

a s e i

**AMERICAN SOCIETY OF
ENGINEERS OF INDIAN ORIGIN**



12th

ANNUAL NATIONAL CONVENTION

Theme

**US – INDIA BUSINESS
COLLABORATION**

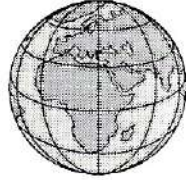
SEPTEMBER 3, 1995

BETHESDA MARRIOTT
Bethesda, Maryland

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ECG, Inc. Provides Technical, Engineering and Management Services and Products to both Domestic and International Clients

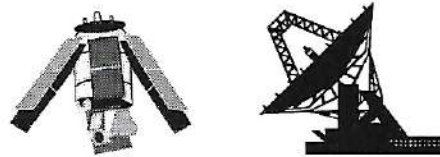
Environmental



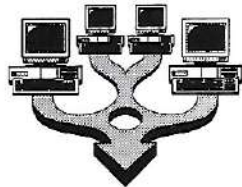
- ★ Air Quality
- ★ Hazardous Waste Management
- ★ Regulatory Compliance Support
- ★ Planning and Design Services
- ★ Site Investigation and Assessments
- ★ Remediation Technology Development / Analysis
- ★ Remediation Design / Engineering

- ★ Systems Analysis and Integration
- ★ Advanced Materials R&D
- ★ Small Satellite Technology
- ★ Modeling and Simulation
- ★ Imaging and Signal Processing
- ★ Error Modeling and Risk Assessment
- ★ Guidance and Navigation
- ★ Subsurface Imaging

Space & Defense Technologies



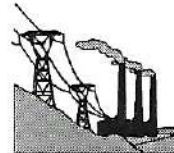
Information Sciences & Systems



- ★ LAN / WAN Design and Integration
- ★ System Procurement and Installation
- ★ Information Management Systems
- ★ Operations and Maintenance Services
- ★ Software Design / Validation
- ★ GIS / Emergency Response Systems
- ★ Virtual Reality Simulation Applications

- ★ Demand Analysis / Management
- ★ Alternate Energy Technologies
- ★ Energy Audits and Conservation
- ★ Advanced Power Systems
- ★ Advanced Desalination Technologies and Systems
- ★ Utility Generation Planning

Energy



Technology Transfer



- ★ Pollution Prevention
- ★ Advanced Sensors
- ★ Mapping Technologies
- ★ Emergency Response
- ★ Risk Management
- ★ Manufacturing

- ★ Hazardous Waste Containers
- ★ Environmental Coatings / Paints
- ★ Laboratory Information Management Systems
- ★ Expert Decision Support Systems
- ★ Training

Products



Dr. Yudi P. Gupta
8150 Leesburg Pike, Vienna, Virginia 22182
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A Business Dedicated to Excellence of Solutions to Problems of Now and the Future

ASEI 12th ANNUAL NATIONAL CONVENTION

Theme: U.S. – INDIA BUSINESS COLLABORATION

Sunday, September 3, 1995 – Bethesda Marriott, Maryland

CONVENTION AGENDA

10:00 am – 12:00 pm	ASEI Board of Directors Meeting
09:00 am – 12:00 pm	Sightseeing Tour of Washington
12:00 pm – 01:00 pm	Lunch with Speakers and Board Members
01:00 pm – 01:30 pm	Registration
01:30 pm – 04:30 pm	Theme Presentations
	Welcome Mr. Subroto Mitro , President, ASEI-NCC
	Moderator Dr. Suresh Arurkar , Asia-Net Telecommunication
	Inauguration Mr. Bruce Drury , President Bethesda-Chevy Chase Chamber of Commerce
	Status Mr. Nazir A. Bhagat , Department of Commerce
	Opportunity Ms. Catherine Eiff , Sanders International
	Case studies Mr. Gautam Bose , Merrill Lynch Mr. Sudhaker Shenoy , Information Management Consultant
04:30 pm – 05:00 pm	Break
05:00 pm – 06:30 pm	Career Development and Self-Improvement
	Moderator Mr. Gajanan Deshmukh , ASEI-NCC
	Career Opportunities Col. Ray Trombino Prudential Insurance
	Ignite Your Creative Genius Dr. Prasad S. Kodukula Engineering Consultant
06:30 pm – 07:30 pm	Social Hour
07:30 pm – 08:30 pm	Evening Banquet
	Welcome Mr. Shiv K. Jindal , Convention Chairman
	Master of Ceremonies Mr. Jay Shah , Chairman & CEO, SDA, Inc.
	Guest of Honor Mr. Siddhartha Shankar Ray , Ambassador of India Mr. Douglas Duncan , County Exe., Montgomery Co. Col. Connie A. Brown , Society Of Am Mili. Engineers
	Keynote Speech Mr. Michael J. Copps , Department of Commerce
08:30 pm – 09:00 pm	Awards Mr. Linga Goud Memula , ASEI-CSRA
09:00 pm – 10:00 pm	Dinner
10:00 pm – 11:00 pm	Entertainment Tarang Music Group

ABOUT THE SPEAKERS

MICHAEL JOSEPH COPPS

Dr. Michael Joseph Copps is the Deputy Assistant Secretary for Basic Industries in Trade Development at the U.S. Department of Commerce. Dr. Copps directs a staff of 100 industry analysts, economists, and international trade specialists dedicated to improving market access and competitiveness of American industry sectors including capital goods, automotive, primary commodities, chemicals, energy, environmental technologies, machine tools, food processing and packaging machinery, and international engineering and construction. Prior to joining Department of Commerce, Dr. Copps served as the Senior Vice President with the American Meat Institute, and Director of Government Affairs for Collins & Aikman Corporation. Formerly, he served as the Administrative Assistant to Senator E. F. Hollings. Dr. Copps holds a bachelor's degree from Wofford College and a Doctorate in U.S. History from the University of North Carolina at Chapel Hill.

CATHERINE EIFF

Ms. Catherine Eiff is an Information Manager at Sanders International, Inc. in Washington, DC. She is implementing and managing Sander's environmental information system to facilitate business linkage between U.S. and foreign firms to solve environmental problems. The system integrates public and private information on technologies, vendors, foreign markets, and trade and environmental policies, and keeps track of industry experts, associations, government programs and sources of financing. She is responsible for transferring the system to India under the Trade in Environmental Services and Technologies (TEST) program. Prior to joining Sanders International, Ms. Eiff was with the U.S. Chamber of Commerce, International Division. She has written and produced, "Europe 1992: A Practical Guide for U.S. Business, Update 4". She participated in NAFTA grassroots lobbying. She holds a bachelor's degree in Government and Economics and has completed one year of the master's degree program in History and Politics.

COLONEL CONNIE A. BROWN

Colonel Connie A. Brown is a graduate of the Army War College, Army Forces Staff College, and the Army Organizational Effectiveness Staff Officers Course. Colonel Brown is currently working to achieve and maintain excellent facilities for servicemen and women in the Office of the Assistant Secretary of Defense for Economic Security. Colonel Brown was first drafted into Army in July 1966 and has served over a number of years in various capacities. His one thousand man command built and reinforced the United Nations defensive facilities in and along the 151 mile Demilitarized Zone border with communist North Korea in 1985. He recently completed a two year tour, working with military and civilian engineering agencies throughout the Central U.S. in flood control, navigation, hydropower, recreation, and disaster relief. Colonel Brown is current President of the Society of American Military Engineers (SAME) Washington Post. Colonel Brown holds a Bachelor's degree in Aerospace Management and Occupational Safety and Health from Auburn University and a Master's degree in Human Resources Management from American Technological University.

PRASAD S. KODUKULA, Ph.D.

Dr. Prasad S. Kodukula is an environmental engineer with over 15 years of experience. He has worked in Academia, industry, and consulting. Dr. Kodukula's areas of expertise include total quality environmental management, pollution prevention, industrial waste management, hazardous waste and groundwater remediation, and water quality management. He has helped several of his clients solve environmental problems with innovative ideas. For two different manufacturing facilities of Union Carbide, he saved one million dollars each through innovative engineering

solutions. Dr. Kodukula has authored many technical papers and publications including two books. He is frequently invited to speak at seminars and conferences sponsored by trade and professional organizations. A greeting read by him is in on an audio tape aboard Voyager II spaceship in the hope that extraterrestrials would discover intelligence on Earth. The spaceship is expected to leave our solar system, and enter other parts of the galaxy shortly. Dr. Kodukula holds a M.S. degree from Cornell University and a Ph.D. from the Illinois Institute of Technology.

RAYMOND D. TROMBINO

Mr. Raymond D. Trombino is a retired Lieutenant Colonel from United States Air Force. After entering active duty, he worked in various capacities for the United States Air Force. His duties included development of environmental impact statements, facilities maintenance and utility operations and construction programs. He also served as a Past President of the Society of American Military Engineers (SAME). He was assigned as Chief of Services and Readiness Programs for the Air National Guard in 1990 and retired from the Air Force in 1992. Currently, he is a Special Agent for Prudential Preferred Financial Services, where he provides financial advice to individuals and small businesses. He is also acting as the Development Specialist for the Greater Washington DC Agency, providing all training in the agency. Mr. Trombino holds a B.S. degree in Civil Engineering from Manhattan College and a M.S. degree in Civil Engineering from Purdue University.

DOUGLAS M. DUNCAN

Mr. Douglas M. Duncan was elected Montgomery County's fifth County Executive on November 8, 1994 and was sworn in on December 5, 1994. Mr. Duncan's political career began with his election in 1982 to the Rockville City Council, where he went on to serve three terms. In 1987, he was elected Mayor of Rockville, a post he maintained for three two-year terms. During his tenure, the City won national and regional awards for governmental excellence, fiscal responsibility, community policing and environmental achievements. Before entering into politics, Mr. Duncan worked for AT&T for 13 years from 1981 to 1994. Prior to 1981, he worked for the County's Criminal Justice Coordinating Commission. Mr. Duncan is a graduate of St. John's College High School. He went to attend Columbia University and, in three years, earned a Bachelor's degree, with a double major in Psychology and Political Science.

JAYPRAKASH B. SHAH

Mr. Jayprakash (Jay) B. Shah, PE is the Chairman and CEO of Spalding, DeDecker & Associates, Inc., a 70 member civil engineering consulting firm in Detroit, Michigan, serving various 500 Fortune corporations and government agencies. Mr. Shah is extensively published in technical and management journals. Recently, he was recognized as the "Executive Hero" by Crain's Detroit Business for his community activities. He currently serves as the Chairman of the Oakland County Economic Development Corporation and as the Vice Chairman of Waterford Township Planning Commission. He was named the Outstanding Civil Engineer of the Year (1993) by the American Society of Civil Engineers Michigan Section. He is listed in Who's Who in Science and Engineering. Mr. Shah received M.S. in Civil Engineering from Wayne State University and M.B.A. from University of Detroit. Mr. Shah served as the first President of ASEI.

SIDDHARTHA SHANKAR RAY

Mr. Siddhartha Shankar Ray, the Indian Ambassador to the United States needs little introduction to the Indian Community at home and abroad. He is concurrently accredited as High Commissioner of India to the Commonwealth of the Bahamas. Mr. Ray has a distinguished career as a politician and as an attorney. Mr. Ray joined the Calcutta Bar in 1947. He was designated as the Senior Advocate of Supreme Court of India in 1968. He has appeared in

cases in many High Courts and the Supreme Court in India. He has held public office since 1957. He was a member of the West Bengal Legislative Assembly from 1957-71, 1972-77 and 1991 to 10-10-92 when he was appointed as Ambassador to the United States. He was a member of the Lok Sabha from 1971 to 1972. He was the Chief Minister of Bengal, 1972-77 and Governor of Punjab, 1986-89. An avid sportsman, Mr. Ray has maintained a continued interest in sports. He is married to Mrs. Maya Ray, herself a successful Barrister in Calcutta and a Member of the Parliament from 1972-78. During his tenure as Ambassador, he has greatly elevated the relationship between India and the United States.

MR. SUDHAKAR V. SHENOY

Mr. Sudhakar V. Shenoy is President and Founder of Information Management Consultants, Inc., an internationally recognized system consulting firm currently involved in large system implementation for the U.S. IRS, the Executive Office of the President, AIB Bank of Ireland, London Life Insurance Company and many others. Mr. Shenoy is a frequent speaker on the use of image management systems and business process re-engineering, and has been a university lecturer. Mr. Shenoy was a 1994 nominee for the Washington Technology Entrepreneur of the Year award and has been selected by the U.S. Small Business Administration as the Washington Area Minority and Small Business Person of the Year. He was also selected to accompany the Honorable Ron Brown, Secretary of the Department of Commerce, and 24 other CEO's of Fortune 500 companies, on a Presidential trade and development mission to India in January 1995. Mr. Shenoy holds a B. Tech in electrical engineering from the Indian Institute of Technology, an M.S. in electrical engineering and an M.B.A. in finance and operations research from the University of Connecticut School of Engineering and Business Administration.

