

Introduction to Systems Analysis

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- Goals of CIS 3300
- A Need for Systems Analysis
- Discussion Questions

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Questions Answered in This Lecture

- Where are the resources for this class?
- Is there are need for systems analysts?
- What kind of skills do systems analysts have?

Dr. Melody Moore

- Resume

- Nine years in Industry as a Software Engineer
 - Texas Instruments
 - Sperry (Unisys)
 - National Semiconductor
- Ph.D. Georgia Tech
- Interests
 - Software maintenance and reengineering
 - Human-computer interface (for people with disabilities)
 - Educational technology

- Home page

- www.cis.gsu.edu/~mmoore

Dr. Robinson

CIS 3300 Resources

- Home page

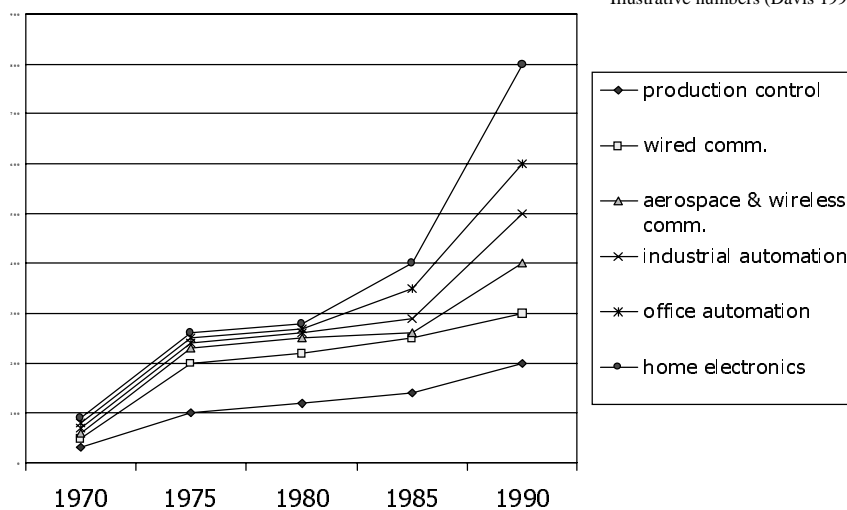
- www.cis.gsu.edu/~mmoore/CIS3300
- Contains
 - Syllabus
 - Assignments
 - Lecture notes
 - Project information
 - Related WWW links
 - Etc.
- GSU Labs
 - Library South 109
 - Kell Hall 120

Goals of CIS 330 Systems Analysis

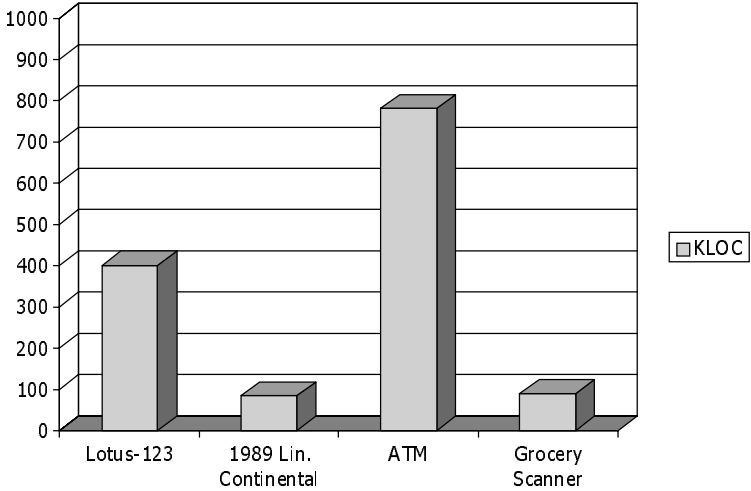
- Do systems analysis
- Write a structured system specification
 - System requirements
 - Class diagram
 - Use Case diagram
 - Sequence and Collaboration diagrams
- Work in groups
- Use CASE technology

Software Is Pervasive

Illustrative numbers (Davis 1990)

