Informatics

NICNET

National Informatics Centre in National Games '94

EDITOR'S NOTE

Our Side of the Story

It is now two years since we first reached you and is high time that we take a look at ourselves and find out how true we have been to our promises.

In our first issue itself, we had made the commitment that this quarterly newsletter of the National Informatics Centre would endeavour to cater to all categories of potential Readers. And we have tried to do just that. The emphasis has always been on you and you only. Initially we classified you into two broad categories: those who are familiar with computers and informatics, and those who are not. That the planning of Informatics was based on this classification becomes evident when you consider our presentation. In each and every column, we have first tried to explain the whole concept we present in very simple terms, avoiding computer jargon which could confuse the unfamiliar; and only then have we tried to satiate the computer professionals with detailed technical information. Each column has also been designed to meet this balance. While *Around the NIC World* gives you only the bare news of the Organization, the *Cover Story* tries to introduce a new concept and *Projects* and *Products* each presents a mix of technical and non-technical reporting. *In the Limelight* is non-technical to a large extent but also tries to explain certain technical aspects. For six consecutive issues we brought you *A Leaf of NICPLAN* so that you may appreciate the vision we have of the future. *PHOTOTALK* was thrown in to reach you through the photographic camera and also to add a bit more of colour.

From your side, we present the *Accolades* column where you speak of NIC's achievements and shortcomings and let us know exactly where and how we stand.

The intention of this note is not so much to say what we are doing but to convey how we plan the presentation of *Informatics*. It could be useful only if you participate and let us know of your end of the picture. For only then will we be able to get across to you more meaningfully and aesthetically.

Rubaiyat Ali

FROM YOU TO US

Readers Views

I find your newsletter very informative and an excellent source of knowing the activities of NIC. Many a time I have acted on the news given in the newsletter. It may be worthwhile to include a column "Readers Views" to get a general feedback.

Prof. Prabhakar Mishra,
Ex. Dean, Indian Institute of Remote Sensing, Dehradun.
Ex. Director (Training), Survey of India, Hyderabad.
J-94, South Extension, New Delhi.

Sharing the experience

I congratulate you for initiating the first informative newsletter of NIC. With the expansion of NIC throughout the Country, it was imperative that we are appraised with latest developments elsewhere. The newsletter is very compact, informative and beautifully designed.

I had realized the usefulness and economy of establishing NICNET node at Yamunanagar and took up the setting up of a district centre on priority basis. We are utilizing the facility. I would like to share our achievements through your esteemed newsletter, *Informatics*.

Mr Vivek Joshi, Additional Deputy Commissioner, Yamunanagar, Haryana.

(We hope to have Mr Joshi with us in our next issue of informatics.-- Editor)

AROUND THE NIC WORLD

DISNIC-PLAN MEET

From our Local Correspondent

New Delhi: The first meeting of the DISNIC-PLAN Project Steering Committee was held on January 3, 1994, at New Delhi, under the chairmanship of the Special Secretary and Director General, National Informatics Centre.

NIC personnel in charge of DISNIC-PLAN in the States were present in the meeting and discussed the status of this core project in different States.

A number of action points were adopted to further the cause of DISNIC-PLAN and speed up its implementation uniformly all over the Country.✍

NRIS WORKSHOP

From our Local Correspondent

Bhubaneshwar: A workshop on Natural Resources Information System was organized at NIC Eastern Regional Centre, Bhubaneshwar on February 25, 1994.

Besides NIC Personnel, the Workshop was attended by Officials from several other organizations such as the Directorate of Mining and Geology, Geological Survey of India, Orissa Remote Sensing Application Centre, Water Technology Centre, etc.

NIC's experience of designing, developing and implementing an information system for natural resources in Aligarh was discussed in detail.✍ **(For further information, please refer** *"Putting a Computer Tab on Natural Resources"*, *Informatics*, **January, 1993.)**

> The name of our Haryana Correspondent, Mr Deepak Bhargava SA, was wrongly printed in the July, 1993, issue of Informatics. We regret the mistake. --- Editor.

