SIXTH SEMESTER

BBA (CAM) **Elective-E4** **E-COMMERCE**

Course Code: BBA (CAM) ï 314 L:4 T-0 Credits: 4

COURSE CONTENT:

S.NO	Topic
1.	**UNIT-I** **Hours:10** **Introduction to E-Commerce :** The Scope of Electronic Commerce, Definition of Electronic commerce, Electronic Commerce and the Trade Cycle, Electronic Markets, electronic Data Interchange, Internet Commerce, E-commerce in Perspective
2.	**Business Strategy in an electronic Age:** Supply chains, Porterôs Value Chain Model, Inter Organizational Value Chains, Competitive Strategy, Porterôs Model, First Mover Advantage, Sustainable Competitive Advantage, Competitive Advantage using e-Commerce, Business strategy, Introduction to Business Strategy, Strategic Implications of IT, Technology, Business Environment, Business Capability, Existing Business Strategy, Strategy Formulation & Implementation planning, e-commerce Implementation, e-Commerce Evaluation
3	**UNIT-II** **Hours:10** **Business-to-Business Electronic Commerce:** Procurement Revolution at General Electric, Characteristics of B2B EC, Models of B2B EC, Procurement Management Using the Buyerôs Internal Marketplace, Supplier-Oriented Marketplace: Cisco Connection online case, Intermediary-Oriented Marketplace: Boeingôs PART Case, Just-In-Time Delivery: FedEx InterNetShop Case, Other B2B Models, Auctions, and Services, from Traditional to Internet-Based EDI, Integration with Back-End Information Systems, The Role of Software Agents for B2B EC, Electronic Marketing in B2B, Solutions of B2B EC, Managerial Issues, Electronic Data Interchange(EDI), EDI: the Nuts and Bolts, EDI & Business
4.	**UNIT-III** **Hours:10** **Intranet And Extranet:** Automotive Network Exchange-The Largest Extranet, Architecture of the

	Internet, Intranet, and Extranet, Intranet Software, Applications of Intranets, Intranet Application Case Studies, Considerations in Intranet Deployment, The Extranets, The Structure of Extranets, Extranet products & Services, Applications of Extranets, Business Models of Extranet Applications, Managerial Issues
5.	**Electronic Payment Systems:** Is SET a Failure, Electronic Payments & Protocols, Security Schemes in Electronic payment Systems, Electronic Credit Card System on the Internet, Electronic Fund Transfer and Debit Cards on the Internet, stored-Value Cards And E-Cash, Electronic Check Systems, Prospect of Electronic payment Systems, Managerial issues.
6	**UNIT-IV** **Hours:10** **EC Strategy and Implementation:** IBMôs E-Businessôs Strategy, Strategic Planning for EC, Electronic Commerce Strategy in Action, Competitive Intelligence on the Internet, Implementation: Plans & Excecution, Project & Strategy Assessment, Managerial issues.
7	**Public Policy:** From Legal issues to Privacy: EC-Related legal Incidents, Legal, Ethical, & Other Public Policy issues, Protecting Privacy, Protecting Intellectual property, Free Speech, Internet Indecency, & Censorship, Taxation & Encryption Policies, Other Legal Issues: Contracts, Gambling, & More, Consumer & Seller Protection in EC

G.G.S.INDRAPRASTH UNIVERSITY,DELHI

UNIT-1

Introduction to E-Commerce:

The scope of e-commerce

The scope of e-commerce is to transact online. Transaction through online can be either on products or services. Most of us are aware of buying products online through some sites like e-bay or amazon.com. Almost everything from gym equipment to laptops, from apparels to jewelries, are purchased online in this age of e-commerce. While these are products, people are also buying services online. Consultants to business lawyers are offering their services to their potential clients. Customers are also eager to transact online, as it is much hassle-free. Moreover, there is enough freedom offered to them to go online, look for a product, and compare a few more of different models, along with their prices. The bonus is that the customer can also go to other online product review sites, and discussion forums. Once the customer likes a product after all research, he can order for it online. E-commerce has also made it easy to pay. These days a number of methods have evolved to pay your dealers ï credit cards, debit cards, PayPal account, direct online money transfer and many more. Once the payment is made, the dealers dispatch the product, which reaches the doorstep of the customers within few days.

As business means keeping your customers happy and doing things the way they like, businessmen are choosing e-commerce to traditional business. In fact, companies which already exist in traditional forms are also going for the extra option of online business for the ease of the customers. To cite a good example here would be Wal-mart. Although they have huge stores, they have gone online with their business. So, even if the customers cannot make it to their store can still log on and order things that he needs.

Factors that encourage the businessmen are also that they do not have to set up a real store and spent a bulk of money in its maintenance. A real store also means employing a larger number of employers, the salary of which also needs to be borne by the entrepreneur. Instead of that an online business definitely gives the businessmen a chance to reach a higher profit acting as much cost as possible. And of course just like the customers, the businessmen also love the idea of getting their payments through online modes of payments which are fast, hassle-free, and reliable.

E-commerce, has made it possible for the customers to avoid standing in the queue as to make payments for their bills, or booked tickets of flights and also hotel reservations. They can now do that all with just a click of a mouse, saving both the time and money. E-commerce has also facilitated the customers to order a product sitting in one part of the globe, from another. Of course this idea has enchanted not only the customers but also the businessmen, who can now

make their products or services available to their potential customers, who might be at any part of the world.

However, there are certain risks which are associated with e-commerce or online business. Although technology has taken us to a different sphere of life, we cannot deny the fact that it also has its limitations. And when we are taking the refuge to technology, we must face the fact that at times we will be, obstructed while doing our regular transactions online. In such a scenario, it should be of mutual process of understanding both from the sides of the businessmen and the customers ï both. However, as we see that the benefits of e-commerce outdoes that of the risks, the reason as to why online business has gained so much of popularity is pretty self explanatory there.

Definition of electronic commerce

E-commerce (electronic commerce or EC) is the buying and selling of goods and services on the Internet, especially the World Wide Web. In practice, this term and a newer term, e-business, are often used interchangably. For online retail selling, the term e-tailing is sometimes used.E-commerce can be divided into:

- E-tailing or "virtual storefronts" on Web sites with online catalogs, sometimes gathered into a "virtual mall"
- The gathering and use of demographic data through Web contacts
- Electronic Data Interchange (EDI), the business-to-business exchange of data
- E-mail and fax and their use as media for reaching prospects and established customers (for example, with newsletters)
- Business-to-business buying and selling
- The security of business transactions

Electronic Commerce and the trade cycle

A trade cycle is the series of exchanges, between a customer and supplier that take place when a commercial exchange is executed. A general trade cycle consists of:

Pre-Sales:	Finding a supplier and agreeing the terms.
Execution:	Selecting goods and taking delivery.
Settlement:	Invoice (if any) and payment.
After-Sales:	Following up complaints or providing maintenance.

For business-to-business transactions the trade cycle typically involves the provision of credit with execution preceding settlement whereas in consumer-to-business these two steps are typically co-incident.

The nature of the trade cycle can indicate the e-Commerce technology most suited to the exchange.

Commercial transactions that are repeated on a regular basis, such as supermarkets replenishing their shelves, is one category of trade cycle. EDI is the e-Commerce technology appropriate to these exchanges, see Figure 1.

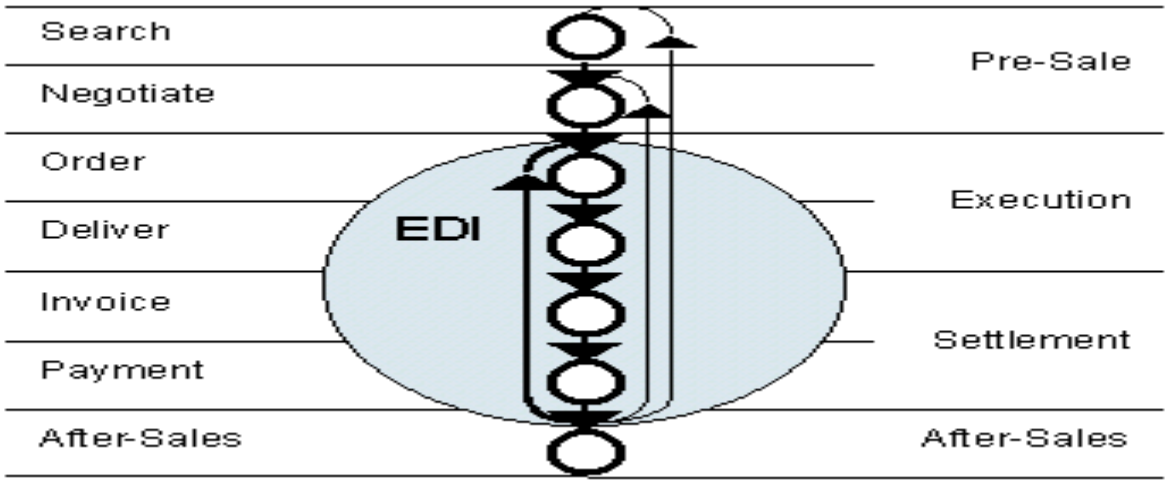

Figure 1: EDI Trade Cycle.

Consumer transactions tend to be once-off (or at least vary each time) and payment is made at the time of the order. Internet e-Commerce is the technology for these exchanges, see Figure 2.

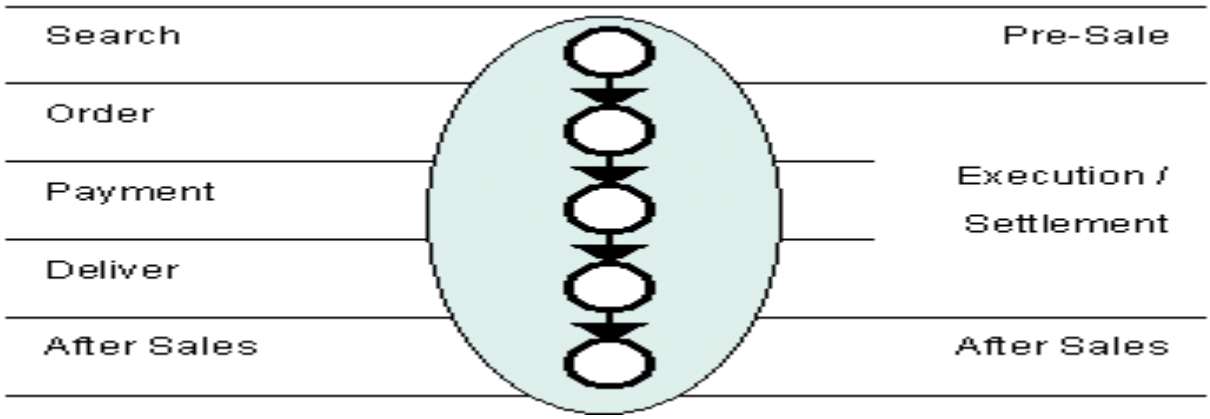

Figure 2 Consumer i-Commerce.

The third generic trade cycle is the non-repeating commercial trade cycle and Internet e-Commerce or an electronic market is the appropriate e-technology.

Electronic Markets

Electronic market uses the Internet to connect a limited number or pre-qualified buyers or sellers in one market. PEMs are a hybrid between perfectly open markets (e.g. exchanges where there is no pre-existing relationship between buyer and seller - similar to eBay) and closed contract negotiations (such as a sealed bid tender, where there is no visibility between competitors and hence no response to competition). The core idea of PEMs is to create competition among buyers/sellers while allowing buyers/sellers to adjust all those aspects of the deal that are typically only dealt with in a negotiation. This creates a problem of "comparing apples and oranges": bids may be quite different in many dimensions and therefore cannot easily be compared. Apart from the dimension of price these could include pre-negotiated discounts (e.g. for loyalty), specific qualities, combinations of goods and services with conditional pricing, freight differentials, contract fulfillment timing, payment terms, or deliberate constraints such as market share limits.

Electronic Data Interchange

Electronic data interchange (EDI) is the structured transmission of data between organizations by electronic means. It is used to transfer electronic documents or business data from one computer system to another computer system, i.e. from one trading partner to another trading partner without human intervention.[1] It is more than mere e-mail; for instance, organizations might replace bills of lading and even cheques with appropriate EDI messages. It also refers specifically to a family of standard.

In 1996, the National Institute of Standards and Technology defined electronic data interchange as "the computer-to-computer interchange of strictly formatted messages that represent documents other than monetary instruments. EDI implies a sequence of messages between two parties, either of whom may serve as originator or recipient. The formatted data representing the documents may be transmitted from originator to recipient via telecommunications or physically transported on electronic storage media." It distinguishes mere electronic communication or data exchange, specifying that "in EDI, the usual processing of received messages is by computer only. Human intervention in the processing of a received message is typically intended only for error conditions, for quality review, and for special situations. For example, the transmission of binary or textual data is not EDI as defined here unless the data are treated as one or more data elements of an EDI message and are not normally intended for human interpretation as part of online data processing."[2]EDI can be formally defined as the transfer of structured data, by agreed message standards, from one computer system to another without human intervention.

Internet Commerce

Internet commerce, commonly known as e-commerce or e-comm, is the buying and selling of products or services over electronic systems such as the Internet and other computer networks.

Electronic commerce draws on such technologies as electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least at one point in the transaction's life-cycle, although it may encompass a wider range of technologies such as e-mail, mobile devices and telephones as well.

- Electronic commerce is generally considered to be the sales aspect of e-business. It also consists of the exchange of data to facilitate the financing and payment aspects of business transactions.

E-commerce can be divided into:

- E-tailing or "virtual storefronts" on Web sites with online catalogs, sometimes gathered into a "virtual mall"
- The gathering and use of demographic data through Web contacts
- Electronic Data Interchange (EDI), the business-to-business exchange of data
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- The security of business transactions

Electronic Commerce in Perspective

1. Define electronic commerce (EC) and describe its various categories.
2. Describe and discuss the content and framework of EC.
3. Describe the major types of EC transactions.
4. Discuss e-commerce 2.0.
5. Describe social commerce and social software.
6. Understand the elements of the digital world.
7. Describe the drivers of EC as they relate to business pressures and organizational responses.
8. Describe some EC business models.
9. Describe the benefits of EC to organizations, consumers, and society.
10. List and describe the major limitations of EC.
11. Describe the major electronic commerce (EC) activities and processes and the mechanisms that support them.
12. Define e-marketplaces and list their components.
13. List the major types of e-marketplaces and describe their features.
14. Describe electronic catalogs, search engines, and shopping carts.
15. Describe the major types of auctions and list their characteristics.
16. Discuss the benefits and limitations of e-auctions.
17. Describe bartering and negotiating online.

18. Describe virtual communities.
19. List the major Web 2.0 tools and their use in EC.
20. Describe social networks as an EC mechanism.
21. Understand virtual worlds and their use in EC.
22. Describe Web 3.0 and define Web 4.0.
23. Describe electronic retailing (e-tailing) and its characteristics.
24. Classify the primary e-tailing business models.
25. Describe how online travel and tourism services operate and their impact on the industry.
26. Discuss the online employment market, including its participants, benefits, and limitations.
27. Describe online real estate services.
28. Discuss online stock-trading services.
29. Discuss cyberbanking and online personal finance.
30. Describe on-demand delivery of groceries and similar perishable products and services related to them.
31. Describe the delivery of digital products and online entertainment.
32. Discuss various online consumer aids, including comparison-shopping aids.
33. Describe disintermediation and other B2C strategic issues.

Business Strategy in an Electronic Age:-

Supply Chains

A supply chain is a system of organizations, people, technology, activities, information and resources involved in moving a product or service from supplier to customer. Supply chain activities transform natural resources, raw materials and components into a finished product that is delivered to the end customer. In sophisticated supply chain systems, used products may re-enter the supply chain at any point where residual value is recyclable. Supply chains link value chains.

Porter's Value Chain Model

The value chain is a concept from business management that was first described and popularized by Michael Porter in his 1985 best-seller, *Competitive Advantage: Creating and Sustaining Superior Performance*

A value chain is a chain of activities for a firm operating in a specific industry. The business unit is the appropriate level for construction of a value chain, not the divisional level or corporate level. Products pass through all activities of the chain in order, and at each activity the product gains some value. The chain of activities gives the products more added value than the sum of the independent activities' values.[*vague*] A diamond cutter, as a profession, can be used to illustrate the difference of cost and the value chain. The cutting activity may have a low cost, but the activity adds much of the value to the end product, since a rough diamond is significantly less

valuable than a cut diamond. Typically, the described value chain and the documentation of processes, assessment and auditing of adherence to the process routines are at the core of the quality certification of the business

An industry value chain is a physical representation of the various processes that are involved in producing goods (and services), starting with raw materials and ending with the delivered product (also known as the supply chain). It is based on the notion of value-added at the link (read: stage of production) level. The sum total of link-level value-added yields total value. The French Physiocrat's *Tableau économique* is one of the earliest examples of a value chain. Wasilly Leontief's Input-Output tables, published in the 1950s, provide estimates of the relative importance of each individual link in industry-level value-chains for the U.S. economy.

The value chain framework quickly made its way to the forefront of management thought as a powerful analysis tool for strategic planning. The simpler concept of value streams, a cross-functional process which was developed over the next decade,[3] had some success in the early 1990s.[4]

The value-chain concept has been extended beyond individual firms. It can apply to whole supply chains and distribution networks. The delivery of a mix of products and services to the end customer will mobilize different economic factors, each managing its own value chain. The industry wide synchronized interactions of those local value chains create an extended value chain, sometimes global in extent. Porter terms this larger interconnected system of value chains the "value system." A value system includes the value chains of a firm's supplier (and their suppliers all the way back), the firm itself, the firm distribution channels, and the firm's buyers (and presumably extended to the buyers of their products, and so on).

Capturing the value generated along the chain is the new approach taken by many management strategists. For example, a manufacturer might require its parts suppliers to be located nearby its assembly plant to minimize the cost of transportation. By exploiting the upstream and downstream information flowing along the value chain, the firms may try to bypass the intermediaries creating new business models, or in other ways create improvements in its value system.

Value chain analysis has also been successfully used in large Petrochemical Plant Maintenance Organizations to show how Work Selection, Work Planning, Work Scheduling and finally Work Execution can (when considered as elements of chains) help drive Lean approaches to Maintenance. The Maintenance Value Chain approach is particularly successful when used as a tool for helping Change Management as it is seen as more user friendly than other business process tools.

Value chain approach could also offer a meaningful alternative to evaluate private or public companies when there is a lack of publically known data from direct competition, where the

subject company is compared with, for example, a known downstream industry to have a good feel of its value by building useful correlations with its downstream companies.

Value chain analysis has also been employed in the development sector as a means of identifying poverty reduction strategies by upgrading along the value chain.[5] Although commonly associated with export-oriented trade, development practitioners have begun to highlight the importance of developing national and intra-regional chains in addition to international ones

Inter Organizational Value Chains

- A connected series of organizations, resources, and knowledge streams involved in the creation and delivery of value to end customers (Handfield & Value chain and supply chain are similar terms
- From competition between firms to competition between value chains
- From vertical integration to virtual integration

Competitive Strategy

Decisions generate action that produces results. Organizational results are the consequences of the decisions made by its leaders. The framework that guides and focuses these decisions is strategy. The framework that guides competitive positioning decisions is called competitive strategy. The purpose of its competitive strategy is to build a sustainable competitive advantage over the organizationôs rivals. It defines the fundamental decisions that guide the organizationôs marketing, financial management and operating strategies.

A competitive strategy answers the following questions.

- How do we define our business today and how will we define it tomorrow?
- In what industries or markets will we compete? The intensity of competition in an industry determines its profit potential and competitive attractiveness.
- How will we respond to the competitive forces in these industries or markets (from suppliers, rivals, new entrants, substitute products, customers)?
- What will be our fundamental approach to attaining competitive advantage (low price, differentiation, niche)?
- What size or market position do we plan to achieve?
- What will be our focus and method for growth (sales or profit margins, internally or by acquisition)?

The key to strategy formulation lies in understanding and overcoming the system barriers that obstruct the attainment of organizational goals. An effective strategy recognizes these barriers and develops decisions and choices that circumvent them.

Porter's model

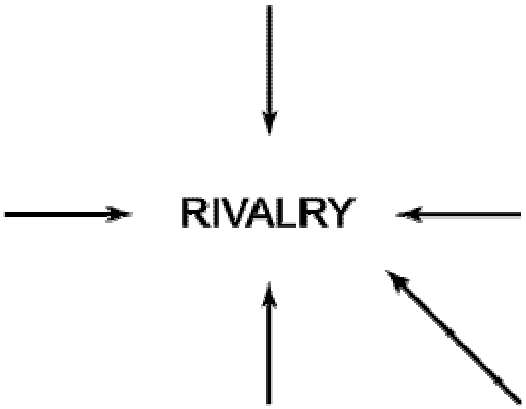
The model of pure competition implies that risk-adjusted rates of return should be constant across firms and industries. However, numerous economic studies have affirmed that different industries can sustain different levels of profitability; part of this difference is explained by industry structure.

Michael Porter provided a framework that models an industry as being influenced by five forces. The strategic business manager seeking to develop an edge over rival firms can use this model to better understand the industry context in which the firm operates.

Diagram of Porter's 5 Forces

SUPPLIER POWER
Supplier concentration
Importance of volume to supplier
Differentiation of inputs
Impact of inputs on cost or differentiation
Switching costs of firms in the industry
Presence of substitute inputs
Threat of forward integration
Cost relative to total purchases in industry

THREAT OF NEW ENTRANTS
Barriers to Entry
Absolute cost advantages
Proprietary learning curve
Access to inputs
Government policy
Economies of scale
Capital requirements
Brand identity
Switching costs
Access to distribution
Expected retaliation
Proprietary products



THREAT OF SUBSTITUTES
-Switching costs
-Buyer inclination to substitute
-Price-performance trade-off of substitutes

BUYER POWER	DEGREE OF RIVALRY
Bargaining leverage	-Exit barriers
Buyer volume	-Industry concentration
Buyer information	-Fixed costs/Value added
Brand identity	-Industry growth
Price sensitivity	-Intermittent overcapacity
Threat of backward integration	-Product differences
Product differentiation	-Switching costs
Buyer concentration vs. industry	-Brand identity
Substitutes available	-Diversity of rivals
Buyers' incentives	-Corporate stakes

First Mover Advantage

first-mover advantage or FMA is the advantage gained by the initial ("first-moving") significant occupant of a market segment. It may be referred to as Technological Leadership. This advantage may stem from the fact that the first entrant can gain control of resources that followers may not be able to match.Sometimes the first mover is not able to capitalize on its advantage, leaving the opportunity for another firm to gain second-mover advantage.

Originally made apparent by the ever booming Internet phenomenon, it has recently been on the decline due to the recent economic downturn. Sometimes first-movers are rewarded with huge profit margins and a monopoly-like status. Other times the first-mover is not able to capitalize on its advantage, leaving the opportunity for other firms to compete effectively and efficiently versus their earlier entrants. These individuals then gain a "second-mover advantage".

Sustainable Competitive Advantage

One of the toughest and yet most important questions you will be asked by savvy potential investors is ñWhat is your sustainable competitive advantage?ò Yet many entrepreneurs, maybe in their passion for their new product, gloss over this one, or even announce that they have no competition. Think about each of the three words for the full meaning of the phrase. straight the keys to sustainable competitive advantage ñSustainableò means over the longer term ï not just today. ñFirst to marketò, for example, is not sustainable. It may buy you a few months, but if you

show traction, competitors with deep pockets will catch up and bypass you quickly, jeopardizing all your investments. ñCompetitiveò should be taken broadly to include alternative ways that people might solve the problem you are addressing. Donôt define your scope so narrowly that you would not consider airplanes to be competitive with your new train, or you will suffer their fate. The problem is transportation, not slow machines on tracks. ñAdvantageò needs to be measurable and significant. Many entrepreneurs lead with fuzzy terms like ñimproved usabilityò and ñlower cost.ò Experienced business people realize that unless you are dealing with a commodity, or customers are extremely unhappy, they wonôt switch to a new alternative unless the savings is well above 20%. So what are some of the indicators that investors look for to conclude that you may indeed have a sustainable competitive advantage?

Real intellectual property A dynamic product line, rather than a single product Dramatic cost improvement for cause Proven team with inside relationships Lock on the market or customer base Strong focus and differentiation

COMPETITIVE ADVANTAGE USING E-COMMERCE

Competitive advantage has to do with a company's ability to outdo competitors, either by improving upon what competitors are currently doing or by doing something completely different in a way that proves successful. Being able to implement an e-commerce plan that improves sales or cuts costs might give one retailer a competitive advantage over another. At the same time, being the first to come up with a new e-commerce business model, or a unique twist on an existing model, might also allow an up-start to gain an early competitive advantage.

