CHAPTER 3
LITERATURE REVIEW
AND SECONDARY DATA
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Literature Review And Secondary Data

3.1 Primary Data

Primary data was collected with the help of Research Instruments like schedules, questionnaires as well as one on one interviews. The questionnaire was logically divided into 3 parts.

- **Part 1**, dealt with historical and background information of the companies and questions were aimed at understanding the goals and objectives of the companies with a view to understanding their marketing philosophy and the scope of Internet marketing in the business plan.

- **Part 2**, comprised of questions relating to company specifics like divisions and diversifications, investments present and future and marketing plans of the companies using the Internet. An attempt was made to study the past, present and future growth plans in the light of the Internet as a marketing medium, keeping in mind the costs incurred vis-à-vis the associated gains. The efficacy of the Internet as a marketing medium being the main objective of the study, supporting business ecosystem, demographics of the user population and the socio-economic structure were also a goal to be investigated.

- **Part 3** questions were of general nature and were aimed at understanding the enablers and deterrents of a firm’s performance in the context of Internet marketing. Opinions were sought from managers on the impact and or implications that this technology would have on businesses worldwide in the coming decade.

3.2 Internet Marketing Research Review - (1987 – 2005)

Electronic marketing (EM) is the transfer of goods or services from seller to buyer that involves one or more electronic methods or media. EM began with the use of telegraph in the nineteenth century. With the advent and mass acceptance of the telephone, radio, television, and then cable, electronic media have become the dominant marketing force (Hoge, 1993). In recent years, increasing numbers of
businesses have been using the Internet in their marketing efforts. The Internet is unique because it is both a market and a medium. This means that it can efficiently assume a multi-channel role by serving as a computer-mediated market in which buyers and sellers access each other, and as a medium to conduct and execute business functions such as marketing, sales, and distribution (Farhoomand and Lovelock, 2001). This leads to increases in the efficiency of traditional marketing functions. The technology of EM transforms many marketing strategies by adding customer value and/or increasing company profitability (Strauss and Frost, 2001). The product is one of the four Ps (price, place, product, and promotion) of the marketing mix. However, it is difficult to find papers that describe products in relation to IM. According to Kotler and Armstrong (1999), marketers must make five general product decisions to meet customer needs, namely: the highlighting of attributes, branding, support services, labeling, and packaging. The use of existing brand names or the creation of new brands in the electronic medium, especially on the Internet, must be considered. Furthermore, new product mix strategies are necessary for IM success (Strauss and Frost, 2001).

Internet Marketing (IM) is defined as the process of building and maintaining customer relationships through online activities to facilitate the exchange of ideas, products, and services that satisfy the goals of both buyers and sellers (Imber and Betsy-Ann, 2000). IM is a hot topic and an exciting area for research due to its relative novelty and explosive growth. Internet Marketing is relatively new for academics and practitioners, and is considered a paradigm change in the literature. Research activity in IM has increased significantly over the last few years, and several attempts have been made to identify the major sources and topics of articles in the field. However, despite, its popularity and importance in the digital economy, no comprehensive literature review has been conducted in the field of IM.

As the nature of research on IM is difficult to confine to specific disciplines, the relevant material is scattered across various journals. Hanson, (2001) adopted a methodology which considered reinforcing trends and implications in marketing, technology, and economics. Based on his Internet Marketing framework, IM articles can be found in three types of journals.
1. Marketing
2. Economics, Business and Management
3. Information Systems (IS) and Information Technology (IT)

As per a literature review and classification scheme for Internet marketing (IM) research done by E.W.T. Ngai (Ngai, 2003), a total of 270 journal articles are reported to have been published between 1987 and 2000 in three types of journals: marketing; economics, business and management; and information systems and information technology. The work done serves as a comprehensive base for an understanding of IM research. The results show that an increasing volume of Internet Marketing research has been conducted in a diverse range of areas. Research output in IM has increased significantly since 1995. A total of 96% of the papers were published in the five years between (1996 – 2000) of this 14-year study. It was further reported that the significance of Internet Marketing to e-commerce is likely to increase in the future. The 270 articles are classified according to the subject headings suggested by Leonard (2001). The articles are classified into five broad categories.

1. IM environment
2. IM functions
3. Special IM applications,
4. IM research
5. Other topics

This review is useful as a source for anyone interested in IM research, and will help to simulate further interest in the area. Some of the findings reported in the paper have been summarized as follows:-

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Table 3.1 Distribution of IM articles by subject headings

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subject Headings</th>
<th>No. of articles</th>
<th>Percentage of subject</th>
<th>Percentage of all Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The IM environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Consumer behavior</td>
<td>32</td>
<td>65.3</td>
<td>11.9</td>
</tr>
<tr>
<td>1.2</td>
<td>Legal, political and economic issues</td>
<td>11</td>
<td>22.5</td>
<td>4.1</td>
</tr>
<tr>
<td>1.3</td>
<td>Ethics and social responsibility</td>
<td>06</td>
<td>12.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>49</td>
<td>100.0</td>
<td>18.2</td>
</tr>
<tr>
<td>2</td>
<td>IM functions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Management, planning, and strategy</td>
<td>40</td>
<td>28.4</td>
<td>14.8</td>
</tr>
<tr>
<td>2.2</td>
<td>Retailing</td>
<td>19</td>
<td>13.5</td>
<td>07.0</td>
</tr>
<tr>
<td>2.3</td>
<td>Channels and distribution</td>
<td>28</td>
<td>19.9</td>
<td>10.4</td>
</tr>
<tr>
<td>2.4</td>
<td>Market structure</td>
<td>18</td>
<td>12.8</td>
<td>6.7</td>
</tr>
<tr>
<td>2.5</td>
<td>Physical distribution</td>
<td>01</td>
<td>0.7</td>
<td>0.4</td>
</tr>
<tr>
<td>2.6</td>
<td>Pricing</td>
<td>13</td>
<td>9.2</td>
<td>4.8</td>
</tr>
<tr>
<td>2.7</td>
<td>Product</td>
<td>04</td>
<td>2.8</td>
<td>1.5</td>
</tr>
<tr>
<td>2.8</td>
<td>Sales promotion</td>
<td>03</td>
<td>2.1</td>
<td>1.1</td>
</tr>
<tr>
<td>2.9</td>
<td>Advertising</td>
<td>14</td>
<td>9.9</td>
<td>5.2</td>
</tr>
<tr>
<td>2.10</td>
<td>Sales management</td>
<td>01</td>
<td>0.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>141</td>
<td>100</td>
<td>52.2</td>
</tr>
<tr>
<td>3</td>
<td>Special IM applications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Industrial</td>
<td>04</td>
<td>12.9</td>
<td>1.5</td>
</tr>
<tr>
<td>3.2</td>
<td>International and comparative</td>
<td>16</td>
<td>51.6</td>
<td>5.9</td>
</tr>
<tr>
<td>3.3</td>
<td>Services</td>
<td>11</td>
<td>35.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>31</td>
<td>100</td>
<td>11.5</td>
</tr>
<tr>
<td>4</td>
<td>IM research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>Theory and philosophy of science</td>
<td>12</td>
<td>26.7</td>
<td>4.4</td>
</tr>
<tr>
<td>4.2</td>
<td>Research methodology</td>
<td>22</td>
<td>48.9</td>
<td>8.2</td>
</tr>
<tr>
<td>4.3</td>
<td>Information technology</td>
<td>11</td>
<td>24.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>45</td>
<td>100</td>
<td>16.7</td>
</tr>
<tr>
<td>5</td>
<td>Other topics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>Educational and professional issues</td>
<td>02</td>
<td>50</td>
<td>0.7</td>
</tr>
<tr>
<td>5.2</td>
<td>General IM</td>
<td>02</td>
<td>50</td>
<td>0.7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>04</td>
<td>100</td>
<td>1.4</td>
</tr>
</tbody>
</table>

The distribution of IM articles by subjects indicates that

- the majority of articles (141 out of 270 – 52.2%) were related to IM functions
- the next category is (49 out of 270 - 18.2%) were related to IM environment
- the next category is (45 out of 270 – 16.7%) were related to IM research
- the next category is (31 out of 270 – 11.5%) were related to Special IM applications
- the least published (4 out of 270 – 1.4%) belonged to the category Other Topics.

Distribution of articles by Journals and types of Journals.

Out of a total of 270 IM articles, 119 (44%) of all publications were found in 23 marketing journals. These 23 marketing journals have been classified as:

The Journals that had articles that were related to IM topics were

1. The Journal of Interactive Marketing
2. The Journal of Consumer Marketing
3. The European Journal of Marketing
4. 50 IM articles were found in the 8 Economics, Business, and Management journals.
5. The Harvard Business Review
6. and 7 other economic, business, and management journals.

A total of 101 IM articles were found in 15 IS and IT journals

1. Internet Research Journal.
4. 12 other journals.

The major implications indicated in the review were as follows:

- There is no doubt that IM research will burgeon in future.
- Although research has been clearly fragmented, the three most popular topics addressed in the IM literature are ‘Management, Planning, and Strategy’, ‘Consumer Behavior’, and ‘Channels of Distribution’. Traditional marketing
strategies are becoming less effective in today’s markets (Angelides, 1997). The Internet is a new channel for researchers, and it is necessary to understand consumer behavior in the new marketing environment.

In his analysis of the global cultural economy (Appadurai, 1990) was the first to introduce the concept of a typology of “scapes”. He identified the global cultural scene in terms of five scapes. These are finanscapes, mediascapes, technoscapes, ethnoscapes, and ideoscapes. Used in the context of Cybermarketscapes (Alladi Venkatesh, 1998) “the cyberscape may be said to be a combination of mediascapes and technoscapes as well as something more that is created within the context of electronic environments.” The literature defines Cybermarketspace as a particular form of cyberscape which lies in the intersection of electronic markets and consumers. (Venkatesh, 1998) states that the most dramatic manifestation of the cyberscape is the Internet and its related technologies including various on-line services, viz. Netscape Navigator (most popular web browser before 2000), Internet Explorer, etc. For the purpose of discussion, he has sketched four key elements that encompass the cyberscape as shown below:

CyberScape

![Diagram](image)

Fig. 3.1
1. The new and rapidly evolving Cybertechnology
2. The larger social order
3. The cybermarketspace or the realm of marketing and commerce impacted on by cybertechnology
4. The cybecitizen/cyberconsumer as the adopter of new technology and a participant in the marketspace.

Cyberspace is essentially a product constructed out of the new technologies of communication, information and computerization. It is in this constructed technological space that we have to envision the everyday life of the individual and the social/cultural order.

Different people configure cyberspace differently. (Habermas, 1987) views cyberspace as an innocuous technological diversion, more as a 'life world' outside the 'system', in a Habermasian sense, an unintended space for computer hackers who were the master tinkerers residing at the technological edge. Its very novelty and profundity transformed it into a marketing initiative. If one traces the capitalist history, in the last four or five decades, the co-optation of cyberculture by marketing is not surprising. Today, Cyberspace represents a limitless commercial space for marketing. Further, of more interest is the rhetoric of the cyberspace that is now appropriated by marketing. (Shields, 1996; Turkle, 1995) have configured Cyberspace as a public space, a community space, as well as a private space. In addition a commercial space, an aesthetic space, a dimensionless space and a negotiated space. The transformation of public space into a commercial space means that the individual is both a citizen with civic identity, as well as a consumer with desires and needs and therefore a "target" for marketing (Alladi Venkatesh, 1998). Cyberspace has been referred to, by some, as being multidimensional and in some cases, references have been made to its non-dimensionality – i.e. it is a space of information flows, databases and networked/hypertextual links to people and places. The fact is that cyberspace is nurtured on the one hand by profit-seeking corporate presence and on the other hand by people driven by community concerns. At another extreme is the notion that it is also a place for humanoids, replicants, prosthetics, in other words, a place where artificial life might emerge.
With increased globalization of the world economies, market opportunities seem to be endless for most enterprises (Pallab Paul, 1996). Consequently, market players are in a permanent state of competition in order to achieve better performance. Innovative managers are constantly in search of unique ways, different from the traditional commercial strategies and tactics, to compete more effectively on a local, regional and global basis. Many business leaders are of the opinion that the information superhighway is what will make these visions a reality in everyday business. Advances in digital telephone networks, interactive cable television, personal computers, online services and finally the Internet have shaped the information superhighway. Back in 1996, it was believed that technological advances will inevitably change the face of business, as we know it today and that for most organizations, the information superhighway offers an abundance of opportunity.

Several questions came up, which were relevant at that point of time - Will the "information superhighway" deliver? And, if it does, will it provide what most businesses now see as a promotional channel? Are traditional marketing management skills appropriate to the exploitation of the new medium? Paul addresses these issues in detail and asserts that the marketing executives must necessarily consider the above questions while examining their organization’s presence on the Internet. He states that it is not sufficient to simply put up a site (however pretty) and leave it at that. Businesses must assess what they will get from a presence on the Internet. This could be straightforward advertising: it could be distant selling, customer service or market research. A combination of these could prove the most effective mix. What is equally of importance is that, in making the choice, managers need to consider how much the Internet might change over the coming decade (Marketing Consultants, MCB University Press).