MR. GAUTAM B. BOSE

Mr. Gautam B. Bose is a Financial Consultant at Merrill Lynch, focussing on Business Financial Planning for small and medium-sized businesses. He advises clients on optimum ways for managing their working capital, lines of credit, investment, employee benefit plans including deferred compensations and ownership succession planning, sale of companies and private placements. Prior to joining Merrill Lynch, Mr. Bose served in senior management positions at other firms. Mr. Bose completed his undergraduate studies in Mathematics at Presidency College, Calcutta University in India. He holds a M.B.A. degree in finance from the Wharton School of the University of Pennsylvania. He has also taught at the Wharton Executive MBA program.

DR. NAZIR A. BHAGAT

Dr. Nazir A. Bhagat is a Senior Policy Analyst in the International Trade Administration at the U.S. Department of Commerce. Currently, he is completing a report on the impact of NAFTA on the location of automotive plants in North America. He has developed a theoretical framework for understanding countertrade. He prepares policy and economic research analysis to guide Congress and U.S. companies in trade and countertrade negotiations. Dr. Bhagat has served the Department of Commerce in various capacities. From 1984-90, he was the Director for Non-durable Consumer Goods, and a Senior Economic and Technology analyst from 1979 to 1982. Dr. Bhagat's previous experience includes a Commerce Science Fellow for the Bureau of Private Enterprises, Technical Director for National Enquiry into Scholarly Communication, Assistant Professor in Graduate School of Management at Rutgers University and Process Engineer at American Cyanamid Company. He holds a Bachelor's and a Master's degrees in Chemical Engineering from Massachusetts Institute of Technology and Doctorate in Business Administration from Harvard Business School.

AMERICAN SOCIETY OF ENGINEERS OF INDIAN ORIGIN

VISION

ASEI TO BE:

- A nationwide network of engineers of Indian origin
- A forum to assist members in advancing their careers
- A facilitator of Technology Transfer between U.S.A. and India
- A national professional organization with the goal of "service to its members"

ASEI ACTIVITIES

CAREER ENHANCEMENTS

- Provide Career Guidance and Counseling
- Facilitate Networking
- Assist in Skill Development through continuing Education Courses and Technical Seminars
- Encourage PE registrations

STUDENT AFFAIRS

- Providing Guidance To Students
- Establish Merit Scholarships
- Assist in Practical Training And Job Placement

ORGANIZATIONAL MATTERS

- Establish a National Office
- Establish an Editorial Board and Publish Quality Newsletter
- Increase Membership
- Publish Membership Directory
- Increase Awareness of ASEI
- Facilitate Local Chapter Meetings

TECHNOLOGY TRANSFER

- Conduct Workshops on How to Transfer Technology to India
- Assist in Development of Rural India
- Provide Communication Channels for Retired Engineers
- Disseminate Opportunities in India for NRIs.

LIAISON WITH INDIA

- Establish working relationship with government and private organizations in India

CONVENTIONS & AFFILIATIONS

- Conduct Conventions throughout U.S.A.
- Cooperate with Other Professional Societies with Similar Goals.

LOCAL CHAPTER ACTIVITIES

- Conduct bimonthly meetings to promote discussion/participation on current events
- Communicate with ASEI National Office and other Local Chapters

American Society of Engineers of Indian Origin

Membership Benefits Guide

Networking

ASEI offers a unique opportunity to you to make contacts and network with fellow professionals who share your interests. Networking leads to mutually beneficial opportunities and relationships.

Convention

Each year ASEI holds a nationwide annual convention. Conventions and workshops are also held locally by each chapter. Recognition is provided to outstanding people through awards.

Local Chapter Meetings

Local chapters provide members the opportunity to meet each other, network, communicate/generate new ideas, attend career development seminars, build beneficial relationships and learn from each other. Chapter meetings are geared towards the needs of the members. Periodically, plant tours, mini-conventions and development workshops are conducted. Monthly programs emphasize business/consulting topics, career development topics or immigration/interviewing/resume topics, depending on the chapter membership interests.

Committees

Committees are charged with the responsibility to accomplish specific ASEI goals which are common to all chapters. Committees can also be looked upon as the R & D arm of the chapters. Committees develop programs or workshops that can be used at the chapter level or at annual conventions. Members are encouraged to actively serve on committees.

Career Enhancement

ASEI assists each member by career planning and enhancement assistance. Two key programs are customized workshops (at local chapter meetings and at the annual convention) and mentoring programs to personally discuss career issues.

Membership Directory

The ASEI directory can help you find fellow members. Information is also available on company affiliations and expertise. The directory is updated annually. ASEI sends a free directory to all members.

Employment Directory

Referral assistance is provided to members looking for work. Employers are encouraged to recruit ASEI members through job fairs and to meet their minority hiring goals.

Publications

ASEI plans to make available publications on relevant subjects such as career development, tech transfer and immigration to its members. These publications will be developed by ASEI committees.

Corporate Membership

Corporate membership is open to companies actively engaged in engineering, architecture and related arts and sciences. Benefits include up to \$150 credit toward your first display ad in the monthly newsletter, exclusive access to a no-fee professional employment placement service, a \$100 credit toward your first display ad in the annual convention brochure, discounted rates for exhibit space at annual and local conventions, and a Corporate Member listing in the membership directory.

Technology Transfer

ASEI assists Indian and U.S. companies by bringing together technology experts in the desired industry. Lists of experts, businesses and technical articles are maintained. Technology liaison is maintained with Indian organizations and with other associations in the U.S.

Trade Assistance

ASEI plans to acquire and catalog trade laws and policies. Facilitation assistance is provided to trade delegations from Indian or to U.S. companies.

Business and Consulting

This committee assists business and consulting firms in areas of mutual interest.

Student Affairs

ASEI assists students by providing scholarships, opportunities for contact with businesses (job search), in immigration matters (workshops) and other beneficial services such as resume writing, career planning and individual guidance and mentoring.

Newsletters

The newsletter is sent to all members and is intended to be informative and educational. It communicates key events and news.

Scholarships and Awards

Student scholarships are awarded based on merit and need. ASEI recognizes outstanding individuals for their professional and entrepreneurial contributions.

ASEI BOARD OF DIRECTORS AND COMMITTEE MEMBERS FOR 1995

BOARD OF DIRECTORS

Jagdish Agrawal	(810) 644-5171
Biliyar Bhat	(205) 882-1382
Yogendra Chadda	(313) 292-3232
Shiv K. Jindal	(703) 644-5815
Ramesh Mehta	(518) 786-1012
Linga Goud Memula	(706) 868-7812
Chandra Pathak	(301) 353-0619
Chandrika Prasad	(301) 464-5042
Nippani Rao	(313) 553-8323
Prakash Rayi	(201) 845-5680
Prashanthi Reddy	(404) 633-0505
Anuj Saha	(706) 863-2331
Arvind Singhal	(614) 592-3430
Meera Vijan	(810) 681-0193
Lakshmi Vora	(313) 642-7983

EXECUTIVE COMMITTEE

Chandrika Prasad	Chairman
Chandra Pathak	Treasurer
Lakshmi Vora	Secretary

COMMITTEES

Awards	Linga G. Memula (Chair)	706-868-7812
	Sudhir Kulkarni	518-783-7179
	Hari Bindal	301-262-0254
Election	Jagdish Agrawal	810-644-5171
	Meera Vijan (Chair)	810-681-0193
	Hari Bindal	301-262-0254
Newsletter	Narender Gupta (Chair)	703-960-2364
	Chandrika Prasad	301-464-5042
Membership	Ramu Rammamurthy (Chair)	810-476-6747
	Hiro Vachani	706-868-5251
	Bhushan Kulkarni	313-971-2956
Handbook	Ramesh Mehta	518-786-1012
	Yogi Anand (Chair)	313-375-9795
	Biliyar Bhat	205-882-1382
Liaison	Hari Bindal	301-262-0254
	Nirdosh Reddy (Chair)	313-335-4429
	H. Brian Sequeira	301-317-5086
Students Affairs	Vic Vishwanath	301-258-9270
	Bhushan Kulkarni (Chair)	313-971-2956
	Yogendra Chadda	313-292-3232
Employment Referral	Harpreet Singh	313-833-3764
	Jagdish Agrawal (Chair)	810-644-5171
	Chad Kymal	313-665-6488
Long Range	Shailesh Vora (Chair)	810-642-7983
	Ram Nemula	805-445-4209
	Nirdosh Reddy	313-335-4429

ASEI BOARD OF DIRECTORS FOR 1995



Chandrika Prasad



Lakshmi Vora



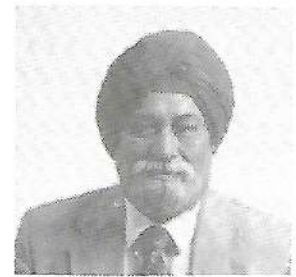
Chandra Pathak



Jagdish Agrawal



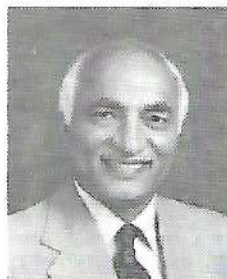
Biliyar Bhat



Yogendra Chadda



Shiv K. Jindal



Ramesh Mehta



Linga Goud Memula



Prakash Rayi



Prashanthi Reddy



Anuj Saha



Meera Vijan

Arvind Singhal



American Society of Engineers of Indian Origin

A NON-PROFIT, TAX-EXEMPT ORGANIZATION, EST. 1983

BOARD OF DIRECTORS:

CHAIRMAN

Prasad, Chandrika
(301) 464-5042

SECRETARY

Vora, Lakshmi
(313) 642-7983

TREASURER

Pathak, Chandra
(301) 353-0619

DIRECTORS:

Agrawal, Jagdish
(810) 644-5171

Bhat, Biliyar
(205) 882-1382

Chadda, Yogendra
(313) 292-3232

Jindal, Shiv
(703) 644-5815

Mehta, Ramesh
(518) 786-1012

Memula, Lingagoud
(706) 868-7812

Rao, Nippani
(313) 553-8323

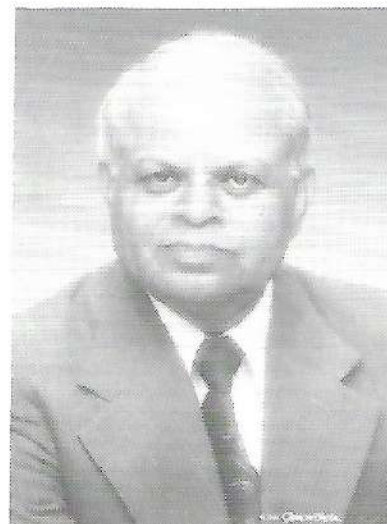
Rayi, Prakash
(201) 845-5680

Reddy, Prashanthi
(404) 633-0505

Saha, Anuj
(706) 863-2331

Singhal, Arvind
(614) 592-3430

Vijan, Meera
(810) 681-0193



A MESSAGE FROM THE CHAIRMAN

There isn't any dancing or singing in the street just yet. But it is exciting to know that ASEI is being noticed as an organization with great possibilities by the engineering professionals and entrepreneurs. I am pleased with the ASEI's progress over the past years. A new chapter was opened last month in Baltimore and a new one is planned to open next month in New York/New Jersey area. Chapters in Philadelphia and in Florida are good possibilities in near future. Along with these expansions, we are certain to experience some growing pains. As a measure of preparedness, work in several areas has been initiated. A draft of the ASEI handbook has been prepared and is going through internal review. Efforts to refine and/or revise the chapter guidelines, the constitution and by-laws are being considered. In order to take advantage of the computer age, we are working to utilize electronic mail and bulletin board to the maximum extent possible. The members profile has been prepared and are available on computer diskette. The members are urged to keep the data updated as changes occur.

Participation in ASEI is an investment in your future. A declining engineering job market, globalization of the business market and changing technology have created a greater need for networking. ASEI provides a forum for the same. It can be all what you want it to be. But it is only possible if you listen. As the old adage goes "Advice is the only thing of value that so many are ready to give away, but so few are willing to take". We need to learn from the old adage before it is too late. I expect the "take-home" message here is that get involved and participate in the ASEI activities.

Wishing you all the best at the 12th Annual National Convention and thank you for your participation.

Chandrika Prasad
September 3, 1995

A message from the

STATE BANK OF INDIA

TAKE ADVANTAGE OF BREAKTHROUGH INVESTMENT OPPORTUNITIES IN INDIA

State Bank of India gives your money the power and flexibility to succeed in this exciting and challenging growth environment. We help you maximize your resources by offering:

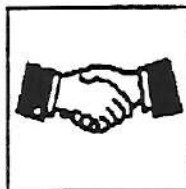
- Letters of credit
- Loans in Rupees in India
- Discounting of bills
- Negotiation of documents
- Loans in dollars in the U.S
- Demand loans
- Stand-by letters of credit
- Collection of documents
- Term loans
- Wire transfers, etc.

Worldwide Locations

Only the State Bank of India can provide financial services to every area in India. We have nearly 9,000 offices in India and 47 offices in 32 foreign countries. In short, we have branches where you need them, when you need them.

