North American IVR and Web-Based Self-Service Markets

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North American IVR and Web-Based Self-Service Market

Introduction

Executive Summary

Technology based self-service is increasingly becoming an integral part of the overall customer service portfolio. The mounting pressure on marketing and service organizations to retain a happy customer, the necessity to control customer service costs, and the need to improve quality of customer service has brought about a transformation in leveraging value from IVR and web-based self-service solutions.

In This Study

This research study looks at market trends, drivers, and restraints for the North American IVR and Web-based Self Service market. It also provides market size, market share, and revenue forecasts for IVR and Web-based Self service. Vendor solution offerings and strate-gies are analyzed in a competitive framework and strategic considerations for market penetration and growth are proposed.

Market Highlights

1. The North American IVR and web-based self-service market is estimated at US $930.3 million in 2005, and is expected to grow at a CAGR of 15.8% to reach a market size of about US $2.59 billion in 2012.

2. IVR solutions account for the larger portion of this market at 66.8% of the overall market size.

3. The presence of contact center vendors in the overall IVR and web-based self-service market is significant. This is largely on account of the ability of contact center vendors to cross-sell and up-sell their self-service solutions into their installed base. This technology driven self-service portfolio also presents a good opportunity for these vendors to garner incremental revenue from their established customer base.

Market Snapshot

1. Cost optimization is the single biggest factor that spawns interest in IVR and web-based self-service solutions.

2. Solutions are focused on creating greater operational efficiency, improving workflows, and allocating optimal resources to improve customer service while containing costs.

3. Vendors are looking to create hosted/hybrid self-service solutions to offset the saturation levels in the IVR market.

4. Speech enablement continues to be a key driver for enterprise investment in IVR solutions.

Vendor Landscape

The Vendor landscape by and large consists of two camps:

Contact Center vendors such as Aspect, Avaya, Cisco, Genesys, Intervoice, Nortel, and others.

CRM vendors such as ATG Primus, eGain, KANA, Oracle-Siebel, RightNow, Salesforce.com, SAP, and others.

Market Segmentation and Definitions

Market Segmentation

This study provides a comprehensive analysis of the market for IVR and web-based self -service solutions. Hosted/ASP solutions are also included for market sizing purposes.

Definitions

Interactive Voice Response (IVR) Self Service

IVR systems are primarily used to automate customer-centric business processes and relieve the pressure on live agents handling customer calls. IVR systems automate inbound customer interactions by means of speech and/or touch tone prompts. Modern IVR systems also support advanced features such as natural language speech recognition.

Web-based Self Service

Web-based self service solutions are defined to include applications that support customer self-service in a web-enabled environment, including e-mail, web self-service, knowledge management, web call-back, etc.

Revenues

IVR system revenues include revenues from sale of IVR equipment, software and services including installation, maintenance and standard upgrades. Web-based self service revenues include software and services revenues. Hosted/ASP application revenues are also included.

Scope and Research Methodology

Scope of the Study

The geographical region covered in this study is North America, which is defined to include the U.S. and Canada.

Base Year & Forecast Period

The base year for this study is 2005 and the forecast period is 2006-2012.

Research Methodology

1. Primary research with vendors

2. Frost & Sullivan published reports

3. Decision support databases

4. Company websites

5. IT journals

6. Published company financial statements

7. Other secondary resources

Market Dynamics

Trends in Web and IVR based Self-Service

Consumers Determine their Desired Service Quality at Every Touch Point

The experience with numerous failed CRM implementations in the past has been an eye-opener for consumers and vendors alike. However, unlike the vendor-driven CRM market, the IVR and web-based self-service markets are characterized by consumers' desired level of service quality at every touch point. This is forcing vendors to increase the value proposition from their solutions at every customer touch point. The fundamental rule of customer service that the cost of retaining an existing customer is lower than the cost of acquiring a new customer, is highly relevant in the IVR and web-based self-service space.

Market Consolidation has a Massive Impact on Business Strategy and Customer Concerns

The year 2005 is marked by a spate of mergers and acquisitions in the IVR and web-based self-service market. Such consolidation has a degree of caution associated with it as customers look for the future destiny and support for their investments into these solutions. Some of the major mergers and acquisitions during the year included Aspect Commu-nica-tions and Concerto Software to form Aspect Software, Intervoice and Edify, ScanSoft and Nuance.