BENGAL CM GRACES INAUGURATION
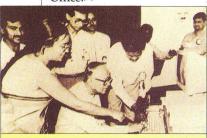
From our West Bengal Correspondent

West Bengal: The West Bengal Chief Minister, Mr Jyoti Basu recently inaugurated NIC's Revenue Management System for the West Bengal State Electricity Board (WBSEB).

In his inaugural speech, the Chief Minister said, "Computerization is essential in offices like banks, P&T, State Electricity Board etc. In State Electricity Board faster generation of bills and better realization can be achieved by computerization".

The revenue management system of the West Bengal State Electricity Board has been considerably improved by the installation of the computerized Revenue Management System developed by NIC.

Boosted by the improvement in the areas of energy and revenue monitoring, the WBSEB has entrusted the NIC West Bengal State Unit with the responsibility of implementing the System in 14 more of its divisions through an execution order of Rs 1.75 crore. NICNET will be used to interconnect these offices and the Corporate Office.✍

Chief Minister Mr Jyoti Basu inaugurating the Revenue Management System at the Bidhannagar Distribution Division.

NICNET-EMMS SAVE THE DAY

From our Haryana Correspondent

Haryana: NICNET, along with the Electronic Mail Monitoring System (EMMS) developed by NIC Haryana State Unit, played a crucial role during the December Jail Bharo agitation by the Haryana State Government Employees. NICNET nodes at all the districts and the State Centre were operational from 9 a.m. to 9 p.m. during the agitation days, enabling important missives and messages to be transmitted and received without any hitch. NICNET had already been declared as the emergency communication system for the State Government.

EMMS was developed for monitoring mails between the Principal Secretary (PS) to the Chief Minister and the Deputy Commissioners.✍

GISTNIC IN HARYANA

From our Haryana Correspondent

Haryana: Mr BS Ojha, Chief Secretary, Haryana State Government, inaugurated two General Information Service Terminals of NIC (GISTNIC) in the State.

Mr Ojha inaugurated the first GISTNIC booth in the State in the Multi-purpose Hall at the Mini Secretariat at Rohtak. It is proposed to set up GISTNIC booth in each district of the State.

GISTNIC, having garnered a large number of databases, is a versatile system which provides information on diverse fields.

The second booth was inaugurated by Mr Ojha in the library of the Kurukshetra University.

The GISTNIC booth at the University will be a boon to the teaching faculty, research scholars and students. The information on colleges and universities and the courses of study they offer is expected to help many a aspiring student.✍

> *Informatics* is now being sent to all NIC District Units directly from NIC Headquarters, New Delhi. Correspondents are requested to ensure that all districts in their respective states are in receipt of the newsletter. Any anomaly is to be reported to **NICMAIL!CIR.**

BRAINSTORMING ON NICNET UTILIZATION FOR COOPERATIVE SECTOR

From our Local Correspondent

New Delhi: A one-day Brainstorming Session on NICNET Utilization for Cooperative Sector was organized by NIC at the India International Centre on January 19.

Inaugurating the Session, the Minister of State for Agriculture and Non-Conventional Energy Sources, Mr Krishna Kumar, said, "I hope that this interaction will pave the way for a very comprehensive scheme and programme for the upgradation of the entire information system as well as the resulting improvement in qualitative decision making in the Cooperative Sector..."

The morning session was chaired by Ms Asha Das, Additional Secretary, Dept of Agriculture and Cooperation; while the two afternoon sessions were chaired by Mr K Rajan, Adviser (Agriculture), Planning Commission and Mr Bhagat Singh, Joint Secretary (Cooperation), Dept of Agriculture and Cooperation.

The speakers included the Punjab State Registrar of Cooperative Societies and senior officers from NABARD, NCUI, NCDC and IFFCO. The Session was well attended by representatives from cooperative institutions both from the States and the Centre.✍

The inaugural session in progress

NIC sets new Record

Any major sporting event generates a lot of interest. In India, the Asian Games of 1982, the World Table Tennis Championships of 1987 followed by World Railway Games and the Second National Games of the same year were veritable bonanzas for the public. Old records were broken and new ones set.
Few however know of a unique participant which competed against itself to make and break its own records in all these games. The part that the National Informatics Centre played in the recently concluded National Games '94 in Bombay and Pune, brought NIC's contribution to Indian sports to a new zenith.
We present NIC's performance record in the National Games '94.

