Executive Director's speech on 13th Foundation Day – 5th April 2000

Dr. Kohli, the Chief Architect of the organization which has brought the Indian software industry to the world scene, an individual with a life time contribution to the Indian Information Technology industry and with a number of accomplishments to his credit, aptly described as the father of Indian software industry.

Dr. Mashelkar, whom all of us in this city of Pune recognise, respect and love, and who has brought Indian science to the centre stage. The person who fought and won the Indian case on the patent issue in the international market place.

Shri Jayakrishnan who in a short period of only a few months of his association with the information technology sector earned the admiration of this industry with his inspiring leadership .

Distinguished guests and members of C-DAC family…

A very good morning and warm welcome to our 13th Annual Foundation Day celebration. On behalf of C-DAC, I once again convey our very best wishes for the New Year on Gudi Padwa.

This occasion is not only auspicious as it marks the beginning of a new. year, but is also significant as we share with you on this day C-DAC's humble contribution to the Indian Science & Technology that makes us proud of what we are together capable of achieving, and set an example of the developing world's contribution to the technological developments that are taking place globally at breath-taking pace.

We are fortunate enough to enjoy your appreciation and patronage in both sharing joy of our accomplishments and being with us in times of uncertainty when we needed your support and understanding most.

We are once again fortunate to be taking part in a revolution that is sweeping the globe. A revolution that our country is also in the midst of. Yes, I am referring to the information technology revolution. Our government has given us both a target and a direction to effectively contribute and continue to attract the world's attention to our capabilities and achievements in this field.

To become a world leader or a super power, in my view, would not just be a game of numbers, but a standing which comes from a position of strength emanating from technological leadership. It is here that the role of our institutions is of paramount importance. Technology is a resource

that every country strives to possess. Technology is not traded but bargained. Technology is a supreme element of national security today, and technology brings in self-reliance and self-confidence.

At C-DAC therefore we realised our role, a role that is pivotal to this very theme.

Last year, on this very day, I shared with you a happy moment when, Government bestowing their confidence in us, approved and awarded the 3 1/2 year Third Mission on development of next generation high performance computing technology and applications. I take this occasion to express our gratitude to the Ministry of Information Technology in exuding confidence in us. In a period of just one year I bring before you some accomplishments of our teams in this area:

1. We developed last year PARAM 10000P, an 8-node 16-processor open frame scalable architecture technology. The approach was "to build the technology to build supercomputer", and offer a package or a know-how to the institutions to have their own system suiting to their needs. We continued from there, and have now come up with a concept that not only allows us to draw the advantage of high speed of processors that continue to done the market as commodity elements, but uses custom designed system area network providing 1 Gigabit speeds with extremely low communication overheads among processing elements. This not only provides for common user applications on this configuration on one hand, but the compute intensive applications are being addressed and benchmarked using tuned hardware programmable libraries to provide higher throughput. This is PARAM Anant, the next step in C-DAC's parallel processing technology approach. It provides upgradability at the system, component and technology levels to a virtual endless extent. I congratulate our hardware, system software and benchmark teams for their hard work in this. The Business Division also has started at seed marketing of this technology. We plan to bring new accomplishments using this technology in the next one to two years.
2. Building a technology could be only half the work, if we do not apply this to real life applications. This year, our Applications team has continued to work on key applications of weather forecasting, computational fluid dynamics, molecular modeling, seismic data processing, visualization and data warehousing for business applications.
3. The National PARAM Supercomputing Facility (NPSF) housing the PARAM 10000, which we offered last year is now available to researchers and institutions countrywide for solving their compute intensive problems. We have evolved a Technical Affiliation Scheme which allows the users to register with the NPSF, apart from our own dedicated team of twenty scientists who have been using this facility regularly. The facility is now

available for remote access as well. In the last one year the facility has logged 3.2 lakh hours of CUP time under the scheme. Thanks to our System Administration team.

4. Under the Indo-Russian programme of cooperation in the high performance computing area we have been having exchange of scientists to work on areas of mutual interest. Currently we have two scientists from the Moscow Institute of Computer Aided Design (ICAD) who are working with us in these areas. I am happy to inform that ICAD is one of our oldest users of PARAM system with three systems already supplied and installed in the past, and one more recently contracted to be supplied this year to them.
5. I am also happy to inform you that to proliferate the use of parallel processing technology, the Ministry of Information Technology had visualized a nationwide programme for collaboration between C-DAC and the twelve premier academic institutions in India to build synergy among the research interests of the two organizations, create highly skilled manpower in this high tech area and help develop new applications of interest to both science and industry. I am glad to inform that this Rs.7.2 crore programme has enabled us to configure PARAM 10000 system, provide an application platform and a volume of technical literature and training material for the selected 12 institutions through a 3 months hard work of System software, Hardware, Applications and Benchmark teams. First of this system has already been commissioned at BITS Pilani while others are in process. Roorkee University, BIT Ranchi, REC Allahabad, IISc. Bangalore, IIT at Delhi and Mumbal are next in the pipeline.

