

Investigating the Impact of Mobile Marketing in the Current Indian Scenario and Proposing CUSTOMERIZATION as a Solution

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ABSTRACT

Key Words: *consumer responsiveness, mobile marketing/advertising, purchase decision, customization, Customerization*

Innovation creates marketing opportunities and challenges. Mobile advertising, an area of mobile commerce, is a form of advertising that targets users of handheld wireless devices such as mobile phones and PDAs. It can reach the target customers anywhere anytime. In order to promote the selling of products or services, all the activities required to communicate with the customers are transferred through mobile devices. Combining with the customer's user profile and context situation, advertising companies can provide the target customers exactly the advertisement information they desire, not just "spam" them with irrelevant advertisements. Previous studies have investigated dimensions of consumer acceptance of mobile marketing/ advertising. In contrast the current study attempts to study consumer responsiveness to mobile marketing, in terms of its impact on purchase decision making. The primary objective being to gain an insight into the perception of mobile users, towards mobile marketing/advertising and their utility value in terms of impact on the purchase decision. Hence we are attempting to explore consumers' responsiveness to mobile marketing, taking into cognizance the impact of demographic factors. The study also aims to concretize some features enhancing the acceptability/ utility of mobile marketing/advertising and suggests an appropriate strategic initiative for the same. The major findings reveal that the perception of consumers towards mobile marketing can be broadly categorized into three factors: 1) *Lack of contextualization and personalization of mobile ads* 2) *Disruptive nature of mobile ads* 3) *Perceived usefulness of mobile ads*. Further results indicate that mobile marketing/ advertising (in its current format) does not have a significant impact on the purchase/brand decision of consumers. Mobile marketing is relatively at a nascent stage in India. Distinct preferences were expressed by customers regarding the desirable content of such messages. Customers are looking for customization of mobile marketing messages as per their individual requirements, tastes and preferences. Hence the need of the hour appears to be **Customerization**. Customerization combines operationally driven mass customization with customized marketing in a way that the company is able to respond to individual customers by customizing its products, services, and messages on a one-to-one basis. Marketers could harness the complete potential of mobile advertising by deploying *Intelligent Mobile Software Agents*, which enable firms to completely customize mobile marketing messages to individual customer preferences. Artificial intelligence is harnessed, which enables software agents to learn, optimize, and individualize information dissemination to mobile users.

INTRODUCTION

Technology developments have created new marketing communication channels or media such as email, SMS (Short Messaging Service) and MMS (Multimedia Messaging Service). These digital media are considered to potentially improve the possibilities to reach consumers by allowing personalisation of the content and context of the message (Forrester Report 2001). Simultaneously there is a potential downside to the development of new digital channels. In a Forrester report companies using SMS expressed fear for invasion of consumer privacy (80%) and negative consumer reaction (60%) as disadvantages of the media (Forrester Report 2001, p. 3). A crucial question is thus whether there are obstacles for the marketer to use mobile media to its potential. Are customers more reluctant to receive marketing information through mobile media than through traditional media or is it the other way around?

Mobile advertising, which is an area of mobile commerce, is a form of advertising that targets users of handheld wireless devices such as mobile phones and Personal Digital Assistants (PDAs). In Comparison with traditional advertising, the main advantage of mobile advertising is that it can reach the target customers anywhere anytime. In order to promote the selling of products or services, all the activities required to communicate with the customers are transferred through mobile devices. Combining with the customer's user profile and context situation, advertising companies can provide the target customers exactly the advertisement information they desire, not just "spam" them with advertisements they are not interested in.

The devices on which these value-added services are pushed onto or downloaded to, operate in an environment that imposes constraints such as: wireless network environments are unreliable and bandwidth is low, and the very mobility of devices increases the risk that a connection will be lost or degraded. More importantly, mobile services must work within the daunting constraints of the devices themselves, which include: memory, processing power, input capabilities, and size of display. It is therefore important that mobile advertisements take into account the user's context, optimize resource usage, and minimize input effort imposed on the user.

Mobile media, for example, transcend traditional communication and support one-to one, many-to-many and mass communication. Phones and personal digital assistants increase the availability, frequency and speed of communication. Yet the technology associated with these devices, which let marketers personally communicate with consumers, continues to evolve. The most popular mobile application, referred to as text messaging or Short Message Service (SMS). Studies on this new advertising medium indicate that mobile advertising campaigns can generate responses that are as high as 40%, compared with a 3% response rate through direct mail and 1% with internet banner ads (Jelassi & Enders 2004).

The high diffusion of SMS facilitates analyzing usage behavior and hints at the commercial potential of future communication services. Multimedia Messaging Services (MMS), for example, will build on the success of SMS but allow for richer content based on similar asynchronous, digital and interactive communication. Studying interactive mobile services such as SMS and MMS suggests drawing upon theories in marketing, consumer behavior, psychology and adoption to investigate their organizational and personal use.