It started in 1982 with the IXth Asian Games held in New Delhi. For the first time in Asia, computer and communication services were provided for handling Sports Information Systems. An intra-city star-configured computer network connecting all stadia in Delhi was set up by NIC. Subsequently, the Computerized Results Information System was developed to support the World Table Tennis Championship held in Delhi in 1987 and the World Railway Games which followed immediately. NIC also had the privilege of extending its computer services to the Second National Games held in Kerala in the same year.

Considering NIC's rich experience in the field, the Games Technical Conduct Committee (GTCC) for the National Games '94, held in Maharashtra, entrusted NIC with the responsibility of computerizing the whole gamut of information flow for the Games. It was a gesture of extreme confidence and NIC lived up to expectations. With its usual display of professionalism, the Organization came up with what is known as the Sports Information System of NIC (SISNIC). Three functional components were the mainstays of SISNIC:

❐ Design, development and implementation of a Computerized Results Information System, RISNIC.
❐ Design, development and implementation of an Accreditation and Registration Information System, RAISNIC.
❐ Provision of satellite communication services linking all major stadia in Pune and Bombay.

RISNIC produces results

The Results Information System of NIC (RISNIC) covered the entire range of 27 games and 290 events of the National Games, and also provided information on the results of earlier National Games (1985 to 1987) for reference. Computers installed in all the stadia in which the Games were

being conducted, used RISNIC to prepare the results of the Games, based on score sheets. Event-wise and match-wise results were prepared. At the end of each day, complete results of the day for all games and medal tally reports were printed at the Bal Bhavan, Balewadi and BHA stadia. On the last day of the Games, RISNIC produced the overall results of all the games and events. RISNIC also provided access to the records of the 1985 National Games in Delhi and 1987 National Games in Kerala, which could be viewed on computer terminals or printed along with the current results. Reports of medals distributed and National Records set during the Games were produced for each game and event.

Computerization was a boon for the media and other experts in the field. Computers at the respective stadia were connected to each other through NIC's satellite-based computer-communication system, NICNET, and dedicated telephone lines. This made it possible to combine results of all the games h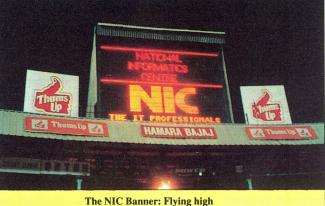eld at various geographically separated stadia to produce the overall results at any moment of time. The use of modern computer and communication technology helped the Organizing Committee in declaring the up-to-date results to the Press and sports associations in a very organized manner.

Co-ordination with RAISNIC

The Registration and Accreditation Information System developed by NIC (RAISNIC) enabled computers to manage pre-Games data related to 27 games, 290 events, 28 States, 5,000 players and numerous officials spread over several venues in

Bombay and Pune. The national sports federations and the state Olympic associations were requested to submit details of all players participating in the Games. This information, for example, consisted of player's name, state, game, age, sex and the details of events in which the player would participate. Obviously, it was not feasible to manually administer this large volume of data so vital for smooth conduct of the Games. RAISNIC collected and processed this pre-Games data effectively, saving a lot of time and energy.

Using RAISNIC, computers processed the information on individual players and applied various checks to ensure consist-

The NIC Banner: Flying high

ency. The data was then used to prepare the game-wise list of the participants and the list compared with the original document for accuracy. It was also possible to update the data in case of any changes. Various reports were prepared based on this data, and the reports, in turn, were used to prepare detailed schedules for all events. Various summary tables, which gave the number of players for each game, event and state, were generated automatically through RAISNIC. These summary tables were found to be very useful for the purposes of accreditation and for the overall conduct of the Games.

Similarly, reports with information regarding various committee members, media personnel, technical officials, Games officials from various associations etc. were prepared for assisting the registration process and management of manpower. In a nutshell, RAISNIC helped the Organizers in registering the participants, finalizing competitions, preparing draws of matches/ heats, preparing competition schedules etc,. with greater accuracy and in lesser time.