According to Dena Waggoner, in the Encyclopedia of Management, "The strongest competitive advantage is a strategy that cannot be imitated by other companies. Competitive advantage can also be viewed as any activity that creates superior value above its rivals."

A prime example of an upstart gaining an early competitive advantage by being first-to-market with a new business model is eBay.com, the world's largest online auction site, with more than 22 million registered users and roughly 8,000 product categories. Although rivals like Yahoo! and Amazon.com attempted to gain market share from eBay by launching their own auction sites, eBay's ability to gain critical mass gave it the competitive edge it needed to stave off its rivals. Despite Amazon's attempt to lure customers with guarantees of product quality and Yahoo!'s offering of commission-free auctions, eBay attracted more sellers than any other auction site simply because it had the most buyers.

Dell Computer Corp. was able to use the Internet to trim costs and boost sales, both of which were becoming increasingly difficult to do in the nearly saturated personal computer (PC) market of the late 1990s. Hoping to gain a competitive advantage, the firm started to sell PCs via the Internet in 1996. It became possible for customers who previously had placed custom orders via the telephone to place them on Dell's Web site. Customers could select configuration options, get price quotes, and order both single and multiple systems. The site also allowed purchasers to

view their order status, and it offered support services to Dell owners. Within a year, Dell was selling roughly $1 million worth of computers a day via the Internet. Even more importantly, nearly 80 percent of the online clients were new to Dell. With the more automated Web-based PC purchasing process, Dell found itself able to handle the growing sales volume without having to drastically increase staff. Cost savings also were achieved as the firm's phone bill began shrinking. Dell's business model, which allowed for easy tracking of customer purchases, also allowed the firm to keep inventory at a minimum. In 2001, Dell usurped Compaq Computer Corp. as the world's largest PC maker.

BUSINESS STRATEGY

ñWe have a good game plan and our players, coaches, and support staff are prepared and ready. I couldnât be more confident of victory!ò On the other side of the field, the Bears coach says virtually the same thing. Then the game begins. Play after play, the coaches adjust their game plans to reflect the circumstances. They keep using plays that gain yardage, they keep going with defensive formations and tactics that prove effective, they exploit any weaknesses they find in the other team, they react to injuries or field conditions, they make decisions based on the score and field position and the clock. In the end, the team whose coach best understands the strengths and weaknesses of both teams and then strategizes for all the possibilities and whose players execute the strategies best will usually win. Then, after the game, both teams must begin again to prepare for the next opponent.

The Game of Business

Business competition is very similar to sports. In business,teams of individuals face each other in competition for employees, customers, product innovations, and profitsð among other goals. The major difference between sports and business is the relevant time frame. (Imagine if teams in the National Football League had to play each other every day, from nine to five, with the lunch hour replacing halftime!) As in sports, business organizations that win consistently excel at preparation, planning, and execution. They know their situation, know where they want to go, and determine how best to go there. Maybe more importantly, these organizations have their finger on the pulse of the markets, customers, technologies, and other innovations that may change the rules of the game and the factors that lead to success. And these dominant companies are willing to adjust their game plans accordingly. Strategy is the business word for game plan. All businesses have strategies, either planned or unplanned. This book explores how to find the best strategy for your business and how to use strategy to drive successful business results, that is, achieve your long-term goals.

INTRODUCTION TO BUSINESS STRATEGY

Introduction to Business Strategy Course Overview:The purpose of business strategy is to create tomorrow's organisation out of today's. Strategic analysis and strategic planning take a holistic view of the performance and potential of an organisation within its business environment and set the basis for creating sustained performance improvement in a constantly changing set of

business conditions. Participants will be introduced to the concepts, tools and techniques of analysis, planning and strategic management that will put their own specialist experience into the broader context of business development. It will enable participants to make a more effective contribution to the direction of their own part of their organisation and to the organisation as a whole.

- To understand the concept and content of strategy and strategic management.
- To learn about the basic tools and techniques of strategic analysis and planning
- To learn now to convert analytical and creative thinking into a range of choices
- To consider focus and concentration ï choosing what to do and what not to do
- To understand the nature and implications of globalisation
- To consider the relevance of alliances and joint ventures
- To enable participants to write a concise and comprehensive strategic plan
- To address the problems of converting a strategic plan into action

STRATEGIC IMPLICATIONS OF IT, TECHNOLOGY

Outsourcing generally involves non-strategic resources and/or non-asset specific capabilities. However, in this paper, the authors examine the non-traditional, but increasingly more common, use of IT to facilitate theoretically inconsistent outsourcing decisions involving core resources and capabilities. The authors reconcile theory with practice by developing propositions to explain how IT can enable such outsourcing decisions and how performance advantages may ensue. The authors develop a finer-grained perspective of the constructs of knowledge-based resources and capabilities. The paper concludes with a discussion arguing that such IT-enabled outsourcing decisions, if implemented correctly, can provide an organization with both capability advantages and cost benefits, resulting in higher performance.

BUSINESS ENVIRONMENT

Meaning: - The term Business Environment is composed of two words ôBusinessô and ôEnvironmentô. In simple terms, the state in which a person remains busy is known as Business. The word Business in its economic sense means human activities like production, extraction or purchase or sales of goods that are performed for earning profits.

On the other hand, the word ôEnvironmentô refers to the aspects of surroundings. Therefore, Business Environment may be defined as a set of conditions ï Social, Legal, Economical, Political or Institutional that are uncontrollable in nature and affects the functioning of organization. Business Environment has two components:
1.InternalEnvironment
2. External Environment

Internal Environment: It includes 5 Ms i.e. man, material, money, machinery and management, usually within the control of business. Business can make changes in these factors according to the change in the functioning of enterprise.

External Environment: Those factors which are beyond the control of business enterprise are included in external environment. These factors are: Government and Legal factors, Geo-Physical Factors, Political Factors, Socio-Cultural Factors, Demo-Graphical factors etc. It is of two Types:
1. Micro/Operating Environment
2. Macro/General Environment

Micro/Operating Environment: The environment which is close to business and affects its capacity to work is known as Micro or Operating Environment. It consists of Suppliers, Customers, Market Intermediaries, Competitors and Public.

(1) Suppliers: ï They are the persons who supply raw material and required components to the company. They must be reliable and business must have multiple suppliers i.e. they should not depend upon only one supplier.

(2) Customers: - Customers are regarded as the king of the market. Success of every business depends upon the level of their customerôs satisfaction. Types of Customers:
(i)Wholesalers
(ii)Retailers
(iii)Industries
(iv)Government

(v) Foreigners

(3) Market Intermediaries: - They work as a link between business and final consumers.Types:-
(i)Middleman
(ii)MarketingAgencies
(iii)FinancialIntermediaries
(iv) Physical Intermediaries

(4) Competitors: - Every move of the competitors affects the business. Business has to adjust itself according to the strategies of the Competitors.

(5) Public: - Any group who has actual interest in business enterprise is termed as public e.g. media and local public. They may be the users or non-users of the product.

Macro/General Environment: ï It includes factors that create opportunities and threats to business units. Following are the elements of Macro Environment:

(1) Economic Environment: - It is very complex and dynamic in nature that keeps on changing with the change in policies or political situations. It has three elements:
(i) Economic Conditions of Public
(ii) Economic Policies of the country
(iii)Economic System
(iv) Other Economic Factors: ï Infrastructural Facilities, Banking, Insurance companies, money markets, capital markets etc.

(2) Non-Economic Environment: - Following are included in non-economic environment:-
(i) Political Environment: - It affects different business units extensively. Components:
(a)Political Belief of Government
(b)Political Strength of the Country
(c)Relation with other countries
(d)Defense and Military Policies
(e)Centre State Relationship in the Country
(f) Thinking Opposition Parties towards Business Unit

(ii) Socio-Cultural Environment: - Influence exercised by social and cultural factors, not within the control of business, is known as Socio-Cultural Environment. These factors include: attitude of people to work, family system, caste system, religion, education, marriage etc.

(iii) Technological Environment: - A systematic application of scientific knowledge to practical task is known as technology. Everyday there has been vast changes in products, services, lifestyles and living conditions, these changes must be analysed by every business unit and should adapt these changes.

(iv) Natural Environment: - It includes natural resources, weather, climatic conditions, port facilities, topographical factors such as soil, sea, rivers, rainfall etc. Every business unit must look for these factors before choosing the location for their business.

BUSINESS CAPABILITY

Understanding the capabilities required by your business provides a high level overview of the business and can be a very useful exercise as it allows one to take a step back and focus on what the key elements of the business are. You can avoid getting bogged down in the details of ôhowô things happen and concentrate on ôwhatô does (or needs to) happen. Once you have done this it is possible to identify your key capabilities, for example, the ones that will differentiate your business and you can use this information to ensure that you focus on the areas of importance in your business, whether this is in defining new projects or ensuring business as usual delivers appropriately.

We use Business Capabilities to model the services that a business or enterprise offers or requires. These capabilities are modelled in the Business Conceptual layer and represent what the business does (or needs to do) in order to fulfil its objectives and responsibilities.

The Business Capabilities are the top layer of the business architecture. They belong to a Business Domain and are governed by the Business Principles of the organisation. The capabilities are realised by a business process and performed by a role, i.e. an individual or team in the organisation.

The Business Capability is, therefore, at a higher level than a business process and is in the conceptual layer. It represents a conceptual service that a group of processes and people, supported by the relevant application, information and underlying technology, will perform. The capability represents the what, whereas the process and people represent the how.

Business Capabilities can themselves be broken down into supporting capabilities, if this is useful. For example, óOrder Fulfilmentô is a high level capability that may be broken down into further supporting capabilities such as óorder approvalô, ópickingô, ópackingô, ódespatchô, ódeliveryô and óreturns managementô, as depicted in the diagrams below. These are all examples of capabilities, or of services, that an organisation needs to perform to enable it to fulfil its obligation to its customers.

You will find that your business capabilities are relatively static because you are defining the ówhatô which rarely changes whereas, for example, your business processes will constantly be evolving as the óhowô things are done changes all the time with the advancement of technology and of customer demand. A very obvious example is retail ï twenty years ago the internet did not exist so there were no online sales channels; but the capabilities of a retail channel have not altered, Sales, Fulfilment and Billing are still capabilities, however the process of óhowô they sell, dispatch and take payment has altered dramatically.

The level at which you model your business capabilities will depend on your objectives ï why you are carrying out the modelling exercise. Sometimes it can be useful to use the capabilities to model the key value chain of the business - the key chain of capabilities, or services, that flow through your business. This is a subset of all the capabilities as it will not include any of the support functions such as IT or HR and is usually modelled at a fairly high level. It can be useful to highlight what the areas of most importance are to the business and to provide some focus. However, if a particular area has been identified as an area for change, you should focus on this area and model the capabilities down to the level where they meet the processes and people that support them. It depends on you objective at the time.

Before entering any information into Essential, it is useful if you can identify all the capabilities in the area you are modelling up front, however, if you canôt do this it is ok to model incrementally and add the information as you get it. You will also need to understand which capabilities are supporting capabilities and which are contained capabilities, for example,ô Order Fulfilmentô contains the órder approvalô, ópickingô, ópackingô, ódespatchô, ódeliveryô and óreturns managementô capabilities. In return, these are capabilities that support óOrder Fulfilmentô. It is easier if you ensure that you are aware of this structure before you start modelling.

EXISTING BUSINESSS STRATEGY

Economic Impact Looking at the source of jobs in a community gives insight into the importance of business retention. Based on research by Blane, Canada Ltd., the average community will derive 76% of their new jobs and capital investment from existing business. Business attraction will contribute 15%, and entrepreneurship will deliver the balance of the new jobs and capital investment, about 9%. In a rural area, the contribution of existing businesses is likely to be 86 - 90% because both business attraction and entrepreneurship will contribute less. Add in lifetime value, the economic benefit generated by a company over the life of the business, and the economic impact of existing companies increases. Even a small employer s lifetime value can be substantial when payroll, taxes, business purchases and philanthropy, are considered. Yet,

existing businesses, as any investment annuity, are easily taken for granted by community leaders.

Business Retention To strengthen the relationship with existing businesses, many economic development organizations have a business retention program. There are four elements to a comprehensive existing business program. Business retention and expansion is only one of these elements. Each element requires a progressively higher level of commitment of time and money. The reward in each case is commensurate with the investment. Existing Business

Responsive Retention

- Respond to the problems/needs of individual companies.

Attention Retention

- Create opportunities to shower attention on existing employers.

Executive Contact

- Conduct personal interviews or surveys to identify company and community issues.
- Collect company-specific strategic information.

Business Development

- Provide support and services to help individual and groups of companies to increase sales and grow in the community. Results have been mixed. Jobs have been saved. Important issues have been uncovered and corrected. Yet, existing business programs do not get adequate support or the funding needed to protect individual company s or the community most important asset, its economic future.

Portfolio Management

Progressive communities around the US and Canada are now adopting a new view of existing companies based on the future economic security these companies represent. Progressive communities are looking at the existing business base as a portfolio. The value of the portfolio is the sum total of the value the individual companies bring to the community. Similar to an investment portfolio, the community s portfolio provides future security. But, insuring future security means managing the portfolio. Like a stock portfolio or a real estate portfolio, the first step to manage the existing business base as a portfolio is to assess each company and their business practices. Economic development organizations have used executive contact, private one-on-one meetings with business executives, as a central part of business retention. Historically, the goals have been clear:

Help companies at risk of leaving/downsizing

Identify opportunities to help companies expand in the community

Identify problems that could cause employers to leave a community

Build relationships with individual company executives

Conducting executive visits is not enough to adopt an effective portfolio management strategy for existing business programs. In order to be effective, the questions asked during the visit must be designed to gather predictive data. Municipal officials must craft questions and guide the executive interview discussions in order to obtain information concerning the corporation s growth plans, community problems if any, need or desire for assistance, perception of place in the community, and perception and level of awareness the company may have of the officials

New Model for Economic Development themselves. This new interview strategy leads to an understanding of the value of the company to the community, satisfaction levels, growth

potential and the potential risk of the firm leaving the community or downsizing. As a by-product, the interview identifies companies at risk, companies that need help expanding their facilities, and community-based problems. The goal of community economic portfolio management is to better manage public resources and
increase the return on investment in economic development policy and programs by maximizing the future economic value of the business base. Communities adopting a portfolio approach to existing business are now redefining the purpose of the executive visit. They are also defining the strategic information needed to understand a company s economic contribution to a local economy. For the first time, instead of focusing exclusively on individual companies, community leaders are asking, What is the value of our portfolio? Is the portfolio being neglected? Should our portfolio be conservatively or aggressively managed? What is the cost/consequence of a failure to act? What are to the community s long-term objectives for the existing business portfolio?
Balancing An Economic Development Strategy
Traditionally, economic development strategy has been dominated by business attraction. However, looking at the risk of loss to other aggressive marketers and the potential represented by the existing business base, economic development strategy should be led by the existing business program, including business retention. By emphasizing existing businesses, progressive communities adopting a portfolio management strategy are working to align their economic development strategy with real world realities. This approach: Focuses resources on the greatest opportunities. Makes business retention expansion an integral part of a more comprehensive approach to existing business. Leverages the executive-contact/assessment phase to collect information beneficial to business development, business retention, as well as business-attraction programs Improves the community s infrastructure, making it more attractive to prospective Investors Generates positive success stories documenting company and economic growth
Works to diversify the economy Focusing on portfolio management provides all the benefits of a classic business retention and expansion program. Companies with problems and/or expansions are identified while community problems are isolated. At the same time, resources can be properly directed to growth and value companies.

STRATEGY FORMULATION & IMPLEMENTATION PLANNING

Following are the main differences between Strategy Formulation and Strategy Implementation-

Strategy Formulation	Strategy Implementation
Strategy Formulation includes planning and decision-making involved in developing organizationôs strategic goals and plans.	Strategy Implementation involves all those means related to executing the strategic plans.
In short, Strategy Formulation is placing the Forces before the action.	In short, Strategy Implementation is managing forces during the action.

Strategy Formulation is an Entrepreneurial Activity based on strategic decision-making.	Strategic Implementation is mainly an Administrative Task based on strategic and operational decisions.
Strategy Formulation emphasizes on effectiveness.	Strategy Implementation emphasizes on efficiency.
Strategy Formulation is a rational process.	Strategy Implementation is basically an operational process.
Strategy Formulation requires co-ordination among few individuals.	Strategy Implementation requires co-ordination among many individuals.
Strategy Formulation requires a great deal of initiative and logical skills.	Strategy Implementation requires specific motivational and leadership traits.
Strategic Formulation precedes Strategy Implementation.	STrategy Implementation follows Strategy Formulation.

E-COMMERCE IMPLEMENTATION

Pursuant to a congressional request, GAO reviewed the Department of Defense's (DOD) efforts to implement its Joint Electronic Commerce Program, focusing on: (1) issues DOD needs to resolve to successfully implement its vision for electronic commerce; and (2) the implementation status and performance measures associated with key electronic commerce initiatives.

GAO noted that: (1) DOD faces several implementation issues that, if not resolved, could adversely effect the success of its electronic commerce program; (2) DOD has not yet: (a) completed a detailed plan to implement its strategic vision; (b) developed an electronic commerce architecture; (c) determined how to best manage the electronic commerce program; and (d) fully implemented key security measures that are needed for electronic commerce; (3) the officials responsible for developing a Department-wide implementation plan have not been able to draft a plan that is acceptable to DOD's military services and agencies; (4) a Department-wide plan has thus been put on hold, and DOD's components are developing individual plans; (5) without an overarching, Department-wide plan to guide the military service and Defense agency efforts, the individual plans that result may not be consistent with program goals; (6) in addition, DOD has made little progress in developing a common electronic commerce architecture, which is needed to provide a framework to integrate the individual parts or systems; (7) Department components may develop separate architectures, which may lead to systems and capabilities that are redundant or unable to share information; (8) DOD established an electronic commerce program office, but its authority is unclear and its chain of command is cumbersome and, as a result, the office has been hampered in carrying out its program planning and implementation

responsibilities; (9) DOD is taking steps to improve the program office's effectiveness, but these steps may not be sufficient; (10) DOD's ability to transact business electronically, particularly over the Internet, will not be as secure as desired until it completes ongoing work necessary to better protect and authenticate electronic transactions and data; (11) DOD is implementing a number of specific, electronic business-related initiatives that it believes will help modernize selected business processes; (12) these initiatives, which are at various stages of implementation, include: (a) expanding the use of purchase cards to streamline aspects of the procurement process; (b) establishing an electronic mall as a source of supplies for DOD customers, and (c) making aspects of the contracting process paper-free; and (13) many of these initiatives began several years ago, and they predate the Defense Reform Initiative and the electronic commerce program.

E-COMMERCE EVALUATION

Todayôs world, becoming more competitive every day, is demanding from companies the flexibility to adjust themselves to the permanent situations of market change, readiness for constant innovation and warranty of the quality of products and services. At the same time, Internet, after being used initially as a great source of trade information, gradually came to be used as an important environment for trading values (e-commerce). According to Jupiter Research, e-commerce transactions: business-to-business and businessto- consumer, could exceed US$7 trillion per annum by 2005 [3]. However, the sites do not completely satisfy their customers in several aspects and those deficiencies can eventually threaten the very existence of many of those companies in the market. This paper is intended to collaborate in the effort to produce e-commerce sites of quality, through the identification and ranking of
their main quality characteristics, as well as a survey of the different developersô and usersô points of view.
To attain the desired quality of software products, it is necessary to produce models that enable evaluation of those productsôquality. According to ISO [5], the main purpose of software quality evaluation is to supply referential quantitative results to the software products that are reliable, understandable and acceptable to anyone interested. User satisfaction and economic return are also important considerations. The quality characteristics were organized using the *Fuzzy Model to Software Quality Evaluation* [2] that was already used with satisfactory results in several application domains. That model ranks a set of software quality attributes, organizing them into three objectives. Each objective is composed of quality factors. Those factors can be subdivided into sub-factors. Usability is a quality objective that refers to the characteristics that allow use of the e-commerce site in the most diverse situations, not only during its development process, but also during its operation and maintenance. Conceptual Reliability concerns the e-commerce siteôs capacity to implement, satisfactorily, what was specified and designed. The Reliability of the Representation refers to the e-commerce siteôs representation characteristics that affect its understanding and manipulation along its life cycle.

UNIT –II (BUSINESS TO BUSINESS E-COMMERCE)

PROCUREMENT REVOLUTION AT GENERAL ELECTRIC

Details have emerged of wrangling between General Electric (GE) in-house lawyers and the groupôs procurement team over a slimming-down of its European legal panel earlier this year.

The revamp is understood to have been handled largely by the internal procurement department, leading to claims that the final roster of selected advisers was not the ideal list from the point of view of the in-house counsel and members of business teams. The business was not desperately pleased as it was entirely procurement-led. The business probably know what they need. Some people in GE have said the process leaves the team with a panel that [they feel] from an empirical viewpoint weôve got the right ones, but a number will say even with all that process theyôre not really the optimal people to help us. Next time they will somehow put more of an oar into it and see if they win that battle.ò

The European panel primarily covers GEôs finance unit, GE Capital, but can also feed into other arms of the US conglomerate. The length of the appointment is unclear, as is the full line-up.

The panel was compiled as a highly complex matrix covering various different business strands including sections known as órooms ô. Another adviser said: ñThe general thrust of the review is there are far fewer firms than have been on it in the past.ò

Supervise a select team of buyers on procurement activities, review and allocate workload based on requisition count and work-in-progress activity.

Negotiate the best commercial and technical package for Drilling & Production procurement requirements.

Support the business team in ensuring that quotes needed are collected in a timely manner.

Work with allocated key suppliers to improve On Time Delivery and Quality statistics to target levels.

Assist in the preparation of a weekly sourcing report.

Actively participate in appraisal performance reviews of commodity buyers.

Provide technical / commercial assistance to Commodity Buyers to develop awareness of manufacturing processes and improve product knowledge.

Actively participate in the setting up of Frame Agreements when and where required.

Provide timely and effective communication of issues to the department manager.

Assist in the continuous development of the Procurement function towards best practice.

Identify and deliver value-adding opportunities from the supply chain.

Take initiatives to clarify requirements for purchase orders and/or contracts.

CHARACTERISTICS OF B2B EC

Electronic commerce is an emerging concept that describes the process of buying and selling or exchanging products, services and information via computer networks including the Internet. E-

Commerce can be mainly divided into Business-to-Business electronic commerce (B2B EC) and Business-to-Consumer electronic commerce (B2C EC). B2B EC implies that both sellers (suppliers) and buyers are business corporations, while B2C EC implies that the buyers are individual consumers.

The leading items in B2B EC are computing electronics, utilities, shipping and warehousing, motor vehicles, petrochemicals, paper and office products, food and agriculture. B2B EC is the electronic support of business transactions between companies and covers a broad spectrum of applications that enable an enterprise or business to form electronic relationships with their distributors, resellers, suppliers, and other partners.3 B2B EC does not just comprise the transaction via the Internet, but also the exchange of information before and the service after a transaction. From the purchasing companyôs point of view, B2B EC is a medium for facilitating procurement management by reducing the purchase price and the cycle time.4 According to Schneider and Schnetkamp, Business-to-Business EC is expected to grow explosively in the next years and to continue to be the major share of the electronic commerce market. It is estimated that the B2B EC sector is going to be eight to ten times the size of the B2C EC sector The development of B2B EC took place in three, partly overlapping, stages. Stage one was the *Electronic data interchange (EDI)*, which realized the standardized, bilateral exchange of business information (e.g. orders and requests for products) electronically. A necessary condition for realizing the exchange of data were expensive, proprietary networks, called

Value Added Networks (VAN). As a consequence, just large companies were able to use this method. EDI made faster processes possible and lowered the error rates due to former manual processing. EDI has been used since the 1970s.6 The problem of the highly expensive Value Added Networks was solved through the worldwide acceptance of the Internet. The Internet made *Internet catalogues*, which were the second stage of the B2B ECôs development, possible. Companies were able to present information on their products via the Internet. Prospective buyers had permanent access to actual data. Providing information this way is alot more cost-effective than using paper, telephone and fax. Especially by using Internet catalogues, it was possible to handle small and standardized transactions more efficiently. Supporting business transactions with Internet catalogues was given special emphasis until The third and present stage of B2B EC (since 1999) are *electronic markets (e-markets).*

E-markets are ñvirtual roomsò in which different participants are able to interact via the Internet. Several buyers, sellers and service-providers have access to the e-markets. E-markets do not just provide information like the Internet catalogues, but also support the negotiation, the transaction and the services afterwards. In 1999, the e-market volume was about 76 billion US$. The volume is expected to grow to 1,800 billion US$ in 2003

MODELS OF B2B EC

Three models of B2B EC In this section, the three models of B2B EC are described. They are classified depending on who controls the marketplace: the buyer, the supplier or the intermediary.