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(202) 223-5579

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Suite A
Artesia, CA 90701-2703
(213) 865-5009

19 South LaSalle Street
Suite 200
Chicago, IL 60603
(312) 621-0019

707 Wilshire Boulevard
19th Floor, Suite 1995
Los Angeles, CA 90017
(213) 623-7250

**Best Wishes on This Very
Special Occasion of The**

**American Society of
Engineers of Indian Origin**

Larsen Engineers, Inc.

Offices at

**Beltsville, MD
(301) 595-4600**

**Virginia Beach, VA
(804) 456-9714**

**Manu B. Patel, P.E.
President**



ATHAVALA, LYSTAD & ASSOCIATES
Consulting Civil, Structural & Environmental Engineers

SHRI G. ATHAVALA, P.E.
President

8180 Greensboro Dr. Suite 201
McLean, VA 22102

(703) 893-3104
Fax (703) 893-2758

Best Wishes

From

Shiv K. Jindal

and

Mrs. Suresh Jindal

(703)644-5815

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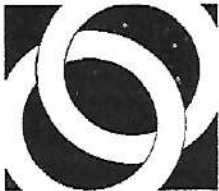
12th ANNUAL CONVENTION COMMITTEES

Convention	Shiv K. Jindal (chair)	703-644-5815
	Gajanan Deshmukh (cochair)	703-273-5879
	Linga Goud Memula (cochair)	706-868-7812
	Prashanthi Reddy (cochair)	404-633-0505
Awards	Linga Goud Memula (Chair)	706-868-7812
	Sudhir Kulkarni	518-783-7179
	Hari Bindal	301-262-0254
	Jagdish Agrawal	810-644-5171
Souvenir	Ravi Laljani (Chair)	301-982-9838
	Suresh Chandra	703-569-2276
	Narender Gupta	703-960-2364
Fundraising	Shiv K. Jindal (chair)	703-644-5815
	Om Bansal	410-788-7968
	Anand Gupta	301-596-9445
Publicity	Suresh Arurkar (chair)	703-903-9898
	Gajanan Deshmukh	703-273-5879
Registration	Ranjana Shah	301-577-5581
	Jayprakash Gandhi	301-916-1366
	Raj Shah	301-972-6554

A generous monetary contribution from Dr. Jai Gupta of EER Systems, Inc. is deeply appreciated.

ASEI appreciates the help of the following media for announcing/broadcasting news about ASEI's activities:

India Abroad	India Tribune	Spotlight	News India-Times
Express India	India Globe	Vividh Bharati	Spirit of India
India Monitor	India on-line	ATN TV	



American Society of Engineers of Indian Origin

A NON-PROFIT, TAX-EXEMPT ORGANIZATION, EST. 1983



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(404) 633-0505

Saha, Anuj
(706) 863-2331

Singhal, Arvind
(614) 592-3430

Vijan, Meera
(313) 689-9897

September 3, 1995

My Fellow Engineers:

Welcome to the 12th National Annual Convention of the American Society of Engineers of Indian Origin.

India has undertaken a comprehensive program of economic liberalization, opportunities for trade, investment, and business in the field of technology and engineering. Secretaries from U.S. Departments of Commerce and Energy have led Business Development Missions to India. In January 1995, our two great nations formed "US-India Commercial Alliance" to build a long-lasting partnership. I hope that the 12th Convention will serve as a foundation for the future growth of ***US-India Business Collaboration***.

I express my sincere thanks to those who have helped to make this program a successful event. I especially appreciate all the support that I have received from my fellow Board and Committee Members by putting this convention together in a very professional manner. I would also like to thank registrants, participants, guest speakers; our patrons, sponsors, and advertisers for the success of this program.

I congratulate all of you for the success of today's event and wish everyone in attendance the best of luck in all your endeavors.

Looking forward to seeing at future ASEI events.

Warm Regards,

Shiv Jindal
Chairman, ASEI's 12th National
Annual Convention

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and

Mrs. Urmila Prasad

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OFFICE OF THE VICE PRESIDENT
WASHINGTON

July 25, 1995

Chandrika Prasad
Chairman
American Society of Engineers of Indian Origin
11101 Fruitwood Drive
Bowie, MD 20720

Dear Mr. Prasad:

Thank you for the invitation to Vice President Gore to join you for the 12th Annual National Convention in September.

The Vice President sincerely appreciates your interest in his attendance, but, unfortunately, other commitments prevent him from accepting your invitation. The Vice President is disappointed to miss the opportunity to join you, and he has asked that I convey to you his best wishes for a successful event.

Thank you again for your letter. Please feel free to contact my office again with future requests or questions. Best wishes.

Sincerely,

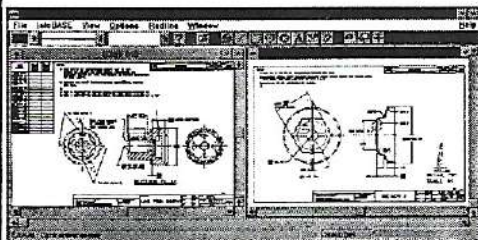
A handwritten signature in dark ink, appearing to read "Kimberly H. Tilley", with a stylized flourish at the end.

Kimberly H. Tilley
Director of Scheduling

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September 3, 1995

Dear Friends:

As Governor, it is my pleasure to welcome you to Maryland for the 12th Annual National Convention of the American Society of Engineers of Indian Origin. I am delighted that you have chosen Bethesda to host this prestigious conference, and hope that you enjoy your stay in our great State.

Organizations such as the American Society of Engineers of Indian Origin play an integral role in making our communities a better place in which to live. I applaud your devotion to improving the quality of life of those of Indian origin through your many educational and cultural activities and awards. The members of your organization deserve to be very proud of their worthwhile and important contributions to our community while pursuing excellence in all areas of engineering.

Let me offer my congratulations to those people being honored by the American Society of Engineers of Indian Origin during this conference. You should be very proud of your significant contributions within your industry and community. Please accept my best wishes for a successful and memorable convention.

Sincerely,

Parris N. Glendening
Governor



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August 18, 1995

MESSAGE

I am delighted to learn that the American Society of Engineers of Indian Origin will be holding their 12th Annual National Convention on September 3, 1995.

Indian American professionals in engineering and technical fields have made us particularly proud by their achievements in their adopted homeland. Their contribution to the technological revolution of the recent years has been second to none.

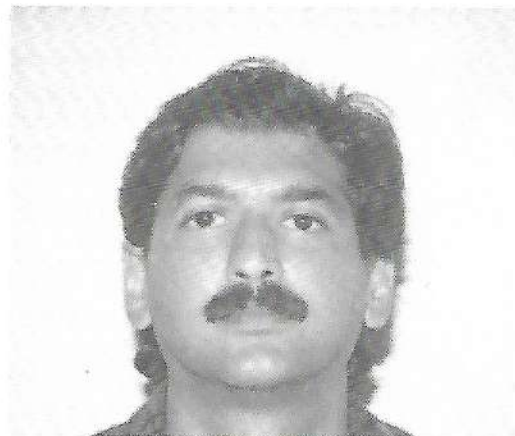
I extend my best wishes to all the participants at the National Convention.

(SIDDHARTHA SHANKAR RAY)
Ambassador of India

ASEI CHAPTER PRESIDENTS FOR 1995



Kuldeep Gupta
Albany



Arvind Benegal
Atlanta



Ashok Amin
Huntsville



Subroto Mitro
NCC



Hans Bajaria
SE Michigan



Sharma Pogula
CSRA

Pictures for Presidents from other chapters not available.

Host Chapter Presidents Message

I welcome you to the National Capital area for our 12th National ASEI Convention. We hope your stay here and attendance at this Convention will prove to be an inspirational experience for you to remember.

Over a million Indian-Americans today live in the USA. Nearly a third of us are professionals in engineering and technical fields. The American culture has traditionally developed a respect for the professional excellence. They respect those who create employment in their midst and for all tax paying business owners. The Indian-American professionals are noticed when they exceed over their traditional expectations. How we interact in their society culturally and professionally.

Is it too much to ask each of the professionals to join an organization such as our ASEI, to maintain an active participation in it, to create and promote an atmosphere of professional unity and support the networking so that we can together continue to improve the image for ourselves ?

We are the frontier men and women who have had the best of what India had to offer. We have been able to come to this land of opportunity where if organized together, with positive constructive contribution we can leave behind achievements beyond our greatest expectations. Individually too, we must continue to strive to perform feats we are capable of, perform our best to succeed in this society.

This is an age of teamwork, brainstorming, information dissemination within cyberspace, technology transfer across oceans, satellite communication within moments. Selfish egos and personal interests must become secondary to



greater objectives of unity and primary support for the goals of united missions that does credit to our existence and brings the recognition of the mainstream so both of them and our children can proudly look up at us and continue to support and admire those we leave behind.

I ask all of you to take this message of unity to each of your alumni and ask them to join us. We will provide free opportunity for each alumni to meet at future conventions and hold joint annual programs for networking. We have already tried it successfully this July at a picnic by the National Capital Chapter. Each alumni can also choose to individually arrange their annual meetings in conjunction with the ASEI annual convention as the Jadavpur University Alumni unintentionally did for their Platinum Jubilee Celebration this year.

Yours Sincerely,

Subroto Mitro
President, ASEI-NCC

September 3, 1995

CHAPTER ACTIVITIES

Albany, New York

Sep 94: Buffet lunch-lecture on Immigration Entrepreneur's Experience in the USA by Mr. Brij Bhushan Bharteey, President and CEO of Spectrum technologies USA. Mr. Arun Shirole who won the "ASEI Engineer of the Year" award for 1994 was recognized at the meeting.

Feb 95: Buffet lunch-lecture on Investment Opportunities in India by Mr. Charles M. Joseph, Investment Executive of First Albany Corporation. Mr. Joseph presented insights into investment opportunities in India. Annual election for the chapter Executive Committee following Mr. Joseph's presentation.

Jun 95: Dr. Sudhir Savkar, Manager, GE Corporate Research and Development spoke on "Technology Development in Appliance Industry", a subject widely discussed all the time.

The 1995 executives are:

Kuldeep Gupta	President	518-877-6468
Gargi Shah	VP	518-453-9730
Mathew Royce	Secretary	518-377-9515
Zoher Bambot	Treasurer	518-783-9011

Athens, Ohio

Since its start in 1991, the Athens Chapter has been very active and growing stronger. During 1992-93 it has arranged a number of seminars including a three day workshop on Unix and Shell programming and a talk cum demonstration on the X-Windows programming in April 1993. A two-day chapter convention was held in May 1993. Several members of the chapter attended the 10th National Convention. The chapter's first newsletter was published in October 1993 with a scheduled for publishing four times a year. The chapter had been more or less inactive in 1994-95.

Northwest Indiana

The Chapter used to hold four activities a year. The chapter has been inactive during 1994-95.

Detroit, Michigan

Jun 94: Seminar on NRI Investments in India by Mr. A. K. Kandaswamy, Managing Director, Sri Ranga Foundries, Ltd., India and Dr. Bhupendra Hajratwala, Certified Financial Planner, American Educational and Financial Services.

Aug 95: Seminar on Ford Motor Operations in India. Mr. Ashok Goyal, Director, India New Market Development, Ford Motor Company gave an insight into the Ford Business arrangements with Mahindra and Mahindra in India, and Dr. Haren Gandhi, Manager, Scientific Research Labs of Ford Motor Company presented the current status of the automotive industry in India with special reference to pollution control requirements (catalysts) on vehicles in certain cities in India.

The 1995 executives are:

Hans Bajaria	President	313-277-5692
Ramu Ramamurthy	Vice President	810-354-6895
Mamta Sabharwal	Treasurer	810-652-8879

Huntsville, Alabama

Sep 94: Seminar on "Subject Oriented Technology in Software Development" by Dr. Harry Delugach of University of Alabama in Huntsville, and Mr. Lewis Graham of Intergraph Corporation.

Feb 95: General body meeting and Election.

Mar 95: Promotional activities for ASEI at Huntsville India Association function.

Jun 95: Seminar on "Setting up and Succeeding in Business" by Dr. John Wessley of Beowulf Corporation.

The 1995 Executives are:

Ashok Amin	President	205-883-5676
Mangala Annambhotla	VP	205-883-9560
Chandrashekar Dahagam	Treasurer	205-883-4599
Manjunath Rao	Public Relations	205-881-7644

Atlanta, Georgia

Sep 94: Seminar on Legal Considerations of Setting up Consulting in Engineering and Software Professions, including related immigration and H-1 visa issues by Mr. Chandler B. Sharma, Attorney at Law.

Dec 94: General body meeting and Elections for 1995 Executive Committee.

Jan 95: Seminar on Tax Consulting and Planning by Mr. Kirit Kanakiya, a practicing accountant in Georgia.

Mar 95: All day meeting starting with ASEI HQ Board of Directors meeting in the morning followed by a seminar on Employer/Employee Relationships by Mr. Uday Vikram, a practicing attorney in Atlanta.