When looking at marketing communication from a consumer perspective the issue of media effectiveness is challenging. The increased number of media has led to a harder competition for consumers' attention. Attention and time has increasingly become scarce resources for the consumers in the information age. It has been argued that the information age empowers consumers and creates immediate 24-hour access, which changes consumers' behaviour (Seybold 2001). Many consumers have attitudes; aspirations and purchasing patterns that are different compared to what companies have been used to. Today's consumers are claimed to be independent, individualistic, involved and informed, (Lewis and Bridger 2000) which makes it harder than ever to conduct interruption-based communication.

In traditional research concerning advertising and media effects the consumer's perspective has been largely overlooked. Traditional marketing communication planning has focused on the marketer's objectives of reaching relevant consumers (Stewart & Pavlou 2002). An open question is, however, what reaching means when considering the empowered and active consumer. In permission marketing context it has been argued that if the consumers have agreed to pay attention it would be easier to reach them about offerings (Godin 1999). A key issue is the responsiveness of the consumer to marketing communication. Responsiveness depicts the consumer's willingness to receive and respond to marketing communication and can be viewed as a function of the content and the context of the message. Any channel can and should be evaluated according to consumer responsiveness in order to understand

communication effects and effectiveness. Consumer responsiveness is potentially more effective than permission because it assumes consumer attention rather than merely permission.

OBJECTIVES OF THE STUDY

The primary objective of this research study is to gain an insight into the perception of mobile users, towards mobile advertising and their utility value in terms of impact on the purchase decision. Hence we are attempting to explore consumers' responsiveness to mobile marketing, taking into cognizance the impact of demographic factors like age, gender, occupation, etc. From the marketer's perspective it is crucial to know the utility of mobile advertising, as far as having an impact on purchase decision of a customer is concerned. From an academic perspective the issue of responsiveness to a media is interesting in itself. The media in use influences the effect of the marketing communication in addition to the marketing message. Finally an attempt has also been made to broadly concretize some features enhancing the acceptability/ utility of mobile marketing/ advertising. Also a strategic initiative (*Intelligent Software Agents*) has been proposed, so as to incorporate all the positive attributes perceived as important by the customers. Hence **Customerization** with the help of Software Agents has been proposed as a strategic initiative with the aim of increasing the overall acceptance of mobile marketing efforts.

LITERATURE REVIEW

A study done by Heinonen & Strandvik (2003) showed that mobile channels are perceived to be more personal than traditional and e mail channels. This creates high expectations for the relevance of marketing communication messages. A consumer expects messages to be personal and of high interest and this makes the disappointment greater when they get undesired messages. Mobile advertising may even step over the line of discretion and invade consumers' privacy because of the personal nature of the mobile device. Li et al (2002) discusses how negative reactions like irritation arise through intrusion advertising. The channel influences consumer responsiveness to marketing communication by being perceived as either disturbing or acceptable (Abernethy 1991). If the consumer considers marketing communication via a channel as disturbing it may negatively affect the attention to and perception of the message. In contrast, the channel may also enhance the acceptance of the marketing communication if it is perceived as appropriate for the specific marketing communication. Also, some consumers may perceive the channels as neutral, i.e. it is neither disturbing nor accepted.

Despite substantial marketing potential, research on mobile advertising and particularly through its most successful application, short message service (SMS) is still embryonic. In a comprehensive survey concerning consumers' experiences of direct marketing channels in Finland it was found that consumers perceived direct marketing channels differently compared to each other. (Finnish Direct Marketing Association, 2002) The experiences of mail order, Internet and email experiences were more positive compared to other direct market channels such as telemarketing and door-to-door sales. 80 % of the respondents had positive experiences of mail order, 77% had positive experiences of Internet and email as marketing channels and the corresponding number for SMS and WAP was 65%. For telemarketing and door-to-door sales the number of positive consumers was down to 30% and 25% respectively. Concerning satisfaction with information received, there seemed to be differences between the channels. The study also indicated that consumers have considerable less experience of SMS messages compared to mail order, Internet and email.

The most influential model for comparing media is probably the ARF (Advertising Research Foundation) model first published in 1961 (Harvey 1997). This model was created as a