- In a Buyer-Orientated Marketplace few buyers face many suppliers.
- In a Supplier-Oriented Marketplace many buyers face few suppliers.

- In an Intermediary-Oriented Marketplace many buyers face many suppliers.
Other important B2B models are virtual corporation, networking between the headquarters and subsidiaries and online services to business. This paper concentrates on the three B2B EC models. Supplier-Oriented Marketplace (Sell-Side-Solution) Characteristics of the Supplier-Oriented Marketplace Supplier-Oriented Marketplaces offer a group of customers a wide spectrum of products and services and also support them in their own business. Furthermore, there are large potentials through customer communities, individualized products and direct customer-relationships. By using Supplier-Oriented Marketplaces, suppliers are offered new types of market channels in marketing and distribution. Products can be sold directly to the customer without using
intermediaries. According to Turban, Lee, King and Chung, the cultivation of customerrelationships is also possible.9 Most manufacturer-driven electronic stores use this form of marketplace. Successful examples of this business model are e.g. Dell and Cisco. Dell sold 90 percent of their computers directly to business buyers and Cisco sold US$ 1 billion worth of routers, switches and other network interconnection devices mainly to business customers in 1997. Both Dell and Cisco sold and sell their products via the Internet. However, not only Dell and Cisco use the Supplier-Oriented Marketplace, there are thousands of other
companies using this model. The major issue especially for small companies is how to find buyers for their products. Excellent reputation and a group of loyal customers are necessary for the success of the sites using this model. Another application of the Supplier-Oriented Marketplace are auction sites like e.g. the computer reseller Ingram Micro. Companies can e.g. sell surplus goods and business customers can therefore realize large discounts.Example of the Supplier-Oriented Marketplace: Cisco Connection Online Case11 Cisco uses the Supplier-Oriented Marketplace successfully. The market is operated by Cisco Connection Online. In 1997 Cisco sold more than US$ 1 billion online (total: US$ 6.4 billion) of routers, switches and other network interconnect devices. Ciscoôs business model also includes customer service and finding order status. In 1991, Cisco began providing electronic support using the Internet. The first applications were software downloads, defect tracking
and technical advice. Three years later, in 1994, Cisco put its system on the Web naming it Cisco Connection Online. By 1998, customers were using Ciscoôs Web site about one million times a month to receive technical assistance, check orders or download software. Nearly 70 percent of the technical support and customer service calls are handled online. As a result,
Cisco increased its technical support productivity by about 200 to 300 percent per year. Furthermore, the online technical support reduced technical support staff costs by about US$ 125 million. Since 1996, Ciscoôs Internet Product Center allows customers to buy any products via the Web, saving time for both Cisco and its customers. Before the development of the Web site, ordering a product was lengthy and complicated. Cisco also provides tools on its Web site where customers can find answers to questions like e.g. ñWhen will the order be ready?ò. Cisco estimates that putting its applications online in 1998 saved the company US $363 million per year. Additionally, Cisco saves US$ 180 million per year in distribution, packaging and duplication, because customers download new software releases directly from Ciscoôs site. By providing product and pricing information on the Web site and on Web-based CD-ROMs, Cisco also saves US$ 50 million per year in printing and distributing catalogues.

By using Supplier-Oriented Marketplaces, buyers would have to search electronic stores and electronic malls to find and compare suppliers and products. This would be very costly and time consuming for big buyers, who purchase thousands of items on the Internet. As a result, such big buyers prefer to open their own marketplace, which is called a Buyer-Oriented Marketplace.12 By supporting transactions and procurement processes, these marketplaces offer great potentials in cost savings. Buyer-Oriented Marketplaces are found in industrial sectors with few and dominant buyers.

Essential elements of the marketplace are:13

- guidelines for transactions
- Internet-based product and supplier catalogue
- availability check
- informational support of negotiations
- invitation to bid in auctions and submissions
- catalogue ordering
- support of transactions
- delivery inspection
- quality management

PROCUREMENT MANAGEMENT USING THE BUYER's INTERNAL MARKETPLACE

In many companies, procurement has become one of the most important functions in the last years. Companies realized the existence of great potentials in cost savings by supporting procurement electronically. Product-, process- and inventory costs can be reduced by using electronic procurement (E-Procurement). E-Procurement is mostly realized in Buyer-Oriented Marketplaces.

Product Costs Lower product costs can be realized by reducing purchase prices through E-Procurement. This is achieved mainly by the following points:

- access to small companies located in foreign countries is facilitated
- procurement systems aimed at key-suppliers can efficiently be expanded to other suppliers
- procurement cycles can be shortened and also be supported by e.g. auctions
- purchase volume can be bundled up from internal business departments and from partner companies

These points are mainly true for suppliers e.g. of bolts, nuts and stationeries. Suppliers of highly specialized products are less affected. In 1999, the Aberdeen Group found out that large-scale enterprises were able to reduce product costs by 5-10% on average using Buyer-Oriented Marketplaces.

Process Costs Reducing the process costs is the greatest potential of E-Procurement. Up to now, one order has caused costs on average DM 200-300. Internal bureaucracy is responsible for a large part of the costs. E-Procurement can reduce process costs up to 90 percent.17 These cost savings are realized through the following improvements:

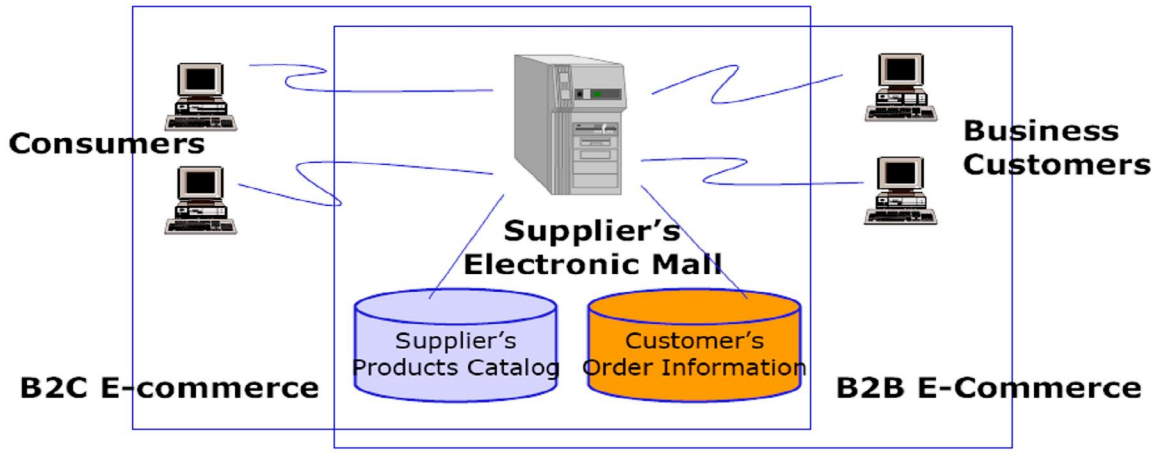
- more effective handling of administrative tasks like e.g. delivery inspection or order forms through electronic support
- faster and more efficient internal coordination like e.g. signatures that are necessary for an authorization
- better information by e.g. updating product catalogues and descriptions regularly
- avoiding errors (e.g. wrong article numbers)
- faster searching for products

The 1999 investigation of the Aberdeen Group showed that process costs (of large-scale enterprises) were reduced on average from over US$ 100 to US$ 30 using Buyer-Oriented Marketplaces. Inventory Costs

Long delivery times and poor transparency of orders cause higher inventory levels, which lead to higher capital costs and to partial loss of the inventoryôs value. This affects the profitability of the company negatively. E-Procurement can decrease the inventory levels by 20-40 percent. The Aberdeen Group showed that inventory costs were reduced by 25-30 percent.20 Possible Problems of Electronic Procurement The Buyer-Oriented Marketplace offers many potentials in cost savings. The marketplace theoretically offers benefits to all participants but the reality shows that they are mainly realized by buyers and key suppliers. The automobile manufacturers DaimlerChrysler, Ford and General Motors joined to form Covisint, a Buyer-Oriented Marketplace. They expect to realize cost savings of up to US$ 1000 per car. Other automobile companies are interested in joining. Suppliers like e.g. Continental and Karmann, who manufacture specialized products and who are market leaders in their segments, welcome the electronic marketplace. There are interdependencies between these suppliers and the buyers. They can also realize cost savings e.g. in process costs. Many small and medium-sized companies, on the other hand, are confronted by a new situation. They often manufacture unspecified products and have largely invested in the business relationships e.g. by basing their plant close to the buyer. The new marketplace increases the dominance of the buyers. The buyers can put them under pressure with new alternatives and can realize lower purchase prices. These companies are threatened by the new situation

SUPPLIER ORIENTED MARKETPLACE: CISCO CONNECTION ONLINE CASE

The most common model is the supplier-oriented marketplace. Most of the manufacturer driven electronic stores belong to this category. In this model, both individual consumers and business buyers use the same supplier-provided marketplace as depicted in Figure below.



The architecture for this B2B model is basically the same as that for B2C EC, and the purchasing process is similar.

Successful Cases and Challenge

Successful examples of this business model are Dell, Intel, and Cisco and IBM. It is reported that Dell sold 90 percent of their computers to business buyers, and Cisco sold $1 billion worth of routers, switches, and other network interconnection devices in 1998 mainly to business customers through the Internet. The sites with this model may be sustained as long as the vendor has a superb reputation in The market and a group of loyal customers. Thousands of other companies are using this model. One of the major issues for smaller companies is how to find buyers. This issue will be discussed during labs about electronic marketing.

Electronic Auctions

Another application of the supplier-oriented marketplace is the proprietary auction sites. These sites are open only to existing customers. They are designed to cement relationships between the company and its regular buyers. Sellers can get rid of surplus goods, and business customers can realize deep discounts. Also, liquidators can get 600 percent more than if they use offline auctions.

Supplier-Oriented Marketplace: Cisco Connection Online Case

The supplier-oriented marketplace for B2B EC can be successful if the supplier has a sufficient number of loyal business customers and the frequency of orders is not formidable from the buyer's point of view. Cisco's marketplace belongs to this category. Let us investigate Cisco Connection Online (CCO), which operates the market (Maddox 1998).

INTERMEDIARY ORIENTED MARKETPLACE: BOEING 'S PART CASE

This business model is established by an intermediary company which runs a marketplace where business buyers and sellers can meet. There are two types of Intermediary-Oriented Marketplaces: horizontal and vertical marketplaces. Vertical marketplaces concentrate on one industrial sector whereas horizontal marketplaces offer services to all industrial sectors. The Intermediary-Oriented Marketplace is a neutral business platform and offers the classical economic functions of a usual market. The difference is that the participants do not have to be

physically present. There are thousands of Intermediary-Orientated Marketplaces and many of them are very different in the services they offer. These marketplaces can contain a ñvirtual catalogue of the industrial sectorò. Companies have the possibility to present themselves in this virtual catalogue. On an Internet based ñnotice boardò single offers or requests of companies can be found. An Intermediary-Oriented Marketplace can also contain catalogues where information on products and prices can be presented. By offering search functions, the marketplace makes the comparison and transparency of products possible. Marketplaces can also offer auctions. These auctions can be organized by sellers (products are sold) or by buyers (orders are sold). Furthermore is it possible to offer electronic functions where participants can negotiate in real time.23 The intermediary company running the marketplace can generate profits through provisions for successful transactions and for negotiation of services (e.g. a logistical company to deliver the products). The company can also charge fees
for membership and for presenting information, offers or requests. Profits can furthermore be generated by advertising (e.g. banners). The company can also distribute its own products through the marketplace profiting from more buyers entering the site than e.g. a normal e-store.
Example of the Intermediary-Oriented Marketplace: Buzzsaw is a vertical electronic marketplace which concentrates on the building industry. Many different parties are involved in a construction project: e.g. building contractors, builders, manual workers, architects, merchants and the building owner. Many of these parties are regional sellers. There are varied business relationships between all participants. The complex structure leads to inefficient processes of planing and communication. Buzzsaw offers software to improve planning and communication between the parties. This helps reducing the usual overspending of the projectôs budget and schedule. The heart of Buzzsawôs services is a software, which administrates the construction project (administrator). This software can be used to carry out the entire construction plan of many participants involved in the process. Functions like e.g. the design, the planning of the project and the supervision of the buildingôs progress can be supported. Buzzsaw also offers detailed information about the building industry (e.g. news affecting the sector, a classified directory and a local weather forecast). The marketplace also provides the option to do business. All products relevant for the building industry can be traded. The Web site offers search engines to find the wanted products. Additionally, buyers and sellers can insert requests and offers on the marketplace. Buzzsawôs sources of income are fees for transaction and for the use of the administrator as well as advertising revenue.

JUST-in-TIME DELIVERY: FEDEX INTERNET SHOP CASE

Just-in-time (JIT) is an inventory strategy that improves a businessôs inventory cost by reducing transit times and reducing warehouse cost. To meet Expedited Freight objectives, the process relies on Just in Time Critical Delivery demands of reliably getting products to the customer just before the customer needs them. Firms now pay more attention to inventory costs and look to their suppliers for help in controlling them. This often means that a supplier must be able to provide just-in-time (JIT) delivery - reliably getting products there just in time.

Supply chain managers have two primary goals: reduce inventory and avoid delays. Just-in-time delivery has been the preferred method for meeting those goals. Expedited Freight has the Just-in-time Delivery service for improving a manufacturer's bottom line.

The bottom line is that we eliminate a lot of inventory that you would have on hand just in case.

OTHER B2B MODELS

TABLE 2.4 B2B BUSINESS MODELS

BUSINESS MODEL	EXAMPLES	DESCRIPTION	REVENUE MODEL
(1) NET MARKETPLACES			
E-Distributor	Grainger.com FindMRO.com Staples.com	Single-firm online versions of retail and wholesale stores; supply maintenance, repair, operation goods; indirect inputs	Sales of goods
E-Procurement	Ariba.com CommerceOne.com Siemens	Single firms creating digital markets where thousands of sellers and buyers transact for indirect inputs	Fees for market-making services; supply chain management, and fulfillment services
Exchanges	Exchange.eSteel.com IMX.com GEPolymerland.com	Independently owned digital marketplaces for direct inputs. Vertical industry orientation	Fees and commissions on transactions
Industry Consortia	Covisint.com Sciquest.com Pasticsnet.com	Industry-owned vertical digital markets open to select suppliers.	Fees and commissions on transactions
(2) PRIVATE INDUSTRIAL NETWORKS			
Single-firm networks	Wal-Mart Proctor & Gamble DaimlerChrysler Ford Motor Co.	Company-owned networks to coordinate supply chains with a limited set of partners	Cost absorbed by network owner and recovered through production and distribution efficiencies.
Industry-wide networks	Nistevo Inc. Globalnetxchange.com UCCnet.org Worldwideretailexchange.org	Industry-owned networks to set standards, coordinate supply and logistics for the industry	Contributions from industry member firms and recovered through production and distribution efficiencies; fees for transactions and services

AUCTIONS & SERVICES from TRADITIONAL to INTERNET BASED EDI

TRADITIONAL EDI

EDI is a communication standard that enables electronic transfer of routine documents, such as purchasing orders, between business partners. It formats these documents according to agreed-upon standards. An EDI implementation is a process in which two or more organizations determine how to work together more effectively through the use of EDI. EDI often serves as a catalyst and a stimulus to improve the business processes that flow between organizations. It reduces cost, delays, and errors inherent in a manual delivery system of documents. EDI has the following special characteristics that differentiates it from e-mail messages:

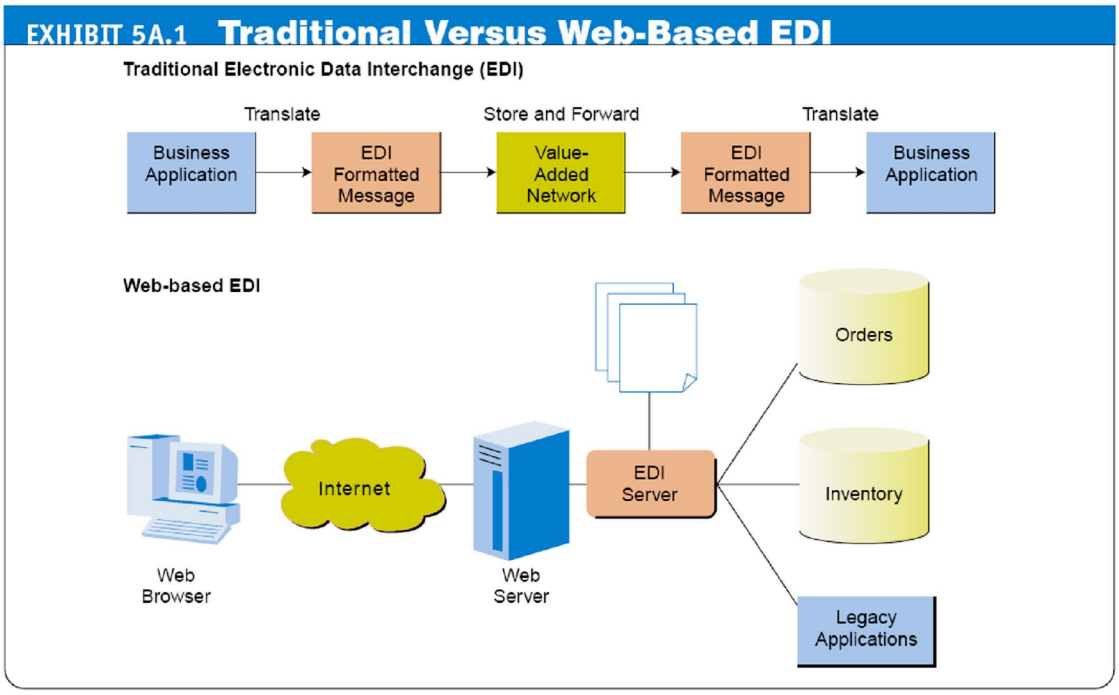
- Business transactions messages. EDI is used primarily to electronically transfer repetitive business transactions. These include purchase orders, invoices, approvals of credit, shipping notices, confirmations, and so on.
- Data formatting standards. As EDI messages are repetitive, it is sensible to use some formatting (coding) standards. Standards can shorten the length of the messages and eliminate

data entry errors, since data entry occurs only once. In the United States and Canada, data are formatted according to the ANSI X.12 standard. An international standard developed by the United Nations is called EDIFACT.

- EDI translators. An EDI translator converts the data into standard format. EDI has been around for almost 30 years in the non-Internet environment. It is a system that standardizes the process of trading and tracking routine business documents. EDI translates these documents into a globally understood business language and transmits them between trading partners using secure telecommunications links (Exhibit 5A.1). To distinguish it from Internet-based EDI, we call EDI on the non-Internet platform *traditional EDI.*

APPLICATIONS OF TRADITIONAL EDI

Traditional EDI has changed the landscape of business, triggering new definitions of entire industries. It is used extensively by large corporations, sometimes in a global network such as the one operated by General Electric Information System (which has over 100,000 corporate users). Well-known retailers, such as Home



INTERNET-BASED EDI

WHY INTERNET-BASED EDI?

When considered as a channel for EDI, the Internet appears to be the most feasible alternative for putting online B2B trading within reach of virtually any organization, large or small. There are several reasons for firms to create EDI ability over the Internet:

- The Internet is a publicly accessible network with few geographical constraints. Its largest attribute, large-scale connectivity (without the need for any special company networking architecture), is a seedbed for growth of a vast range of business applications.

- The global nature of the Internet offers the potential to reach the widest possible number of trading partners of any viable alternative currently available. 5A-4 Appendix 5A
- Using the Internet can cut communication costs by over 50 percent.
- Using the Internet to exchange EDI transactions is consistent with the growing interest of business in delivering an ever-increasing variety of products and services electronically, particularly through the Web.
- Internet-based EDI can complement or replace many current EDI applications.
- Internet tools such as browsers and search engines are very user friendly, and most users today know how to use them.
- Internet-based EDI has several functionalities not provided by traditional EDI, which include collaboration, workflow, and search engines.

TYPES OF INTERNET-BASED EDI

The Internet can support EDI in a variety of ways:

- Internet e-mail can be used to transport EDI messages in place of a VAN. To this end, standards for encapsulating the messages within Secure Internet Mail Extension (S/MIME) were established.
- A company can create an extranet that enables its trading partners to enter information in a Web form whose fields correspond to the fields in an EDI message or document.
- Companies can utilize the services of a Web-based EDI hosting service in much the same way that companies rely on third parties to host their commerce sites. Netscape Enterprise is an example of the type of Web-based EDI software that enables a company to provide its own EDI services over the Internet. Harbinger Express is an example of those companies that provide third-party hosting services.

INTEGRATION WITH BACK-END INFORMATION SYSTEMS

Application Integration

- BEA SmartConnect provides the native integration to ERP systems of SAP and Siebel.
- Standards-based architecture for hosting J2EE CA-based adapters.

Adapters

- J2EE CA 1.0-based adapter infrastructure with extensions.
- Service adapters expose application services to WLI.
- Event adapters publish asynchronous, unsolicited messages from the application to the message broker.

XML Metadata Cache Management

- The XML metadata cache is a global, domain-wide cache. Data stored in this cache can be accessed by any business process that is deployed in the domain. You can use the cache to share data within a cluster. You can manage the cache through the WLI administration console or by using the MBean API, with which you can create your own NetUI-based consoles.
- The XML metadata cache stores configuration data in the form of key-value pairs, where the key is of type String and the value contains XML data. Data from the cache is made available permanently through file-based storage.
- A new XML metadata cache file is created for each XML document that is added to the cache.
- WLI provides an XML metadata cache control, which you can use in business processes to retrieve data from the cache. The control uses the key (from the key-value pair) to retrieve associated XML metadata from the cache.

THE ROLE OF SOFTWARE AGENTS FOR B2B EC

Å Infrastructure for B2B electronic data interchange (EDI)

The electronic transfer of specially-formatted standard business documents, such as bills, orders, and confirmations, sent between business partners value-added networks (VANs)

Private, third-party managed networks that add communications services and security to existing common carriers; used to implement traditional EDI systems

Internet-based (Web) EDI

EDI that runs on the Internet and is widely accessible to most companies, including SMEs

Å Integration for B2B

ï Integration with the existing internal infrastructure and applications

Å Marketing databases, operational databases, EC applications, legacy systems, etc

Å ERP software, payment systems, CRM packages, DSS applications

Å Major vendors of management solutions

ï SAP, IBM, Microsoft, Oracle, Ariba

ï Integration with business partners

Å The Role of Standards in B2B Integration

XML (eXtensible Markup Language)

Standard (and its variants) used to improve compatibility between the disparate systems of business partners by defining the meaning of data in business documents

Web Services

An architecture enabling assembly of distributed applications from software services and tying them together

- The Role of Software Agents in B2B
  - The major role of software agents in B2C is collecting data from multiple sellersô sites
  - Software agents also collect information from business sellersô sites for the benefit of business buyers

ELECTRONIC MARKETING IN B2B

Business-to-business (B2B) describes commerce transactions between businesses, such as between a manufacturer and a wholesaler, or between a wholesaler and a retailer. Contrasting terms are business-to-consumer (B2C) and business-to-government (B2G).

The volume of B2B (Business-to-Business) transactions is much higher than the volume of B2C transactions.The primary reason for this is that in a typical supply chain there will be many B2B transactions involving sub components or raw materials, and only one B2C transaction, specifically sale of the finished product to the end customer. For example, an automobile manufacturer makes several B2B transactions such as buying tires, glass for windscreens, and rubber hoses for its vehicles. The final transaction, a finished vehicle sold to the consumer, is a single (B2C) transaction.

B2B is also used in the context of communication and collaboration. Many businesses are now using social media to connect with their consumers (B2C); however, they are now using similar tools within the business so employees can connect with one another. When communication is taking place amongst employees, this can be referred to as "B2B" communication.

SOLUTIONS of B2B EC

On the Internet, B2B (business-to-business), also known as e-biz, is the exchange of products, services, or information between businesses rather than between businesses and consumers.

Although early interest centered on the growth of retailing on the Internet (sometimes called e-tailing), forecasts are that B2B revenue will far exceed business-to-consumers (B2C) revenue in the near future. According to studies published in early 2000, the money volume of B2B exceeds that of e-tailing by 10 to 1. Over the next five years, B2B is expected to have a compound annual growth of 41%. The Gartner Group estimates B2B revenue worldwide to be $7.29 trillion dollars by 2004. In early 2000, the volume of investment in B2B by venture capitalists was reported to be accelerating sharply although profitable B2B sites were not yet easy to find.

