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Plan for Today

Review midterm exam.

Virtual Communities

Internet Advertising

Marketing Direct (have said enough based on Dell
Computer presentations)

Bandwidth/traffic analysis information



Business Plan Guidelines



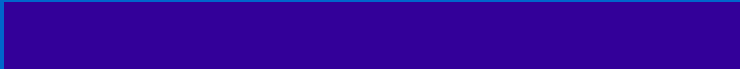
Will put on class web page tomorrow morning.

Assignment #3 due date moved to Thursday, Nov. 18.



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Midterm Exam Review



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Short Answer Questions:

1. An e-business integrates its business philosophy, strategies, processes and organizational structure to learn, purchase, market, sell, manufacture, share resources and receive services through any channel at any time. E-business occurs when the company, its customers and partners interact on all of these levels. E-commerce is the automation of the processes by which we conduct commerce. It is an integral part of e-business which is a broader process of change within and between companies.

2. Implementation of a LAN does not involve a common carrier (a telephone company like Pac Bell). The answer "none" is worth 5 points.

3. We screwed up on this question. We meant to ask about search engines but instead said browser. The browser is the user interface that allows the user to gain access to multimedia data. A faster microprocessor on your PC will result in faster downloads and response time based on the speed at which things happen within the PC.

4. Popular search engines are almost always provided by companies that use the search engines as the foundation for their business. Because they are competing for business they continue to upgrade the functions, features and performance of their respective search engines. For this reason the search engines are far from static and over time their relative competitive posture changes.

5. End users do not directly deal with packet collisions. If a collision occurs, the LAN hardware and software deal with the attempt to retransmit. The end user can experience delays in transmitting messages and it is mathematically possible that these could be quite long.

6. Half of the samples/second or 4,000 hertz.

7. Three things brought the Internet into popular awareness and use: 1) the World Wide Web that provided a structured approach to deal with textual documents, 2) browsers like Internet Explorer and Netscape (Mosaic prior to Netscape) that acted as a multimedia user interface and 3) search engines that made it easy and convenient to do easy to use searches of information on the Internet.

1. If a telephone line is a POTS, and can send 30,000 bits/second, and its signal/noise ratio cannot be improved, what characteristic of the phone line channel must be changed to send 60,000 bits/ second over the channel using a modem? (The assumption is that there is no compression.)

Answer: Shannon's theorem says that the capacity of a channel is given by $C = B \log_2(1 + S/N)$, where B is the bandwidth of the channel and S/N is the signal / noise ratio. If we are to double "C" (going from 30,000 bits / second to 60,000 bits / second, and if S/N is fixed, then we must double "B", i.e. double the bandwidth of the channel (or in effect use two ordinary POTS channels).

2. Local Area Networks (LANs) have become an integral part of most organizational networks. Why is this the case? In terms of performance, why are switches employed in LAN networks in place of repeater hubs?

Answer: LANS provide fast connections between computers (10Mb/sec, 100 Mb/sec, and beyond) and thus enable fast messaging between users, the sharing of files (via a file server or with access by users to multiple machines on the network) and provides fast connection to printers, which can therefore be shared across all users on the LAN. If the organization needs external network connection, this can also be shared via the LAN, so that one external network connection is shared by all LAN users.

Switches are used in LANs in place of repeater hubs to give users faster LAN speed. A switched connection between two users (or between a user and a file or print server) is dedicated to that pair of users. Connections via a repeater hub are shared, and multiple users can interfere with each other by having their packets collide, requiring retransmission, thus reducing effective throughput of that connection.

E2. The popularity and success of the use of the Internet has only reinforced the ultimate goals and objectives that companies would have in utilizing vendor hardware and software to address their requirements. These still focus around providing users with application function that is easy to use and can be used in a seamless and transparent manner. It is getting to this point in the Internet world that is a challenge.

The top of the model reminds us that the business environment is extremely dynamic as change has almost become the only constant. The Internet is simply one of the more recent new technologies, at least for many businesses. The Internet provided new network technologies to many companies as a way to deal with their business dynamics.

