

Dr. Arabinda Mitra
Executive Director
Phone : 23321555/42691701
Email : amitra@indousstf.org

**INDO - US
SCIENCE & TECHNOLOGY
FORUM**



27 March 2006

IUSSTF/UC-India Coop/2006

Dear Dr. Vijayaraghavan,

I am pleased to enclose a copy of the MoU on the University of California - India S&T initiative signed on 16th March 2006 in New Delhi. I would like to thank you for being a partner in this initiative.

The Indo-US S&T Forum will be more than happy to seed the joint initiatives under the MoU.

Best regards


(Arabinda Mitra)

Dr. M.S. Vijayaraghavan
Executive Director
Society for Electronic Transactions & Security (SETS)
No. 21 (old No. 11), Mangadu Swamy Street
Nugambakkam
Chennai 600 034

INDIA



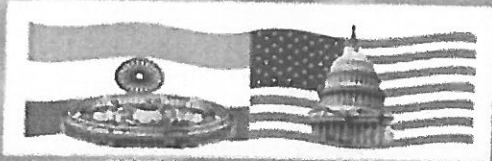
DST, Science and Engineering Research Council, DBT
Government of India



IIT Kanpur



AMRITA Vishwa Vidyapeetham (AMRITA University)



INDO-US Science and Technology Forum



TIFAC



Society for Electronic
Transactions and Security



JNCASR

UC-INDIA INITIATIVE

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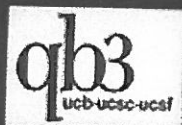
Memorandum of Understanding
between

Science and Technology Organizations of India
and
University of California

UNITED STATES OF AMERICA



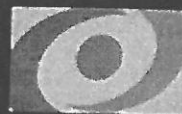
University of California



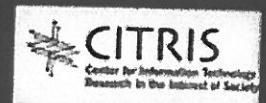
qb3



Calit2



UC SF
Global Health Sciences



CITRIS

Signed in the presence of Shri Kapil Sibal, Honorable Minister for Science & Technology and Ocean Development, on March 16, 2005, in New Delhi, India

UC-INDIA INITIATIVE

A

Memorandum of Understanding

Between

Science and Technology Organizations of India

And

The Regents of the University of California
United States of America

on

Cooperation in Science and Technology

Memorandum of Understanding

Signatories

INDIA

Department of Science and Technology (DST), Government of India

Department of Biotechnology (DBT), Government of India

Science and Engineering Research Council (SERC)

Technology Information Forecasting and Assessment Council (TIFAC)

Indo-US Science & Technology Forum

AMRITA Vishwa Vidyapeetham (AMRITA University)

Indian Institute of Technology (IIT) Kanpur

Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR)

Society for Electronic Transactions and Security (SETS)

UNITED STATES OF AMERICA

Regents of the University of California (UC)

International Strategy Development, Office of the President, University of California

California Institute for Telecommunications and Information Technology (CALIT2)

Center for Information Technology Research in the Interest of Society (CITRIS)

California Institute for Quantitative Biomedical Research (QB3)

Global Health Sciences (GHS), University of California, San Francisco

I. Background

In conjunction with the state visit of Indian Prime Minister Dr. Manmohan Singh to Washington, DC, on July 20, 2005, a landmark memorandum of understanding was signed between US and Indian Universities on engineering education and research. The Indo-US University Network, an alliance of universities in both countries working on engineering education, was created under the leadership of Amrita Vishwa Vidyapeetham (Amrita University). On December 8, 2005, the President of India, Dr. APJ Abdul Kalam, officially launched this program with a presentation that was broadcast live over EDUSAT, India's educational satellite, to thirteen Indian universities. Academic leaders from twenty U.S. universities, including the University of California, were present in India to participate in this program.

II. Summary

The University of California System, with its ten campuses and four Institutes for Science and Innovation, and leading science and technology organizations and universities of India, are now taking their collaborations to a far deeper level through the creation of an initiative on science, technology, research and education. This initiative will dramatically strengthen joint research and educational collaborations, and will build on the recent US-India collaborations in engineering education, expanding the focus to a wide range of disciplines aimed at providing solutions to common pressing challenges that will yield long-term benefits to the competitiveness and security of India and the US. These collaborations will be structured to provide multiple opportunities for the intellectual and professional development of students, and to encourage active participation from U.S. and Indian institutions, government, industry, non-profit organizations, and venture capital entities.