Jun 95: Seminar on Living in the Information Age by Dr. Farokh Mistree, professor at Georgia Tech. Dr. Mistree discussed information related developments in technology and the impact of these on education, work, leisure, culture etc.

The 1995 executives are:

Arvind Benegal	President	404-476-4642
Sharad Paranjape	Vice President	404-998-5137
Mohan Devu Rao	Secretary	404-986-8856
Shekhar Reddy	Treasurer	404-633-0505
Prashanthi Reddy	National Chapter Coordinator	404-633-0505

CSRA, Augusta, Georgia

The Central Savana River Area chapter Board of Directors and Executive Committee continued their monthly meetings to discuss various issues, chapter activities and business matters. Several general body meetings and seminars were held as given below.

Feb 94: Dinner meeting –Diversity in Work Place

Mar 94: Nuclear Future of SRS

Apr 94: Investing in Emerging Market

May 94: Economic Development of CSRA from SRS Downsizing of SRS

Oct 94: Taking Charge of Your Future

Mar 95: Don't just cope with the Change, Create your own Opportunities

May 95: How to Start a Small Business with Assistance from SCORE/SBA

The 1995 executives are:

Sharma L. Pogula	President	706-855-1081
Jagdish Bhatt	Vice President	706-855-7991
Swapan Bandhyopadhyay	Secretary	706-868-8300
Vijay Aranke	Treasurer	706-860-2101

ASEI-NCC

The National Capital Chapter members have been active not only within the ASEI but also with many local area activities. Our staff has developed a reputation in the area for their professionalism and interaction within the social, cultural and political arena, both within the Indian-American Community and also within the American mainstream. Since the last annual national convention, the following activities were held:

Sep 94: A picnic at Cabin John Park in Rockville

Dec 94: General body meeting, annual election and a presentation on the Economic Reforms in India by Hasmukh Shah, President of US-India Enterprise

Mar 95: A Seminar on US-India Commercial Alliance by Ms. Kathleen Keim, Director of Commercial Programs, Office of South Asia and Oceania, US Department of Commerce and Dr. Rajendra Singh, Chairman of Telecom Ventures, Inc.

May 95: A Seminar on Legal Developments in Solicitation & Protest by Mr. Onkar Nath Sharma, Attorney from Sharma and Bhandari followed by SBA Resources and Information Center for Small Business by Mr. James Steiner Information Resources Officer from the Small Business Administration.

Jul 95: An ASEI-sponsored promotional picnic with all alumni of various engineering schools.

The 1995 executives are:

Subroto Mitro	President	703-803-0474
Raj Shah	Vice President	301-972-6554
Narender Gupta	Secretary	703-960-2364
Ranjana Shah	Treasurer	301-577-5581

ASEI

American Society of Engineers of Indian Origin

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Biliyar Bhat
Ram Reddy Nemula
Saleem Moazzam
Vidya S. Reddy

Georgia

Hiro V. Vachani
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Indiana

Rangasami Kashyp
Ravinder Chopra

Michigan

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Chhotu N. Patel
Chumilal Gala
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Hansraj Bajarla
Harendra Kumar
Hasu Gavan
Jag Bushan Kaul
Jagdish Agrawal
Jayprakash B. Shah

Jehangir B. Mistry
Kameshwara Gupta
Kanu C. Mehta
kishorchandra Patel
Lakshmi B. Vora
Mohindarpal Gill
Nirdosh Reddy
Nuruddin H. Kapadia
P. R. Perumalswami
Prakash Shrivastava
Radha Krishnan
Raj Raja
Raj Vijayendran
Rajaram Khatri
Ramarao Cherukuri
Ramesh C. Sharma
Ramesh M. Patel
Ramesh Mangrulkar
Ramji Patel
Ranjit Purba Roy
Ravi M. Reddy
Sajauddin H. Kapadia
Santokh S. Labana
Shailesh B. Vora
Shashikant Dani
Subhash Mandan
Sudhir K. Jain
Sunil Sabharwal
Tappan Datta
Umesh Rohatgi
Vinod K. Sahney
Viresh Doshi
Yogindra Anand

Indiana

Mr. Ravi Chopra

National

P. R. Nayak
Syed M. Shahed

New York

Dhirendra Gupta
Kuldeep Gupta
Suresh Gulati

Ohio

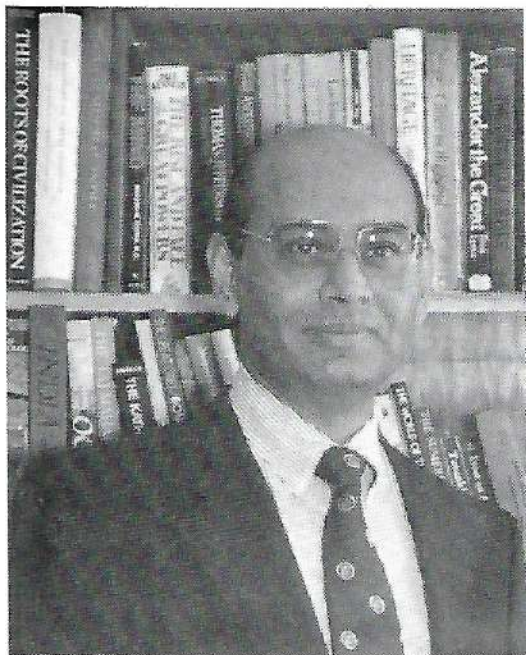
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Prem S. Garg
Ranjana Shah
Satyendra Srivastava
Shiv K. Jindal
Subroto Mitro
Sudhanshu K. Sinha
Urmila Prasad
Vinod K. Goel

ASEI AWARDS FOR 1995

ASEI ENGINEER OF THE YEAR



Sudhir D. Savkar

Dr. Sudhir Savkar is team Leader at General Electric Corporate Research & Development in Schenectady, New York. Dr. Savkar received his B.S. degree from Catholic University of America, Washington, DC and M.S. and Ph.D. degrees from University of Michigan, Ann Arbor.

During his twenty nine years of career at GE, Dr. Savkar has managed and worked on a number of research projects in the field of heat transfer and fluid mechanics, including aero-acoustics, combustion instability, plasma processing, coal fired diesels for transportation, atomization of super alloys, and high temperature superconductors. Dr. Savkar served as Adjunct Associate Professor of Nuclear Engineering at Rensselaer Polytechnic Institute. He has published more than 47 technical papers in national and international journals.

Dr. Savkar has 11 US patents and 9 European Patents. He has received numerous awards including CRD Dushman Award in 1981, Silver and Gold Patent Awards from GE and CRD Whitney Gallery of Technical Achievers in 1990 and 1991. Dr. Savkar has served as a member of numerous professional committees for ASME, IEEE, and Material's Research Society.

ASEI STUDENT OF THE YEAR



Venkatesh Ravirala

Dr. Venkatesh Ravirala obtained his Ph.D. in December 1994 from Rensselaer Polytechnic Institute, Troy, NY and has been offered the position of Research Associate in the Department of Civil and Environmental Engineering at RPI. He received a MS degree in Civil Engineering and a second M.S. degree in Operations Research and Statistics, both from RPI. He holds a B.S. degree in Civil Engineering from Regional Engineering College, Warangal, India.

His doctoral thesis, Multi-criteria Optimization Methodologies for Highways Program Development, was awarded honorable mention in the 1995 George B. Dantzig Dissertation Award competition. These methodologies are being implemented by NY State Authority in making cost effective decisions regarding pavement network. Dr. Ravirala has been awarded the Thomas Archibald Bedford prize for his scholastic ability and contributions to the field of civil engineering. He also received Award of Excellence from the center for Infrastructure and Transportation Studies.

ASEI COMMUNITY SERVICE

Mr. Umesh B. Rohatgi is the Vice President of Analytical Design Service Corporation located in Ann Arbor, Michigan. He has been involved in more than 12 social and community organizations. He has received many citations and awards including awards for Outstanding Community Involvement by Detroit Public School Board in 1981, Dedicated Service by ASEI in 1984 and 1986, and Excellence for Community Services by Bharatiya Temple in 1988. He is an active member and served the following organizations in various capacities: ASEI, Active Friends of the Homeless, Bharatiya Temple, Concil of Asian Indians, FOCUS HOPE, Vishwa Hindu Parishad, and others.



Umesh B. Rohatgi

ASEI MERIT SCHOLARSHIP

Ms. Rachita Ruchi graduated from the prestigious Eleanor Roosevelt High School in Prince George's County, Maryland. She has been admitted to the University of Maryland Electrical and Computer Science Department. Rachita completed part of her high school education through 10th grade in India and achieved 83.6% marks. She scored 4.0 GPA in 11th grade and 3.93 GPA in 12th grade. She earned a place on Honor Roll and French Honor Society. Rachita received 1240 in SAT. She was recognized as a Summa cum Laude. Rachita is interested in Indian classical dances and performs regularly on TV and other cultural programs.



Rachita Ruchi

Mr. Rakesh Arora is a student at the American University in Washington, DC. He holds a B.S. degree in Civil Engineering from Birla Institute of Technology and Science and a M.S. degree from Southern Illinois University. Mr. Arora has been on the Dean's list at the American University. He received Student Leadership Development Program Award at Southern Illinois University. He received Graduate Merit Scholarship Award 1988-90. Rakesh has earned the reputation of being a diligent, enthusiastic and very conscientious student. He is a highly motivated individual with desire to excel in his chosen field of studies and work.



Rakesh Arora

ON U.S.-INDIA BUSINESS COLLABORATION

Subroto Mitro, President, ASEI- NCC

Both U.S. and India are eager to promote trade with each other. The investment potential in India is high. The U.S. - India Commercial Alliance Board has been set up.

Change is in the air and with every change comes a new direction. U.S. foreign policies are changing, so is U.S. trade and its commercial alliances. Since her freedom, India has been protective of its infant industry. It has been conservative in its economic practices, in its internal trade and commerce. Now, however, realizing the potential benefits in liberalizing its policies, it has now begun to open up. In India, the entire society is changing rapidly with the post-independent generation beginning to take control. On the outside, foreign investors and traders wait on the sidelines, learning from the experience of the others before venturing in themselves. U.S. administration has begun to take note of the fact that not only is the opportunity to expand trade but matters in many directions can improve if U.S.-India relations improve.

The Indians in this country have proved how valuable they can be when given the right working environment and job opportunities. India today has a pool of over 300 million educated, liberal, democratic, young labor force, many of them familiar with the English language, waiting to be drawn into a globally expanding economy. U.S. administration has begun to notice India. As a sign of the importance the U.S. attaches to India, the administration sent three of its Secretaries for the promotion of general trade and commerce including defense and energy. The Indian Prime Minister and several other ministers have visited the United States recently. The results of these negotiations are still developing. Today, the investment potential in India is high with its high growth rate. The Indian-American Community (IAC) is playing its role. The NRI investments in India have seen a boost. Several IAC businessmen accompanied or followed the U.S. Secretaries to explore opportunities. Since April 1993, the American Society of Engineers of Indian Origin (ASEI), a technical professional society, has focussed its seminars disseminating information in related topics such as Export-Import Opportunities under the New Economic Reform Policy, US-India Business Collaboration, etc. In early March 1995, the ASEI introduced Dr. Kathleen Keim, Director of Commercial Programs, Office of South Asia/Oceania, USDOC, to the Indian Business Community.

Under a joint agreement, both governments are setting up a US-India Commercial Alliance - a Board, which shall assist and supplement the US-India Economic/Commercial Subcommission by discussing with it relevant matters of concern raised by the Business Alliances. These Business Alliances will be set up in sectors such as Information Technology, Transportation Infrastructure, Food Processing, Packaging and Power. They will promote trade, investment and business relations subject to both countries laws and regulations. The current members of the U.S. - India Commercial Alliance Board are given on the next page. Recently in the west, Secretary Ron Brown spoke at an Indian-American Business Conference regarding this Commercial Alliance. On September 3, the ASEI National Convention will further explore the theme of US-India business collaboration. At the Convention, ASEI will further disseminate information concerning India's economic liberalization to bring attention to these developments.

U.S. - INDIA COMMERCIAL ALLIANCE BOARD MEMBERS

United States:

Co-Chairman:

Jack A. Shaw, Chairman and CEO, Hughes Network Systems

Members:

R. Michael Gadbaw, VP & Senior Counsel, General Electric
Rebecca Mark, CEO & Chairperson, Enron Development Corp.
William F. Paul, Executive VP, United Technologies
Edward P. Hoppe, VP & General Manager, Eastman Kodak Co.
Herb Lotman, Jr., Keystone Food Corporation
Robert C. Wiesel, CEO & Chairman, Stone & Webster Engg Corp.
Harry C. Stonecipher, President & CEO, McDonald Douglas Corp.
Karl Deily, Director, W. R. Grace Company
Hatim A. Tyabji, President & CEO, Verifone (pending acceptance)

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Co-Chairman:

A. K. Rungta, Chairman, Rungta Enterprises

Members:

Deepak Banker, Senior VP, Kimal Engineering Company, Ltd.
L. M. Thapar, President, Balarpur Industries
K. Singh, Managing Director, DLF Universal Ltd.
S. Bhargava, Group Chief Executive, Eicher Goodarth Ltd.
Jashyed N. Godrej, Godrej Boyce and Manufacturing Co. Ltd
F. Kohil, President, NASSCOM; Chairman, Tata Consultancy Svcs.
Gokul Patnaik, Chairman, Ag & Processed Food Prdts Export Dev.
Suresh Krishna, CEO, Sundram Fasteners
Jagdish Hinduja, Gokuldas Images

THE INDIAN ECONOMY IN THE POST REFORM PERIOD

Narayan Valluri, Minister (Economics)
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The impressive record of the Indian economy following the economic reforms and liberalization augur well both for the continuance of the reform process and the future of the Indian economy. The inherent strength of the economy is evident from the resilience it has shown in the face of social discords and trauma, and political changes. The signs of robustness hold promise for the future.