Multi-vendor and multi-product is the state of IT within many companies. IT implementation over the years often resulted in islands of automation that lacked connectivity and compatibility since the hardware and software was often from different vendors. This represented a major challenge since significant investment had been made in these disparate systems that couldn't simply be written off. This situation forced companies to deal with Information Systems architecture—how to design and built future information systems. A discussion of architecture in the Internet era results in a discussion of an approach based on open systems and related standards.

The Internet is a classic example of the merits of a network that was built using accepted standards. Open systems say that a vendor that provides hardware and/or software that is consistent with the Internet standards assures its customers that it will gain connectivity and compatibility with its Internet-based applications.

Getting to this position is again a challenge based on the size of the investment in proprietary hardware and software but the success of the Internet is providing the justification to move more quickly in this direction.

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Virtual E-Commerce



Will be shaped more by strategy than by experimentation.

The battle will be waged along three dimensions: reach, affiliation and richness.

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Three Dimensions

Reach: Access and connection. How many customers a business can connect with and how many products it can offer to those customers.

Richness: Depth and detail of information that can be given to the customer and the depth and detail of information it collects about the customer.

Affiliation: Whose interests the business represents.
(business partners and/or customers)

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Virtual E-Commerce

- Is it achievable for most established companies?
- Is it worth it? (Give up more than you gain)
- Important to recognize that different companies start with different advantages.

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Virtual Communities

We are convinced that cyber community members are the most focused and loyal of online users. Their emotional involvement in these communities suggests powerful opportunities for marketers to build brands.

Myra Stark

Saatchi & Saatchi Advertising

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Virtual Communities

Seems to be a consensus opinion.

Obviously suggests a target audience.

How does a company identify people in the community?

Doesn't this suggest a fundamental change in how companies relate to their customers and the ways in which they conduct business?

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Virtual Communities

If it is that big of a deal, what is a virtual community?

Virtual communities allow people with common interests to meet, communicate and share ideas and information with each other through an online network.

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Virtual Communities

Demographic groups.

Professionals.

Those who share a common interest.

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Demographic Communities

College Students

Tripod

Women

iVillage

New Parents

Babyplace.com

African Americans

NetNoir

Older Adults

SeniorNet

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Professionals

Farmers

Agriculture.com

Doctors

Physicians Online

Computer Jocks

IDG Net

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Common Interests

Individual Investors

Motley Fool

Wine Drinkers

Virtural Vineyard

Travelers

Expedia

Backgammon Players

Gamegrid

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Virtual Communities

How authentic are virtual communities?

They exist only in cyberspace say the critics.

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Virtual Community

Has anyone ever heard of the HOGS?

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Elements of a Community

Cohesion

Effectiveness (impact that the group has on members' lives)

and the outside world.)

Help (can ask for and receive assistance)

Relationships

Language (specialized?)

Self-regulation (ability of group to police itself)

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Virtual Community Approaches

Sponsor--advertise in a community or sponsor community content.

Participate--provide content as an interactive participant in a virtual community.

Build--create and maintain a virtual community of customers.

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Virtual Building Blocks

Text Chat

Instant Messaging

Message Boards

Mail Lists

Member Web Pages

Surveys

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Profiling Abuse!

The Network Advertising Initiative (NAI) was announced at a government-sponsored workshop in Washington. Critics contend the practice of profiling, now used by almost all of the larger ad networks has the potential for serious abuse.

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Internet Advertising

Whether seeking advertising as a revenue source or simply looking to increase traffic to your site, an understanding of Internet advertising opportunities and tactics is a crucial competency.

“Two advertising guys”



Why Advertise on the Internet?

Companies with something to offer user community are appreciated, e.g electronics, music, sports, universities, mail order companies, news services.

Improves company image, provides detailed information (catalogs, videos, graphics) and direct customer contact

Available 24-7, year round

Accessed because of interest

Results are immediately measurable interactively

Pages are accessed for free

No distribution expenses

Same cost for same city, or across the world

Materials can be updated, supplemented, or changed at any time, therefore always up to date



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Internet Advertising

PaineWebber's Online Advertising Forecast has been increased to \$3.84 billion from a previous \$3.55 billion in 1999.