The following sections provide the major components of this initiative.

III. Consistency with India-US Science & Technology Umbrella Agreement

All of the projects undertaken between the UC and science and technology organizations and universities of India will be structured in such a manner as to be consistent with the India-US Science and Technology Umbrella Agreement signed between the Governments of India and the United States on October 17, 2005.

IV. The Partners

IV.1. The University of California (UC)

With ten campuses, five academic medical centers, an annual budget of \$19 billion, 200,000 students, and 155,000 faculty and staff, UC has grown to become one of the world's leading centers of research and education. UC is built on the foundation of distinguished faculty, outstanding students, a world-class education, and internationally acclaimed research breakthroughs. UC faculty and researchers are credited with 49 Nobel Prizes and 56 National Medals of Science, a record unmatched by any other public or private institution. UC also manages three of the most important national laboratories in the United States -- Los Alamos, Lawrence Livermore and Lawrence Berkeley National Laboratories. UC's track record of linking research and education to economic development is unrivalled. Consider the following: In the state of California, UC is estimated to be responsible for the creation of 370,000 jobs per year in California, and to trigger approximately \$15 billion in annual economic growth. UC faculty and students create on average 3 inventions per day, and for the past 11 years have developed more patents than any university in the world.

The University of California encompasses the following 10 campuses:

- University of California, Berkeley
- University of California, Davis
- University of California, Irvine
- University of California, Los Angeles
- University of California, Merced
- University of California, Riverside
- University of California, Santa Barbara
- University of California, Santa Cruz
- University of California, San Diego
- University of California, San Francisco

IV.2. California Institutes for Science and Innovation

The UC experience gained in translating research into real products and services that build local economies and that create jobs is of significant value in the design of the new initiative with Indian partners. UC's California Institutes for Science and Innovation (Cal ISIs), are exciting examples of university research, development and delivery for the 21st century. Using a new model for multi-disciplinary, public-private collaborative research, the Cal ISIs are tackling large-scale societal problems in healthcare, energy, the environment, transportation, civil infrastructure and homeland security through the latest cutting-edge research. The State of California and local industry have together recently invested a total of \$1.4 billion in these new institutes. In addition to the Cal ISIs, UC has also recently established a Global Health Sciences initiative (GHS). The GHS is working to reduce the burden of disease in the world's most vulnerable populations, by integrating UC strengths in the health, social, and biological sciences and applying that expertise to address health challenges in partner nations. Both of these models are a key strategic component of UC's future collaborations with India. While our program will be open to participation by all of the best research laboratories within the UC system, the initial core participation will be from three of the Cal ISIs, specifically the California Institute for Telecommunications and Information Technology Research, the Center for Information Technology Research in the Interests of Society, and the California Institute for Quantitative Biomedical Research, as well as from our Global Health Sciences Initiative.

IV.2.a. The California Institute for Quantitative Biomedical Research (QB3), a cooperative effort among three campuses of the University of California and private industry, harnesses the application of the quantitative sciences - mathematics, physics, chemistry and engineering - to biomedical research that promises to bring about a second revolution to improve human health and create dynamic new technologies. This long-sought integration allows scientists to attack problems that have been simply unapproachable before, setting the stage for fundamental new discoveries, new products and new technologies for the benefit of human health. The Institute builds on strengths in the engineering and physical sciences at UC Berkeley, engineering and mathematical sciences at UC Santa Cruz, and the medical sciences at UC San Francisco, as well as strong biology programs at the three campuses.

IV.2.b. The California Institute for Telecommunications and Information Technology (CALIT2) represents a new mechanism to address large-scale societal issues by bringing together multidisciplinary teams of the best minds (both on and beyond UC campuses) in a way that had been impossible earlier. Calit2 is taking ideas beyond theory into practice, accelerating innovation and shortening the time to product development and job creation. Where the university traditionally has focused on education and research, Calit2 extends that focus to include development and deployment of prototype infrastructure for testing new solutions in a real-world context. CALIT2 represents an experiment in inventing the university research environment of the future to continue to fuel innovation in the global economy. It builds horizontal links among departments to foster multidisciplinary studies, creates research teams consisting of members who can be located anywhere because of the Internet, supports involvement by faculty, students, industry, government, and community partners, enables prototyping in Calit2 "living laboratories", and provides technical professionals as the bridge between academia and industry.

