

Emsg SaaS & Intranet Edition

Version 8.1.0 May 2023



www.emsg.co.nz

Emsg Overview

"Software as a Service"

&

Intranet Edition

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Introduction

Emsg gives customers the ability to utilise their LAN, Intranet and Internet infrastructure to send text messages directly to mobile phones and pagers from their email system, web-browser (Explorer, Chrome), mobile Internet devices and any software application or device capable of sending an email or requesting a web page.

Emsg is delivered to the customer in two forms;

- Software as a Service (SaaS) over the Internet
- On-site for high volume, mission critical messaging

Two-way messaging is supported on all mobile networks with automatic reply matching and optional confirmation of status and replies returned to the message originator by email. In addition, mobile users may initiate requests for information by texting keywords to the appropriate Emsg system number and receive information by return message.

Features & Functions

- Ubiquity and general acceptance of text messaging in the community
- Unlimited number of users and message recipients supported
- Ability to send messages to individuals or large groups
- Flexible grouping, searching and groupcall facilities
- Multi-company structure supports departmental independence
- Comprehensive call logging with time-in/time-out timestamping
- Departmental and profit center usage tracking and costing by sender/receiver
- Fast and direct access to multiple message services simultaneously
- Automatic cleanup of call history and purging of failed messages
- Supports up to 125 concurrent serial networks (unlimited TCP/IP)
- Runs in the background with minimal administrative overheads
- Microsoft operating system & databases common to many sites
- SaaS implementation requires no software installation and low technical resource

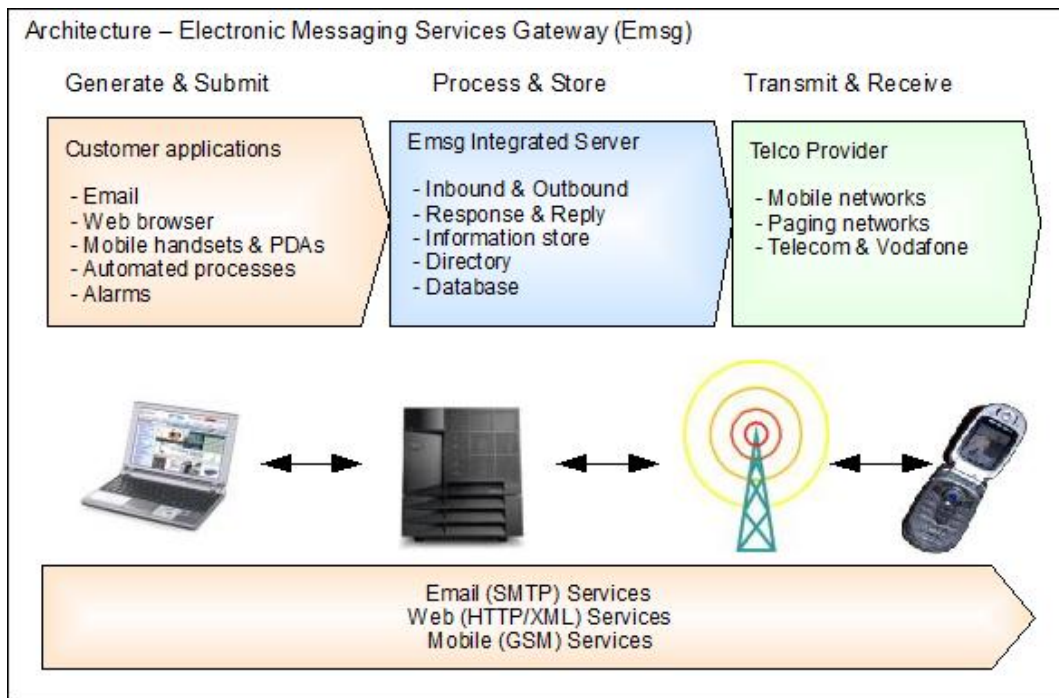
Benefits

- Low cost of communications through text messages
- Immediacy of information delivery gets attention of recipient
- Rapid delivery of vital messages to the right people almost anywhere
- Non intrusiveness of message delivery when devices are in silent mode
- Low cost of ownership utilising existing LAN & Internet resources
- Low cost of implementation, training and administration
- Zero capital investment for SaaS over the Internet

Emsg Architecture

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Emsg provides customers with a set of "ready-to-use" interfaces including email and web applications that allow quick and seamless integration of text messaging with existing business applications without the need for highly skilled technical staff. An Emsg SaaS solution can be implemented in minutes, while on-site system takes less than a day.

