



SIMPLY TAKE CONTROL



SmartAlerts™ v1



The Business Challenge

New technology is allowing customers to engage with businesses in a real time, self-service manner through more and more channels. This new multifaceted engagement model, coupled with the rapid evolution of new payment types, is creating a complex point-of-sale revolution.

This, in turn, is creating more data and the need to be able to make decisions quickly and accurately. In order to take advantage of these changes and to stay competitive, organisations have to seek solutions that can help manage this revolution, in an operationally efficient manner.

Additionally many of these organisations have customers of their own, be that cardholders, business Clients etc. and speed of notification around either positive or negative events is a clear differentiator when it comes to customer engagement and customer experience.



The Solution

SmartAlerts™ reduces the need for human intervention by automating the customer contact process, using technology that is familiar to them, easy to use and can be accessed at any time, in any location.

Utilising SMS services, SmartAlerts™ can be completely tailored to a business's needs. A self-service portal is provided that allows for the definition of customer strategy regarding:

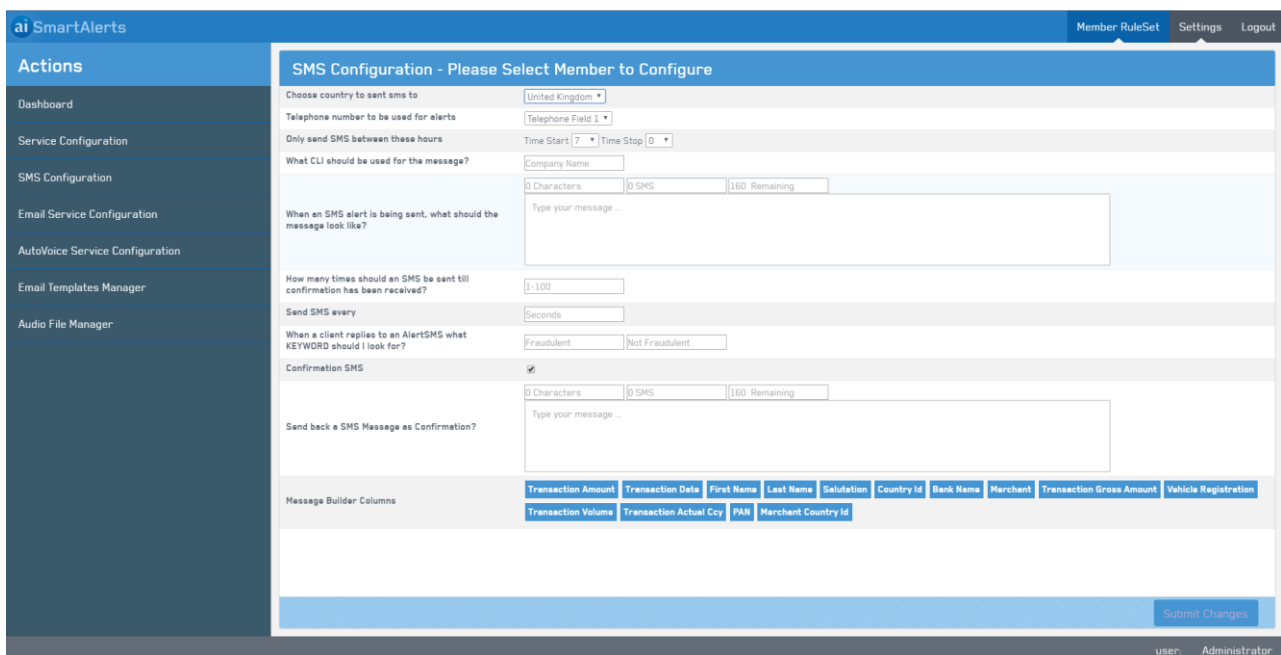
- 1 way messaging
- Automated alert and subsequent alert generation based on rules defined within RiskNet®
- Time between polling for alerts
- Message content
- Coded responses to determine how alerts should be updated into RiskNet®, subject to responses received
- Frequency with which messages should be sent
- Keyword scrubbing in responses
- Out of hours settings
- Re-queuing in event of no response
- The transaction to proceed (in a real-time environment)
- Removing the need for outbound calls
- Automated customer contact and callback requests to support representative
- Blocking suspected fraud transactions

Each service component can be used in silo, or in turn, dependent on response, or lack thereof.