response to the need in the advertising industry to compare different advertising media (Harvey 1997). The model contains six stages or hierarchical levels of advertising effects. The original model contained the following levels; vehicle distribution, vehicle exposure, advertising exposure, advertising perception, advertising communication and sales. The first two levels indicate measures of potential spread of the media among consumers and have been the most used factors in the marketing communication industry. Advertising exposure refers to the number of consumers exposed not to the media as such but to the particular commercial or ad. The fourth level, advertising perception is the first level to include a consumer reaction, i.e. the number of consumers noticing the advertising. The next level, advertising communication, could measure how many consumers in fact receive something of the content besides only noticing the communication. These two levels have been the least studied and understood in the advertising industry, which has focused on the two first levels and the last, sales that are easier to measure. As the model is considered to be a hierarchical model there is something of a black box in the knowledge of consumer response, which is one of the objectives of the current study. The direct marketer may record a pull or response rate in sales of, for example, 2 % compared to response rate of 8 % in another marketing campaign but have no information about the reason for the difference. The problem is accentuated on one hand when new media have evolved and on the other hand when customer relationships have come into focus instead of only campaign sales. Harvey (1997) argues that the advertising communication level needs more attention. In this model responsiveness would relate to the levels advertising perception and advertising communication, which have been the least studied aspects. In a new edition of the model the Advertising Research Foundation (ARF) included new digital media and created eight hierarchical levels of media performance; vehicle distribution, vehicle exposure, advertising exposure, advertising attentiveness, advertising communication, advertising persuasion, advertising response and sales response (Informed 2001). The three first are essentially retained from the original model as well as the last level. In this model our responsiveness framework links to advertising attentiveness, communication and persuasion.

According to the descriptions of the new model (Informed 2001) advertising attentiveness is considered to be a measure of the degree to which those exposed to the advertising are focused on it. Advertising communication refers to information retained by the consumer after exposure to the message. Advertising persuasion measures shift in attitudes and/or intentions produced by the communication and advertising response is other consumer response than purchasing. This would for example, include click-through, lead generation, mail response and coupon redemption.

Our responsiveness conceptualization closely relates to the attentiveness level but carries over to the communication and persuasion levels in the sense that we assume that they are closely related. As a consequence the study attempts to examine the relationship between marketing/ advertising efforts (through mobiles) and the consumers' responsiveness in terms of impact on their purchase decisions.

New media in the digital economy have created potentially powerful tools for direct and interactive marketing. Traditional marketing communication strategies have been based on the interruption logic (Godin 1999) where the consumer is forced to momentarily pay attention. Permission marketing was introduced as a new managerial approach in marketing communication. It has been argued that firms benefit from getting consumers' permission to be contacted (Marinova, Murphy and Massey 2002). Permission from the consumer would resolve the difficulties to get access to the consumer. Permission is, however, not necessarily a guarantee that the consumer pays attention; it is only a door opener and gives an indication of the consumer's potential interest areas.

We believe that by using the information retrieval and filtering capabilities of mobile agents and location information about the user, there exists a good opportunity for value-added services to be provided to the end-users. This also brings about a new way for cellular phone service providers to achieve competitive advantage by competing not only on the basis of price and packaging, but also on the basis of the set of value-added services that they provide to their clients. In order to overcome the input/output limitations brought about by mobile devices, the system should be free of user's intervention. To that end, we propose to use mobile agents for provisioning context-aware advertisements to mobile users. Schilit and Theimer first introduced the concept of context-awareness in the project Active Map in which they took advantage of the location concept to define the context as people, object, and the changes that occur to them. Dey and Abowd stated that a system is context-aware if it uses context to provide relevant information and/or services to the user, where relevancy depends on user's task.

Krishnamurthy (2001) also proposes a conceptual framework for managing online advertising using the permission marketing approach. Permission marketing requires the consumer to participate in the programme by giving the permission and the information for continuing the relationship. The interest in this participation arises from the balance of benefits (message relevance and monetary benefits) and costs (personal information, message processing costs, privacy costs) for consumers.

One of the main challenges and opportunities for mobile advertising companies is to understand and respect the personal nature of the usage of mobile phones (Barwise & Strong 2002; Heinonen & Strandvik 2003; Barnes & Scornavacca 2004; Jelassi & Enders 2004). The key is to use interactive wireless media to provide customers with time- and location-sensitive, personalized information that promotes goods, services and ideas, thereby generating value for all stakeholders (Dickinger et al. 2004). The mobile advertising relevance can be influenced by the contextualization (Kenny and Marshall, 2000; Yuan & Tsao 2003) of advertising messages. Barwise & Strong (2002) take up the flexibility, and time-based nature but also the fact that the small screens restrict the length of the message. Barnes (2002) stresses the interactive nature of mobile advertising and the ability to use contextual information to target the messages to individual receivers, in other words to personalize the message. Location-aware advertising messages are creating five to ten times higher click-through rates compared to traditional internet advertising messages (Ververidis & Polyzos 2002).