Application Components

Emsg runs on the Microsoft Windows Server platform utilising the built-in Internet Information Services (IIS) HTTP & SMTP Servers and Microsoft SQL databases.

Emsg Server

The Emsg Server is the heart of the Emsg solution, processing all messages received from the web, email and mobile networks then initiating outbound communications sessions with multiple messaging network gateways and recording all activity in the database.

Emsg Control Center

Application providing the setup and administration functions necessary to operate an Emsg Server, including backup, network configuration and viewing of communications logs.

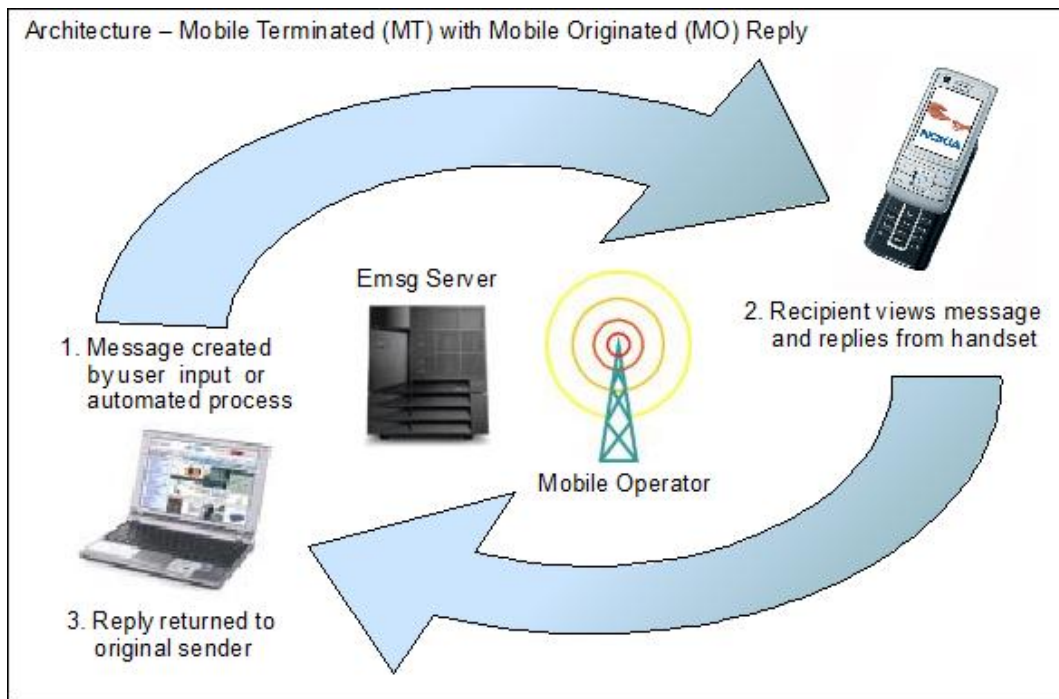
Emsg Web

Web application providing online messaging for users and general maintenance functions for administrators, including add/change/delete of mobile device numbers in the database.

Entrap

Eventlog monitoring and alert management for Microsoft Server Eventlogs.

Sending & Receiving Text Messages



Emsg aims to make the complexity of computer systems and connectivity with the mobile networks quite transparent to the user.

As far as the user is concerned, message submission is as simple as sending an email or creating a message using the web application. In just a few clicks the message is on its way to the intended recipient, or if Emsg is integrated into business processes, the message might be generated automatically in the background without any user intervention at all.

Once created, the message is transported to the Emsg server over the network using SMTP or HTTP and delivered to the message queue in an smtp format text file. Emsg's inbound process extracts the sender, receiver and message details, applies acceptance/rejection rules and stores in the database ready to send.

The outbound server process picks up messages from the database queue and initiates communications sessions with each target network to send all waiting messages to the mobile operator's Short Message Service Center (SMSC), which usually responds with a message success status.

