Annual Report 2002-03

Danlaw
TECHNOLOGIES
INDIA LIMITED

DANLAW
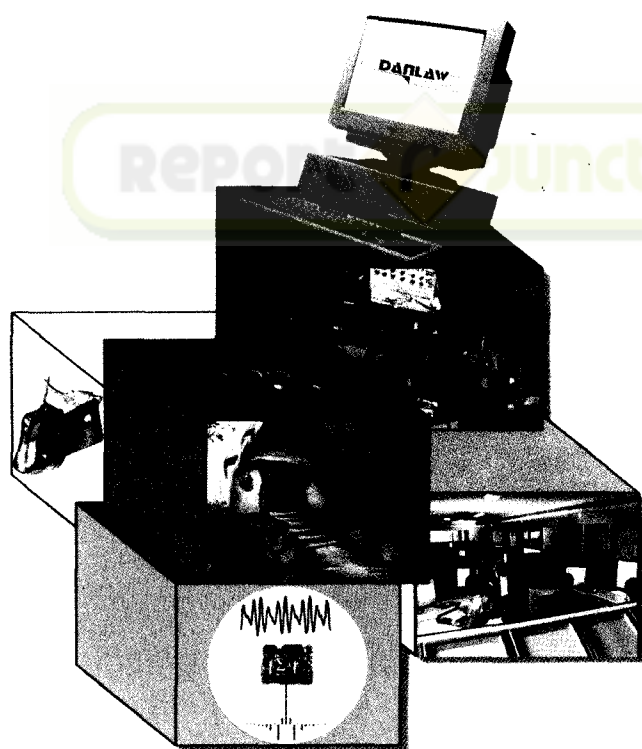
CHAIRMAN'S MESSAGE

Dear Members,

For us, Fiscal 2002-03 was all about seeking higher standards of quality and better execution in everything we do. I am extremely proud to inform you that your company has achieved another feather in its cap by being assessed **CMM Level 3**. This excellence has been driven by the commitment of our Danlaw family members. On your behalf and on behalf of the board of directors, I salute all of our employees on this sterling achievement. Danlaw continues to foster a company culture that puts customers at the center of everything we do and deliver solutions with an unprecedented focus on quality.

While we are encouraged by the progress we have made during the year, we recognize the challenges we face in this economic climate, especially in the IT sector. In the short term, the customers' demand for these services is tempered by their own economic concerns and budget constraints. Today the customers are becoming increasingly focused on cost and they are demanding higher value-for-money. Your company continues to focus on effectively managing cost efficiencies and on increasing productivity.

Danlaw continues to be financially healthy. In fiscal 2003, we carefully controlled our expenses while innovation in technology continued.

The R&D division has developed several algorithms and now is in a strong position to be a player in both the Speech Compression area and Communication Systems. Danlaw has achieved recognition by Texas Instruments as a Third Party solutions developer in the Digital Signal Processing area. The division is also playing a significant role in developing innovative solutions in the area of satellite communications for our defense industry.

The R& D has become an institution that pushes innovation in technology and best solutions to drive our growth.

Our Engineering Division continues to be a significant player in the Automotive Electronics area while it makes progress in the consumer electronics industry. Danlaw has been chosen, by the **largest automobile manufacturer** in the world, to design and develop a tool to improve the robustness of the communications networks in the sophisticated automobiles of tomorrow. We have delivered Phase I of this product already and have achieved accolades from our customer. In a testament to the quality of our product, we are already receiving orders from several Tier-1 suppliers. We have proven ourselves as a proactive strategic partner in helping our customers use creative and cost-effective solutions.

Engineering division has developed applications, based on the innovative technologies from the R&D institution, for the defense industry and started to receive revenues. While continuing to develop products, we have made progress in adding customers in the services sector.

The ISS division has made significant progress in establishing itself as a solution provider in security and biometrics industry. We have successfully implemented EAS solution at a library in a central university and received commendations for our quality solution. In the wake of continued security concerns all over the world, the future looks bright for ISS division as the technology and its use matures in the market place.

The management team continues to revise strategies for the success of our AMM division.

Our subsidiary, Danlaw Technologies Inc. has made significant strides as an ERP solution provider. We have successfully implemented Oracle 11i solution for a US division of a Japanese company and went live on time. Efforts are under way to translate this success into significant business opportunities.

DANLAW

The IT division has successfully developed the web based high-end solution for the municipalities in Andhra Pradesh. The production installation will be completed in the near future as soon as the government procures and installs the network and the hardware. Our innovative product development for US market is continuing to take shape.

