B2C Offerings in India: A Critical Review

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ABSTRACT
The developments in IT related fields have pushed India into the forefront of international business debates in the last one and half decade. The ICT developments have also meant that Indian market has been witnessing tremendous innovation in terms of offerings; the B2C sector has been the one to experience most activity.

The Internet penetration is extremely low in India; still a total of around 40 million users make it a sizeable market for study. And with mobile phone usage growing, the Indian market is set to break into a substantial market for B2C offerings, many of which have been examined herein.

This paper attempts to critically review the status of B2C offerings in India. The idea here is to elucidate the origins of such offerings; and juxtapose them with key ground variables in order to properly evaluate their economic and consumer worth. The paper draws on researcher’s interviews with key middle and senior level executives in Indian businesses as well as Industry groups and lawyers to properly cover these issues. This paper is small part of the overall PhD research being undertaken by the researcher and only small portion of findings are being reported here. The approach is qualitative in nature as an earlier quantitative study with similar objectives met with a very cautious and incomplete response from the industry.

Keywords: B2C, Rediff, IRCTC, India

INTRODUCTION
The Internet Growth

The last two decades have witnessed a considerable increase and improvements in communications technologies. The ICT led developments have meant that almost no aspect of human life has been left untouched, Exchange (as a very basic form of business transaction) as a integral part of social life has also undergone change. The words like e-mail, website, and blogs are not today limited to techno-savvy only, rather they are a part of our everyday lexicon.

In-fact the addition of a small thing like an e-mail address for contact on our business cards in almost all parts of the world has come about in less than 10 years. This addition

*The material presented by the author does not necessarily portray the viewpoint of the editors and the management of the Institute of Business & Technology (BIZTEK) or Ritsumeikan Asia Pacific University, Japan.

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today is looked upon as a “must” on any business card; and an even more relevant development has been the adoption of this change transcending the traditional age barrier (even though the rate of adoption, resistance to transfer and usage, are some aspects that are still debated).

The development of the Internet has been considered by many to have had an all-transforming effect on our daily lives. This importance to the new medium is best highlighted by using Castells’s opening lines in his book (Castells, 2001):

“The Internet is the fabric of our lives. If information technology is the present-day equivalent of electricity in the industrial area, in our age the Internet could be likened to both the electrical grid and the electric engine because of its ability to distribute the power of information throughout the entire realm of human activity.”

Before we go any further in this paper it is imperative that we deepen our understanding about the basics of the Internet. The Internet as we know it today is not so recent in origin. Contrary to popular belief it was created in its earliest form in the late 1960’s as a part of the ARPANET (a computer network) project in the USA. This project was launched by the Advanced Research Projects Agency (ARPA) which was founded in late 1950’s as a response to the erstwhile USSR’s developments in form of first Sputnik in 1957.

The Internet can be best explained as a network of networks. A network is simply the system of interconnected nodes all of which engage in an exchange of information in the forms of packets (the form in which the part of the message is stored and this packet has a destination address). Simply, the Internet allows all machines operating on “common standards” to exchange information digitally. There is no difference between the “resources dedicated to administration of the network and transmission of the information carried” (Brousseau and Curien, 2007). The unique feature is that each machine on this network is either a ‘server’ or ‘client’. The ‘client’ sends a request to the ‘server’, which then processes it and responds with an appropriate message.

Another important aspect about the development of the Internet has been that it grew out of a highly unlikely amalgamation of the fields of Business, Research, Education and Military (as shown in Fig. 1 Castells (2001) has referred to it as “intersection of big science, military research, and libertarian culture. Major universities and defense think tanks were essential meeting points between these three sources of the internet”. This can be taken to explain the overriding impacts of this new medium on human life, in all its facets.

![Figure 1](Extracted from Sutherland, Keith (2000) Understanding the Internet, Butterworth-Heinemann, Oxford)

The growth of the Internet technology has been described by Kalakota (2001) in six stages. It is however the commercialization stage that concerns us the most. And the corresponding development of World Wide Web (WWW) by Tim Berners-Lee, which for the first time brought about a real sense of ‘interconnectedness’ of information existing on this network. The idea that information (in all forms could be retrieved and contributed) from any machine connected to the internet revolutionized the sharing of ideas. The development
of browser, or a tool to help the user find the intended information easily, resulted in the introduction of Netscape Navigator in 1994 and with Microsoft introducing Internet Explorer in its Windows 95 offerings, the stage was set of the Internet take off in real sense. During all this time the universalization of the Internet meant that it came out of the reach of ‘chosen few’ and became accessible to a far greater populace.