SmartAlerts™ provides a low maintenance, easily set up suite of communication methods that can be quickly configured to meet a wide range of needs, from direct customer engagement, to business notifications.

As with all of ai’s products and services, SmartAlerts™ is self-service and comes with a Client branded management and reporting portal.

This enables the user to set the various SMS delivery parameters and message content.



This covers:

- Multi member set up
- SMS configuration (content, type and response)
- Test SMS
- Service configuration
- Service dashboard (SMS service statistics etc.)



Business Benefits

In today's technological era, customers are always connected and expect to be contacted by their chosen service providers. In the same way that they require instant access to view their bank accounts, and transfer money, a business can leverage off this connectivity and be provided with intelligence directly from that customer. That way, a customer will maintain control of their contact strategy and positively position themselves at the heart of the decision making process.

Using SmartAlerts™ will save time, money and effort in exposing critical information required by an organisation. In the case of fraud management, this will be achieved by reducing the amount of reviews (and hence resource) that is required by automating the validation steps and providing accurate, actionable intelligence directly from the source to the analyst team. Hence, they are able to spend longer investigating the more complex cases and make better decisions.

From a marketing perspective, SmartAlerts™ provides a positive customer engagement opportunity to either reward a good customer for remaining loyal, or to reassure them that they are protected from being exposed to negative factors, such as fraud.

Companies can give customers a tailored experience and minimise the risk of churn with SmartAlerts™, a critical business factor in today's congested market-place.



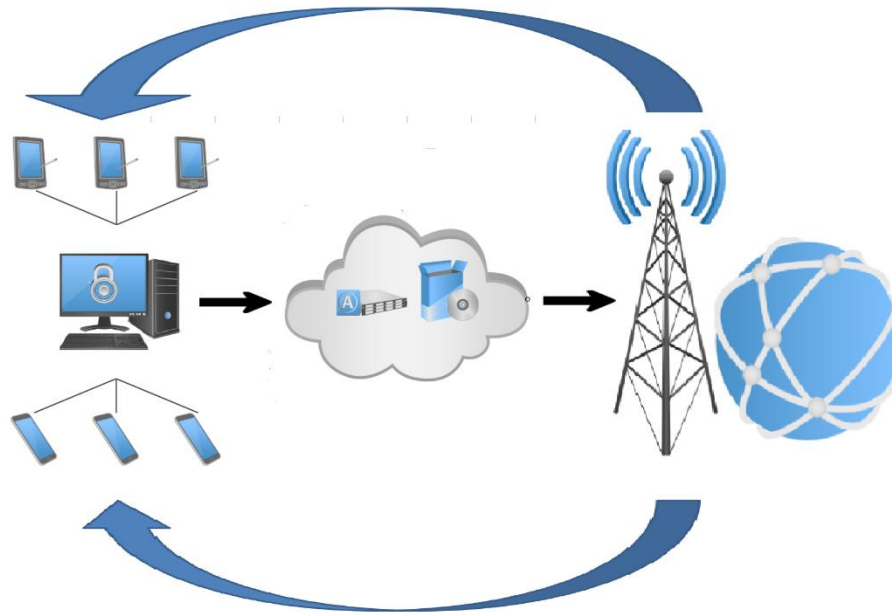
Technical Overview

SmartAlerts™ is a customer engagement platform designed to streamline B2B and B2C communication.

This event-based solution is designed to alert businesses or consumers, using SMS. SmartAlerts™ reduces the need for human intervention in sending fraud alerts (outbound.)

Communications are managed centrally, supported by a suite of reports, dashboard and individual work queues.