IV.2.c. Center for Information Technology Research in the Interest of Society (CITRIS): The State of California galvanized a powerful partnership of university, industry, and government to launch this effort with CITRIS to propel California to new solutions and leadership in technology, including energy efficiency, transportation, and earthquake preparedness. The CITRIS partnership is the first to create and harness information technology to tackle some of society's most critical needs such as, pervasive, secure, energy-efficient, and disaster-proof information systems, delivering new kinds of vital data that people put to use quickly. More than 100 faculty members in engineering, science, social science, law, information management, health care, and other disciplines at four UC campuses are collaborating with researchers at more than 60 supporting companies on CITRIS research.

IV.2.d. Global Health Sciences, University of California, San Francisco: Diseases such as malaria, tuberculosis, and AIDS compromise the health and tax the resources of millions of people in developing countries. UC Global Health Sciences strives to lift this burden. Working in partnership with institutions around the world, it focuses its expertise in the health, biological, social, and policy sciences on a range of diseases that threaten this and future generations. Collaborative training and research

programs to build infrastructure and develop a trained workforce including leaders in science and medicine are the initial programs through which the mission is being implemented.

IV.2.e. The California Digital Library (CDL) harnesses technology and innovation, and leverages the intellectual and cultural resources of the University of California, to support the assembly and creative use of the world's scholarship and knowledge for the UC libraries and the communities they serve. Established in 1997 as a UC library, the CDL has become one of the largest digital libraries in the world. It

- builds, preserves, and supports access to and local configuration of large-scale, online collections of scholarly and cultural materials;
- supports innovation in scholarly publishing and scholarly communication;
- conducts applied research essential to the development of a scholarly information infrastructure that supports collaborative and geographically distributed research, teaching, and learning.

IV.3. Science & Technology Organizations and Universities of India

The following science and technology organizations, institutions, and universities of India will be initial partners in this initiative:

IV.3.a. Funding Agencies

- Department of Science and Technology (DST) including its Science and Engineering Research Council (SERC), Government of India
- Department of Biotechnology (DBT), Government of India
- Technology Information, Forecasting and Assessment Council (TIFAC)
- Indo-US Science and Technology Forum (Indo-US S&T Forum)

IV.3.b. Universities and Research Centers: Implementing Institutions

- AMRITA Vishwa Vidyapeetham (AMRITA University)
- Indian Institute of Technology (IIT) Kanpur
- Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR), Bangalore
- Society for Electronic Transactions and Security (SETS)

Both sides will work actively to encourage additional Indian implementing institutions to join this initiative. Additional institutions may be added with approval of the Secretary of the Department of Science and Technology and the President of the UC. Other Indian funding agencies including industry and private sources will be encouraged to participate in this initiative.

IV.3.a.i. Department of Science and Technology (DST), Government of India:

DST is the largest Science & Technology funding agency of the Government of India cutting across disciplines and institutions. DST is also the nodal agency for bilateral and multi-lateral Science & Technology cooperation between India and other countries. **The Science and Engineering Research Council (SERC)** was established in 1974 and is an apex body through which the DST promotes R&D programmes in newly emerging and challenging areas of science and engineering. SERC is composed of eminent scientists, technologists drawn from various universities/national laboratories and Industry. This Council is assisted by Programme Advisory Committees (PACs) in various disciplines of Science & Engineering.

IV.3.a.ii. Department of Biotechnology (DBT), Government of India: DBT was set up to give new impetus to the field of modern biology and biotechnology in India. In more than a decade of its existence, the department has promoted and accelerated the pace of development of biotechnology in the country. Through several R&D projects, demonstrations and creation of infrastructural facilities a clear visible impact of this field has been seen. The department has made significant achievements in the growth and application of biotechnology in the broad areas of agriculture, health care, animal sciences, environment, and industry.