The appropriateness of the Internet as a communicational tool is on account of its two major competences in a particular situation -

- Direct marketing Capability: Businesses that do not appreciate the core skills and tactics of direct marketing are at a disadvantage. The best direct marketeers have been on the Internet longer than any other marketing group.
They see it (possibly wrongly) as another direct response medium where the tested tactics of copywriting, incentives and attention – getting will deliver business success. Furthermore, the principles of database marketing and relationship making - both emerging from the direct marketing concept – apply to marketing on the Internet.

- Public Relational Skills: (Boutie, 1996) asserts that PR professionals have the appropriate skills to exploit the Internet. News management, former communications campaign management and writing skills are all included in a major way. The idea of stakeholders and stakeholder communication also applies to this area of marketing communications.

This takes us to the next issue – an issue that Paul addresses in some detail and that is in addition to the above competences, and the evidence that mass marketing techniques cannot work on the Internet, is that, the days of traditional brand management could be numbered and that on the Internet the brand managers need to change the basis of brand communications to encompass relationships and the dynamic way in which opinions are formed about a brand within the marketplace. As more “private” users come onto the net, its role will change. Users will be focused more on interests and opinions, rather than the search for offers or information. Communicators need to move towards asking “What do you think?” rather than saying “here’s my product – buy it.” In addition, Internet users would need full disclosure rather than selected highlights. It will not be sufficient simply to put up brand: the rationale for position and background information need to be planned out very carefully. Any form of deception and secrecy should be completely avoided on the Net.

(Ainscough and Luckett, 1996) observed that the Internet is perhaps the first genuinely new marketing medium for a generation and perhaps the first major change in advertising media since the advent of commercial television. Whether it could have the same colossal impact that television has on advertising and marketing remains to be seen. They have presented a helpful guide to marketing on the Internet by providing a more analytical and considered approach. Ainscough and Luckett assert
that the World Wide Web can be used as a promotional tool in several ways. In order to simplify the classification of WWW sites, they have developed a topology (fig 3.2) that defines four broad categories of use relevant to marketing. The categories describe four different ways in which the WWW can be used to market goods and services to consumers. The four categories are

1. Interactive brochure
2. Virtual storefront
3. Information clearinghouse

Each of these uses is independent of the others; a combination of any or all of them may be used as promotional tools. In order to determine the rate of use of each of the four categories, Ainscough conducted a study comprising of a random sample of 50 corporate WWW sites. The results indicated that the percentage of WWW sites incorporating the features of a category are as follows

a. Ninety-six percent of the companies in the study used the WWW as an interactive brochure.
b. The virtual storefront was used by 12 percent of the corporate WWW pages examined.
c. Around 8 percent used the World Wide Web as an information clearing house.
d. Sixteen percent of the companies in the sample use the World Wide Web as a way to provide help and services to their customers.
The World Wide Web was used as an interactive brochure by companies, by providing information about their companies, the products and/or services they offer, and contact information. The interactive brochure is a good way to begin a WWW presence. These range from simple information provided in a text-only form, to so-called "flat-ads, to highly sophisticated multimedia productions, with full scale audio, video and interactive capabilities. Two examples of sites using such sophistication are that of Sony Corporation and Ford Motor Company in the year 1996. Sony Corporation provides links for each of its divisions (music, pictures, electronics, electronic publishing, and merchandise). Its music division allows users to hear a portion of their favorite artist's latest CD, view a video clip from their most recent music video, or get information about their upcoming concert tours. Ford Motors has made available on its Internet showroom, a simulator program, which allows consumers to select a vehicle, paint it the color of their choice, choose accessories, and create a customized window sticker reflecting their desired car and financial needs. At the other end of the scale of web sites are flat ads, essentially single page electronic flyers, that are often the first step into an eventual multimedia format. They allow companies to get an initial feel for the marketplace. Sandberg (1995) observes that, even these relatively simple sites on the Internet send a message to current customers, potential customers and competitors that a company is on the cutting edge.

The virtual storefront makes use of the same features as the interactive brochure, but interested customers can browse through merchandise and purchase items online. Both large and small businesses have taken advantage of this particular aspect of Internet access. Godiva Chocolate (1996) maintains an online presence, that not only allows consumers to read about the rich history, but also to examine the range of chocolate products that are available for purchase, place their order, and have their purchases delivered. Although the majority of large companies have well established physical distribution systems, virtual storefronts have benefited the smaller companies more as these virtual storefronts have a great leveling effect, instantly transforming small companies into worldwide distributors by providing a source of direct sales. It is therefore difficult to determine the size of a company by its World Wide Web page.
The third category of use of the World Wide Web is as an information clearing house. Some companies, especially those with strong research and development arms, wish to provide a place to exchange information with customers and other researchers, such as those in academia. The establishment of an information clearing house on the WWW can assist businesses in this endeavor. In this context, an information clearing house, is a place where product questions can be asked and answered online, meetings and conferences can be announced, and research findings can be shown and explained. Current technology allows participants to have real time audio and video interaction via the Internet. These virtual meeting places and discussion groups can bring people with similar interests together for meetings and discussions instantly and at very little cost to the sponsor. An example of an information clearing house is the online journal maintained by Accelerated Learning Systems. The journal contains articles that are intended to be a resource for those interested in education and accelerated learning.

Companies can use the World Wide Web as a way to provide help and service to their customers. Businesses often take customer questions and/or service orders online and provide detailed answers (for all to read) within 24 hours. Some anticipate questions in advance and provide lists of frequently asked questions (FAQ's) online. An example of this could be the case of Builder's Graphics, Inc. that is offering custom design and architectural services to Internet customers who send in rough sketches of potential floor plans, which are then converted into blueprints. Later, customers can arrange to have a virtual walk-through of their newly designed home or office. While not all of the above four features are useful to every organization, going beyond the informational level of the interactive brochure may yield significant competitive advantages.

Today, a growing number of multimedia development consultancies exist that specialize in providing clients with Internet access, WWW page design and maintenance. The cost of these services vary widely, but generally depends on the amount of time it takes to design the WWW site, the amount of memory space the site is allotted, and the amount of Internet traffic (bandwidth) that the site draws. The larger and more detailed multimedia sites, that occupy many megabytes of server disk space and receive thousands of accesses daily, may be expensive to install and
maintain, but what is noteworthy is that they could yet be price competitive as compared to more traditional promotional options. Promoting one's products or company on the Internet can be an extremely cost-effective way to reach potential consumers worldwide. But once a WWW site is online, companies initially must wait for consumers to come to them. Unsolicited advertising, such as mass e-mailings, is frowned on in the Internet community. Typically, it takes a few days or weeks for a site to appear in the search services. These services pick up most sites using an automated process (some form of proprietary algorithm as in the case of Google or Yahoo).

The waiting time for customers can be shortened considerably by giving the site address in traditional promotional materials, by joining electronic malls and by arranging with the operators (referred to as Webmasters) of related sites to include hyperlinks that link your site to theirs. Willing customers can call toll free numbers, send e-mail messages, or fill out online "forms" to order merchandise or request further information. These customer contacts can be used to develop a highly targeted and individualized direct marketing effort, starting with a simple presence and slowly building as the Internet proves its worth. Thus the Internet is an extremely fast moving and rapidly changing environment. With the advent of the WWW and user-friendly browsers, companies are making the leap online; visualizing a cost-effective media vehicle to reach customers.

(Hoffman et al., 1995) has classified Internet business into six non-exclusive categories:

1. Storefronts
2. Content Sites
3. Search Engines
4. Malls
5. Incentive sites
6. Presences

The diffusion of the Internet and with it, electronic commerce, is promoting a transformation in the business landscape as different business models emerge as feasible alternatives to existing models. (Klein and Quelch, 1997) talk about one more
additional business model that had received less attention and that is of Market Makers (MM’s). In traditional distribution channels, this existed as a viable model in the form of middlemen. But the introduction of electronic commerce has widely expanded their capability and role in business. More than merely middlemen, MM’s on the World Wide Web aim to bring together buyers and sellers through the creation of an online marketplace. They observe that while early MM businesses have been primarily consumer business relocating from the marketplace to the marketspace (Rayport and Sviokla, 1995), the fastest growing MM’s operate in the business-to-business segment and are rapidly establishing themselves as modern virtual intermediaries within their industries. Desaultels, (1996) asserted that although consumer Web businesses were earning profits, through their advertising, sales or subscriptions, the profitability of electronic commerce in the business-to-business marketplace appeared more promising. Klein and Quelch have distinguished three types of MM’s

1. Auctions (e.g. Onsale)
2. Single Buyer markets (e.g. GE TradeWeb)
3. Pure exchanges (e.g. TRADE ex.)

Auctions are on-line marketplaces where the negotiation of price between independent buyers and sellers is implemented via a system-wide standard auction open to all participants. Single-buyer markets are those in which one large buyer establishes an on-line market for its own suppliers to respond to RFQ’s from different operating divisions. Pure exchanges are marketplaces where individual buyers and sellers are matched according to product offerings and needs, and prices are negotiated on an individual one-on-one basis. As a variation of the third type of MM’s, Zwass, (1996), has distinguished yet another form of markets which he calls as “direct-search markets”, where buyers and sellers search for one another from “brokered markets”, where brokers assume the search function for either or both parties. However, this dichotomy has not been accepted by Klein and Quelch as they have found that most firms either serve both roles or plan to progress from the first to the second.

^ RFQ : Request For Quotation
In all these virtual marketplaces, the MM matches, directly or indirectly, buyers and sellers facilitating transactions directly between the parties through traditional negotiation processes or auction formats. Services provided by these exchanges may include not only transaction facilitation and order processing, but also credit provision, industry expertise, news and directories, Web site management and technology assistance. While some academics have predicted the dissolution of the role of the middleman as technological development help in eliminating inefficiencies from traditional markets, others have identified a simultaneous process of ‘re-intermediation’. Re-intermediation is defined as the process by which middlemen, whose continuing roles are threatened, “find new niches for themselves in the electronic marketplace, gathering customers and information, extending on-line credit and providing services to complete transactions”, (Bank, 1996). Forrester Research labels the new electronic MM’s “content-focused match-makers” who will “bring buyers and sellers together by developing unbiased content and advice”, (Gomez et al., 1996). Forrester Research claims that the new MM’s in consumer business will concentrate on complex products that traditionally require a salesperson, such as real estate, financial services, and auto buying. These are complex infrequent transactions that consumers do not enjoy, partly because they lack experience and confidence and partly because of the bad reputation earned by many of the salespeople in these industries. Klein and Quelch disagree with this claim and assert that in view of the analyses conducted by them, commodity markets and not the above mentioned complex products are the most viable candidates for market-making in the business-to-business arena, since complex, infrequent and substantial purchases require face-to-face negotiation and extended decision making processes. Several firms in the insurance industry, selling a complex product, however, report that their expertise reduces the complexity of the purchase process even for businesses that comprises 10-25 per cent of their total business. The current observed trend towards re-intermediation appears to confirm that, although the middleman can be eliminated from the distribution channel, its functions cannot be. Some channel entity must perform the functions the traditional middlemen deliver to both sellers and buyers, including: providing assortment and convenience: offering small lot sizes: processing payments: holding inventory: and arranging credit and finance (Stern and El-Ansary, 1992). The impact of technology is in forcing a reassessment of who in the channel can perform these functions most efficiently and effectively. Whether the new
electronic MM’s will be important and sustainable in the long term will depend on whether they can add value in one or more channel functions.

In continuation with our discussion, earlier in 1.4.5 where we have classified Internet commerce modes based on buyer/seller relationships, Archer and Yuan, (2000), have examined the impact that new technologies have had on the support of relationships between suppliers and business customers. This is especially important in the light of the current trend of enhancing these relationships by reducing the number of suppliers and increasing the level of collaboration between supplier and customer (Clemons et al., 1993). To explain how supplier-customer interactions have changed, Archer and Yuan have developed a business-customer relationship life cycle to evaluate the form of these interactions (supplier – customer) at each phase of the life cycle. In the course of their study they have observed how modern technologies can support these relationships from both the customer’s and the supplier’s perspectives. Finally, they have summarized the impact of these technologies on supplier-customer relationship development and management by asserting that the state of the applications and the technology involved, is being subject to rapid change, and the trend is towards more on-line electronic marketplaces, hosted by intermediaries or major customers, and marketed through high-volume Internet portals. The inter-organizational information systems (IOS) that link suppliers and customers will improve along with the integration of the applications they support, and the development and widespread application of data standards and technologies, such as XML, will help reduce the cost and improve the portability of IOS (inter-organizational information systems) applications. At the same time, improved end-user customer access will reduce the need for human intervention by purchasing agents and other support personnel. In theory, an ever-larger proportion of the less structured activities in the customer relationship life cycle can be automated through the application of newer technologies such as expert systems and intelligent software agents. However, the main benefit, of any such advanced systems, will be to allow increased attention to more effective inter-company relationships by supplier and customer personnel.