The software facilitates bulk communications at reduced costs and empowers users to have a consolidated view of outstanding communications, whilst ensuring that messages are not lost.



The above diagram illustrates the interaction of client and end users to SmartAlerts™ application in cloud with global Telecom Service providers

Solutions Development

SmartAlerts™ offers a front end user portal that establishes the customer contact strategy for SMS through various control settings and configuration:

- 1- Service overview dashboard: This displays the high level activity across the system.
- 2- Service configuration: General configuration of the service. ai SOAP service destination URL input and poll frequency.
- 3- Queue ID and member configuration: This allows the option to create/delete and edit queues and members. (Queue ID being the highest



configuration level and considered the most important, if Queue ID does not match then Member ID configuration is used.)

- 4- SMS configuration: A user can configure SMS settings for a queue/member. The user is allowed to configure country, time restrictions for outward SMS's, frequency, outcome codes, reply message template, outbound message template etc.

Software Architecture

In its entirety, the SmartAlerts™ solution is comprised of three components: a SmartAlerts™ web based application, a SmartAlerts™ (alert processing) service and a SmartAlerts™ SMS and email features (powered by Smartz Chat.)

The SmartAlerts™ Web Based Application component has been written using the latest MVC technologies. Its backend includes PHP, an open source server-side language designed primarily for web development, and mysql. Its frontend makes use of html and css to build visual aspects of the application with javascript acting as a Client side data processor. Within the scope of these languages two frameworks are used. PHP's well maintained Laravel framework and javascript's JQuery make the application secure, functional and perform at its best.

The main purpose of this component is to house user configuration as well as information about the alerts being processed. The message content to be sent SMS is designed and when interacted with data, provided by RiskNet, from a specific message about current matters. Depending on the configurations per member and queue, alerts would be processed and acted on differently.