METHODOLOGY

The research design chosen for the study is conclusive (cross sectional descriptive design). A survey instrument was developed based on previous studies done on consumer perceptions of mobile advertising. Quota sampling (multi stage) has been employed with the questionnaires being sent to approximately 1000 respondents. However 660 questionnaires were found complete in all respects. The response rate was 66%. An attempt has been made to keep the sample fairly representative across the demographic variables by constructing quotas according to these factors e.g. age, gender, occupation, and level and purpose of mobile usage. Almost 54% of the respondents belonged to the age group of 20 to 30 years and approximately 30% of the respondents belonged to the age group of more than 30 years. 30% of the respondents were students, 27% were in service, 14% were housewives and 29% were in business. 59.7% were males and 40.3% were females. Almost 85% of the respondents rated their usage of mobile in the range of medium to high. 75% of the respondents used their mobiles primarily for personal communication. The area of our sampling is the city of Lucknow (mobile density in Lucknow is at par with the major cities in India). The time frame of the study was June 2007 to October 2007. Primary- stage sampling units were the mobile

users, while the secondary stage sampling units were markets, shopping malls, institutions and localities of Lucknow. In order to make the sample representative, sampling was performed in various market places, shopping malls, office complexes and some residential localities considering the desired quotas. A group of respondents were also chosen from Lucknow Telephone Directory using systematic sampling scheme.

The study used a likert scale of 1-5 to elicit response of mobile users. The statistical techniques used to analyze the data are factor analysis, discriminant analysis, perception maps and non-parametric two-independent samples test.

We have examined the reliability of the data to check whether random error causing inconsistency and in turn lower reliability is at a manageable level or not, by running reliability test. For various sets of important associated factors used in the questionnaire, values of coefficient alpha (Cronbach's alpha) have been obtained. Amongst the reliability tests that were run, the minimum value of coefficient alpha (Cronbach's alpha) obtained was 0.732 (Table 1.1-1.4) (which is substantially higher than 0.6) which shows that data has satisfactory internal consistency reliability.

Table 1: Case Processing Summary

		N	%
Cases	Valid	660	100.0
	Excluded(a)	0	.0
	Total	660	100.0

a Listwise deletion based on all variables in the procedure.

Table 1.1: Reliability Statistics (purchase decision & Brand decision)

Cronbach's Alpha	N of Items
.785	2

Table 1.2: Reliability Statistics (Perception towards mobile advertising)

Cronbach's Alpha	N of Items
.732	4

Table 1.3: Reliability Statistics (Positive reactions towards mobile advertising)

Cronbach's Alpha	N of Items
.788	3

Table 1.4: Reliability Statistics (Desired attributes of mobile advertising)

Cronbach's Alpha	N of Items
.757	7

FINDINGS

Consumer Perception about Mobile Advertising

Table 2: Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.572	29.781	29.781
2	2.429	23.685	53.466
3	1.891	17.550	71.016

Table 2.1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
Bartlett's Test of Sphericity	Approx. Chi-Square	1575.073
	Df	78
	Sig.	.000

Table 2.2: Rotated Component Matrix

	Component		
	1	2	3
less informative	.622	-.127	.133
Not suiting personal needs	.808	-.128	.039
relayed at the wrong time	.764	-.050	.171
clutter as a result of too many ads	.608	.021	.284
cause disturbance at work	.537	-.094	.463
junk ads without going through it	.295	-.158	.650
I find it time consuming to go through ads	.344	-.101	.695
recall of brands advertised	-.244	.656	-.141
recall of sale/special promotions	-.113	.694	-.066
recall of products /services advertised	-.096	.779	-.045
ad positioning	-.003	.615	.082
positive impact of mobile ads	.045	.672	-.107
loss of privacy	.030	.033	.773

The **factor analysis** results are shown in table 2, 2.1 & 2.2. The variance explained by the initial solution, extracted components and the rotated components are displayed in Table 2. The total variance shown in table 2, accounted for by all of the three components explains nearly 71% of the variability in the original 13 variables. So we can reduce the original data set by using these three components (Eigen values greater than 1 as shown in Table 2.) with only 29% loss of information.

The Rotated Component Matrix reveals three factors (which represent the three perceptual dimensions about mobile advertising) derived from 13 variables (which represent the perception of mobile users towards mobile advertising). The components of each factor have been highlighted in Table 2.2.

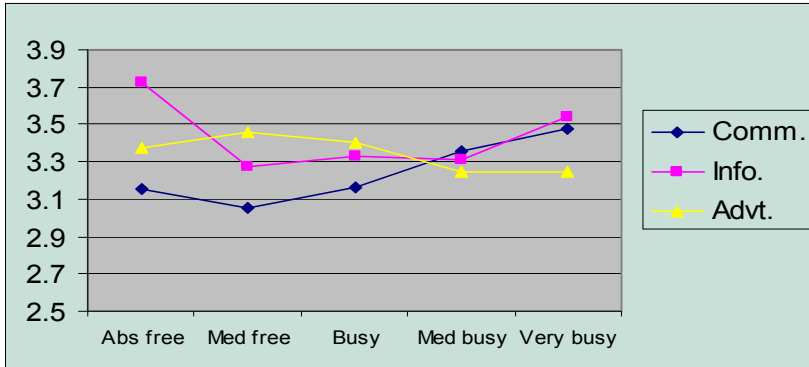
Factor 1 comprises of the variables- mobile ads being less informative, not suiting personal needs, inappropriate timing, and clutter. Since all these variables are related to lack of contextualization and personalization, this factor can be labeled '**Lack of contextualization**'.