Drawing from this literature, in the present context, we examine once again, the two well-known marketing approaches viz. Transactional marketing and relational marketing. These two approaches primarily depend on the availability of systems to
gather, store, analyze, and manipulate the information generated by customer transactions and supplier-customer interactions.

Transactional marketing (Brodie et al., 1997) is an 'arms-length, impersonal approach assuming an active seller to a marketplace inhabited by passive customers'. This company-centric model assumes a homogeneous marketplace, with information delivered to the marketplace and little feedback in the other direction except through the ultimate sales rate. Its focus is on the economics of the transaction, and it does not attempt to build beyond the immediate sales event. Marketing is based on the marketing mix concept, and some form or extension of the four P's of marketing (Product, Price, Place, and Promotion), (McCarthy, 1960; Gronroos, 1994; Archer et al., 1999). A typical example of transactional marketing is of marketing products to transient customers passing through a region where there is little likelihood that they will ever return eg. A cybercafe in an intercity fuel station.

The relational marketing perspective has developed more recently (Brodie et al., 1997; Nevin, 1995; Weitz and Jap, 1995). This concept has received a considerable amount of attention in both the academic and business literature. Different perspectives offered on this topic include –

- Promotion (targeted customers identified through marketing databases)
- Building relationships with individual customers
- Retaining customers after the initial sale
- Strategic shift from customer manipulation to customer involvement (Nevin, 1995)

Recent research has examined how technologies can be applied in an innovative manner to build relationships with customers, suppliers, and competitors, for value creation through cooperative and collaborative efforts (Evans and Wurster, 1997).

Relationships in the B2B environment are based heavily on information exchange, which has a fundamental effect on market growth and structure. (Hakansson, 1989; Naude and Holland, 1996). In the business-to-business (B2B) e-commerce environment, inter-organizational information systems (IOS) have been used since the
early 1970s to link one or more firms to their customers or suppliers through private value-added networks. These forms of IOS used earlier are commonly referred to as EDI and typically have little to offer in terms of end-user interaction and support. Today, relational marketing includes relationships or networks among companies and their suppliers, lateral partnerships among competitors, government and non-profit organizations, internal partnerships with business units, employees, and functional departments, and buyer partnerships with intermediate and ultimate customers (Morgan and Hunt, 1994). Collectively these represent complex arrays of relationships among organizations, operationalized through information transfers. Inter-organizational information systems enhance support for relational marketing techniques, because of their ability to maintain ongoing communication between supplier and customer (Mckenna, 1991), allowing many cycles of communication to occur in a short time, and browsing and buying activities to be captured in a data base for future evaluation. Archer and Yuan observe that although relational marketing is not a mature approach, (at the time of writing), it has for some time made significant inroads in industrial and services industries (Hakansson, 1982). (Brodie et al., 1997) claim that transactional marketing can and does co-exist with relational marketing. However, (Gronroos, 1994) believes that these two perspectives can be considered as a continuous spectrum. A major difference between these two approaches is that transaction-oriented marketing tends to emphasize the short term, while relational marketing emphasizes longer term market development with business customers (Kotler, 1996).

To organize relationship marketing concepts, (Coviello et al., 1997) have reviewed previous research efforts and developed a relationship marketing classification scheme. They classify relationship marketing as –

1. Database marketing – defined as a technology based tool
2. Interactive marketing - focuses on dyadic (two party) relationships
3. Network marketing – considers the entire relationship network.

Relational marketing approaches that are relevant to B2B relationships include interaction and network marketing. Interaction marketing implies genuine interaction between supplier and customer, and must be mutually active, adaptive, and continuous, if it is to be effective. Maintaining interactive relationships includes
activities such as regularly advising registered customers of new products, product updates, sales and promotions via e-mail at one level. In addition interaction marketing can involve individuals across different functions and levels in the firm (Coviello et al., 1997) and the entire company should be market-oriented to maintain effective customer relationships. The market orientation of a firm (the organization-wide generation of market intelligence, dissemination of the intelligence across departments, and organization-wide responsiveness to it – GOSPA) is an important determinant of a company's performance (Jaworski and Kohli, 1993). Internal activities of this type (e.g. market situations, goods shipment, customer responses) can be supported through internal intranet functions that disseminate information and assist in coordinating cross-functional group work. Internal systems also support interactions and exchange of information among product designers, developers, and manufacturing partners, via e-mail, e-conferencing, groupware, and secure negotiation support systems (Beam et al, 1999; Yuan et al, 1998). Network marketing is the modern equivalent of industrial marketing. It refers basically to longer term relationships that exist between a business customer and its suppliers. A business network is a set of connected relationships, and these may emerge through interaction between managers at different levels of these firms (Johanson and Hallen, 1989). Managers, outside the marketing function, may utilize the business network and it typically takes on a more strategic role than other marketing classifications (Coviello et al., 1997; Jarillo, 1998). Network marketing has long been practiced in B2B commerce, where switching costs are typically high due to the long term commitments that may exist between suppliers and customers. Industrial marketeers coordinate the marketing-relevant activities of a company with the procurement needs and information requirements of the buying company (Spekman and Johnston, 1986).

The advent of commercial applications on the Internet, and their integration with internal information systems such as intranets and enterprise resource planning (ERP) systems, have resulted in significant changes in networking and other technologies available for IOS, allowing other business functions to make use of these networks. As a result, the importance of IOS is increasing dramatically, either as private networks connecting cooperating organizations, or as networks linked through the Internet (Segev et al., 1997). More advanced IOS extensions that affect supplier-customer relationships include web-based interfaces, integration with supplier
catalogs and internal information systems, and built-in business transaction rules based on purchase limits or negotiated contracts. These allow end-users to order products and services (P/S) on-line without intervention by the purchasing department, including automatic fulfillment by the supplier organization, and payment via electronic funds transfer or purchasing cards. Tightly linked supplier-customer relationships, such as those between parts suppliers and automobile manufacturers, use IOS to link suppliers to customer inventory and production forecast data, with supplier responsibility for automatic replenishment. Eg. These kinds of inter-organizational systems are used in India by Maruti Udyog Limited and Tata Motors Limited, and in the USA by Ford Motors.

The two main methods of coordinating the flow of goods and services in the marketplace are markets and hierarchies (Malone et al., 1987). Markets coordinate the flow through supply and demand forces, while hierarchies (with pre-determined customers and suppliers, such as manufacturing assembly plants and their component suppliers) rely on managerial decisions to coordinate flows. “Mixed mode” network structure, an intermediate form of marketplace, is a situation dependent form existing in many business relationships that blend hierarchical and market structure in a coordinated manner. The advent of the Internet has led to an evolution in the types of IOS that can support these market structures, with added benefit of market coordination, reductions in coordination/transaction costs, and lessening P/S specificity. Networked commercial applications, especially on the Internet and through IOS, have resulted in many changes in how B2B transactions can be carried out. Benefits from such approaches include rapid data exchange, low inventories, and quick response. All of these require a high degree of interaction and some degree of system integration between supplier and customer. At the same time, suppliers now have an electronic “push” channel for their marketers, and new ways to manage sales, distribution, and support services. Current trend in e-commerce, strategic alliances, supply chain integration, and globalization (Avery, 1999) are presenting purchasers, suppliers and distributors with major challenges in creating value from these new channels.

Coming to the B2C mode, the use of technologies, especially communication technologies, impacts the knowledge, attitudes and behaviors of consumers (Wang,
Consumer roles have also changed and the effectiveness of traditional marketing strategies or tools must be considered. In the 1950s, mass communication media such as radio and television empowered mass marketing. The advent of manufacturing technology and data analysis power made market segmentation the popular marketing tool in the 1970s. The last two decades have witnessed a paradigm shift from transactional marketing to relationship marketing (Gronroos, 1996). The focus of transactional marketing is on increasing market share, whereas the focus, of relationship marketing, is on improving customer retention. The Web, as an effective communication medium and distribution channel, has been facilitating the development of relationship marketing. The Web and its technologies such as multimedia and hypermedia have also advanced e-commerce development in the business-to-consumer (B2C) retail market. A new marketplace is emerging which greatly varies from the traditional marketplace. The Web B2C market supports interactions between retailers and consumers and among consumers. Such interaction is limited in the traditional market by communication restrictions. In the Web retail market, the number of distribution layers may be reduced and close cooperation among businesses is required in order to compete. The power of market players is beginning to shift significantly.

The Web facilitates information access, that empowers customers and helps establish virtual communities (Internet users with common interests). Reach (people/locations) and range (variety) of information has expanded dramatically due to the Internet and the Web. Manufacturers are also empowered by having direct access to customers. As the number of web participants continues to increase dramatically, e-commerce development in the retail market shows tremendous potential. Relationship marketing has been studied systematically in the B2B market and various models have been established (Anderson and Narus, 1990). Relationships among firms in specific industries have been studied and well reported (Halinen, 1997). Compared to the B2B market, relationship concepts have been loosely investigated in the retail market and are usually based on new market phenomena, such as direct sales. Due to the characteristics of retail markets, relationships between retailers and consumers may be more difficult to build and maintain. Since there are, typically, a large number of consumers, it is hard to give special treatment to individual consumers or consumer groups. Relationship building may require significant time, technology or personnel
investment. Risk for the marketer increases when the time and investment needed increases. Relationship building is also limited by communication and data collection constraints in the conventional retail market. One of the tools for implementing relational marketing is permission marketing (Godin, 1999), in which the customer gives permission to the marketer to continue to contact the customer. Permission marketing may require advanced technological support, such as communication and database techniques. A common name for such a tool is ‘Autoresponder’. Consequently, while relationship marketing has received some attention from both researchers and practitioners, transaction marketing still plays an important role in the conventional retail market.

As discussed earlier, relationship marketing comprises of three main components: database, interaction, and network. We draw on the literature provided by (Fang Wang, Milena Head and Norm Archer, 2000), to investigate these components in the Web retail marketplace. Marketers have used Database marketing methods for long for effective interaction with consumers. Spalter (1995) defines database marketing conducted by consumers as “database consuming”, where customers use database technology to target products just as marketers have been using databases to target customers. Technologies, such as personal Web agents (Jennings and Wooldridge, 1998) that support consumers in these activities, continue to be developed and used in a variety of related applications. Consumer databases may also exist in conventional markets. Consumers possess their own knowledge and evaluation of the market. However, such databases are usually small and separate, with poor data quality, and do not portray efficient market behavior. In contrast, in the Web environment, consumers may obtain more detailed, personalized and timely information as well as access to market research or analysis tools. The Web market can also group consumers together as virtual communities and integrate small individual databases. Thus, communication among consumers is greatly facilitated, and knowledge from individual consumers can be shared and learned. Some examples include bulletin boards and newsgroups on different topics. Some marketers even design database tools from the consumers’ perspective. Eg. bestdeal.com that allow customers to search and list information on books from multiple electronic bookstores. Extending consumer databases and supporting consumer database marketing may be one of the methods to transform virtual communities into commercial sites. (Turban et al.,
Hence, consumer databases are becoming much more explicit and gaining value in the Web retail market.

Interaction includes all types of contact among market participants. It not only includes information exchange, but also the purchase process and post-purchase service. A mercantile model (Kalakota and Whinston, 1996) describes the purchase process which includes the various interaction activities.

Table: 3.2 Mercantile model

<table>
<thead>
<tr>
<th>From the customer’s perspective</th>
<th>From the merchant’s perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-purchase/sale phase</strong></td>
<td><strong>1. Customer inquiry and order planning generation</strong></td>
</tr>
<tr>
<td>1. Product / service search and discovery in the information space.</td>
<td>2. Cost estimation and pricing of product services</td>
</tr>
<tr>
<td>2. Comparison shopping and product selection based on various attributes</td>
<td>3. Order selection and prioritization</td>
</tr>
<tr>
<td>3. Negotiation of terms</td>
<td></td>
</tr>
<tr>
<td><strong>Purchase/sale phase</strong></td>
<td><strong>4. Order scheduling</strong></td>
</tr>
<tr>
<td>4. Placement of order</td>
<td>5. Order fulfillment and delivery</td>
</tr>
<tr>
<td>5. Authorization of payment</td>
<td>6. Order billing and account / payment</td>
</tr>
<tr>
<td>6. Receipt of product</td>
<td></td>
</tr>
<tr>
<td><strong>Post-purchase/sale interaction</strong></td>
<td><strong>7. Customer service and support</strong></td>
</tr>
<tr>
<td>7. Customer service and support management</td>
<td></td>
</tr>
</tbody>
</table>

Source: Kalakota and Whinston, 1996

Interaction not only occurs between marketers and consumers, but may also take place among business partners and among consumers. The Web, as a combined communication medium and distribution channel, greatly facilitates many types of interaction. Since interaction on the Web can be recorded in digital form, data collection is facilitated. Most interaction is based on database components. While some interaction is goal directed, in which market participants explicitly seek information that is lacking in their existing databases, some others are experimental in which market participants passively receive information without explicit goals. However, the judgment to participate in or evaluate the experience is based on existing database knowledge.
In academic literature network marketing refers to the B2B market, either explicitly or implicitly and is basically a new name for what was formerly called “industrial marketing”. This concept focuses on the totality of relationships in a market/industry, rather than individual or dyadic (two-party) relationships (Easton, 1995). As described by Gummesson (1994), marketing in this context involves the creation, utilization, and maintenance of a network of relationships between firms. There has been little discussion of relationship networks within a traditional retail market segment. The reasons as summarized by Head and Archer are obvious.

