



sendQuick[®]

SMS Public Service

Enhancing Public Service Delivery With SMS Technology

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INTRODUCTION

The public service is the largest customer facing organisation in any country. The public service has the responsibility to deliver many services to the general public for the social benefits of the general population. As such, such services could not be priced openly, unlike commercial organisations. Hence, public service constantly facing new challenges to reduce costs while improving service delivery. Technology, especially computer technologies plays a central role in allowing public service to reduce costs, as well as delivering new services. Over the years, innovation like phone transactions and more recently internet transactions, are examples of innovations that has reduce costs as well as enhancing the customer experiences. As the mobile and computer technologies converge, new innovative services are available for the public service to adopt and deploy. Two key technologies are Short Message Service (SMS) and Mobile Internet on mobile phone (WAP).

This document will focus on SMS technologies and how SMS can be used by public service to help to reduce costs, streamline operations and allow public service to deliver superior customer experience by offering service on the go using SMS technologies.

INTRODUCTION TO SMS

Short Message Service (or known as SMS or text messaging) are found on all mobile phones across across all technologies, including GSM, CDMA and 3G. SMS is a short message that can be sent from a phone to phone, and pushed to the recipients device when sent. The technology delivers each message as a 'package' of 160 characters but current improvement allow them to be sent as 'long message' (a few SMS to be read and delivered as a single message) which is known as conentrated SMS. Some key advantages of SMS includes, short messages of 160 characters are delivered instantly across all mobile phones and network, good interoperability between networks and technologies (GSM and CDMA), non-intrusive nature, always operational, service is activated by default to all phone users, low cost while most cost less than a normal voice call, sender pays, free for the receiver and messages delivered across networks (roaming) capability.

With mobile phones becoming the dominant mobile device that many people own, SMS becomes the most popular low cost messaging medium for all users. Furthermore, the mobile penetration is very pervasive (countries like Singapore, Hong Kong and Taiwan and more than 100% mobile penetration in their population) and the popularity of SMS (the Philippines send more than a billion messages a day) making mobile phones and SMS the most natural choice for banks to reach customers.

PUBLIC SERVICE TO GO MOBILE

While there are many areas of transactions that can use SMS, the key public service operations that will be discussed are centred on information dispatch, 2 way transactions and emergency messaging.

SMS FOR INFORMATION DISPATCH

SMS can be deployed in dispatching information when required, information the customers on transaction updates and others. There are many areas that SMS can assist to reduce cost and improve th operations. The following sections document how the various public service operations can benefit from using SMS.

SMS FOR TRANSACTION STATUS

In the public service operation, one of the key cost component is information delivery and acknowledgement. In this process, information (sent via normal mail) is an important cost component in terms of materials, postage and manpower cost.

SMS can be used to send messages like:

- license renewal or collection (e.g. driving license, road tax, other government license like liquer, etc.)
- transaction status update (e.g. passport collection, medical records collection etc.)
- transaction status for applications (e.g. employment pass, building applications, land related applications, others)
- business and citizen related applications

Benefits to Public Service

- Improve service delivery and reduce paper based communication
- Reduce transaction costs (mails reminder cost about S\$1.00 in materials cost compared to SMS cost of US\$0.20). This translates to a savings of 80%.
- Faster collection of documents, reduce storage cost and business risks/liability
- Reduce transaction administration cost (SMS sending is automated)

Benefits to Customers

- SMS reminder service is prompt and direct (to the phone)
- Convenience to users
- SMS is non-intrusive and message is portable
- Received immediately and can act on the information immediately

SMS FOR REMINDERS

SMS present a good alternative to send reminders to customers. Services include:

- Reminder for collection of materials
- Appointment reminder for public hospitals and clinics
- Fees payment reminder
- Reminder for income tax filing
- Reminder to businesses

Benefits to Public Service

- Provide a new channel (SMS) to inform customers
- SMS present a lower transaction cost (S\$0.05 - S\$0.10) compared to call centre, phone banking or over the counter activation
- SMS provides convenience of automated sending of reminders
- Relieve other channels, reducing cost to public service
- Better public infrastructure utilisation

Benefits to Customers

- Reminder service is useful
- Information is delivered quickly (compared to letter) and portable
- Better service to customers

2 WAY SMS INTERACTIONS

SMS can be used in most of the public service operations. The following sections summarise some of the operations that can use SMS to improve service delivery.

SMS FOR INFORMATION ENQUIRY

The time difference between sending the transaction status update, application update and others makes delivery of timely information to customers more costly and complicated via the traditional means. SMS presents an on-demand alternative for customer.

Some on-demand (2 way) transactions include:

- enquiry on application status
- enquiry on account status
- enquiry on account information (e.g. tax account for individual or company)
- general information enquiry

Benefits to Public Service

- Information delivery anytime anywhere
- Self-service transactions, bringing convenience to users
- High transaction cost (compared to counter, IVR and call centres)
- Ride on existing SMS channel (investments)

Benefits to Customers

- Information on demand anytime anywhere
- Transaction is portable
- Make timely decision with information transparency

SMS FOR SECURE REMOTE ACCESS

In the development of a connected global community and connected workforce, public service employee need to be empowered to work from any location at any time. This is true with the popularity of mobile broadband and push towards work-life balance to all employees.

As more users access data remotely, there is a need to have a reliable and secure remote access channel to employee. This will ensure the convenience of working anywhere (out of office) while maintaining the required data integrity of these transactions. SMS can play a role in 2 factor authentication for the users.