B2B Web sites can be sorted into:

- Company Web sites, since the target audience for many company Web sites is other companies and their employees. Company sites can be thought of as round-the-clock mini-trade exhibits. Sometimes a company Web site serves as the entrance to an exclusive extranet available only to customers or registered site users. Some company Web sites sell directly from the site, effectively e-tailing to other businesses.
- Product supply and procurement exchanges, where a company purchasing agent can shop for supplies from vendors, request proposals, and, in some cases, bid to make a purchase at a desired price. Sometimes referred to as e-procurement sites, some serve a range of industries and others focus on a niche market.
- Specialized or vertical industry portals which provide a "subWeb" of information, product listings, discussion groups, and other features. These vertical portal sites have a broader purpose than the procurement sites (although they may also support buying and selling).
- Brokering sites that act as an intermediary between someone wanting a product or service and potential providers. Equipment leasing is an example.
- Information sites (sometimes known as infomediary), which provide information about a particular industry for its companies and their employees. These include specialized search sites and trade and industry standards organization sites.

Many B2B sites may seem to fall into more than one of these groups. Models for B2B sites are still evolving.

Another type of B2B enterprise is software for building B2B Web sites, including site building tools and templates, database, and methodologies as well as transaction software.

B2B is e-commerce between businesses. An earlier and much more limited kind of online B2B prior to the Internet was Electronic Data Interchange (EDI), which is still widely used.

MANAGERIAL ISSUES

Managerial Safety Leadership can make or break your process! It is known that good Safety

Leadership can positively impact safety behavior by anywhere between 35-86 percent. Poor Safety Leadership can kill the process. What are the issues?

Managers have a huge part to play in determining the success or otherwise of a behavioral safety process. Although many behavioral safety processes are 'employee-led', they can help or hinder the process in so many ways. A strong, visible and demonstrable managerial commitment to helping out can bring about enormous changes to the safety culture of an organization. However, they should not try to take the process over as this can lead to employee withdrawal and a failed effort. Equally, a lack of commitment can be detrimental in so many ways, that the process can fail in a relatively short time. The following highlights particular issues that have led to failed processes.

People are disciplined for not behaving safely in accordance with the behavioral items on the observation checklists. If there is one quick way to kill off peoples enthusiasm for engaging in behavioral safety it is this one. Although it may sound logical and the correct thing to do if someone is putting other people at risk, it can backfire rapidly. As such punishment /discipline for not adhering to the behaviors on a checklist has little value in a behavioral safety process as this will undo everything the process is trying to achieve. Although a somewhat controversial view to many safety professionals, it is based on years of psychological research that has demonstrated that punishment MUST be given immediately someone engages in that unsafe behavior, AND every single time, if it is to work. Logic dictates that this is physically impossible to do (unless you have safety policemen on every corner of your worksite). Using positive encouragement when people behave safely is a far more effective means of changing peoples behavior (something very rarely done).

A lack of regular feedback sessions. A lack of regular feedback due to the perception that people do not have the time can create a lack of workforce buy-in, as they perceive line management does not view the system as an appropriate weapon to reduce accidents. Some behavioral safety systems only require detailed feedback to be issued to the workforce on a monthly / quarterly basis (particularly those that rely solely on peer feedback at the time of observation and graphical charts). This often leads to accusations that behavioral safety takes a lot of effort for very little 'payback', as the accident rate and the percentage safe scores remain static. In my view, regular weekly feedback to the whole workgroup and a 'site summary' to the management team is the key to improving safety performance. Moreover, there is a strong business case that the beneficial side effects of improved team-working and communications outweigh any argument that it is a wasteful time resource. Moreover, it could be argued that a reluctance to provide the time demonstrates a lack of commitment to making the process work.

A lack of ongoing management support. Management do not see themselves as a part of the problem, and therefore do not see what they have anything to offer. They could and should allow people time to conduct observations, encourage people to behave safely, facilitate the target setting and feedback sessions, and help to implement any corrective actions by aiding with

paperwork and providing any necessary resources. In other words, being a safety leader not a follower!

ELECTRONIC DATA INTERCHANGE(EDI)

Electronic data interchange (**EDI**) is a document standard which when implemented acts as a common interface between two or more computer applications in terms of understanding the document transmitted. It is commonly used by big companies for e-commerce purposes, such as sending orders to warehouses or tracking their order. It is more than mere e-mail; for instance, organizations might replace bills of lading and even cheques with appropriate EDI messages. It also refers specifically to a family of standards.

In 1996, the National Institute of Standards and Technology defined electronic data interchange as "the computer-to-computer interchange of strictly formatted messages that represent documents other than monetary instruments. EDI implies a sequence of messages between two parties, either of whom may serve as originator or recipient. The formatted data representing the documents may be transmitted from originator to recipient via telecommunications or physically transported on electronic storage media." It distinguishes mere electronic communication or data exchange, specifying that "in EDI, the usual processing of received messages is by computer only. Human intervention in the processing of a received message is typically intended only for error conditions, for quality review, and for special situations. For example, the transmission of binary or textual data is not EDI as defined here unless the data are treated as one or more data elements of an EDI message and are not normally intended for human interpretation as part of online data processing

EDI: the NUTS and BOLTS

EDI is defined as the electronic transmission of business documents in a standard format between two companies. The definition can be expanded further to include the electronic transmission of business documents from the application program of one computer to the application program of another computer within the framework of a standard format. The key elements in the definition are business documents and standard format. EDI reduces cost and errors associated with the paper document environment. EDI also provides a rapid transfer of information between trading partners, which has become mandatory in todayôs business.

EDI & BUSINESS

ASC X12 format consists of data elements grouped together in segments. Each X12 transaction set is made up of a list of segments. The beginning of a transaction is identified by a header segment ñSTò, and the end of the transaction is identified by an ñSEò segment. Several transactions of the same type can be functionally grouped together. The beginning of a functional group is indicated by a group header segment identified by ñGSò, and the end of a functional group is indicated by a segment identified by ñGEò. One or more groups are bound together

within an interchange envelope made up of an ñInterchange Control Headerò identified as ñISAò and an ñInterchange Control Trailerò identified as ñIEAò. There is a diagram on the next page depicting the X12 hierarchical structure. Testing and Certification Each new transaction set will require testing and certification by our EDI support staff. Once the transaction set has been certified, we will make arrangements with your EDI staff to begin transmission of data using the newly tested transaction set. For further details on how to obtain testing information,

UNIT-III

INTRANET & EXTRANET

AUTOMOTIVE NETWORK EXCHANGE

ANX is the company that owns and operates the Automotive Network Exchange (ANX), a large private extranet that connects automotive suppliers to automotive manufacturers. Since 2006, ANX has expanded into other areas and now provides managed security, compliance and connectivity solutions to businesses in the healthcare, financial services, and manufacturing sectors.

The Automotive Network Exchange is the private extranet initially set up and maintained by the Automotive Industry Action Group, Telcordia, General Motors, Ford, and Chrysler. It was built as a private network for the auto industry in 1995 to provide consistent, reliable speed and guaranteed security for data transmissions between the automakers and their suppliers. The ANX Network allows trading partners to collaborate electronically on product design and development; solicit and process orders; and facilitate just-in-time manufacturing and post shipping schedules. In 1999 the Automotive Industry Action Group sold the ANX Network to the Science Applications International Corporation (SAIC). The overseer of the ANX Network became ANX. During the next six years, over 4,000 companies joined the ANX Network making it one of the largest extranets in the world. In 2006, the private equity firm One Equity Partners

THE LARGEST EXTRANET

The worldôs largest extranet in the PR industry will go live in February 2004 as a result of a new strategic partnership between the International Communications Consultants Organization (ICCO), and creative brief (www.creativebrief.com) the worldôs first global online interactive search and procurement service for the PR and creative industries. The new PR extranet forms part of the creative brief platform, and will be completed once all the trade associations

"showcases" go live on the creative brief site. The extranet will encompass 850 PR agencies in 24 countries across Europe, the Middle East, Africa, Asia-Pacific and the Americas, who collectively employ more than 25,000 people.

PRCAI is partnering with creativebrief to put Indian firms on the extranet and members will soon be hearing from creative brief in this regard.

The International Communications Consultancy Organisation is the voice of public relations consultancies across the world. It is the umbrella association for more than 850 consultancies through their trade associations in 24 countries. ICCO's 20 full member countries all have a formal trade association of PR consultancies. There are also four observer members where the local industry is moving towards establishing a formal association. Altogether, the associations that make up ICCO's family employ more than 25,000 people.

ARCHITECTURE OF THE INTERNET

What is the *Internet* architecture? It is by definition a meta-network, a constantly changing collection of thousands of individual networks intercommunicating with a common protocol.

The Internet's architecture is described in its name, a short from of the compound word "inter-networking". This architecture is based in the very specification of the standard *TCP/IP* protocol, designed to connect any two networks which may be very different in internal hardware, software, and technical design. Once two networks are interconnected, communication with TCP/IP is enabled end-to-end, so that any node on the Internet has the near magical ability to communicate with any other no matter where they are. This openness of design has enabled the Internet architecture to grow to a global scale.

In practice, the Internet technical architecture looks a bit like a multi-dimensional river system, with small tributaries feeding medium-sized streams feeding large rivers. For example, an individual's access to the Internet is often from home over a modem to a local Internet service provider who connects to a regional network connected to a national network. At the office, a desktop computer might be connected to a local area network with a company connection to a corporate Intranet connected to several national Internet service providers. In general, small local Internet service providers connect to medium-sized regional networks which connect to large national networks, which then connect to very large bandwidth networks on the Internet *backbone*. Most Internet service providers have several redundant network cross-connections to other providers in order to ensure continuous availability.

The companies running the Internet backbone operate very high bandwidth networks relied on by governments, corporations, large organizations, and other Internet service providers. Their technical infrastructure often includes global connections through underwater cables and satellite links to enable communication between countries and continents. As always, a larger scale

introduces new phenomena: the number of packets flowing through the switches on the backbone is so large that it exhibits the kind of complex non-linear patterns usually found in natural, analog systems like the flow of water or development of the rings of Saturn (RFC 3439, S2.2).

Each communication *packet* goes up the hierarchy of Internet networks as far as necessary to get to its destination network where local *routing* takes over to deliver it to the addressee. In the same way, each level in the hierarchy pays the next level for the bandwidth they use, and then the large backbone companies settle up with each other. Bandwidth is priced by large Internet service providers by several methods, such as at a fixed rate for constant availability of a certain number of megabits per second, or by a variety of use methods that amount to a cost per gigabyte. Due to economies of scale and efficiencies in management, bandwidth cost drops dramatically at the higher levels of the architecture.

Resources. The *network topology* page provides information and resources on the real-time construction of the Internet network, including graphs and statistics. The following references provide additional information about the Internet architecture:

ARCHITECTURE OF THE INTRANET

ñI canôt find anything!ò At the risk of sounding repetitive, this is still the number one complaint of most employees at most organizations, regardless of size, industry and geographic location. Notwithstanding the effectiveness of the search engine which, more often than not, is rated as being somewhere between 'awful' and 'piss-poor,' information architecture is often the top priority of most intranet managers when undertaking a redesign.

Information architecture (IA) is mostly science with a dash of art. As it relates to the intranet, the IA is best represented by a site map or organization chart of the major information or content categories (parents) and the sub-categories (children) and how they all relate to each other.

IA is defined by the Information Architecture Institute as:

- The structural design of shared information environments.
- The art and science of organizing and labeling web sites, intranets, online communities and software to support findability and usability.
- An emerging community of practice focused on bringing principles of design and architecture to the digital landscape.

The ultimate goal of the intranet manager, architect and consultant is to create an óintuitiveô IA with information categories and navigation paths that are intuitive or easily understood at a glance. Of course the principal challenge of any information architect is that what is intuitive to one person is not always intuitive to another.

When redesigning an intranet or portal, there is a natural inclination by some architects and consultants to reinvent the IA to best reflect ôbest practicesô and/or the IA or labels used by other clients with successful and intuitive IAs. This of course is a dangerous trap, as no outside consultant or architect could truly appreciate and know intimately the culture and the formal and informal corporate nomenclature as those who have worked for an organization for years. Furthermore, legacy labels and nomenclature considered awkward or poorly named by the architect redesigning the IA are in fact reinforced and validated by years of employee use. For example, the content category ñHRò is not a very cool label and design firms and architects have come to use cute, new millennia labels like:

- People Place
- My Services
- Employee Central

None of these labels are wrong per se, but if employees have spent years finding benefits and compensation information and tools under the ñHRò section, why would anyone change the label? Frankly, unless there is a solid, demonstrated reason for doing so, you risk further confusing employees who demand simplicity.

Firstly, no two organizations are the same. Notwithstanding different industries and services, each organization (even closely related competitors) may in fact differ in very significant ways:

- Corporate priorities
- Corporate values
- Target audience & customer base
- Management
- Culture
- Geographic locations
- Personal life experiences and preferences
- Career path & development

All of the above factors, and many others (including dozens and perhaps hundreds of sub-factors), influence an individual employeeôs definition of 'intuitive.' Therefore applying labels and schema from one company to another makes absolutely no sense and is reckless in principal.

So while reinventing an intranetôs information architecture from scratch, and removing common and generally accepted labels and information paths is counter-productive, there are some general lessons to be learned (though not always universally applicable):

1. The vast majority of practical content should be no more than 3 clicks from the home page (this is impossible with millions of pages of content, but note the emphasis on majority)

2. Major parent categories (major sections or channels that represent virtually all the content on a corporate intranet) should be limited to 6 to 8, including sections for:

- About Us (Corporate profile, business structure, bios, directory, etc.)
- News (news stories, announcements, events, etc.)
- HR (human resource related information and tools)
- Products & Services (and/or customer related information)
- Forms & Tools (an aggregate section of links or originals)
- Manuals & Policies (an aggregate section of links or originals)

3. Beware of catch-all sections such as Resources or Information that become dumping grounds for everything that doesnôt fit in other sections rather than finding it a true home

4. Navigational / usability elements such as Search, Site Map, Help, Contact Us, Feedback, etc. need not be in a parent category per se, but should be available in the main navigation banner and/or footer

5. Card sorting exercises that allow users to determine content groupings and labels are extremely valuable for fixing navigation and usability problems

6. Do not bury or overlook highly desirable but not necessarily mission-critical items that are usually very highly sought by employees including:

- Cafeteria menus
- Buy-and-sell / Classifieds
- Job postings
- Weather forecast
- Office locations & maps

Most corporate intranets feature weak information architectures that require careful thought and some work to enhance. But completely scraping and reinventing the IA at the expense of years of common, learned behavior may well further confuse and irritate your employees who are already complaining that they ñcanôt find anything!ò

ARCHITECTURE OF EXTRANET

A Web site is an Internet-software-based publicly accessed World Wide Web location characterized by open access, conformance to common standards, and limited security. It is primarily used commercially for marketing and advertising.

An Intranet is an Internet-software-based network inside an organization that links its communications and information in a way that makes information more accessible and

navigation through all the resources and applications of the organizationôs computing environment more seamless.

Security is a key Intranet concern and is most typically achieved by placing the Intranet network applications on the organizationôs wide area network (WAN) and by limiting access to the WAN.

An Extranet is an Internet-software-based network designed for proprietary communication with specific customers or business partners. An Extranet network allows organizations to communicate more efficiently with their strategic constituents and make technical or product support, exclusive pricing, or other forms of privileged information accessible online. As with Intranet networks, security is a concern, but limiting the Extranet network to an organizationôs WAN is typically not an option. Therefore, alternative security measures must be adapted to the specifics of the network.

While the different and discrete features of these three networks may be worth noting, it is more important to recognize that the inherent technical and practical efficiency of open-architecture connectivity is blurring these distinctions. When an organizationôs Intranet or Extranet network can be accessed via the Web by a user who has appropriate security clearance, as is now often the case, network definitions become obsolete, and the central issues of business value and communications functionality become more important.

Does the blurring of these network concepts represent increased efficiency and offer increased business opportunities, or does it simply serve to further complicate matters? The distinctions made between these networks were artificial, or at least temporary, in the first place. And attempting to conceptually separate and disconnect networks that are predicated upon inherent connectivity is self-defeating. Therefore, rather than focusing upon the differences between Intranets, Extranets, and the Internet, it is wise to identify the logical connections and commonalities between these networks and apply them to practical needs.

The central value of Internet-based communications technologies is that they all use the same languages, standards, and protocols. Not only does this agreement on language, standards, and protocols lead to open communications, but the common languages used also can be advanced simultaneously by multiple competing organizations to the benefit of all.

For example, in order to advance applications in a proprietary system environment, the system sponsor must independently invest in software development. Advancing applications in an open-architecture environment, on the other hand, occurs through competition and synergy. It is hard to believe that any of the major healthcare information system vendors could bring as much programming capability to bear on improving their proprietary user interfaces as Microsoft and Netscape are applying to advance the open-system user interface commonly known as the Internet browser.

What types of real-life business problems can an open-architecture network address? Whether classified as Web sites, Intranets, or Extranets, the potential value these networks offer to organizations is the same and can be broken down into three categories:

Improved data access. Examples might include improved physician and hospital access to clinical data, financial data, and legacy systems designed to interface with existing inpatient systems.

Business processes online. Business processes that traditionally have been performed by phone and fax can be accomplished more efficiently in an online format. Examples include online medical authorization and referrals and supply order placement and confirmation.

Data collection. With business processes trafficking a network, data collection can be accomplished by using relevant, specific databases maintained by the organization. Healthcare organizations can, thus, have real-time access to data that previously was lost in a paper system of forms, faxes, and printed reports. Collecting and analyzing these data allows healthcare organizations to make strategic and tactical decisions based on accurate and timely information ï a rare and powerful advantage.

INTRANET SOFTWARE

Claromentis provides a secure web platform for your business that includes our framework, intranet software, business process management software and custom applications. Our information management, process management, and intranet / extranet software is used by global corporations, governments, small to medium enterprises, and not for profit organizations on five continents and helps to ensure that intranet and extranet users can find and create exactly the information required.

Our intranet software supports global information management, business processes, workflow automation, collaboration software, corporate social networking, custom software and applications. Intranets and custom solutions are available individually, in combination, or as a holistic web-based environment to deliver integrated information and process management on a single platform

We provide a consultative approach to understanding your business needs and we ensure that our intranet and extranet software is designed to the highest aesthetic and usability standards. Our prototyping process provides confidence that your intranet software will meet your requirements and allows us to provide accurate and fixed-cost estimates before there is any commitment to actual development.

We deploy our open source extendable intranet software on Linux or windows, in any language

and on a perpetual license model or as software as a service. Our API is extensive and our experience is worldwide.

If you are looking for a web based platform for your business, or wish to discuss intranets, document management software, global extranet software, business process management software or custom applications please contact us to arrange a discussion with one of our experienced global intranet software and extranet software advisors

APPLICATIONS OF INTRANETS

Besides supplying infrastructure for Web applications by providing a natural developmental and staging area for these applications, intranets have become so useful that they are now generally recognized as being necessary even if the organization has no need for Internet applications.

1.Document publication applications
The first application that always comes to mind for intranets in and of themselves is the publication and distribution of documents. This application allows for paperless publication of any business information that is needed for internal employees or external customers or suppliers. Any type of document may be published on an intranet: policy and procedure manuals, employee benefits, software user guides, online help, training manuals, vacancy announcements--the list goes on to include any company documentation.

2.Electronic resources applications
In the past it has not been easy to share electronic resources across network nodes. Employees have had problems sharing information for various reasons including software version inaccuracies and incompatibilities. Intranets provide the means to catalog resources online for easy deployment across the network to any authorized user with the click of a mouse. Software applications, templates, and tools are easily downloaded to any machine on the network.

3.Interactive communication applications
Two-way communications and collaboration on projects, papers, and topics of interest become easy across the intranet. Types of communications that are enhanced and facilitated include e-mail, group document review, and use of groupware for developing new products.

4.Support for Internet applications
Even though organizational full-service intranets are the next step in enterprise-wide computing and have enough value to make them desirable simply for the organizational benefits they bring, they are also necessary for supporting any Internet applications that are built.

The transactional processes and trading of information that will be done by all but the most elementary Web applications will require an infrastructure to store, move, and make use of the information that is traded. The infrastructure to accomplish those tasks is the organizational intranet.

The development and maintenance of the Internet application requires that the organization has a developmental environment and the means to test the applications prior to placing them on the Internet. This requires an intranet that mirrors the functionality of the Internet. The infrastructure also requires that the Internet application be easily updated and maintained by the staff that has the responsibility for the application. The infrastructure becomes even more important until the middleware to easily manage Internet applications becomes available. Because both intranet and Web application tools are still missing, maintenance on Internet applications will remain labor intensive for the next 18-24 months. This requires an infrastructure that allows easy access and manipulation by these labor-intensive processes.

INTRANET APPLICATION CASE STUDIES

It used to be so difficult to find and read quality intranet case studies. Although, long detailed case studies with screenshots are hard to come by, many organizations are opening the hood to allow the outside world a peak at their intranet.

Here are a few good intranet case studies from the past few weeks:

Navy Marine Corps Intranet Case Study

The Navy Marine Corps Intranet (NMCI) is the second-largest network in the world; only the Internet is larger. The NMCI is not just massive, its mission is vital: more than 700,000 of the military and civilian employees of the Department of the Navy and Marine Corps receive IT services via the intranet.

Its integrated operation enables secure off-site storage and rapid service and data restoration, even in the event of a disaster. Some that the NMCI has weathered so far include 9/11, Hurricane Katrina and the Indian Ocean tsunami.

EDS is deploying VMware Infrastructure throughout the NMCIôs vast network to improve application availability while cutting costs. Virtualization is still a work in progress, but the results thus far have been impressive.

At Leroy Merlin, teams are organized within each store by department, such as hardware, woodworking, garden, etc. The project, spearheaded by the Internal Communications department, has the ultimate goal of improving the personal and collective efficiency of all Leroy Merlin employees ð 20,000 people in France. The Intranet has a team space that must be easy to use by a non-technical person. Employees use this space to leave each other messages, tasks, share photos, etc. The space also has specific widgets to display data, such as financial results.

Meredith Corp uses social intranet to help grow revenue

Meredith Corporation runs some of the most recognizable, storied magazine brands in America, serving nearly 75 million women. But the Des Moines, Iowa based Meredith competes in a challenging media market in the midst of transformation. The way people consume information is undergoing a massive shift, disrupting traditional revenue sources. In fact, according to this yearôs State of the News Media report by the Pew Project for Excellence in Journalism, the number of ad pages sold by magazines fell by 25 percent in 2009. In order to better grow their subscriber base and offset the challenges of the current ad market, they deployed enterprise social software from Socialtext.

SKM engineers a SharePoint future

This case study is about a MOSS 2007 rollout, with a focus on communications and change management.

In 2009 Sinclair Knight Merz (SKM) embarked on a global rollout of Microsoft SharePoint to host its corporate intranet, performance dialogue system and other key business applications. The multinational engineering firm needed to replace multiple legacy systems and, following an evaluation of a number of products, it identified SharePoint as its core platform for collaboration and KM for the future.

CONSIDERATIONS IN INTRANET DEPLOYMENT

1. collections of web links
2. company news and department newsletters

3. organization charts
4. manuals, documentation, policies
5. basic collaboration tools (groupware)
6. directory services (gateway to phone and other staff contact info)
7. human resources information
8. threaded discussions on current company topics/issues
9. webï based email access
10. webï based discussion list management and participation
11. access to company databases ð sales, inventory, pricing
12. calendaring (companyï wide events calendar)
13. scheduling (meetings, personal scheduling)
14. document management
15. search engine of company documents
16. employee time logging
17. employee expense reporting
18. forms to help automate other business processes ï work orders, job descriptions, mileage, maintenance requests, etc.

THE EXTRANETS

There's something about new technologies that makes people give them awkward and contrived labels. Extranets are no exception. First, there was the Internet, a reasonable enough name for a wonderful basket of technologies. Then came Intranets as a play on the Internet name. An Intranet is like a small private Internet living within the confines of an organization. Employee manuals, access to accounting and a variety of similar internal matters are all now frequently entrusted to a company's Intranet.

However, when early adapters began giving selected outsiders access to parts of their Intranets and creating private online communications tools for visitors, customers and clients, some Intranets stopped looking all that, well, intra. Inevitably, someone coined the word "Extranet" to describe these new tools and techniques, and the name stuck.

Big deal. Just another addition to the opaque jargon of the computer world. True, but if you dig into the concept a bit, there emerges a promising idea of real utility to law firms: the reduction or elimination of barriers between clients and lawyers, or in other words ï the ability to communicate better with clients with much less effort. Where time is increasingly at a premium, it only makes sense for lawyers to learn a little something about what Extranets can do for their practices.

THE STRUCTURE OF EXTRANETS

So hereôs the first thing to understand. Extranets are not really a thing so much as they are a serviceð the service of creating novel and effective ways of communicating and sharing information with a client.