The communication structure

A combination of satcom and telecom media ensured integration and inter-communication of all games-related results during the entire duration of the Games. Satellite earth stations were installed in Bombay at the BHA Stadium (Churchgate), Shooting Range (Worli) and Sports Complex (Andheri); and in Pune at the Sri Shiv Chatrapati Sports City, Balbhavan (housing the National Games office) and PCMC Stadium (Pimpri-Chinchwad). Other stadia in Pune and Bombay were interconnected by data circuits.
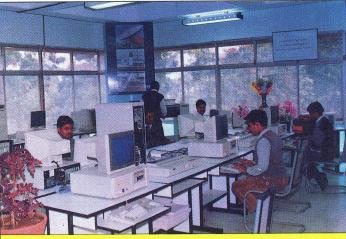
The implications

In any computerization effort it all boils down to the basic question of the explicit implications for Users. As far as the National Games , or any other sporting event for that matter, is concerned, results processing and dissemination are the main

objectives. The system basically has to cater to the media , and the media, on its part, gets the information across to the general public.

The primary aim of SISNIC was to enable Users to operate the System all by themselves. Users could retrieve and use all games-related information at their own pace and convenience. The SISNIC database was regularly updated to make it a versatile, user-friendly and very useful information system for media persons and all enthusiastic sports lovers. Media people had access to not only the results of the National Games '94 but also to the results of the previous National Games held in Delhi (1985) and Thiruvananthapuram (1987) and any other relevant sports-related information including existing world records. Also of immense help to the media was the on-line information on games schedules, medal winners, winning teams, medal tally etc. This information, as noted before, was readily available in user-friendly and conveniently retrievable forms. Mediapersons were able to retrieve specific information

of interest and build up write-ups, stories etc. To facilitate quick reference to the results of the games/events conducted or completed up to a point in time, a continuously rolling/scrolling mode of informa-
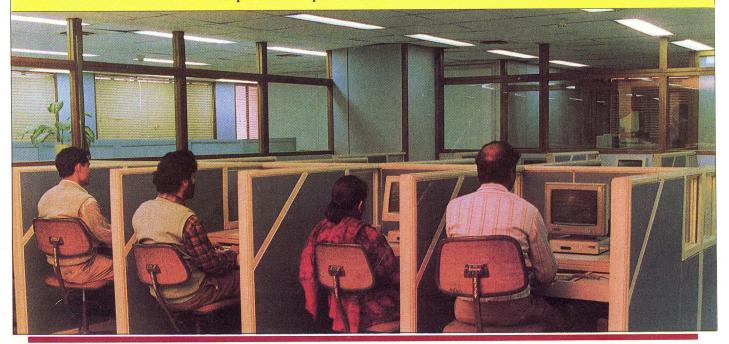
All work for the Games: NIC personnel toiling away

tion display was provided. Useful information on the NIC was also provided.

Computerization of the National Games '94 was yet another milestone in NIC's proven track record. The National Informatics Centre has set yet another record for itself. And it won't be long before it breaks its own record. ✍ (*For further information please contact: The Director, NIC (WR), Ganesh Khind Road, Pune - 400 032, Maharashtra.*)

PHOTOTALK

A unit of the Training Division at the National Informatics Centre Headquarters, New Delhi. The National Informatics Centre has trained over 50,000 government personnel in different aspects of computers and computerization.

Annual Plan Preparation made easy

From our Punjab Correspondent

T he Punjab State Unit of the National Informatics Centre has come up with the computerized Annual Plan Information Monitoring System (AIMS) to facilitate preparation of annual plans for the Punjab State Planning Board. The System has inducted a great flexibility in presentation of data and its modification, besides reducing the time, labour and cost involved. The System has been successfully implemented in the Punjab for preparation of Annual Plan of 1994-95 of the State. Computer printouts of about 300 pages of the Annual Plan 1994-95 was presented to the Chief Minister of Punjab for submission to the Planning Commission. Necessary training for effective utilization of the System has been provided to the operational Staff and Officers of the State Planning Board.✍

OBJECTIVES OF AIMS:

■ Data presentation in different formats to provide strong basis for funds allocation to different schemes.

■ Proper monitoring of the various schemes and funds allocated.

■ Efficient and fast processing of voluminous data.

■ Statistical and graphical analysis of the data.

■ Fast retrieval of specified information.

■ Generation of Comparative Statements.

FEATURES OF AIMS:

■ User-friendly, menu-driven System with on-line help at all levels.