The rebound of the economy would be evident by contrasting the current situation with what obtained 4 years ago. All macro economic measures underscore its creditable performance. The **growth rate** which had sunk to around 1% is up again at over 5% and in fact exceeded 5.5% in the last fiscal year. But what is more important is that though the economy had seen growth rates of over 5% in the 80s, these were unsustainable as they were fed by borrowings, whereas the current growth rate has been achieved by spurt in manufacturing and industrial growth.

Industrial growth which was almost stagnant is now upwards of 8% per annum. The record on inflation and reducing the fiscal deficit has, however, been somewhat mixed. After having reduced **inflation** from a high of nearly 17% in 1991 to around 6% within less than 2 years, it again climbed back to well into the double digits. But thanks to the determined efforts of the government it is currently (end of July 1995) around 7.6%. Likewise, **fiscal deficit** which was brought down from 8.4% of GDP in 1990-91 to 5.7% in 1992-93 again rose to 7.7% in 1993-94 but has since been brought down to 6.7% by 1994-95, and is expected to be reduced to 5.5% by 1995-96. These point to the resilience of the economy in being able to make quick corrections and adjustments, in spite of temporary setbacks.

Job creation has shown an impressive rise too. Prior to initiation of reforms in 1991 jobs grew annually at only around 3 million a year, whereas since then new employment has been of the order of 6 million annually. But by far the most impressive gain of the reforms has been in the area of **foreign investment**. Before liberalization of the economy, investment flows into India hardly averaged US \$ 200 million a year, if that. By contrast, in the last two fiscal years foreign investment flows into India have been US \$ 4.1 billion and US \$ 4.7 billion respectively, which includes Global Depository Receipts (GDRs), portfolio investment by Foreign Institutional Investors (FIIs) and foreign direct investment. And cumulative investment flows since the opening up of the economy till the end of June, 1995 have been of the order of US \$ 11.7 billion, made up of about \$ 5 billion of GDRs, \$ 3.7 billion of portfolio investment, and slightly over \$ 3 billion of foreign direct investment(FDI). **Exports** too have registered impressive growth rates of 20% and 17% in the last two years helping keep our current account deficit within healthy limits. In fact, the current account deficit which was over 3% of GDP in 1990-91 was down to under 1/2% in 1994-95. Both in trade with and foreign investment in India, the United States occupies the first place.

This dramatic turnaround in the economy has been achieved by removal of controls, under which the true potential of the economy remained to be achieved. Opening up many sectors of the economy to the private sector and allowing freer entry of foreign investors has introduced competition, led to the flow of technology and exposed consumers to a choice of

products and services. Suddenly, India has begun to be noticed as a country with great possibilities; and the many advantages of India, like well trained and skilled manpower; managerial and entrepreneurial skills; the use of english; a well developed legal and administrative system; and the existence of infrastructure conducive to the functioning of a market economy; have begun to acquire added significance.

The economy cannot, however, grow or attract and absorb substantial foreign investment, without improvement and expansion of infrastructure. If India is to transform itself rapidly into a modern economy it is imperative that the level of infrastructure be raised. The magnitude of funds required is clearly beyond the scope of the government and public sector. Hence, as part of the economic liberalisation process, infrastructure sectors like energy, including power, hydrocarbons, mining; telecommunications; transport, including ports and roads; have been opened to the private sector, including foreign investment. It is an indication of the emphasis on this area that infrastructure was the theme of the second part of this year's India Development Forum meeting in Paris at the end of June, and is also the focus of the newly commenced Commercial Alliance (between India and the United States).

Far from raising doubts about the stability and durability of reforms, the recent elections to the State Assemblies where the ruling party at the Centre suffered reverses demonstrate that there is a general consensus in favour of economic reforms. The new governments of different political affiliations which have assumed office following the state level elections have not repudiated economic reforms or foreign investment. In fact, many of them are actively wooing foreign investment. The changes ushered in by economic reforms are, therefore, there to stay; at most, there could be a shift in emphasis, like 'computer chips and not potato chips' as some one was reported to have said. Nor has the Centre's commitment to economic reform and liberalisation slackened following the electoral reverses. Both the central government budget (for 1995-96) presented in mid-March, after the electoral setbacks, and the Export-Import Policy announced a couple of weeks later deepen and push further the reform measures already set in place.

In conclusion, it would be apt to recall the words of both Treasury Secretary, Rubin and the Indian Commerce Minister. In his address to Indian businessmen in Bombay last April, Secretary Rubin said:

"Economic reform is producing tangible results, economic growth and a good beginning of widespread and well-warranted attention for India -- attention that I believe will rapidly increase as you continue to pursue reform." ... "Ten or 20 years ago to visit the cities absolutely critical to the U.S. economy, a Treasury Secretary would go to London, Paris, Bonn and Tokyo. Today that list is far longer, and New Delhi and Bombay are on it, because of India's growth and our deepening economic relationship."

Mr. Chidambaram, India's Minister of Commerce once remarked¹ that:

"India's road to reform will neither be a German autobahn nor an American interstate, we'll take an Indian road -- with potholes, twists and turns, and slowing down at crossings. Do not have the slightest doubt, though, we are headed in the right direction and we will reach our goal."

¹ in November 1993- when he was temporarily not the Commerce Minister

US-INDIA BUSINESS COLLABORATION IN SPACE, COMMUNICATION AND INFORMATION TECHNOLOGY

Shiva B. Anand, Board Member, ASEI-NCC

In 1991, Indian Prime Minister P.V. Narasimha Rao introduced a sweeping program of economic reforms, orchestrated by Finance Minister Manmohan Singh, aimed at increasing foreign investment, promoting privatization and liberalizing India's economy. This made India a global player for high tech, communication and space technology and products. American companies are taking a special interest in India, especially in the telecommunications sector. US exports of telecommunications equipment to India, totalling US\$70 million in 1992, are expected to grow by 15 to 20 per cent annually over the next several years. Sustained investment is projected to be US\$1 billion to US\$2 billion annually through 2000.

Historically the Indian space program was a pure research effort for studying the upper atmosphere and for remote sensing, in which now it has about 12 years of experience. India's huge archives of satellite data and tremendous experience in data processing is a major resource. Prime Minister Rao's economic reforms opened an avenue for the Department of Space to create a marketing arm, Antrix Corporation Ltd, which consists of Indian Space Research Organization (ISRO) and leading industrialists and businessmen.

The recent failure of Landsat 6 satellite and the ageing of old Landsats, gave a great opportunity to ISRO to market the remote sensing data globally. On Feb 2 1995, The Earth Observation Satellite Co (EOSAT), a joint venture between the Hughes Aircraft Corp division of General Motors Corp and Martin Marietta Corp (now Lockheed Martin), signed the agreement with Antrix Corp Ltd, in San Francisco, to market data from a network of Indian earth observation satellites to government agencies and companies around the world.

Under the 10-year agreement, EOSAT will be the exclusive worldwide marketing agent for earth observation data from remote sensing satellites operated by the Indian government. EOSAT hopes the agreement will enable it to take a lion's share of the global satellite imagery market, worth hundreds of millions of dollars, in coming years. India's remote-sensing programme is the largest and most advanced of its kind, The EOSAT reckons that over the next 10 years it could generate \$1 billion in revenue for India, EOSAT and ancillary firms. The Bangalore-based ISRO will receive royalties from EOSAT. Though the skies are crowded with such satellites, EOSAT expects demand to surge. The U.S. Commerce Department says the annual world market could quintuple to \$2 billion in six years.

In another global communication venture, ISRO is likely to be involved in the ambitious Iridium project, which hopes to make global wireless communication a reality. The multi-billion dollar venture, initiated by communications giant Motorola, proposes to use ISRO's launch facilities for putting in place many of the 77 low earth satellites proposed.

Recently, a multi million dollar investment in entertainment industry was announced during the India satellite and cable TV conference. Turner International Network Sales, announced Turner will open an office very shortly in New Delhi to oversee the company's plans to introduce its Cartoon Network and TNT channels to India. Asian Television Network (ATN) will launch a 24-hour news channel and several entertainment channels. Later, channels will include U.S.

programming and some dubbing into regional languages. GE American Communications Inc. (GE Americom) announced the launch of four channels to the Indian subcontinent in a mix of Hindi, English and Indian regional lingos.

PanAmsat corp, An American satellite company is planning a direct-to-home television service for India in 1996 at a cost of up to US\$1 billion. PanAmSat Corp's PAS-4 satellite over the Indian subcontinent will be used to line up big international and Indian production houses for a direct-to-home retail service. PanAmSat's service will provide the satellite, gather the big name movie and programming houses together, market the satellite dishes and decoder boxes. Investment in the satellite alone will be around US\$250 million, and development of the service to the retail stage would require much more capital. The investment could double or triple in few years. Eighty percent of the PAS-4 satellite is dedicated to the Indian market

The most lucrative and employment-oriented Indo-US business collaboration may be in software development in India and its transmission through computers and satellites to the users in the US. Due to availability of highly-educated, low-cost Indian programmers, US companies do not have to embark on a world-wide talent hunt. Some US companies already send programming work to India, because of the tight economic climate in US. Information system managers here have been asked to do more with less. At the same time, companies require state-of-the-art software to deliver timely sales and marketing information. Because of 10-12 hour time differences, prototype software that Indian programmers send at the end of their day to a US client's Internet address arrives in the morning. Returned to India for "overnight" modifications, it arrives back the next morning ready to run. Hourly rates for Indian programmers average \$20 an hour. In comparison, US fees range from \$50 to \$150 per hour. The Indian information technology industry has grown at an annual rate of 59 per cent, compared to 12 per cent in the United States. The development is primarily fueled by US demand.

Already Mastech Corp., a US-based \$70 million software firm, is setting up a Rs 10 crore software technology park with a satellite link to US operations all over India. This company has already invested Rs 3 crore and has hired software engineers to start the operations in Bangalore. The Bangalore operations will contribute around Rs 8 crore during the current year itself. Within five years, Mastech's Bangalore operations will emerge as one of the top software houses with 2,000 software developers and engineers, plus marketing people.

Apart from the low-cost expert manpower available in India, the country offers a unique advantage as an offshore operations center for US-based companies, enabling US business to operate almost around-the-clock. For Indian software firms, the U.S. market provides 61 percent of business.

In conclusion, since the initiation of India's economic reforms, US-India business collaborations in this field are accelerating rapidly. Future prospects continue to be bright, given the shared values and traditions of both countries (e.g., a democratic system of government), and the fact that one is economically rich and other one is intellectually rich with over 300 million highly educated people. Both nations stand to benefit from such collaborations well into the foreseeable future.

The New Indian Budget: Who Gains?

Gajanan Deshmukh¹

Dr. Manmohan Singh, Finance Minister of India has presented an intelligent 1995-1996 budget, with twin emphasis on increasing domestic-international competitiveness and check on inflation. The Infotech industry has been given a major thrust by addressing software piracy, tax exemptions for software exports, viable manufacturing, curbing the grey market and ensuring higher growth rates. Section 80 HHE which used to exempt from tax the profits of software exporters was extended on an annual basis, and has now been made open ended. The consumer electronics industry has also been given a boost by reducing excise and import duties on various components.

Undeveloped infrastructure, which is a critical bottleneck in accelerated economic growth has been addressed by a five year tax holiday to any industry or enterprise which builds, maintains and operates facilities like highways, bridges, expressways, ports and rapid mass transit systems. An incentive to financial institutions providing long term finance for infrastructure facilities by proposing a deduction of upto 40% of their taxable income derived from funding such investments, provided the amount is credited to a special reserve. The budget provides tax exemption for income by way of dividend and long term capital gains from equity investments in unlisted companies made by approved venture capital funds and companies.

