

Mobile Spam in Singapore

A report from the Singapore Internet Research Centre

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Report Summary:

As mobile phones become a more and more critical element of how people communicate, it is clear that mobile spam, or unsolicited messages received via a mobile phone, is becoming an increasing irritant, and a potential threat to businesses. Governmental and individual responses to this phenomenon will be instrumental in determining whether or not mobile spam becomes a major problem. In January of 2005, researchers at the Singapore Internet Research Centre collaborated with an international research team examining the rise of mobile spam. This international project involved studying spam and responses to it in eight countries, including Switzerland, the United States, Saudi Arabia, China, Austria, Canada, Germany, and

Singapore. The full results of this international study are available at <http://www.mobilespam.org/>

This report summarizes the findings from Singapore.

Key Findings:

Experience with Mobile Spam

- 81.6% of Singaporeans reported having received mobile spam.
- This figure was between that of the two other regions studied: In Central Europe, 84.4% of respondents reported receiving mobile spam, and 73.1% of respondents in North America had received mobile spam.

Tolerance towards Mobile Spam.

- 82.5% are most concerned about sms spam, 57.4% are most concerned about mms spam, and only 38.7% are most concerned about vms.
- Singaporeans are least concerned about unsolicited messages from their mobile provider, with only 7% very bothered by it.
- 67% of Singaporeans felt that children should not receive mobile spam
- 84.4% of Singaporeans believed that Spam would likely hurt the mobile operators.

Behaviors to control Mobile Spam

- 98.3% of Singaporeans had not contacted their service provider to complain, in spite of the fact that over 10% of Singaporeans felt that their mobile operator was responsible.
- 55% of Singaporeans believed that the government and regulatory authorities should enact stringent policies and controls to monitor spam
- 43.1% stated that they would most likely complain to their mobile operators should they receive an unacceptable number of mobile spam messages
- 10% of Singaporeans said that they were likely to change mobile operators should they receive an unacceptable number of mobile spam messages.
- 84% of Singaporeans would not discontinue the use of SMS as a plausible option for them to combat mobile spam,
- 25% stated that they would not take any action even if they were inundated with a large number of mobile spam messages.

Conclusions:

Generally speaking, Singaporeans are quite tolerant of mobile spam and do not feel that it is currently a significant problem. However, should mobile spam continue to rise, many would support increased governmental and regulatory oversight.

Introduction

Spam first started becoming a concern in 1975, when the biggest problem individual had was junk email (Sipior, Ward, et al. 2004). Not only has the problem of spam grown over the decades, but it has also become more widespread. In today's networked society, spam encompasses email spam and mobile spam among other different types of spam, with mobile spam increasingly becoming more of a nuisance, and in some cases, a serious problem.

Mobile spam refers to unsolicited messages to a mobile handset with the aims of accomplishing any one of the following activities: trying to sell an item or service, asking the user to call a number (which may be a premium rate number), sending messages that may be harmful or attempt to change the handset settings, or commercial messages that are threatening or intrusive to privacy (Brodt & Hee, 2005, Sipior et al, 2004). There are three main forms for mobile spam: text messages (SMS), multi-media messages (MMS) or video messages (VMS).

In Singapore, for example, mobile spam is not yet considered to be a big nuisance by government authorities (such as the Infocomm Development Authority) and relatively few steps are in place to combat it, as opposed to email spam (Leong, 2004), despite the fact that Singaporeans widely use SMS, as the average Singaporean sends around 200 SMSs a month (IDA, 2004). In addition, text messaging is also widely used as part of reality show competitions (such as the Singapore Idol) and even to buy a drink from a vending machine!

A second reason for the lack of interest from regulatory authorities probably is that because text messages are not free to senders it is expected that mobile spam will not become as big a nuisance as email spam is (Lee, 2004). Since it costs to send each sms, unlike emails which are free, the proliferation of mobile spam is not expected to

be as great as that of email spam. In fact, in this international comparative study of eight countries across Asia, Europe and North America, Singaporeans had the highest tolerance rates for mobile spam, as only 60% of Singaporeans were annoyed when they received mobile spam, in comparison to about 80% of respondents from Central Europe and North America (Brodt & Hee, 2005).

Although regulatory authorities don't seem concerned about mobile spam, individuals and companies alike are worried about the possible impact of mobile spam. Most individuals are mainly concerned with privacy issues, especially since mobile phones are considered personal and consumers usually travel with them (MMA, 2004). This is expected to develop into an even larger problem as 3G phones become more popular among Singaporeans. Secondly, it is annoying to receive mobile spam messages. Mobile operators especially are worried as mobile spam can pose a serious threat to (the extremely lucrative) messaging business that is growing in Singapore. Two of the main reasons fueling their worry is that mobile users will stop using SMS and turn to other methods of communication, and secondly that an increase in mobile spam sent through their networks would negatively impact mobile users perceptions of mobile operators should mobile spam become a bigger nuisance in the future.

To get a better understanding of how Singaporeans view mobile spam, the Singapore Internet Research Centre joined in an international study of mobile spam during January of 2005. Singaporeans were invited to participate in a web-based survey which measured their experience with mobile spam, and their attitudes and responses to it.