■ Data preparation (addition/modification/deletion).

■ Reports generation as per the requirements of the State Government Departments.

■ System can be implemented in other States without any major changes.

■ Uses NICNET for the transfer of data/information on various plan/non-plan schemes of the Districts.

System for PF accounting

From our M.P. Correspondent

T he NIC Madhya Pradesh State Unit has developed a **Departmental Provident Fund Accounting and Information System** for maintaining the accounts of Departmental Provident Fund (DPF) contributions from Secretariat employees. This software is very generalized in nature and covers contributions, loans and part/final withdrawals.✍

ECPMS for FCS

From our Punjab Correspondent

T he NIC Punjab State Unit has designed and implemented the Essential Commodities Procurement Monitoring System (ECPMS) at the district and state levels of the State. For the Punjab Food and Civil Supplies (FCS) Department, this System has drastically reduced the delays in the availability of daily *mandi*-wise procurement data from the districts.

A new proforma, to be filled by the *Mandi* Officer, has been designed, and the data from this proforma entered into the NIC district computers. New codes have been designed for all the *mandis*, district *centres and commodities. The data is then transmitted to the NIC State Unit through NICNET where it is compiled, and various comparison reports generated.*
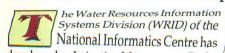
The System provides information on *mandi*-wise procurement of agricultural commodities by each Agency, to their respective state headquarters through a single channel. It acts as a means of timely and effective control over the field staff and procurement of commodities. Compilation of data through computers reduces the manual labour, time and cost. The System also incorporates provisions for comparing current data with the data of previous years to search for trends and also enable time-series analysis of the data.

The System, with separate modules for implementation at the district and state levels respectively, is menu-driven and extremely user-friendly. It also provides for graphical representation and statistical analysis of the data.

Daily, *data from approximately 900 mandis* and 155 storage centres is being transferred through NICNET.✍

Bhadra Flow computerized

From our Karnataka Correspondent

T he *Water Resources Information Systems Division (WRID) of the* National Informatics Centre has developed an Irrigation Management Package for the Bhadra Reservoir of Karnataka. This software package has replaced the manual procedures in the existing irrigation management practices.

The canal system of the Bhadra Reservoir consists of the Left Bank Canal (LBC) and the Right Bank Canal (RBC). The LBC is 78 km in length with a designed capacity of 9.50 cumecs and covers an area of 8,292 hectares. The RBC is designed for a capacity of 75 cumecs and runs for a length of 103 km to irrigate an area of one lakh hectares.

The complete canal network has been coded and stored in a database. A canal can be identified by specifying its upstream node and downstream node numbers. A unique 19-digit code has been evolved to map the canal network structure. The System calculates the crop water requirement using the modified Penmen method. Daily, as well as monthly and seasonal, water release tables and water budget tables are also computed by the System. The software also graphically represents the *supply Vs requirement* chart for the selected distributory, and also for *actual flow Vs advised flow* chart for any particular distributory.
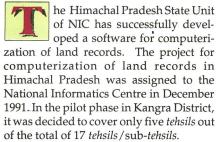
The System will help the project authorities in improving water use efficiency and in effective monitoring of water supply with respect to crop water requirement.

The software simulates the quantity of flow which passes through the main canal section immediately after each distributory or branch. The System computes the seepage losses in the main canal, distributories and minors. The water availability status in different sections of the canal against the head discharge and the differences between the target flow and the observed flow can also be seen. If the differences are greater than the pre-specified percentages, a report is flashed to the *System Manager* who can take action accordingly.✍

Land Records Computerization in Himachal

From our H.P. Correspondent

The Himachal Pradesh State Unit of NIC has successfully developed a software for computerization of land records. The project for computerization of land records in Himachal Pradesh was assigned to the National Informatics Centre in December 1991. In the pilot phase in Kangra District, it was decided to cover only five *tehsils* out of the total of 17 *tehsils* / sub-*tehsils*.
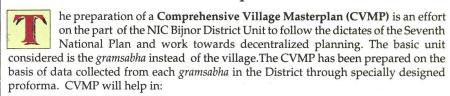
After going through the required phases of testing and subsequent modifications, the software (for *Jamabandi* Records Computerization) was finalized in October 1992. However, actual data entry from *Jamabandi*s could be started only in February, 1993. Data from *Jamabandi*s for more than 400 villages have been entered into the system within a short span of 8 months.