In 2003-04, the analysts' estimates vary from a slow recovery to a growth rate of around 5%. Gartner estimates that IT services during 2003 will grow by more than 6% worldwide. For a lot of organizations the IT continues to be central to competitiveness. The IT buyers are looking for significant cost savings and there is wide acceptance of offshore IT services.

As the industries like Energy, Health Care and Retail also move into the outsourcing model, the number of companies that are considering offshore outsourcing increases significantly.

Our role is to be realistic, while being prepared for long-term opportunities.

The distinguishing dynamic of your company is that it preserves the cherished core ideology while simultaneously stimulating the progress and change in everything that is not part of the core ideology. Our operating practices and business strategies change constantly in response to a changing world. Our team members are empowered to tap their idealistic motivations and the importance they attach to their company's work.

You have always been able to feel good about Danlaw's integrity. Your organization has been built on a foundation of trust and fairness to everyone. We believe in highest degree of transparency and openness. Our reputation starts with experienced Board of Directors and carries through to each and every employee, all of whom follow Danlaw's Standards of Business Conduct.

With economic recovery on its' way, 2003-04 will be a year of great opportunity. Given the varying dynamics of our industry, Danlaw will continue to be as flexible as the future demands, in order to build value for our **customers**, our **employees** and our **shareholders**.

Thank you for your continued support,

Raju S Dandu
Chairman and Managing Director

DANLAW

BOARD OF DIRECTORS

Raju S Dandu	Chairman & Managing Director
Dr. B Bowonder	Director
Lloyd R Lawrence	Director
P B Kulkarni	Director
M A Ashok Kumar	Alternate Director to Mr. Lloyd R Lawrence
D S N Raju	Executive Director

CORE MANAGEMENT TEAM

B V Ramana	Executive Vice President (ESD)
Prakash B Kulkarni	Executive Vice President (ITD)
Dr. A K Raina	Vice President (R&D)
Phani Tetali	Vice President & CTO (AMM)
V N Rao	Vice President (Finance)
Dr. Y V Subrahmanyam	Vice President (HRD)
B S Bhaskar	Company Secretary

AUDITORS

M/s. A M Reddy & Co.
Chartered Accountants
10-5-6/A, "My Home Plaza"
Off.: 103, II Floor
Masab Tank
HYDERABAD – 500 028

BANKERS

HDFC Bank
HSBC
Union Bank of India

DEPOSITORY AND SHARE TRANSFER AGENTS

M/s. Sathguru Management Consultants P. Ltd.
Plot No. 15, Hindi Nagar, Punjagutta
HYDERABAD – 500 082

ENGINEERING AND R&D DIVISIONS	AMM STUDIO	ISS & IT DIVISIONS
REGISTERED OFFICE		
43, Sagar Society Road No. 2, Banjara Hills, HYDERABAD – 500034	5, Sagar Society, Road No. 2, Banjara Hills, HYDERABAD - 500034	1271, Road No 63, Near Jubilee Hills Checkpost HYDERABAD - 500033

US SUBSIDIARY OFFICE

DANLAW TECHNOLOGIES INC.
23700, Research Drive
Farmington Hills,
MI 48335–2624, USA.

DANLAW

CONTENTS

NOTICE

Notice is hereby given that the Tenth Annual General Meeting of the Company will be held on Monday, the September 29, 2003 at 11.00 a.m. at the Registered Office of the Company, at 43, Sagar Society, Road No. 2, Banjara Hills, Hyderabad – 500 034, to transact the following business:

ORDINARY BUSINESS

1. To receive, consider, and adopt the audited Balance Sheet as at March 31, 2003 and the Profit and Loss Account for the year ended on that date, alongwith the Auditors' Report and Directors' Report thereon.

2. To appoint a director in place of Mr. P B Kulkarni, who retires by rotation and being eligible offers himself for reappointment.

3. To appoint Statutory Auditors of the Company to hold office from the conclusion of the 10th Annual General Meeting until the conclusion of the next Annual General Meeting and to fix their remuneration.

By Order of the Board

Hyderabad
July 25, 2003

B S BHASKAR
Company Secretary

NOTES:

1. A member entitled to attend and vote at the meeting is entitled to appoint a proxy and such proxy need not be a member of the company. Proxies in order to be effective must be received by the company not less than 48 hours before the commencement of the meeting.

2. Members/proxies should bring duly filled attendance slips sent herewith for attending the meeting.

3. The Register of Members and Share Transfer Books of the company will remain closed from September 25, 2003 to September 29, 2003 (both days inclusive)

4. Members seeking any further information on the accounts of the company should write to the company atleast ten days before the date of the meeting, to enable compilation of data.

