mhepp@computer.org

Information Systems
ISM 3011

Fall 2004

Unit 1A

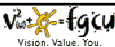Dr. Martin Hepp   1

Introduction

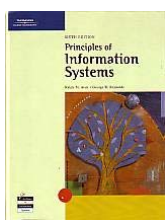| 2000-2003 | PhD in Management and Information Systems, University of Wuerzburg, Germany |
| 1994-1999 | Diplom-Kaufmann (M.B.A.), Business Administration and Management, University of Wuerzburg |
| | Majors: Information Systems, Operations Research, Law |

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Textbook

- Ralph M. Stair / George W. Reynolds: Principles of Information Systems, 6th edition
  (ISBN 0-619-06489-79)

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Resources ISM 3011

- Course Web Page
  – http://ruby.fgcu.edu/courses/mhepp/
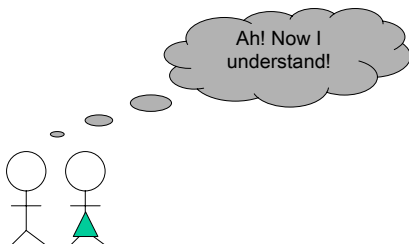 (-> ISM 3011 / CRN 80097)

- Office Hours
  – Wednesdays, 2:00 to 5:00 p.m. or by appointment
  – by email mhepp@computer.org

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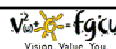
Teaching Philosophy

Ah! Now I understand!

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Overall Learning Goal

- Learn to use Computer Technology effectively and efficiently for business purposes.
- Understand the transformation of the business world currently in progress and look behind the buzzwords.
- Be well prepared for a career in the dynamic, global economy.

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Assignments and Grading

My personal point of view:

Justice is…
when the rules are clear.

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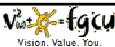## Assignments and Grading

- 3 Midterm Exams   **40 %**
- 2 Assignments   **30 %**
- Average Score in Quizzes   **30 %**

- In order to pass this course, you must
  1. turn in ALL assignments in time,
  2. pass all three exams with 70 % or better, and
  3. pass all assignments with 70 % or better.
  No late assignments will be accepted.

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Assignments and Grading

- Exam 1: September 29, 2004
- Exam 2: November 1, 2004
- Exam 3: December 1, 2004

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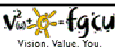
Assignments and Grading

- **Assignment 1** (due on October 4)
- **Assignment 2** (due on November 3)

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Attendance Policy

- Topics covered in class deepen and expand the contents of the textbook. **Reading the respective textbook sections is thus required but not sufficient.**
- On average 1 quiz per week

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Be prepared…

- Read the reading assignments!
- Prepare the cases!

Hunted down by deadlines

Be the happy early bird…

…and not the suffering late one!

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Grading

- Cheating and Academic Dishonesty Policy
  - see "Student Code of Conduct" on p.11, and "Policies and Procedures" on p. 18-24 of the Student Guidebook
- DON'T:
  - Copy/paste from the internet, textbooks, or your friends,
  - use cell phones, PDAs, etc.
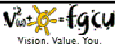
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Assignment for Next Class

- Read chapter 1 (p. 1 – 33)
- Self-Assessment test (p. 34)
- Check that you know the key terms listed on pages 34 and 35.
- Prepare review questions 3, 4, 7, 11,12, and 13 (p. 35)
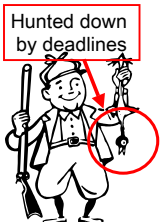
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What is the difference between a computer and a TV set?

Both
- have a screen,
- a "keyboard", and
- react to keystrokes.

- So what is the difference?

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Computer vs. TV set

- "Likes" to work
- Can perform tasks autonomously

- Lazy
- Displays what is generated elsewhere and by others

The computer has already and will continue to change the way we work, and compete with us on the labor market, because he can work, too!

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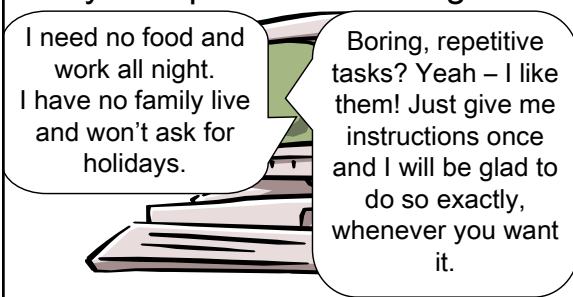
The Future Labor Market

Hire me!

You better hire me!

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My Competitive Advantages…

I need no food and work all night. I have no family live and won't ask for holidays.