Table : 3.3 Relationship network building in traditional business and consumer markets

<table>
<thead>
<tr>
<th></th>
<th>Business market</th>
<th>Consumer market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of customers</td>
<td>Small</td>
<td>Large</td>
</tr>
<tr>
<td>Personalization</td>
<td>Easy</td>
<td>Difficult</td>
</tr>
<tr>
<td>Switching cost</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Relationship</td>
<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td>Knowledge of and influence on</td>
<td>More</td>
<td>Effect: establishing relationships is difficult</td>
</tr>
<tr>
<td>customers</td>
<td></td>
<td>Difficult</td>
</tr>
<tr>
<td>Information tracking</td>
<td>Easy</td>
<td>Effect: low switching costs for customers</td>
</tr>
<tr>
<td>Dyadic relationship connections</td>
<td>Simple</td>
<td>Weak</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effect: difficult to analyze and personalize</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effect : difficult to predict market behavior</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Difficult</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effect : relationship networks are hard to build</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effect : difficult to analyze networks that are not well established.</td>
</tr>
</tbody>
</table>

Source : Internet Research: Electronic Networking Applications and Policy Vol.10, No. 5 pp – 374-384

Despite the structural differences that exist between business and consumer markets in the traditional retail market, some relationship networks do exist (Sashi, 1990). Marketers may have groups of loyal customers and consumers may have some stable product/service providers. Existing dyadic relationships have connections that may
mutually affect each other. However, such networks tend to be weak, complex and individualized, which makes them more costly to analyze. In the Web environment, consumers can more easily communicate with each other and share their knowledge and experience. This may facilitate long-term relationship building. Marketers are able to identify customers on the Web (through the use of technology, such as cookies) and record their behavior digitally and automatically. By analyzing this data, businesses can mine valuable information about their customers to provide personalized service and help establish relationships.

Relationships are routes that lead to future interaction. Building these routes helps reduce market costs for both consumers and marketers. The cost of finding new customers far exceeds the costs of retaining current customers (Buttle, 1996). The effect of the Web on switching costs is complex. On the one hand the Web tends to reduce switching costs by providing easy access to a broader spectrum of vendors. On the other hand, in the Web retail market, other effects may actually increase switching costs. One of the main reasons here could be the fact that, despite the efforts made by marketers to simplify the Web environment, the environmental learning process tends to be longer for individual customers in the Web market than it is in the conventional market. On the Web there is no consistent standard for site organization and transaction completion. Marketers should not only provide their products and services, but they should also provide convenience and personalization. Customers appreciate the convenience and potentially lower costs, which can help increase switching costs. Another important issue in the Web market is trust. Consumers may have to provide personal information about themselves, such as address and credit card information, and every interaction may be recorded. Since the risk is higher when purchasing from an unfamiliar business in the Web market than in the conventional market, long-term relationships are more desirable, which further increases switching costs.

Both consumers and marketers establish relationship networks. They are based on consumer and market experiences and databases, and embody essential characteristics of trust and loyalty. Relationships may affect each other. An established relationship will affect a customer’s choice in a new relationship, and a new relationship will change the existing relationship network. Understanding the consumer’s relationship
network can help marketers implement a more effective marketing effort. For example, knowing that a consumer has previously purchased brand X will tell a marketer that B may be better suited to this consumer than either brand A or C. It is noteworthy here that consumer relationship networks can be further expanded by modifying distribution channels viz. manufacturer-consumer, retailer-consumer, manufacturer-retailer.

Integrated Relationships in the retail market network

![Diagram of integrated relationships in the retail market network](image)

Fig.: 3.3

Whereas network marketing emphasizes co-ordination, interaction marketing emphasizes interaction (Coviello et al., 1997). In the Web market, where marketers and especially consumers have increased power, adaptive co-ordination between the two parties becomes necessary. In the conventional market, marketers sell available products or services, and meeting future consumer needs depends on new product development. Consumers in the Web market may also join the product development process. Their power may call for a change of business structure or business strategy, such as promoting business alliances between retailers and suppliers. This relationship development process has been examined through researchers through various models. Frazier (1983) had developed a model for inter-organizational exchange. The framework proposed by Dwyer et al.,(Dwyer et al., 1987; Macintosh et al, 1992), for developing buyer-seller relationships takes into consideration some the unique characteristics of the consumer market. The Dwyer et al., framework of the relationship process consists of five general phases:

1. Awareness
2. Exploration
3. Expansion
The models developed by Frazier (1983) and Dwyer (1987, 1992) do not address the existence of inter-effects among relationships since the relationship network concept has traditionally not been considered in the context of the retail market. The Dwyer et al. framework (Dwyer et al., 1987) addresses the detailed relationship building process within a single dyadic relationship. The model proposed by Wang, Head and Archer is valuable in the following ways. The model proposed by these authors can be summarized by three stages of relationship-building process.

1. Initial investigation
2. Full-range communication
3. Relationship network creation

Firstly, they consider two-way marketing, where customers are seen as active market players that play an important role in marketing tasks. Second, they incorporate the relationship network concept. Relationships are evaluated within the relationship network and according to their inter-relationship effects. Third, the overall relationship-building process, rather than single relationship, is considered. In addition the authors also connect the three marketing methods to different relationship-building stages. Reasons attributed for the development of the above model by the authors are adequately justified. In the Web retail market, business partners are closely connected. Relationships may include not only business to customer, but also business to business and customer to customer. Since one relationship may affect another, considering only single relationship-building may not be sufficient to understand the market. In this context, the Dwyer et al., framework that primarily addresses the dyadic relationship-building process, could be considered a subset of the current model as part of stage 2(full-range communication).

In conclusion, the literature is suggestive of the fact that the Web is a suitable environment for relationship-marketing strategies, but not necessarily the only marketing method employed in the Web marketplace (Archer et al., 2000). The implications are that the Web is better suited for facilitating relationship-building than other more conventional means. Since market information and customer
behavior can be recorded automatically in digital form, data collection and information handling desks are more easily handled. At this stage there are still a number of challenges that marketers must face in this new electronic medium to successfully integrate relationship-building with traditional marketing strategies. As mentioned earlier although there are a large number of customers in the retail marketplace, marketers can digitally and automatically record customer behavior and preferences for analysis and future personalization. Even though the technology exists, many marketers may not understand how and what to record, and, most importantly, how to mine the data effectively to provide value-added services to their customers.

Fortunately, software vendors have realized this challenge and are starting to provide tools to guide retailers in these marketing efforts and recently researchers have begun to give attention to fundamental issues of buyer interaction with the medium (Berthon et al., 1996), and its ability to convert prospective purchases through purchasing hierarchies. Gopalakrishna and Lillien, 1995 have dealt with this issue in more detail. How does a prospective purchaser become aware of a website, and then “hit” it?. Having hit it, does the surfer “visit” the site – i.e. interact with it by reading and viewing it and respond to it? Having visited, does the prospect purchase and, having done so, repurchase? It is tempting to view the Web as a paradise for easy counting – after all, if an interaction is electronic, then it should be easy and obvious to count it electronically. When compared with other marketing media, nominally cyberspace offers unrivalled monitoring and tracking potential. However some complicated factors have been revealed on further inspection (Berthon, Pitt, Prendergast, 1997). The authors identify the phenomenon of cache memory,3 the use of proxy servers and trawler software and explore their influence on under and over counting “hits” and “visits” to web sites. Berthon et al. (1996) developed the hierarchy of effects model where they have asserted that the first major marketing objective of any Web site is to maximize the “hit” rate of aware people seeking (actively or passively) the site. Berthon et al.(1996) refer to this as “locatability / attractability” efficiency defined as follows:

3 Cache memory:
Proxy server :
Trawler software :
Locatability / attractability = \( \frac{Q_2}{Q_1} \)

The major marketing task is to turn momentary hits (\( Q_2 \)) into active visitors (\( Q_3 \)), where an active visitor is defined as a surfer who spends an appreciable length of time actively investigating a given site. Again, Berthon et al., refer to this as contact efficiency (\( \hat{\eta}_2 \)) of a Web site and define it as follows:

Contact efficiency = \( \hat{\eta}_2 = \frac{Q_3}{Q_2} \)

Drawing on the above model developed by Berthon et al., (1996), Berthon, Pitt and Prendergast, (1997) have claimed that the use of caching, proxying or trawling introduces problems in accurately assessing both the above measures, and have presented a series of correction factors. Unfortunately, these correction factors, the authors have assessed are likely to differ by page and change over time as the distribution of proxy servers change and hence, clearly suggest that further more empirical research is required to estimate the various correction factors. Therefore, the initial perception that the Web enables the ready calculation of efficiency measures needs to be tempered by the recognition that cache memory and proxy servers can distort the situation. Some specific tools that provide server monitoring, network monitoring, e-commerce monitoring and modeling of visitor behavior are discussed in Greening (1999). The counting problem caused by caching etc. is not unlike other counting problems encountered by advertisers in traditional marketing. Viewership, listenership and readership of conventional media are cases in point. The issue of readership, for example, has perplexed advertisers, researchers and publishers for many years: How does one measure readership? Is it merely circulation? That probably undercounts in one way, because there may be more than one reader (two people read the same subscription of a magazine), or over counts in another (no one reads the subscription). The authors believe that caching, proxying and other factors in cyberspace is a new variation of the same old counting problem, and creative managers will need to discover innovative ways to solve it. However, the objective for retailers is profit. Building relationships may often prove to be an effective means of improving long-term profit, but relationship marketing is based on more advanced technology and requires more human intervention than mass
marketing. This in turn requires large initial investments and continuing management costs. Such costs may be prohibitive for some firms and, depending on the marketing purpose (such as an initial product launch by a firm with little brand recognition), mass marketing may perform better than relationship marketing. Thus for many marketers, a combination of mass marketing and relationship marketing may prove to be a more feasible and effective strategy.

Another critical challenge is the consumer perception of privacy loss on the Internet. Consumers are increasingly getting concerned about threats to personal privacy. Some consumers believe that they have lost control over how their personal information is used. Though some consumers may feel comfortable giving away their personal information, the majority is more cautious. Trust, which can be influenced by many factors, is critical to information disclosure. Information may also be gathered implicitly, which may be viewed as "covert" collection since consumers often do not realize they are giving away personal information. Many consider this practice a privacy violation, which has a large negative impact on trust (Head and Yuan, 2000).

In fact, 86 percent of respondents in a survey in USA in 1999, (Cranor et al., 1999) reported no interest in features that implicitly transfer their data to Web sites without any human intervention. Implicit or explicit data gathering is the foundation of B2C relationship building on the Internet. Presently, lack of security is perceived as a major roadblock to doing business online. Risks of system corruption, fraud, theft and viruses point companies to the need for enhanced security. Alridge, White and Forcht (Alridge et al., 1997) investigate the importance of securing a company's systems, its individual users and its commercial transactions and provide a complete checklist of available protection measures for these three primary security concerns. These are in the areas of system privacy, user privacy, commerce transaction privacy, systems protection, user, information and message protection, commercial transaction protection and involvement of governmental agencies. To help overcome the challenge of consumer privacy concerns, businesses must make every effort to build an environment of trust. They should clearly state what information is being collected and how this information will be stored and used. Consumers should be given information dissemination choices and retailers should ensure that their data is secure and their stated policies are followed. A very strong majority of Internet shoppers believe that it is important for business Websites to post notices explaining how
personal information provided during the buying of products and services be used (Westin and Maurici, 1998). To build and maintain consumer trust, it is important for the collectors publicly to provide a clear and complete privacy policy, strictly to adhere to this policy, and to allow annual audits for compliance (Head and Yuan, 2000). Other guidelines for developing trust include (Head, 2000)

- Build a professional Web site that is well organized, easy to navigate and has comprehensive, correct and current content.
- Subscribe to a “seal of approval” program, such as TRUSTe, BBBOnline, or WebTrust.
- Disclose all aspects of the customer relationship upfront, such as delivery times, methods and costs, payment terms, warranties, return policies, etc.
- Ensure that customer information is accurate, protected and kept private.
- Fulfil the promises that are made
- Have contingency plans ready to mitigate any trust-reducing blunders immediately.

Currently, brick-and-mortar companies that have an established, commonly recognized brand with a built-in trust factor are proving to be most successful in the electronic marketplace. Customers are heavily influenced by brand recognition when purchasing on-line, indicating that most B2C relationships have not yet surpassed stage 2 (full-range communication) in the relationship-building model (Wang, Head, Archer, 2000).