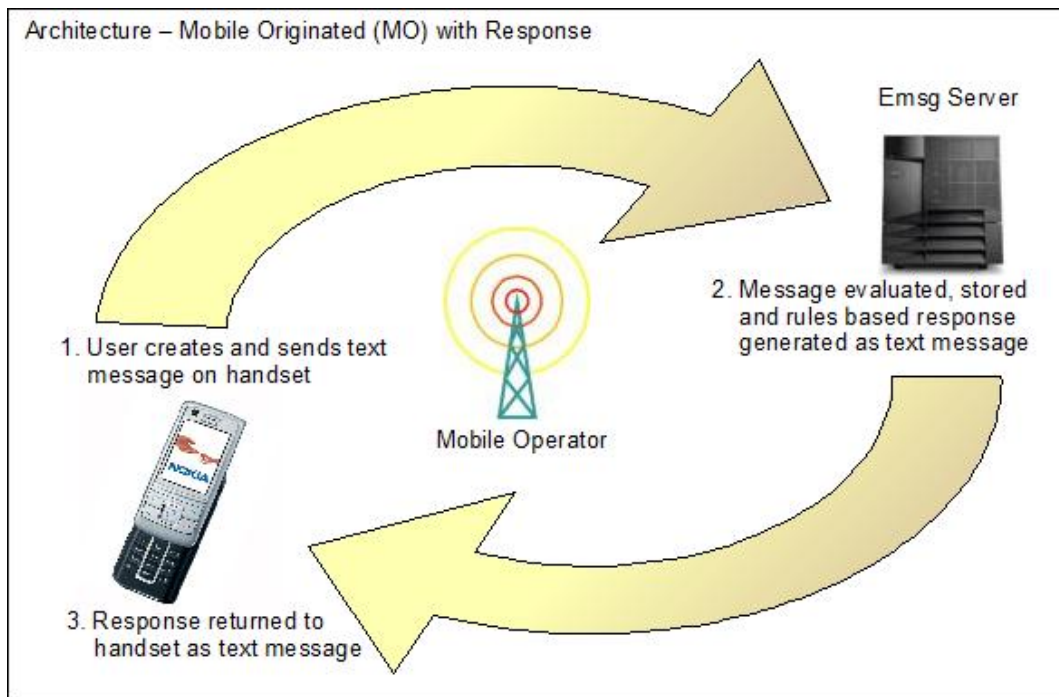
Normally, it is only a matter of seconds for the message to arrive on the handset, however delays may occur if a network is heavily congested. The recipient reads the message and, if appropriate, sends a reply which will arrive back on the Emsg in similar time, be processed by the inbound server and logged against the original message.

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Requesting & Receiving information by Text Message



Mobile users can initiate the sending and receiving of messages from an Emsg Server.

A mobile handset may initiate a request to the Emsg Server by creating and sending a "keyword" text over the mobile network to one or more numbers or shortcodes allocated to an Emsg Server. The server validates the keyword request, retrieves information matching the request from the database and returns the information in a text to the mobile originator. A mobile handset may also simply create and send messages to an Emsg Server to be updated and stored in the database..

In summary, Emsg is built robust and effective, ideal for use in high volume, high priority messaging environments such as hospitals, emergency services and university campuses. In the corporate sector, Emsg delivers reliable and timely information such as stock levels, currency rates and computer system alerts to staff and customers wherever they are.