Factor 2 has components- brand recall, recall of sales/promotion information, recall of product/services, ad positioning, and repetitive nature of mobile ads and positive impact of mobile ads. Since all this components are related to perceived usefulness of mobile advertising, this factor can be labeled '**perceived usefulness**' of mobile ads.

Factor 3 has components- disturbance at work, busy work schedule, wastage of time, loss of privacy. Since all these components are related to disturbance caused due to mobile advertising, this factor can be labeled '**disruptive nature**' of mobile ads.

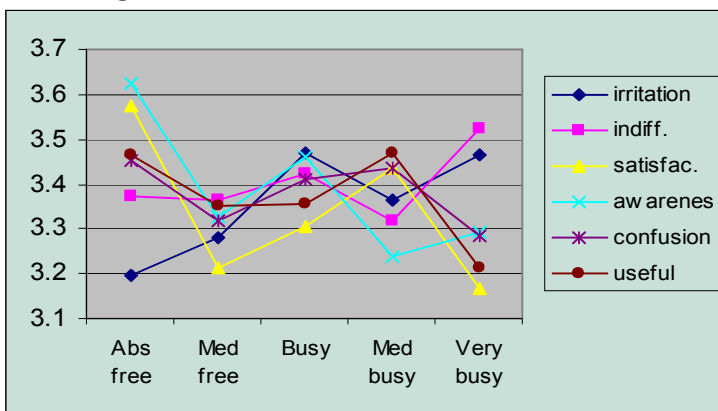
Further to gain an insight into the perception of mobile users towards mobile marketing vis a vis their demographic characteristics, a series of **Perception Maps** were also prepared.

H1: An individual's work schedule has an impact on his perception of his mobile being an instrument of either communication, advertisement or information.



On drawing a perception map, in order to adjudge the impact of an individual's work schedule on their generic perception of a mobile phone, it was found that there was significant difference in perception if the individuals were either free or very busy; and as the work schedule of an individual became busier, they increasingly perceived their mobile as an instrument of information and communication, vis a vis communication or advertisement. This clearly indicates that a busy individual would reject any overtures of mobile advertising in a defined manner, because he perceives his mobile to be primarily a means of relevant information and communication. Hence unless and until, the information being transmitted on his mobile does not carry any utility value for him, it will be regarded as spam or junk. However respondents who were free had a diametrically opposite perception of their mobile phones and perceived it to be a source of varied information and promotion, instead of just considering it a device of communication.

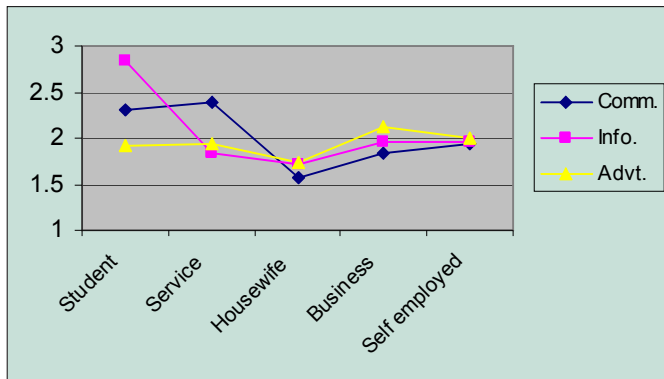
H2: An individual's work schedule has an impact on his reactions' towards mobile advertising.



On drawing a perception map, in order to adjudge the impact of an individual's work schedule on his reactions' towards mobile advertising, it was found that there were significant differences in the reactions displayed by either *absolutely free* or *very busy* respondents. The respondents, who were rather free and had more time on their hand, found mobile advertising as a means of creating awareness and rather satisfactory; whereas in sharp contrast we can also infer that respondents with a busy work schedule, having a paucity of time- reacted with indifference and irritation towards mobile advertising. It can thus be inferred that mobile marketing/ advertising in its current format is unacceptable to customers with busy work

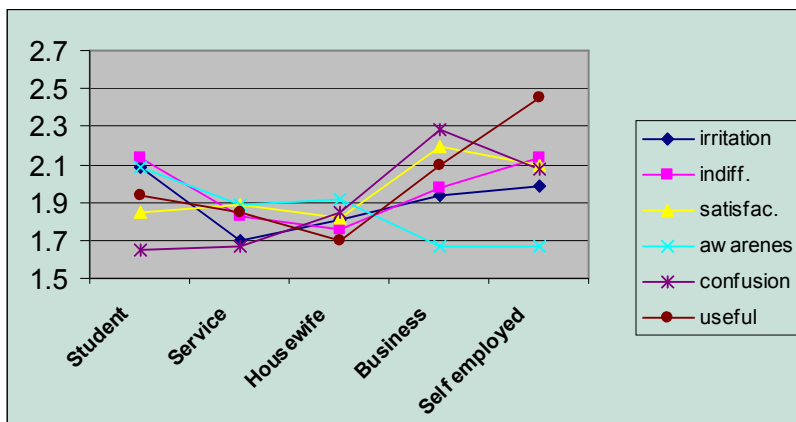
schedules, and requires inclusion of certain attributes- so that the relevance and utility value of such marketing messages, increases their overall acceptance by consumers.

