CASE STUDY: GINTEL AND TACIRA

Machine to Machine to Human

How voice and AI integration can boost IoT services and reduce costs

Intelligent voice control for managed security service

Providing managed security solutions to residential and commercial property has become a significant business, but it's proving to be increasingly challenging as providers seek to scale. Not only are alarms more sophisticated, covering a growing range of triggers, but users also demand instant notification of any incursions or threats. They seek reassurance, so that they can continue to enjoy peace of mind.

The growing need for real-time alarm monitoring

The companies that offer managed security services often rely on call centres, with staff deployed to contact the designated contact person with responsibility for the property. If an alarm is triggered, the property holder may be called, and appropriate action taken. This can require considerable investment in call centre agents and operatives. As a result, while growing in popularity, such services are costly, resource intensive, and may also struggle to keep pace with evolutions to security sensors and alarms.

Tacira, a service provider offering managed network and smart city IoT services sensed an opportunity to deliver an enhanced, more intelligent security service by capitalising on advanced call management and processing capabilities, but with a leaner organisation and fewer resources to service the customer interaction required.

The authentication problem

In a typical managed security service, when an alarm is detected, this triggers a phone call from a service centre to the designated contact person for the property concerned. The called party must authenticate themselves to the agent, so that the security company can implement the required actions. Authentication is necessary, to avoid any attempts at fraud, but it is time consuming and is a significant contributor to the costs of service delivery.

Tacira's research had shown that 80% of alarm triggers are either minor or false and therefore do not require any physical intervention. In traditional managed security services, this creates a huge cost drain and leads to inefficient allocation of resources. Tacira realised that eliminating this step and automating the customer validation process with an advanced call handling solution could both accelerate response times for situations that really do require intervention and also dramatically reduce costs.

Reimagining the service workflow

To achieve this, Tacira needed to completely reimagine the service workflow to ensure the tight integration of advanced voice capabilities with other key processes. The automation of the identification process and connectivity with other elements of the service meant that Tacira needed to connect:

- Core CRM, containing key customer data, service profile and security information
- Alarm collection from sensors
- Alarm classification
- Call control and processing, for inbound and outbound traffic
- Call distribution to agent operatives
- Artificial intelligence and natural language processing

By combining these elements into a structured workflow, Tacira would be able to introduce a new level of automation, allowing designated individuals to be authenticated and informed of relevant events and alarms, before being passed to an agent in the call centre. Tacira's engineering team had already created an innovative platform to process and manage alarms, tightly integrated with the CRM which stored customer profiles and data.

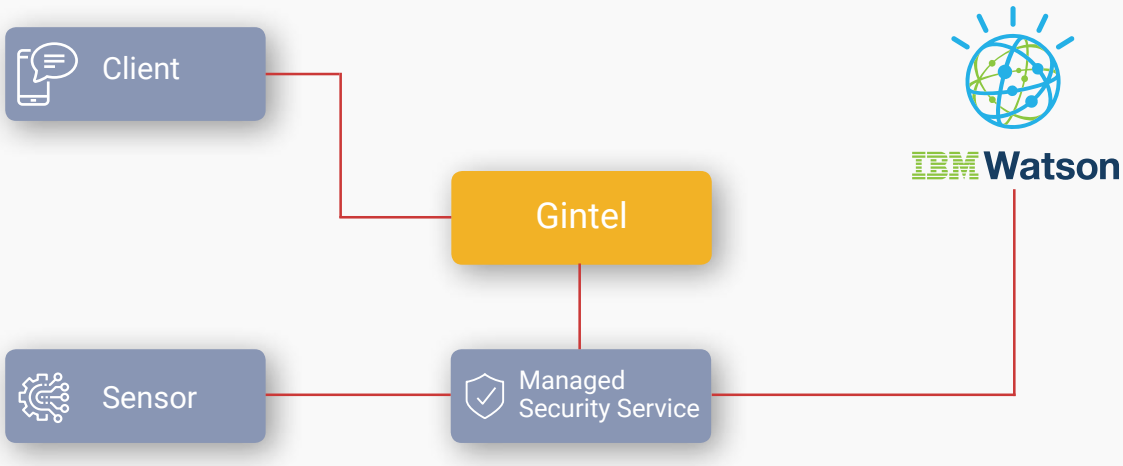
They needed to access a rich voice services platform in order to control the call handling elements of the enhanced service.

