of Manipur and will be continued. The Santhal project has been taken up as in-house study. (2) West zone - A study of Bajara cultivating communities taken up in the seventh Plan will also continue. (3) Southern zone - A small study of Mukkuvar community taken up by Institute of Asian Studies will be completed and another study initiated in the Eighth plan. (4) Northern zone - one study will be initiated in the Himalayan region. It is also proposed to initiate a pilot project on atlas of tribal art in 89-90, beginning with Santhal art. In the next plan other tribal/rural groups will be taken up for preparation of atlas of tribal arts.

Each project taken up under Loka Parampara will require formulation of a thesaurus. Culling out from bibliographical sources independently or on the basis of the knowledge of the area, terms relating to the tribe/community under study will be worked out. All thesaurus formulation will deal with a few basic concepts like water, fire, air, earth, sky etc. As thesaurus work will be on going and a cell to supervise and guide the work is proposed to be started with appointment of a senior expert. The cell may require one or two junior personnel and travel to consult libraries. For this an outlay of Rs. 2 lakhs for 89-90 and Rs. 5 lakhs for Eighth plan may be provided.

It is further proposed to have a statistics-cum-computer programming unit for JS exclusively. Lastly Janapada Sampada Division also require certain field equipments like camera, tape-recorders etc. and raw stack for in-house documentation and field work. The total budget for the studies under Loka Parampara are as follows:

Bud	iget:		
		1000-00	Rs. in lakhs Fichth llan
1 -	a l'a <u>rattor</u> a		
1 5 5	t rone		
1.	Santhal project		
	Research project leisonnel Travel	1.08 1.12 0.50 2.70	3.00 12.00
٠.	Meiteis of Manipur	5.00	16.66
3.	<u>West zone</u> Bajara Project	1.00	5.00
4.	Southern zone Mukkuvar project	1.00	5.00
5.	Northern zone Himalaya Project	0.50	5.00
6.	Thesaurus	2.00	5.00
7.	Tribal Atlas proje	ct	
	Research Personnel Travel	0.50 1.30 0.50 2.30	5.00 5.00 <u>4.00</u> 14.00

3.50

5. (H)

15.00

18.00

10.00

8. Seminars/Workshop

programming unit

10. Core equipment for

documentation a

Statistics-cum-computer

9.

CALLA MON GAMPADA

Ksetra Sampada

Under the Ksetra Sampada two area-based studies have been taken up: they are Vraja-Nathdvara and Brhadisvara temple in Tanjavur. The Ksetra Sampada envisages a study not only of a specific place or a temple and its units but its impact on the culture of the people surrounding it, of the entire interlocking of the devotional, artistic, geographic, social and economic aspects of a particular centre, and what factors act as its renewals and continuity.

Vraja-Nathadvara

The area of Vraja has become a centre of many socio-cultural movements. It has attracted people from far and near; some to settle permanently in the surrounding areas and larger numbers who came on pilgrimage at certain specified seasons. Thus, the centre acted as a catalyst in human mobility from Vraja to other similar centres. A beginning has been made by first attempting a multilingual bibliography of secondary source, a data base on unpublished manuscripts. Apart from bibliography, audio-visual decomentation of the entire year's ritual in the temples, beginning with nitya seva to utsava service will be attempted. Along with these the architecture of the temples will be separately recorded to study the impact of temple tradition of Vrindavan. Lastly, the study of the priesthood, intricately woven and linked with Vraja-Nathdyara complex will bring out the relationship of the people with the deity, as its priests or Goswamis who conduct the rituals and interpret them for the devotees.

The proposal for studying and documenting Srinathji cult in the area of Vraja-Nathdvara was made in 1987 with a total outlay of Rs. 26.82 lakhs and a time span of these years. Finally it was agreed that IGNCA will fund the "compilation of resource material" for an outlay of Rs. 57,000/-. This allocation was to be used for preparation of bibliography for a period of six months. After completion of bibliography phase documentation, both audio and visual, is envisaged. *Lastly a monograph is to be published analysing cultural impact of Vraja-Nathdvara circuit. The entire project Rs. 30 lakhs may be required for 1990-95. *For 1989-90 an outlay of Rs. 2 lakhs may be provided.

Brhadisvara Project

The Brhadisvara temple also known as the Rajarajesvara temple built by Raja Raja I in 1010 A.D. has been acclaimed as the finest achievement of Cola Art. A beginning has been made with the preparation of a bibliography. A multi-lingual bibliography of secondary sources is an essential pre-requisite before launching on the next fundamental step of a comprehensive bibliography of primary sources published and unpublished.

In the next stage, a programme of putting together the full corpus of epigraphical evidence will be taken up. This will include all that has been published and stampages of inscriptions so far not studied.