Ladies and Gentlemen, C-DAC has a tradition of developing innovative products which meet highly specialized requirements in the IT field. We not merely develop them but package and put them in the market and support the user needs in the competitive environment. This year once again witnessed many events when we released an equally large number of our products, eight of them, developed through the dedicated efforts of our teams. These are:

1. LEAP Office 2000 - a complete office environment in Indian languages
2. ISM Ver 3.0 - developers, publishers and web content creators
3. PRATIBIMB - Multimedia clipart
4. Devanagri OCR
5. Axess Kiosk - eGovernance applications
6. Quick MM Album for multimedia creations
7. Multimedia Portal
8. TALASH Search Engine on the Web
9. LILA Prabodh - self Hindi learning package

My congratulations to our GIST, AAI, Multimedia and Data Warehousing teams for this wonderful effort. And we are not sitting quiet, as two of our other products are getting ready for launch in this quarter.

Sir, as we all know, there is very little technology that grows in isolation more so today, as most contemporary developments require inputs from a variety of disciplines. Research and development is essentially a team effort. We are a technology institution and wish to continue to be recognized as one. C-DAC continues to develop the technologies that are key to our needs today, that are controlled and those that will give us self-reliance in major areas of national interest. I just present before you a glimpse of some of these technologies:

1. Core technologies of Network and Internet Security; these are under export control and much needed for eCommerce, eGovernance and Corporate data communications.
2. Reusable software Components; To help speed up the process of software development and making it cost-effective using the object technologies of JAVA, CORBA, etc.
3. Digital Library; To enable high-end scalable, fault tolerant server based three-tier architecture for effective documentation and dissemination of vast information on our heritage and culture.
4. Show case applications of eGovernance for administration. C-DAC is setting up an eGovernance Demonstration Centre at the Ministry of Information Technology headquarters in Delhi.
5. Data warehousing and datamining for Government and Corporate data systems building decision support and executive information systems - in Finance, Telecom and Government sectors.
6. Telemedicine; Enabling treatment for a remote end patient through the specialist's analysis and diagnosis at the other end.

Sir, a word about our business efforts would be appropriate while talking about technology development.

In a highly competitive environment, it is important that the technologies developed are commercialized at the first opportunity. Our Governing Council has been encouraging us to create business opportunities for the technologies developed by us. We have three prime business areas. These are:

1. High end Computing and Networking products and solutions
2. Multilingual Multimedia Technology, and
3. Training

Last year, I reported to you our business growth of 50% going from Rs.25.5 crores to Rs.38.24 crores in 1998-99. I am very happy to inform that this year our growth has been over 80% touching a figure of Rs.70 crores in the year 1999-2000. I would like to congratulate our Business teams at all our Centres to have achieved this remarkable growth. That gives us a confidence of maintaining this lead.

I would just like to cite a few important contracts that we bagged this year:

1. Networking of Engg.Colleges of the Directorate of Technical
2. Education of Government of Maharashtra
3. Laboratory Automation of CPRI Bangalore
4. Hospital Information System for GTB Hospital
5. Computerization of PWD operations in Maharashtra State
6. Stamp Registration System for Maharashtra Government
7. Multilingual products for the Corporates

Our training operations have witnessed tremendous growth this year. With nine different courses offered through 60 different centres across the country, C-DAC has established its brand image of a successful IT training organization producing 50,000 trained personnel the year that just passed by.

I have seen members in our Advanced Computing Training School spend 15 hours a day relentlessly to exceed their target of the year. My congratulations to them.

Ladies and Gentlemen, let me come to another important subject. This is the subject on which our parent Ministry of Information Technology has taken the lead. There has been a demand to make some of our multilingual products available in open domain, so that larger cross section of our society could benefit through their use on computers in their own language. Our GIST team responded to this call, and offered their popular iLEAP internet ready word processor and popular Indian language fonts with keyboard driver on the TDIL website of the-Ministry of Information Technology.

Like our institution is young, we are also a very young team. A strong 462 human minds with an average age of 27 is what we have as our strongest resource. We too have a dream and a vision. The vision that we collectively crafted:

> "To emerge as the premier R&D institution for the design, development and deployment of world-class IT solutions for economic and human advancement."

There is also an action agenda which we together work on to realise this vision.

Ladies and Gentlemen, that brings me to the end of the commentary on what C-DAC looked like in the fiscal year that ended 5 days ago. We have an exciting year ahead, and we have a number of challenges too. Our team is charged and fully geared to convert these challenges into opportunity. I am indeed looking forward to similar occasion next year when at this platform we present before you our accomplishments of yet another year.

I would like to take this opportunity to thank you for your all time encouragement and understanding, to enable us live up to your expectation. Like with any technology institution, we have passed through both joyous and uncertain occasions in our path of development, but your best wishes have helped us to gain strength, and we came out of our testing moments, victorious as always.

I have been privileged to have with us very intelligent, hard-working and understanding colleagues, and it is through their cooperation and ceaseless efforts that we have been able to put together a picture before you. I take this opportunity to thank every one of them, and look forward to an equally exciting and rewarding year.

Thank you once again ladies and gentlemen.