Internet and Business

The advent of Internet, development of WWW and availability of commercial browsers meant that the business world was forced to take notice of this new medium. The impact of Internet on business environment can best explained as:

1. Changing the industry structure
2. Bringing new and different structures of distribution systems
3. Bringing new rules to competition
4. Bringing new competitors
5. Bringing new set of values both for customers and employees

The year 1995 also saw the incorporation of Yahoo Inc. and Amazon coming into business which truly heralded an era of considerable interest in e-commerce or internet based commerce. E-commerce/e-business became the buzz word, and slogans like “if you’re not an e-business, then you’re out of business” (Cassidy, 2002) were being thrown around. It resulted in considerable investments on e-commerce/internet based business with highly doubtful (?) ‘business models’. Some other aspects where this new medium provided benefits to business were:

1. The interactive nature of medium provided greatest interactivity, on date with customers.
2. Shorter response time meant better servicing of consumers
3. The transcending of geographical barriers at a much lower cost

However just like the deployment or use of any new technology, results in over enthusiastic experimentation, the internet era also saw over-investment through Venture Capital moving in the field and providing the new techno-entrepreneurs with the opportunities to offer new business propositions. The Dotcom bust of year 2000 brought with it the realization that not everything could be traded off on the Internet. There have been many attempts to study this downturn but the simplest explanation could be the one, given by Warren Buffett (2001) who says “irrational exuberance which invaded stock markets in 1999 and early 2000 has left investors expecting unrealistic returns”.

Internet in India, a Historical Perspective

The history of Internet in India is not as new as most people think, the first ISP in India VSNL (the then Government of India enterprise, which has subsequently been divested) started operations in 1995. The year 1996 was watershed year for the Indian Internet lifeline, this was the year the Microsoft bought Hotmail, an e-mail service was created by a Non-Resident Indian (NRI) in the USA. Hotmail was subsequently bought over in 1997 by the Microsoft for a whopping sum of 400 Million USD and that created an unprecedented buzz in Indian media and inspired an whole generation of technoprenuers, who would go on to launch many e-commerce ventures. This was also the year that Rediff.com, a Portal was launched. Rediff.com would go on to become the number one destination of Online Indians (excluding the global portals) in the year 2006-07. It would also survive the DotCom bust, which hit the Indian market and would modify its business model considerably to adjust to changing environments to survive and solidify its position. The years 1997 and 1998 saw a good beginning with Hotmail’s buyout top lining everything else and the later year also saw the monopoly of VSNL ending in the ISP with the introduction of the new ISP policy which allowed Sify Limited to become the first private ISP in India. The venture funding in late 1998 and 1999 saw many projects take-off,
examples being kabadibazaar.com (a platform for secondhand goods).

Some other Ventures in the Early Days of E-Ventures in India were:

a) Caltiger.com – A free ISP service which folded in 2003 when its venture fund pulled out
b) FirstandSecond.com – a online book store which failed to catch on, still survives but it’s just a token existence, as the firm as an offline component for primary business.
c) Skumars.com - supposed to be a great online VSAT based marketplace with all-India operations, however folded up even before a formal launch.

Characteristics of Internet in India:
The difficulty in getting exact numbers, even though there are a few studies, both academic & commercial, and some even from Industry organizations, however each one of them paints a very difficult picture.

The lack of any single government data source on the issue is also a handicap. The majority of these studies from NASSCOM, IAMAI, and BSNL (the biggest ISP and a national government enterprise) give data of subscribers, which is a good indicator to the overall usage but cannot replace the hard facts. The data sets from ISPAI of India is hard to come by, even though they helped me with the figures, the methodology of calculation is hardly given, or is open to criticism.

The data from ITU data base, though reliable & acceptable, are not without flaws as it only gives an indicator as to the access to PC (the PC penetration ratio) and the average costs in USD for usage. What is missing is a large scale profiling work on Internet usage in India. This makes the present inquiry into the B2C services a little difficult but also interesting as you have to resort to triangulation as a best-possible approach to study the issue at hand.