Concurrently, the Institute of Indian Studies, Pondicherry, and the Ecole Francaise Extreme Orient, Pondicherry, will undertake survey and architectural drawings of the drawings. With the cooperation of the Archaeological Survey of India and other eminent scholars who have already worked on the temple, the total architectural programme of the temple ranging from drawing plans, elevations, internal architecture, schema of sculpture, paintings, will be prepared. A complete photographic documentation in black and white and colour, including slides, microfiche and possibly photometric survey in 20 and 30 will be undertaken. It is expected that the bibliography will be published in the course of the next two or three years. Other volumes will follow on each aspect culminating in a final volume. This will be supported by audio-visual documentation. Date will be stored, classified and retrieved through verbal and image computerised modules. Data bases of bibliography, primary sources, graphics will be stored in computer. Hopefully all this data will be fed into the integrated work stations which the IGNCA Informations System and Data Bank proposes to establish. The project will continue in the next plan. So far only the bibliographic phase with an outlay of Rs. 40,000/- for six months has been taken up. The project will require Rs. 4 lakhs in 1989-90 and around Rs. 50 lakhs in the Eighth Plan.

Children's World

The programmes of this section will acquaint children with the rich heritage of tribal and folk cultures: realities they have little access to through their home and school environment. This section will be devoted to inculcating a sense of curiosity and pride in the multiplicity of lifestyle. Through puppetry and other participatory device, such as games and staging self-produced plays, opportunities will be provided for constructing an alternate view of these societies in India as well as outside. In the second phase it is proposed to bring out a children's encyclopaedia of the Indian arts and culture.

Attempts will be made to produce pictorial cultural works in simple language for children through NCERT and similar coloured pictorial booklets on National Museums artifacts for distribution in schools. This programme will require to be initiated in 1989-90 itself and a token provision of Rs. 50 lakh may be provided. For the Eighth Plan Rs. 75 lakh outlay is proposed.

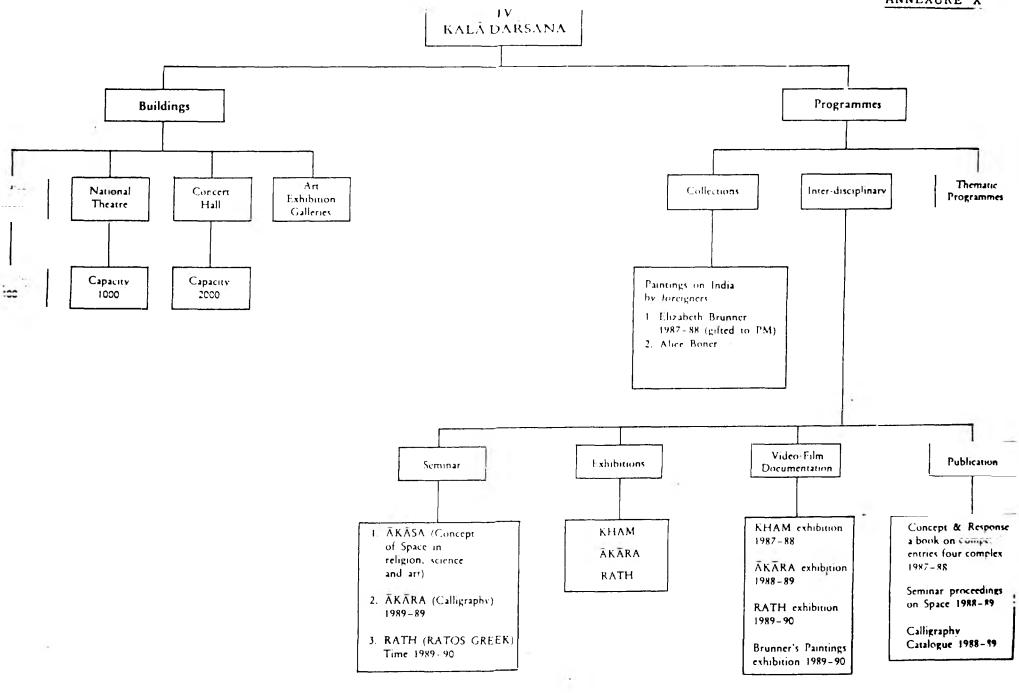
Experimental Theatre cum Studio

This will be the venue of participative activities and innovative experiments as well as the in-house documentation studio. A fully equipped theatre with computerised control systems and facility for studio recordings will be available for innovative and experimental work. Since it will be necessary to acquire equipment for the studio, one time investment of Rs. 165 lakhs in the Eighth plan is envisaged. During 1989-90, a token provision of Rs. 50 lakh may be provided for the project.

Conservation and Restoration Laboratory

The laboratories will attend to the conservation of art objects and artifacts made of varied kinds of materials. Separate cells will be set up for treatment of paper, wood, clay, metals, paintings and other materials. It will be necessary to equip the laboratory with necessary chemicals, equipment and appoint personnel. An outlay of Rs. 100 lakhs is charaged for this in the next plan.