Even more impressive, the 2002 estimate is up to \$12.7 billion from \$10.7 billion.

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Internet as Super Media

Print

Audio and Video

Branding

Reach

Targeting

Direct Response

Immediacy (placed and changed quickly)

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Related Considerations

Interactivity

Context Sensitivity (related content sought by consumer)

Dynamic Customization

Duration

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The Core Retail Issue

In a physical retail world, a broad search for a product is time consuming and inevitably incomplete.

Therefore, consumers rely on product suppliers and retailers to navigate through the choice process based on advertising, brand selection, merchandizing and in-store assistance.

The Internet has fundamentally changed this entire process for many consumers.

... and who is playing a major role and how this process has changed.

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1st Generation of E-Commerce

A landgrab: (1995-96)

Based on who got there first with enough resources to create a credible business.

Success was bolstered by speed, a willingness to experiment and cyber savvy.

B&M companies either didn't care or didn't seem to understand this major new channel.

Few if any, B&M company have a leading E-Commerce market share.

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1st Generation

Profitability was not deemed necessary for E-Commerce leaders.

- Revenue growth and building brands took priority.
- Capital funding was readily available.
- Stock market capitalization.

Strategy was subordinated to tactics, which were subordinated to experimentation.



Has the Next Generation Started?

- A lot of land has already been grabbed.
- B&M industry leaders are getting serious.
- Internet stocks are showing some buoyancy.



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Key Players to Watch

- Established brand suppliers.
- B&M retailers with an Internet presence.
- Established search engine companies as E-Commerce navigators. (making sense of business transactions without being part of the transaction)

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Traditional Competitors

Prior to E-Commerce, competed on the basis of reach.

Convenient store locations.

Large selection. (by then standards)

Barnes and Noble - 200,000 titles

Amazon.com - 4.5 million titles

Music Store - 50,000 titles

EveryCD - Prize if you find something they don't have.

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Navigator Threats

- Consumer aggregator role.
- Technically difficult to stop a navigator.
- Not in the sellers interest to fight navigators.
- Sellers need to match the reach and richness of the navigators.
- Current thinking is that consumers will not pay for navigation but this could change.

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An Error in Thinking

- The web is a new channel to do old things.
- The web is just a way to drive traffic to you store.
- The Internet is like a store window dressed up with HTML.
- Traditional definition of product-mix can succeed if “done right.”
- A company can go solo in competing with the web leaders.

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Traditional Players

- Have a disadvantage to compete with electronic retailers and pure navigators.
- Have a natural advantage when it comes to richness.
- It is their product information. They also have rich data from other sources.
- They frequently have good information about their customers.
- Probably means revisiting how they feel about branding.

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Two Kinds of Brands

1. Brand promotion to communicate rich, product-specific information. i.e. Intel Inside, Sony, Toyota
2. Brand promotion to communicate an experience. i.e. Coca-cola, McDonald's, Mattel

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Internet Impact on Brands

Customers on their own or through navigators can confirm or refute product excellence brand promotions.
(brand as belief)

Suggests a need to focus more on brand as experience which can be enhanced through web-based promotions.

In reality, the product, the brand and the experience are one and the same.

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Richness Constraints

1. **Privacy constraints.** Require consumers be informed of, and agree to, any exchanges of data.
2. **Consumer options.** Can search and organize information on their own.
3. **Manufacturers are filtered by retailers.**

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Manufacturer Strategies

- Adding product richness is a key strategy.
- Concentrate on establishing a brand.
- Look at informational components as businesses in their own right.
- Recognize that reach is a opportunity and a threat since it exposes you to navigators.
- Look seriously at multiple alliances including competitors to address both affiliation and reach strategies.

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Banner Advertising

Once upon a time, people looked at banners online. People weren't yet conditioned to tune out anything banner-shaped. They hadn't already seen countless banners that were irrelevant to them. They hadn't been tricked into clicking on some.