Before, we go any further there should be a look into the basic figures on what they say about the Internet business related areas.

The International Telecommunications Union (ITU) figures (2004 and 2006):

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<td>Firm level technology absorption</td>
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<td>Extent of Business internet use</td>
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<td>47</td>
<td></td>
<td>3.82</td>
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* A different figure is provided which cannot be suitably presented a comparable case (absolute numbers are given)

Blank means that these variables were subsequently introduced
But what does this Table Translate into?

The ICT led developments have taken India by storm in the last decade. The Indian market has witnessed activities ranging from startups in late 1990s to the meltdown in 2001-02 when many startups (Dotcoms) folded or were facing considerable troubles. The above figures indicate that the governments in India, at all levels, central, state (provincial) and district level have been interested in harnessing the new medium for their service offerings. The ranking of government prioritization of ICT indicates that the initiative is not lost on the establishment. The quality of scientific talent has grown over the years and all this has its origins in the centrally planned educational institutional development, especially the Indian Institutes of Technology (IITs) and the Indian Institute of Management (IIMs) The IITs and IIMs gave India its first round of tech-based entrepreneurs. Many of them were the part of the brain drain happening in the late 1980 and early 1990s and had come back with venture funding to develop projects in India.

Another important factor, which is conventionally taken as a standard measure for Internet usage in many countries is the PC penetration ratio. This figure stood at 5.8/1000 in 2001 (ITU, 2001) which is nothing much to go by but the important fact is that like all developing nations the internet access, in India, is also driven through shared Personal Computer (PC), at work, school/universities and cyber cafés (or internet cafés)

The lowering of PC prices has also contributed to the PC reaching the Class B and C towns. Still Internet remains a primarily urban phenomenon especially in terms of buying of high involvement products. Of late, however, the dependence on Cyber cafe for access has gone down (IAMAI, 2007a) with a shift to the Office as a number one source for accessing the Internet, which can be explained by the demographic shift in employment in general and also the greater use of PC and Internet in businesses. This is also reflected in the table above.

The Internet usage in businesses can be taken at two levels of Business-to-Business (B2B) level and Business-to-Consumer (B2C) levels.

a) B2B e-commerce implies that the Internet as a medium is used to facilitate the sales of goods & services among businesses. The word ‘facilitate’ is being utilized here in order to present a holistic nature of the usage and not confining ourselves to select few functions.

b) B2C e-commerce involves the direct interaction with consumers for the sale of products and services (Laudon, 2002). The target audience in this case is the individuals rather than business or organizations.

Worldwide popularity of Internet had led to a lot of interest in the B2C aspects of businesses; in fact a 1999 study by The Economist stated that out of top 500 companies, over 90% executives at the higher levels thought that the Internet will transform or will have a big impact on the global marketplace. The B2C e-commerce was supposed to, according to one estimate, see a growth of around 100 Billion USD in the period 1998-2003 (see Elliot, 2002).

The Indian economy is witnessing a substantial growth in the past few years, around 8% annually, and with a large young working population this has created a growing retail market. According to a study by the Tata Strategic Management Group (TSMG), the consulting division of the TÀTA group, the organized retail market would grow up to Rs. 246,000 Crores, by 2015, it’s sufficient to explain the magnitude (TSMG, 2006). And when we couple this with a growing middle-class, which is young, affluent and increasingly leading a busy life style (which is something very different from the lifestyle practiced by their parents just 10-15yrs back) the convenience would step in and drive the e-retail. The ease of shopping from home/office is slowly picking up already; IAMAI (2007 b) data shows that the overall B2C e-commerce market for 2006-07 was estimated at Rs. 7080 Crores and the e-tailing (excluding the travel sector) stood at Rs. 850 Crores in 2006-07.
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The venture capital has also staged a comeback in Internet related businesses in the year 2006, with funds like Kleiner Perkins Caufield Byers and Sherpalo Ventures picking up stakes in ventures like cleartrip.com and naukri.com. Helion Investment fund also reported its interest in investing in Indian Internet businesses (Business Today, 2006) and with Internet Users base in India estimated at 40 Million by IAMAI (2007a) it looks like ‘small is big in India’ hence, the need to study it.

