ENTERPRISE SYSTEMS

Pre-history of business computing

9/19/2011
Early history of business computing

1960s  Focus on

LEO I (Lyons Electronic Office) in 1951. First computer specifically focused on business.

1970s  MRP software debuts to assist in production scheduling and inventory mgmt.
(More) contemporary history of business computing

1980s  MRPII expands focus of previous systems

1990s  ERP systems apply same data collection and handling mechanisms organization-wide

Evolution of Business Computing

MRP--Materials Requirement Planning (1970s)

MRPII--Manufacturing Requirements Planning (1980s)

ERP--Enterprise Resource Planning (1990s)
Enter SAP

SAP pioneered the ERP software market. Five former IBM employees in Manhheim, Germany founded SAP in 1972.

Systemanalyse und Programmentwicklung
Systems Applications and Products (now), System Analysis Program Development (then)

3 Goals:

SAP Software Timeline

1973 "System R" (real-time data processing) released to market. (Later came to be called "R/1")

1978 "R/2"

http://www.sapdesignguild.org/resources/r3_history.asp
SAP Software Timeline

1992/93 SAP R/3--3 tiered architecture

1994 and beyond
Enhancements and additional modules to R/3
Various "marketing names": SAP ECC, SAP Business Suite, mySAP, mySAP Business Suite, mySAP.com.
SAP ERP, SAP Business Suite (preferred current names)

SAP ERP 3-tiered Client-server architecture
Client-server system

Database and Application Server

Nothing important is saved on your PC. Only things saved on the server are saved, and they are saved for good.

http://sap.uwm.edu/UWMDefault.htm

SAP ERP Product Evolution

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Who is SAP today?

SAP AG
World’s Largest Business Software Company
World’s Third-largest Independent Software Provider
Annual revenues exceeding $10 billion.

Company Statistics
53,000+ employees in more then 75 countries
(12,500 in North America)
1,500 Business Partners
75,000 customers in more then 120 countries
12 million users
109,000+ installations

Source: SAP AG website

SAP Software Applications

Small & Medium Size Solutions:

Business One link
1-50 employees. SE (Small Enterprise) focus.
Bought (not made) by SAP. Not sold by SAP directly.

Business by Design video
50-100/500 employees. SME (Small, Medium Enterprise) focus.
Based on Service Oriented Architecture (SOA).
Cloud-Based

SAP All-in-One video
100/500-1000 employees. ME (Medium Enterprise) focus.

SAP ERP Modules & Business Suite

SAP ERP Modules
- SD (Sales and Distribution)
- MM (Material Management)
- PP (Production Planning)
- PS (Project Systems)
- QM (Quality Management)
- PM (Plant Maintenance)
- HR (Human Resources)
- FI (Financial Accounting)
- CO (Cost Accounting)
- WM (Warehouse Management)
- PS (Project Systems)
- EA (Environment, Safety, and Health Management)
- SRM (Supplier Relationship Management)
- CRM (Customer Relationship Management)
- ERP (Enterprise Resource Planning)
- SCM (Supply Chain Management)
- PLM (Product Life Cycle Management)
- CRM (Customer Relationship Management)
- NetWeaver

SAP Business Suite

SAP Industry Solutions—Best Practices

- Aerospace & Defense
- Automotive
- Banking
- Chemicals
- Consumer Products
- Defense & Security
- Engineering, Construction
- Healthcare
- High Tech
- Higher Education
- Industrial Machinery
- Insurance
- Life Sciences
- Logistics Service
- Media
- Mill Products
- Mining
- Oil & Gas
- Pharmaceuticals
- Postal Services
- Professional Services
- Public Sector
- Railways
- Retail
- Telecommunications
- Utilities
- Wholesale Distribution
**ERP System Functional Details**

ERP Systems are large-scale applications that run on top of database systems for storage and data management.

- SAP typically used with Oracle, DB2, or MS SQL.
- Basic SAP installation--over 28,000 tables.

ERP Systems are not "install and go." Configuration required.

- Configuration: making the standard software fit your business processes.
- SAP: over 8,000 configuration decisions.
- ERP Configuration Management--full time job

**ERP System Functional Details**

Systems are large-scale distributed applications that need system level administration and control.

- Performance tuning, network and equipment management, redundancy and backup, development and test systems, transport.
- SAP "Basis Administration", "NetWeaver Administration" non-trivial for large company with significant infrastructure.
- SAP Configuration, Development
Other types of Enterprise Applications

BI--Business Intelligence
CRM--Customer Relationship Management
SCA--Supply Chain Analytics
SCE--Supply Chain Execution

Other types of Enterprise Applications

SCM--Supply Chain Manufacturing
SCP--Supply Chain Planning
APS--Advanced Planning and Scheduling
Other types of Enterprise Applications

SEM--Strategic Enterprise Management

TMS--Transportation Management Systems

WMS--Warehouse Management Systems

Other major ERP software vendors

Oracle Applications
  Oracle, JD Edwards, PeopleSoft, Siebel, Retek

Microsoft Business Solutions
  Dynamics (GP aka Great Plains), Navision, Axapta, Solomon

Niche and legacy:
  The Sage Group
    Sage Software – Accpac ERP, PeachTree
  SSA Global Technologies (now Infor)
    BAAN
References and Links


http://www.sapdesignguild.org/resources/r3_history.asp
http://www.sap.com/smallbusiness/solutions/overview/index.epx
http://www.sap.com/solutions/sme/businessbydesign/overview/index.epx
http://www.oracle.com/applications/jedwards-enterprise-one.html
http://www.oracle.com/applications/peoplesoft-enterprise.html
http://news.cnet.com/The-big-fuss-over-little-Retek/2100-1012_3-5606907.html
http://www.microsoft.com/dynamics/gp/product/default.mspx
http://www.microsoft.com/dynamics/nav/default.mspx
http://www.microsoft.com/dynamics/ax/default.mspx
http://www.microsoft.com/dynamics/si/default.mspx
http://www.sage.com/
http://www.sageaccpac.com/
http://www.peachtree.com/
http://www.ssaglobal.com/
http://en.wikipedia.org/wiki/Baan

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