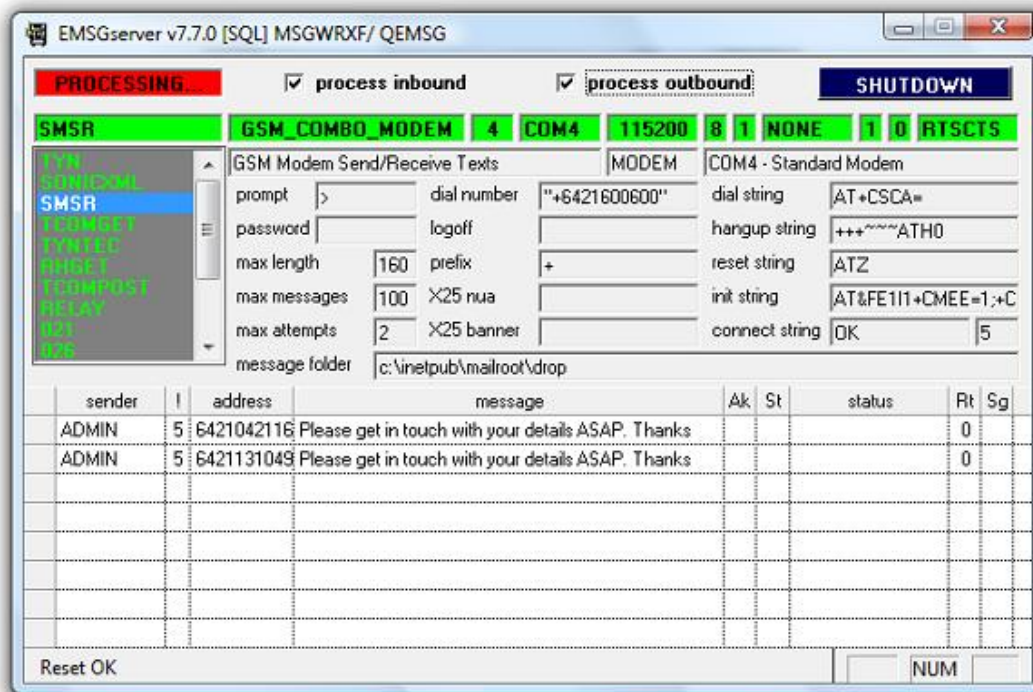
Key Features

- Delivery usually less than a minute
- Replies logged against original message
- Sender emailed message status and replies if desired
- Hundreds of recipients may be included in a single submission
- Users only need to know how to use everyday tools such as email or browser
- No need for users to have in depth understanding of network complexity
- Standard reply to numbers and shortcodes supported
- Full message id and message status tracking

Emsg Server

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The Emsg Server process continuously polls inbound queues for new messages, which are then validated and added to the database and outbound message queue ready for sending depending on the status of the sender and receiver.

All requests and replies are handled by the server process, which performs the keyword lookups for the information in the database or matches replies with the original message sent and generates a return email if configured to do so.

The Graphic Use Interface (GUI) shown above gives administrators visibility into the realtime operation of the server process itself. In the background, comprehensive message status and communications logging is being performed with viewing of logs available through the Emsg Control Center.