Motivation for this Work:

The fact that B2C e-commerce in India has not garnered enough research yet drew the researcher towards this area. A few existing writings in this area are mostly from a technical point of view which leaves a vacuum about a holistic work based in qualitative dimensions. The legal aspect is seldom involved in these researches & even when it is involved it is on a secondary data level. In this paper an attempt is made to integrate the views of the Judiciary in order to ascertain the real situation of e-commerce, more so the B2C aspects. The B2C e-commerce generated maximum interest during the initial days of the internet in India but after the 2001 meltdown the academic interest in it also went down, hence the need to examine it once again and also to introduce the qualitative approach in such works.

Methods:

A qualitative research approach, relying considerably on data collected through in-depth Interviews, was utilized in this study. A combination of quantitative and qualitative methods has been recommended by Kaplan and Duchon (1988) who said “collecting different kinds of data by different methods sources provides a wider range of coverage that may result in a fuller picture of any unit under study”. An earlier study, by the present researcher, looking at the internet technology adoption process in organizations that was based on survey method had been attempted on a smaller scale, however the results of that survey were far from satisfactory and also the incomplete. The experience of many responses to the survey dictated that the current study was to be designed to be smaller in scope but rely on qualitative methods to gather data. The quantitative data, mainly drawn from secondary sources, is used to supplement the work.

The use of qualitative methods in Information Systems (IS) research is not new and has been debated a lot. (see Mayers & Newman, 2007; and Gable, 1994). The use of case studies is deemed useful when the focus is “on contemporary events” (Benbasat, et.al,1987). It is also useful when the aim is to examine knowledge of practitioners and then develop a theory from it. The case study refers to a ‘group of methods which emphasizes qualitative analysis’ (Yin, 1984). The aim is to ‘understand’ the problem being investigated in its natural settings, as in this case.

Yin (1984) has further recommended that single case studies can be used when the object in question is an unresearched (or with limited research) subject.

The Companies/Organizations Considered for this Paper are:

1. Rediff.com India Limited
2. eSeva
3. IAMAI
4. Indian Railway Catering & Tourism Corporation (IRCTC)

Selection Criterion:

The broad criterion, being the status of these companies/organizations in the chosen field, as Rediff.com has the 5th ranking online destination for Indians (Alexa, 2008). It is also the only wholly Indian website/portal to feature in top 5 destinations of online Indians. eSeva has won numerous accolades in eGovernance area in both India & abroad. Even
though its a governance initiative, it is chosen here because of its success with B2C offerings in the state of Andhra Pradesh and also due to the fact that it is a government led project addressing B2C services, needs to be studied.

IAMAI is an Internet & Mobile industry organization indulging in lobbying and facilitation with the stakeholders. Hence its opinion in such a study is important not only because getting feedback from them provides the researcher an access to cross-section of views and also because they have no commercial stakes.

IRCTC is an Indian Railways offering and as on date, is the biggest single product B2C offering operating in India, it offers travel related services in India and has a pan-Indian area of operations, hence naturally selected itself in the paper.

The other factors playing a role in this selection are the availability of resources and the willingness to cooperate with the research on the part of the relevant organizations/companies. The multi-method approach as mentioned above was utilized to collect data, including in-depth interviews with key informants including CEO, General Manager, Implementation heads and Thinktank, head.

Two sitting High Court Judges and lawyers, especially well versed with the Information Technology Act 2000 were also contacted & interviewed. In accordance with the requests of the Judges the interviews were not recorded and they cannot be quoted however they subsequently gave the researcher permission to paraphrase their responses to the questions on a review of the transcript/notes. Lawyers were in-fact more reluctant to be quoted, which was unexpected for the researcher.

The main areas on which information was sought, especially related to B2C area, are as follows:

a) The Vision of the company/organization
b) Reason for venturing in this medium
c) The Initial Business model, and if it has undergone any change
d) Factors affecting e-Business adoption among in Indian corporate sector
e) The existence of Usability & Design studies
f) Metrics used for evaluation of the operations, other than the basic financial metrics
g) User/consumer Profiling
h) Incorporation of Cultural aspects in Offerings
i) Trust Building
j) Buyer-supplier Interaction management
k) Ethical issues confronting the business.
l) The IT Act 2000 and its scope and adequacy
m) eBay case (a controversial case involving the auction platform eBay in India)
n) The legal awareness in terms of IT in the masses
o) Mobile driven future? Is the market ready?