The Software has been developed in FoxBase under XENIX environment and run on a Super-AT(386). The Software incorporates extensive on-line validation checks to ensure maximum accuracy.

The process of computerization has brought several discrepancies in the original records to light. This has been possible because the Software reflects reconciliation errors in its validation checks applied extensively during data entry.✍

A Step towards Decentralized Planning

From our Uttar Pradesh Correspondent

The preparation of a **Comprehensive Village Masterplan (CVMP)** is an effort on the part of the NIC Bijnor District Unit to follow the dictates of the Seventh National Plan and work towards decentralized planning. The basic unit considered is the *gramsabha* instead of the village. The CVMP has been prepared on the basis of data collected from each *gramsabha* in the District through specially designed proforma. CVMP will help in:

- Creation of a unique development plan for each *gramsabha*.
- Quick retrieval of information to assist in decision making.
- Real grass-root planning.
- Creation of a detailed database for each *gramsabha*
- Evolution of an effective and scientific system of monitoring various development programmes.

Concrete data on every *gramsabha* will help in the preparation of an **Index of Village Development (IVD)** which will be able to rank all *gramsabhas* of the District in terms of their overall development level using a weighted index. This will in turn pave the way for creation of an index for prioritization of the ten individual development parameters in IVD. For example, if one needs to know the priority of *gramsabhas* for drinking water, there has to be a system where such a prioritization is feasible. The answer is the index termed the **Village Prioritization Index (VPI)**. The VPI helps in:

- Ranking the development level of gramsabhas in terms of individual parameters
- Developing a scientific database on the basis of which departmental funds and Jawahar Rojgar Yojana (JRY) funds can be allocated
- Abolishing adhocism in the selection of schemes/locations for various development projects.✍

Projects for Computerization of M.P. Finance Sector

From our Madhya Pradesh Correspondent

The Madhya Pradesh State Unit of the National Informatics Centre has taken up two major projects --- the **Treasury Accounting Information System (TRACIS)** and the **Budget Management Information System (BMIS)** --- for computerization of the Finance Sector of the State.

TRACIS

In May 1992, the Madhya Pradesh State Government entrusted the NIC MP State Unit with the responsibility of designing, developing and implementing an appropriate computer-based accounting information system to enable the treasuries to generate compiled accounts with less effort and time. NIC's response to this responsibility was the conceptualization of TRACIS.

The necessary design for TRACIS has already been completed and allows for modular development of the system. The required software development for data entry and updation/maintenance pertaining to both receipts (*challans*) and payments (vouchers) is also over.

At present, the system facilitates the generation of date-wise detailed and summary reports on the compiled statements of accounts pertaining to major and minor heads. Further, bank scroll register, subsidiary register, schedule of receipts (for submission to AG), DDO-wise expenditure, cheque accounts, plus-minus memo, list of payments, cash account, cash book, deposit and work account, etc., can also be generated with the present system. The basic information is captured directly from the *challan* or voucher. Automatic book transfer from payment to receipt and generation of the required information for budget control at various levels are additional features of the System.

Required training for operating the System has been imparted to Treasury Officers and Staff of most of the Treasuries located in the State.

TRACIS is operational in 13 treasuries which already have computer facilities.

BMIS

The Budget Management Information System (BMIS) has already been designed and is presently under implementation in the departments of Public Health Engineering, Fisheries and Food & Civil Supplies. This fully menu-driven system is so designed that classified budget information is available to both policy makers at the apex as well to those concerned at the grass-root level.

The BMIS software is NICNET-based and can be used by any department for **Budget Preparation, Budget Allocation** and **Monitoring of Expenditure**.