IV.3.a.iii. Technology Information Forecasting and Assessment Council

(TIFAC): TIFAC is an autonomous organisation which plays the dual role of a technology think-tank and an agency that implements major technology missions in different technology and industry sectors, ranging from agriculture and agro-food processing to textiles and automotive technology. Under its Mission REACH, TIFAC is working towards upgrading science and engineering education in areas of relevance to industry.

IV.3.a.iv. The Indo-US Science and Technology Forum (Indo-US S&T Forum), established under an agreement between the Governments of India and the United States of America on March 21, 2000, is an autonomous, bilateral, non-governmental, not for profit society that promotes and catalyzes the Indo-US bilateral collaborations in science, technology, engineering and biomedical research through substantive interaction among government, academia and industry. The Forum supports innovative programs aimed to stimulate interactions that have a strong potential for generating follow-on activities and building long term Indo-US Science and Technology relationships. The Forum promotes program that nurtures contacts between the young and mid career scientists and technologists and fosters active public-private partnership in Research and Development.

IV.3.b.i. AMRITA Vishwa Vidyapeetham (AMRITA University), a dynamic University of international excellence established in India by the **Mata Amritanandamayi Math** (also known as **MA Center** in the US), spearheaded the formation of the initial collaborative Indo-US Inter-University network on engineering education, and has set up world-class programs in engineering, medical sciences, and biomedical technologies. It is also home to **Amrita Research Labs (ARL)**, and national centers of excellence in Biomedical Technology, Telematics, E-Learning, Cybersecurity, Digital Health and Telemedicine, Wireless Networks, and Computational Engineering and Networking (CEN). **The Amrita Institute of Medical Sciences and Research (AIMS)** is a 1300-bed all-digital super-specialty hospital and medical research center with strong research groups in a wide spectrum of clinical areas, such as, cardiology, orthopedics, cancer, infectious diseases, chronic illnesses such as diabetes, neurology along with basic research facilities in biochemistry, molecular biology, molecular medicine, toxicology and animal testing. Recently, AIMS has been granted a center status in Nanotechnology as applied to the biomedical area, specifically, in implants, tissue engineering and STEM cell research. AMRITA University has been the prime force in starting this UC-India initiative with the University of California.

IV.3.b.ii. Indian Institute of Technology (IIT) Kanpur is carrying out original research of significance and technology development at the cutting edge. It imparts training to students to make them competent, motivated engineers and scientists. The Institute not only celebrates freedom of thought, cultivates vision and encourages growth, but also inculcates human values and concern for the environment and the society.

IV.3.b.iii. Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR) is a relatively young but already well-known multidisciplinary research institute. Its mandate is to pursue and promote world-class scientific research and training at the frontiers of science and engineering.

IV.3.b.iv. Society for Electronic Transactions and Security (SETS) in Chennai, is set up to enable electronic transactions on a wide scale, and developing technologies and products for protection, surveillance & monitoring and certification in the area of Information Security.

V. Areas for Collaborative Research

The UC and Indian partners will periodically identify areas of cooperation which may be of interest to both sides. Initially the Parties have agreed to explore expanding cooperation in the following areas (but not limited to):

- Biomedical and digital healthcare technologies, Molecular biology, Drug design and delivery systems, Emerging infectious diseases
- Wireless and mobile communication, Intelligent transportation systems, Telematics
- Information technology and cybersecurity
- Technologies for disaster warning, mitigation, and management
- Nano-science and technology, and materials science, including nanobiosciences / nanomedicine
- Energy, including a focus on solar energy and bio-fuels
- Agricultural biotechnologies and food security,
- Biodiversity, with an emphasis on marine systems
- Water quality and quantity
- Global warming and climate change studies

VI. Methods of Cooperation

The mechanisms of cooperation will include:

VI.1 Joint Science & Technology Projects

Research projects may be proposed by a joint group consisting of (1) UC Researchers and (2) Researchers from at least one Indian partner institution. Each such project shall have two Principal Investigators: one from UC and a corresponding one from a Indian partner institution.

