Industry Reaching out to Academia

Sriram Venaktesan | IT Specialist
IBM Academic Initiative | IBM Software Group
The Economy Has Reached a New Era – An Innovation Era

21\textsuperscript{st}-Century Drivers of Change

**Network Ubiquity**
- More than a billion Internet users today

**Open Standards**
- Widely-adopted technical and transaction specifications

**New Business Designs**
- Horizontally-integrated operations
Industry transformation and innovation driving growth

*Industries undergoing radical transformation*

- Broad-based industry growth
- Industries undergoing restructuring
- Strong global aspirations
- Global acquisitions by Indian firms

*India is driving global innovation*

- India’s people are the source of innovation
- MNCs: From labor-arbitrage to mission-critical innovation
- Indian companies migrating up the value-chain to offer high-end services
- Rural and indigenous innovations
Interdisciplinary skills are very highly valued.

Need more T-shaped people – both deep and broad.
One Answer to the Need for Curricula Change: Services Science, Management & Engineering (SSME)

The marketplace requires innovation that combines people, technology, value and clients.
A Shared Responsibility

- **Academics need to make service innovation a priority**
  - Job placement for existing students
  - University competitiveness for prospective students
  - Continued attractiveness to business for shared research

- **Governments need to make service innovation a priority**
  - GDP growth of nations increasingly depends on it

- **Businesses need to make service innovation a priority**
  - Revenue and profit growth increasingly depend on it
SSME Roadmap for University Faculty

1. Learn about Services as a Science
   - Go to the IBM SSME website: [www.ibm.com/university/ssme](http://www.ibm.com/university/ssme)

2. Assess what your school is doing now in SSME-related studies and share with IBM and other universities. Identify gaps in curriculum and build SSME curriculum.

4. Collaborate with other Universities who are leaders in SSME research
   - Berkeley, CMU, Stanford, MIT, Oxford, Tsing Hua, NCSU, GA Tech, SJSU

6. Participate in the SSME evolution:
   - Champion efforts to promote SSME
   - Conduct research in various challenge areas
   - Build new course curriculum for degree programs
   - Build case studies using IBM customer examples, industry studies and business issue studies
   - Post SSME curricula and courseware on IBM Academic Initiative website for collaboration
   - Engage in SSME conferences and events

8. Seek out funding from government and other foundations/agencies for SSME research and training development
IBM Academic Initiative

- Partner with colleges and universities to drive open standards
- Better educate millions of students for a more competitive IT workforce

www.ibm.com/university/academicinitiative
IBM Academic Initiative – India Programs

- Programs
  - Middleware Skill Development – Training & Certification
    - DB2 and WebSphere software
    - Rational Seed Program
    - Training, certification and courseware
    - Certification for students & faculties in SOA, XML, DB2, WebSphere, Tivoli
- Contests
  - Project INVITE
  - Tivoli Reach Program
  - The Great Mind Challenge
- Other Initiatives
  - WW IDR Speaker University sessions
  - Eclipse / WAS CE / DB2 Express – ‘C’ workshops
  - IBM – VTU EDUSAT Programs
  - Eclipse Innovation Grants
  - Apache Derby/Cloudscape
  - Linux Campus Club
  - Advanced Technology Updates…SOA, Web Services, Grid Computing… Open Standards!

IBM Academic Initiative provides software and courseware for use in curriculum and research
"In times of change, learners inherit the earth..."
— Eric Hoffer, author

Your world looks brighter with IBM on your side
Confidently face the future of IT technology. Gain unmatched industry expertise. Join an open community of shared knowledge and skills.

What’s new
New school year, new resources. Great for lab exercises, this SQL and XQuery tutorial series is just one of the many new offerings that help professors stay on top. Visit IBM Academic Initiative to find more.

Ph.D. Fellowships
→ Learn more

CASCON 2006
→ October 16-19
Ontario, Canada

New student contests
Win t-shirts, iPods, laptops!
→ Master the Mainframe
→ Accessibility ODF Coding Challenge

www.ibm.com/university
IBM’s free online resource for faculty

- Technology Resources
- Software Downloads
- Tutorials and Training
- Curriculum & Courseware
- Forums
- Certification Information and Discounts
- Technical support
- Free Copies of IBM Press Books to Faculty Members
- Enrollment for Monthly Newsletter
- Links to:
  - Student Portal
  - DeveloperWorks
  - AlphaWorks
developerWorks - IBM’s resources for developers

- www.ibm.com/developerWorks

- Open and emerging technologies, as well as IBM product information
  - Tutorials
  - Product downloads
  - Q&A forums
  - How-to articles
  - Sample code
  - Blogs
  - RSS feeds
  - Newsletters
alphaWorks: Emerging technologies

alphaWorks
Emerging technologies

IBM Simulation Producer
IBM Simulation Producer is a tool for quickly creating application simulations for training purposes by capturing user input through interactive images and events. Learn more.

Data Access Services for IBM WebSphere Product Center: A Web service that provides an "out-of-the-box" way to access and manipulate WebSphere Product Center data.

IBM Web Service Streaming Engine: A standards-based multi-media server that serves both live and stored presentations and that is accessible as and controlled as a Web service for Windows and Linux.

IBM Client Application Tool for JMS: A J2EE application client with a SWING- and SWT-based user interface that interacts with JMS 1.1-compliant JMS providers, such as WebSphere MQ and the Service Integration Bus.

Systems Management Framework for Distributed Environments: A custom-coded Java framework for administering a distributed WebSphere environment.

Celebrating 10 years of innovation and the launch of alphaWorks Services
We're celebrating ten years of ushering in emerging technologies that have helped shape the technology landscape.
How IBM Can Help Support your Efforts: Course Consultation - Areas to consider

- Business Courses: **Websphere Business Modeler**
- Programming: Use **Eclipse or Rational Application Developer** as an IDE
- Introductory Programming: Are your students learning **Java**?
- Software Engineering, Methodology, or OO Design: Consider using **Rational modeling tools for labs; SOA is key**
- Database: Consider including **Derby/Cloudscape or DB2 Express**
- Operating Systems: Consider **Linux**
- Business Intelligence: Consider **Data Warehouse and WebSphere**
- Knowledge Management: Consider **Lotus products and tools**
- Security Monitoring and Network Management: Consider **Tivoli**
- Internet Access and Protocol: Consider **WebSphere**
- IBM **server technology** as a “platform of choice”
Academic Innovation … that Matters

- Technical talent needed more than ever - but nature of that talent is changing

- Growing Demand for new generation of innovators with deep knowledge of service related disciplines

- In essence, there’s a need for a FUSION of
  - Business/Finance
  - Technology
  - Social/Cultural

- IBM, with it’s “full spectrum” of research, services, industry and technology expertise, is in the unique position to work closely with academic institutions to help shape the workforce and business and society of the future
IBM Resources

www.ibm.com/university/academicinitiative

www.ibm.com/in/university

www.ibm.com/university

www.ibm.com/developerWorks

www.ibm.com/alphaWorks

www.ibm.com/university/ssme

www.ibm.com/developerWorks/patterns

www.ibm.com/open