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eSupport: A System unto Itself or Something Else?

By Myles Suer

Many opinions have been rendered concerning the value, future, and viability of Automated Support. The existing market players have each obtained ten or fewer Fortune 500 customers; a clear market leader has not emerged. Moreover, the movement from an emerging to a growth market has not taken place. Clearly, early opinions regarding this market reflected the emotions of the revolutionary potential of the Internet and information technology, as well as the unbridled economic and financial enthusiasms of the day. Given the new realities, it is appropriate to question whether automated support will be stillborn, as earlier player YY has already exited stage left. It also now relevant to question the entire layered support model that enabled automated support to be viewed as a separate and distinct market. We believe this model is no longer valid. These thoughts affect all players in what is the largest — and perhaps the most ignored — segment of the CRM market. From our vantage point, emarketing and esales get the lion's share of attention and investment at major CRM vendors even though support is the largest seller.

The Sageza Group, Inc.
836 W El Camino Real
Mountain View, CA 94040-2512
650·390·0700 fax 650·649·2302
London +44 (0) 20·7900·2819
Munich +49 (0) 89·4201·7144

With the advent of the Web, it became possible to support customers through means other than queue-based IVR systems. Initially, Web-based support enabled online search of existing help text but this quickly became supplemented by email and chat support. Unfortunately, the human on the initiating end of the email never intended to talk with a computer. As the number of emails increased, automated response became popular. Product Leaders for the email support channel are Kana and eGain. With no means to clarify what was meant in the email, customers ended up having to sort through any material that might be related to the key words extracted from the message by the automated email response system.

Within this context, automated self-help systems were born. Automated support systems involved the user typing questions and receiving answers in a text box much like chat. In some cases, these systems were made to look like "virtual support representatives." Regardless of user interface, they had a significant advantage over automated email in that the user could be asked to repose the question to one that matched a question in the system's programming. By doing so, the system provided the customer with faster feedback. Nevertheless, automated email response proved to be only as good as the system's text conversion engines and back-end taxonomies. With the cost of a first-level support call ranging between $10-33 depending on which analyst firm is quoting[1], a significant potential remains for cost reduction if these systems are made capable enough for the "dog (customers) to eat the dog food (use automated support systems)."

Support Market Dynamics

As shown in table 1, the support market has layered customer interface upon customer interface. As each new approach is developed it is made to act independently of interfaces and technologies that have gone before. No attempt heretofore has been made to integrate them.

Table 1: Support Market Segments and Participants

Segment	Function	Players
Interactive Voice Response (IVR)	Voice Queuing and Traffic Management	Avaya Active Voice Nortel Siemens
Trouble Ticket Software	Documenting and Ownership System for Customers Problems	PeopleSoft BMC Siebel
Email Support Software	Email Queuing and Automated Response	Kana eGain
Chat Software	Chat with customer service or tech support	PhP Live Xigla
Automated Support	Automated Problem Solving	Kanisa Banter Native Minds
IM Software	Business Application of IM including support	FaceTime (has support-specific application) IBM Oracle Ikimbo Jabber

One area of note is chat. During the Internet boom, there were a large number of venture-financed companies focused upon products for this capability, yet today there are only freeware and smaller companies' solutions available. There are numerous reasons for this, but most important we believe is the supplanting of chat by systems providing support via Instant Messaging for backend. It is worth noting that only Talisma seems to be pursuing an integrated suite; however, we expect this to change. Currently, these players sell to Global 2000 companies on a direct sales approach. Players pursuing small business customers, such as Great Plains, Front Range Solutions, and NetLedger, do so through VARS and Systems Integrators.

Applications: Customer Service versus Help Desk

Two distinct applications exist in this market: customer service and help desk. Since the missions of each are different, their business requirements are also different. The former answers simple and repetitive questions such as "What is my bank balance?" and "How much does such and such a product cost?"

Help Desk processes tend to be about technical or IT support. According to the Help Desk Institute, 62% of all Help Desk support requests relate to Personal Computers[2]. These include hardware, application software, and network connections. For the Help Desk, the potential breadth and depth of questions is much larger than customer service.