What's done is done: banners suck for most marketers because of "the tune-out factor." So, how does a marketer with something good to say reach out to online users?

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Customer Relationship Management

Customer Relationship Management (CRM) is application software that supports a company's E-Commerce strategies.

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CRM Elements

Contact Management

Account Management

Sales Force Management

Time Management

Customer Service

Marketing

Executive Information

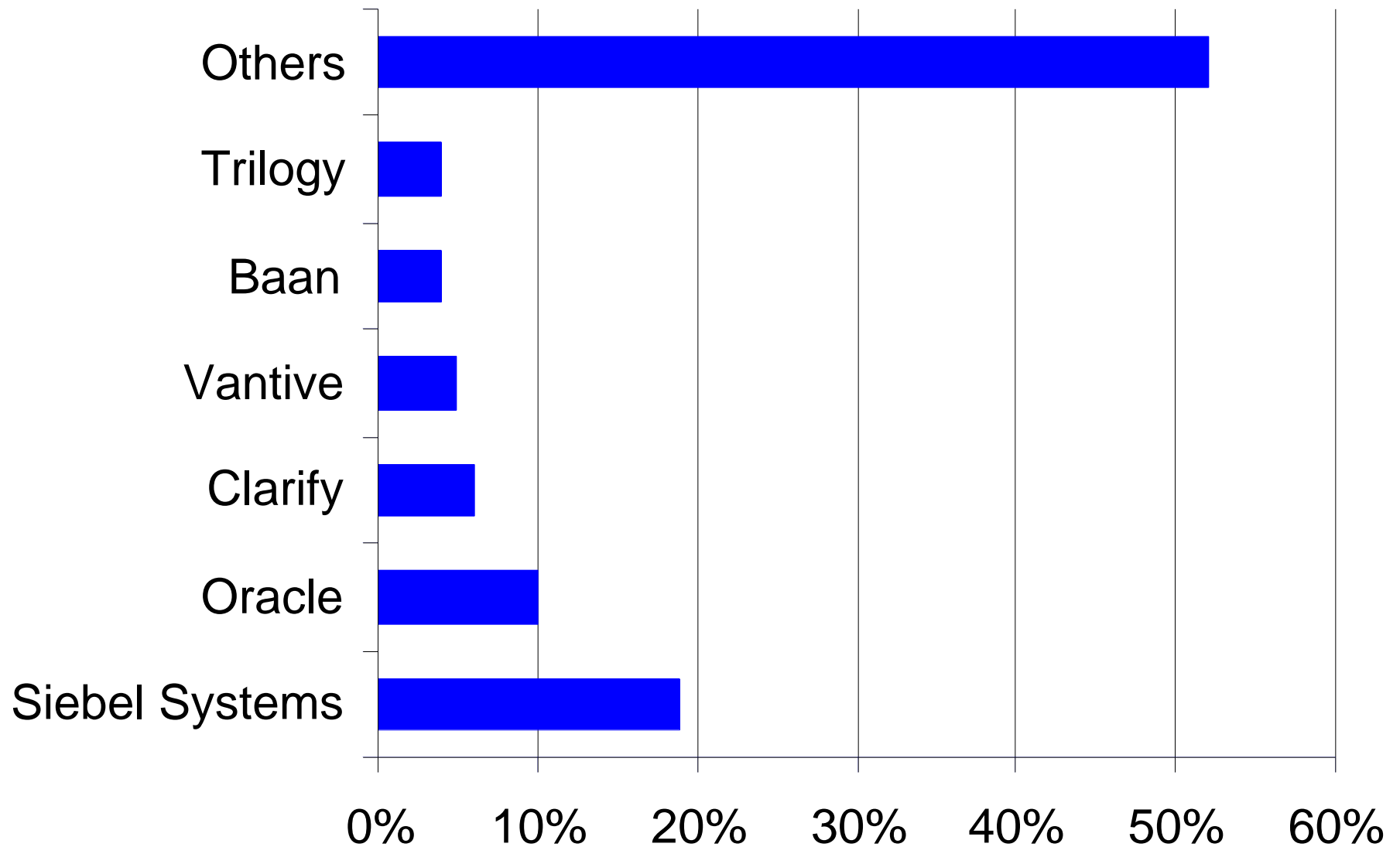
Telemarketing/Telesales

Supply Chain Management

Materials Requirements Planning (MRP)