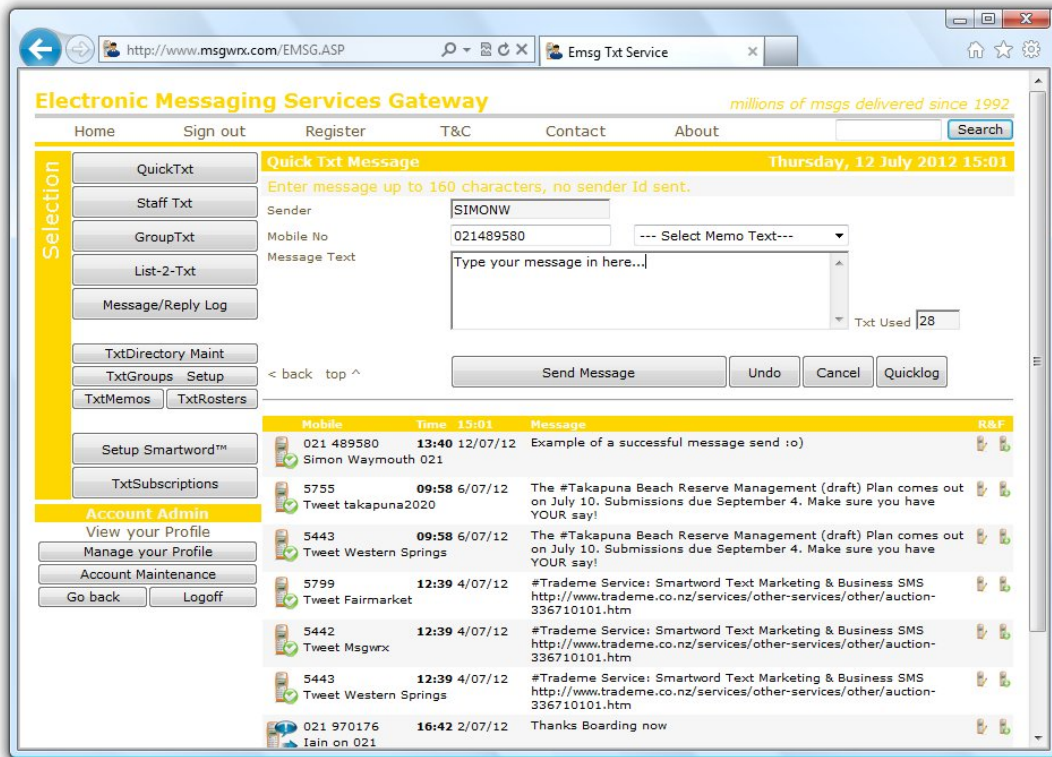
Key Features

- Long messages split into multiple segments
- Built-in and configurable rules for acceptance and rejection of senders/receivers
- Anti-spam validation to eliminate unnecessary sending of unwanted messages
- Rosters to ensure the right people get sent the right message at the right time
- Multiple instances of outbound server can be run to increase throughput
- Separate instance of inbound server can be run to increase throughput
- Excellent reliability and small memory footprint

Emsg Web Application

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The Emsg Web Application gives users and administrators online access, from anywhere on an Intranet or the Internet, to day to day activities such as message sending, review of message logs, and maintenance of staff (recipient) directories, standard messages, rosters and groups.

The Emsg web is easy, fast and effective to use, requiring no software to be loaded on a user's workstation and is available in a full featured version for desktops or a smaller, "cut-down" version for mobile devices such as the 3G handsets and PDA devices (see graphic above). Of course, some users like to use the mobile version on their desktop computer.

The web application requires the user to login to the system using their ID and password, which is validated against the Emsg database. Users can be allocated different levels of authority to control whether they are able to maintain staff directories or view messages sent by other users.

Key Features

- Login ID and password challenge
- User authority levels; Administrator, Security and Standard User
- Individual, multiple and group selection of recipients
- Visual keys to successful, failed and reply messages in log
- "Canned Messages" selectable at send time to cut down typing
- Search facilities by group, name, location and job position
- Easily modifiable "classic" .ASP web page construction

Emsg Technical Information

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Emsg Software as a Service (SaaS)

Customers wishing to subscribe to the Emsg SaaS version can do so by completing the online form at www.emsg.co.nz. A login ID and password is provided for access to online messaging pages and logs with maintenance functions provided for administrators. Email submission requires the sender's email address to be registered to the login ID to enable return of replies. Email headers sent to the device are selectable.

Requirements

- Any web browser on a computer workstation or mobile device and internet connection
- Any email client or email system that can send text format email messages
- Any other software application able to create and send smtp emails
- International GSM Address format example: 6421number@emsg.co.nz
- Local (NZ) Address format example: 027number/27number/027.number@emsg.co.nz
- Any software application capable of calling HTTP GET/POST commands

Emsg Intranet Edition

An on-site implementation requires the customer to provide an appropriate hardware and operating system platform on which the Emsg Intranet Edition Server can be installed.

Requirements

- IBM PC processor minimum 266+ mhz Pentium, 500+ Mb RAM & 2+ Gb Disk
- CD ROM drive and appropriate network/internet and serial port connections
- Microsoft Windows Server with IIS WWW/SMTP servers running
- Microsoft SQL Server or MS Access MDB (suitable for low volume)
- Access agreements with mobile operators and/or gateway providers

Supported Networks & Gateways

Emsg includes a choice of protocols and connectivity options to suit the requirements of the customer in terms of volume, priority and pricing models available from the New Zealand Telcos and gateways in New Zealand and overseas.

- Vodafone New Zealand
- Telecom New Zealand Mobile & Paging services
- Any GSM network interconnected with Vodafone or Telecom NZ
- Support for mobile gateway providers including Sonicmobile, TynTec and others
- Connectivity enabled over TCP/IP, GSM, X.25/FR, DDS and Dialup protocols

General Rule: If a target mobile gets a text sent from a Vodafone NZ handset, Emsg will also be able to send messages to it. If not, the target network mobile operator does not accept messages from other networks, while some operators will charge for the receipt of texts and limit availability of service to "pre-pay" mobiles when roaming.

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