H3: An individual's occupation has an impact on his perception of his mobile being an instrument of communication, advertisement or information.



On drawing a perception map, in order to study the impact of an individual's occupation on his perception of a mobile being an instrument of communication, advertisement or information, it was found there were significant differences in perception in case of *Students* and those in *Service*. Students primarily perceived their mobile to be an instrument of information (advertising, sports and other news) as they have varied interest areas and no excessive work pressure, whereas those in some kind of service perceived their mobile as primarily being a source of communication, having focused interest areas and a lot of work pressures to contend with. Such individuals would thus prefer only relevant and useful information to be relayed on their mobiles. Hence customization on an individual basis or **CUSTOMERIZATION** seems to be the need of the hour, as far increasing acceptance of mobile advertising is concerned.

H4: An individual's occupation has an impact on his reactions' towards mobile advertising.



On drawing a perception map, in order to study the impact of an individual's occupation on his reactions' towards mobile advertising, it was found that there were significant differences in the reactions of *Businessmen* and other *Self-Employed* people. The businessmen reacted with confusion towards the plethora of information and advertising that they were subjected on their mobiles, whereas the self-employed respondents found the information (pertaining to either their work interests or leisure interests) relayed through their mobiles useful. It can hence be inferred that incorporating attributes like contextualization, relevant utility value

(with reference to the target customers), would increase the overall acceptance of mobile marketing/ advertising.

Impact of Mobile Marketing/ Advertising on Purchase/ Brand Decisions of Mobile Users

Finally Discriminant Analysis was performed to adjudge the impact of mobile advertising on the purchase/ brand decision of mobile users. The results of the discriminant analysis (Table3) revealed that although the model was significant (P<0.05) confirming that the results were valid for a larger population, but the high value of Wilk’s Lambda (=0.824), indicates that mobile marketing/ advertising in its current format does not have a significant impact on the purchase decision of a consumer, and there might be other significant factors like a Firm’s *Marketing Efforts* (Marketing Mix), a consumers’ *Socio Cultural Environment*(Family, Informal Sources, Non Commercial Sources, Social Class, Culture & Sub culture), and an individual’s *Psychological Field*(Motivation, Perception, Learning, Personality and Attitudes)- that affect his purchase decision. The above inference is further substantiated by the Classification Results which reveal that only 66.7% of original grouped cases were correctly classified. Mobile advertising in its current format is very generic in its approach, as revealed by Factor Analysis performed on the data, marketing communication through mobiles primarily lacked in *contextualization, perceived usefulness* (for the target customers) and were *disruptive in nature*. Although mobiles are a powerful mode of marketing communication, but the important issues at stake here are- *what to say, how to say it, to whom, and how often*. But communications get more and more difficult, as a large number of companies clamor to get the consumers’ increasingly divided attention through various means. Hence the challenge lies in customizing the marketing communication to suit individual needs (**Customerization**), i.e. reaching the right target market with the right message at the right time.

Table 3: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.824	94.469	13	.000

Analysis of Desired Attributes (in Mobile Marketing/ Advertising) - so as to Enhance the Overall Acceptance of Mobile Marketing/ Advertising

This study also attempts to broadly concretize some features or attributes, which will enhance the overall acceptance and utility of mobile marketing and advertising. For this purpose the non parametric Two-Independent-Samples tests were performed. The results (Table 4) revealed that customization of mobile marketing messages according to the demographic characteristics and individual tastes and preferences (P value >0.05), would enhance the overall acceptance of mobile marketing messages, and have a positive impact on the purchase decisions being made by these consumers. Hence the mobile users are apparently seeking customization of mobile marketing messages as per their individual requirements, tastes and preferences. Thus the marketing firms need to combine *Mass Customization* and *Customized Marketing* i.e **CUSTOMERIZATION**. Customerization combines operationally driven mass customization with customized marketing in a way that the company is able to respond to individual customers by customizing its products, services, and messages on a one-to-one basis. Another desired attribute as per consumer perception is that they would prefer *session based* messages, which would *self delete* after a given period of time- hence saving the mobile users the hassle of clearing the clutter of marketing messages in their inbox and occupying unnecessary memory space.