Automation of Help Desk requires not only understanding of the questions presented by the user but also the potential material that can help users solve their problems. Even more important, there is a half-life to the knowledge indexed for a Help Desk. For customer service, the answers or where to get them can be created once as they are slow to change. For this reason, the range of issues used in Help Desk applications needs to be limited to the most common, least-changing problems. Otherwise, the system is in constant flux. As important, the install time becomes long and the ROI harder to judge.

Automated Support Market Players

To date, the mainline support software makers, PeopleSoft (Vantive) and BMC Software (Remedy) have not yet decided to participate in the automated support market. Of the integrated suite players, Siebel, Talisma, and eGain claim to have added automated support modules. eGain acquired its solution through a strategic alliance. Unfortunately, suite vendors have tended to build suites of point solutions and, making matters worse, they have viewed automated support like chat and email as separate and distinct means for interacting with the customers. We call this the *Support Channel Model.* Only Talisma has identified the need for a common core between support elements. However, this is only so that customer support representatives can easily move between support channels without needing to relearn the system.

In this environment, the selection of an automated support vendor is made separate and distinct from other CRM purchasing decisions: this approach was the argument that has enabled automated support startups to raise funds. These companies include Banter, Kanisa, and NativeMinds.

Automated Support Technical Approaches

NativeMinds vRep pattern-matching software seeks to understand question type, context, and subject. The system deploys specificity algorithms to determine best fit answers. vReps provide the ability to understand simple and repetitive questions and to answer those questions based upon programmed scripts. vReps' natural language technology enables them to do so in natural conversations with customers.

Banter provides natural language processing, statistical and semantic model-

ing, and automatic machine learning. Like Native Minds, Banter claims its approach is designed to handle the way people typically communicate, i.e., with unstructured or informal text. Specifically, Banter enables analysis and understanding of the content of documents and messages in everyday, informal forms, including the naturally occurring variations in expression, spelling, and grammar typically present in such text.

In our opinion, Kanisa has developed the most sophisticated technology which, although similar to that of Banter and Native Minds, adds large and complex semantic taxonomies to index and classify support materials. With these Kanisa is able to compare terminology used by a user against archived support materials.

Imperfect Science Leads to an Imperfect Experience

Regardless of application and technology solution, automated support remains an imperfect science; we do not all talk the same way, and we have diverse language patterns. At the same time, relating questions to problems is only as good as the quality of the semantic linguist. Lastly, it is difficult and expensive to try to have all problems and the latest solutions represented in the database.

Taken together, these issues mean that automated support is an imperfect experience for customers. Nevertheless, the potential exists to drive down support costs if automated Web self-help can become widely used. We are talking about solving the problems of maybe 30% of the incoming customers by eliminating the need for an interaction with a live customer support representative (CSR). We believe that to achieve user acceptance, the benefits must be perceived as an acceptable level of customer care even though they are using an imperfect system. This requires a new approach to support systems.

A New View

We believe that the achievement of real ROI and superior customer service demands a new approach combining technologies in a new form; replacing traditional concepts of support channels with end-to-end Web-based support channels using automated self-help as a key component. This new approach would need to capture chat, instant messaging, and client escalation: information to be shared between all components to overcome the inherent limitation solutions.

This new approach would also recognize that simply diverting customers from a telephone call to the online World does not automatically make their problems go away or, in most cases, eliminate the cost of their call. It would also acknowledge that email support is just plain bad service to valued paying customers.

We believe in *End-to-End Web-Based Customer Service.* Creating better service means moving away from a discrete support channel model (automated support, email support, chat, and telephone support) and toward integrated solutions that address each of those channels. The potential exists today to integrate trouble ticket software, automated support, and IM into a unified solution where the customer moves seamlessly between support levels. If effectively deployed, this would imply the creation of a new level of customer service commensurate with a lower operating cost. At present, Talisma and perhaps Siebel appear to be the closest technologically to being able to do this; but neither apparently see the bigger picture, i.e., that end-to-end service must be created in one window regardless of whether the connection is for automated support, chat, or escalated support.

