Information-Centric Design of Systems
Using Information Technology to Improve the Quality of Life

Prof. Ashok K Agrawala

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What is this Course About

Improving the quality of life using information technology
Participants

• UMD
  – 19 registered
  – ...

• Amrita University
  – AmritaPuri
  – Coimbatore
  – Bangalore

• Dayalbagh Educational Institute
  – 9 registered
Mode of Operation

• Independent and Group activities and research
• Cooperation and Interaction
• Exchange of ideas - Forum
• Groups of 2-3 people
• Assigned work for each week
• Every week
  – Lecture Session
  – Discussion Session
    • As required
Methodology

• Lectures
  – Focused presentation on a topic
    • Slides posted on the web
      – Annotate by adding your notes to catch the major points that may come up in discussions.

• Group Studies – Research and Exploration
  – Reports to be made in discussion session
    – Same rules of annotation apply

• Proof of Concept Demonstrations/Projects
  – Using Testbeds
    • MyeVyu
    • MAXWell Net
    • ...

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Grading

• Based on
  – Class participation
  – Weekly activities
  – Papers/ Projects
  – Exams
Interactions

• In Class
• Through “Forum”
• Papers
• Web postings
• Individualized
• ...

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Quality of Life

• What does it mean to you?
Perspective

• Individual
  – Family
  – Social Groups
  – Friends Circle
  – ...

• Organization
  – International - UN
  – Corporation
  – Government
  – Non-profit
Areas

• Security
  – Public Safety – Individual
  – First Response – Incidence
  – Emergency Response – Catastrophic events

• Education
  – Elementary
  – School
  – College
  – Post Graduate and Research

• Health Care
  – Physician
  – Hospital
  – ER
  – Wellness care – health clubs – exercise
  – Food and Nutrition

• Recreation
• Social Interactions
• Transportation
• E-commerce
• Finance
Some Basic Notions

• Information
  – Fundamental Nature
  – Implications
• Interrelationships
• Context
• Models
• Limitations of Physical representations of information
Technological aspects

- Processing
- Storage
- Human Interaction
- Communications

- Inputs
  - Sensors

- Outputs
  - Actuations
  - Commands
  - Messages
When reading a paper

Standard paper questions:
• What is the claim of the paper?
• What is the key idea of the paper?
• What are the strengths and weaknesses of the paper?

Information-Centric questions:
• What is the purpose of the ‘information’ they are capturing?
• What ‘information’ are they capturing?
• How are they capturing the ‘information’?
• How are they storing the ‘information’?
• What ‘contextual information’ are they capturing?
• Is the ‘information’ being captured sufficient or useful for the purpose?
• What additional ‘information’ could or should be captured?