

Using SMS for Contact Tracing during a Pandemic

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The column is brought to you in collaboration with Singapore Computer Society (www.scs.org.sg). It deals with the wide spectrum of issues and challenges that confront IT executives and managers in today's dynamic business IT environment.

Are we ready for the next pandemic? "Being ready" does not just include seeking vaccination to keep ourselves healthy. Social awareness and organisation readiness is also important.

During an occurrence of a disaster, especially a pandemic, there is an urgent need to contact the group of people who have been in close contact with the carrier. SARS provided a real life illustration of the importance of contact tracing in reducing the spread of the virus. By contacting and quarantining those who may be infected, it will then be possible to break the chain of infection.

Contact tracing is the process of contacting a group of persons who were present in a specific place and within a particular time frame.

To have the ability to trace these people, there must be accurate information about them. However, logistically, it can be costly and inconvenient to manage people movement in public areas such as malls, airports, on public transportation or even in office buildings.

During the SARS outbreak, several measures were implemented to gather information about people and proper checks were conducted in public buildings prior to entry. Many processes were relatively manual as they involved jotting information down in log books rather than capturing data directly into a database.

It is important to find a cost-efficient method to gather the information needed for contact tracing, while causing minimal inconvenience to visitors and the management and having the least impact on infrastructure investment.

SMS is a good way of informing the building management of a person's time of visit and the locations visited through structured information sent to a database.

With mobile penetration of close to 100 per cent, it would be easy to get someone to send an SMS to designated numbers for the first part of contact tracing (data capturing).

The information that is needed – mobile number, date/time of visit and probably Identification number – can be captured easily. All the visitor needs to do is simply to send in codes of the location he is visiting and his own NRIC number. The mobile numbers and the date/time are automatically captured by the system when the SMS is received.

When disaster strikes, requiring the activation of contact tracing, information can be retrieved quickly, facilitating the disaster team in narrowing down the possible list of infected persons and contacting them within a much shorter time frame. The sooner you can track the affected people, the faster the virus can be quarantined.

An SMS can be broadcast to pre-warn the people who are at risk, urging them to seek medical check up immediately.

With the SMS broadcast, the effective time needed to reach the affected people can be reduced tremendously compared with calling. Although a phone call may still be the preferred mode of communication to ensure that the affected people have been properly advised, the SMS broadcast acts as the first line of contact since the speed surpasses manual calling by at least 100 times.

If information is captured from the start, we will be better prepared to react to a real threat. Apart from having a good tracking system, social responsibility should also be encouraged so that everyone will participate in such a contact tracing programme proactively to facilitate the search process.

Nobody hopes for a pandemic but if it does strike, how ready are we?

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