



SmartContact

Rapid access to
the most relevant
customer data



where business meets innovation

New Technology from DIT



A system for retrieval of the most relevant customer data

SmartContact is a system that provides contact centre agents with a concise view of a customer history to enable handling of customer queries. It was invented by researchers at DIT School of Computing, as part of CeADAR - the Enterprise Ireland funded Technology Centre for Data Analytics.

To operate effectively, contact centre agents require key customer history to be displayed quickly and intuitively when dealing with a customer.

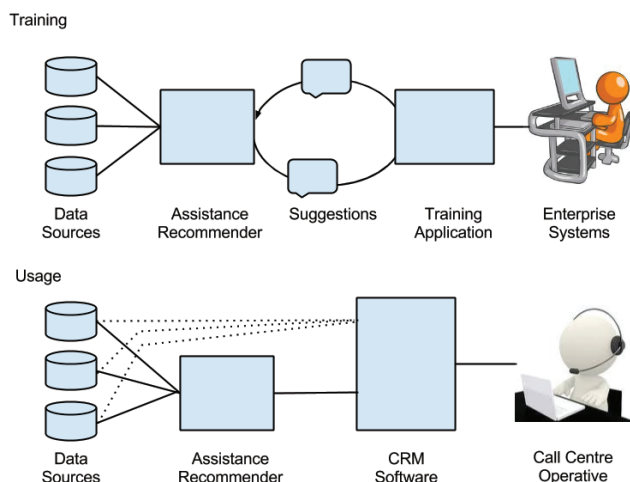
SmartContact is an analytics tools that automatically provides the agent with a concise review of the customer history to provide an optimal customer service experience.

According to a March 2016 report by ReportBuyer.com, the global cloud-based contact centre market is expected to grow to \$14.7 billion by 2020 at a compound annual growth rate of 25.7 per cent.

The key issue handled by the system is the distillation, from the massive amount of data relating to a particular customer, to only the key information relevant to a specific customer contact. This removes the need for the agent to engage in time-consuming searches across multiple interfaces.

The data that forms the basis of SmartContact is a customer's history, including key performance indicators (KPIs); a customer's service contract (seen as an additional KPI); and the context of the customer's call. This data is inputted into a recommender model that ranks the importance of each input, displaying only data relevant for the specific call by a particular customer.

The recommender model can be tailored to the particular company needs using a semi-automatic learning curve that allows management to supervise the assistance being offered to the contact centre agents. The recommender model can be integrated with the company's CRM software.



Above: The SmartContact workflow, separated into training and usage phases

Applications

The SmartContact system is relevant to all companies in the contact centre industry.

SmartContact will address one of the contact centre industry's biggest concerns, namely how to access just the key data points required to assist a particular customer at a particular time in order to deliver an optimal level of customer service experience.

Users will benefit from access to SmartContact technology across call centres of all sizes, and it will remove the need for the agents to engage in time-consuming searches across multiple interfaces when dealing with a query.

Opportunity

According to a March 2016 report by ReportBuyer.com, the global cloud-based contact centre market is expected to grow to \$14.7 billion by 2020 at a compound annual growth rate of 25.7 per cent. A 2015 IDC study (IDC.com) also predicted significant growth worldwide in the contact centre infrastructure and software (CCIS) market. "Revenue growth will be driven by enterprises looking to retain capital, reduce costs, and improve customer experience, as well as by service providers refining their contact centre strategies and product portfolios," said Jason Andersson, programme director, IDC EMEA Telecom and Networking.

While there are various CRM software solutions and plug-ins on the market aimed at helping contact centre agents, there are still numerous limitations in terms of the relevancy of information provided to the agent. SmartContact enables the development of CRM systems that deliver context-specific information to agents.

Advantages

SmartContact uses a variety of machine learning techniques to store the company's particular requirements for customer-related data retrieval within the context of its operations. Its analytics-driven approach offers the following advantages:

- **Most Relevant Data** – SmartContact restricts the presented information to just the key facts that will give the contact centre agent a quick overview of the customer and the history relevant to the current customer engagement.

"SmartContact will address one of the contact centre industry's biggest concerns, namely how to access just the key data points required to assist a particular customer at a particular time."

- **Faster Agent Response** – Present technology requires agents to manually read and drill down into customer history data, whereas SmartContact provides key metrics instantly on a pop-up screen.
- **Active Learning** – SmartContact allows IT and contact centre management to train the recommender model to fit the needs of the company and supervise the assistance provided by contact centre agents.
- **Integration** – SmartContact can be integrated with the organisation's CRM software.

Stage of Development

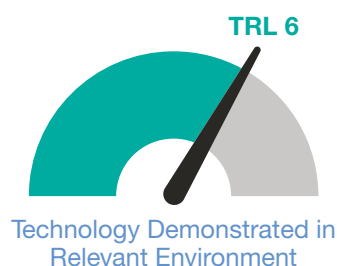
SmartContact has been developed in the DIT Applied Intelligence Research Centre (AIRC) as part of CEADAR - the Enterprise Ireland funded Technology Centre for Data Analytics.

SmartContact's recommender model is based on several mathematical models including an analytical closed form model where the relevant importance of each data point (DP), such as length of call or total value of customer, can either be set manually by an expert or automatically estimated from labelled data. The system also includes a neural network-based regression model that ranks the data points for every case; a neural network-based classification model that finds the important data points for every case; and a support vector machine-based classification model that finds the important data points for every case.

A full prototype is available and there are several trials in the planning stages.

DIT is currently seeking expressions of interest from potential licensees. The technology may be licensed through the CEADAR Technology Centre.

Technology Readiness Level (TRL)



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