In conclusion, we tend to agree with Pallab Paul, (Paul, 1996) who argues that utilizing the Internet, as a marketing tool is something that businesses today must consider. Whether a company is large or small, if it is not using or seriously considering the Internet as a marketing avenue in the near future, it will be at a competitive disadvantage over time. However, companies should not limit themselves to just marketing on the Internet. They must also look at other traditional media of advertising and marketing research in order to meet their business and marketing objectives, Furthermore, when using the Internet, companies should exercise caution but, at the same time, be assured that the Internet will reward the early adopters rather than those who wait. In closing the Internet has many risks associated with its use, but
it also has many benefits that may outweigh the threats. Companies that do not use it will be left out in the cold. An analyst from Gartner Group summarizes this discussion with the following: “fire up your Internet engines and ease into traffic – but drive slowly and don’t carry any valuables” (ComputerWorld, 1994).

In closing, we present here a catalogue of 35 distinct business benefits. Based on the literature review and the work done by Sanjeev Kalanidhi, (1996), Massachusetts Institute of Technology, June 2000 it gives a comprehensive list of the benefits / value addition businesses can get on incorporating an Internet marketing Plan.

Table : 3.4 Comprehensive list of business benefits on the Internet

<table>
<thead>
<tr>
<th>No.</th>
<th>E-Business Benefit</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The ubiquity of the Internet is enabling businesses, especially those that are predominantly brick and mortar operations to gain new customers.</td>
<td>Office Products, Retailing</td>
</tr>
<tr>
<td>2</td>
<td>The Internet is enabling businesses to reduce order-processing costs by allowing customers to input the orders.</td>
<td>Office Products, Retailing</td>
</tr>
<tr>
<td>3</td>
<td>By linking billing with web base order entry processes, businesses are using Internet to reduce their customer’s order processing costs.</td>
<td>Office Products, Retailing</td>
</tr>
<tr>
<td>4</td>
<td>Internet is enabling businesses to establish new sourcing relationships through: Use of online catalogues, Online bidding/quoting systems, Online auctions</td>
<td>Office Products</td>
</tr>
<tr>
<td>5</td>
<td>Protocols such as XML are allowing businesses to exchange documents such as purchase orders and invoices over the Internet – leading to reduction in purchasing lead times.</td>
<td>Contract Manufacturer Electronics</td>
</tr>
<tr>
<td>6</td>
<td>Businesses are using web-based catalogue from third party vendors to improve existing purchasing practices. These include greater harmonization of purchases across business units, and price consolidation.</td>
<td>Computer Hardware</td>
</tr>
<tr>
<td>7</td>
<td>Extranets⁴ and Web based quoting tools help streamline and automate material acquisition process and help businesses achieve significant reduction in sourcing cycle times.</td>
<td>Computer Hardware</td>
</tr>
<tr>
<td>8</td>
<td>By substituting paper and EDI purchase orders with web – transmitted requests, businesses are finding major improvements in order fulfillment operations.</td>
<td>Office furniture</td>
</tr>
<tr>
<td>9</td>
<td>By publishing large bulky content (especially those that</td>
<td>Pharmaceuticals</td>
</tr>
</tbody>
</table>

⁴ An Extranet is a private network that uses the Internet protocols and the public telecommunication system to securely share part of a business’s information or operations with suppliers, vendors, partners, customers, or other business (from www.ask.com)
<table>
<thead>
<tr>
<th>No.</th>
<th>E-Business Benefit</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Internet is enabling businesses to improve ROI(^5) by leveraging existing investments in information technology (especially ERP(^6)) on the Internet, businesses are reducing the costs of customer communication.</td>
<td>Garden and Agricultural tools</td>
</tr>
<tr>
<td>11</td>
<td>By providing customers to order online and search through catalogs, businesses are able to leverage sales personnel for other higher value-added activities.</td>
<td>Computer Hardware</td>
</tr>
<tr>
<td>12</td>
<td>The ability to keep a website open all the time is enabling businesses to extend operations and provide customer service on a 24x7 basis, all throughout the year.</td>
<td>Retailing</td>
</tr>
<tr>
<td>13</td>
<td>Businesses are developing new web-based applications to create self-service environment for their customers.</td>
<td>Office Products Retailing</td>
</tr>
<tr>
<td>14</td>
<td>By allowing customers to configure products online, businesses are able to reduce returns.</td>
<td>Computer Hardware</td>
</tr>
<tr>
<td>15</td>
<td>By developing e-commerce website as a forum for information exchange, businesses are providing customers with complementary services.</td>
<td>On-line book retailer</td>
</tr>
<tr>
<td>16</td>
<td>Businesses are using the convenience and the ubiquity of the Internet to inform the customers about exceptions on a real time basis.</td>
<td>Third-party logistics Service Provider</td>
</tr>
<tr>
<td>17</td>
<td>New 2-way interactive communication technologies are enabling businesses to develop one-to-one customer service channel over Internet.</td>
<td>Computer Hardware</td>
</tr>
<tr>
<td>18</td>
<td>With the deployment of self service tools and interactive communication tools, businesses can learn customer buying behavior and preferences.</td>
<td>Office Products Retailing</td>
</tr>
<tr>
<td>19</td>
<td>Businesses are leveraging information and analysis regarding customer's buying patterns over Internet to provide customized product offerings.</td>
<td>Office Products Retailing</td>
</tr>
<tr>
<td>20</td>
<td>Businesses are developing Internet channels to provide wider (and sometimes different) range of products than in their traditional retail stores.</td>
<td>Retailing</td>
</tr>
<tr>
<td>21</td>
<td>By incorporating database driven language translation tools over the Internet, businesses are able to reach customers around the world with greater effectiveness.</td>
<td>(1) Conglomerate and (2) Photography</td>
</tr>
<tr>
<td>22</td>
<td>By moving existing customers away from proprietary systems to Internet, established businesses are finding an increase in sales revenue.</td>
<td>(1) Computer Hardware distribution and (2) Industrial distribution</td>
</tr>
<tr>
<td>23</td>
<td>Internet is enabling businesses to capture information about supply chain partners, and learn about their preferences.</td>
<td>Computer Products</td>
</tr>
<tr>
<td>24</td>
<td>Internet is enabling supply chain partners sharing planning schedules with suppliers on a real time basis.</td>
<td>Electronics</td>
</tr>
</tbody>
</table>

\(^5\) ROI:
\(^6\) ERP:
<table>
<thead>
<tr>
<th>No.</th>
<th>E-Business Benefit</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.</td>
<td>Internet is enabling supply chain partners to connect and create a collaborative</td>
<td>(1) Automotive and (2) Engineering Services</td>
</tr>
<tr>
<td></td>
<td>work environment. This results in reduced product development times and improvement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>in R&amp;D and innovation.</td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Internet is enabling supply chain partners to make joint decisions on plant</td>
<td>Industry</td>
</tr>
<tr>
<td></td>
<td>capacity allocations.</td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>Internet is enabling customers and supply chain partners obtain visibility into</td>
<td>Networking</td>
</tr>
<tr>
<td></td>
<td>inventory levels and movements.</td>
<td>Hardware</td>
</tr>
<tr>
<td>28.</td>
<td>Internet is enabling businesses to collaborate with supply chain partners, using</td>
<td>Alcoholic Beverages</td>
</tr>
<tr>
<td></td>
<td>industry-wide collaborative planning and forecasting standards.</td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Internet is enabling businesses to use real time information sharing among</td>
<td>Carpets</td>
</tr>
<tr>
<td></td>
<td>partners for monitoring events in the supply chain (and make proactive decisions).</td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Internet is enabling businesses to sell directly to end customers.</td>
<td>Networking and Computer Hardware</td>
</tr>
<tr>
<td>31.</td>
<td>Internet is enabling businesses to enhance their role (or even take a new role)</td>
<td>Computer distribution and retail</td>
</tr>
<tr>
<td></td>
<td>in the value chain.</td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>Internet is enabling business to experiment with new business models.</td>
<td>Grocery</td>
</tr>
<tr>
<td>33.</td>
<td>Internet is enabling businesses to re-design supply chain to reduce inventory</td>
<td>Automotive</td>
</tr>
<tr>
<td></td>
<td>carrying costs.</td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>Internet is enabling businesses to build extended enterprises.</td>
<td>Computer parts distribution</td>
</tr>
<tr>
<td>35.</td>
<td>Internet has spawned many online markets, agents (or online brokers) and</td>
<td>Portals, Demand Aggregators, Auction for</td>
</tr>
<tr>
<td></td>
<td>information intermediaries.</td>
<td>excess inventory.</td>
</tr>
</tbody>
</table>

Source: Adapted from Sanjeev Kalanidhi, Massachusetts Institute of Technology, 2000

3.3 Secondary Sources of data in India

In this sub section the researcher has attempted to highlight the status of e-governance at a national level in the country at the time of writing. In the next subsection a similar run down of efforts made in UK in the same area have been indicted in order to compare the disparity / similarity in these e-governance initiatives by the two countries.
E - governance truths in India
To learn about e-governance at the national level in India one needs to visit the E-
Governance Website for dissemination of public information at DIT. The Electronic
Governance group, in the Department of Information Technology has been set up to
accelerate the usage of Information Technology in all spheres of Governance. The E-
Governance Group examines the practical implications of IT related issues in the
Government with the aim of improving services to the citizens. The goal is to
"reinvent government," by identifying breakthrough strategies that rethink the core
functions of key government services, archive integrated services delivery, reduce
costs, and redefine administrative processes. The Department of Information
Technology has a center for E-Governance at DIT. The objective of the Center is to
showcase successful tools and applications in e-Governance and also serve as a venue
for government officials, legislators, industry, and various other key players to come
together, discuss, learn and explore issues of shared importance. The center also helps
identify/develop applications of immediate concern to the various Central
Ministries/Departments and the State Governments. The Center showcases e-
governance projects developed and successfully implemented by different states. The
primary activities of the center are:

a) To showcase the best practices in the area of Electronic Governance which
would encompass technology, processes as well as public policies
b) Conduct programs for creating awareness among decision makers in the
Central and State Governments
c) Demonstrate the feasibility of Electronic Governance to decision makers
through workshops, demonstration programs, video/tele-conferencing etc.
d) Help the Central and State Governments in defining and implementing process
and policy changes
e) To enrich the repository of best practices through continuous interaction with
subject matter experts from India and abroad.

E-Governance Website : http://egov.mit.gov.in/.
The following is a glimpse of the EG Initiatives in States/Ministries/Departments. It is indicative of the initiatives being undertaken by various State Governments/Central Ministries/Departments as of July 2003.

Table 3.5 EG Initiatives in States / Ministries / Departments

<table>
<thead>
<tr>
<th>Ministry of Textiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Parliamentary Affairs</td>
</tr>
<tr>
<td>Ministry of Chemicals and Fertilizers</td>
</tr>
<tr>
<td>Ministry of Civil Aviation</td>
</tr>
<tr>
<td>Ministry of Environment &amp; Forests</td>
</tr>
<tr>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>Ministry of Labor</td>
</tr>
<tr>
<td>Ministry of Tourism</td>
</tr>
<tr>
<td>Ministry of Communication</td>
</tr>
<tr>
<td>Ministry of External Affairs</td>
</tr>
<tr>
<td>Ministry of Information and Broadcasting</td>
</tr>
<tr>
<td>Ministry of Power</td>
</tr>
<tr>
<td>Ministry of Surface Transport</td>
</tr>
<tr>
<td>Ministry of Science and Technology</td>
</tr>
</tbody>
</table>

Steps taken by various Departments in the area of E-Governance

<table>
<thead>
<tr>
<th>Department of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Posts</td>
</tr>
<tr>
<td>Department of Space</td>
</tr>
</tbody>
</table>

Steps taken by various States in the area of E-Governance

<table>
<thead>
<tr>
<th>Andhra Pradesh</th>
<th>Haryana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gujarat</td>
<td>Karnataka</td>
</tr>
<tr>
<td>Lakshwadeep</td>
<td>Maharashtra</td>
</tr>
<tr>
<td>Pondicherry</td>
<td>Punjab</td>
</tr>
<tr>
<td>Sikkim</td>
<td>Tamil Nadu</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>West Bengal</td>
</tr>
</tbody>
</table>

Source: Secretary (e-governance), Department of IT and Biotechnology, Government of Karnataka, Bangalore – 1.

Some 13 Indian states claim to have e-governance initiatives on the ground. Business Today has investigated these initiatives and has given a first hand report of the e-governance efforts of six states Andhra Pradesh, Tamil Nadu, Karnataka, Gurgaon, Maharashtra, and Delhi in April, 2003. A brief run down of the actual status of e-governance in these states in India is given below.
Maharashtra

The state of Maharashtra has made a modest beginning with the following:

E-Governance Snapshot: The I-SETU project; the Koshwahini project linking 33 government treasuries and 292 sub-treasuries to handle annual transactions of around Rs. 70,000 crore, computerization of land records and municipal corporations.

First E-Governance Initiative: SARITA (Stamp Duty and Registration with IT Application) in August 2000.