VI.2. Joint Meetings, Workshops, Seminars, Training Programs, and Symposia

Meetings, workshops, seminars, or symposia that bring researchers and academicians from both sides can play a key role in a fruitful exchange of ideas, generation of new ideas, formulation of plans for collaborative work, exploration of developments of one side for application in the other side, etc. Such gatherings may be through the visit of a team of scientists, experts, and academicians from India to UC or UC to India, and joint proposals for such gatherings may be submitted at any time.

VI.3. Mutual Visits of Scientists, Researchers, Faculty, and Students

Partners will encourage exchange visits of scientists, technologists, researchers, faculty, and students towards

- Fostering joint Research and Development projects
- Exploratory and planning mission

VI.4. Educational Exchange

Our goal is that the University of California and the science and technology organizations and universities of India lead the world in developing new, research-based models for multinational collaborations on undergraduate and graduate education. These models will focus on integrating collaborative, team-based research into the curricula of students on both sides, and will result in sustainable communities of collaboration. While, because of their practical focus, the emphasis is on science, engineering, medicine and agriculture, for each of these projects the social science and humanities will also be given high priority.

Some elements of the envisioned partnership include:

- Research topics will be chosen to address practical, interdisciplinary challenges that are of importance both to India and California;
- Students will work together in bi-national teams, with guidance of faculty members from both sides, and facilitated as needed by electronic communications;
- A program of reciprocal student and faculty exchange will be designed, to enable them to spend extensive time on each others' campuses, engaging in both research and education;
- These collaborative research opportunities will be designed so as to engage students very early in their undergraduate careers, but will include joint efforts continuing up through doctoral level, such as joint advising of students by UC faculty and faculty from Indian partner institutions;
- Program will incorporate a strong focus on developing creativity, entrepreneurship, and multinational teamwork skills in students;
- Through work on common practical challenges, students in Science & Technology disciplines will develop a sophisticated awareness of how local, social, cultural, economic and political factors constrain potential solutions to technical problems;
- The collaborative research will be enabled, enriched and sustained by participation, on both sides, of multiple sectors of our societies, including state and local government, industry, the entrepreneurial sector, and community organizations;
- The effort will incorporate a rigorous program of evaluation and assessment, so that the lessons learned from our work can be of broad utility to the higher education community not only in the U.S. and India, but worldwide.

VII. Implementation

For the purpose of effective implementation of this Memorandum, a bi-national Joint Steering Committee (JSC) will be established.

VII.1. Joint Steering Committee (JSC)

The Joint Steering Committee will have responsibility for the management of this collaboration under the directions of the Secretary, Department of Science and Technology, Secretary, Department of Biotechnology, Government of India, and the President of the University of California. The responsibilities of the Joint Steering Committee include:

- Creating favorable conditions for implementation of the goals of this Memorandum and giving the appropriate recommendations for this purpose; and subsequent review of the implementation of the MoU;
- Selecting priority directions of cooperation and collaborative research;
- Defining the scientific and technological program content, including formulating calls for proposals in both general and specifically targeted areas;
- Receive, review and recommend for approval: proposals submitted for funding;
- Monitoring of the funded projects.

VII.2. Initial Composition of the JSC

The initial composition of the JSC will be as follows:

- Four members representing DST (SERC), DBT, TIFAC, and the Indo-US S&T Forum
- Four members from UC selected by the UC President
- Two eminent scientists from India, one each nominated by the Secretary of DST and Secretary of DBT
- Two eminent scientists from the U.S. nominated by the UC President
- A Convener from India and a Co-Convener from the UC

For the first two years, Amrita Vishwa Vidyapeetham will serve as the Convener from the Indian side, and the Office of International Strategy Development in the UC Office of the President will serve as the Co-Convenor. Subsequent conveners for the Indian and UC sides will be appointed by the Secretary of the DST and the President of the UC, respectively. The JSC may be expanded with the mutual consent of the Secretary, Department of Science and Technology, Secretary, Department of Biotechnology, Government of India, and the President of the University of California.

VII.3. Meetings of the JSC

The JSC will meet semi-annually or more frequently if needed, preferably alternately in India and the U.S. When the JSC meets in India, an Indian member will be elected as Chair, and similarly, when the JSC meets in the U.S., a member from the U.S. will be elected as the Chair.

