

In the past, call routing in a customer service center was a matter of routing calls to the next available rep. Now automatic call distribution (ACD) systems offer a variety of call-routing options. The following white paper on skills-based routing, from IEX, a supplier of call-routing products based in Richardson, TX, offers details on one of those options.

— **Editor**
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Skills Based Routing: An Industry Survey

IEX, a Tekelec company

Skills Based Routing has become one of the most talked about ACD features to date. Call center managers, no doubt, feel stunned by all of the attention being given to Skills Based Routing. Yet with all the information published on this subject, some fundamental questions still need to be answered:

- What does it mean to me as a manager?
- Will it make my work life better and less complex?

After reading several articles authored by a diverse group of experts, it appears this ACD feature is being blessed as one of the greatest discoveries since the ACD itself. But with some cautions, since there is an up-side and a down-side to Skills Based Routing. In order to better understand this feature I decided to survey the approaches being used to implement Skills Based Routing.

User Viewpoints

A single question was asked of several call centers: What do you expect to achieve with Skills Based Routing? Surveyed call centers included:

- Mutual fund management companies.
- Corporations providing call center environments through a service bureau.
- Major telecommunications carriers.

Each of the companies identified several objectives in common for Skills Based Routing:

1. Focus on call delivery to qualified agents with the first contact.
2. Improve customer satisfaction with proper call delivery on the first contact.
3. Provide feedback to internal marketing groups on specific products or campaigns.
4. Better utilization of resources.

However, there was also some disagreement on the benefits of Skills Based Routing. For example, one company discovered the impact of using Skills Based Routing was to divide their call centers into 60 to 70 virtual teams. The number and complexity of the virtual teams changed each time an agent logged in or out. With these large numbers of teams, call centers lose the efficiencies of having 700 to 2,000 agents (virtual or physical) and the following issues emerge:

1. Call handling efficiencies are lost with subdivision by skills. Multiple skills become a factor in determining call handling and waiting time and more calls can be held in queue for longer periods of time.
2. Priorities assigned to skill types can exacerbate call delay profiles, allowing newer calls to be handled before older calls held in queue. When an agent is allowed to set preferences for call types without a forced override within the skill routing definition, calls can again be delayed.

3. Last but not least, there are very few call center management tools for forecasting and scheduling that effectively address the Skills Based Routing environment.

What is It? When surveying the approaches being used by Skills Based Routing systems, it's important to remember there are two distinctly different requirements:

1. Routing the calls in a network or within an ACD.
2. Defining agent's call handling attributes or skills.

Skills Based Routing matches a particular type of call to a specific agent, or group of agents, with defined skills. Agents with multiple skills can handle various types of calls, regardless whether an ACD supports Skills Based Routing or a form of call-group to call-group overflow.

Every ACD environment supports calls being routed to intra-ACD groups and inter-ACDs without agents being assigned to more than one call group (skill). This allows a caller to be pointed first to a primary agent group, and then expand the search for an available agent based on an algorithm defined by the call center.

If agents are defined with multiple skills, a caller would be directed to the group with specific skills, and then the search can be expanded to include agents with additional skills. In effect, each successive scenario allows the caller to be answered by a larger group of agents.

Vendor Approaches

There are a variety of companies providing products and services with special features focused on Skills Based Routing. In the course of this survey the following examples were discovered:

Blended Call Centers

Blended environments are call centers where inbound calls and outbound calls are handled by the same agents. Inbound call activities are assigned as one skill and outbound call activity is assigned to a second skill. Vendors supplying call routing systems for this environment may include enhanced ACD and IVR functions with CTI features.

Multiple Queue Assignments

Features for multiple queue assignments can increase the power of ACD agents by allowing them to serve multiple queues simultaneously. Agents control the queues they take calls from and can set priorities for each queue they have chosen to receive calls within. In addition, agents can select the supervisor they wish to report to and have their individual (direct dialed) calls forwarded to them regardless of the telephone they use to login. Multiple queue management with a single agent pool can hold a big key to many call centers' future success.

Adjunct Application Processing

Adjunct application servers are now becoming viable entrants into the Skill Based Routing arena. An interesting aspect of this approach is that the adjunct product is designed to operate separately from the normal call handling server. CTI links between the two servers provide the capability to route calls based on available agent skills, an important consideration for some call centers.

Virtual Call Centers

Skills Based Routing can be implemented as part of a much more elaborate call center scenario, the virtual call center. Several vendors are now providing fresh looks at how a virtual call center would operate within a network environment. The application sits on top of Centrex, central office or PBX environments, allowing agents from multiple geographic locations to log into a single virtual ACD environment. Think of it as an ACD without the equipment, but totally dependent on the public switched network. In this scenario, routing calls based on agent skills is a network requirement and easily implemented. Calls are labeled as a primary skill or a non-primary skill. Matching calls to agents becomes easier and less costly within the network -- easier for the customer and less costly for the call center.

Skills Based Simulators

Programs which simulate Skills Based Routing to calculate workforce management requirements should be used cautiously. The complexity of this task should not be minimized. According to one popular workforce planning simulator, to obtain the same efficiency of Skills Based Routing with traditional agent groups a company could have to add 50 percent more people to its workforce! Skills Based Routing simulators provide analysis for a particular point in time and are limited in use for real-time call center management.

Conclusions and Recommendations

After all is said and done, the answer seems to lie somewhere between the concept of ACD call groups and the latest iteration on Skills Based Routing. How many skills can be assigned to a single agent and what is that agent's value in handling calls for any given moment? The number isn't big, it's relatively small compared to the capabilities of most ACDs. But the capability is needed to anticipate if a person will be available when the skill-coded calls arrive. Skills Based Routing turns out to be a people thing. With the great and abundant technology available from ACD vendors, Skills Based Routing is a great leap forward in ACD architecture, but it is important to understand which approach is best for a company. For example:

- A catalogue sales company with multiple catalogues may opt for multiple queue assignments.
- A customer service group may find it advantageous to have multiple skills assigned to agents.
- A service bureau would perhaps work well with the ACD call group.

Each company needs to choose the approach to routing calls that provides them the greatest benefits. Decide which approach makes the most sense, from a business viewpoint as well as an employee viewpoint, before getting too dazzled by the claims and technology.