At its most basic an Extranet is a means of networking two or more entities so they can securely share information. In some cases an Extranet is simply an extension of a law firm's Intranet to include a connection to a client. In other cases an Extranet makes use of the public Internet combined with security features to create a new, more private, environment. Extranets generally have the following features:

- The use of Internet technologies and standards. These include the standardized techniques for transmitting and sharing information and the methods for encrypting and storing information, otherwise known as the Internet Protocol, or IP.
- The use of Web browsers. Users access Extranet information using a web browser like Microsoft Internet Explorer, Netscape Navigator or, more recently, Mozillaôs Firefox. Browser software uses relatively small amounts of memory and resources on a computer. The great thing about browsers is that an application written for a browser can be read on almost any computer without regard to operating system or manufacturer. That makes an application developed for a browser a snap to deploy. A browser on a userôs machine is all the software he or she needs to take full advantage of the Extranet application. No messy and confounding installation disks; fewer clogged hard drives.
- Security. By their very nature, Extranets are embroiled in concerns about security. To protect the privacy of the information that is being transmitted, most Extranets use either secure communication lines or proven security and encryption technologies that have been developed for the Internet.
- Central Server/Repository. Extranets usually have a central server where documents or data reside. Members can access this information from any computer that has Internet access.

While these are the broad attributes shared by most Extranets, Extranets vary dramatically in their design and implementation. They can be employed in a wide variety of environments and for very different purposes, like:

- Sharing case information
- Sharing of case-related documentsð many Extranets contain document repositories that can be searched and viewed by both lawyer and client on-line
- Calendaringð key dates and scheduling of hearings and trials can be shared on-line
- Providing firm contact information
- Acting as a ñwork flow engineò for various suppliers
- Providing access to firm resources remotely
- Sharing time and expense information

Is there a point?

Extranets have a high risk/reward factor. A successfully implemented Extranet can result in significant expansion in clientele and profitability for a law firm. An Extranet that is poorly designed or badly executed can be an endless headache. The failure to implement or join an Extranet can also have a negative impact on a law firm if it means that a more willing, entrepreneurial or adventurous competitor gains a significant advantage.

Letôs look at some of reasons why Extranets matter to lawyers:

Improved communications. The most common reason for building an Extranet is improved communication between lawyer and client. An Extranet can eliminate telephone tag, or worse, the failure of a lawyer to respond to calls and the delays involved with traditional correspondence. An Extranet is available 24 hours a day; both lawyers and clients can update or review information whenever it is convenient for them to do so. This can greatly reduce the friction between lawyers and clients and make life easier for both.

From the clientôs perspective, an Extranet can make the arduous task of monitoring and following up with a roster of law firms much easier. Many clients decry the deeply frustrating process of chasing law firms for status information on the matters assigned to them. Extranets liberate the status information (ñwhere are you on the Bloggs matter?ò) from the physical file (a memo on the correspondence spike confirming that discoveries are scheduled for next Friday) by making that information open to review by the client online at any time.

Client retention and integration. High on the list of law firm motives for participating in or creating an Extranet is the desire to retain clients. Many law firms will create an Extranet around a key client or practice area where they have a significant volume of work. In an effort to enhance and solidify the relationship, an Extranet can build and reinforce deep links between the lawyer and client. Taken to the extreme, an Extranet can make it hard to tell where the law firm ends and the client begins.

Client marketing. Extranets can attract new clients or gain additional business from existing clients. A law firm that builds an Extranet can differentiate itself from those that donôt. What you are saying to the client is: "Not only do we provide excellent legal services and advice, but we do so in a way that makes it much more convenient for you to use, consume and monitor those services". And never underestimate the ñwowò reaction that technology creates: the simple viewing of a computer screen with all of their file information available at a point and a click can seduce even the most cynical of clients.

Improved workflow management. Many legal matters involve a complex series of steps that must be completed in a specific order to get a file done properly. Some steps must be completed by the lawyer; other steps by the client or third parties. These steps can often be defined by a series of rules often referred to as the "workflow". An Extranet can be designed to incorporate and manage the workflow for handling a wide variety of legal matters. If properly designed, the workflow management built into an Extranet can be a boon to all parties. Done poorly, it can

become a rigid straightjacket that does not conform to the realities of legal practice. Flexibility must be an inherent part of the design.

Higher quality. Implementation of an Extranet can significantly raise the level of quality control within an organization. Extranets can be built with real-time status reporting on the progress of matters. In other cases, information from the client's or law firm's core systems can be transferred automatically into the Extranet, eliminating the error-prone task of transcribing information or re-keying data. It all adds up to better product.

Community building. Something quite interesting happens when a well-designed Extranet gets properly implemented. In a very real sense, you have just built a new kind of community, a community where a shared set of values and purposes is given a new forum. The members of the Extranet community normally include the client but can include other law firms, suppliers, government offices or the courts. Rather than each of these community members working through or around each other with the benefit of only partial or third hand instructions, they can all be brought into the same circle and work toward the common goal by the very structure of the Extranet itself.

The Client wants it so. Some clients mandate participation in an Extranet as the cost of doing business with them. For this reason alone, it behooves the law firm to familiarize itself with the technology and to indicate a willingness to participate. Remarkably, many law firms, when confronted by a client who wants to introduce an Extranet, will raise objections and complain loudly about the costs of doing so. These objections often ignore the benefits that can accrue to the client and pessimistically ignore potential savings and benefits to the law firm. All talk of savings and benefits aside, if a client wants an Extranet, then a client will have an Extranet. The law firm that drags its heals will quickly lose that client.

Build or Buy

Extranets are still novel tools. So most law firms approach the world of Extranets gingerly and do so primarily at the behest of clients. Increasingly, however, leading law firms are taking steps to get in front of these things and have begun considering whether to build or buy their own Extranet applications.

If you or your firm are heading in this direction, the first task is to research whether there are existing Extranets that meet your requirements. It may be that the vendor or service provider for an Extranet could tailor an Extranet to meet your needs. Here are some things to keep in mind as you go through your planning.

Buy. If there is an existing application that meets most of your requirements and it can be customized with a modest amount of effort, you will be hard pressed not to choose this option. Here is why buying is generally considered the most effective solution:

- An existing application may be far less expensive than designing your own. The vendor will likely have developed a series of Extranets using tools that it has developed specifically for that purpose. It can license the application on a one-time or periodic charge. The vendor can spread the development costs over a greater number of users, meaning the cost is lower for each user.
- The vendor may host the solution on their web servers so that you do not have to build and maintain the hardware/software infrastructure internally.
- Where an Extranet is developed by a third party or on behalf of more than one law firm/one client, the features developed by or at the request of one company can benefit all users of the Extranet.
- Law firms specialize in practicing law and, generally speaking, not developing software. So it may make most sense to work with an organization that specializes in Extranet development and implementation.

Build. On the other hand, you may not find what you are looking for on the open market and so may have no choice but to construct your own tools. This has some real benefits:

- You can specify the application to precisely meet your needs. You can accommodate the wishes of the law firm and client and the solution can have a unique look and feel.
- You would have free reign over subsequent changes or modifications to meet the needs of users. You are not dependent on a third party's willingness to update the application.
- You have the ability to support the application internally, meaning you can determine the level of support and training required.
- You can show your client something proprietary that other law firms cannot offer.

And some real disadvantages:

- Itôs generally quite costly, even with the contemporary design tools that have gone a great distance to simplify the job.
- If you donôt have the resources and expertise internally, you may have to hire them or contract with a third party to provide them.
- If you do not have existing web servers you will have to invest in additional hardware and software.
- If you host it yourself, then you alone are responsible for all security issues and the risk of any breaches.
- It may also take a substantial amount of time to construct your own Extranet from scratch.

There is usually a considerable learning curve associated with creating an Extranet. It takes time to assemble the hardware and resources. If you are doing a custom "design and build" it will take time to develop the web pages and features and test them thoroughly. Usually, there is a pilot phase where users test and provide feedback. It may take months before the application is ready for full implementation.

Whether you build or buy, those firms that have taken an aggressive approach to Extranet development and deployment are beginning to see some reward for their efforts. What is clear is that Extranets are not a passing technological fancy. They matter and, increasingly, clients want them.

EXTRANET PRODUCTS AND SERVICES

Portal solutions. It has been our objective to work with information systems built on the latest Internet technologies since the founding of Internet Projekt. And we still adhere to that.

Thus you will find dozens of portal solutions in our portfolio, from standard e-shops and B2B business platforms through specific corporate intranets, customer-oriented CRM systems to sophisticated multifunctional or content-extensive portals.

If we are to choose between an easy order that can be completed in a few days and a time-demanding portal based on hundreds of general or specialized pieces of information conditioned by challenging technological requirements, we do not hesitate to go for the latter.

Intranet. We believe that if a company is to successfully communicate with its clients, it should primarily focus on the analysis of internal communication and rehabilitate it as needed.

We can professionally secure this information and guarantee that the access to this information will be limited to the group of business partners, distributors or VIP clients you choose.

Extranet is another effective solution for sharing updated information but unlike the intranet it is intended for a number of external subjects. You can still share discrete information that you do not wish to publish on the Internet.

We can professionally secure this information and guarantee that the access to this information will be limited to the group of business partners, distributors or VIP clients you choose.

We can do the following in the field of Portal Solutions:

- Design creative personalized solutions from small Intranets to complicated robust portals
- Execute a detailed analysis of accessibility and usability
- Consolidate the access to information from different sources into a uniform interface
- Ensure efficient and safe operation even for very user-utilized portals
- Integrate the web presentation with other corporate systems and applications (ERP, DMS, BPM, ECMS, social networks)
- Deal with a whole range of integration relations that eliminate duplicity in entering content
- Employ the latest portal technologies increasing the quality of company processes

- Efficiently manage global multi-langauge projects
- Set the content and appearance according to the individual needs of the user
- Provide the user with simple content management without the need of technical knowledge
- Professionally train future editors, user support and administrators)

Introduction of the intranet in the company brings:

- Central source of information and documents
- Possibility of simple search with the use of metadata
- Safe archiving of in-house data at one place
- Access to information 24 hours a day, 365 days a year
- Efficient tool for improving the efficiency of employee communication

What the extranet brings:

- Fast, safe and reliable communication with business partners
- Reliable tool for provision of information to suppliers, or clients
- Acceleration of the information flow between your company and selected subjects
- Improvement in the efficiency of work organization
- Cost and HR savings
- Elimination of obsolete red tape models
- Competitive advantage

APPLICATIONS OF EXTRANETS

An extranet application is a software data application that provides limited access to your company's internal data by outside users such as customers and suppliers. The limited access typically includes the ability to order products and services, check order status, request customer service and much more.

A properly developed extranet application provides the supply chain connection needed with customers and suppliers to dramatically lessen routine and time consuming communications. Doing so frees up resources to concentrate on customer service and expansion as opposed to administrative office tasks such as data entry.

Just as intranets provide increased internal collaboration, extranets provide increased efficiencies between your company and its customers and/or suppliers. Developing and implementing an extranet application can provide you the competitive edge to stay ahead of the competition in the eyes of your customers and a better ability to negotiate prices with your suppliers.

Contact an AAIS consultant to find out more about how your business can benefit from extranet application technology.

BUSINESS MODELS OF EXTRANET APPLICATIONS

THE EXTRANET MODEL

The strategic role of the extranet The extranet represents the bridge between the public Internet and the private corporate intranet. The extranet connects multiple and diverse organizations on-line, enabling strategic communities of stakeholders with common interests (*communities of interests*) to form a tight business relationship and a strong communication bond, in order to achieve commerce-oriented objectives. The extranet defines and supports this extended business enterprise including *partners*, *suppliers and distributors*, *contractors*, *customers* and others that operate outside the physical walls of an organization but are nonetheless critical to the success of business operations. With the Internet providing for public outreach or communication, and intranets serving internal business interests, extranets serve the business-critical domain between these extremes where the majority of business activity occurs. The unification of robust enabling technologies and ubiquitous access through the Web is resulting in unique and interesting market dynamics that are changing the way many companies are doing business. Interactive communities are beginning to emerge that exist solely in cyberspace, where information travels faster, more cost effectively, and with greater accuracy when compared to other forms of communication and information exchange. These interactive communities are the driving and sustaining force behind the extranet concept, and their insatiable collective need to access content when, where, and how they want to see it will continue to push the limits of what is technologically possible. Extranet solutions built to engage and support these interactive communities are designed to emphasize and foster customer relationships. As successful businesses know, the cost of obtaining a new customer far outweighs the cost of maintaining a current one. With commerce-enabled extranets, companies are now able to establish and maintain one-to-one relationships with each of their customers, members, staff or others at very low cost through the Web, offering a customized and individualized experience that can be dynamically generated or modified based upon a user's privileges, preferences, or usage patterns. Information entered by the user (registration form, on-line surveys, etc.) can be compiled with statistics and other information that is captured automatically by the system (searches performed, products purchased, time spent in each site area, etc.) to provide the company a complete picture for each and every visitor of the system. This comprehensive user profile offers unprecedented opportunities to present relevant information, advertising, product and service offerings and other content to a qualified, targeted interactive user community on a one-to-one basis.

Characteristics of Emerging Interactive Communities of Interests

Emerging interactive communities on the Web are comprised of individuals and organizations who are demanding that increased value be delivered through these on-line solutions. The static brochure Web site is fast becoming an outdated marketing tool that does not effectively serve the

needs of business. Extranet solutions couple the power of the Web with true business purpose. As a result, several dominant characteristics are emerging for supporting this interactive business model. One of the strongest characteristics of the on-line interactive community is an active member-centric focus. With the ability to capture both active (user-entered) and passive (system-recorded) information throughout the user's on-line experience, the site owner now has a wealth of information that can be used for promotional efforts, customized offerings, and other incentives to entice the user to return to the site and conduct future business. Integration with other forms of more traditional communication such as emailing lists, global-faxing, and direct mail extends the reach of the Web site beyond the software browser and executes a more inclusive strategy to engage individuals and organizations at whatever technology level they reside. Another characteristic for these interactive business models is a change in the way content is presented. In the early stages of the Internetôs development, ñcontent is kingò was the credo followed by many as they established their company's on-line presence. Today, lack of information is no longer the concern; quite the opposite. As a result, the emerging interactive communities are substantially more discriminating in their need for relevant, value-added information. This, combined with the fact that the WWW remains a user-driven medium with content being requested or specifically selected with each click of the mouse, presents the ongoing challenge to keep the users interested and engaged in an interactive service. The new paradigm for information dissemination through the Web involves presenting *content in context*. This requires not only knowing your user community and providing the business-critical information that will be of interest to them, but also offering the capability for the user to control their own system environment. Extranet applications (for instance, intelligent agents) that dynamically control and generate pages based upon user's privileges and/or preferences can instantly display relevant information to the user, presenting content in the manner in which he/she wishes to receive it. The third major characteristic is transaction management activities. Millions of people have already made their way to the Web, and the accompanying flow of currency is not far behind. According to a recent market study [1], Internet-based sales represented 73.8% - or $733.1 million - of all electronic sales in 1996. That figure is projected to grow to $4.27 billion by 2000, accounting for 85.0% of all electronic sales. The circulatory system of the new digital economy is quickly being established, due in part to the business-oriented demands of the emerging interactive communities. SET, SSL and other industry standards are gaining wide acceptance and use for Internet-commerce activities; however, robust commerce-oriented solutions will also be required to effectively support the various on-line business models [2]. Extranet solutions are specifically designed to support the various revenue models of the Web. Advertising and promotion of goods and services, acquisition of *market intelligence* from consumers, subscriptions, pre and post sales support, on-line retail sales and delivery services [3] as well as communication between traders and supply chain management operations all present complex challenges for both front and back office operations.

MANAGERIAL ISSUES

The application of Internet technologies for the conduct of interfirm business transactions has given rise to a boom in business-to-business (B2B) electronic commerce. Yet, although there are many success stories that have been reported over the past several years, the progress of B2B e-commerce has been hindered by unanticipated technical, organizational, economic and legal challenges that diminish value. In this article, we report on a series of interviews with leading academic researchers and industry senior managers who are in a unique position to make sense of key issues and offer useful insights. The respondents provide their views on the efficacy of different business models in B2B e-commerce, the problems associated with B2B technology platform adoption and implementation, new ways of thinking about interorganizational information sharing and e-procurement business process design, investment decision making and financial returns for e-business infrastructure, international and regional issues, and research directions.

ELECTRONIC PAYMENT SYSTEMS:-

Is SET a Failure?

This note considers the application of electronic cash to transactions in which many small amounts must be paid to the same payee and in which it is not possible to just pay the total amount afterwards. The most notable example of such a transaction is payment for phone calls. If currently published electronic cash systems are used and a full payment protocol is executed for each of the small amounts, the overall complexity of the system will be prohibitively large (time, storage and communication). This note describes how such payments can be handled in a wide class of payment systems. The solution is very easy to adapt as it only influences the payment and deposit transactions involving such payments. Furthermore, making and verifying each small payment requires very little computation and communication, and the total complexity of both transactions is comparable to that of a payment of a fixed amount.

ELECTRONIC PAYMENTS & PROTOCOLS

What is cash payment?
- Cash payment is currently most popular form in conventional payment system in the world.
- Currently cash payment involves 75% - 95% of all transactions are paid in cash..
- Transactions are paid in a cash form (such as $ bill) from a buyer to a seller. An electronic cash payment system usually is developed based on an electronic payment protocol which supports a series of payment transactions using electronic tokens or coins issued by a third party. There are three types of users:
- a payer or consumer
- a payee, such as a merchant
- a financial network with whom both payer and payee have accounts.

Customers: Customers use the digital cash payment systems to make purchases.
- Dealers: Dealers have to bear the costs of payment transactions.
- Providers for digital payment systems:
Providers are intermediaries between dealers and financial institutions. They provide services and training.
- Development vendors for digital payment systems:
- Financial institutions: Banking systems or organizations who use electronic payment systems.
- Trust Centers:
They control digital signature keys, and help to secure customer confidence in certain payment systems. They are responsible for the integrity of transmitted data and authenticity of contractors.
Digital money: Payment systems must provide customers and private households with acceptable digital money.
- Security: Ensure the security of transactions and information privacy of users.
- Scalability: A large number of customers and concurrent transactions should be handled in a scalable manner.
- Efficient and effective: Payment systems must support efficient and effective payment processing and accounting services for small payment transactions.
- Simple and lost cost: Payment systems must provide customers with simple and low cost transparent transactions.
Anonymous: Usually, customers wish to stay anonymous for all involved transactions..
- Double spending: Digital coins consists of a number of bits. Payment systems must be able to recognize and/or prevent repeated payments with the same digital coin.
- Exchange: Digital money should be convertible into ñrealò money whenever necessary.
- Store: Digital money must be stored locally on hard disks or other media.
- Value: Digital cash payment systems must provide a large number of digital coins for circulation and perform authentication checking.
Saved time:
- Reduce transaction process time
- Speed up transaction processes
- Reduced costs:
- Reduce transaction costs
- Reduce cash distribution costs
- Flexibility:
- Digital cash can take many forms, including prepaid cards
- Digital cash can be converted into different currencies
- Reduce cash distribution risk:
- Reduce the regular cash distribution risk

SECURITY SCHEMES IN ELECTRONIC PAYMENT SYSTEMS

The number of private and corporate financial transactions that are done electronically is growing rapidly. From a user's point of view, efficiency and flexibility are clear advantages of existing and emerging electronic payment systems. Due to technical progress (e.g. powerful

smart cards) and new developments in cryptology, these systems offer also a high level of security.

The goal of this paper is to describe and discuss a new electronic payment system allowing a customer to pay anonymously without affecting the system's security. In Section we introduce some basic concepts, and in Section 3 we present our proposal. Related systems are discussed in Section 4. The Appendix describes the novel methods in a concise mathematical notation. Usually, the security of electronic payment systems is realized by a combination of physical measures and cryptologic methods. Physical security measures depend on the current technology; therefore, technological progress may threaten seriously the existing systems. It is therefore interesting to investigate systems whose security relies solely on cryptologic methods. In this section we propose an electronic payment system that provides payer's anonymity. Electronic payment systems offering no anonymity can easily be realized. The simplest example is an EFTPOS-like1 system in which payments are done by simultaneously debiting the payer's account and crediting the payee. The security of such a system is based on the authentication of the payer as the owner of the debited account; this means that the security does not need to rely on physical measures.

There also exist systems offering anonymity, for instance systems using numbered bank accounts, which have been introduced in some countries. The basic idea of our proposal is to combine the two systems mentioned above in order to have the independence of physical security of the former and the anonymity of the latter. A customer has a regular account with the bank and is the owner of one or several anonymous accounts. Actually, anonymous accounts are similar to numbered bank accounts. The customer can pay with the regular account, if no anonymity is desired, and with an anonymous account, if the individual's identity should not be disclosed. However, EFTPOS: Electronic Funds Transfer at the Point of Sale. before an anonymous account can be used, some money has to be paid into it. How can this be done both digitally and anonymously? Our solution is to split this transfer into two steps. In the first step, the customer withdraws money from the regular account and receives from the bank a digital attestation. Then he or she can use this attestation to pay the withdrawn money into the anonymous account.

The following properties of this attestation are fundamental for the security of the system.

ÅIt must be impossible to forge an attestation because this is equivalent to forging money. For this reason, the bank signs the attestation with a digital signature.

ÅThe attestation must not reveal the identity of the payer. This is possible if a blind signature is used instead of an ordinary digital signature: the customer acts as the sender and the bank as the signer.

ÅIt must be impossible to use the attestation more than once to pay money into an account. This problem can be solved in the following way: the attestation consists essentially of the number of the customer's anonymous account and of the number of withdrawals that have been made using this anonymous account. Since the attestation is signed by the bank, the customer cannot change this information. The bank, counting for each anonymous account the number of valid transfers, accepts an attestation only if it indicates the correct account and if it contains the correct sequence number. After the money is paid into the anonymous account, the number of valid

transfers is incremented by the bank. In this way, the attestation is automatically invalidated. Note
that the customer has to take care that the attestations are used in the same order as they have been received. Because the system does not rely on any physical security measure, it is possible to make backup-copies of all attestations. Therefore, if a smart card containing such attestations is lost, it is possible to restore the attestations in another card. Even if a thief obtains the attestations, he or she could only use them for the intended anonymous accounts. This system can be realized as an extension of today's EFTPOS systems, since there is no significant difference between a payment involving an anonymous account and a regular
account. For legal reasons, the bank could be led to control the origin of money paid into an account. In the case of a regular account, this can be done with the usual assortment of administrative measures. For an anonymous account, the only fact known by the bank is that the money comes from some regular account, which means that its origin has previously been checked.

