Intro to SAP R/3

Enterprise Resource Planning (ERP) System

- Computer system that integrates application programs in accounting, sales, manufacturing, and other functions in the firm
  - Enterprise-wide resources needed to make, ship, and account for customer orders
- Integration accomplished through a database shared by all the application programs
- Allows firm to achieve end-to-end connectivity

Reasons for Implementing ERP

- Desire to standardize and improve processes
- Improve the level of systems integration
- Improve information quality

ERP Systems

- Case studies show that firms that have implemented ERP systems have made improvements in inter-functional coordination and business performance at various levels (reduced cycle times, reduced inventory, information sharing).
- However, ERP systems are extremely complex pieces of software requiring huge investments of financial resources, time and expertise.
  - Improper implementation could lead to huge problems
    - Hershey's
    - FoxMeyer Drug

SAP

- Systems, Applications, and Products in Data Processing (SAP)
- Name of the company
  - SAP AG
  - SAP America
- Name of the software
  - SAP R/2 – Mainframe version
  - SAP R/3 – Client/Server version

SAP AG

- Founded in Germany (1972)
- World’s fourth largest software provider
- World’s largest provider of Integrated Business Solutions software
- Company stock trades on the Frankfurt and New York exchanges
### SAP R/3
- World-wide usage
- Designed to satisfy the information needs for all business sizes (small local to large international)
  - Multi-lingual
  - Multi-currency
- Designed to satisfy the information needs for various industries (industry solutions)

### SAP R/3
- Enables a company to link its business processes
- Ties together disparate business functions (integrated business solution)
- Helps the organization run smoothly
- Real-time environment

### Integrated Business Solutions
- Software Vendors
  - SAP
  - Oracle
    - PeopleSoft, J.D. Edwards
  - Microsoft – Great Plains, Axapta, Solomon
  - IBM
  - Baan
  - IFS

### Architecture
- Central relational database (e.g., Oracle, Informix, Microsoft SQL, and many others)
- Client/Server – three-tiered
- ERP Component – Oriented towards common identifiable business modules (FI, MM, SD, CO, PP, HR)
- Add-ons:
  - Customer Relationship Mgmt (CRM)
  - Supply Chain Mgmt (SCM)
  - Product Lifecycle Mgmt (PLM)

### Relational Database
- Defines and links thousands of tables of information (25,000+)
- Advantages
  - Consistent and accurate data
  - Common definitions for terms
  - Shared, but restricted usage (e.g., profiles)
  - Eliminates data redundancy

### Client/Server Environment
- Client
  - Software/hardware combination that can make a request for services from a central repository of resources
- Server
  - Software/hardware combination that can provide services to a group of clients in a controlled environment
Three-Tier SAP Structure

- GUI – Graphical User Interface
- Or Web Interface
  - [http://www.drexel.edu/irt/sap/members.html](http://www.drexel.edu/irt/sap/members.html)
- Application server (one or many)
- Database server (one single location)

Business Modules

- Collections of logically related transactions within identifiable business functions
  - MM ("Buy")
  - PP ("Make")
  - SD ("Sell")
  - FI and CO ("Track")
  - HR

SAP R/3 Advanced Basics

- Instance – each install of the SAP R/3 software on an individual application server
- Configurable – each instance can be distinctively configured to fit the needs and desires of the customer (within limits)
- Most of the infrastructure decisions, including configuration decisions, occur during project implementation

Configuration

- The process of tailoring SAP software by selecting specific functionality from a list of those supported by the software, very much like setting defaults (e.g., Word, Access)
- DOES NOT involve changes to the underlying software code
### Programming Code Modifications

- Changes to the delivered code
- ABAP/4 – Advanced Business Application Programming (ABAP)
- This should be done sparingly and carefully as it can make migration to new versions of the software much more difficult.

### SAP R/3 Document Principle

- Each business transaction that writes data to the database creates a uniquely numbered electronic document.
- Each document contains information such as:
  - Responsible person
  - Date and time of the transaction
  - Commercial content
- Once created, a document cannot be deleted from the database.

### Internet Demonstration and Evaluation System

**Features**
- Fully developed model company
- Based on a standard R/3 system
- Master data and transaction data
- Complete Customizing
- Comprehensive data and process descriptions for cross-component business processes
- Online documentation with self-learning units on the business processes in the consolidated group.

### IDES - Overview of Divisions

**IDES Group**
- IDES Industry
- IDES Retail
- IDES Banking
- IDES Services

### IDES Subgroups - Overview

- IDES Industry
- IDES Europe
- IDES N. America
- IDES Asia
- IDES Mexico
- Mexico City

### IDES Company Codes - Overview

- IDES Industry
- IDES Europe
- Frankfurt / De
- London / GB
- Paris / Fra
- Lisbon / Por
- Barcelona / Esp
- IDES N. America
- New York / USA
- Toronto / Canada
- IDES Mexico
- IDES Asia
- Tokyo / Japan
Organizational Structure of 'Accounting'...

Organizational Structure of 'Distribution'...

Organizational Structure of 'Logistics'...