DANLAW

ENGINEERING DIVISION

The Engineering Division primarily provides software engineering services to Automotive OEM and First Tier Supplier markets. The services involve Software Development, Software Verification and Validation and Software Test Plan Development. In addition, the Division is involved in Development of specific Hardware and Software testing tools for the automotive industry.

The Division has developed and executed a number of projects for various customers during the year. The division has had two new major customers during the year namely General Motors (GM).and Johnson Controls International (JCI). An automated testing tool based on Danlaw's Flight recorder platform was supplied to the GM OnStar Group. Similarly, software development projects were executed for JCI and for existing first tier customers such as Visteon and Lear.

The Division has also commercialized the Vocoders developed by our R&D Division. These have been accepted and are commissioned into actual operation. This has generated the first local revenues from the division. Due to the changing North American business environment and restructuring, the division has lost significant expected revenues from Visteon Corporation.

The Division continues to participate in third part, independent Software Validation and Verification activities for first tier suppliers to the Automotive electronics market. Software Validation Test Plan development and execution is performed in conjunction with Danlaw Inc. for typical automotive projects.

The Division has obtained an order from GM for a set of testing tools for their automated bench top testing. The tools are valuable for system level testing and in Electronic Control Unit (ECU) development. The development of this set of tools will occur in three phases throughout the year. The successful delivery of this product will enhance Danlaw's image and establish the company as a valuable tool provider within GM and the supplier community. The order was won in spite of competition by established players in the test tool market. The tools provide Danlaw with a suite of standard products which can serve as an entry point for all first tier suppliers developing ECU's based on the GMLAN communications protocol.

The outlook for the coming year is positive. We expect an increase in local revenues from various developments under way. The revenues from the US market are expected to improve or at least continue at the present level.

The Division is working towards increasing the local revenues. The major emphasis would be towards Defense, Space, Transportation, and other large public sector Enterprises. The Division alongwith the R&D Division, will be working towards participating in development activities in Defense Laboratories.

The division continues its success as an ODC (Offshore Development Center) for the US customer. Significant efforts are underway to replicate this model for other existing customers as well as prospective new customers.

Based on the success with existing customers as well as addition of new customers, we are aggressively pursuing the expansion plans. Recruitment efforts are in progress and we expect to add significant talent to this division.

The engineering division is establishing itself as a significant player in the Real-time Embedded Solutions area by being a service provider as well as innovative product solution provider for our customers.

DANLAW

RESEARCH AND DEVELOPMENT DIVISION

The division primarily works in voice processing and communications areas, developing solutions for speech compression, voice modems, blind demodulators, echo and noise suppression and related DSP technologies.

The Activities during FY 2002-2003, with respect to Projects:

In this year there were six main projects underway:

Vocoder: This was a project for satellite voice communications for ASTRA's laptop system for SAC. The system control module (PAMA) was also developed for this application.

Modem: This is a 456 KHz complete DSP based BPSK modem expected to replace the complete baseband processing for ASTRA's laptop satcom solution for SAC. This is a major technology demonstrator for DTIL and puts DTIL onto the track of high speed and specialized modems for military and collateral applications.

Speech Codecs: This project is geared towards developing the complete suite of DTIL's CELP and waveform speech codecs for various applications. During this year 8Kbps high performance G.729AB codec has been developed. This augments the codec profile of DTIL by adding this codec to the already deployed G.723.1 and testable C-version of G.726.

E-Meter: The e-meter software was completed and handed over to engineering for tests. Some work on OFDM for PLCC link was also done at proof of concept level.

Clarity Porting: OMS for H/F with AEC/LEC was to be ported onto various platforms including TI55x, AD B/F, Mot563x, Mot568x, ST, SH4, etc. Porting on Blackfin and Motorola processors was completed. Other portings were abandoned due to change in Clarity's basic module designs.

Fax and related algorithms: Since the defence communications require fax relay along with voice and data, development for V.21 signaling software and V.27 ter DSP D8PSK modem. In addition, DTMF and related signaling protocols were developed.

Other Projects

XDAIS: TI system compatibility certification was received for AEC, LEC, G.729ABEnc, G.729ABDec. This massive effort to redo the whole coding to make it compatible with eXpressDSP standards was also carried out this year. DTIL became TI3P vendor for four products. This adds to marketing punch in addition to the FFT that we have.