ELECTRONIC CREDIT CARD SYSTEM ON THE INTERNET

- Å In the past year, the number of users reachable through Internet has increased dramatically
- Å Potential to establish a new kind of open marketplace for goods and services
- Å Online shops in Internet
  - Å Bookshop (Amazon.com)
  - Å Flight Resevation and Hotel Reservation shopping place, etc.
- Å An effective payment mechanism is needed

Issues related

- Å Security Performance
- Å Reliability
- Å Efficiency
- Å Bandwidth
- Å Anonymity (mainly in electronic coins)

Security

- Internet is not a secure place
- There are attacks from:
  - eavesdropping
  - masquerading
  - message tampering
  - replay
- RSA public key cryptography is widely used for authentication and encryption in the computer industry
- Using public/private (asymmetric) key pair or symmetric session key to prevent eavesdropping
- Using message digest to prevent message tampering
- Using nonce to prevent replay
- Using digital certificate to prevent masquerading

Outstanding protocols

- Credit card based
  - Secure Electronic Transaction (SET)
  - Secure Socket Layer (SSL)
- Electronic coins
  - DigiCash
  - NetCash
- Parties involved: cardholder, merchant, issuer, acquirer and payment gateway
- Transfer user's credit-card number to merchant via insecure network
- A trusted third party to authenticate the public key

Secure Electronic Transaction (SET)

- Developed by VISA and MasterCard
- To facilitate secure payment card transactions over the Internet
- Digital Certificates create a trust chain throughout the transaction, verifying cardholder and merchant validity
- It is the most secure payment protocol

Advantages

- It is secure enough to protect user's credit-card numbers and personal information from attacks
- hardware independent
- world-wide usage
- Cost-effective for small payment
- User can transfer his electronic coins to other user
- No need to apply credit card
- Anonymous feature
- Hardware independent

Disadvantages

- User must have credit card
- No transfer of funds between users
- It is not cost-effective when the payment is small
- None of anonymity and it is traceable
- It is not suitable for large payment because of lower security
- Client must use wallet software in order to store the withdrawn coins from the bank
- A large database to store used serial numbers to prevent double spending

Electronic cash/coins

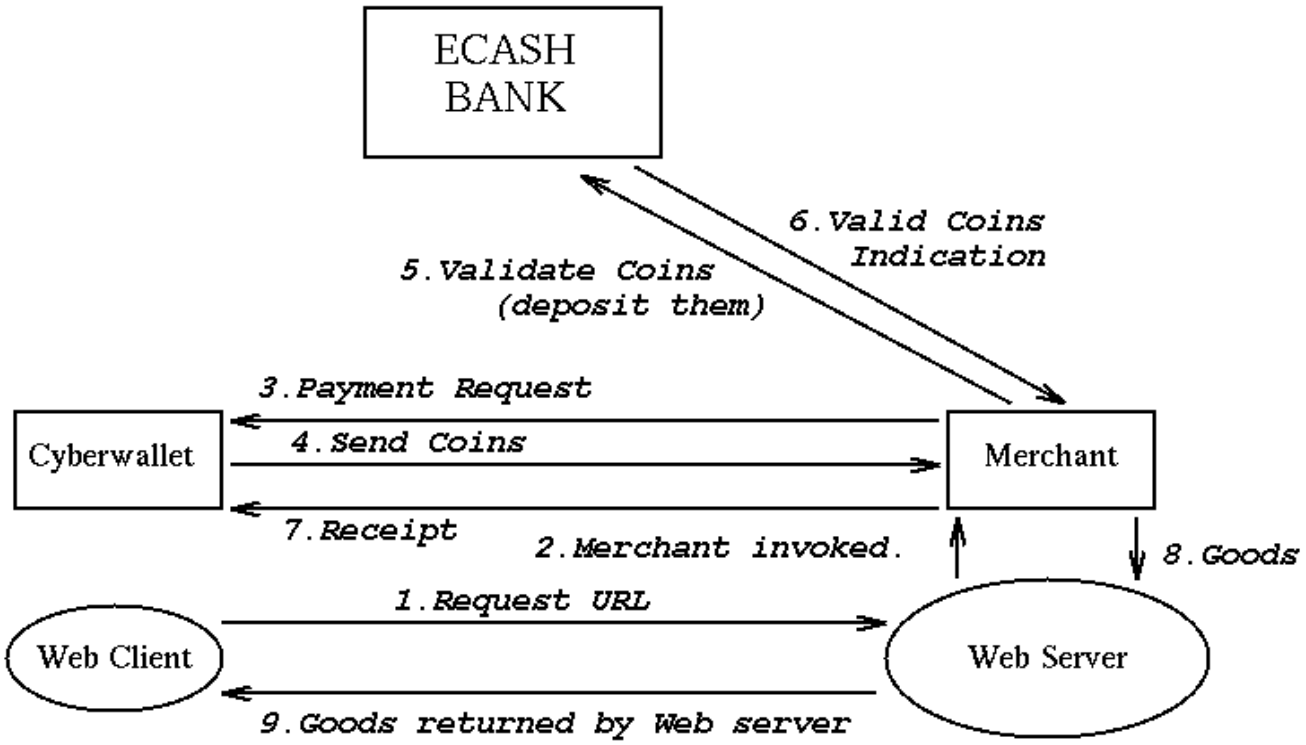
- Parties involved: client, merchant and bank
- Client must have an account in the bank
- Less security and encryption
- Suitable for small payment, but not for large payment

DigiCash (E-cash)

- A fully anonymous electronic cash system
- Using blind signature technique
- Parties involved: bank, buyer and merchant
- Using RSA public-key cryptography
- Special client and merchant software are needed

Withdrawing Ecash coins

- User's cyberwallet software calculates how many digital coins are needed to withdraw the requested amount
- software then generates random serial numbers for those coins
- the serial numbers are blinded by multiplying it by a random factor
- Blinded coins are packaged into a message, digitally signed with user's private key, encrypted with the bank's public key, then sent to the bank
- When the bank receives the message, it checks the signature
- After signing the blind coins, the bank returns them to the user



ELECTRONIC FUND TRANSFER AND DEBIT CARDS ON THE INTERNET

The origins of the electronic funds transfer (EFT) industry can be traced back to the introduction of the first automated teller machine (ATM) in the mid-1960s. The ATM was able to handle account transfers, accept deposits, and dispense cash using a standard magnetic stripe card and personal identification number (PIN). With the introduction and acceptance of ATMs, U.S. financial institutions entered the era of EFT systems. The term EFT refers to the application of computer and telecommunication
technology in making or processing payments. The term itself does not refer to a specific product. Rather, it is a descriptor that defines payment vehicles that use electronic networks instead of cash or checks to conduct a transaction. EFT networks are divided into two main types: wholesale and consumer. Wholesale EFT networks are typically used by financial institutions for large-dollar electronic transfers. Consumer EFT networks handle a variety of electronic payment services used by consumers and
generally move small-dollar amounts Historically, the core of consumer EFT networks has been the ATM and associated access cards. ATM networks were first established as proprietary systems that were owned by a bank or payments processor and that served a limited geographic area. In some cases, the proprietary systems were shared with other financial institutions to expand the network, but the proprietary bank provided the ATM processing. While sharing of

ATM networks created economies of scale, its primary benefit was stimulating consumer demand. Financial institutionsô customers discovered that their ATM/debit cards could be used to access their accounts at the financial institutions where they held accounts and at local financial institutions where they did not. Initially, these networks were local, since the McFadden Act legally prohibited expansion into other states. This changed in 1985 when the U.S. Supreme Court upheld an earlier U.S. Court of Appeals decision that ATMs did not represent bank branches, thereby allowing interstate EFT networks to develop.2 With the restriction on interstate expansion of ATM networks lifted, financial institutions recognized that the costs of ATMs and the networks could be shared. As a result, shared regional ATM networks grew, typically as joint ventures of financial institutions within the same geographic area. The national networks, such as Plus and Cirrus, came later. While a shared ATM network allowed a bankôs customers to gain access to their accounts and cash in other geographical areas, more important, it supported the deployment of ATMs at new locations. Since there is a minimum cost associated with the installation of each terminal, the sharing of an ATM with other financial institutions allows more ATMs to be placed in areas that may not have been profitable for a single bank. Therefore, economies of scale are realized through greater transaction volume. This sharing of ATMs represents a network externality, which occurs when the value of a network increases as new users join the network. As more customers join the network, the network becomes more valuable to each user. This network externality results in ñincreasing returns,ò that is, as the network continues to grow, it becomes easier to attract additional users. The larger number of users in the expanded network makes deployment of new ATMs more profitable, which further enhances accessibility for existing members. Typical examples of network externalities are telephone networks, fax machines, and railroads. The number of ATM terminals has risen dramatically, from fewer than 10,000
terminals in 1978 to approximately 324,000 in 2001, processing over 1.1 billion transactions per month. This growth of both ATM terminals and volume demonstrates the public acceptance of ATMs. In fact, the number of access cards has increased from 60 million in 1982 to over 236 million in 2001. As financial institutions began to recognize the benefits of shared ATM networks,
the number of networks grew, reaching a peak of almost 200 in 1986.3 However, as the networks consolidated during the 1990s, either through mergers or outright purchases, the number of shared regional networks dropped to 30 in 2001. Currently, the top five networks handle over 78 percent of the transaction volume that is switched through shared regional networks. The very same factors that led to the development and expansion of the ATM networks led to the consolidation of the industry. First, since ATM networks have proven to have network externalities, the larger the network, the more consumers conduct transactions and accept usage fees. Driven by the increases in usage, network owners are eager to expand their existing network by purchasing additional networks. Second, since ATM networks made significant investments in technology and equipment, the more transactions processed over an individual network, the lower the costs become on a per unit basis. Networks, therefore, can take advantage of economies of scale. Third, with the change in interstate banking legislation, barriers to cross-state lines were eliminated, James McAndrews, ñThe Evolution of Shared ATM Networks,ò Federal Reserve Bank of Philadelphia *Business Review.* allowing competing networks to acquire

additional networks in other states and geographical locations. Financial institutions initially believed that with the introduction of an ATM network, consumers would not use branches as extensively and issue fewer checks. They expected to realize cost savings by moving transactions from the high-cost branch locations to low-cost ATMs. These cost savings were assumed to be so great that financial institutions would be able to absorb the costs of the ATM infrastructure without charging usage fees. Although consumers did find the ability to withdraw cash and transfer balances without physically entering a bank appealing, the cost savings to the financial institutions were never realized. The number of ATM transactions grew dramatically, and the dollar size of transactions declined as consumers fell in love with ATMs as a source of easily accessible cash. At the same time, they did not decrease the number of checks written and continued to use bank branches and bank tellers for all other transactions. In the 1990s, financial institutions instituted transaction fees for ATM usage, especially for transactions made by customers from other banks. While financial institutions, EFT processors, and the bankcard associations were developing debit card products for purchases at merchant locations, Internet sales volumes began to increase during the late 1990s and the Internet became a new market for developing payment vehicles. According to a recent article in *Credit Card Management*, over 40 percent of adults made online purchases in 2001.8 The market for consumer-to-business payments over the Internet has grown substantially over the last few years, but it is still only a small portion of the personal consumption market. NYCEôs Tomasofsky noted that while consumer-to-business Internet sales grew more than 66 percent in 2000, they accounted for only 2 percent of total consumer-to-business transactions. However, this number is expected to grow over time. He cited industry estimates that currently 79 million consumers shop on the Internet, resulting in sales of $39 billion. By 2004, over 138 million consumers are expected to use the Internet to purchase goods worth over $184 billion. Some of this is
due to customers switching from shopping at a merchant's physical establishment to using its web site for shopping. Also, brick-and-mortar establishments see the Internet as an additional distribution channel and are promoting their Internet sites. While various forms of payment ð including cash, check, credit and debit cards ð are accepted in brick-and-mortar locations, credit cards are currently the payment vehicle of choice for transactions conducted on the Internet. However, accepting credit cards via the Internet poses a problem of authenticating the card to the cardholder, since the merchant cannot verify the customerôs identity. Unlike point-of-sale transactions at a merchant location where either a PIN or signature verification is used to authenticate the card to the cardholder, there is no such authentication capability in the card-not-present environment. This exposes on-line retailers to increased risk of fraud. Based on current industry reports, the percentage of fraud on the Internet is estimated to be around 1.5 percent of total purchases. Since it is the merchant who is responsible for the cost if the cardholder claims the charges were fraudulent, merchants sometimes pay for fraud detection services, increasing their cost of doing business on the Internet. Companies that sell merchandise over the Internet are looking for more secure and cheaper payment mechanisms for the card-not-present environment. Various schemes have been created to help solve this problem while improving ease of use for consumers and lowering risk to merchants. The two major credit card associations, Visa and MasterCard, have recently developed a guaranteed payment program for merchants that use their own proprietary authentication systems. Visaôs ñVerified by Visaò is an

on-line security feature whereby the issuer authenticates the cardholder in real time at participating merchant sites by prompting the cardholder to enter a password. MasterCardôs ñSecure Payment Application" (SPA) is also designed to authenticate cardholders when they pay on the Internet. This system requires consumers to install a wallet application on their personal computers that will generate a unique value to each transaction, which is authenticated by the issuer at the time of the transaction. Unlike Visaôs application, the MasterCard SPA does not require a password unless the issuer requires its use. Another new payment vehicle aimed at providing greater security to both the merchant and consumer for Internet transactions is the smart card. The United States consumer's first encounter with smart cards as a tool for making payments was with the introduction of American Expressôs Blue Card in 1999. Smart cards are plastic cards, similar in appearance to a typical credit card, but with a microcomputer or memory chip embedded in it. There has been great interest in the use of smart cards, especially since the cards are marketed as safer to use for both in-person and Internet transactions. Some smart cards are considered as being safer for consumers to use because the chip on the card can have a PIN stored on it and can be used for a transaction only if the consumer uses the correct PIN. For merchants, accepting a transaction originated by a smart card provides greater assurance that the card is being used properly, since it provides two authentication forms, namely, the card number and that the consumer is in possession of the card. However, a hindrance to wider use of smart cards for Internet transactions is that consumers need to are considered an emerging payment that has yet to become generally accepted by both merchants and consumers. However, if major retailers such as Target gain market acceptance with their smart card product, both consumers and merchants may increase
their demand for the product.

Internet and PIN-Based Debit

Although consumers have quickly adapted to the use of debit cards at merchant locations, the next challenge seen by EFT networks is gaining the same level of acceptance for Internet-based purchases where credit cards are still the payment vehicle of choice. Despite their popular use, credit cards have two important limitations in the Internet or card-not-present environments. First, as noted earlier, the lack of authentication capability exposes merchants to greater risk of fraud and higher charge backs for Internet-based credit card purchases. Second, credit card transactions, relative to those made with on-line debit cards, are assessed higher interchange fees. There is anecdotal evidence as well that many consumers are concerned about the security of using credit cards on the Internet and, as a result, will not shop over this medium. Among the several solutions under development in the payment card industry is NYCEôs SafeDebitTM product. SafeDebitTM is a PIN-secured Internet debit payment product. Tomasofsky and Sussman explained that SafeDebitTM operates much the same way as a normal PIN-based debit transaction, allowing consumers to pay for purchases on the Internet with funds withdrawn directly from their checking CD-ROM ñcardò and a PIN to make secure Internet purchases from any personal computer, anywhere, at anytime. The transaction is routed from the consumerôs computer, in encrypted form, through multiple processing points until an approval message is routed back to the consumer from his or her financial institution. Because of the routing, the

consumerôs account number and other sensitive data never reside on the merchantôs system. A typical transaction takes about 10 seconds to complete.

STORED VALUE CARDS

A **stored-value card** refers to monetary value on a card not in an externally recorded account and differs from prepaid cards where money is on deposit with the issuer similar to a debit card.[1] One major difference between stored value cards and prepaid debit cards is that prepaid debit cards are usually issued in the name of individual account holders, while stored value cards are usually anonymous.

The term *stored-value card* means the funds and or data are physically stored on the card. With prepaid cards the data is maintained on computers affiliated with the card issuer. The value associated with the card can be accessed using a magnetic stripe embedded in the card, on which the card number is encoded; using radio-frequency identification (RFID); or by entering a code number, printed on the card, into a telephone or other numeric keypad.

Closed system prepaid cards

A vending machine sells fare cards for the Washington Metro subway.

Closed system prepaid cards have emerged and replaced the traditional gift certificate and are commonly known as merchant gift cards. "Closed system" means the cards are only accepted at a single merchant. Purchasers buy a card for a fixed amount and can only use the card at the

merchant that issues the card. Generally, few if any laws govern these types of cards. Card issuers or sellers are not required to obtain a license. Closed system prepaid cards are not subject to the USA PATRIOT Act, as they generally cannot identify a customer. As debts owed to consumers who purchased the card, these purchases remain on the books of a merchant as a liability rather than an asset. Consequently, gift certificates and merchant gift cards have fallen under state escheat or abandoned property laws (APL). However, the emergence of closed system prepaid cards has blurred the applicability of APL. North Carolina and Illinois have excluded these types of cards from APL provided the card has no expiration date or a service fee. Maine and Virginia require the issuer to pay the state when the cards are abandoned. In Connecticut an issuer is required to identify the residence of the gift card owner. Since most merchant gift cards are anonymous, the residence of the card's owner is deemed to be the state's treasurer's office.

Presently, no law exists that requires an issuer to provide refunds for lost or stolen cards. Whether a refund is possible is specified in an issuer's cardholder agreement. In addition, most closed system cards cannot be redeemed for cash. When a cardholder redeems all but an insignificant portion of the card on merchandise, that amount is generally lost and is absorbed by the issuer.

Such cards are increasingly becoming a way for Mexican drug cartels to smuggle money across the border without repercussions.[2]

Semi-closed system prepaid cards

Semi-closed system prepaid cards are similar to closed system prepaid cards. However, cardholders are permitted to redeem the cards at multiple merchants within a geographic area. These types of cards are issued by a third party, rather than the retailer who accepts the card. Examples include university cards and mall gift cards. The laws governing these types of cards are unsettled. Depending on the state, the issuer may or may not be required to have a money transmitter license or other similar license. In addition to the District of Columbia, the states that require a license include Connecticut, Florida, Illinois, Iowa, Louisiana, Maryland, Minnesota, Mississippi, North Carolina, Oregon, Texas, Vermont, Virginia, West Virginia, Washington, and Wyoming. Note, these states explicitly require licensing for card issuers. Other states may have more subtle licensing laws. Under 18 USC section 1960, it is a crime for an issuer to conduct a money transmitting business without a license. Cardholders generally suffer from the same redressability problems that closed system card holders suffer. It is unclear whether or not Chapters 7 and 11 of the Bankruptcy code are applicable to these types of cards.

E-CASH

While many different companies are rushing to offer digital money products, currently e-cash is cash is represented by two models. One is the on-line form of e-cash (introduced by DigiCash) which allows for the completion of all types of internet transactions. The other form is off-line;

essentially a digitially encoded card that could be used for many of the same transactions as cash. This off-line version (which also has on-line capabilities) is being tested by Mondex in partnership with various banks.

The primary function of e-cash is to facilitate transactions on the Internet. Many of these transactions may be small in size and would not be cost efficient through other payment mediums such as credit cards. Thus, WWW sites in the future may charge $0.10 a visit, or $0.25 to download a graphics file. These types of payments, turning the Internet into a transaction oriented forum, require mediums that are easy, cheap (from a merchants perspective), private (see Privacy), and secure (see Security). Electronic Cash is the natural solution, and the companies that are pioneering these services claim that the products will meet the stated criteria. By providing this type of payment mechnism, the incentives to provide worthwhile services and products via the Internet should increase. Another prospective beneficiary from these developments would be Shareware providers, since currently they rarely receive payments. To complete the digital money revolution an offline product is also required for the pocket money/change that most people must carry for small transactions (e.g. buying a newspaper, buying a cup of coffee, etc...).

The concept of electronic money is at least a decade old. [Hewitt 1994] demonstrates that check writing is a pre-cursor to E-cash. When one person writes a check on his bank account and gives the check to another person with an account at a different bank, the banks do not transfer currency. The banks use electronic fund transfer. Electronic money, removes the middleman. Instead of requesting the banks to transfer the funds through the mechnism of a check, the E-cash user simply transfers the money from his bank account to the account of the receiver.

The reality of E-cash is only slightly more complicated, and these complications make the transactions both secure and private. The user downloads electronic money from his bank account using special software and stores the E-cash on his local hard drive. To pay a WWW merchant electronically, the E-cash user goes through the software to pay the desired amount from the E-cash "wallet" to the merchants local hard drive ("wallet") after passing the transaction through an E-cash bank for authenticity verification. The merchant can then pay its bills/payroll with this E-cash or upload it to the merchant's hard currency bank account. The E-cash company makes money on each transaction from the merchant (this fee is very small, however) and from royalties paid by banks which provide customers with E-cash software/hardware for a small monthly fee. Transactions between individuals would not be subject to a fee.

E-cash truly globalizes the economy, since the user can download money into his cyber-wallet in any currency desired. A merchant can accept any currency and convert it to local currency when the cyber cash is uploaded to the bank account.

To the extent a user wants E-cash off-line all that is necessary is smart card technology. The money is loaded onto the smartcard, and special electronic wallets are used to offload the money onto other smartcards or directly to an on-line system. Smartcards have been used successful in

other countries for such transactions as phone calls for a number of years. The money could also be removed from a smartcard and returned to a bank account. Visa is developing a related product, the stored value card. This card comes in a variety of denominations, but functions more like a debit card than E-cash.

In essence, E-cash combines the benefits of other transaction mediums. Thus, it is similar to debit/credit cards, but E-cash allows individuals to conduct transactions with each other. It is similar to personal checks, but it is feasible for very small transactions. While it appears superior to other forms, E-cash will not completely replace paper currency. Use of E-cash will require special hardware, and while most people will have access, not all will. However, E-cash presents special challenges for the existing "middlemen" of the current paper currency society. More and more, banks and other financial intermediaries will serve simply as storehouses for money, lenders, and processing/verifying electronic transactions. Personal interaction with a teller, or even visits to a bank ATM will become obsolete. All one will have to do is turn on his computer.

ELECTRONIC CHECK SYSTEM

Electronic check (e-check) is an important component of electronic commerce. It was first proposed by Chaum in 1988. Till now, engineers have provided many improvements to enhance the security and functionality of the e-check system. The face value of a check and the identification of a payee, however, have to be determined previously in these improved versions. This results in the inflexibility of the system. In this paper, we aim to propose a novel e-check mechanism which allows a payer attaching the face value and the information of a payee to an e-check when dealing with a transaction. The security of this novel system is based on several cryptographic techniques including the secure one-way hash function, blind signature, and RSA cryptosystems.

PROSPECT OF ELECTRONIC PAYMENT SYSTEMS

The success of electronic commerce depends upon effective electronic payment systems. The Internet and on-line businesses are growing exponentially.. Due to this explosive growth, electronic commerce on the Internet uses various electronic payment mechanisms that can cater for much diversity of applications. This paper discusses the evolution and the growth of electronic technologies, which can provide more advanced technical supports for electronic payment systems. The focus of this paper is to identify and explain the different methods of e-payment the authors analyses the challenges of electronic payments from different perspective and provide preliminary security countermeasures for each of the issues. Finally a number of solutions have been proposed based on the problem and discussed on the prospect of electronic payment system.

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UNIT-IV (EC STRATEGY & IMPLEMENTATION)

IBM's E-Business's Strategy

Social networking and mobile commerce have changed the dynamic between buyer and seller. As power has shifted to the consumer, enterprises need to facilitate effective customer collaboration and differentiated customer experiences. Quality insight into shifting consumer behavior can help develop a customer strategy that redefines value by enabling immediate action to improve service. Regardless of the channel consumers select to approach youð traditional, social media or mobileð you want to provide a consistent end-to-end user experience to attract new customers and create new revenue streams. Whether you need to design and deploy a new business-to-business or business-to-consumer e-commerce strategy or enhance the one you already have, IBM e-commerce solutions can help add value to your commerce implementation. IBM Global Business Services can deliver a scalable e-commerce solution to help you create a next-generation web platform built on the IBM WebSphere® Commerce e-commerce software. Project accelerators such as RAPiD can help you more quickly deploy new cross-channel capabilities while reducing overall cost, time to value and risk.

The e-Commerce practice in IBM Global Business Services builds solutions that leverage multiple components, including:

- **Customer experience strategy:** Leverages key insights from digital agency IBM Interactive to help provide an enhanced multichannel customer experience, user experience design and full life-cycle development

- **Existing web experience enhancement:** Approaches to better leverage content management, portals, product catalogs and user experience
- **Smarter sales and marketing:** Techniques from the WebSphere Commerce development lab and service support to help provide deep integration skills and faster-to-market deployment
- **Time to value:** Services leveraging prebuilt assets, global talent pools and accurate estimating tools and techniques to help you get to market faster

Business challenges

Smarter Commerce can provide the opportunity to address several key issues, including:

- Inconsistent and fragmented user experience across channels
- Complex user interfaces that make it difficult to quickly and easily navigate shop and buy
- Lack of consistent cross-sell and up-sell capabilities based on customer insight
- Inadequate influence over portions of the e-commerce experience by business personnel and limited understanding of the business impact of changes

IBM offers more comprehensive, integrated, outcome driven, flexible and open commerce solutions to enable your organization to better understand, take action and achieve your unique business goals. Business consultants from Strategy & Transformation and Business Analytics & Optimization can address the process redesign and customer insight aspects of successful e-commerce strategies and solutions. Application management experts from IBM can also work with you to help you get more ongoing business value from your applications by improving your ability to meet enterprise quality and speed requirements. Bolstered through investments in building expertise through Smarter Commerce University, IBM Global Business Services can help you develop e-commerce approaches that deliver on the promise of compelling, cross-channel customer experiences.

STRATEGIC PLANNING FOR EC

Developing an e-business requires extensive research and planning in order to be successful in cyberspace. This planning involves the development of a solid and concise business plan, and a focused marketing plan well before a website is created. An e-business plan must have clearly defined goals as it is difficult for any business organization to stay on track if there are no goals in place for guidance. E-business Strategic Planning recent years, the Internet has presented a wealth of opportunities for conducting commerce on a global scale. As a result, there has been a significant increase in both the number of start-up businesses in the e-commerce field, as well as the number of traditional "brick and mortar" businesses entering this "new economy." According to Forrester Research, an independent technology and market research company, US online retail sales will grow from $172 billion in 2005 to $329 billion in 2010. This increase translates to a

steady 14% compound annual growth rate over the next 5 years. E-commerce will represent 13% of total US retail sales in 2010.
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Strategic planning determines where an organization is headed over the next year or more, how it's going to get there and how it will know if the results are successful. There are a variety of perspectives, models and approaches used in strategic planning. The way that a strategic plan is developed is dependent on the nature of the organization's leadership, culture of the organization, size of the organization, complexity of the organization's environment and expertise of planners. Goals-based planning is perhaps the most common strategic planning model and begins with focus on the organization's mission and vision and strategies to achieve these goals.