The Thane District Collectorate’s office locates the SETU center. SETU – Society for Promotion of Excellence and Transparency in Public Administration for Better Understanding of Requirements of Citizens in Their Interface With Government. This office has issued 30,000 certificates in the 18 months before the date of the report. In most districts in Maharashtra it is possible to obtain basic certificates related to birth, death, marriage, domicile, solvency in SETU centers. The I-SETU network linking individual centers is the next project which is planned to link almost 50 centers in Mumbai with an aim to enable delivery of services to citizens anytime, anywhere, and anyone.

Delhi

It is seen that the implementation of eGovernance in Delhi is lagging behind expectation.

E-Governance Snapshot: Downloading form issue of ration cards, certificates and licenses; online submission facility.

First E-Governance Initiative: Computerization and issue of driving licenses in 1994. Delhi’s e-governance efforts are in the form of www.delhigovt.nic.in . The site is replete with information of all sorts concerning applications for certificates (birth, death, marriage), and the forms can be downloaded. Unfortunately one has to present oneself at the specified office to complete the transaction. By visiting www.dcwestrev.delhigovt.nic.in one can submit a request for marriage registration
online. A relevant question here is – can the average citizen get to this page? Around 5 marriages had been registered online at the time of the report, the earliest being expedited 4 days after the application was made. Only the person concerned had to lug along a gazetted officer and documents to the center.

Haryana
While there is a framework defined there has been no initiation of any moves in this direction.

E-Governance Snapshot: Computerization of records: web-enabled electoral rolls; online passport issue.


Haryana’s website, www.haryana.nic.in Haryana’s land records site. www.jamabandi.nic.in being the site where one can obtain Record of Rights aka Jamabandi in the vernacular easily. The land records office is situated at Gurgaon. There are 734 villages in all in the Gurgaon district, and several of Haryana government’s departments are ‘computerized’ but a few are linked to each other, and web-enablement seems a distance. Computer-generated certificates are available for everything from death to vehicle registration, and even grievances can be posted online, without visiting a government office.

Andhra Pradesh
This is another forward looking state that has taken big strides in the implementation of eGovernance reforms.

E-Governance Snapshot: eSeva centers offering a wide range of services to citizens in parts of Hyderabad and Secunderabad. CARD offering computer-aided registration services, Saukaryam offering online civic services in Vishakapatnam.
First E-Governance Initiative: CARD in 1998
The eSeva center at Greenlands, Hyderabad’s central business district. Andhra Pradesh’s Chief Minister Chandrababu Naidu’s e-governance efforts have paid dividends. Since its launch three years ago, the service by the 30 eSeva centers in Hyderabad and Secunderabad have become reasonably famous. Starting from driving licenses to paying of electricity bills can be done in an eSeva center. Unfortunately reports indicate that the project suffers from lack of transparency and inefficiency and in implementation.

Tamil Nadu
Having started the work in this direction the progress is slow but steady, by and large governed by the political instability in the state.

E-Governance Snapshot: Computerization of records small-scale industries department for the registration certificates, and Tamil Nadu Medical Service Corporation for e-procurement of drugs.

First E-Governance Initiative: Computerization of Thanjavur district administration in 1997. The state of Tamil Nadu boasts of India’s first e-governed state, Thanjavur in 1997. The Electronics Corporation of Tamil Nadu has an information-loaded website. The office of the Inspector of Registration, the oldest department in the state (it was created in 1875), is at Santhome. The office issues marriage certificates, valuation guidelines for property, and registers documents. All certificates can be obtained online and can be followed at any sub-registrar’s office as all the offices are networked. Within 24 hours certificates reach the homes of people by a courier who collects the charges for the same. Though efficient, there have not been too many takers in the last six months at the time of the report, a mere 06 of the, 474 certificates handed out in Chennai origin online. This could be due to lack of awareness. At the RTO, in East Coast Road renewals of driving licenses are done. All forms filling and submission are done manually and nothing is online. However, a computer printout of the license can be obtained.
Karnataka
This is where some of the more challenging eGovernance projects have been initiated and have a fair degree of adherence to schedules.

E-Governance Snapshot: Computerising admission to college, the Khajane project linking treasuries of 27 districts; and computerization of rural land records (Bhoomi).


Karnataka government’s land records office is in the center of Gowda Road. Bhoomi is the name given to the computerized land records project of the S.M. Krishna government that won a commonwealth award in 2002 and serves the Government’s entire template for similar projects. For the record, Bhoomi kiosks have mustered 177 administrative blocks of the state and records of 6.7 million farmers have been dumped in this kiosk. Farmers interviewed claim that the computerized process is quicker and corruption free. Earlier Tehildars and revenue officers used to act like kings. The farmer oriented Bhoomi is definitely a step taken in the rural areas of India. The state of Karnataka has addressed the issue of e-governance more than any other state in India and has received international acclaim for the same. We examine here, in some more detail the efforts made by them.

The Government of Karnataka believes that the effect implementation of e-governance will take IT to the common man. The Government of would like to be pro-active and responsive to all its citizens particularly the poor. Presently, computers are used in several departments and such decisions are taken in a decentralized manner. While the Apex Committee headed by the Additional Chief Secretary lays down the general guidelines, the committees under the Secretaries to Government are empowered to take all decisions and implement computerization in their respective departments. The departments are supported by Karnataka Government Computer Centre as well as the National Informatics Centre. Infact, the Government of Karnataka is a pioneering state that established Karnataka Government Computer Centre as early as 1971.
Center for E-governance: While statistical progress has been achieved in several departments in a decentralized manner, the Government now proposes to establish a Centre for e-governance under the Department of Information Technology. This center will facilitate the use of Information Technology for the common man rapidly and effectively. It will provide technical support to all the Government departments in their IT Projects. It will play a vital role in coordinating with the Government departments as well as undertake a few critical projects that are likely to be used in more than one department. Some of these critical projects have been described in more detail below.

Mukhya Vahini:
Karnataka State has a decentralized set up in which people do not have to come to Bangalore for their day-to-day routine business. Most decisions are taken at the village and district levels. It is however felt that an exhaustive database needs to be developed at a single point and be made available to all the decision-makers in Karnataka. A comprehensive database will be developed and portions of the database will be made available to respective decision-makers. It is also planned to analyze the data in an intelligent manner and provide a sophisticated decision support system for the use of the Chief Minister. The Government has already commenced a systems requirement study on the project.

Education Department:
The Government of Karnataka's committee to education shows up in the projects implemented here. The department already has a computerized payroll accounting system of all 2.4 lakh teachers in the state. The details of over 18 lakh students that take SSLC, PUC and University examinations have already been computerized and the results of SSLC are made available on the website. The department has used IT in Common Entrance Test for professional courses in an astounding manner. The Common Entrance Test is conducted by the Government of Karnataka for admitting students to professional courses in engineering, medicine, dental courses. Over 55,000 students appear for these examinations every year seeking admission to more than 128 colleges covering 27 courses. More than 20,000 students from outside Karnataka State also participate in the process. The examination is conducted in a
most transparent manner. The students are admitted by computerized counseling process, the best ever designed in an education system in India.

Bhoomi:
The record of rights (RTC) play a vital role in the life of farmers. The records are required for establishing ownership of land, for recording the succession of ownership, for recording the agricultural crop details and for obtaining loans from banks. The land records of all the villages in Karnataka have already been computerized. Immediate steps will be taken to make these computerized land records available to the villagers. Bhoomi has been recognized as a successful e-governance project in India. It has also earned recognition outside the country. The success can be attributed to 10,000 village accountants and more than 2000 officials in the revenue department, who worked for over four years tirelessly to digitize 20 million manual records. The digitization of manual records was a very tough process. That is the only process, which no other State has been able to do in such a systematic manner, making Bhoomi the only experiment in India, which has been a success. Apart from that, its business model which was put in place also contributed to the success of the project. The training of the officials, who run the system in the talukas (small towns), the political leadership and their support for the program are among the other things attributed to its success.

Nondani:
This project is aimed to making land registration simple and easy for the citizens. People go the sub-registrar office for registering a sale deed, mortgage deed, etc., as well as for an encumbrance certificate. This process requires a lot of manual operation and is extremely cumbersome. To simplify the procedures for citizens, the government has already initiated computerization of the department. The sub-registrar offices in Shivaji Nagar, Kengeri and Bangalore South have facilities to scan the registration deeds and return the registered documents. So far, over 100,000 documents have been registered in computerized environment. For giving the encumbrance certificate the 13 year data needs to be incorporated into the computer. This process has already been taken up and is expected to be finished early. This will give relief to Bangalore citizens. Later, the project will be extended to entire Karnataka.
Khajane:
This involves intensive computerization of the treasuries all over Karnataka. The treasury payment system handles over Rs.20,000 crores annually through 225 treasuries. The system serves 4.7 lakh pensioners of Government service, art and culture, sportsmen, journalists, freedom fighters, etc. In addition, the system serves 13.15 lakh old age pensioners, the physically handicapped and destitute widows. The treasuries act as bankers to 4,500 Zilla Panchayats, Taluk Panchayats, Gram Panchayats, Municipal Corporations and other funds. A comprehensive computerization is planned using the V-sat terminals. There will be a main data base center at Bangalore and a disaster recovery center at Dharwad.

Therige:
The Commercial Taxes Department has already computerized several facets of its operations. The details of about one lakh dealers are computerized by the department. In addition important check posts are being computerized where the invoices will be scanned and the details of the transactions will be made available to the assessing officers to check evasion of taxes on certain commodities.

Karnataka Government Insurance Department (KGID):
Karnataka has the oldest insurance department started in the year 1891. It undertakes life insurance as well as vehicle insurance for its employees. The department offers life insurance policies for the employees as well as third party and comprehensive insurance for vehicles. The motor branch of the department that offers insurance for vehicles is completely computerized. The computerization of life insurance business is under progress.

Reshme:
Karnataka has introduced online transactions in the silk market. The cocoons are brought to the market, displayed and the traders are recorded online. This system has brought lot of transparency in market operations.
Agricultural Price Information:
The Government of Karnataka has already got a system of recording and displaying the spot prices of agricultural commodities at APMC, Bangalore. It is proposed to expand the system to other APMCs so that the prices of commodities are easily available for the farmers all over the state.

Employment Department:
Karnataka has computerized data on registration of candidates for employment, employment market information as well as the all India trade tests for the employment training wing.

Police IT 2000:
Karnataka boasts of a peaceful law and order situation in the country. Citizens as well as citizens from outside and foreign nationals live happily here. The police department is already computerized to a large extent and has ambitious projects which will improve the state crime record bureau, connect the police stations located in Bangalore, enhance the capabilities of the intelligence wing, etc.

Environment:
The Government believes in the protection of the State’s natural environment and has used IT as a tool to do that. The forest department has already implemented computerized systems to track poaching and other forest offences, track the land use data, improve the wild life management system as well as manage rare species under the Western Ghats program.

Saarige:
Under this project the Government has plans to computerize all the RTO offices in Bangalore. Once implemented, the citizens will be able to get driving licences faster. Vehicle registration process will also be simplified. This project is already under implementation and is expected to be launched in the next few months.

Municipal Corporations:
The Government initiated action to computerize the Bangalore, Mangalore, Mysore, Belgaum, Hubli-Dharwad and Gulbarga Corporations. The project involves
simplification of the payment of property tax, early issue of birth and death certificates and grievance redressal.

Small Scale Industries:
The state has computerized the permanent registration of over 2.5 lakh small scale industries. All the districts as well as 26 taluk industries centers have been completely computerized.

Common Systems:
The center for e-governance plans to develop certain common systems in the areas of payroll processing. This includes Vethana, a personnel information system, Sibbandhi, as well as GIS. Already many government departments have their own systems in place. The center for e-governance seeks to standardize them to enhance the scope and implement the systems uniformly and more effectively across the departments. In addition, the center for e-governance is expected to complete Sachivalaya Vahini, the Secretariat LAN System for intelligent sharing of information between the departments. The center also plans to start an information network to connect all the district and taluk head quarters. Presently, all the districts well as 140 taluks out of 175 taluks have already been connected by fiber optic network. Video conferencing facility is in place in all the district head-quarters facilitating direct interaction between the district level officers and the higher authorities as the State level.

The Big Picture:
A. ITC e-Choupal

ITC’s International Business Division, one of India’s largest exporters of agricultural commodities, has conceived e-Choupal as a more efficient supply chain aimed at delivering value to its customers around the world in a sustainable basis.
ITC’s e-Chaupal Model

The e-Chaupal model has been specifically designed to tackle the challenges posed by the unique features of Indian agriculture, characterized by fragmented farms, weak infrastructure and involvement of numerous intermediaries, among others.

The Value Chain – Farm to Factory Gate:
e-Chaupal also unshackles the potential of Indian farmer who has been trapped in a vicious cycle of low risk taking ability > low investment > low productivity>weak market orientation>low value addition>low margin >low risk taking ability. This made him and Indian agribusiness sector globally uncompetitive, despite rich and abundant natural resources.

