Contact Center Agents as Media Channel

A new vision of roles of chatbots and agents in omnichannel contact centers

White Paper

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In previous articles, we considered a new approach to cloud contact center architecture and considered all known types of routing. In these notes, we suggest a method of arranging contact center application logic, enabling a flexible combination of chatbot and agent functionalities.

In recent years, the industry of customer contact centers has experience some curious anomalies caused by incorporating chatbots as a new self-service functionality. The chatbot invasion brings new concepts to the world of the contact center, such as customer's intent, slot, context, fulfillment, etc. The natural question arising from this is how to seamlessly incorporate these concepts into existing contact center ontology that operates with such concepts as agent, agent script, agent group, queues, routing strategy, etc.

The first temptation is to replace all IVR staff with chatbots' staff. At first glance, this approach looks reasonable. A customer calls a contact center and is forwarded to chatbot that, like an IVR, collects needed information from the customer using AI techniques. Collecting this information involves a filling of slots of some intent. In this case, the fulfillment is to execute a corresponding routing strategy and distribute the call to a corresponding agent. It is assumed that the agent completes the call by finding a solution to the customer's problem.

However, this type of case is only one of the possible combinations of chatbot and agent functionalities. We suggest a scheme that supports more options (see Figure 1 below).

The figure shows a system with three customers are connected to a contact center via a voice channel. All customers are served with the aid of one contact center application. The application contains application logic that governs interaction processing. This logic is based on chatbot concepts such as intents, slots, and fulfillment. This logic could be executed directly as a self-service (customers A and B) or with the aid of an agent (customer C). In the latter case, an agent could be perceived as a part of complex media channel containing two sections – voice and agent connections.

The important question is how to switch a customer from one channel to another. The answer is obvious - to use conventional routing logic. When an agent involvement is required we execute routing logic, find an appropriate agent, and transfer a call to her/him. The agent takes over the conversation using an agent script created from application logic. The agent can continue the conversation from the exact same point when self-service is interrupted. For instance, he/she can continue collecting information from the customer, filling empty slots.

This schema enables us to use more flexible scenarios. For example, we could arrange a scenario when an agent is captured at the beginning of a conversation and collects all customer information. We could request an agent after determining a customer's intent and the agent would help with collection of customer data. In this case the customer's intent would relate to an agent skill. Finally, we could use a more sophisticated scenario where an agent is assigned only when he/she becomes available. However the customer will not wait – instead of waiting in line he/she will be served by chatbot in the self-service regime.

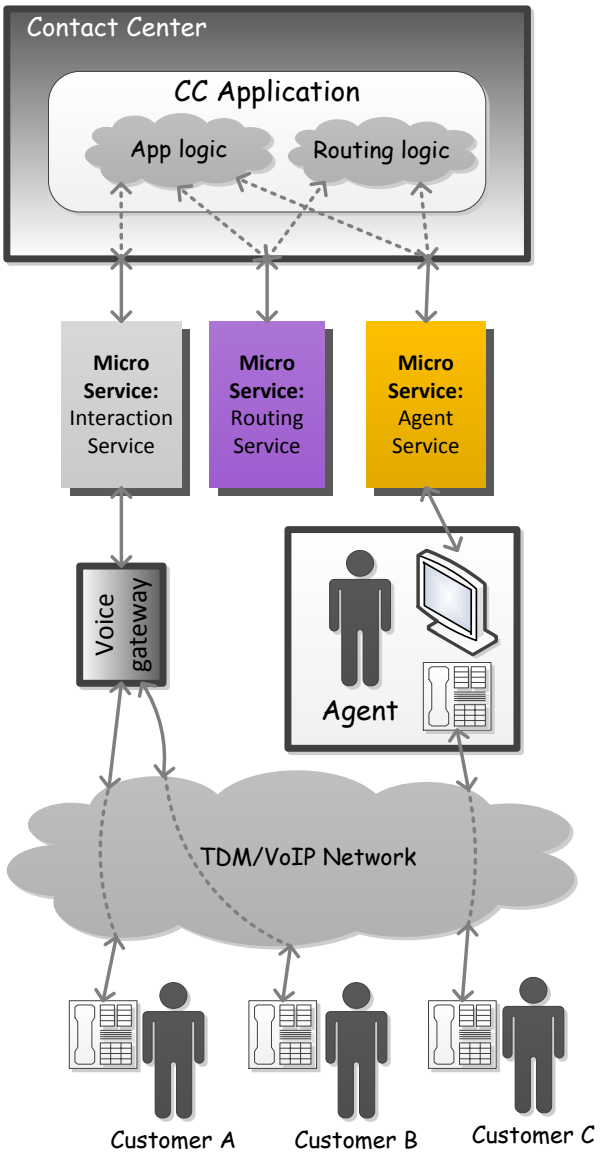

Figure 1: Chatbot and Agent Functionality Options

Neither do we exclude a case where a customer is switched back to self-service mode. This scenario is useful when an agent has to leave a conversation for some urgent reason (e.g. he/she is reassigned to a more valuable customer).

Naturally, instead of voice channel, we could use other media channels such as chat, SMS, emails, and different messengers. In all these cases, agents will play a role of re-translator between

customers and a contact center. One can even consider an agent as a special browser that renders a conversation scenario.

To sum up, in these notes, we have introduced a method of combining chatbot and agent functionalities in an orthogonal manner, enabling different useful scenarios. This approach allows for incorporating chatbot concepts into contact center architecture in a natural and systematic way.

About the Author

Nikolay Anisimov, Ph.D., is a computer scientist with a strong academic background. He is an industry veteran with twenty years' experience in contact center technologies, is the author of numerous patents, technical and research papers, articles in industry journals and whitepapers. Nikolay has worked for Genesys Telecommunication Labs, Alcatel-Lucent, Front Range Solutions, Five9, Aspect Software, and Bright Pattern, Inc. He is a co-founder of Contact Technology Labs, Inc.
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