Other Algorithms: Various proprietary DSP algorithms for use in modules were developed, e.g. DTD, VAD, CNG, etc. Partial development of an isolated word recognition system based on DTW algorithm was carried out. At a more advanced level, research was initiated into speaker classification strategies for use in Speaker Identification.

Skill set, technologies or expertise obtained during the year

- Design technology of communication systems
- H/W and S/W testing of algorithms and systems
- Motorola563xx/568xx & AD Blackfin processors (attrition)
- Optimization on TI54xx and MSP430
- DTW based word recognition
- OFDM basic Technology
- Speaker population modeling theories

Industrial scenario and trends: Both voice signal processing and communication industries are very vibrant and the market volatility is small as compared to IT/Telecom application industry. However, the commercial market is very competitive and needs forceful marketing of IP. The most preferred area is Asia-Pacific rim, since that is where the OEM activity is maximum at present and increasing. The defence market in India is good but slow and un-remunerative in the beginning unless an OEM tie-up (India or abroad) exists. This market is, however, very huge and lucrative in the long run. Industry is moving into more and more sophisticated applications in the voice area like blind demodulation, security and identification, voice activated devices, toys and robots.

New opportunities visualized: Field of advanced DSP based non-commercial communication systems for defense in India and elsewhere. At present we can only explore and expand into defense Industry. Most of these come as development contract opportunities rather than commercial product or IP lease/buy out propositions. Commercial applications of voice technologies like Compression, Cancellation, Speaker identification, voice activation, etc., need to be explored abroad.

Future Prospects: The R&D now appears conspicuous in the systems-in-place structure. However, all enterprises that wish to become global players at high value returns need to have R&D in focus, since any future prospects depend on this focus and its manifestation in: a) Vision, b) Management style and autonomies, c) High quality HR, its size and respect accorded to it, d) growth pattern, incentive and attrition styles, and e) Marketing support.

The best value of R&D opportunity is realizable in IP/Co-IP partnership format. Proper business case must be made out to a large OEM for ensuring best prospects.

DANLAW

IT DIVISION

IT division at DTIL is actively pursuing product development activity and also providing software solutions to the government initiated projects.

In this Information Age, government information resources are of increasing value to the citizen, business, government officers and users around the world. Effective information management is essential for the provision of services to the citizen and business, and for the efficient running of government.

MAS & MMIS Project

Municipal Administration System (MAS) and Municipal Management and Information System (MMIS) project for the Directorate of Municipal Administration (DMA) is about computerizing the day-to-day operations of 110 Urban Local Bodies (ULBs), 4 Municipal Corporations, 6 Regional Directorates and DMA.

The solution is based on WEB with a Central Server at Hyderabad and 21 District Servers connected by APSWAN backbone network. ULBs ranging from two per district to as many as 11 per district are connected by means of leased lines to the District Data Center (DDC). The DDCs are in turn connected to the Central Server and upload data at regular intervals.

Consultant cum Solution Provider (CSP) include M/s Danlaw Technologies India Limited (DTIL) & Nagarjuna Infotech (NGI) to supply the Application software and maintain the same for a period of 3 years from go-live and provide training to the DMA staff and help desk facilities during the maintenance phase of the project.

The solution offered is based on the THREE TIER architecture, with IBM Web Application Server as the middle tier and DB2 as the backend db server. The DMA has identified the following applications that need to be available online with e-Seva connectivity:

- Property Tax
- Birth and Death Registration
- Dangerous and Offensive Trade Licenses
- Solid Waste Management
- Financial Accounting
- Projects and Works
- Asset and Inventory Management
- Water Tap Connection
- Court Cases
- Advertisement Tax
- File Movement
- Vacant Land Tax
- Grievance redressal Schemes

SWS

A Project was executed for SUMITOMO Wiring Systems, USA on Oracle Applications 11i

GE

Software outsourcing offshore is transforming IT & product development organizations similar to how contract manufacturing transformed the high technology industry. Keeping the skill set and capabilities of Danlaw in mind, we initiated ODC (Offsite development Center) for GE, which also is a stepping-stone for GDC.

IT Process Digital Cockpit - GE Capital International Services (GECIS)

- The solution involved the detailed study and preparation of the SRS as the first deliverable and get the sign off from the concerned process heads.
- The Design and Development of the Warehouse Schema using 'SQL SERVER 2000 DTS tool'.
- Generate Reports using the 'Business Objects Data Warehouse Reporting Tool'.
- Provide Necessary Drills, vertically and horizontally, so as to facilitate the Root-Cause Analysis.