Such a market-led business model can enhance the competitiveness of Indian agriculture and trigger a virtuous cycle of higher productivity, higher incomes, enlarged capacity for farmer risk management, larger investment and higher quality and productivity. Further, a growth in rural incomes will also unleash the latent demand for industrial goods so necessary for the continued growth of the Indian
economy. This will create another virtuous cycle propelling the economy into a higher growth trajectory.

The Model in Action:
Appreciating the imperative of intermediaries in the Indian context, e-Choupal leverages Information Technology to virtually cluster all the value chain participant, delivering the same benefits as vertical integration does in mature agricultural economies like the USA. e-Choupal makes use of the physical transmission capabilities of current intermediaries – aggregation, logistics, counter-party risk and bridge financing-while disintermediating them from the chain of information flow and market signals. With a judicious blend of click & mortar capabilities, villages Internet kiosks managed by farmers-called ‘sanchalaks’- themselves, enable the agricultural community access ready information in their local language on the weather and market prices, disseminate knowledge on scientific farm practices and risk management, facilitate the sale of farm inputs (now with embedded knowledge) and purchase farm produce from the farmers doorsteps (decision making is now information-based).

Real-time information and customized knowledge provided by e-choupal enhance the ability of farmers to take decisions and align their farm output with market demand and secure quality and productivity. The aggregation of the demand for farm inputs from individual farmers gives them access to high quality inputs from established and reputed manufacturers at fair prices. As a direct marketing channel, virtually linked to the ‘mandi’ system for price discovery, e-Choupal eliminates wasteful intermediation and multiple handling. Thereby it significantly reduces transaction costs. e-Choupal ensures world-class quality in delivering all these goods and services through several product / service specific partnerships with the leaders in the respective fields, in addition to ITC’s own expertise. While the farmers benefit through enhanced farm productivity and higher farm gate prices, ITC benefits form the lower net cost of procurement (despite offering better prices to the farmer) having eliminated costs in the supply chain that do not add value.
The Status of Execution:
Launched in June 2000, e-Choupal, has already become the largest initiative among all Internet-based interventions in rural India. e-Choupal services today reach out to more than 3.5 million farmers growing a range of crops – soyabean, coffee, wheat, rice, pulses, shrimp in over 31,000 villages through 52000 kiosks across seven states (Madhya Pradesh, Maharashtra, Rajasthan and Kerela). The problems encountered while setting up and managing these e-Choupals are primarily infrastructural inadequacies, including power supply, telecom connectivity and bandwidth, apart from the challenge of imparting skills to the first time Internet users in remote and inaccessible areas of rural India. Several alternative and innovative solutions – some of them expensive – are being deployed to overcome these challenges eg. Power back-up through batteries charged by Solar panels, upgrading BSNL exchanges with RNS kits, installation of VSAT equipment, Mobile Choupals, local caching of static content on website to stream in the dynamic content more efficiently, 24*7 helpdesk etc.

Going forward, the roadmap includes plans to integrate bulk storage, handling and transportation facilities to improve logistics efficiencies. As India’s Kissan Company, ITC has taken care to involve farmers in the design and management of the entire e-Choupal initiative. The active participation of farmers in this rural initiative has created a sense of ownership in the project among the farmers. They see the e-Choupal as the new age cooperative for all practical purposes. This enthusiastic response from farmers has encouraged ITC to plan for the extension of the e-Choupal initiative to altogether 15 states across India over the next few years. On the anvil are plans to channelize services related to micro-credit, insurance, health and education through the same e-choupal infrastructure.

B. Gyandoot
Information is the key to democracy. With the advent of information technology, it has become possible for common man to access global information. Gyandoot is an intranet in Dhar district connecting cybercafes catering to the everyday needs of the main web site of Gyandoot is an extension of Gyandoot for giving global access.
What's On Offer

The site has planned following service to offer in addition to the hope that generated by networking, the first district in the state of Madhya Pradesh.

1. Commodity / mandi marketing information system.
2. Income Certificate
3. Domicile Certificate (Mool Niwasi)
4. Caste certificate
5. Landholders passbook of land rights and loans (Bhoomi adhikari evam rin pustika)
6. Rural Hindi e-mail
7. Public Grievance Redressal (Shikayat Nivaran)
10. Employment news
11. Rural matrimonial (Vivah Sambandh)
12. Rural Market (Gaon ka bazaar)
13. Rural newspaper (Gram samachar)
14. Advisory module (Salahkar)
15. E-education
16. Driving license
17. Khasra Nakal Avedan
18. Varmi Compost Khad Booking.

All in all, there has been a positive anti retrograde step taken by a few of the states in initiating e-Governance reforms within the states. Due to interstate transfer of revenues, it will shortly be a coercive force on the other states to keep track with the high volume of interstate exchange of information that will shortly become important to capture and handle.
3.4 Secondary Sources of data in UK
E for Evasion and Efficiency and E-government in UK

Central Government

National weights and Measures laboratory (NWML), founded as the Board of Trade Standards Department in 1869, has installed electronic document and records management software from TOWER Software in UK. Initially considered to ensure compliance with government legislation including handling inbound enquiries created by the Freedom of Information Act, the system’s main benefit has been to make document process more efficient. The £ 80,000 system spans fifty-two users and was rolled out in just three weeks during December 2004. David Williams, the Agency Records Officer at National Weights and Measures explains that the project was initiated last year in order to meet e-government requirements. The system manages a variety of documents and files including Word, Power Point, PDF, pictures, and e-mail and , according to Williams, the main advantage has been bringing all records and documents to a single location. There has been a dramatic reduction in the duplication of documents, and it is far more easier now to locate and retrieve existing documents readily, that the need to recreate files has diminished. As an example William explains that NWML has been able to cut the time taken to document the staff assessment process. More recently, NWML has added the Microsoft SharePoint Client Access functionality to the environment so that staff can access TRIM Context through the SharePoint interface.

Several public sector departments have initiated EDRM projects on the basis of FOI, e-government and other regulatory compliance. Once up and running, they are consistently impressed by ‘secondary’ benefits such as process efficiencies, cost saving and improved public service. One of the biggest wins is usually email management. It is estimated that around 35-60 per cent of business-critical information is stored in personal messaging systems. This information is unavailable as a resource to the organization, becomes a potential liability in a legal or audit situation, and creates mayhem for IT departments concerned with data back-up, recovery and storage. NWML will now be capturing all appropriate information-from Word, to PDFs as well as email using TRIM Context to address this issue.
A new content management system from Mediasurface has enabled the Office of the Deputy Prime Minister (ODPM) to transform communications between the ‘Government offices for the regions’, its partners and the public. A new family of eleven websites, made up of a national entry site, nine regional Government Office sites and the Regional Co-ordination unit (RCU) website, has been built using the Mediasurface Content Management Suite and has just been launched. Ian Jones, Head of Communications at the RCU is of the opinion that said using Mediasurface has allowed the office to replace ten disparate websites. Instead they, now have a set of websites with a uniform, corporate feel that they look like part of the same family and can talk to one another. This gives them the ability to look across the regions and make comparisons. Initial feedback has been that it is hugely improved. These enhanced websites are a very powerful tool for direct communications and reputation management with their key partners and the public at large. The system will ensure quality, currency and depth of regional and local information, whilst the need for the regional offices to produce their own versions of national content has been eliminated. Each separate office has its own team of content authors developing specific regional information; there is now common national content available to all, plus a central library of images. There are currently thirty content authors, a figure likely to rise into the hundreds; all the content authors are from non-technical roles and it was for this reason that RCU chose Mediasurface’s content management application Morello. Aware of differing expectations on website accessibility standards in the public sector, RCU aims to produce the best network of sites they could possibly manage. The goal was to exceed government targets and achieve WAI AAA (the highest accessibility level required by the Web Accessibility Initiative) status on the entire network of sites. External auditors have checked the sites and in-depth examinations have included extensive user testing. Page impressions have already virtually trebled compared with the old sites. Favorable comments have come in and most recently from the Teacher Training Agency which commented: “A modern interface for the public sector—easy to navigate, contemporary in look and significantly enhancing stakeholder communications.”.
Local government

In UK the drive towards efficiency in government, and especially local government, has the notion of joined-up citizen and stakeholder access at its very heart. Today, the increasing burden on local government to answer and satisfy a growing range of citizen queries – from Freedom of Information Act enquiries to simple local service questions – will not be met by any additional human resource. Public sector employment rates are already around one in four of total employment, and it would be politically unacceptable to increase this still further. Since in any case the government believes that throwing more people at the task is neither an efficient nor an effective method of delivering consistently high customer service, the focus of the central government has switched to how to do more with less. This has come soon after the report in 2004 from Sir Peter Gershon which has outlined considerable potential savings that could be made through improved public sector efficiency.

Theoretically, the Internet has been seen as a potentially powerful tool in delivering greater public sector service efficiency. In 2004, The Gershon report painted a picture of a world where citizens could go online and have their queries answered in seconds, even if they ranged across a number of authorities, departments and / or agencies, all without human intervention. In truth, the reality has so far been far from this, with each authority or agency using different classification systems and vocabularies, creating very much un-joined-up solos of information which quickly frustrate the online enquiries and make them reach for the phone. By the end of 2005, local and central authorities are required by the Office of the Deputy Prime Minister (ODPM) to have the majority of their services available online. The e-government deadline of January 2005, has the Modernising Government agenda, which requires all local authorities to provide their services online, and the Freedom of Information Act, which gives residents the right to request to see information kept by any public sector organization. The Freedom of Information Act, which came into force in January 2005, imposed records management requirements on both central and local government. As a result the Office of the Deputy Prime Minister included in its IEG (Implementing Electronic Government) requirements the adoption of ISO 15489 for Electronic Document Records Management (EDRM). In addition, the Department of Health required Social Services to capture all new service user records electronically by October 2005 and prescribed EDRM for the record-keeping.
IMAT has given a brief run down of the progress and on who’s done what and where in e-government in January 2006. Various software vendors dominate this area every year. In 2005, it was Tower and IDOX which had come to the fore. In 2006, it has been Comino, which has always made a strong presence in EDM in local government providing solutions to over 400 organizations including Social Services, Social Housing and Occupational Pensions at both departmental and corporate level. Comino’s workflow and EDM based systems are used in over seventy local authorities across the UK. It is particularly strong in Scotland and confirms its position as the leading government IT specialist in the Scottish market with a run of successes across the country, from Edinburgh to Glasgow, Argyll and Bute to Dumfries and Galloway. With a total implementation value of over GBP 2.5 million, Comino stretches its lead with installations in almost half of all Scottish authorities.

Aberdeen Council
Aberdeen Council is situated in the highlands of Scotland – 2,437 square miles, representing 8 per cent of Scotland’s overall territory. Due to its rural nature and spread out area, it has eight Revenues and Benefits offices operating up to forty miles apart. The Department for Work and Pensions (DWP) has recently set a 36-day target for processing benefits claims. The EDM and workflow system has already achieved ninety percent of the tender requirements is designed to reduce paperwork for the Revenues and Benefits services. The system hopes to bring in more efficiency by allowing for increased customer visibility and handling. Processing accuracy will also be improved and duplication eliminated with centrally stored information. The solution, currently being implemented, is due to go live by 31 March, 2006.

Angus Council
Angus Council, a little further south of UK, like Aberdeen, serves a huge area. The project sees Angus Council replace its paper-based system in Revenues and Benefits with Comino’s EDM, document image processing (DIP) and workflow solution to not only reduce the sheer volume of paper it handles but also improve standards and reducing processing times to meet and beat government performance.

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targets. Anus Council followed the OJEC (now OJEU)\(^9\) tendering process and set up a tender review team, consisting of a cross-section of council workers, to put each tender received through a rigorous evaluation process. From developing the implementation plan in May 2005, the Revenues and Benefits of Angus Council went live at the end of November 2005.

Argyll and Bute
In Argyll and Bute, a key requirement for the geographically widespread Council was the elimination of location constraints. The EDM system has been adopted across the entire Council, so that back-office functions can take place in any location. As of now, all the correspondence is dealt with within four to five days, significantly beating the Council’s performance indicator of ten days. Payback of the initial investment is set to be achieved in two years.

City of Edinburgh Council
The City of Edinburgh Council, is on target to save GBP 2 million in the next five years, after implementing the EDM and workflow solution in its Revenues and Benefits Department. The authority has already achieved more than GBP 100,000 in savings in five months since the system was installed and has also reduced claim processing times from 78 days prior to implementation to 30 days.

Dumfries and Galloway Council
Coming south to the Lowlands of Scotland, Dumfries and Galloway Council area is the third largest geographically in Scotland and covers 2,380 square miles with 239 miles of coastline. The Council is upgrading its EDM solution from Comino, reaffirming its established partnership as part of a £ 300,000 implementation. The Council has selected workflow, CRM and telephony solutions help further improve customer service within the Revenues and Benefits service.