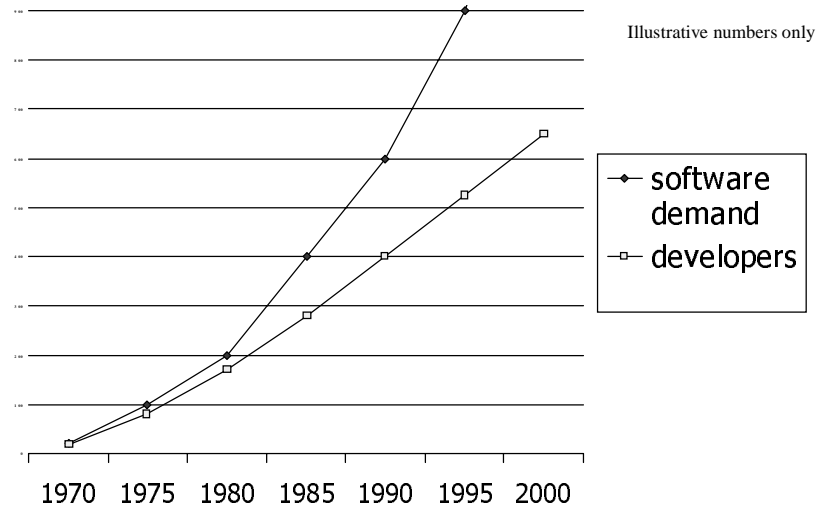


Software Is Getting BIG



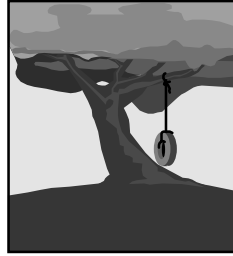
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Growing Demand for Developers

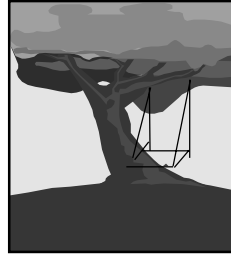


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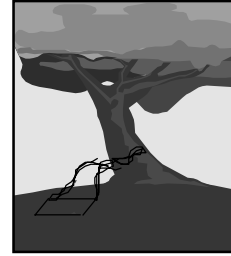
Systems Analysis



Current System



Users Require..

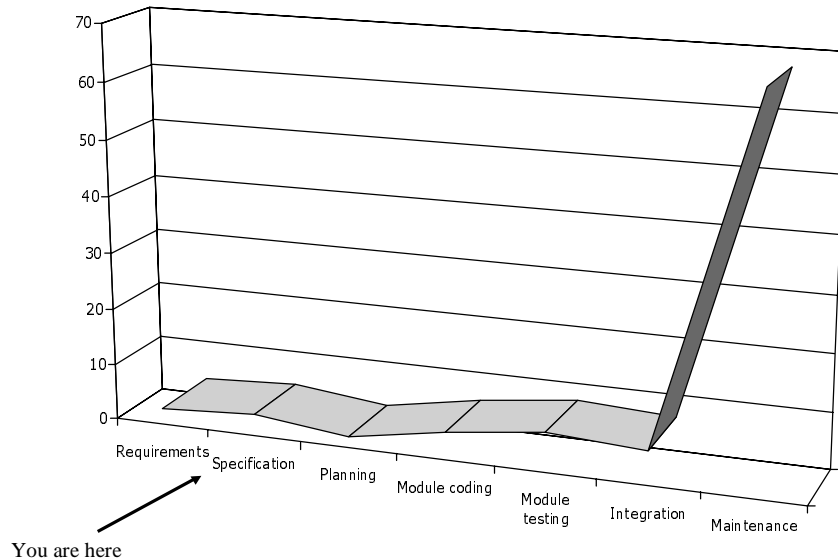


Developers
Deliver..

Seek to Understand

- Analysis develops understanding
- Reduces overall cost of development
 - Cost of discovering and fixing faults in a system grows substantially as it passes through each phase of development
- The Denver debacle
 - Cost: \$1.1 million per day

Relative Life Cycle Costs



Parking Gone Wrong

- Three violators of the municipal parking code became war criminals when an official entered the wrong code number.
- Three Bayreuth residents received summonses for "conspiracy to prepare aggressive warfare," when they should have only received citations for parking violations.
- [The officer had entered the wrong code.]
 - Nordbayerischen Kurier

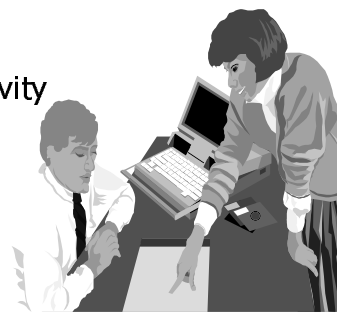
Systems Analysis

- Understand user needs
- Specify user needs
- Model the system
- Understand consequences



Analysis Skills

- Data gathering
- Communicating
 - Systems analysis is a social activity about technical descriptions
- Modeling
- Tenacity
 - Most analysis involves “re-analysis”



CIS 3300 Systems Analysis Skills

- Data gathering techniques
 - Interviews
- Communicating
 - Group projects & presentations
 - Class & electronic discussions
 - System requirements
- System modeling
 - Process modeling with Use Case, Sequence, Collaboration diagrams
 - Data modeling with Class diagram

Discussion Questions

- How does one begin systems analysis?
- What role do
 - Requirements play? If any?
 - Business objectives play? If any?

Don't Forget

- Make sure to frequently check...
 - www.cis.gsu.edu/~mmoore/CIS3300
- Keep up with the syllabus
 - See the readings and assignments