Enterprise Resource Planning (ERP)

CRM Market Share 1999



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SAP America of SAP AG

Software Categories: ERP, MRP II. Product Suite: R/3

SAP is a market and technology leader in client/server application software, providing comprehensive solutions for companies of all sizes and all industry sectors. Cultivating innovative technologies on a solid foundation of business experience, SAP delivers scaleable solutions that enable its customers to continually improve upon best business practices. SAP products empower people to respond quickly and decisively to dynamic market conditions, helping to achieve and maintain a competitive advantage. SAP's client/server suite, R/3, is accepted as the standard in such key industries as oil & gas, chemicals, consumer packaged goods, high technology, and electronics. SAP client/server and mainframe business applications help customers manage comprehensive financial, manufacturing, sales and distribution, and human resources functions.

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Oracle Corp.

Software Categories: ERP, MRP II.

Product Suite: Oracle Applications

Oracle Corp. is the world's leading supplier of software for information management, and the world's second largest software company. With annual revenues of more than \$7.5 billion, the company offers its database, application server, tools, and application products, along with related consulting, education, and support services in more than 140 countries around the world.

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J.D. Edwards

Software Categories: Demand Planning, Supply Chain Execution, ERP MRP II, Financials, Accounting and Business Mgmt., Supply Chain Mgmt, Transportation Planning, Warehouse Management. Product Suite: OneWorld, Genesis, WorldSoftware, WorldVision

J.D. Edwards develops, markets, and supports multinational, integrated enterprise software for distribution, finance, human resources, manufacturing, and supply chain management. Its Supply Chain Optimization and Real-Time Execution solution extends the ERP backbone to include critical supply chain applications. It provides the flexibility to execute tailored supply chains for individual customers by integrating back-office functions with front-office sales and service operations.

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Baan Company

Software Categories: Supply Chain Execution, ERP MRP II, MES. Product Suite: Baan ERP, BaanFrontOffice

Baan is a leading global provider of enterprise application software. Baan offers a comprehensive portfolio of best-in-class, component-based applications that span an organization's entire value chain, including E-Business, Customer Relationship Management, ERP, Supply Chain, and Corporate Knowledge Management. Baan's enterprise solutions enable organizations to achieve strategic business goals, as well as improve tactical business processes, and helps them attain competitive advantage.

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JBA International

Software Categories: ERP MRP II, Warehouse Management
Product Suite: System 21

JBA is one of the world's leading business software providers. Its market-leading JBA System 21 software is an enterprisewide suite of fully integrated applications that provides key service management, manufacturing, financial, customer service, and logistics solutions for organizations trading in both national and international marketplaces. Complemented by unique solutions for specific industries, System 21 also gives many of the world's leading food & beverage, automotive, and style companies the competitive edge they require for the twenty-first century.

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System Software Associates

Software Categories: ERP MRP II, Maintenance Management, Warehouse Management. Product Suite: BPCS

Mode Supported: Assemble to Order, Batch Processing, Configure to Order, Continuous Flow, Discrete, Hybrid Process, Make to Order, Make to Stock, Mixed Mode, Process.

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i2 Technologies

Software Categories: Supply Chain Management
Product Suite: Rhythm, Think Demand, Optiflex

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Interbiz Supply Chain Group

Software Categories: ERP MRP II, Scheduling, Warehouse Management.

Product Suite: PRMS, Warehouse Boss, MK Enterprise, Manufacturing, Logistics

Manufacturing Mode Supported: Assemble to Order, Configure to Order, Discrete, Highly Engineered Products, Make to Order, Repetitive.

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Intentia International

Software Categories: Configurators, Demand Planning, Distribution Planning, ERP MRP II, Maintenance Management, Project Management, Quality Management, Supply Chain Mgmt, Transportation Planning.