There has been a general reduction in import duties, as summarized below:

Merchandise Import Duties	Before (%)	Now (%)
I.C.	40	25
PCB's	45	25
Hard Disk Drives	65	25
Non Electronic Parts	50	35
Electronic Components	40	25
Raw Materials	20/30	15
Color Picture Tubes (CPT's)	65	40
Application/Systems Software	20/65	10
A/C's	60	40
Copper	50	35
Testing & Quality Control Equipment	65	25
Capital Goods	40-65	25
Hot Rolled (HR) Coils (excise duty)	40	30 (no change)
POY/PFY	69	57.5
Texturised yarn	Rs.10.35/kg	Rs.4.60/kg.
PTA/DMT/MEG	60	35
Xylene	30	10
Polymer (excise duty)	65-45 (30)	40 (25)
Ethylene	15	10
Paper (pulp & fiber)	65	40

Companies in the hardware segment which would benefit are HCL-HP, Wipro, PCL, DELL, Apple, and Fujitsu -ICIM. Companies in the software segment which should benefit are HCL-HP, DEC, Wipro, Infosys, Mastek, Motorola, DEC, IBM, and other small service companies. Higher benefits would accrue to companies engaged in software training like NIIT, Tata Unisys and Apple Industries. In the first six months of 1995, Indian Infotech industry grew by 21% as compared with 9.5% in 1994. PC sales have peaked to 250,000 (so far one million) and server shipments have doubled as compared to previous year.

Domestic software will grow by over 60%. More and more companies are discovering the benefits of networking, on-line processing, e-mail, satellite links and ease in setting up software units in software parks.

Major Color TV (CTV) and consumer electronic companies like BPL, Videocon, Mirc Electronics and Weston should generate higher growths, however they may have to drop prices to compete with foreign brands who will benefit most from reduction in import duties. Sony's \$ 16 million venture to manufacture Trinitron TV sets is good precedent for other Japanese companies to follow. The air-conditioning industry comprising mainly of Blue Star and Voltas, which had suffered higher excise duties last year will benefit due to recouping the same in this year's reductions. The telecommunication industry will also benefit due to reduction in import duties on copper, a critical input for the jelly filled cable industry accounting for 40% of its cost. As domestic copper accounts for only 60,000 tonnes against industry's requirement of 264,000 tonnes, major beneficiaries would be Sterlite Industries, Finolex Cables and Birla Ericsson. Further, Sterlite should benefit immensely because of the reduction in import duty on optical fibers, raw material for optical fiber cable, its other product. Telecom equipment manufacturers viz. Bharti Telecom, Tata Telecom and Global Telesystems would benefit due to reduction in import duties on integrated circuits and printed circuit boards and on testing and quality control equipment's.

Infrastructure companies such as the Tata-led consortium comprising Changi Airports Authority, Raytheon and the Sembawan group which has bagged the contract for building the new airport at Bangalore should also benefit. NEPC Airlines which has acquired an airfield in Kayathar, Tamilnadu should also benefit.

Manufacturers with an import content of raw material in their end product can now reduce their costs which should benefit Greaves Ltd, Triveni Engineering, Walchandnagar Industries and Elecon Engineering. As this reduction in duties on components include components with electronic parts, textile machinery manufacturers like Schlaforst Engineering, Lakshmi Machine Works and Gujarat Textronics should significantly benefit. "India going to be great," John Welch, GE's Chairman quoted in his trip to assess GE's investment in plastics, home appliances, lighting and medical equipment. Companies like DCL Polyester and Sanghi Polyester who have significant PFY capacities should benefit. Because of the reduction in import duty on ethylene, manufacturers of polymers and downstream users, such as Reliance, Finolex Pipes and Chemplast are also likely to gain. This is due to reduction in import duty on ethylene. While cost of production for those who use naphtha will not be affected, companies importing ethylene will benefit. Duty cuts extended on paper raw materials like caustic soda, soda ash and other chemicals would have a marginal effect on the paper companies. The major gainers out of the slash in duties will be the printing industry which will now have the option of choosing various varieties of imported paper at competitive prices. Companies which would benefit are Tata Press, Orient Press and Conway Printers. With international prices of HR coils stabilizing, Indian manufacturers like Essar Gujarat, Nippon Denro, Ispat and TISCO will face pressure on their margins. Pressure on margins may ease provided international prices of HR coils continue to harden. Also, stress on infrastructure projects in this budget will enable the steel industry to maintain a strong growth rate.

Though this is a good budget for import-export industry, and record levels of exports have been achieved, India's overall growth rate lags behind the regional competitors such as China, Malaysia and Thailand. Many economist and Indian businessmen worry that India will be behind unless the dismantlement of the old socialist economy continues.

Sources: Milan Sangani Column & Hindu Newspaper.

Compiled by Gajanan Deshmukh, Board Member, ASEI National capital Chapter.

INDIA JOINS THE INTERNATIONAL COMPUTER MARKET

Reprinted from Financial Times Business Reports, February 8, 1995

In a technology-driven, high-growth industry such as computers, it is almost impossible for a country to remain insulated from world currents. This lesson was driven home with a vengeance with the onset of liberalization in 1991. Less than a decade ago, computers in India were pricey, protected by high import tariffs or outright bans. The reforms saw Indian computer companies changing strategies as they began to form alliances with foreign majors to meet the new realities.

The first to see the writing on the wall was HCL Ltd. It joined up with Hewlett Packard to form HCL-Hewlett Packard. Other major companies followed. ICIM, a joint venture of the RP Goenka group and ICL of the UK, has joined up with Fujitsu of Japan to form ICIM Fujitsu. Tata Elxsi has joined up with NEC. Now, Wipro, the last major Indian computer company to hold out against the multinationals, has joined up with Acer of Taiwan. Meanwhile, foreign computer companies such as Unisys, Compaq, Dell and others have set up shop in the country, in most cases in collaboration with Indian companies for distribution and service support.

In the ensuing shakeout in the information technology (IT) industry, the profile of the industry is also changing. While PCs still dominate the hardware market, LAN server sales are growing much faster, taking an increasing market share. The real boom, however, is in software. Even here, while the domestic market for software is growing at a brisk canter, exports are really booming, growing by an average of 40 per cent annually from \$24m in 1985 to \$330m in 1993-94 and expected to cross \$1bn by 1998.

Though the Indian hardware market is still small, its potential is large. Sales of PCs in 1993-94 was just 180,000 units (one per cent of worldwide sales of 18 million) but this is expected to grow to one million units by the turn of the century. Following the worldwide trend, an increasing number of PCs now are based on the 486 chip. According to the International Data Corporation's report on India, sales of 286-based systems are declining while those of 386 and 486 based systems are rising. Moreover, LAN servers are taking an increasing market share. While the Indian IT market grew by 33 per cent in 1993-94, the LAN server market grew by 152 per cent to Rs 2.63bn. In the current year, the growth in the IT industry is expected to be around 40 per cent in value and 60 to 70 per cent in volume.

The Indian strength in hardware is in design and integration of PCs rather than manufacture of components, though in peripherals there is a growing domestic capability. While the Indian companies design and fabricate machines built with imported components the foreign majors are still importing their machines to sell in India. But once the market grows, manufacturing by foreign companies within India is expected to grow. Already PCL is making motherboards for sale to Dell. Peripherals such as keyboards, floppy drives, power supplies and printers have established manufacturers within the country though these indigenous capabilities are now threatened by cheaper imports.

The hardware market in India was estimated at Rs 18.9bn last year, a major part of it being serviced by small companies. While technological change sets the pace, small companies, which can offer better customer support, service the market better. They often function as resellers and distributors for the bigger outfits. In the coming shakedown, most Indian IT companies will tend to fill this niche while the manufacturing is done by the big players. The smaller companies also operate in the so-called "grey market" where smuggled duty-free components are used to manufacture PCs at lower cost. As a result they today have 60 to 70 per cent of the total market.

Until volumes pick up substantially, the hardware market will remain under pressure and will see increasing foreign tie-ups. At the same time, much will depend on how the Indian companies manage to compete with their foreign partners in some areas even while they collaborate in other areas.

If hardware is feeling the pinch, the future promise for Indian companies lies in software. According to a 1994 Harvard Business School study, "software is one of the few industries in India closest to achieving a sustainable competitive advantage." IBM's senior vice president for world wide sales and distribution, Ned Lautenbach, is also optimistic about the software potential of India, remarking on its "second largest technical trained English educated workforce in the world" and maintaining, "India's software industry is advanced enough to be recognized for its ability to innovate and adapt to new circumstances."

In just the past month, Rolta India bagged a Rs 1bn order from Saudi Arabia for CAD conversion services to its posts and telecom department; Hewlett Packard announced plans to invest \$24m to build up its software operations in India; HCL America was awarded the Datamation Quest award for contract programming; and Executive Desk, an Indian designed software package was launched in the US and Europe.

Initial software export efforts were concentrated in "body shopping", with Indian software engineers being sent abroad to work on contract at a client's site. This was stymied by hurdles put up by US immigration authorities issuing visas to visiting Indian programmers and on-site software development fell from 92 per cent of total software exports in 1987-88 to just 58 per cent last year. Indian software companies are now increasingly going in for off-shore software contracting. Around half of the 100 satellite data lines in India are used by software exporters, mainly in software technology parks, to connect them with clients in Europe or the US. These satellite links enable a team working in India to work as an extension of another team working in the subcontracting company abroad. Several western computer companies, including IBM, Motorola, Hewlett Packard, and Digital Equipment have set up software units in India.

Software development also helps in adding to company bottomlines. Though software revenues are a fraction of total revenues for most companies, they are the more profitable operation, often compensating for losses in manufacturing. Indian software operations are not only cost effective compared with those in the west (salaries are typically a fifth of those in the US) but have acquired a reputation for quality as well. Tata Consultancy Services, the largest software company in India with 4,000 professionals, was able to establish a facility for Swissair in Bombay to process one milli on flight coupons a month with just 100 people, while Swissair earlier used to do this in Zurich with twice as many. The Software Engineering Institute, funded by the US military, recently rated 200 US owned software teams for excellence. One of the two teams which was rated tops was Motorola's Indian software team in Bangalore. Turnover of major computer companies 1993-94

	TOTAL (Rs m)	SOFTWARE SALES (Rs m) (Rs 100 = \$ 3.23)	
		(Exports)	(Domestic)
Digital Equipment	1,240	384	n.a.
HCL-Hewl. Packard	3,968	405	n.a.
Fujitsu ICIM	1,362	322	n.a.
Pertech Comp.	2,789	n.a.	110
Tata Consultancy	2,520	2,000	520
Tata Unisys	1,188	750	166
Wipro Infotech	3,371	155	165
Wipro Systems	436	302	128
Industry total	36,030	10,200	6,950

Packaged software in India has tended to be pirated, with most customers seeing it as a free add-on supplied with the PC. This has inhibited the growth of a domestic market for legal packaged software. With the passing of legislation to stop the use of pirated software, packaged software should take off. In the last year the market for packaged software jumped 80 per cent to Rs 3.75bn (worldwide market \$ 70bn) most of it imported. With a crackdown on pirated software users, Indian designed software packages are likely to have a substantial domestic market for the first time as legal foreign packages would be too expensive for most of the Indian market. Once a domestic market is established, export of packaged software should follow as a natural consequence.

DOING BUSINESS WITH INDIA: INTERNET WAY

Gajanan Deshmukh, Board Member, ASEI-NCC

"The Internet is not just a high-tech communications system, but a necessary and crucial weapon of corporate battles. For the emerging markets, it provides access: access to people, information and markets. It makes the physical border of a country disappear".

Recently, I set out to explore the information resources available on the information superhighway. My surfing the Internet was an adventure, as I encountered unknown places, communities and business opportunities, in my quest for information about doing business with India, the Internet way. I found information about business groups, both in India and the US, and a wealth of World Wide Web sites which can be mined for more information. Some samples of what I found follow.

Business people today are bombarded from all sides with offers to help find international business opportunities. Only a qualified, reliable, and small/large business interest group can deliver such information globally instantaneously. In 1919, the International Chamber of Commerce (ICC) is a non-governmental organization of more than 7,000 companies and business associations in 140 countries. ICC National Committees throughout the world present ICC views to their governments and alert Paris headquarters to national business concerns. ICC has been serving world business by promoting trade and investment and open markets for goods and services, as well as the free flow of capital. Now there are over 1,000 chamber of commerce's in six continents joined together in an international network as members of the International Bureau of Chambers of Commerce (IBCC). US chambers of commerce, ACCII (Associated Chambers of Commerce & Industry of India) and FICCI (Federation of Indian Chambers of Commerce) are part of this electronic silk road. The electronic media (Internet) channel through which the commerce has been traded is called as "IBNet-Electronic Silk Road".

USA has over 100 American Networks of Chambers of Commerce & Industry (CCI's). Majority of American Networks offer information on geographical location, trade policies, infrastructure, industries, alliance partners, population, natural resources, schools, universities, arts, entertainment, hotels, restaurants, tourism information, etc. Local businesses associated with CCI's tends to benefit, since their information is published at nominal fee. Not all businesses have their own Web (home) page and is provided through Internet service providers for a nominal cost.