Some 2 factor authentication transactions include:

- secure access to remote server via SSL VPN
- secure access to web portal/transactions
- second layer confirmation for transaction verifications
- confirmation code for transaction verifications

Benefits to Public Service

- Secure access allow employees to work anytime anywhere delivering a more efficient public service to the end users
- Maintain high level of data integrity
- Data protection
- User access to users

Benefits to Customers

- Ensure data integrity to public data
- Better service delivery
- Higher trust to the public service data protection level

SMS FOR NOTIFICATIONS

SMS for notifications can be deployed in a few ways. They are:

- SMS alerts and notifications for IT systems failure (for IT managers)
- SMS notifications for critical government missions (like police, defence, medical)
- Emergency messaging for BCP (e.g. SMS medical information alert to medical staff)
- SMS alert for public service (e.g. terrorist attack)
- SMS to key personnel (e.g. police, army, government ministers, etc.)
- SMS for critical systems failure (like power, utilities, water and others)

Benefits to Public Service

- Easy to deploy as SMS is easily available
- Fast deployment for all users and mobile phone is ubiquitous
- Multi-faceted deployment (can be used in all types of scenarios)
- Support standard IT messaging format (for IT)
- Leverage on existing SMS infrastructure
- Reduce downtime, reduce opportunity cost (loss of business)

Benefits to Customers

- Constant service availability
- Reliability of services by the public service
- Fast response by public servant on emergency situations

SENDQUICK SMS FOR PUBLIC SERVICE

sendQuick SMS gateway is an appliance based SMS for banks and enterprises. As an enterprise class system, sendQuick support multiple types of configurations, from single server to RAID and High Availability (HA) infrastructure to ensure continuous SMS service availability to banking customers.

sendQuick has the following features for public service operations as listed below:

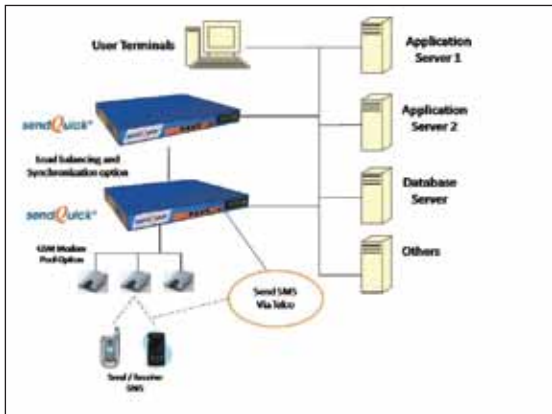
- Interface to back end system via HTTP Post, TCPIP messages, Secure FTP, ODBC and others
- Web interface for direct messaging for different users to send different messages
- Bulk messaging capability
- High throughput via Telco connection via HTTP Post or SMPP 3.4
- GSM modem messaging as a backup capability
- 2 way messaging to banking system for transaction enquiry
- IT notification messaging format (SMTP, SNMP Trap and Syslog)
- Database integration via ODBC connection
- Other connection method that can be customised

Unlike normal applications, sendQuick is delivered as an appliance server bringing the benefits of appliance server to the IT and application team. sendQuick has a low Total Cost of Ownership (TCO), maintenance free and reduce the support cost for public service. Furthermore, all sendQuick systems comes with one (1) year standard warranty. As an appliance, it is easy and quick to deploy for the standard modules.

sendQuick has been deployed in more than 1300 customers worldwide in more than 15 countries across governments and industries in many variety of applications.

TECHNICAL OVERVIEW

sendQuick works on standard TCP/IP protocol, connecting to the network using standard 100BT with normal RJ45 cable. For Gigabit ethernet, the server that support this high speed network can be chosen. The schematic diagram is illustrated below.



RETURN ON INVESTMENT (ROI) COMPUTATION

sendQuick presents a good ROI for most organisations. In fact, the ROI can be achieved fairly easily for most organisations. As an illustration, we are using just a few services that an organisation may deploy. If the organisation deploy more services, the ROI will be shorter (faster).

- Assumptions: If public service has,
- 1000000 applications per month
 - Send 50000 acknowledgement and reminder letters per month
 - Handle 50000 call centre calls per month
 - Per SMS cost is US\$0.10

- a) Cost Savings on Communication with Customers on acknowledgement and reminder letters
- Cost of sending a notice via normal mail: (50000 x US\$1.00) = US\$500000
 - Cost of handling a call via Call Centre (500000 x US\$2.00) = US\$1000000

Assumptions: 20% of the letters are replaced to SMS traffic

Cost savings from SMS service includes:

- i) $(20\% \times 500000 \times US\$1.00) - (20\% \times 50000 \times US\$0.10) = US\$90000$
- ii) $(20\% \times 500000 \times US\$2.00) - (20\% \times 50000 \times US\$0.10) = US\$190000$

Cost savings in using SMS to deliver public service is US\$3360000 per annum

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sendQuick® is the industry's leading appliance based SMS gateway specifically designed for enterprise messaging. Developed in 2004, it has since been implemented by more than 1300 companies worldwide across all continents.

As a low cost plug-and-play appliance that is reliable, scalable and compatible with key mobile technologies like GSM and CDMA, sendQuick® has been applied successfully across various industries. Examples includes banking, finance, insurance, manufacturing, retail, government, logistics, education, healthcare; for purposes like IT alerts and notifications, 2 factor authentication with SMS OTP (One Time Password), marketing campaigns, emergency broadcasting.

sendQuick® is developed by TalariaX Pte Ltd, a Singapore incorporated company focusing on mobile application development specifically on SMS, MMS and 3G technologies. Based on the channel development business model, TalariaX™ takes pride in working with strong partners, distributors and resellers to bring the benefits of SMS to enterprise customers worldwide.