Boring, repetitive tasks? Yeah – I like them! Just give me instructions once and I will be glad to do so exactly, whenever you want it.

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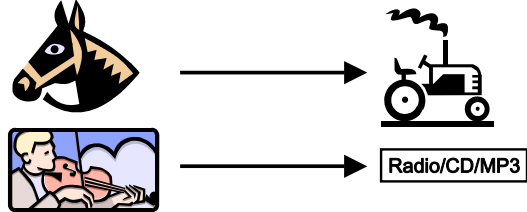
The History of Automation

Radio/CD/MP3

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The fully automated bookstore

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What Are Our Competitive Advantages?

Computer (so far) can't
- design,
- create,
- organize,
- maintain, or
- improve computers and their usage.

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A Great Chance for Your Career

- There is constant need for individuals who invent new ways to use computers for business purposes.
- This is an interdisciplinary challenge, requiring skills in both business and computer technology.

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Chapter 1:Principles and Learning Objectives

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Principles and Learning Objectives

- The value of information is directly linked to how it helps decision makers achieve the organization's goals.

  – Distinguish data from information and describe the characteristics used to evaluate the quality of data.

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Principles and Learning Objectives

- Models, computers, and information systems are constantly making it possible for organizations to improve the way they conduct business.

  – Name the components of an information system and describe several system characteristics.
  – Identify four basic types of models and explain how they are used.

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Principles and Learning Objectives

- Knowing the potential impact of information systems and having the ability to put this knowledge to work can result in a successful personal career, organizations that reach their goals, and a society with a higher quality of life.

  – Identify the basic types of business information systems and discuss who uses them, how they are used, and what kinds of benefits they deliver.

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Principles and Learning Objectives

- System users, business managers, and information systems professionals must work together to build a successful information system.

  – Identify the major steps of the systems development process and state the goal of each.
  – Discuss why it is important to study and understand information systems.

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Information Concepts

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Information System

- A set of interrelated components that collect, manipulate, and disseminate data and information, and provide feedback to meet an objective

- Examples: ATMs, airline reservation systems, course reservation systems

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Data vs. Information

- **Data:** raw facts

- **Information:** collection of facts organized in such a way that they have value beyond the facts themselves

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Types of Data

TABLE 1-1
Types of Data

Data	Represented By
Alphanumeric data	Numbers, letters, and other characters
Image data	Graphic images and pictures
Audio data	Sound, noise, or tones
Video data	Moving images or pictures

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The Characteristics of Valuable Information

TABLE 1-2
Characteristics of Valuable Data

Characteristics	Definitions
Accurate	Accurate information is error free. In some cases, inaccurate information is generated because inaccurate data is fed into the transformation process (this is commonly called garbage in, garbage out [GIGO]).
Complete	Complete information contains all the important facts. For example, an investment report that does not include all important costs is not complete.
Economical	Information should also be relatively economical to produce. Decision makers must always balance the value of information with the cost of producing it.
Flexible	Flexible information can be used for a variety of purposes. For example, information on how much inventory is on hand for a particular part can be used by a sales representative in closing a sale, by a production manager to determine whether more inventory is needed, and by a financial executive to determine the total value the company has invested in inventory.
Reliable	Reliable information can be depended on. In many cases, the reliability of the information depends on the reliability of the data collection method. In other instances, reliability depends on the source of the information. A rumor from an unknown source that oil prices might go up may not be reliable.

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The Characteristics of Valuable Information

Relevant	Relevant information is important to the decision maker. Information that lumber prices might drop may not be relevant to a computer chip manufacturer.
Simple	Information should also be simple, not overly complex. Sophisticated and detailed information may not be needed. In fact, too much information can cause information overload, whereby a decision maker has too much information and is unable to determine what is really important.
Timely	Timely information is delivered when it is needed. Knowing last week's weather conditions will not help when trying to decide what coat to wear today.
Verifiable	Information should be verifiable. This means that you can check it to make sure it is correct, perhaps by checking many sources for the same information.
Accessible	Information should be easily accessible by authorized users to be obtained in the right format and at the right time to meet their needs.
Secure	Information should be secure from access by unauthorized users.

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The Characteristics of Valuable Information

FIGURE 1-2
The Process of Transforming Data into Information

Data → The transformation process (applying knowledge by selecting, organizing, and manipulating data) → Information

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Summary

- Common functions in the workplace will be taken over by computer systems.
- Being capable of finding and implementing innovative ways of computer usage in businesses is a skill with great potential.
- Such tasks require both business and computer technology skills.

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The slides will be available on the
internet at
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