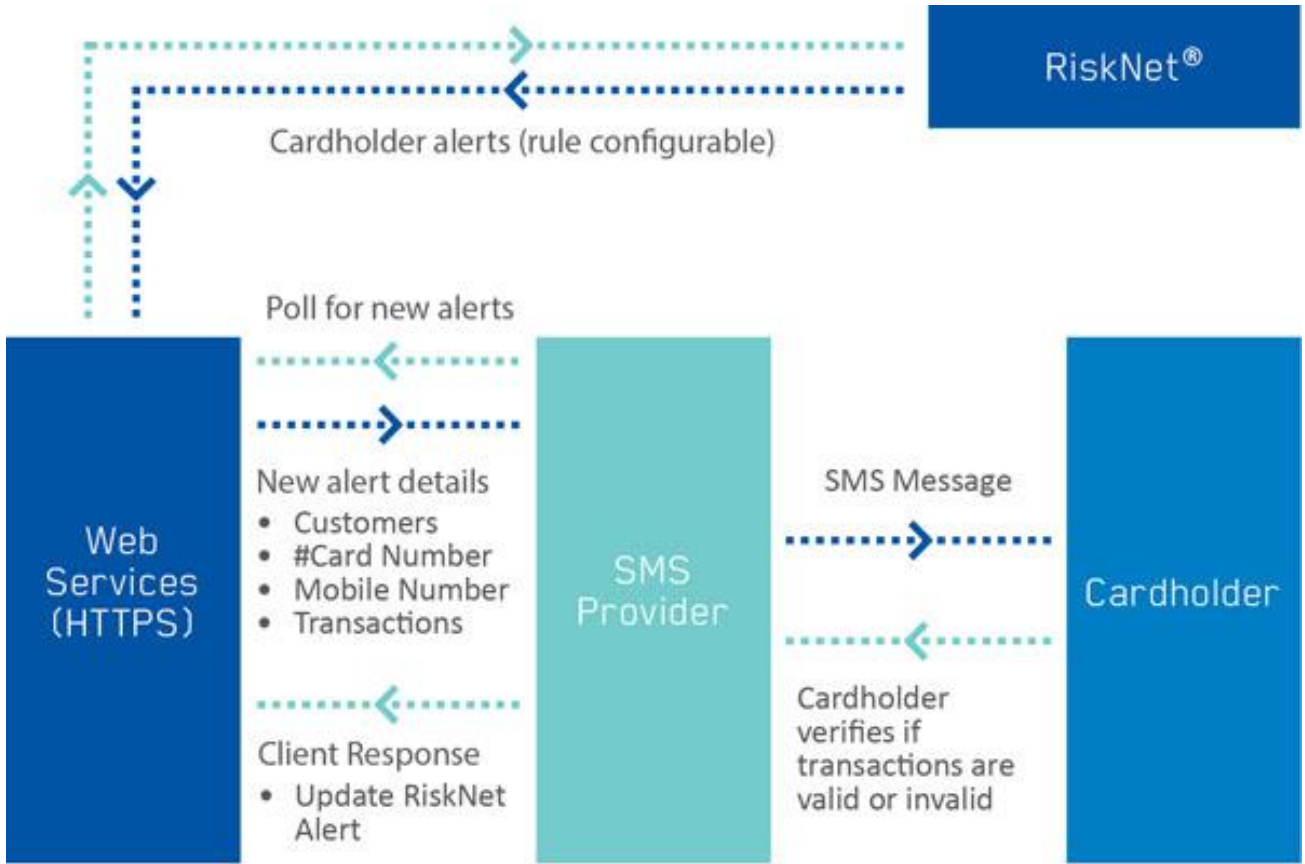


SmartAlerts™ Alert Processing Service

This component was written using two technologies; the general purpose programming language python and mysql. Python is also an open source language and proves to have exceptional performance benefits. Additionally, because of its large and long term support base, many problems can be quickly and efficiently solved thanks to the wide selection of available modules.

The main purpose of this component is listed in order of execution:

- To communicate with the SOAP API in RiskNet® and retrieve alerts that need to be worked
- To record the alerts in the database and process the alert messages that need to be sent depending on member or queue configuration
- To communicate with the SmartZChat API concurrently, delivering alert messages to be sent and receiving responses to alert messages that were previously sent.
- The responses to previously sent messages are then processed and (according to user configuration) determined to be fraudulent, not fraudulent or other.
- Once the alert status is determined, the alerts information is updated in the mysql database as well as at RiskNet® by communication with their SOAP API



Executive Summary

In today's omni-channel global marketplace a 'consumer self-service' revolution is well underway. Together with the move to 'instant mobile access', it means that large multinational organisations face a real dichotomy of needing to implement first class front of house services, but are using ageing back-office systems. Added to that are a plethora of new security and compliance requirements, as fraudsters and criminal gangs become ever more sophisticated.

It is quite evident to most observers that large multinational institutions' back-office systems are under ever increasing strain. Financial organisations and large merchants are taking a piecemeal approach to integrating creaking legacy systems with new digital solutions. This amalgamation of real-time and batch applications, often creates high cost human endeavour and complex processes that simply dilutes profit and adds cost.

It is clear that agile, flexible and real-time tools and software are essential, for future success. The ai Corporation (ai) has a long and exciting heritage as one of the world's leading companies in risk management. For over 20 years, ai has provided solutions to some of the world's largest financial institutions, international merchants and other major payment service providers.

ai's global customer base, enjoy outstanding products and services which are based on making things simple for them – they are truly self-service and easy to use. This means customers can make decisions and implement them immediately, unlike many competitor products.

Today, ai's self-service fraud detection rules engine is considered by many industry thought leaders to be the best in the world. Their unique solutions, including new



state-of-the-art neural technology, protect and enrich payments experiences for more than 100 banks as well as some of the largest merchants and processors across the globe.



What Next

SmartAlerts™ is not just limited to the notification of potential fraudulent activity. By leveraging off the wealth of data flowing into RiskNet® the service can become a comprehensive customer engagement strategy to provide a better customer experience with real time account updates, marketing information and sales opportunities. Please contact ai for more information or to arrange a demonstration.



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