Table 4: Test Statistics (a)

	Timing	Location Based	Customization as per Demographics	Customization as per Individual Preferences	Permission Based	Choice of Browsing	Self Deleting
Mann-Whitney U	25603.500	27179.000	22494.000	22859.500	25645.500	25036.000	24636.500
Wilcoxon W	40309.500	41885.000	37200.000	37565.500	40351.500	39742.000	39342.500
Z	-1.429	-.355	-3.536	-3.301	-1.402	-1.814	-2.088
Asymp. Sig. (2-tailed)	.153	.723	.000	.001	.161	.070	.037

a Grouping Variable: Purchase Decision

PROPOSED STRATEGIC INITIATIVE

Summarizing the major findings of the study, we can infer that the relationship that we have sought to examine between mobile marketing/ advertising efforts and the consumers' responsiveness in terms of impact on the purchase/ brand decision, exists. However mobile marketing efforts do not have a substantial impact on the purchase or brand decision of the consumer. The study further indicates that the crux of the problem lies not in relaying mobile marketing messages to mobile users, but in the mass marketing approach being adopted by the companies. Mobile users have apparently developed an aversion to the mobile marketing messages, to which they are being subjected. Also the study revealed distinct preferences expressed by customers regarding the desirable content of such messages. Customers are looking for customization of mobile marketing messages as per their individual requirements, tastes and preferences. Hence the need of the hour appears to be **Customerization**.

The potential for the efficient and effective organization of market processes by using interactive media is hardly used. Intelligent Software Agents represent one of the most interesting and innovative technologies under economical criteria. Software Agents are programs, which fulfill a task independently on behalf of the user. This definition encompasses the term agent as a person or thing, who is able and authorized to act on behalf of a third party, and the term software. The software can be adapted to the individual preferences and parameters of its instructor and operates without intervention of the user at a specific problem definition.

Agents can be used by both Customers as well as mobile marketing firms. Mobile marketing firms can deploy these agents to customize products as well as advertisements. In the age of Mass Customization and one-to-one marketing (i.e. Customerization), individualizing the marketing communications is even more strongly in the focus of the strategic considerations of the firms. Software agents represent a marketing-tool par excellence for this individualization. Mobile users can use agents in order to execute complex search and filter functions.

A software agent indicates the following characteristics:

- ❖ A software agent has an *instructor*, who instructs him, to operate certain functions independently. The instructor can be a person or a superior software agent.
- ❖ A software agent needs *interfaces*, in order to be able to communicate. On one hand interfaces are necessary for input of data and parameters for specification of the function which should be executed. On the other hand they are needed, in order to transfer the results of an executed job to the instructor.
- ❖ A software agent has to be *autonomous*, i.e. it must be able to execute its job without direct intervention of the instructor. This means that the agent must be *authorized to act*.
- ❖ The software agent must be able to notice *events* in its *environment*.

- ❖ For the interpretation of the events assumed by the software agent, it must have *intelligence*. Hence the term *intelligent software agents*. The methods used for agents usually rise from the area of artificial intelligence (AI) and have thereby only an indirect reference to the “human” or natural intelligence.

By successfully deploying intelligent software agents, the marketing firms can incorporate the following attributes in their mobile marketing communications:

Personalization: Marketers can personalize text messages based on the consumers’ local time, location, and preferences e.g., directions to the nearest vegetarian restaurant open at the time of request.

Time: Less intrusive than phone calls, recipients can read text messages at their leisure and choose when to respond, if at all. Still, organizations must consider the best time and message frequency for the target group and topic. For e.g. Targeting students, messages should not be sent before noon, because at this time students can either not be reached efficiently or might get into trouble receiving messages during their classes.

Location: Mobile phones amplify two key arguments for electronic commerce, location independence and ubiquity. Consumers increasingly expect tailored and location-based services, thereby underlining the importance of personalized mobile marketing. Properly applied, location-based services can create or reinforce virtual communities. The Swedish company Telia, for example, one of Europe’s biggest and most innovative telecommunication companies launched a real-time SMS game using mobile positioning to let users play against others in their vicinity (www.botfighters.com).

Preferences: Personalizing messages increases their impact. Similar to traditional media, a personalized SMS campaign relies upon databases with enough active and potential clients to reach the target group profitably. Such databases regularly contain personal information such as leisure activities, holidays, music and media interests, type of Internet access, occupation, marital status, car ownership and income.

Consumer control, permission and privacy: There is a trade-off between personalization and consumer control. Gathering data required for tailoring messages raises privacy concerns. Corporate policies must consider legalities such as electronic signatures, electronic contracts, and conditions for sending SMS messages. According to all the experts, advertisers should have permission and convince consumers to “opt-in” before sending advertisements. A simple registration ensures sending relevant messages to an interested audience. Unsolicited messages, commonly known as spam, stifle user acceptance – particularly as mobile phones cannot distinguish between spam and genuine communication automatically. Unwanted messages are illegal in some countries and annoy consumers regardless of the medium (e.g., fax, telephone, electronic mail, or mobile devices). Spam may work as the strongest negative influence on consumer attitudes towards SMS advertising.