Moving away from the layered support channel system should improve the customer experience. It could also create more extensive documentation records for the customer's issues. It could create an end-to-end experience for the customer where an automated support system is made part of the process of solving the problem. Nonetheless the following challenges must be recognized and correctly positioned for customers' expectations:

- Inability of automated systems to fully discern the customer's problem;
- Presenting the correct or latest solution to the customer;
- Inability of automated systems to cover the full range of potential issues;
- Imperfections inherent in created taxonomies.

Users will likely accept these imperfections if the process enables problems to be solved more quickly and efficiently. We believe that consumers of support will use an imperfect automated support system if it is part of a system enabling the resolutions they need.

Details of Customer Service Roadmap

In customer service, a single Web-based dialogue box needs to be created for the customer. This dialogue box will be used for both the automated self-help dialogue and, if needed, a one-on-one, secured chat interaction with a CSR. Before the queued agent connects, the agent has the ability to review the customer's self-help dialogue. As a result, the agent is in a better position to solve the customer's issue more quickly. This benefits both the company and the consumer. More importantly, the customer is presented with a seamless experience where there is no need for the customer to transfer between separate and distinct support channels.

Help Desk Solution

The Help Desk Solution has the potential to create differentiated technical support. As in customer service, a single Web-based dialogue box is created for the customer that can be used to create an end-to-end support channel for the customer. This process starts with an automated dialogue where the information collected from this process could be provided to a live agent should escalation become necessary. We envision it determining the best first-level agent for the customer's problem. At the same time, all information is automatically stored within the trouble ticket system, reducing the CSR's time involved in writing a tracking record.

When an agent does connect, it is within the same context as in the automated self-help. When the agent cannot solve the customer's problem, IM technology is deployed instead of secure one-on-one chat. This extends an IVR concept into the Web environment with presence detection. Support has been done by the trouble ticket system for years. These systems have been used for two reasons: 1) they create a record of customer problems, and 2) they ensure clear ownership of the customer. The latter really was the driver for enterprises buying these products. With the trouble ticket system, a rep creates a ticket and gives up ownership of the customer. A new rep is assigned by picking up the ticket or being handed it.

With IM presence detection, a new process can be established. The first-level rep can see that at senior rep is actually available. Software also can do all kinds of management tasks such as controlling the number of tickets the CSR can receive. With IM presence detection and management software, a first-level agent can hand over what he has learned and even sit in on the connection as the customer is moved to a senior representative. The consumer

in turn gets a seamless, less time-consuming support process.

Combining presence detection with skills-based recognition could lead to an immediate escalation of the customer to a new support level. This creates in whole a real time connection between support layers as opposed to today's trouble ticket system where the customer often has to wait hours or days for a second-level agent to be assigned and to respond.

What Does It All Mean?

The market for automated customer service and help desk systems has not caught on with either enterprises or their customers, in large part due to the multiplicity of systems involved to cover all aspects of the service and the lack of a pleasurable user experience. From a practical standpoint, vendors in this space will need to map features from their own disparate systems along with the capabilities of some of their competitors in order to resolve these issues. The right answer for many vendors in the space will not be to invent new products, but to accomplish these goals either by partnering or by merger and acquisition activity. It is our view that automated self help, in order to deliver on its promise, can no longer be considered as a separate business or product from chat and trouble ticket systems. There is simply too much value to be delivered through integration. For this reason, we believe that it would behoove Native Minds to add chat capabilities while Banter and Kanisa should consider establishing relationships with BMC Software, PeopleSoft, and Siebel. More importantly, not developing market player relationships will mean sure death.

We believe that the technology is in place to revolutionize the entire support process. Instead of a siloed connect and disconnect model, Internet-based support should be provided in a seamless end-to-end fashion. The results would be greater value for the consumer of support services and greater return on investment to the support technology acquirer. It is now time to re-invent the notion of the entire support system.

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[1] Sageza's analysis information from Help Desk Institute puts the cost per call at just under $20. Forrester claims it is $33 per call.

[2] Help Desk Institute 2001 Practices Survey, pg 41.