Vision and Mission Statements
A successful organization understands that it takes more than a good plan to succeed in business. It takes an empowered organization with impassioned leadership, focused on realistic goals. It takes vision, consensus and a sense of purpose. According to Jack Welch, previous Chairman for General Electric, "Good business leaders create a vision, articulate the vision, passionately own the vision, and relentlessly drive it to completion." The vision statement describes what the leaders of an organization want it to look like in ideal terms in the future - the results they seek to achieve and characteristics needed to possess in order to achieve those results. The strategic vision statement provides direction and motivation for organizational goal setting.

A mission statement is an organization's declaration of its principles, purposes, and objectives that can be used to initiate, evaluate, and refine all life activities. It is an enduring statement of purpose for an organization that identifies the scope of its operations in product and market terms, and reflects its values and priorities. Every company no matter how big or small, needs a mission statement as a source of direction, a kind of compass, that lets its employees, its customers, and even its stockholders know what it stands for and where it's headed. A mission statement gives everyone the opportunity to know what the organization is about.

Environmental Analysis
Environmental analysis plays a central role in strategic management. For a company to gain or maintain a sustainable competitive advantage in the e-commerce marketplace, it must be ever attentive, watching and preparing for shifts in the business environment and must be prepared to alter its strategies and plans when the need arises. Companies conduct environmental analysis to identify market opportunities and threats and also to anticipate changes in highly complex and dynamic environments. By anticipating changes accurately, companies can gain competitive advantage through quick action. Environmental analysis assesses current environmental circumstances and projects, forecasts, and monitors their future situation. According to

eSocrates.com, a knowledge, management and eLearning company, Environmental analysis also helps the firm to position itself in a continually evolving environment by matching its characteristics to the environment's demands.

Competitive Factors

In formulating an e-business strategy, a company must consider the strategies of their competitors. A competitive analysis allows them to identify the competition within the same market in order to analyze their strengths and weaknesses. This will help a company develop strategies that will provide them with a definite advantage and barriers that can be established in order to prevent competition from taking over the market. A competitive analysis can also identify any weaknesses that can be improved within the business development cycle.

Economic Factors

The economic environment consists of factors that affect consumer purchasing power and spending patterns. The environment in which an organization operates is very much determined by macro-economic factors. A recession can dramatically reduce total income and expenditure levels in the economy, in turn affecting consumer demand. Higher taxes, internet rates and inflation similarly serve as disincentives to consumer confidence (and therefore spending), while economic growth and prosperity can generate spending and an overall "feel-good factor." The importance of the economic environment - the broad trends in employment, inflation and growth that shape regions, nations and the world - to the growth of e-business in the U.S. should not be underestimated.

Social / Demographic Factors

Demography is the study of human populations in terms of size, density, location, age, ethnicity, income, occupation and other statistics, as well as those variables bringing about change in that population. The demographic environment consists of the customers who form the marketplace. These customers may be demographic environment shifts as customers enter the market, mature, and leave the market.

As the consumer's level of comfort with online functions such as e-mail and research continues to increase, so too will their level of participation in e-commerce. A growing online consumer base, increases in new product categories, and efforts by online retailers to optimize online shopping experiences will spark significant growth in e-commerce in years to come.

Long Term Objectives

One of the key purposes of a comprehensive planning process is to establish a set of long-term objectives and recommend a series of strategies and policies to ensure that these goals are attained in the most effective way. The established goals combined represent an organization's vision or desire for a future condition that will enhance its overall image and quality of life. It is important to understand that these objectives serve as the backbone of the strategic plan. That means that any planning element included in this plan should function as reinforcement to these objectives.

The achievements of an organization are based on the combined efforts of each individual within the organization working toward common objectives. These objectives should be practical, should be clearly understood by everyone within the organization and should mirror the organization's basic personality and character.

Here are some steps that an organization can take to evolve the company culture toward e-business:

- In order to be successful, e-business requires that information flow freely within an organization. Business experts need to be designated in each major functional area to facilitate the free flow of information and connect people and processes throughout the enterprise.
- Recognize that an e-business is an inside-out proposition. In order to operate as a true e-business, your core processes must be predominantly real-time, online, integrated and interactive.
- Remember that continual education and training is essential. Everyone within the organization must be knowledgeable of basic e-business concepts. For those who are accountable in areas that involve direct interaction with customers, more detailed training is needed.
- Instill a sense of urgency necessary to deliver the level of service that should help drive business decisions. Customers now expect immediate quality service, whether it is in person, on the phone or on the web.
- Recognize that the Internet and the realities of e-business have permanently changed the barriers to competition. Viable competitors can spring up almost overnight.

The completion of a written strategic plan document marks an important milestone in the planning process, but major benefits accrue to the organization only when the plan is put into operation. Achieving the established goals will require effort and attention from every part of the organization. Research must be conducted in order to determine all questions concerning success measurement. The questions "What do we want to achieve with this e-business website?" and "How do we know when the goal for the site is reached?" are of primary interest.

Continuous planning with feedback is a strategic planning necessity that involves company wide activity. Ongoing measurement and evaluation after completion is necessary to track success of the e-business plan and to determine if any further changes or modifications need to be made. Most importantly, one must constantly revisit their strategic plan to ensure that they are meeting the customer's needs and providing the highest level of customer service.

ELECTRONIC COMMERCE STRATEGY IN ACTION

Electronic Commerce Strategies helps companies achieve market leadership through e-business, helping them transform the way they interact with customers, communicate, manage

information, make decisions, and transact business. E-business is not just having a web site with a creative interface that can process a few online transactions. It is about re-tooling your business to create a compelling value proposition for your customers and your employees. Without the right e-business strategy, business processes, and technology components to engage and to retain your customers in revenue-generating activities, nothing else matters. Our business experience and our analytical approach enables you to better understand your options and to choose the right blend of high tech and high touch to optimize the future of your customer interactions. E-business is transforming the framework and boundaries of business transactions. Your customers should have the ability to communicate and to transact business anywhere, anytime. Understanding how the Internet and Web-based technologies will change your business is what we do. We help our clients envision adaptive business models and implement new technology strategies. Our strategy services provide a framework for bringing together leading experts from a variety of fields, along with your executives and shareholders, to develop e-business scenarios for your industry. Using these plausible scenarios, we will help you develop a decisive action plan. We can even help you implement that plan from an operational and project management perspective. Our approach is to help you articulate and document your vision in such a way that it ensures broad-based ownership and acceptance throughout your organization. We ensure rapid, measurable results. We become the solution. To be successful at Electronic Commerce, you must create a strong customer value proposition and drive traffic to your Web Site. Once you have established brand awareness, the next step is to create a distinctive experience, driving action oriented behavior and fostering an on-going relationship. We listen to you and to your target customers, understanding the emotional connections and what your customers value. Using this knowledge, we will help you choreograph a personalized experience for each visitor that will engage them and keep them coming back. Through our partnerships and alliances, we will help create the right identity for you, driving top-line, measurable results. As experienced marketing professionals, we can support your e-business efforts in tasks such as Electronic Commerce fundamentally changes and extends your organization in ways unique to the connected economy. It is not simply a web browser into your company. In fact, at times, e-business is more about improving internal business processes and the more efficient use and sharing of business information than it is about external transaction with customers. To be successful in the connected world of an Internet economy, you have to rethink your business processes around a customer value proposition and the use of e-business technological components. Because of our experience in operations and systems integration, we can help you incorporate your customers, your employees, your suppliers, and business partners into an e-business framework that will allow you to achieve efficiencies and to optimize your value proposition. Our approach will help you achieve top line benefits, to serve your customers better, and to realize a market leadership position within your industry. We try to make the hard e-business stuff easy for you. Through our associates and partners, we can assemble the talent, supply the technical breadth, and utilize proven methodologies to develop and integrate the many layers of an e-business solution, from a front-end interface to an Internet-enabled back office re-engineered process. We look at the solution through your eyes and those of your customers and other end-users in order to engineer solutions that build on your investments, your staff, and your technology directions. We have no canned answers. We have no particular software products to sell. We research, investigate, and

formulate solutions for your specific circumstances. We use our independence and our objectivity to find the best strategic solution for you.

COMPETITIVE INTELLIGENCE ON THE INTERNET

A broad definition of **competitive intelligence** is the action of defining, gathering, analyzing, and distributing intelligence about products, customers, competitors and any aspect of the environment needed to support executives and managers in making strategic decisions for an organization.

Key points of this definition:

1. Competitive intelligence is an ethical and legal business practice, as opposed to industrial espionage, which is illegal
2. The focus is on the external business environment[1]
3. There is a process involved in gathering information, converting it into intelligence and then utilizing this in business decision making. Some CI professionals erroneously emphasize that if the intelligence gathered is not usable (or actionable) then it is not intelligence.

A more focused definition of CI regards it as the organizational function responsible for the early identification of risks and opportunities in the market before they become *obvious*. Experts also call this process the early signal analysis. This definition focuses attention on the difference between dissemination of widely available factual information (such as market statistics, financial reports, newspaper clippings) performed by functions such as libraries and information centers, and competitive intelligence which is a *perspective* on developments and events aimed at yielding a competitive edge.

The term CI is often viewed as synonymous with competitor analysis, but competitive intelligence is more than analyzing competitor it is about making the organization more competitive relative to its entire environment and stakeholders: customers, competitors, distributors, technologies, and macroeconomic data.

IMPLEMENTATION: PLANS & EXECUTION

Partners In Leadership is expert in helping clients increase their capability, both individually and organizationally, to execute plans on important organizational priorities and strategic initiatives. Research shows that 60-80% of TQM, IT-related interventions, downsizing, de-layering and other similar types of organizational efficiency efforts in the USA, UK and Europe are deemed a failure in accomplishing the intended objectives. Why such a dismal success rate? A lack of personal and organizational accountability. Accountability is the engine behind every initiative requiring effective execution. Without personal accountability, efforts to execute usually fail and

result in disappointment and frustration. The lack of personal investment, ownership and engagement doom any initiative to failure. When people take personal ownership for the success of organizational initiatives and can connect their own success with that of the organization, you get the traction needed to achieve flawless execution. Our research reveals a lack of confidence in an organizations ability to execute, with 78% of respondents anticipating missed deadlines, 85% feeling overwhelmed with the amount of work they have to do and 71% feeling they are unable to succeed because of the workload. These results reflect the underlying challenges in an organization's ability to execute and successfully implement strategic initiatives. Using the Partners In Leadership Accountability Training methodology, leaders can cut through the fog of confusion and frustration people face and help them take accountability to effectively execute organizational strategies and initiatives. Accountability is the missing ingredient and the essential element to the success of every organizational initiative.

PROJECT & STRATEGY ASSESSMENT

A program is about managing change, with a strategic vision and a map of how to get there. It is able to deal with uncertainty about achieving the desired outcomes. A program approach should be flexible and capable of accommodating changing circumstances, such as opportunities or risks materialising. A program co-ordinates delivery of the range of work ï including projects ï needed to achieve outcomes, and benefits, throughout the life of the program. Program reviews are carried out under the Gateway Review Strategic Assessment of a Program. A program will generally undergo three or more Strategic Assessment reviews, including an early review, one or more reviews at key decision points during the course of the program, and a final review at the conclusion of the program. **A project** has a definite start and finish date, a clearly defined output, a well-defined development path and a defined set of financial and other resources allocated to it. Benefits are achieved after the project has finished. The project plan should include activities to plan, measure and assess the benefits achieved by the project. Typically a project will undergo six Gateway reviews during its lifecycle. Project reviews may be repeated as necessary depending on the size, scope and complexity of the project. Programs are delivered in the wider context of carrying forward policy and strategic objectives and improving organisational performance. The programôs potential to succeed is checked as it is established, using a Strategic Assessment review. The review can be repeated whenever appropriate key decision points are reached or as desired throughout the programôs lifecycle. A program may contain a number of linked sub-programs, projects and other pieces of work. These are delivered in a co-ordinated sequence that will achieve the program outcomes with the optimum balance of cost, benefit and risk. The programôs projects are reviewed at key decision points from start-up through to the point where they have contributed the benefits set out in the projectôs business case. Feedback from these project reviews contributes to the ongoing program. The program should be managed as part of a corporate portfolio of organisational programs, which may be competing for resources and have changing priorities. Program managers should be aware of any interdependencies between their program and other programs in the Public Authorityôs portfolio and, where relevant, those in other Public Authorities.

Purpose of the Strategic Assessment of a Program review

- Review the outcomes and objectives for the program (and the way they fit together) and confirm that they make the necessary contribution to the overall strategy of the Public Authority and its senior management
- Ensure that the program is supported by key stakeholders
- Confirm that the programôs potential to succeed has been considered in the wider context of Government policy and procurement objectives, the Public Authorityôs delivery plans and change programs, and any interdependencies with other programs or projects in the Public Authorityôs portfolio and, where relevant, those of other Public Authorities
- Review the arrangements for leading, managing and monitoring the program as a whole and the links to individual parts of it (e.g. to any existing projects in the programôs portfolio)
- Review the arrangements for identifying and managing the main program risks (and the individual project risks), including external risks such as changing business priorities

Projects

Every project develops in response to an identified need, generally in the form of having a difficulty in meeting a policy target or user demand for a particular service. The first stage of developing and implementing a solution is to understand this need. What is the particular need to be met? Who does it impact? How does it fit with Government and departmental policies and objectives? What will success look like? A natural decision point arises once this business need or risk has been identified, scoped and understood. The decision is then whether to proceed to identifying, documenting and justifying solutions to the need. Gateway Review Strategic Assessment of a Project is aimed at assisting the SRO in reaching this decision, by advising them on whether the project team has done sufficient work to allow a well-informed judgement to proceed. The timing of the review should therefore be once this work has been completed, and before the decision is taken to proceed with the preparation of a business case. For example, it may have been identified that a transport corridor is reaching capacity under current conditions. The project team will have scoped this need and canvassed some high-level solutions, as well as set out in broad terms what the project will require to succeed. Before moving to the next stage, it is useful to ensure this has been done adequately.

Purpose of the Strategic Assessment of a Project review

- Review the outcomes and objectives for the project (and the way they fit together) and confirm that they make the necessary contribution to the overall strategy of the Public Authority and its senior management
- Ensure that the project is supported by key stakeholders
- Confirm that the projectôs potential to succeed has been considered in the wider context of Government policy and procurement objectives, the Public Authorityôs delivery plans

and change projects, and any interdependencies with other projects or projects in the Public Authorityôs portfolio and, where relevant, those of other Public Authorities

- Review the arrangements for leading, managing and monitoring the project as a whole and the links to individual parts of it (e.g. to any existing projects in the projectôs portfolio)

MANAGERIAL ISSUES

Managerial Safety Leadership can make or break your process! It is known that good Safety Leadership can positively impact safety behavior by anywhere between 35-86 percent. Poor Safety Leadership can kill the process. What are the issues? Managers have a huge part to play in determining the success or otherwise of a behavioral safety process. Although many behavioral safety processes are 'employee-led', they can help or hinder the process in so many ways. A strong, visible and demonstrable managerial commitment to helping out can bring about enormous changes to the safety culture of an organization. However, they should not try to take the process over as this can lead to employee withdrawal and a failed effort. Equally, a lack of commitment can be detrimental in so many ways, that the process can fail in a relatively short time. The following highlights particular issues that have led to failed processes. People are disciplined for not behaving safely in accordance with the behavioral items on the observation checklists. If there is one quick way to kill off peoples enthusiasm for engaging in behavioral safety it is this one. Although it may sound logical and the correct thing to do if someone is putting other people at risk, it can backfire rapidly. As such punishment /discipline for not adhering to the behaviors on a checklist has little value in a behavioral safety process as this will undo everything the process is trying to achieve. Although a somewhat controversial view to many safety professionals, it is based on years of psychological research that has demonstrated that punishment MUST be given immediately someone engages in that unsafe behavior, AND every single time, if it is to work. Logic dictates that this is physically impossible to do (unless you have safety policemen on every corner of your worksite). Using positive encouragement when people behave safely is a far more effective means of changing peopleôs behavior (something very rarely done). A lack of regular feedback sessions. A lack of regular feedback due to the perception that people do not have the time can create a lack of workforce buy-in, as they perceive line management does not view the system as an appropriate weapon to reduce accidents. Some behavioral safety systems only require detailed feedback to be issued to the workforce on a monthly / quarterly basis (particularly those that rely solely on peer feedback at the time of observation and graphical charts). This often leads to accusations that behavioral safety takes a lot of effort for very little 'payback', as the accident rate and the percentage safe scores remain static. In my view, regular weekly feedback to the whole workgroup and a 'site summary' to the management team is the key to improving safety performance. Moreover, there is a strong business case that the beneficial side effects of improved team-working and communications outweigh any argument that it is a wasteful time resource. Moreover, it could be argued that a reluctance to provide the time demonstrates a lack of commitment to making the process work. A lack of ongoing management support. Management do not see themselves as a part of the problem, and therefore do not see what they have anything to offer. They could and

should allow people time to conduct observations, encourage people to behave safely, facilitate the target setting and feedback sessions, and help to implement any corrective actions by aiding with paperwork and providing any necessary resources. In other words, being a safety leader not a follower!

PUBLIC POLICY:

FROM LEGAL ISSUES TO PRIVACY

EC-Related Legal Incidents

Researching issues in professional responsibility is a complex process and requires use of materials beyond judicial decisions and statutes. At the core of issues of legal ethics are the **rules** governing the conduct of lawyers and judges that are adopted by each state. These state rules are based on **model rules** adopted by the American Bar Association, most recently the Model Rules of Professional Conduct and the Code of Judicial Conduct. In addition, each state bar association has some mechanism for enforcing the rules through **disciplinary proceedings** and through the issuance of **opinion letters** on ethical issues submitted to it. You may need to consult bar association ethics opinions, the Model Rules, and the version of the rules of professional conduct for your particular state. **Case law** research can also be complicated because ethics issues can arise from attorney discipline proceedings and such diverse substantive areas as legal malpractice and criminal appeals. This research guide concentrates on materials other than case law, although a few tips on finding judicial decisions in the area of legal ethics are included.

Legal issues

If you need some background on professional responsibility or an overview of key issues, start with the text, **Understanding Lawyers' Ethics** (4th ed.) by Monroe H. Freedman (KF306 .F76 2010), **Professional Responsibility and Regulation** (2d ed.) by Rhode & Hazard (KF306 .R468 2007), or **Legal Ethics in a Nutshell** (3d ed. 2007) by Ronald Rotunda (Reserve KF306.Z9 R668 2007). The American Bar Association has provided leadership in legal ethics through adoption of professional standards that serve as models of the law governing lawyers since adoption of the Canons of Professional Ethics in 1908. The latest version of these standards is the **Model Rules of Professional Conduct**, first adopted in 1983 and amended a number of times since then. The Model Rules replaced the **Model Code of Professional Responsibility**, which was adopted in 1969. The **Model Rules of Professional Conduct** consist of a Preamble, a statement of their scope, and a list of approximately 58 rules, organized into eight subject areas. Each Rule is followed by a comment, explaining the Rule. **The Model Code of Professional Responsibility** is divided into three types of provisions: Canons, Disciplinary Rules, and Ethical Considerations, plus a set of Definitions. The Canons are general statements, defined as "axiomatic norms." The Disciplinary Rules (DR) are considered to be mandatory. Ethical Considerations (EC) contain objectives towards which lawyers should strive. The text of the

current and historical versions of the *Model Code* and *Rules* with comments can be found in many places, including most of the resources listed at the end of this guide. A few convenient sources are:

Ethical issues

The American Bar Association's **Center for Professional Responsibility** maintains a **page for the Model Rules**. Included are the full text of the current *Rules,* the *Model Code* and the *1908 Canons of Professional Ethics*. Also includes lists detailing state adoption of the *Rules* and links to state ethics rules and opinions. In addition, it provides commentary, legislative history and a comparison of the *Rules* to the ALI *Restatement(3d) of the Law Governing Lawyers*.

Lexis & Westlaw also each have databases that bring together legal ethics rules:

For **Model Rules** on **Lexis**, choose the "Find a Source" link and enter "model rules of professional conduct" in the search box. In **Westlaw**, use the database identifiers ABA-MRPC (Unannotated) or ABA-AMRPC (Annotated).

For **State Rules** on **Westlaw**: Ethics rules are included in the database for court rules; identifier: XX-RULES (where XX is the two-letter state postal abbreviation). **Lexis** does not have a specific database to search state ethics rules. Electronic access is also provided by the **American Legal Ethics Library**, hosted by Cornell University Law School.

- American Bar Association, ***Model Rules of Professional Conduct*** (annual) (Reserve KF306 .A74816). Includes a Table of Amendments and Correlation Table between the Model Code and Rules and subject index.
- ***ABA Compendium of Professional Responsibility Rules and Standards*** (current year ed.) (Reserve KF305.A2 A23). Includes Table of Amendments and a Correlation Table between the Model Code and Rules and a subject index, as well as selected federal procedural rules and a few well-known ABA Ethics Opinions.
- American Bar Association, ***Annotated Model Rules of Professional Conduct*** (6th ed.) (Reserve KF305.A26 2007). Includes comparisons between the *Rules* and the *Code*, narrative on the legal background of each rule, discussion of related legal issues, and citations to supporting cases and opinions.
- Morgan & Rotunda, ***Model Rules of Professional Conduct and other Selected Standards, including California and New York Rules on Professional Responsibility*** (current ed. Reserve KF306 .M67).

Other Public Policy Issues

The *Model Code* and *Model Rules* are not binding on anyone, but serve as a model for adoption by states. Their interpretation in case law and ethics opinions also serves as guidance, since the

state rules are based on these models. Since 1983 almost all of the states have adopted some form of the ABA Model Rules. The others use a version of the *Model Code*. California is the only state that has never adopted either model and has its own rules of professional responsibility. Many of its provisions are, of course, similar to the model acts. The states can modify the model rules when adopted or at any later time.

Codes or rules of professional conduct for lawyers and judges function much like statutes. However, most are not adopted by the legislature, but instead by state bar associations or the highest court of the jurisdiction. Because these model codes have effect in a state only as they are adopted by that state, begin your research by finding your stateôs version of the *Model Code* or *Model Rules*.

- **American Bar Association Center for Professional Responsibility** links to state codes, codes of other countries and those of other legal entities.
- **American Legal Ethics Library** (from Cornell's Legal Information Institute) provides links to state ethics codes and correlates them with the *Model Rules*. Includes narratives/commentary for some states.
- **Court Rules books**. West publishes separate paperback volumes of court rules for many states which contain the current version of the rules or code of ethics. These books are found at the end of the code for each state (Level 3).

A good way to get started is to consult the ***Annotated Model Rules of Professional Conduct*** (6th ed.) (Reserve KF305 .A26 2007), which includes comparison between the Model Rules and the Code, a narrative on the legal background of each rule and paragraphs on each rule and sub-rule, describing the legal issues and giving citations to supporting cases and ethics opinions. This treatise is also available on Westlaw (ABA-AMRPC). Some states also have annotated versions of their ethics rules. Another good source to determine the intent of the rules is American Bar Association, ***A Legislative History: the Development of the ABA Model Rules of Professional Conduct 1982-2005*** (KF306.A32A16 2005). Its stated intent is to "lead researchers to a better understanding of the Model Rules as they exist on January 1, 2006 and to aid all those who interpret or apply the Model Rules..." It does that by tracing the evolution of the rules from the inception of the commission that created them to the present iteration, providing information on amendments proposed along the way and the arguments given for and against their adoption. ***ABA/BNA Lawyer's Manual on Professional Conduct*** is an electronic database containing information on recent developments in the law of professional responsibility, including a subject index to opinions for the ABA and all states. The Ethics Opinions section has recent ABA opinions in full, plus a digest of recent state bar ethics opinions. The section for each state also tells where that stateôs ethics opinions are published in full. The current volumes of this set include sections analyzing the law in a wide array of subject areas. **Note**: This title may also be accessed through Lexis & Westlaw. Lawyers can, of course, be **disciplined** for a breach of state ethics rules in the state where they are licensed. Each state has its own disciplinary procedure for violations of its rules, but generally there is an initial, informal process to determine whether the charge or complaint filed requires a full administrative hearing. If a hearing is held, it is before

an administrative board, usually created under the authority of the state's highest court. Appeals from these hearings are allowed, generally directly to the stateôs highest court. Results of disciplinary proceedings are most often found in the stateôs bar journal, but few states publish "opinions" regarding these hearings. It is usually only in the appellate court opinion that analysis of the ethics violation can be found. In determining issues of legal ethics, **court opinions** carry far more weight than the bar association ethics opinions described above. The context of case law involving legal ethics issues can be diverse, including appeals of disciplinary proceedings, legal malpractice, sanctions under FRCP 11, 26 and 37 and their state counterparts, and criminal appeals where ineffective assistance of counsel is alleged. Fortunately, they are easier to find using standard research tools. A good way to find cases interpreting the Model Rules and Code is to Shepardize using ***Shepard's Professional and Judicial Conduct Citations*** (Reference Indexes - Shepard's). Shepard's will give you citations to court opinions, ethics opinions and law review articles dealing with the a provision of the Model Code or Model Rules, beginning in 1980. You cannot Shepardize or KeyCite these electronically on Lexis or Westlaw. You can also use **digests** to find cases. When using the digest, try the key numbers under the topic *Attorney and Client*. Special databases of cases related to ethics have been created by both Lexis and Westlaw. In Lexis, the ETHICS library has files for each state and one for all states. In Westlaw, there are individual state databases and databases for all federal Judges are bound by the general rules of professional conduct for all lawyers, but special rules of professional conduct for judges also exist. The **ABA Model Code of Judicial Conduct** was adopted in 1972 and revised most recently in 2007. It consists of a Preamble, Terminology section, and 4 Canons with comments. Prior to this there was the **ABA Canons of Judicial Conduct**. The text of the model code is usually included in most sources that have the Model Rules and Code for lawyers. The current Model Code, along with comparisons to prior editions, is available at Like the rules for lawyers, each state adopts its own rules for judicial conduct, and most are based on this model.