Intentia is one of the world's leading ERP software providers. MOVEX is designed to improve underlying business processes within manufacturing and distribution companies in the areas of logistics, production, distribution, and finance. MOVEX leverages the Internet with order entry, order status, product catalog, and service management applications.

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Foxboro Co.

Software Categories: MES, Quality Management,
Supervisory Control, Intelligent Automation.

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Epicor Software Corp.

Product Suite: Platinum ERA, Avante, Vantage, Vista,
Imprese

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Aspen Technology

Software Categories: MES, Supervisory Control.

Product Suite: ASPEN MIMI

Company Profile

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Manugistics

Software Categories: Supply Chain Mgmt.
Product Suite: Manugistics5

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Indus International

Software Categories: Maintenance Management.
Product Suite: PassPort, EMPAC

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QAD

Software Categories: Demand Planning, Distribution Planning, ERP MRP II, Supply Chain Mgmt, Warehouse Management. Product Suite: MFG/PRO

QAD is a leading developer and worldwide supplier of ERP and supply chain software. In 1986, the company released MFG/PRO, an open architected Enterprise Resource Planning (ERP) solution that set new standards for functionality and rapid installation. MFG/PRO software provides comprehensive, open and interactive ERP solutions using either Oracle or Progress databases and running on most UNIX, Windows, and Windows NT environments.



IFS Industrial & Financial Systems

Software Categories: Configurators, ERP MRP II, Financials, Accounting and Business Mgmt., Maintenance Management, MES, Project Management, Scheduling, Supply Chain Mgmt, Transportation Planning, Warehouse Management.

IFS provides web-enabled, enterprise-wide business and eBusiness solutions in a broad range of component-based software modules, including financials, manufacturing, distribution, engineering, front office, resource management, and maintenance management.

Accelerated return on investment is achieved through use of the IFS Business Modeler. A graphical representation of the business processes is used to prioritize the selection of modules to meet the most critical business needs first, and to subsequently support the entire implementation process. IFS is a leader in the practical application of technology to business.



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PeopleSoft

Software Categories: Configurators, Distribution Planning, ERP MRP II, Planning, Advanced, Supply Chain Mgmt.

PeopleSoft for Manufacturing delivers an enterprise solution enabling manufacturers to maximize their return on key assets, such as inventory and capacity, to deliver customized products worldwide, on-time, and at the lowest possible cost. Whatever the nature of your operation--assemble-to-order, make-to-order, make-to-stock, repetitive, or mixed-mode--PeopleSoft's suite of enterprise applications simultaneously considers all supply chain resources and determines the best method of execution.

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Trilogy Software of Selling Chain

Software Categories: Configurators.
Product Suite: Selling Chain

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ABB Automation

Software Categories: Configurators, MES, Quality Management, Supervisory Control, Supply Chain Mgmt. Product Suite: Advant

ABB offers a wide array of MES-based products for specialized industry applications. Advant Enterprise Historian 2.0 provides manufacturers with unparalleled access to plantwide and corporatewide data from business, production, and control systems for better production and business decisions. The unique distributed architecture of this true enterprisewide historian enables data visualization, retrieval, and storage so that it becomes meaningful, useful information. AdvaBatch 2.0 easily manages multiple recipes for a wide range of batch processes. Designed to utilize Microsoft's DCOM and ActiveX technologies, this software is ideal for batch applications that require S88-based solutions. This includes such industries as food & beverage, pharmaceutical, fine chemical, and consumer products.

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MAPICS

Software Categories: ERP MRP II.

Product Suite: MAPICS

MAPICS is a leading provider of enterprise resource planning solutions for manufacturers worldwide. Two decades ago, its software revolutionized manufacturing processes, making them faster and better. Today, MAPICS XA optimally provides more than 49 applications that offer the breadth and depth of functionality you need to compete in a global marketplace, taking advantage of technology innovations when they deliver value to you. MAPICS offers a number of options for executing your e-business strategies, as trading partners demand commerce via the Internet.