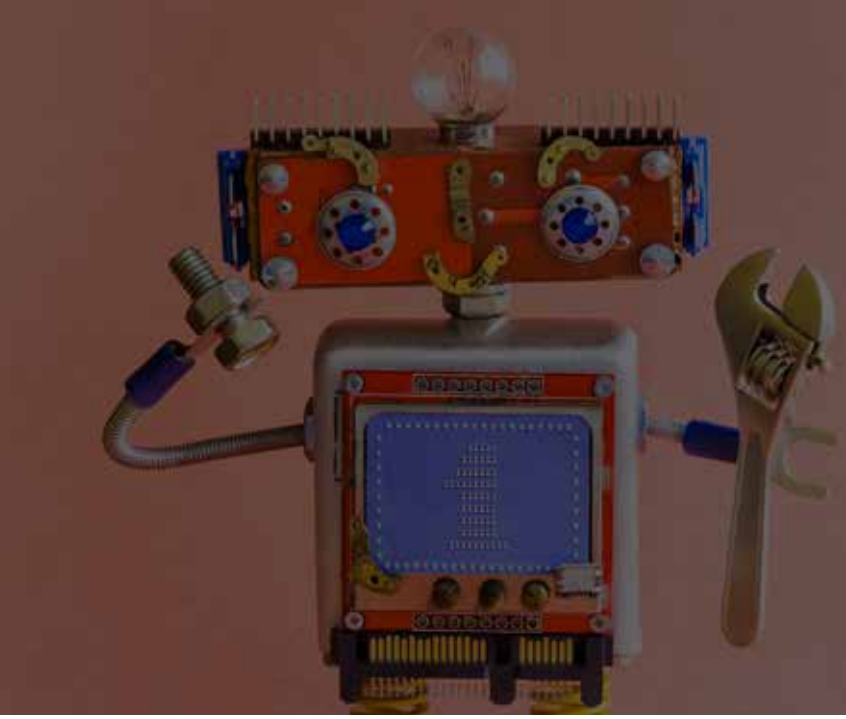
The team partnered with a Gintel cloud partner, which has deployed the complete Easy Business Communications Suite (EBCS) from Gintel. This is equipped with a flexible API, allowing integration with third-party solutions.

This means that new use cases and applications can be created, which leverage the call handling capabilities supported by Gintel. Tacira used this API to integrate the advanced voice processing engine at the heart of the Gintel solution, with its core alarm processing system. The resulting architecture is shown in Figure 1.

At the same time, Tacira also wished to capitalise on the advanced artificial intelligence and natural language capabilities offered by IBM's Watson Services solution. This would provide the means to interact with individuals in the event that any alarms are triggered. Watson enables questions and answers to be raised, so that people can interact naturally with an AI-based speech processing system. By processing the initial authentication sessions automatically, a leaner, more efficient call centre could be operated for more complex enquiries.

Figure 1: Remote, managed security systems with AI and intelligent call processing





Tacira was able to offer a premium managed security service for residential and commercial properties, more efficiently and at a highly competitive price, benefiting from the cost savings delivered through its integration efforts and process automation. However, the solution was also built to scale.

Integrating AI and intelligent voice processing

With the elements in place and the integration completed, Tacira was able to launch a fully-featured, managed service – but from a central location reaching multiple regions and countries. When an alarm is detected at a protected property, it triggers a response on the centralised TacReceiver node.

This interrogates the database to uncover the alarm conditions and the required actions. It also obtains details of the customer and the security credentials required. The credentials are used to create a security authentication dialogue that is unique to the user. This is relayed to the Watson Services platform, in readiness for the next step.

Once the conditions are known and matched with a customer record, the system makes an API request to the Gintel EBCS voice platform, which, in turn, makes a call to the subscriber via a dedicated interconnection with a telecoms voice carrier.

When the call is answered, the client is connected, via SIP, to the Watson Services platform, which then executes the dialogue with the client, collecting the required information and then providing the results to the TacReceiver.

When the authentication process is complete, and depending on the nature of the alarm and the require action, the customer can then be transferred to the call centre using the existing live connection.

The Gintel EBCS also includes ACD functionality, which means that calls can be processed according to the skills required to handle the call and distributed efficiently. They are then passed to an appropriate agent, based on the skills required. In turn, if a field agent or if the police need to be summoned to the property, the appropriate calls can be made.

Just as agents in the call centre are selected according to availability and skills, so too are field agents, based on their status and location.

Automating the triage stage which ensures that customers are authenticated saves considerable time and money, while ensuring that incidents are handled and resolved faster.

As a result, Tacira was able to offer a premium managed security service for residential and commercial properties, more efficiently and at a highly competitive price, benefiting from the cost savings delivered through its integration efforts and process automation. However, the solution was also built to scale.

In addition to the cost savings, the automated authentication can also be used to add a further level of security, to handle general enquiries or to help ensure that customers follow the correct procedures. The first level of machine-driven security also means that agents can be trained in more complex tasks, as they have more time to devote to operational performance.

Launching an international managed security service

In addition to the Gintel solution, Tacira had also deployed a carrier-grade Session Border Controller (SBC) from World Telecom Labs. This provides the means to establish carrier interconnections with any telecoms service provider. As a result, Tacira can connect to any international or national carrier. This means that Tacira can offer its services in any country or as a managed service for other providers.

Because the Gintel EBCS is optimised for service provider networks, it can also scale, so as traffic grows and the number of queries increases, it can also flex with the business. Finally, one of the advantages of Watson is the number of languages that can be supported.

With this infrastructure in place, Tacira can effectively launch services in multiple countries and offer a white-label service to other providers.

It's a flexible, scalable solution that cost-effectively delivers enhanced managed security services, by leveraging intelligent call management and processing, and capitalising on the latest advances in artificial intelligence to dramatically enhance service delivery and customer support. The same architecture can also be extended to support other IoT and smart services, with intelligent human interaction.

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