VII.4. Servicing the JSC

The Indo-US Science & Technology Forum shall service the JSC.

VIII. Funding

With a desire to provide a fertile ground and funding for a successful blooming of this landmark UC-India Initiative, both UC and Indian Scientific Organizations intend to provide adequate support, subject to the budgetary appropriations available to each side and the applicable laws and regulations.

Under this MoU, four types of project proposals may be submitted for funding:

1. A project that has already received funding on the UC side, may seek funding support from Indian funding agencies for the addition of partner institutions from India.
2. A project that has already received funding from the India side, may seek funding support from US funding agencies for the addition of partner institutions within the UC System.
3. Principal Investigators of Projects already funded in both US and India, may jointly seek additional funding from funding agencies in either country to enable them to work together.
4. Principal Investigators, at least one each from India and UC may jointly submit new project proposals for fresh funding from funding agencies in either country.

The annual limits on total funding through this MoU will be INR 50 Crores on the Indian side, and \$10 Million on the U.S. side. It is understood that UC's financial contribution to this programme will be through related funded projects granted from a variety of sources, including U.S. federal government, California government, industrial and private sources.

Both sides will also develop continued fund-raising efforts to gain further support from national and local government, industry, and the private sector in both countries.

The UC will give access to its libraries to project participants, including: 1) Indian researchers, students, and faculty members participating in projects under this agreement, and 2) students participating in collaborative degree programs in which part of their time will be spent on a UC campus. Such participants will have access to UC system-wide licensed electronic resources via the California Digital Library as well as to the library-licensed electronic resources of the primary campus with which they are affiliated. During their residence at a UC campus, participating students, researchers, and faculty with official visiting status at a UC campus will have physical access to the print resources of the UC libraries.

IX. First Proposed Projects

The first proposed set of projects and their corresponding implementing institutions on both sides shall be finalized at the first meeting of the JSC.

X. Confidentiality

The Parties agree that all the information in this MOU, received from each other, is considered as confidential and cannot be revealed to any third person or organization without prior consent of all the Parties, except as required by law.

XI. Amendments

Any amendments and additions to this MOU will be effected by mutual agreement between the Parties in written form. Details and forms of cooperation will be periodically reviewed by the parties and modified as per mutual agreement.

XII. Effective Period

This MOU comes into effect from the date of its signature for an initial period of 5 years. This will be automatically extended for a further period of five years unless either Party gives a written notice of its intention otherwise.

XIII. Conclusions

Science and technology organizations, institutions, and universities of India, and the University of California in the United States of America, have the opportunity to seize a historic moment and illustrate to the world the tremendous capacity of research

universities to foster bi-national economic growth and improve quality of life. We look forward to the contributions of multiple sectors of both American and Indian society in this research, education and economic development agenda.

XIV. The Signatories to this Memorandum of Understanding (MoU)

Recalling the long-term fruitful, scientific and technical ties between India and the United States of America; and wishing to develop further cooperation in the field of prospective technologies for common benefit of the two countries, the parties have agreed for cooperation in advanced fields of science & technology.

Done at New Delhi, India on Day Thursday, March 16, 2006.

Witnessing the above, the undersigned, is having full authority, have signed this MoU:


INDIA	
Department of Science & Technology (DST), Government of India	Signature Page 19
Department of Biotechnology (DBT), Government of India	Signature Page 20
Science and Engineering Research Council (SERC)	Signature Page 21
Technology Information Forecasting and Assessment Council (TIFAC)	Signature Page 22
Indo-US Science & Technology Forum	Signature Page 23
AMRITA Vishwa Vidyapeetham (AMRITA University)	Signature Page 24
Indian Institute of Technology (IIT) Kanpur	Signature Page 25
Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR)	Signature Page 26
Society for Electronic Transactions and Security (SETS)	Signature Page 27

UNITED STATES OF AMERICA	
The Regents of the University of California (UC)	Signature Page 29
International Strategy Development, Office of the President, University of California	Signature Page 30
California Institute for Telecommunications & Information Technology (CALIT2)	Signature Page 31
Center for Information Technology Research in the Interest of Society (CITRIS)	Signature Page 32
The Institute for Quantitative Biomedical Research (QB3)	Signature Page 33
Global Health Sciences, University of California, San Francisco	Signature Page 34


