Blue Jacking: A New Marketing Tool

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Abstract

Mobile phones have been adopted as an everyday technology, and they are ubiquitous in social situations as users carry them around as they move through different physical locations throughout the day. As a communicative device, the mobile phone has been gradually taken up in ways that move beyond merely providing a channel for mediated conversation in the world of marketing & advertisement .This paper explores one such appropriation i.e. blue jacking, the practice of sending unsolicited messages over Bluetooth to Bluetooth-enabled devices such as mobile phones, PDAs or laptop computers, sending a vCard which typically contains a message in the name field sending short (i.e. for blue dating or blue chat) to another Bluetooth enabled device via the OBEX protocol. This technique is used at many places like cinema theaters, train station, shopping malls, mobile phone shops etc.

Key Words: Blue jacking, Bluetooth, Blue chat, PDA, OBEX Protocol

Introduction

Bluejacking is the sending of unsolicited messages over Bluetooth to Bluetooth-enabled devices such as mobile phones, PDAs or laptop computers, sending a vCard which typically contains a message in the name field to another Bluetooth enabled device via the OBEX protocol. Bluetooth has a very limited range; usually around 10 meters on mobile phones, but laptops can reach up to 100 meters with powerful transmitters. Bluejacking allows phone users to send business cards anonymously using Bluetooth wireless technology. Bluejacking does not involve the removal or alteration of any data from the device. Bluejackers often look for the receiving phone to ping or the user to react. In order to carry out a bluejacking, the sending and receiving devices must be within 10 meters of one another. The messages tend to be anonymous since the recipient has no idea who has sent the bluejack, and the recipient has no information about the bluejacker, except for the name and model of the bluejacker's mobile phone. Because of Bluetooth's short-range networking capabilities, bluejacking can only occur between actors who are within 10 meters of each other, which makes this activity highly location-dependent. Contrary to what the name suggests, the bluejack recipient's phone is not hijacked; that is, the phone is at no time under the control of the bluejacker.

Objectives

1. To know characteristics of the public spaces in which bluejacking occurs
2. To study alternative social conventions that might arise from the practice of bluejacking
3. To understand use of bluejacking in marketing & advertising

Origin

This bluejack phenomenon started after a Malaysian IT consultant named "Ajack" posted a comment on a mobile phone forum. Ajack told IT Web that he used his Ericsson cellphone in a bank to send a message to someone with a Nokia 7650. Bluejacking has become popular among young people wanting to play practical jokes.A 13-year-old named Ellie from Surrey in the UK has started a dedicated bluejacking site called bluejackq.

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The site explains what bluejacking is and also has forums where people can share their bluejacking experiences.

Bluetooth Bluejack: Bluetooth technology users take advantage of this ability to network with other phones and can send text messages or electronic business cards to each other. To send information to another party, the user creates a personal contact name in his or her phone's address book -- the name can be anything from the sender's actual name to a clever nickname.Bluejackers have devised a simple technique to surprise their victims: Instead of creating a legitimate name in the address book, the bluejacker's message takes the place of the name.For instance, if you're sitting in a coffee shop and notice a fellow Bluetooth user sitting down to enjoy a cup of iced coffee, you could set up a contact under the name "Is your coffee cold enough?" After choosing to send the text via Bluetooth, the phone will search for other enabled Bluetooth devices; selecting one will send the unsolicited message to that device. A bluejacker's crowning moment comes, of course, when the victim receives the message and expresses a mild mix of confusion and fear that he's under surveillance.Bluejacking is imprecise, however. Searching for other Bluetooth-enabled hardware might turn up a list of devices labeled with a series of numbers and letters. Unless the bluejacker's target has chosen to publicly identify his or her phone, or it's the only Bluetooth phone in the area, the bluejacker may have a hard time messaging his or her target on the first try.

How to Bluejack

Bluetooth only works over short distances. Bluetooth works underground so the Tube on the train, in a Cafe or standing in line are all good places to start.

- **Mobile**

Following steps are followed for bluejacking through mobile

1. First press the 5-way joystick down.

2. Then choose options.

3. Then choose "New contact"

4. Then in the first line choose your desired message.

5. Then press done.

6. Then go to the contact.

7. Then press options.

8. Then scroll down to send.

9. Then choose "Via Bluetooth"

10. Then the phone will be searching for enabled Devices.

11. Then press "Select"

- **Personal computers/laptops**

Following steps are followed for bluejacking through Personal computers/laptops

1. Go to contacts in your Address Book program (e.g. Outlook)

2. Create a new contact
3. Enter the message into one of the 'name' fields
4. Save the new contact
5. Go to the address book
6. Right-click on the message/contact
7. Go to action
8. Go to Send to Bluetooth
9. Click on other
10. Select a device from the list and double click on it

Usage of Bluejacking

Bluejacking can be used in many fields and for various purposes. The main fields where the bluejacking is used are as follows:

- Busy shopping centre
- Starbucks
- Train Station
- High Street
- On a train/ tube/ bus
- Cinema
- Café/ restaurant/ pub
- Mobile phone shop
- Electronics shop (e.g. Dixons)

The main use of bluejacking tools or bluejacking is in advertising purpose and location based purpose. Advertising on mobile devices has large potential due to the very personal and intimate nature of the devices and high targeting possibilities.

Bluejacking as a market channel

Bluetooth offers a new communications channel to marketers. The marketing industry is never slow to jump on a new communication channel and exploit it for its own ends. The telephone, email, SMS text messaging and the web have all become a standard part of the marketing toolkit, the latter having a marked impact on the way in which organizations communicate with their audiences.