Derbyshire’s Amber Valley Borough Council
Crossing the border into England, is Derbyshire’s Amber Valley Borough Council staff to electronically file, access and manage all citizen information, including

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\(^9\) OJEU : Official Journal of the European Union
benefit claims. With scanners and image processing software, the EDM application enables staff to scan all documents it receives from members of the public and store them electronically. This removes the need for paper-based filing systems and it helps staff to manage activities and view their status at any point in time. Comino’s solution stores case files electronically for each citizen. Each file contains all the relevant queries and documentation relating to an individual. By using the full audit trail facility, which enables information tracking, staff can view all documents quickly and easily. Amendments will be made in real time, reducing the possibility of error. As most enquiries will be handled at first point of contact, the authority is aiming to improve response and turnaround times in processes within the Benefits and Revenues Service. The solution was implemented as Amber Valley Borough Council by August 2005.

East Staffordshire Borough Council
In the Midlands, East Staffordshire Borough Council’s workflow and electronic document management solution has gone live in the Revenues and Benefits Department. The system will help the authority to improve its service delivery, reduce the length of time it takes to process claims and meet Modernising Government agenda targets.

In the capital
In London city itself, Comino has installations in one third of London’s Borough Councils. Even some of the city’s local authorities are customers. One of the most recent is the London Borough of Bexley which had implemented an EDM and workflow system in its Trading Standards, Environmental Services and Highways and Parks Departments. Other local authorities in the city using similar solutions are the London Boroughs of Hilingdon and Haringey.

Another company that is also a leader in the field of re-government implementation is IDOX Plc. Its has recently signed a partnership agreement with Tonbridge and Malling Borough Council to implement an integrated Revenues and Benefits EDRM solution, with funding support from the Department for Work and Pensions. IDOX Software is a true web EDRM solution which will be closely integrated with the Northgate Information Solutions (formerly SX3) back-office system as part of the
Paul Griffin, Revenue and Benefits Manager at Tonbridge and Malling explains: “During our selection process, we considered the solutions put forward by a number of suppliers. We were impressed by the functionality of the IDOX system and its corporate capabilities. We also appreciated the potential of being able to integrate components, such as workflow, with online forms.” Tonbridge and Malling were awarded in ‘Excellent’ rating in their Comprehensive Performance Assessment (CPA) in 2004 and has a ‘forward-thinking’ approach. IDOX Software has been deployed as a corporate solution in many councils over the last five years so recognizes that, for existing customers it would have to develop suitable solutions to support the finance area – many of the existing EDRM technologies in the market are based on old client server technology. IDOX employed Revenues and benefits experts and have invested heavily in Research and Development over the past eighteen months in order to develop the next generation solution which will, IDOX hopes, be the platform of choice for the next ten to fifteen years.

Late in the year 2005, Northgate Information Solution also secured a new contract worth £700,000 to provide a new revenues and Benefits system for Durham City Council. The contract, spread over five years, will enable Durham to manage its service more effectively and efficiently. Northgate’s Revenues and Benefits solution provides staff with quicker, more user-friendly systems, enabling them to offer a more streamlined service in calculating council and business taxes, and delivering council tax and housing benefits to citizens. This project is a part of an overall performance upgrade for Durham City Council which includes the opening of the new ‘City info Centers’, the ‘one stop shops’ for information, advice and assistance on a range of matters including revenues and benefits. Over 89,000 citizens are set to benefit from these improvements through electronic customer services, enabling revenues enquiries and transactions to be handled via the Internet, providing up-to-the-minute information to staff members quickly and easily, enabling them to answer queries more efficiently and automated systems reducing the need for manual intervention in day-to-day processes, enabling more staff to be available to citizens.
Future Plans

West Devon Borough Council

In the West Country, West Devon Borough Council has implemented Comino EDM and workflow solutions to improve residents’ access to its services. The £191,000 system will be implemented corporately starting with planning and finance, before being rolled out to other departments. Comino’s solution replaces paper-based filing with an electronic system to improve access to information and enables the sharing of electronic documents. The solution, which fully integrates with West Devon’s back office system, includes document image processing (DIP) technology. The tender for the system was produced in partnership with neighbouring Torba Council, providing West Devon Borough Council to meet the Modernising Government Agenda. West Devon Borough Council is planning to roll out Comino’s Contact Management solution across the authority, which complements EDM by replacing paper-based systems with the electronic recording, monitoring and maintenance of customer contact.

Blackpool Council

In Lancashire, Blackpool Council has selected Graphic Data Online (GDO), a provider of automated document management and document processing services, to help meet e-Planning objectives. Like many councils, Blackpool is focused on meeting the Pendleton criteria for e-Planning (www.pendleton-assoc.com/PPA-criteria.html) adopted by the Office of the Deputy Prime Minister (ODPM). The Council receives around 2,000 development and building control applications per year, and faced two challenges. First, scanning past applications dating back to 1998 so that document images could be made available online and, second, having systems in place to scan new applications to make the immediately available on its website. Anne Thornton, Business and Customer Services Manager at Blackpool Concil, explains, “Applications are typically fifteen pages each and we had three different storage rooms that were full of them, which made locating files quickly a real problem. As a first phase in our e-Planning process around 15,400 files for the period 1992-2000 have been scanned by Graphic Data so that planning and building control officers can view everything on screen. We’re currently in the second phase, scanning files from 2001 to the present day. GDO looks after the whole process-their
people arrange collection of the boxes of files, they then do the preparation of the files including removing staples and treasury tags, scan them in and send us the digital images of the pages on a CD. Those images are then uploaded to our document management system where they can be retrieved and viewed. It means we can speed up applications’ processing quite considerably. The ODPM’s target for processing an application, From receipt to acknowledgement, is three days. Now we can process and acknowledge with a day or less”. The Deputy Leader of Blackpool Council, Councillor Eddie Collett, added: “A lot of our planning enquiries can now be dealt with in our ‘one-step-shop’ which means that when a member of the public comes in and wants to view one of the historic files, instead of having to wait for a member of the planning department team to source it, with customer service specialists can access the images on screen. It’s all about enhanced customer service”. Once the entire back-scanning process is complete, Blackpool Council investigated the options for publishing images ‘live’ on its website in the near future.

Birmingham City Council
Birmingham City Council, representing one of the biggest cities in England, has selected the EMC Documents Enterprise Content Management platform to create, manage, deliver and archive content related to its planning applications and major construction and refurbishment projects. The Documentum platform will be used across the council’s planning and Urban Design services to replace paper-based systems, automating numerous processes. The solution will enhance collaboration between council departments and suppliers, improve efficiency and productivity by reducing the processing time of applications and enabling the public to view planning information online rather than visiting council offices. The EMC Documentum Enterprise Content Management platform is part of an initiative that will help Birmingham City Council meet the government’s local authority electronic delivery targets. The platform will be integrated with scanning and viewing software to manage electronic documents and images involved in the relevant business process. Paper documents will be scanned, stored and indexed electronically. AutoCAD images, voice files, photographic files and video recordings will be incorporated later.

The Council is currently processing planning applications using a combination of an integrated planning applications system manual paper systems, manual paper systems,
electronic files and folders on shared servers. However, a huge amount of floor space is required to store the physical documents and the manual process of collecting, copying and transporting a paper folder of drawings, pictures and documents for each application or project is lengthy and complex. Furthermore, the accessibility to specific information is limited to those officers who have the file.

Eman Al-Hillawi, Project Manager, Birmingham City Council said, “Birmingham City Council currently deals with around 800 pieces of content related to its planning application and major projects per day. The type of content that we deal with varies enormously from electronic images to paper architectural plans, but we required a solution that will manage many different formats effectively and meet our rigorous procurement criteria. The EMC Documentum platform met our requirements on all fronts.” Using the EMC Documentum platform, documents will be routed automatically through the business processes to the appropriate council staff. Officers and managers will track and monitor the progress of an application or a major project with the click of a button. Collaboration with contractors will also be easier—the Urban Design service works with an established team of external partners who will have direct and secure access to the system. “This system will not only reduce processing time for the council’s Planning and Urban Design Services, it will also improve access to files and enable the process itself to be audited” as explained by Al-Hillawi. This will help officers and managers to work with other council services, contractors and members of the public more effectively. On a practical level, managing applications electronically will significantly reduce physical storage requirements in the long term. The system will be evaluated during its first phase for potential use across other services such as Social Care and Health, and Learning and Culture. The IMC Documentum platform went live early last year (2006).

Corporate Stock, buildings and assets
North Ayrshire Council has chosen council-wide asset management planning software from Tribal Technology, one of the fastest growing companies supporting the public sector. The Scottish local authority will use asset management software, Enterprise Desktop and Enterprise web module from Tribal, to manage its property portfolio. North Ayrshire is one of the first councils in Scotland to seek a solution for its corporate stock. The west coast council has 650 education, social and corporate
properties plus a housing portfolio of 16,000 properties, located in its 340 square miles. North Ayrshire is a very forward-looking council and one of the first councils in Scotland to seek a full corporate asset management system for all its departments. They are Tribal’s second Scottish customer to implement a full corporate asset management system, but it is expected that others in Scotland and the rest of the UK will soon see the benefits and follow their lead. The management of public assets such as land and property, and the loans which help to support them, constitute the second highest cost on revenue budgets after employee expenses and managing them efficiently is essential. Phased implementation started in August 2005 with fifty properties, with the other 600 assets to follow. For educational buildings, Tribal’s system enables the Council to collect and store data on the condition, suitability and sufficiency of schools. The Council can identify the improvements and maintenance required more easily, ensuring minimum disruption to teaching time. To make the new asset management register a success, the Council had to have its own data in shape and so instigated a program of inspections for its 650 buildings to ensure that essential data such as drawings and surveys are fully up to date. It also requires a change management program internally to ensure that it is working on this project as a corporate entity.

Miscellaneous
North Warwickshire Borough Council is a mainly rural area with over half within the Green Belt. Over 61,000 people live there, in towns and villages ranging in size from Atherstone parish with 8,000 residents to Seckington with just 51. The Council has selected EDRM software from TOWER software to enable a series of regulatory and operational improvement initiatives. The £190,000 system will eventually span 300 users and will not only be designed to support information sharing across the authority but also achieve savings as detailed by the Gershon Review of public sector efficiency as well as progress the delivery of the authority’s Priority Outcomes objectives. It will also provide an important tool for meeting standards required under the Freedom of Information Act and e-government. The council has just completed an administration review and now plan to scan all letters and documents and store them electronically for internal action. The EDRM system will form the backbone of that process and will greatly assist the new document retention and disposal policy. They have also ensured and have operational a system capable of handling at all while
meeting all of their product requirements such as being XML and e-GIF compliant. The authority had last deployed a document management system twelve years ago in one department and more recently attempted to implement in other departments but became disappointed with its ongoing costs and functionality. The old system was not flexible enough for information sharing across the Council's divisions. Customising it is a difficult task. In order to resolve this issue they went through an open tender process for a new EDRM partner and selected TOWER Software from an original line up of thirteen vendors. The present system is a vast improvement on the paper-based process where only certain people knew where to find certain documents. Getting the right information to the right people at the right time is reaping enormous rewards in terms of service delivery and cost savings from streamlined processes. TRIM Context has not only improved across to information internally but to the electorate as well, thus dramatically raising external service levels. In addition, TRIM is now equipped to deliver best-in-class online services and to enable mobile working for our front-line staff.

Last summer (2005), Software house, Anite signed £ 2.1 million contract with North Hertfordshire District Council (NHDC) to provide the backbone to e-enable services across the authority. Anite will be providing a fully integrated strategic IT infrastructure and consultancy service as part of North Hertfordshire's Access to Service programme. This will include the establishment of a common IT infrastructure which will be the foundation for e-enablement of council services and provide a consistent view of the council to its service users. Hardware and software components have been tailored specifically for local government use in both back and front office including systems for mobile working enterprise workflow, document management, CRM, content management and electronic payments. The system supports the Council not only internally but is also compatible with other government and non-government partners by delivering the solutions based on open architecture. The system is flexible to meet future NHDC needs with regard to the volume and complexity of service interactions and in the functionality available.

Police

The North Ireland Policing Board (NIPB) has installed electronic document and records management software from TOWER Software to support around 70 users at
its location in Belfast. The TRIM Context 5 system was successfully rolled out over three months. The solution complements the NIPB IT system addressing the requirements of the Modernising Government to enhance records management and to enable NIPB to manage Freedom of Information (FOI) and other enquiries more effectively. The Policing Board is an independent public body made up of nineteen Political and Independent Members established to secure for all the people of North Ireland an effective, efficient and impartial police service that has the confidence of the whole community. NIPB staff work closely with suppliers to refine the requirements of the system. The EDRMS solution provided by TRIM has proved very successful for NIPM, from matching the system with their Corporate File Plan, through to staff training in TRIM. The functionality that the TRIM application provides for this organization has been beneficial and NIPB are very content with the overall result. The NIPB uses TRIM Context in its entirety—from storage to filing—in accordance with its corporate file plan. The team has effectively reduced the incidence of staff storing documents, email and other information in personal areas, and enjoys a centralized approach to handling FOI enquiries. Further, not having to jump in and out of different systems is saving them valuable time and frustration. The EDRM project was implemented in last year (2005), alongside a separate Microsoft upgrade.