Signatories from India

INDIA

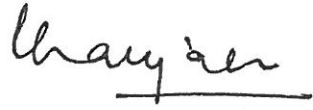
Department of Science and Technology (DST), Government of India

Name, title & affiliation	Signature
Professor V. S. Ramamurthy Secretary, Department of Science & Technology (DST) Government of India & Co-Chairman of Board, Indo-US Science & Technology Forum New Delhi, India	


Department of Biotechnology (DBT), Government of India

Name, title & affiliation	Signature
Dr. M. K. Bhan Secretary, Department of Biotechnology (DBT) Government of India New Delhi, India	


Science and Engineering Research Council (SERC)

Name, title & affiliation	Signature
Dr. Rao Aiyagari Adviser Science and Engineering Research Council (SERC) Department of Science and Technology Government of India New Delhi, India	


Technology Information Forecasting and Assessment Council (TIFAC)

Name, title & affiliation	Signature
Professor Anand Patwardhan Executive director Technology Information Forecasting and Assessment Council (TIFAC) New Delhi, India	

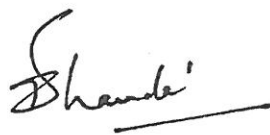
Indo-US Science & Technology Forum

Name, title & affiliation	Signature
Dr. Arabinda Mitra Executive director Indo-US Science & Technology Forum New Delhi, India	


AMRITA Vishwa Vidyapeetham (AMRITA University)

Name, title & affiliation	Signature
Professor P. Venkat Rangan Convener & Vice Chancellor AMRITA Vishwa Vidyapeetham (AMRITA University) Coimbatore, India	


Indian Institute of Technology (IIT) Kanpur

Name, title & affiliation	Signature
Professor Sanjay Dhande Director IIT Kanpur Kanpur, India	

Jawaharlal Nehru Centre for Advanced Research (JNCASR)


Name, title & affiliation	Signature
Professor M.R.S. Rao President Jawaharlal Nehru Centre for Advanced Research (JNCASR) Bangalore, India	

Society for Electronic Transactions and Security (SETS)


Name, title & affiliation	Signature
Dr. M.S. Vijayaraghavan Executive Director Society for Electronic Transactions and Security (SETS) Chennai, India	 16/03/2006

Signatories from The University of California


The University of California

Name, title & affiliation	Signature
Regents of The University of California Professor Robert C. Dyne President University of California Oakland, California	


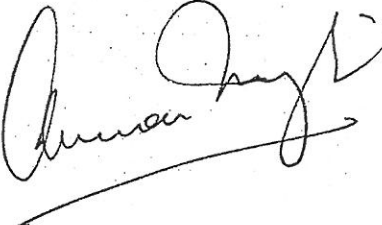
The University of California

Name, title & affiliation	Signature
Professor Gretchen Kalonji Director of International Strategy Development Office of the President University of California Oakland, California	

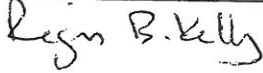
**The California Institute for Telecommunications and Information Technology
(CALIT2)**

Name, title & affiliation	Signature
Professor Ramesh Rao Director, UCSD Division The California Institute for Telecommunications and Information Technology (CALIT2) La Jolla, California	

**Center for Information Technology Research in the Interest of Society
(CITRIS)**

Name, title & affiliation	Signature
Professor Shankar Sastry Director Center for Information Technology Research in the Interest of Society (CITRIS) Berkeley, California	
Professor Arun Majumdar Director Nanosciences and Nanoengineering Institute Berkeley, California	

California Institute for Quantitative Biomedical Research (QB3)

Name, title & affiliation	Signature
Dr. Regis B. Kelly Director California Institute for Quantitative Biomedical Research (QB3) San Francisco, California	 March 13, 2006

**Global Health Sciences (GHS)
University of California, San Francisco**

Name, title & affiliation	Signature
Dr. Haile Debas Executive Director Global Health Sciences (GHS) University of California, San Francisco San Francisco, California	