Marketing opportunity

Bluejacking offers three distinct opportunities for marketers:

1. Viral communication

Exploiting communication between consumers to share content such as text, images and Internet references in the same way that brands such as Budweiser, Honda & John West Salmon, have created multimedia content that has very quickly been circulated around the Internet

2. Community activities

Dating or gaming events could be facilitated using Bluetooth as a channel to communicate between participants. The anonymous nature of bluejacking makes is a superb physiological tool for communication between individuals in a localized environment such as a café or pub

3. Location based services

Bluejacking could be used to send electronic coupons or promotional messages to consumers as they pass a high street shop or supermarket. To date SMS text messaging has been used with mixed success as a mechanism to send consumer's location based information. Viral communication and to a lesser extent event based activities offer the greatest opportunity for bluejacking as a marketing mechanism. Already companies are looking at ways of exploiting the technology in these two areas.Unlike any other mobile communication mechanism it is absolutely free – there are no subscription charges and no costs associated with sending a message.The rise in text-based bluejacking couldn't have been more timely for Tag Text's launch. Not only we can capitalize on the trend, but using images adds a new dimension that even most bluejackers haven't yet considered. But at the same time bluejacking would not suit everyone, but for brands that want bleeding edge youth credibility, it's certainly worth considering. If any company doesn't shy away from other forms of guerrilla marketing like fly posting or giant image projection, they can think about this new medium.

Code of Ethics

a) The 'bluejacker' is the individual carrying out the bluejack.
b) The 'victim' is the individual receiving the bluejack.

The various codes of ethics are as follows:

1) Bluejackers will only send messages/pictures. They will never try to 'hack' a device for the purpose of copying or modifying any files on any device or upload any executable files. By hacking a device you are committing an offence under the computer misuse act 1990, which states it is an offence to obtain unauthorized access to any computer. Changes in this law soon will cover all mobile devices including phones.

2) Any such messages or pictures sent will not be of an insulting, libelous or pornographic nature and will be copyright free or copyrighted by the sender. Any copyright protected images/sound files will only be sent with the written consent of the copyright holder.

3.) If no interest is shown by the recipient after 2 messages the bluejacker will desist and move on.

4) The bluejacker will restrict their activity to 10 messages maximum unless in exceptional circumstances e.g. the continuous exchange of messages between bluejacker & victim where the victim is willing to participate, the last message being a final comment or parting sentiment (perhaps include www.bluejackq.com web address).

5) If the Bluejacker senses that he/she is causing distress rather than mirth to the recipient they will immediately deceases all activity towards them.

6) If a bluejacker is caught 'in the act' he/she will be as co-operative as possible and not hide any details of their activity (honesty is the best policy).

7) Social practices of bluejacking
Other forms of message content included social interaction (19.4%) types of statements (Figure 3). This suggests that while bluejackers engage in this illicit messaging, they use

social pleasantries to follow the conventions of acceptable small talk occasionally made by strangers in public places. Bluejackers often wanted to "spread the word" about bluejacking; 16.6% of the messages referred to the practice of bluejacking. They characterized this bluejacking-referential message type as a way to familiarize recipients about bluejacking in the hopes that those who received a bluejack would visit the Bluejackq website and eventually be inclined to try bluejacking in the future. The evangelical tone adopted by bluejackers suggests that they perceive this practice positively. We were interested in whether bluejackers engaged in harmful behavior through malicious message content, despite their framing of bluejacking as merely for fun. While bluejackers do not deny that there are prank-like aspects to their activities, there does seem to be a regulatory spirit among the posters on Bluejackq. We conceptualized bluejacking as the bluejacker's attempt to leave his or her mark on the recipient's mobile phone through violation of possessional territory, which leads us to wonder if the bluejackers would want to leave an identifiable imprint, similar to the tag of a graffiti artist. Only a small percentage of bluejackers (4.7%) sent multimedia files, such as a signature camera phone image or a theme song, suggesting that for most bluejackers, simply sending a largely anonymous text-only bluejack was sufficient to mark the recipient's mobile phone. This lack of richer multimedia messages, when combined with the relatively large percentage of posts (23.4%) that did not indicate message content type, implies that bluejackers place less value on a carefully crafted message. The act itself and the description of the location in which the bluejack took place are the noteworthy portions of the practice when bluejackers share their stories of bluejacking.

Related concepts

The various concepts related to bluejacking are as follows:

Bluesnarfing

Snarfing is information theft or data manipulation in wireless, local networks.Bluesnarfing is the unauthorized access of information from a wireless device through a Bluetooth connection, often between phones, desktops, laptops, and PDAs. This allows access to a calendar, contact list, emails and text messages and on some phones users can steal pictures and private videos. Bluesnarfing is much more serious in relation to Bluejacking

Bluecasting

"**Bluecasting**" uses "small digital media" does not exclusively mean advertisements but could include photos, podcast style audio content, video, mobile ticketing, text messages, games.

Bluebugging

Bluebugging is a form of Bluetooth attack.   In progression of discovery date, Bluetooth attack started with bluejacking, then bluesnarfing, and then bluebugging.

Conclusion

Bluetooth is a great technology with many useful applications. Bluejacking is a technique by which we can interact with new people and has ability to revolutionerise market by sending advertisement about the product, enterprise etc. on the Bluetooth configured mobile phone so that the people get aware about them by seeing them on the phone.. At the same time, variety of Bluetooth hacking tools and techniques are available, Bluejacking being the most vulnerable of the lot, which makes it a little riskier to use this technology. Bluetooth is not

going to go away because of a few security flaws; instead it can be secure if configured properly and used carefully with a proper understanding of this wonderful technology

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