Acknowledging the complementarities of the World Wide Web and mobile networks, this paper has attempted to propose a *technology intervention* (namely Intelligent Software Agents) in the *mobile marketing messaging service*, with the objective of increasing its overall acceptance, utility value and impact in the perception of the mobile users or our target customers.

References

- ❖ Abernethy, A.M. (1991) 'Physical and mechanical avoidance of television commercials: an exploratory study of zipping, zapping and leaving', in Holman, R. (Ed.): Proceedings of the American Academy of Advertising, The American Academy of Advertising, New York, pp.223–231.
- ❖ A.K. Dey, and G.D. Abowd, "Towards a Better Understanding of Context and Context-Awareness", in the Workshop on The What, Who, Where, When, and How of Context-Awareness, as part of the 2000 Conference on Human Factors in Computing Systems, The Hague, The Netherlands, pp.304-307, 2000
- ❖ Barwise P. & Strong, P. 2002. Permission-based mobile advertising. *Journal of Interactive Marketing*. Vol 16. No. 1, 14-24.
- ❖ Barnes, S.J. 2002b. Wireless digital advertising: nature and implications. *International Journal of Advertising*, Vol. 21, 399-419
- ❖ Barnes, S.J. & Scornavacca, E. (2004) Mobile marketing: the role of permission and acceptance. *International Journal of Mobile Communications*, 2(2), pp. 128–139.
- ❖ B. Schilit, and M. Theimer, "Disseminating Active Map Information to Mobile Hosts", *IEEE Network*, Vol. 8, No. 5, pp. 22-32, 1994.
- ❖ Dickinger, A., Haghirian, P., Murphy, J. & Scharl, A. (2004) An investigation and conceptual model of SMS marketing. Proceedings of the 37th Hawaii International Conference on System Sciences, Big Island, Hawaii, January.
- ❖ Forrester Report (2001): Lussanet et al. The Marketer's Guide to SMS, Forrester Research Inc., European Research Center, Amsterdam.
- ❖ Harvey, Bill (1997). The Expanded ARF Model: Bridge to the Accountable Advertising Future. *Journal of Advertising Research*. March-April, 11-20.
- ❖ Heinonen, Kristina & Strandvik, Tore (2003): Consumer responsiveness to marketing communication in digital channels, FeBR2002 Frontiers of e-Business Research 2002, ed. M. Hannula, A-M. Järvelin & M. Seppä, pp. 137-152, Tampere University of Technology and University of Tampere
- ❖ Informed (2001). The "New" ARF Model. Vol. 4, No. 3, June 2001. The Advertising Research Foundation.
- ❖ Jelassi, T. & Enders, A. (2004) Leveraging wireless technology for mobile advertising. Proceedings of the 12th European Conference on Information Systems, Turku, Finland, 14–16 June.
- ❖ Kenny, D. and Marshall, J.F. (2000) 'Contextual marketing: the real business of the internet', *Harvard Business Review*, Nov–Dec Vol. 78, No. 6, pp.119–125.
- ❖ Krishnamurthy, S. (2001) 'A comprehensive analysis of permission marketing', *Journal of Computer-mediated-communication*, January, Vol. 6, No. 2.
- ❖ Li, Hairong, Steven M. Edwards and Joo-Hyun Lee 2002. Measuring the Intrusiveness of Advertisements: Scale Development and Validation. *Journal of Advertising*, Vol. XXXI, No.2, 37-47.
- ❖ Mandelli, A. (2005)'Banners, e-mail, advertainment and sponsored search: proposing a value perspective for online advertising', *Int. J. Internet Marketing and Advertising*, Vol. 2, Nos. 1/2, pp.92–108.
- ❖ Marinova, Murphy and Massey (2002). Permission email marketing as a means of targeted promotion, *Cornell Hotel and Restaurant Administration Quarterly*. February. 61-69.
- ❖ Seybold, Patricia (2001). The customer revolution: How to thrive when your customers are in control. London: Random House Business Books.

- ❖ Stewart, D. and Pavlou, P. 2002. From Consumer Response to Active Consumer: Measuring the Effectiveness of Interactive Media. *Journal of the Academy of Marketing Science*. Vol.30. No.4., 376-396.
- ❖ Ververidis, C. & Polyzos, G. (2002) Mobile marketing using location based services. *Proceedings of the First International Conference on Mobile Business*, Athens, Greece.
- ❖ Windham, Laurie and Ken Orton (2002). *The soul of the new consumer: The attitudes, behavior, and preferences of e-customers*, Allworth Press.
- ❖ Yuan, S.-T. & Tsao, Y.W. 2003. A recommendation mechanism for contextualized mobile advertising. *Expert Systems with Applications*, Vol. 24, 399-414