The researcher also conducted an exploratory website evaluation, which even though biased could give some useful indication and can be utilized to contract the results with the responses.

The Web design aspects were evaluated by a single user, hence have limited generalization scope. The components were:

**Overall Presentation:** Visual has been found to impact significantly in all earlier studies in e-shoppers (Badre, 2002). Things like placement, use of scrolling etc. the font sizes used in the page, color coding, the contrasts etc have all been studied in terms of website quality.
**Content**: The old adage ‘content is king’ still holds good even in virtual world (see Badre, 2002), while the ‘ease’ with which the user can find relevant information on product/services etc is important. The provision of additional information has been found to positively affect the users (see Zhang and von Dran, 2000). Things like order tracking, tracking of complaints, feedback system, and contextual information like suggestion can also be useful.

**Accessibility**: The accessibility of the website or portal is extremely important as users continuously exhibit lower levels of patience in site loading. The excessive use of graphics and frames could affect the loading and hence can result in quite a different, if not adverse, user experience.

**Navigation**: The logical structure and navigational ease, has been stressed all along (see Ivory, 2003). The existence of non-working links on the site, too many pop-ups, and a prominent sitemap, etc., are some of the aspects being looked into.

**Transaction Information**: The clarity of payment options, the tracking of shipments, the simplicity of the purchase process, are some areas being looked into. Availability of a shopping cart etc. can also help and ease the process, as bad experience in an e-shopping environment is likely to result in withdrawal as the patience levels are lower.

**Security and Privacy Mechanism in Place**: The presentation of secure transaction seals, the existence and ease of finding the privacy policy, and also the availability of feedback/complaint system in case of problems can help ensure a better user experience and is more likely to result in a repeat visit.

The full result of the above exercise is not being reported in this paper due to paucity of space and due to risk of loosing focus. Only partial results are being reported here.

**THE COMPANIES/ORGANIZATIONS:**

(A) Rediff .com India Limited

The Company founded in 1996, presently is listed on NASDAQ and there is talk of it getting listed in Indian exchanges soon. It started out as a horizontal portal with emphasis on quality print content on web. Over the years it had added all key services like search; targeted search like fares, books, shopping, messenger, social networking, blogging, e-mail, and journalism. The portal has strangely followed the Yahoo model of ‘being everything to everyone’ and has in this researcher’s opinion (and also in large number of the users opinions) lost its focus somewhere. However it still is the first Indian owned online destination for Indians. The site also offers auction and shopping, with shop-bot function, which is an added attraction for e-commerce patrons. India being a price sensitive market, shop-bot has been widely appreciated by users. The Portal also offers web hosting and site maintenance services both to B2B and individual users. It also has a newspaper in USA targeting the Non-Resident Indian (NRI) community.

The portal scored average on content availability, however its presentation is better but quality of journalism is suffering in terms of getting space on the first page. The site is infested with too many pop-ups which seriously hamper the navigational experience. The transaction pages are adequate with both rating of sellers and buyers making the transaction trustworthy. The feedback system on sellers is also an important initiative introduced by Rediff

(B) eSeva:

This is a Government of Andhra Pradesh initiative offering its citizens in the twin cities
of Hyderabad & Secundrabad. The service was launched in 2001 as was envisioned as a total “G2C” offering. The idea was to provide a one-stop shop for the citizen’s interaction with various government departments. The tasks included the things like payment of water, electricity bills, submission of passport applications, booking tickets etc. The additional services by way of just providing downloadable forms and information links to other government departments add convenience for the citizens (this is especially important because the Indian bureaucracy has been famous for acting as information gatekeeper).

The other important aspect of this organization is that it offers a great Offline-Online mix of operations which offers, the citizens a choice to embrace the innovation and get them involved in the process. The project operates on a public-private partnership idea and has continued since its inception. Not only that the additional services like payment of bills of telecom companies like Tata, Reliance, Infocom etc also adds to the usefulness. The users can accomplish multiple tasks in one visit, which is a marked improvement than the previous system. Also the existence of offline payment gateway adds to the trials by first time users.