PROTECTING PRIVACY

Over the past decade, as Americans have enthusiastically moved more and more of their lives online ð from catching up on the latest NCAA results to buying a car, financing their college education or finding a job ð we at the Federal Trade Commission have had to rethink what privacy means: to consider how consumers can continue to enjoy the riches of a thriving, increasingly online and mobile marketplace without surrendering their privacy as the price of admission. Last week, the FTC, the nationôs premiere privacy protection agency, tackled that question with a report on the state of the right to privacy, what Louis Brandeis, one of the intellectual fathers of the FTC, called ñthe most comprehensive of rights and the right most valued by civilized men.ò We detailed what we ð in the public and private sectors ð must do to make sure consumersô right to privacy remains robust into the 21st century. The FTC jumped in at this intersection of high-tech innovation and privacy rights not to erect a stop light but to look at traffic patterns. We asked who should control the personal information that consumers reveal ð about sites they view, purchases they make, people they talk to, even physical locations they visit ð when they surf the Web or use their mobile devices. Are consumers to be defined and judged by what the Atlantic called the ñunconsciously created profileò they amass online? Or

should they get some say in what personal information employers, marketers and the public see? The stakes are high. There are clear benefits to the collection and sale of personal information: It funds the innovative online content we all enjoy for free and fuels the growth of the cyber-economy, a bright spot on our economic horizon. But allowing the minute details of our browsing behavior, shopping habits, and even sensitive financial, health and family decisions to run loose in a freewheeling, high-tech data market comes with equally clear risks. Do we want our health insurer to know we bought a deep fryer on Amazon? Our future employer to see that unfortunate picture of the first, and last, frat party we attended? Our neighbors, pastor or complete strangers to find out whether we are pregnant, have HIV, take antidepressants or attend anger-management classes? To ensure that consumers retain control of their personal information, our report lays out three simple but powerful principles for companies to follow when handling consumer data: Incorporate privacy protections into products as they are developed ð that is, privacy by design; offer consumers more choice about how their data are collected and used; and provide more transparency with better information explaining to consumers how the companies ð including the data brokers who, for the most part, remain invisible to consumers ð handle personal information. Our report also renews our call for industry to develop a Do Not Track system that would let consumers chooses what information is collected about them online and how it is used.

PROTECTING INTELLECTUAL PROPERTY

All businesses have intellectual property (IP), regardless of their size or sector. IP can mean a brand, invention, design or other kind of creation, and it can be legally owned. Your IP is likely to be a valuable asset. It could include the name of your business, the products or services you make or provide, or the written or artistic material you create. Securing and protecting it could be essential to your business' future success, so it's vital to understand your rights and how the law can help you. This guide explains the importance of conducting an audit of your business' IP. It sets out the different kinds of legal protection available for IP available (including patents, trademarks, design rights, registered designs and copyright) and explains the range of things you can do to protect and manage your IP rights.

FREE SPEECH

Social networking websites allows groups to grow from a dozen friends to a hundred hobbyists to a huge organization that transcends national borders. Meanwhile, a new generation of citizen journalists have taken to (micro)blogging and video live-streaming to expose the world to stories that would otherwise go unheard. Websites like Wikipedia and the Internet Archive contribute to a new open-source model of sharing and preserving information. In countless ways the Internet is radically enhancing our access to information and empowering us to share ideas and connect with the entire world. Speech thrives online freed of limitations inherent in traditional print or broadcast media that are created by corporate gatekeepers. Preserving the Internet's open architecture is critical to sustaining free speech. But this technological capacity means little without sufficient legal protections. If laws can censor us to limit our access to certain

information, or restrict use of communication tools, then the Internet's incredible potential will go unrealized. Governmental organizations have time and again tried doing just that. Censorship laws often aim at speech that would also be restricted offline, but they can also erect new barriers to free expression on the Internet in order to privilege established stakeholders. When old laws are not properly adapted to this medium, it's all too easy for governments and companies to undermine your rights. EFF defends the Internet as a platform for free speech, and believes that when you go online, your rights should come with you. Learn more below and consider supporting our efforts.

INTERNET INDECENCY

Picture it: you're sitting at your PC and you log into your Internet access server to read your email. You're expecting a message from a friend, who is sending you some information on breast cancer, but when you check your inbox there is instead a message from the server. It says the message that was sent to you from the address of your friend has been intercepted because it contained indecent material that did not comply with FCC regulations of the Internet. You call your friend only to find that the police have come and taken her away, and she is now facing up to two years in prison and/or up to $100,000 in fines. The message sent by your friend contained the word "breast," which by current FCC standards is indecent, and thus not permitted to be transferred on the Internet. Due to this, your friend is now subject to criminal charges. Sound ridiculous? Unreasonable? Perhaps even a bit scary? It is all three of these things, but further, it is impending reality. This situation is very possible, in the very near future. On February 8, 1996, President Clinton signed the Exon Bill, part of the Communications Decency Act; a bill which makes the possibility of this situation a frightening reality. This bill will allow the government to censor the Internet, by any means it deems necessary. Under the CDA the "seven dirty words", as well as anything the government considers sexually explicit or "indecent", will be banned from the Internet. The CDA, however, will not be enforceable until all appeals made against it by organizations such as the Citizens Internet Empowerment Coalition (CIEC), and the Center for Democracy and Technology (CDT), are resolved. The Internet is a worldwide medium for communication and the transfer of information. It is also, theoretically, a print medium. By virtue of these facts, restrictions such as censorship should not be placed upon the Internet. Instead of censorship and regulation by the government, we as users of the Internet should be able to practice self-regulation. Censorship of the Internet violates the First Amendment of the Constitution, and thus robs us of our right to freedom of speech. Since cyberspace is a fairly new concept, any restrictions placed on the Internet by the CDA will determine the degree of freedom we will enjoy on the Internet in future years. Enforcement of the CDA will potentially rob us of a valuable source of information on subjects ranging from abortion and AIDS to birth control. Despite the restrictions imposed by the CDA, and the jeopardy in which it places our First Amendment rights, many still support it, feeling that

the Internet should be censored so that minors are not exposed to indecent, obscene, or pornographic materials when using it. These people should be made aware of the fact that there are currently several systems available, such as lockout programs, and several more being developed, such as Web site rating systems, which allow parents to screen and regulate what their child sees, according to their own standards, without government interference. Others support the CDA maintaining that the Internet needs to be censored so that pedophiles will not have access to and prey upon our children through the Internet. However, these people should understand that pedophiles are everywhere, and they habitually insert themselves into the most wholesome of situations (schools and churches, for example), gaining the trust of children. Lisa Schmeiser, an opposer of the CDA, says of this situation, "There are undoubtedly a small percentage of people on the Internet --as there are in the rest of society-- who are predatory pedophiles. These people will not get better and they will use every chance they have to get access to kids" (Internet). Today children need to be educated by their parents about sexual abuse, and how to avoid it. This includes on the Internet. Children need to know where not to go, and parents must screen their activities on the Internet, just as they would in any other place. Banning the material won't prevent child sexual abuse. Education will.

CENSORSHIP

While these are both legitimate fears in society today, such drastic measures as censoring the entire Internet are not necessary. The ramifications of such an action can prove to be far worse than any of the problems that censorship is attempting to solve. Perhaps those who support censoring the Internet do not understand the reasons behind those who oppose it. Possibly, they do not realize the impact that the results of this censorship will have on the Internet, society, the transfer of information, and the maintenance of our First Amendment rights, in the future. If the CDA is successful and the Internet is censored, valuable information used as research by students or anyone pursuing further knowledge on a topic will not be available. In order to grasp the significance of this situation, one must understand how important and useful a tool the Internet is today in the search for information and knowledge. Aside from containing a plethora of information on virtually any subject, the data that the Internet holds is available to everyone, and easily accessible to anyone. Given this fact, if the Internet is censored much of this information will no longer be available; not only to children, but to anyone. Information on topics such as abortion, birth control, and AIDS, things that are important to educate children on, will not be allowed on the Internet if it is censored, and thus not available for research and educational purposes. Marty Bruce, a Web page author, says of this Web censorship, "The opinion that the censoring of art, literature, or any thought contained within our minds by a higher authority is justified is not only close-minded, but scary too" (Internet). Other items that will not be allowed on the Internet under the CDA, that are otherwise widely available, include:

rap music (lyrics and sound files), "

Another vital issue that will result under enforcement of the CDA is the issue of indecency. Who is to say what is "indecent"? Who is to say what is "obscene"? Is that the end result of individual perception, or it is what the government decides and dictates to us? Here in America, we possess a coveted right: freedom. We have freedom of speech, and freedom of choice; just two among the many. And these are indeed rights, not privileges which can be retracted by the government. It is our right to discern what is "indecent" and what is not. What is considered to be "indecent" should be decided by the individual Internet users and by parents, according to their own tastes and standards; not by the government. One Web page author says of this idea, "Parents [must take] responsibility for what their kids get exposed to, instead of blaming Hollywood, television, magazines, the Internet, whoever the scapegoat of the week happens to be" (PsyberNut, Internet). Children have to learn to think and make responsible decisions for themselves. It is the responsibility of their parents to teach them how, not the duty of government regulation. A third issue in opposition of the CDA is the idea that the Internet, theoretically, is a printed, not a broadcast medium. Here, it is important to distinguish between printed media and broadcast media. Broadcast media, which travels through waves, can enter into our homes "uninvited", meaning that we have no choice weather or not it comes into our home because it is constantly passing through the walls and such. Since it is uninvited, it must be censored, because we have no means of controlling what we are exposed to through it. This is why what is transmitted via television and radio is censored. On the other hand, printed media is not censored because it must be "invited" into our homes. If we want a book or a magazine, we must go out and buy it, and physically bring it into our home. It is a choice we make. If we want to see what the book has in it, we can look at it, but if we don't, we don't have to. This is why magazines such as "Playboy" are available, and not censored. In the case of printed media, we chose for ourselves, we decide for ourselves, we regulate for ourselves what we are exposed to.

By now you may be wondering: What can we do about it? What can we, as people of the Information Age, do to stop this undermining of our rights and squelching of the growth of an invaluable medium for information? The answers to these questions and the solution to this problem are a simple one. First, we must act aggressively in opposition of the CDA. Participate in actions that do not support this censorship. The CDT has a blue ribbon graphic that symbolizes their opposition of the CDA. It is available to anyone who wants to display their view on the subject, to place on their Web page. Include this blue ribbon that symbolizes the opposition of the CDA on your Web pages. Add links to your page, or carry information on the subject. Inform others on the significance of this situation. We must educate people on the subject, and let them know that both their rights and the vitality of the Internet are being threatened.

On a larger scale, other plausible solutions to this problem are just as simple. One solution to this dilemma is as simple as producing new software. Instead of regulating the entire Internet,

software such as Netscape (or other Web browsers) can be altered or updated so that parents could program them not to go to certain Web sites. The HTML (Hypertext Mark-up Language) codes used to create these Web sites could include a command embedded in the code that would be recognizable by the Web browser, which would instruct it not to go to the site. Similar measures have already been taken, and are currently being developed. Another solution, which is already being employed by several Web sites currently, is the "Safe Surf" scale of rating a Web site. This allows parents to know what type of information is contained on a particular Web site, before their children get to it. In this way, the creators of the particular site can rate their page, which forewarns parents of its contents, while at the same time giving them freedom of expression, no threat to their creativity, and no limitations are imposed upon the information that they chose to carry. Each of these solutions are plausible; they satisfy the needs of both sides of the issue. They present a method for monitoring, restricting, and regulating what children are exposed to on the Internet. They also succeeded in doing this without government interference, or threatening our rights as Americans. Further, it does this in a way which keeps parents involved in their child's activities, and preserves the parental right to decide what their child is exposed to. It also ensures that the growth of the Internet is not stunted in any way. If people are educated on this issue, then they will be aware of what is occurring in this conflict, so they will be ready to stand up for their rights. Anyone who is informed on the subject will not want to risk losing their rights or freedom. Further, if there are solutions which will protect children on the Internet that at the same time protect our freedom of speech and the growth of the Internet and all its information, thus appeasing both sides, it is only logical and reasonable that we follow them.

TAXATION POLICIES

Every so many weeks, around dinner time, the phone rings and itôs somebody asking me if Iôm interested in changing some insurance policy or other. I donôt about you, but I think I have more insurance policies than I know what to do with. I have house, car, health, life, pension, travel, contents, accident, glass, legal aid and mortgage insurance. (Iôm assuming my wife knows where they all are, because I certainly donôt.) In fact, Iôm probably paying *more than one* insurance policy to cover certain risks! And, of course the first question on the call is whether I know the expiry date of the policy. (Of course not. Generally, I donôt even know which company is insuring me.) The next question is what Iôs paying for a specific policy. Answer: Apparently, lots. Because my bank account is empty every month! It all started out quite simply years ago, when I bought my first car. But then stuff happens, such as marriage, kids, mortgage, etc., and before you know it, you are implementing policies to cover every conceivable eventuality. Back in the mid-1970ôs, when I first entered the IT world, the use of encryption by enterprises was pretty much unheard of. Back then, the highlight of each week was printing the paychecks for the company. Thatôs when we began to recognize the emerging power of the IT person ï he or she knew *exactly* what everyone took home. Soon companies started to introduce some encryption. My first experience was using encoders on communication lines to encrypt financial

transactions. In fact, the first place I saw this used was for connection to the SWIFT network. A painful process of having two people at each end, keying in a sequence of numbers, pushing a button and hoping the box would sync -- a process that could take hours. A major breakthrough in the 1990ôs was the arrival of asymmetric encryption, which led to the rapid expansion of the use of encryption. And asymmetric encryption gave birth to two technologies that are now found in every corner of the enterprise, SSH and SSL. Critical company information and communications are protected by keys and certificates, and ineffective management of these keys and certificates is the single biggest reason why companies experience data security breaches. This applies not just too symmetric keys, but to *all* cryptographic keys, including private keys, asymmetric keys and certificates. Symmetric key technology is still widely used today for the protection of data-at-rest, and SSH and SSL are the de-facto standards for data-in-motion. In the case of symmetric key encryption, there is no de-facto standard, so most storage vendors, such as IBM, HP, EMC, etc., provide their own proprietary solutions. The result is that, until now, key management has been segregated into different silos. IT staff manage storage keys, UNIX administrators manage SSH keys, and SSL keys are loosely managed by the security staff because they tend to be found in most parts of the infrastructure -- from the load balancer/off-loaders, through Web servers, right through to back-end systems, such as Websphere. In all three areas, a variety of attempts have been made to introduce key management to address the specific area, but these often have been developed by companies whose core business is to offer cryptography solutions. As a result, companies have been faced with the daunting task of replacing their existing encryption technology with a vendor-specific solution, which in many instances is simply not viable.

ENCRYPTION POLICIES

Data encryption has permeated every facet of life. Itôs in every corner of the IT infrastructure, and is a de-facto requirement in every business sector. Whether it is Anglo Irish Bankôs missing encryption keys, Stuxnet, Playstation 3 or Fedora, hardly a day goes by without another story in the media related to encryption and keys. The encryption keys used to secure data have become the ñkeys to the kingdom.ò The key (not the data itself) becomes the entity that must be safeguarded. Manually managing the lifecycle of these encryption certificates and keys and the systems that rely on them is impossible, and the effort simply *increases* security vulnerabilities. It is therefore essential that organizations take a much broader, systems management approach to handling the complexities of managing encryption. In addition to automating the creation and management of keys and certificates, such an approach includes configuring the applications that use encryption, policy-based management and enforcement, comprehensive tools to monitor and report on status, workflow, notifications, audit and more. This complete approach results in improved data security, system uptime, operational efficiency and regulatory compliance. To date, many organizations have relied on manual processes or adopted siloed point solutions for managing their encryption assets. It is increasingly important to target more automated, enterprise-wide encryption management strategies. The cost of preventative measures -- including automated management tools -- is often far less than the total cost of a breach, particularly when long-term costs, such as lost business opportunities, are considered. According

to The Ponemon Instituteôs 2009 *Cost of a Data Breach Study*, ñThe investment required to prevent a data breach is dwarfed by the resulting costs of a breach, with an average breach costing in excess of £4 millioné ò (Never mind the reputational damage.) And, as I contemplate my insurance policies, Iôve just remembered that we now have funeral insurance. Benjamin Franklin was quoted as saying, "The only things certain in life are death and taxes." But, we the expiration and loss of encryption keys are also guaranteed, and should be added to Franklinôs list. It makes sense to have some insurance and implement effective key managementé or it might just be somebodyôs funeral.

OTHER LEGAL ISSUES

CONTRACTS

Typically, in order to be enforceable, a contract must involve the following elements: The parties to the contract have a mutual understanding of what the contract covers. For example, in a contract for the sale of a "mustang", the buyer thinks he will obtain a car and the seller believes he is contracting to sell a horse, there is no meeting of the minds and the contract will likely be held unenforceable. The contract involves an offer (or more than one offer) to another party, who accepts the offer. For example, in a contract for the sale of a piano, the seller may offer the piano to the buyer for $1,000.00. The buyer's acceptance of that offer is a necessary part of creating a binding contract for the sale of the piano. **Please note that a counter-offer is not an acceptance, and will typically be treated as a rejection of the offer**. For example, if the buyer counter-offers to purchase the piano for $800.00, that typically counts as a rejection of the original offer for sale. If the seller accepts the counter-offer, a contract may be completed. However, if the seller rejects the counter-offer, the buyer will not ordinarily be entitled to enforce the prior $1,000.00 price if the seller decides either to raise the price or to sell the piano to somebody else. In order to be valid, the parties to a contract must exchange something of value. In the case of the sale of a piano, the buyer receives something of value in the form of the piano, and the seller receives money. While the validity of consideration may be subject to attack on the basis that it is illusory (e.g., one party receives only what the other party was already obligated to provide), or that there is a failure of consideration (e.g., the consideration received by one party is essentially worthless), these defenses will not let a party to a contract escape the consequences of bad negotiation. For example, if a seller enters into a contract to sell a piano for $100, and later gets an offer from somebody else for $1,000, the seller can't revoke the contract on the basis that the piano was worth a lot more than he bargained to receive. In order to be enforceable, the action contemplated by the contract must be completed. For example, if the purchaser of a piano pays the $1,000 purchase price, he can enforce the contract to require the delivery of the piano. However, unless the contract provides that delivery will occur before payment, the buyer may not be able to enforce the contract if he does not "perform" by paying the $1,000. Similarly, again depending upon the contract terms, the seller may not be able to enforce the contract without first delivering the piano. In a typical "breach of contract" action, the party alleging the breach will recite that it performed all of its duties under the contract, whereas the other party failed to perform its duties or obligations. Additionally, the following

elements may factor into the enforceability of any contract: It is implicit within all contracts that the parties are acting in good faith. For example, if the seller of a "mustang" knows that the buyer thinks he is purchasing a car, but secretly intends to sell the buyer a horse, the seller is not acting in good faith and the contract will not be enforceable. In order to be enforceable, a contract cannot violate "public policy". For example, if the subject matter of a contract is illegal, you cannot enforce the contract. A contract for the sale of illegal drugs, for example, violates public policy and is not enforceable. Please note that public policy can shift. Traditionally, many states refused to honor gambling debts incurred in other jurisdictions on public policy grounds. However, as more and more states have permitted gambling within their own borders, that policy has mostly been abandoned and gambling debts from legal enterprises are now typically enforceable. (A "bookie" might not be able to enforce a debt arising from an illegal gambling enterprise, but a legal casino will now typically be able to enforce its debt.) Similarly, it used to be legal to sell "switchblade kits" through the U.S. mail, but that practice is now illegal. Contracts for the interstate sale of such kits were no longer enforceable following that change in the law. There is an old joke that "an oral contract isn't worth the paper it's written on". That's a reference to the fact that it can be very difficult to prove that an oral contract exists. Absent proof of the terms of the contract, a party may be unable to enforce the contract or may be forced to settle for less than the original bargain. Thus, even when there is not an opportunity to draft up a formal contract, it is good practice to always make some sort of writing, signed by both parties, to memorialize the key terms of an agreement. At the same time, under most circumstances, if the terms of an oral contract can be proved or are admitted by the other party, an oral contract is every bit as enforceable as one that is in writing. **There are, however, "statute of fraud" laws which hold that some contracts cannot be enforced unless reduced to writing and signed by both parties**. For more information on the Statute of Frauds, please see this associated article. Please note that, although sometimes an oral contract is referred to as a "verbal contract", the term "oral" means "spoken" while the term "verbal" can also mean" in words". Under that definition, all contracts are technically "verbal". If you mean to refer to a contract that is not written, although most people will recognize what you mean by "verbal contract", for maximum clarity it is helpful to refer to it as an "oral contract".

GAMBLING & MORE

Gambling is the wagering of money or something of material value (referred to as "the stakes") on an event with an uncertain outcome with the primary intent of winning additional money and/or material goods. Typically, the outcome of the wager is evident within a short period. The term **gaming** in this context typically refers to instances in which the activity has been specifically permitted by law. The two words are not mutually exclusive; *i.e.*, a ñgamingò company offers (legal) ñgamblingò activities to the public[2] and may be regulated by one of many gaming control boards, for example, the Nevada Gaming Control Board. However, this distinction is not universally observed in the English-speaking world. For instance, in the UK, the regulator of gambling activities is called the Gambling Commission (not the Gaming Commission). Also, the word *gaming* is frequently used to describe activities that do not involve wagering, especially online. Gambling is also a major international commercial activity, with the

legal gambling market totaling an estimated $335 billion in 2009. In other forms, gambling can be conducted with materials which have a value, but aren't real money; for example, games like Pogs or *Magic: The Gathering*.

CONSUMER PROTECTION IN EC

Electronic commerce has the potential to offer consumers a number of benefits, including convenience, more choice, more product information, and lower costs. By extending access to a range of goods and services normally only available in urban areas, it can also provide important benefits to those who live in rural, remote and regional areas. In Canada, electronic commerce is becoming more common, and the number of Canadians using the Internet continues to increase. The latest statistics released by Industry Canadaôs Electronic Commerce Branch in August 2000 reveal that, in 1999, 49% of Canadians had accessed the Internet and 25% of Canadian Internet users had made a purchase via the Internet. Statistics Canada data show that Canadian electronic commerce for 1999 totaled $4.4 billion. One of the principal reasons consumers purchase online is to gain access to goods and services that are not physically close to them. Provincial and national boundaries, therefore, become irrelevant as consumers seek to acquire the goods and services they need in an online environment.

SELLER PROTECTION IN EC

How consumers protect themselves and how governments adapt their consumer protection policies and laws to electronic commerce present a number of challenges. Traditionally, provincial governments have tailored their consumer protection laws to transactions where both the seller and the buyer are located within the same province. This approach, however, may not be effective for transactions involving parties from more than one province or more than one country. As the number of interprovincial and cross-border international transactions increase, it will be important for Canadian provinces to coordinate their approaches to consumer protection and for Canada to coordinate its efforts with other countries. This will outline efforts by the Organisation for Economic Co-operation and Development (OECD), and in Australia and Canada, to develop frameworks for consumer protection in electronic commerce. In addition, the paper will deal with one specific measure ï the "credit card chargeback" ï that appears to be gaining acceptance as a viable consumer protection measure in an electronic commerce environment.

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