FICCI is India's oldest network of industries and businesses on regional, state and local CCI's, Trade & Industry Associations, Professional Institutions, Bi-national CCI's, Corporate bodies and private firms. It speaks for, directly and indirectly over 100,000 business units – small, medium and large – employing around 10 million people. FICCI has several other bodies such as BISNET for domestic and international business information; Food Research & Analysis Center (FRAC) for food testing; Joint Business Councils (JBCs) maintaining agreements with 44 trading partners; Expert Committees headed by Industrialists, Associate Organizations; Quality Forums for quality systems & management; Library and Reference rooms; Publications on latest business and trade policy issues, economic trends, etc. More information on ICC can be downloaded from: URL><http://www1.usa1.com/~ibnet/icchp.html>

IBCC-Net ® is another network which provides information on traders, investors and business opportunity seekers, strategic alliance partners, potential agents and distributors, joint ventures, and licensing and technology transfer. IBCC-Net will open to public in January 1996. During my search for "India Trade", I encountered numerous web sites consisting of abstracts and Web locations. Few of those titles and web sites are given below.

India Commercial Guide, 1995	http://www.ait.ac.th/Asia/ccg/in-guide
India American Expo	http://www.interstar.com/economic/india.html
India High Commission, London.	http://www.pisces.com/clients/pisces/inhclon.htm
India Business Directory	http://www.indiaworld.com/open/biz/yp/index.html
Indian Businesses	http://www.webindia.com/
India Network WWW	http://india.bgsu.edu/
Quick Silk Routes	http://www1.usa1.com/~ibnet/chamshp.html
Quick Silk Routes	http://www1.usa1.com/~ibnet/usachams.html

World Bank
Business Pract. in India
India Eco. Poly & Trad.
India On-line
Express Computer
World Business Center, India

<http://www.worldbank.org/>
gopher://UMSLVMA.UMSL.EDU/00/LIBRARY/GOVDOCS/IBPA/IBPD/IBPDOOO
gopher://UMSLVMA.UMSL.EDU/00/LIBRARY/GOVDOCS/CRPT/CRPTOO39
<http://indiaonline.com/biz.html>
e-mail: compute.express@access.net.in
e-mail:wbc@IndiaOnline.com

My surfing around the Internet about "Doing Business with India" revealed various important Web sites. Two of this sites are described below.

Federation of Indian Export Organizations (FIEO)

Federation of Indian Export Organizations (FIEO) was set up in 1965 by the Ministry of Commerce as an apex body of all Export Promotion Councils, Commodity Boards and Export Development Authorities in India. Over the years FIEO gained confidence of the Government and was entrusted with the task of servicing the Government recognized Export Houses, Trading Houses, Star Trading Houses and Super Star Trading Houses (a status granted by the Government for achieving a minimum quantum of export turnover). The Government of India has nominated FIEO as a nodal agency to disseminate various inquiries and international trade related information from Missions abroad to the concerned segments of Trade & Industry.

FIEO's members comprise the cream of the exporting community of India. They contribute to over 65% of India's export earnings. The products exported by their members comprise a wide spectrum of products that include Gems & Jewelry, Textiles and textile Products, a wide range of Engineering Goods, Leathers and Leather Products, Handicrafts, Chemicals and allied products, Cosmetics, Drugs & Pharmaceuticals, etc. FIEO also services exporters in the Constancy Services. The Constancy Services also cover a wide range like Infrastructure Development, Engineering Industries, Cement, Leather, Paper & Rubber Industries, Agro-based industries, Small Scale Industries etc. The activities of the members also include manufacturing, International Trading, Investment/Joint Ventures.

FIEO Services are primarily aimed at enhancing India's International Trade. On the domestic front, FIEO acts as an interface between the Government and the exporting community for creation of an environment favorable to International Trade. On the overseas front, FIEO strives hard to build an image for Indian Products. Some of them are given below.

Market Development – aimed at image-building for Indian products through sponsoring delegations abroad inviting overseas delegations, participation in Trade Fairs, organizing seminars, entering into MOUs with counterpart organizations abroad etc.

Market Research – FIEO has recently decided to conduct Market Research in specific target markets for the benefit of its members.

Dissemination of Trade Information – is a major international trade facilitation measure, Dissemination is done through a fortnightly "FIEO NEWS". FIEO is in the process of setting an information Network (FIEO NET) through a communication network. This service will be available both for FIEO members and overseas buyers/sellers/partners.

Trade Education/Training & Awareness Programs – for keeping the Trade updated on relevant matters, Awareness programs on Quality, EDI, etc. are also undertaken.

Web India Web India provides Information on Indian Businesses and services. It has three sections: Business Opportunities in India, Indian Services Worldwide and State Bank of India's Home Page with application forms on-line. Each of these sections provides additional information about the topics. For example, the first section provides information about business opportunities in India. The information is classified based on the type of industry. The classifications are: (a) Engineering Products & Services; (b) Financial Services; (c) Jewelry; (d) Jobs in India; (e) Leather Products; (f) Real-estate; (g) Service Companies; (i) Software Companies; and (j) Textiles. There are numerous listings of individual businesses, who can be contacted directly.

USING THE INTERNET FOR INFORMATION AND COMMUNICATION

Gajanan Deshmukh, Board Member, ASEI-NCC

"What railroads were to America in the 19th century, and superhighway systems in the 20th, high-bandwidth networks are to the 21st century", Mitchell Ketzman, CEO, PowerSoft Corporation

By now, surely everyone has heard about the Information Super Highway, a phrase that has almost become the "mantra" of this information age. This global and complex web of electronic networks carries electronic messages, data, voice, graphics, and video transparently, cheaply and almost instantly. The networks of networks, also collectively referred to as the Internet, offers various electronic tools such as e-mail, Telnet (remote login), FTP (file transfer), Gopher, and World Wide Web (WWW) that has the potential to revolutionize how we live and do business. An overview of the Internet follows.

History:

ARPANet, the first and most robust reliable network was first designed by DoD's Advanced (previously Defense) Research Project Agency (ARPA) in 1960 to provide information on military computer systems dispersed globally. Through this and other research several communication protocols for messaging, file transfer, etc. were developed and defined as TCP/IP (Transmission Control Protocol/Internet Protocol). In 1986 National Science Foundation (NSF) used TCP/IP to connect five supercomputers nationally. This NSFNet, ARPANet and other publicly and privately funded networks joined together to launch a new network called as Internet. In 1991, NSF lifted decade old ban on conducting business via the Internet. Since then, in the USA the Internet has grown by 31,000 percent, creating a wide range of services and fostering an unprecedented degree of communication, collaboration, resource sharing and information access.

Internet Overview

Today over 10 million people use the Internet daily to send and receive e-mail. Current net capacity is for over 25 million people. According to the Internet Society, over 100,000 users are added monthly. E-mail is far the most easy, quick and most inexpensive way to communicate with other Internet users.

Telnet is one of the original Internet tool to connect user to other remote computers to browse library catalogs, bulletin board systems (BBS), campus directories, connect databases, and variety of information. The connectivity is usually by knowing host computer name and acceptable "login" (user id) and "password" (user id or anonymous or guest). Example of Telnet sites are fedworld.gov and hollis.harvard.edu.

File Transfer Protocol (FTP) is another Internet tool that lets transfer (send and receive) files from one Internet computer connected to another. This is an important tool to find required data (ex., software programs, graphic images, sound, etc.) first and then transfer. The disadvantage with this FTP process is, one cannot view this data before transfer and most operating systems commands are in UNIX. A Windows software for FTP (Netmanage) was recently developed to ease users FTP capability.

Archie, a search tool allows to query first and locate multiple Telnet sights and FTP files. Gopher is another Internet browsing tool designed by University of Minnesota in 1991 to organize information in a on-line menu system. In addition to browse the users can select and view a file on demand. Like other Internet tools, to access a gopher site, one needs its address. Once accessed a Gopher screen displays a list of "folders", which contains additional information on the particular subject. There are thousands of gopher locations and their information is stored in what is known as "meta" sites. For example various location addresses for this gopher site are "Mother Gopher" gopher.boombox.micro.umn.edu; "Meta Gopher" gopher.liberty.uc.wlu.edu; and "Gopher Jewels" goher.cwis.usd.edu. Usually this sites provide another search tool known as Veronica on the main menu. It searches 5,500 gopher sites worldwide and over 15 million gopher "items" for the files and directories whose titles contain, or match user query terms.

The latest and most popular Internet tool is the World Wide Web (WWW). With its beginnings in the late 1980's at the CERN, the European Laboratory for Particle Physics in Geneva, Switzerland as a hypertext system, the Web features an easy-to-use graphical interface. The first Web browser was Mosaic, designed in 1993 at the National Center for Supercomputing Applications (NCSA). Hypertext, hyperlinks and hypermedia are the heart of this new Web allowing exploration in textual and multimedia (graphics, photos, sound, virtual, and video) formats more interactively than any other Internet tools. To access the WWW, user needs SLIP/PPP account, and web browser (ex. Lynx, or Mosaic or NetScape). Lynx was developed by University of Kansas for text browsing, and Mosaic was developed by University of Illinois, NCSA center for multimedia browsing. Similarly NetScape was developed by some of the original designer of Mosaic. All web sites carry a uniform resource locator (URL) address starts with "WWW.xxx.xxx". A variety of search engines and indexes have been developed to explore what is commonly known as Home Page (opening screen) of a web site. For ex: NCSA Mosaic Home Page and the Netscape URL ids are (respectively):

<http://www.ncsa.uius.edu/General/NCSA/home.html>
<http://mosaic.mcom.com/home/welcome.html>

Once you are at these URL sites, you can use graphical (radio buttons) or textual (hypertext usually highlighted in blue color) search (browser) on the home page. Lycos, InfoSeek, WebCrawler, W3 Search, CUSI and some other search tools allows user to selectively search for information on any WWW sights. My search for documents with the word "india" on Lycos resulted in 5,811 "hits". On InfoSeek, my search for "india trade" resulted in more than 500 abstracts. From this search one can visit the WWW site of interest.

Internet Connection Considerations

To order a Internet service you have to study all above options, your requirements, connection needs, resources (Computer, modem, communication, shareware/freeware software, speed, etc.), price, local/non-local, technical support, level of access (e-mail, FTP, Gopher, Mosaic,

WWW, etc.), and account type (on-line, shell, SLIP/PPP, all-in-one, direct access, true IP, toll-free).

On-line services offering Internet access are the most frequently used, mainly for e-mail and newsgroup services. More and more such services are providing Internet tools. The cost for this type of account includes service fee, a per-hour connect charge, e-mail surcharge and good technical support. The main disadvantage with on-line service access is cost and speed (max. 14,400 bps). Shell or dial-in/dial-up terminal accounts are gaining popularity with individuals who require personal Internet access. In this type of access, the service provider's computer becomes the host or server. In contrast SLIP (Serial Line Internet Protocol) or PPP (Point to Point Protocol) connections link the user's computer directly into the Internet providing full range of multi-media Internet services. This would be the ideal choice for a organization, business or a individual. User need to install a network protocol, TCP/IP and several search, retrieval and communication utilities. Much of this software is available as free-ware and/or shareware and can be downloaded from many sites. All-in-one service works with the particular service provider and comes with prepackaged software, manual and instructions to register with the service provider. Spry's "Internet in a Box", OS/2 Warp from IBM, and NetManage's "Internet Chameleon" offers full access to all Internet tools. Direct Access Internet link is offered through an organization's large computer or workstations via a leased phone line. This node (workstation/computer) gets loaded on to the local area network (LAN). Other users on the LAN connect to the Internet through the TCP/IP access.

In USA the major on-line service for e-mail providers are America On-line, Prodigy, and CompuServe. Lately all these providers are facing a tough challenge from large and small companies like MCI, UUNet, Netcom, Delphi, PSI, IBM, local Internet Access companies etc. Local Internet companies provide a close customer support and service for individual accounts. They are in the forefront in offering dedicated high-speed phone lines, ISDN (Integrated Services Digital Network) services, Web publishing and Internet training. For high end business users interested in Web publishing, multi-media (audio, video, fax, voice, virtual reality), Internet Broadcasting, etc., ISDN is a way to go. It offers three digital communication channels on a single line, two for high speed (B, 64 kbps) channel and third (or D) channel for basic network connection.

Status of Internet in India

In India, 80's and 90's Internet on-line and Bulletin Board Systems (BBS) connections were affordable to mostly large corporations because of Department of Telecommunication (DoT) restrictions, high cost (computers, modems and software), etc. Since DoT relaxed its stronghold over the Telecommunications market and Department of Electronics, DoE's started offering ERNET (Educational and Research Network) Internet access for educational institutions, and R&D organizations, users began tapping potentials of Internet. For users this gateway is still expensive and no commercial application are allowed. Commercial viable services like NIC has recently announced that they will offer full Internet access, but one has yet to see it happen. UUNet India also claims to offer Internet access. The only thing that most user can really get is e-mail, news, and computer gizmos. There are over 25 BBSs in place which have sprung in relatively short period of time. Other on-line service companies like Business India's aXcess, Datapro's Xee-Mail, DartNet's India On-line, IC-Net, Sprint RPG's SprintMail, VSNL's GEMS 400 - all offer e-mail access. Not all offer e-mail to and from Internet addresses, nodes in all cities or offers access via I-net (an X.25 packet-switched network, run by the DoT). Some of the BBSs also offer e-mail connectivity to the Internet. Here is a reference on how to get Internet access from India and other popular web sites shown below.