The online manifestation also offers payment services which are secure and display adequate information for navigation. The sitemap is clear and works well. The site scores well in navigation; among its services however its Government papers links were not found to be working on the chosen days on testing by the researcher. The loading time of the website is longer as compared to others similar sites.

(C) Indian Railway Catering & Tourism Corporation (IRCTC):

This is the biggest single product e-commerce venture in India presently, and surprisingly it comes from an organization which is not known to be very flexible, the Indian Railways. The Indian Railways is a 150 year old organization and hence it was very difficult for it to adapt to changes to it basic operations. However in 2001 the IRCTC was formed and it stared with selling railway tickets online. The extent of its acceptability is gauged from the figures that in 2006 it was selling 13,000 tickets per day online. And its registered user’s database had reached 1.3 million in just 3 years of operation, and this is remarkable in a nation with an extremely low PC penetration ratio and low Internet subscribers. Over the years of its operations it has added SMS based and mobile phone bookings, and updates. The e-ticket and i-ticket services are being continuously expanded. The site has tie-ups with number of national & international banks to help facilitate credit card based transactions. The use of debit cards is also possible. They have tied up with ITZ card, an Indian prepaid payment alternative service which can help the users buy things online and through the mobile, and pay for it. The majority of its ticket sales are not from the top 4-6 cities (the most affluent and IT literate clusters) but from the second class cities and in Sleeper Class (the common reserved berths).

IRCTC has recently come out with a plan to allow the other travel agents (OTA) & websites to trade in railways tickets (which up till now is a monopoly of railways’ or IRCTC alone). The IRCTC is growing at a rate of 200% per year (contensutra.com, 2008), hence it’s open to the idea of combining with other portals and agents to expand its reach even to competing segments.

The site is good in terms of navigation and the annual report provides the basic information, however the quality of delivery is very bad, which shows that the professionalism has still not spread throughout the organization. The content is reasonably placed with good enough instructions to guide a first time user through the registration and booking process. On an average the IRCTC claims that it takes 3 min to register and 5-10 min to book a ticket using their site.
ANALYSIS:

The major issues coming out of the interaction with the corporate respondents were:

The need for offerings targeting the Middle-class; this was one re-occurring theme from all respondents. The suitability of Internet B2C offerings in short term is to concentrate on younger unworldly mobile users. Like the VP (Marketing) for Rediff.com said that – “I still have big unsatisfied young population, hence the older/elder segment is lower on my priority….also that they (the older population- added by the researcher) are slow to adopt the medium”.

Some also mentioned that targeting the older population is costly with no surety of positive response. The question regarding the reason for using this medium, elicited a very enthusiastic response, which could very well be a cleverly disguised sales pitch. However it also showed, with answers to subsequent questions, (especially from IAMAI), that many operators in India, operating in Horizontal portals and stand alone market platforms, are there because of the competitor/industry pressure and many of them lack a long term vision.

Almost all respondents agreed that their organizations business model has undergone a change, and this is because the Internet usage has not moved quickly as expected, for example Rediff has gone from being a journalism driven horizontal to an all service portal.

None of the organizations could successfully explain to the researcher how they carried out intensive Usability & Design studies. The best they came up with was that they did in-house testing, however, the exact responsibility is not established and that it usually worked on the feedback (that is the researcher’ understanding based on their responses both verbal and non-verbal, many of them were hesitant in answering this question). Some also mentioned that they were aware about the emotions’ place on usability and were open to incorporating it or they were in process of doing so however “it still had some work left”.

The IRCTC and eSeva have not tried profiling their users; the reason for this could be the old organizational culture, as a considerable number of staff in the initial days of these two projects were drawn from the old organization (this is especially true for IRCTC) and eSeva also is battling with some resistance from the old structure.

On the issue of ‘trust building’, the overall agreement was that even though they are trying on their own but with limited resources, they could not spare enough resources to this cause; they also were of the opinion that banks, which are partners in this, are also doing little to build trust in internet banking. The existence of a small credit card population is also an area of concern, which is a limiting factor. This along with the ‘touch-and-feel’ factor, affects the purchase(s) both in high & medium involvement goods. The eSeva option of offline payments is a good way to involve and induce trial from users.