Methodology

Participants were sent emails inviting them to participate, directing them to the website on which the survey was stored. 918 Singaporeans participated and completed this web-based survey, with a response rate of 25.36%. The majority of the respondents were between the ages of 18-25 and were undergraduate students at a national university (94.4%). The survey was the same that all respondents in the international study completed.

Findings and Conclusion

Types of mobile spam received

The majority of the participants involved in this study (81.6%) reported having received mobile spam before. This figure is lower than that of respondents in Central Europe (84.4%) but higher than that of respondents in North America (73.1%) (Bordt & Hee, 2005).

Of the different types of mobile spam, participants were most likely to have received offers to buy trustworthy products or services (70%) and were least likely to have received offers to call a suspect or premium rate number (19%). Although participants in Central Europe and North America were also most likely to have received mobile spam messages inducing them to buy trustworthy products, they were least likely to receive spam messages requesting for them to send money to a third party (4.6% and 5.8%) respectively. In contrast, 26.2% of Singaporeans had received mobile spam messages requesting them to send money to a third party.

Reactions to mobile spam

Singaporeans on the whole felt that mobile spam will become more of a problem over the next few years. Of the three types of mobile spam, they were most concerned with SMS becoming a problem (82.5%), followed by MMS (57.4%) and lastly VMS (38.7%). There are two potential explanations for this. Firstly, MMS is only now starting to gain popularity among Singaporeans and VMS is still not widely used, since not all mobile handsets support these kinds of messages. Secondly, of the three different types of mobile messages, SMS is the cheapest to send from the user's point of view.

On the whole, Singaporeans were most likely to be annoyed if they were to receive misleading messages requesting for them to call a premium rate number (78.6%), or if they were to receive messages that contained mobile viruses (94.6%), with around 90% of Singaporeans stating that they would not tolerate even a single message a month.

Amongst the different types of mobile messages available, Singaporeans are least likely to be annoyed by messages from their mobile operators, even if they were unsolicited (7.6%). They were likely to tolerate up to 5 messages of this kind from their own mobile operators per month. These results suggest that among all participants, Singaporeans had the highest tolerance levels in relation to receiving mobile spam in comparison to participants from Central Europe and North America (Bordt & Hee, 2005).

Singaporeans' attitudes towards mobile spam, however, were much more stringent in relation to children receiving mobile spam. 47 percent of Singaporeans stated that they would be very annoyed if children received mobile spam and 67% of Singaporeans felt that children should not receive mobile spam messages at all.

However, mobile spam like email spam is randomly sent and is not able to differentiate between the two, especially if the subscriber registered with mobile operators differs from the actual mobile phone user.

Behavioral responses to mobile spam

Nearly all Singaporeans (98.3%) had never contacted their mobile operators concerning mobile spam. This was surprising, as nearly 92% of Singaporeans felt that it was mobile operators that should be held responsible for preventing mobile spam, and almost 20% of Singaporeans stated that they would hold their mobile operator responsible for them receiving mobile spam.

However, more than half of the Singaporeans who participated in this survey (55%) felt that the government should take more severe action to reduce the occurrence of mobile spam with stricter laws and penalties. A smaller number of our participants felt that they should take on the responsibility of preventing mobile spam themselves, either by blocking numbers on their handsets (24.1%) or by changing operators (8.4%).

Of the different options available to them, the majority of Singaporeans who participated in the survey (43.1%) stated that they would most likely complain to their mobile operators should they receive an unacceptable number of mobile spam messages (an acceptable number of messages ranged from 0 to 5 depending on the source and the content of the messages). Almost 10% of Singaporeans also said that they were likely to change mobile operators should they receive an unacceptable number of mobile spam messages, although 91.3% of Singaporeans stated that they felt that mobile operators should be responsible for preventing mobile spam.

84 percent of Singaporeans did not see discontinuing the use of SMS as a plausible option for them to combat mobile spam, which is not surprising as SMS has become deeply imbedded in the lives of younger Singaporeans. Furthermore, almost a quarter of the Singaporeans who participated in this survey stated that they would not take any action even if they were inundated with a large number of mobile spam messages. A second explanation for the lack of action taken by Singaporeans could be due to the fact that they do not see mobile spam as a large problem at this point in time.

Impact of mobile spam on mobile phone operators

The majority of Singaporeans (84.4%) felt that allowing mobile spam to be transmitted through their networks would have a negative impact on mobile operators, and 13% of Singaporeans did not think that it would impact on the mobile operator at all. The rest remained neutral. When combined with the findings discussed in the earlier sections, suggest that Singaporeans are most likely to hold their mobile operators responsible if they were to receive mobile spam above the number that was considered to be acceptable by them. As such, it is likely that mobile operators may be negatively impacted should they allow a high number of mobile spam messages to be sent through their networks.

Conclusion

In conclusion, the overall results of this survey of Singaporeans is that currently, mobile spam is generally not yet perceived to be a major problem for both mobile phone users and governmental agencies involved in regulating mobile networks. Mobile phone users were also most likely to hold mobile operators

responsible for mobile spam should it become a problem in the future. Although there are no current laws in place to regulate mobile spam, it is unlikely that such laws will be implemented in the near future in Singapore.

Other Resources on Spam

Pew Internet and American Life study on Spam on the Internet (April 10, 2005, by Deborah Fallows.

http://www.pewinternet.org/PPF/r/155/report_display.asp

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