Internet: postmaster@axcess.net.in

Bombay: 3-10 Phoneix mills compound, Bombay 400013,

Phone: 91-22-4937676, Fx: 91-22-4936578.

India Home Page

ERNET Gopher: gopher://ecc.iisc.ernet.in/1

Sergio Paoli's Web: <http://www.fcaglp.unlp.edu.ar/~spaoli/india.html>

News

above Sergio Paoli home page

<http://www.webpage.com/hindu>

Networking

List of Internet Access providers: <http://www.earth.org/~lips/Providers/India.html>

Business Practices, Economic Policy and Trade Practices

<gopher://UMSI.VMA.UMSI.EDU/00/LIBRARY/GOVDOCS//IBPA/IBPD/IBPD000>

India on-line: <http://indiaonline.com/biz.html>

IndiaWorld: <http://www.indiaworld.com>

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Companies in India cannot play a global role if they are not visible and accessible. The Internet is not just a high-tech communication system but a necessary and crucial weapon of corporate market. For the emerging markets, it provides access -- access to people, access to information and access to markets.

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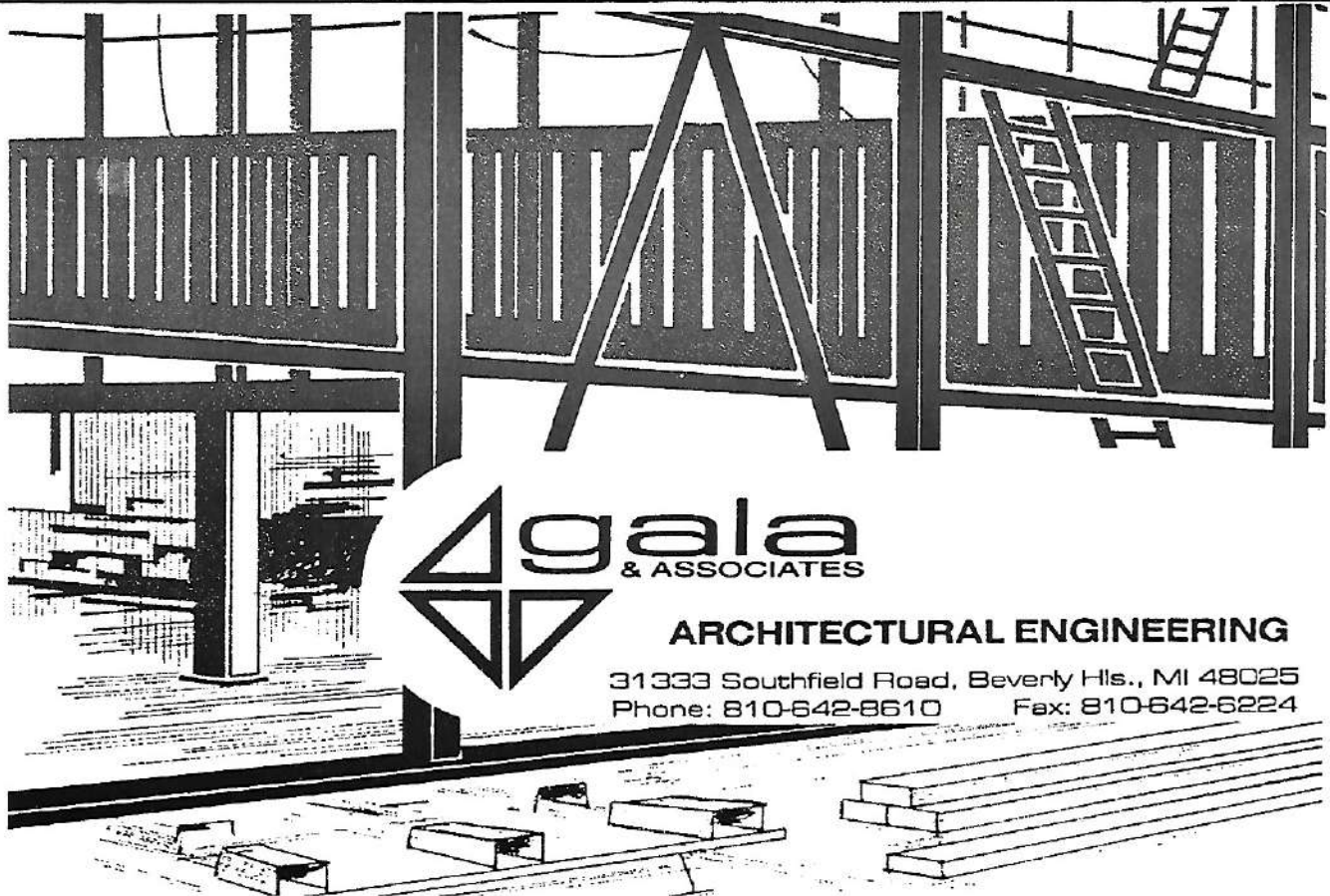
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PROTECT YOUR IDEAS AND INVENTIONS

Shrinivas Rao, Registered Patent Agent

As Engineers most of us have good ideas and we are constantly striving to solve problems and come up with novel ideas and inventions. We may underestimate the importance of protecting our ideas. Sometimes we learn the hard way and when it is too late how our ideas and concepts are commercialized or exploited by others. This article tries to increase our awareness, and to think of ways of protecting our ideas and inventions. The common ways of protecting your ideas are, trade-secrets, patents and copyrights. Lately, new software can be also copyrighted. Each of these ways have their own advantages and disadvantages, and one or more ways can be chosen depending on the given circumstances. This article will focus on patents.

Article I, Section 8 of the U.S. Constitution provides that the Congress shall have the power, " To promote the progress of Science and useful arts, by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries. "

Pursuant to the above Constitutional provision Congress has over the years passed several statutes, rules, etc., Currently the statute is 35 United States Code and 37 Code of Federal Regulations.

A patent is defined as a grant of a property right granted by the Federal government which allows an inventor to exclude others from making, using or selling the invention. Any patent applied for after June 8, 1995 is valid for a maximum period of 20 years from the filing date. A patent in U.S. can be obtained by an actual inventor only. If Mr. I while working for an Organization O invents a new Widget then the patent for the widget can be applied in the name of Mr. I only and not the organization O. Sometimes employment contracts may obligate an employee who invents anything during his employment to assign the invention to the employer. In such cases, the employer will apply for the patent in the employee's name and have the employee assign the application to the employer later.

It is critical that an inventor applies for a patent at the correct time. The statute requires a patent applicant to apply for a patent within one (1) year from the date of ANY public use or sale in this country. The key word is any, which includes the inventors' own use or sale. Failure to file within the one year period may in most instances completely bar all the inventor's rights. As the process of ascertaining the novelty of the invention and preparing and filling for an application may take 3-6 months, it is preferable to contact a patent attorney/agent at least 6 months prior to the expiration of the one year period..

U.S. Patent Office (USPTO) grants three types of patents, Utility, Design and Plant patents. Utility Patents are patents directed to a new and useful process, machine, manufacture or compositions of matter, or any new and useful improvements thereof. Process includes a process or method. Manufacture refers to articles produced (or manufactured), Compositions of matter relates to chemical compositions and may include mixture of ingredients and also new chemical compounds. Design Patents are granted to inventions for a new original and ornamental design for an article of manufacture. The appearance of the article is protected. Design patents are granted for a maximum period of 14 years. Plant Patents are granted for inventions that asexually reproduce any distinct and new variety of plant, including cultivated sprouts, mutants, hybrids, and newly found seedlings, other than a tuber-propagated plant or plant found in an uncultivated state.

In general, the following are the steps in obtaining patents:

- Patent Searching
- Preparing & Filling a patent application
- Responding to USPTO rejections
- Letters Patent

It is suggested to use the services of a patent attorney/agent from the early stages of protecting your ideas. Time and again these professionals have delivered services that are invaluable and indispensable.

An inventor must maintain a record of all developments of his ideas/inventions in a book like a lab book. Patent searches are undertaken by manually searching paper/microfilm copies of patents at the USPTO or one of the 50 or more depository libraries, or a computer data base search, or any of the libraries available on the internet. However the computer & internet searches have the disadvantages of not covering all patents and any key word search is incomplete because the patent laws allow the application drafter(writer) to use any words he likes including invented words. Therefore a professional searcher who manually searches and backs it up with a computer search is likely to provide a more thorough search. It is always better to undertake a search to verify the novelty of the invention before investing thousands of dollars to prepare a patent application.

Upon evaluation of the search results and confirming the novelty of your invention by an attorney/agent, one can prepare an application to be filed in the USPTO. An application includes, a written description and claims, an oath or declaration, a drawing and examples and applicable filing fees. The preparation of an application requires both technical knowledge and in depth knowledge of patent laws and procedures. If the patent application is complete in formal matters, a filing receipt is issued and later examined by an Administrative law judge called an examiner. Usually the examiner will reject the application once or twice. The attorney/agent will provide an appropriate response generally narrowing the claims (breadth of the invention). In most cases the examiner will accept the response and allow the application. Sometimes a personal interview with the examiner to explain the invention is necessary to obtain an allowance.

In about 10-20% of the cases, when the examiner finally rejects the application, an appeal to the Patent Office Board of Appeals & Interferences (POBAI) may be undertaken. If the POBAI upholds the examiner's decision then the decision can be appealed to the Court of Appeals for the Federal Circuit(CAFC), which is the final deciding authority. Letters patent may be derived from an examiner's, POBAI or CAFC decision. In all cases after receiving a notice of allowance the inventor will pay issue fees in a reasonable time (usually 3 months) to obtain a patent. In order to keep the issued patent alive, the inventor is required to pay progressively increasing maintenance fees at the end of 3 1/2, 7 1/2, and 11 1/2 years from the issue date. Failure to pay renders the patent unenforceable.

Shrinivas H. Rao is a Registered Patent Agent, who has over ten years experience in the patent field. He established his patent firm and provides patent services. Anyone with comments, questions etc., are requested to directly contact him.



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EFFECT OF THE PROPOSED IMMIGRATION BILL ON EMPLOYMENT VISAS

Amarnath Gowda, J.D. (Attorney at Law)

The massive legislation (Smith Bill), entitled the "Immigration in the National Interest Act of 1995," if enacted, would have a dramatic effect on employers who are intending to hire non-immigrant in the United States. The proposed legislation would virtually rewrite all every major area of immigration and would make the task of hiring a non-immigrant worker unattractive in almost all aspects. The Smith Bill is the most restrictive immigration bill in decades. The House Immigration Subcommittee has completed its action on the bill and it is currently headed to full Judiciary Committee markup in September. The bill is on a "fast track," and could possible become law by the end of 1995.

There were numerous amendments to the bill that were offered and approved during the House of Representatives markup. The first of the amendments would alter the language prohibiting the displacement of United States workers by expanding the category of protected United States workers to include those with "substantially equivalent" qualifications and experience in specific employment for which the H-1B employee is being sought. The current language protects only those workers with the same qualifications and experience.

A second amendment affected the bill's requirement that an employer pay H-1B workers at least 110% of the median of the last wage earned by certain laid-off United States workers. The amendment would replace the term "arithmetic mean" for the term "median," to prevent the H-1B wage from being disproportionately influenced by the wages of laid-off workers at the lower end of the employer's pay scale.

A third amendment related to H-1B visa will expand the prohibition against displacing protected United States workers by prohibiting such layoffs "for as long as the labor condition application remains active or a visa remains in effect with respect to a non-immigrant pursuant to such application." This amendment will restrict the employer's ability to retain a non-immigrant worker over a United States worker because the duration of the labor condition application will be the control factor in determining when the employer will be able to layoff a United States worker. Hence, the non-immigrant worker will most likely have to be laid off before a United States worker.

An additional amendment will modify the bill's "job contractor" provisions by extending the no-layoff clause to second employers, i.e., other employers to which the job contractor has sent the H-1B employee. This amendment would pose great difficulties particularly for consultancy and placement firms which "hire out" their employees on a contractual basis.

With regard to Alien Labor Certification, the Smith Bill will restrict employment-based immigration. The bill will impose new experience requirements to employment-based visa categories. The Smith Bill will also have a dramatic effect on Family -Based immigration petitions. The bill will reduce family immigration by over thirty (30) percent. Immigration by adult children and siblings will be eliminated. Anyone unlawfully in the U.S. for an aggregate for 12 months is banned from entering the U.S. for ten years.

Time is of the essence, please contact your local representative or Congressman and voice your concerns regarding this proposed legislation. Do not restrict legal immigration. We support any restriction on illegal immigration.

Amarnath Gowda is an Attorney with the Law Offices of Amarnath Gowda, LL.B., J.D., P.C.
For additional information, see his advertisement inside this souvenir.

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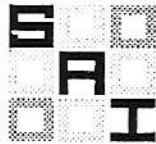
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