In terms of ethics the Rediff.com’s response is more important as its services are more widespread, hence open to abuse also. They have implemented an policy of filtering out search results related to the word ‘sex’, in order to appear to more family audience, as ‘sex’ still is a taboo subject in most Indian families. The fact that the PCs in Indian homes are shared (there is usually only one PC in one household), hence being perceived as a family friendly website is important in this market, especially if you have a bouquet of offerings targeted at all members of the family.

On the issue of eBay case (the infamous case in which the Head of eBay India was arrested due to ‘a flaw’ (as described by the industry respondents) in the IT Act 2000 for allowing the sale of a pornographic CD (a first voyeuristic case, involving invasion of privacy in
India) through its platform, even though they later cooperated in apprehending the accused – the opinion was that the third party liabilities need to be well defined and that the issues of data and identity theft; were not properly addressed in the IT Act 2000 in its present form.

Another issue brought up during the interviews was the Industry-Academia Interaction. The respondents wished more interactions, but they complained that not much practical research was coming out, which would be of interest to them, and encourage them to collaborate further with researchers. The researcher was told that they had made some efforts in this direction but these were in a very early stage.

The Response from Judiciary & Lawyers:

They all agreed that there is a very low level of awareness about the IT Act and this is not only confined to masses alone, even the judiciary and lawyers are also not aware about the exact provisions yet (this could be because only a few batch of lawyers have passed out since the Act was introduced and a lot of old lawyers have yet not been faced with litigations, which would require them to update their skills)

The role of Cyber cafes in India is very important, as has been pointed out in data earlier, the respondents also were aware of the situation and were of the opinion that the role of cyber cafes, from which the majority of access and e-commerce takes place, is also not clear and that the provisions to monitor them and also define their liabilities are needed.

However, when asked what the single biggest problem in IT Act’s implementation is, they all agreed that it’s the out-of-line behavior of the Police Department with this new development. On a conceptual level there are a few token Cyber Police Stations (the ones exclusively dedicated to cyber crimes). These are token establishments in major cities like Delhi & Mumbai but a cyber crime is not limited to these major places alone. The good education system in India has also meant that there is talent in small places and it can be abused and the police department in such places is not adequately equipped to handle such cases on its own. It is here that a great intervention is required from both the government & industry (including the IAMAI, which already has programs addressing awareness creation among police officers).

As is evident from the above discussion, that the Indian B2C offerings still have a long way to go, however, the future does look better, with an increasing middle-class with rising salaries and the lowering PC prices could only take this segment into better days. The local language content however would be the key area for getting the Non-English speaking user to go online. The future of Mobile– Internet access with the introduction of high-end mobile handsets has opened up a new avenue wherein the access to Internet would not be dependent only on the PC.

The Indian market offers a unique mix of (latent) demand for phone based information needs, like the updates on Cricket Score (Indian being the hub of the Cricket world) and examination results for students, etc. The key, however, is the identification of the segments and addressing them as this mobile-internet and SMS based information subscription depends upon the ‘criticality’ or importance for the individual consumer, hence the customization and personalization would play a major role in development of such offerings.

REFERENCES

BENBASAT, I., GOLDTSEIN, D.K., & MEAD, M (1987) The case research strategy in
B2C Offerings in India: A Critical Review

studies of information systems, MIS Quarterly, 369-386
IAMAI (2007b) Consumer eCommerce Market in India 2006-07

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Pollution Control Board in India has implemented Bharat emission standards and it is updating its regulation in regular interval of time. In this paper, a complete review of various stages of Bharat emission standards and the reason for making the emission rules and regulations stringent in recent times were discussed in this paper. Index Terms - Emission standards, Bharat stage, BS VI emission, Indian emission norms. The Nitrogen di Oxide (NO2) emission is very negligible in case of direct injection gasoline engine but very high in case of diesel engine, Likewise CO and HC emissions will be more in the SI engines compared to CI engines[1]. The formation of Nitrogen oxides and its consumption in combustion were clearly discussed by Hill S.C and Smoot L.D[2]. The formation of soot.