Paring 1989-90, a token provision of Rs. 50 Takh may be provided for the project.



Kala Darshana division of IGNCA will comprise appropriate performing areas and halls suitable for large, medium, small and solo performances, all equipped with modern electronic devices but some suitable for professional performances and others for events, happenings and encounters. This Division will also organise exhibition, seminars; there will be connected publications, documentations etc.

It is expected that in the 8th Five Year Plan period, the building complex will be ready and all preparatory work with complete infrastructural facilities will be carried on during the 8th plan. These will cost about Rs.5 crores. These expenses will generate permanent assets and therefore will constitute capital expenditure.

Kala Darshana Division of the IGNCA is operational and has conducted small but significant programmes in a short span of time:

1. Exhibition: KHAM, Space and act of Space: This international Exhibition explored the universal concept of space as interpreted and explained by civilizations all over the world. 14 different meanings of the Sanskrit space world 'Kham' were visually conveyed to the audience.

The exhibition was mounted in Ravindra Bhawan in November 1986 and received very wide acclaim. Besides India, 2 countries participated.

2. International Seminar, "Cidakasa-Bhutakasa"Inner and Outer Space: Concurrently with
the exhibition KHAM, this international
seminar was held at India International
Centre, Delhi from 20th to 26th November, 1986.
This Seminar brought together eminent art
scholars/historians, architects, academics
and other intellectuals from India and 25
countries from Vietnam to Venezuela, belong-

ing to the discipline of astrophysics, philosophy, archeology, art-history, visual and kinetic arts, to explore and reflect on the concepts of space, physical and metaphysical, inner and outer. Key note address was delivered by Dr.Raja Ramanna, presided over by Dr.D.S.Kothari; Pt.Lakshman Shastri Joshi addressed the concluding function which was chaired by Dr.Karan Singh.

3. International Exhibition on contemporary Cultural Complexes: To coincide with the exhibition of the Entries received in the International Architectural Design Competition for IGNCA Building Complex, this exhibition was organised. Models and other visuals on contemporary cultural complexes included gymnasia, museums, puppet theatres, concert halls, opera houses etc. Internationally renowned complexes such as Sydney Opera, Brisbane Cultural Complex, Pompidou Centre, Lincoln Centre, Barbican Centre, South Bank Complex and other cultural complexes were displayed. This exhibition opened on 20th November and was organised at IGNCA building site by remodelling the old war time hutments being used till recently as Kitchen block for Air Force Officer's Mess.

This exhibition along with Exhibition of Entries received in the International Design Competition was the first International Exhibition of Architecture in the country bringing forth a full range of architectural styles and skills from the world over.

4. Athens-History of the ancient city: In the month of January, 1987, this exhibition was organised. Through models, plans and

December, 1988. From the rock paintings of primitive man to the computerised mechanical writing of space-age man, writing has come a long way. Styles of writing have changed from time to time, from place to place, reflecting the environment of the period and the inward development of man. The usage of different types of tools and surface materials, have left their distinct mark on these styles.

The exhibition revolves around calligraphy a man's quest for perfect visual form of the world, silently articulated within the mind. It will trace the evolution of primodial sound and its transference to 'letter' forms. It will be cross-cultural, multilingual in approach and multimedia in presentation.

Concuarrently with exhibition on "World Calligraphy" a seminar will be organised on the same theme in December, 1988.

Exhibition and Seminar on the theme, "RATH" (Greek RATOS) will be held in 1989-90.

Documentation and Publication:

- 6. Publication of book titled "Inner and Outer Space" bassed on but not limited to presentations in the seminar. "Cidakasa Bhutakasa" book will provide a rare collection of contributions from renowned scholars, architects, art historians on the subject.
 - 7. Publication of book on Design Entries:
 The International Design Competition for
 IGNCA Building Complex 194 entries 137
 countries covered a very wide spectrum.
 The book includes a selection of the entries.
 This displays the possibility of diversity
 of architectural solutions of a given concept.

B. Paintings of Miss Sass and Ms.Elizabeth Brunner: Gift of these paintings was received by the Prime Minister on 19th November, 1986. The Paintings are being carefully photographed and documented. After these paintings are accessioned, appropriate catalogue and an exhibition will be organised.

During 1989-90 an integrated programme on theme of RATH (Greek RATOS) is being planned.

It is also being planned to take out the book on Calligraphy based on the presentation made in a Seminar recently conducted.

For the on-going activities of exhibitions seminars, documentation and publication as also for collections, the requirement of funds will be as follows:-

i)	Collections	Rs.10	lakhs
4 /	COTTECTIONS		1017111

Rs.105 lakhs Say Rs.1 Crore for 5 years .. Rs.5 Crores

To oun to requirement of funds for 8th Plan shall be:

(i) Kala Darshana - Pevenue Read - Rs.5 crorec - Capital Read - Rs.5 crores