BMIS supports a number of screen-based queries and output reports related to budget proposals according to DDOs, demand, major head, submajor head, minor head, scheme and object.✍

Making Waves in Goa

From our Goa Correspondent

It is a place on every tourist's itinerary. A land of the sea and beaches, the land of the Carnival --- Goa. Situated in the Sahyadri Ghats on the Western Coast of India, this small State is nestled by the Arabian Sea. With a population of nearly 12 lakh, the State spreads over an area of approximately 3,702 sq kms. Nearly 451 years of Portuguese rule in Goa has resulted in what is called the Goan Culture --- a unique mix of Indian and Portuguese cultures, rich in folk arts, music, dance, drama and literature. This cultural base, along with the prevailing high literacy rate, makes Goa very receptive to new ideas and technologies.

On the economic front, Goa is quite well-off. The State occupies a place of honour in the world tourist map. It is rich in natural resources and its agriculture is blessed by the Southwest Monsoons. For convenience in administration, the State has been divided into two districts, 11 talukas and 429 revenue villages with 183 panchayats.

Setting Sail

Informatics took its first step in Goa with the signing of a Memorandum of Understanding between the State Administration and the National Informatics Centre in 1989. A group comprising the then Collector and Deputy Collector of Goa and professionals from NIC successfully overcame all the initial obstacles to set up a NIC District-cum-State Unit and make it operational in September 1989. There was no looking back thereafter. With appreciation and active co-operation from the State Administration, the NIC South Goa District Centre was made operational in December 1990.

The interest was mutual. The Goa State Administration was quick to catch on to the relevance of computerization in effective management and administration. This coincided with NIC's efforts to usher in a culture of informatics. The results are there to see.

On Course

The initial thrust for computerization was concentrated in State and Central Government offices in the town of Panaji which is the administrative hub of Goa.

In the North Goa Collectorate vital activities such as *Sanad* (issue of certificates on land conversion) and Land Acquisition Monitoring were effectively computerized. Provision of NIC terminals also helped in facilitating word-processing activities.

In the General Administration Department of the Secretariat, officials started making use of Management Information Systems (MIS) such as the Quarters Monitoring System (QMS), Vehicle Monitoring System (VMS) and Goa Civil List (GCL).

Gathering momentum, the NIC Goa State Unit undertook the responsibility of implementing tailor-made softwares in other departments also. The Inspectorate of Factories and Boilers got a comprehensive system to maintain health and factory statistics ; payroll software packages were implemented in the Food Corporation of India and Goa State Police Department; and a software system to monitor house tax collection and rent collection on leased buildings was implemented in the Panaji Municipal Council. The Agricultural Census 1991 was computerized for the Directorate of Planning and Statistics; a software implemented in the Employment Exchange enabled on-line registration and renewal of registration of candidates. NIC's national-level projects, such as the SERMON package for Customs and Central Excise and computerization of the Primary Census Abstract and Village/Town Directory for the Directorate of Census Operations, were successfully implemented.

Today, the NIC South Goa District Unit takes care of all the computerization requirements of various departments coming under the South Goa District. Computerization projects for payroll, arms licence and *sanad* monitoring have already been successfully implemented.

Closer Horizons

As in other states of the Country, NIC's satellite-based computer-communication network, NICNET, interconnects Goa with the rest of the Country. NICNET also provides access to international databases and other international networks. Almost all government departments in Goa are making use of NICNET. The Department of Social Welfare, Department of Planning Statistics, Food Corporation of India, and Department of Food and Civil Supplies, are using this facility for periodical transfer of data on Integrated Child Development Scheme (ICDS), 20-point Programme, and price of essential and agricultural commodities.

In the Goa Medical College (GMC), the MEDLARS services in NICNET are being used extensively by doctors, research students and also by private practitioners. MEDLARS has been a boon for its Users as there is no other easy means of access to the essential medical information gathered from all over the world. "Most of the post-graduate students of various disciplines are availing this facility and getting the required information on a time-bound basis", says the GMC Librarian.

NICNET services were extensively used during the Tenth Lok Sabha Elections in 1991.

Winds of Favour

But computers cannot run by themselves and it is the human factor which counts most in any computerization effort. Trained manpower is the most essential requisite. In order to build up an adequate force of trained manpower the NIC Goa State Unit organizes periodical training programmes on computer awareness and utility softwares for the staff of various departments of the Goa State Government.

The course is set, and the sailing is smooth, but there are leagues to cover still. New ventures are being planned and worked upon. The wind is blowing for NIC.

Terminal room of the NIC Goa State Unit: Work in progress