



Illinois Informatics Institute
Invent Imagine Innovate

I³ – A Short Introduction

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www.informatics.uiuc.edu

Informatics

- **Informatics** studies the structure and behavior of systems that store, process and communicate information and develops the technologies needed to implement such artificial systems
- Three (tightly interconnected and inherently multidisciplinary) areas:
- **Social Informatics & Policies**
- **Computing & Information Science**
- **Applied Informatics (e.g., medical informatics)**



Areas are Interdependent

- CS needs social informatics
 - design under social sciences constraints
- Social informatics needs CS
 - synthesis of experimental apparatus
- Sciences and humanities need applied informatics:
 - advanced data analysis
 - simulation – virtual worlds
 - virtual organizations
- CS need applications
 - That's where the action is



Informatics at Illinois

- We have excellence and size
 - **CS, ECE, GSLIS**, and pockets everywhere
 - **NCSA, CSL, ITI**, Beckman, IGB, Library, Extension...
- Problem:
 - How do we get synergies between all these activities?
 - How do we use our excellence in Informatics to transform the campus?



Possible Approaches

- Create a large Informatics School, bringing together all relevant units.
 - Will take many years and cause havoc
 - Will just create a new silo
- Create a new research institute
 - Further weakens the connection between research and education
 - Competes with existing institutes
- **Approach taken:** create a flexible, open-ended virtual organizations – a “virtual college”



I³ Mission

- Short-term mission:
 - Change research and education in computing and information science on our campus
 - Infuse computing and information science in the research and education of all units on campus
 - Pilot a new type of organization on campus
- Mid-term mission:
 - Change the University
- Long-term mission
 - Change the world



Dimensions

- *Intellectual Scope*: broad definition of informatics
- *Culture*: The boundary breaking Internet culture
- *Cultural impact*: aims at infecting departments with the Internet culture
- *Short term research and education scope*: see next
- *Infrastructure*: virtual organization “without walls”, and with no faculty lines (can move fast and can afford to fail)
- *Organization*: participation is voluntary

Model is unique and distinct from emerging schools of information – will test our ability to work across boundaries; if successful, will have broader impact



Current Education Scope

- Undergraduate informatics minor
 - Open to all students on campus
 - 3 core courses and 3 electives
 - Includes multiple tracks, matching the needs of various majors.
- Bioinformatics Master
 - Given in six units, and coordinated by I³.



Future Education Plans

- Doctoral Informatics program
 - Involving faculty from a large number of application areas
- Interdisciplinary Informatics undergraduate major
 - One program, with a common core of informatics courses and different application tracks
 - *Library and Information Science, Fine Arts, Media...*



Research Goals

- Initiator, incubator, catalyst for new research initiatives in informatics
- Development and promotion of better informatics tools to help campus work (Faculty help thyself)
 - Closed loop of developer, user, evaluator
- Study of I³ as a new organization model



Current Research Centers

- CHASS – Computing for the Humanities, Arts and Social Sciences
 - Create data repositories and analytical to support research in the humanities
- CII – Community Informatics Initiative
 - Work with disadvantaged communities to develop information and communication technologies that serve their needs



Intellectual Issues

- IT is changing the workings of knowledge-intensive organizations
 - efficient use of IT requires changes in processes, rather than automation of existing processes
- IT has not changed significantly the workings of the university
 - we are still at the stage of automating pre IT processes
- How will IT change the university? How do we affect/accelerate/drive this change?
- Pull model vs. push model in education
- Lower barriers for interaction across units, and across students/faculty/staff populations
- More varied, more efficient models for extending the campus community beyond its geographical boundaries
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Thank You!