Saturation Levels in Traditional IVR Markets Open Up New Growth Avenues

The first-phase of voice self-service adoption was largely dictated by the penetration of IVR solutions in the market. With the saturation levels in the enterprise segment for IVR solu-tions, vendors are creating new growth avenues such as hosted IVR, improving the customer experience in the automated IVR menus, creating cross-sell functionality in IVR and attracting companies into emerging areas such as IP-based IVR.

Tolerance for Fault is Lesser in IVR Compared to the Web

Since the web-based self-service solutions are intuitive, and more impersonal, customers tolerance for lack of service resolution from the web is higher, compared to the IVR solutions In voice-based self-service, customers expect clear and complete resolution of their service queries with no room for follow-up or escalation. Vendors are therefore increasing the robustness to their web-based solutions towards automating the customer service resolution process, thus increasing their chances of retaining a satisfied customer base.

Growth of Speech Technology Creates Avenues for Revenue Generation

Vendors are looking to create revenue opportunities from customer interactions by sprucing up their IVR and web-based self-service functionality to include higher cross-sell and up-sell transactions. Integration with business intelligence and analytics solutions is helping compa-nies in identifying customer behavioral patterns towards engaging in targeted marketing to tap into new revenue opportunities. Natural language search is increasingly critical towards this endeavor.

Market Drivers

Cost Reduction is the Biggest Driver of Adoption of IVR and Web-based Self-Service

Exercising control on costs is the biggest driver of adoption of IVR and web-based self-service solutions. This becomes significant in the light of tighter IT budgets and greater pressure on justification on IT spends. Further, in the absence of operational efficiency, self-service solutions are one of the most effective tools that provide the trigger to optimize costs.

Increasing Interest in Speech Applications Creates Opportunities for Greater Interest in Voice and Web-based Self-Service Solutions

The addition of speech applications to IVR solutions, cognitive intelligence from natural language processing and enhanced vocabulary recognition are key drivers for enhance interest in voice and web-based self-service solutions. Embedding speech attributes in self-service also helps in handling a larger call volume and greater customer resolutions, as there is an enhancement in the range of service issues being tackled from the same touch tone phone.

Hosted Self-Service Provides Vendors with New Avenues for Growth

Self-service vendors are constantly looking to harness the potential from new revenue oppor-tunities. The success of the on-demand software in the last couple of years has trig-gered a lot of momentum in the overall self-service arena as well. The emergence of hosted self-service solutions has provided vendors with new solutions to tap emerging oppor-tunities. This also provides sound revenue growth with both cross-sell and up-sell to the installed base and targeted marketing to new customers.

The Emergence of IP-Based Solutions Drives New Revenue Growth from the Installed Base

The great momentum in IP telephony and significant interest in IP contact centers is creating the platform for IP-based self-service solutions to gain traction. Vendors are using different approaches to tap into the IP space. Some vendors use gateways to connect to IP switches, while others resort to an IP port as a base and a gateway to connect to traditional telephony environments. Some of the newer versions of self-service are also witnessing IP presence, thus driving revenue growth.

Replacement Cycle of the IVR Market Creates Avenues for New Investments in Voice Self-Service Solutions

It is pertinent to note that the first-generation adopters of voice self-service solutions are now due to replace their existing IVR systems. This replacement cycle is also likely to create migration to next-generation solutions in the IVR self-service space, thus contributing to overall market growth.

New Open Standards Helps Enterprise in Easier Upward Migration in the Technological Value Chain

Application development on open standards reduces the dependence on high cost implemen-tation and consulting services. They are also well-aligned for companies that are in a consolidation mode, thus enabling easier integration on unified platforms. These benefits are strong factors in overall market growth of IVR self-service solutions that increasingly operate in IP environments.

Negation of the Legislation Defining the 'Do Not Call' Syndrome, Drives a Wider Space to Tap Opportunities for Revenue Growth

Marketers have been saddled with obtrusive legislation that does not allow customer service professionals to call up customers directly, under the 'Do Not Call' syndrome. Self-service solutions, by their very nature, attract customer-driven interaction, thus presenting an excel-lent business case to cross-sell and up-sell various offerings. The growth in web-based self-service solutions and the highly mature IVR solutions are good channels for campaigns and other marketing initiatives.

Automation of Customer Service Delivery Models Across Multiple Channels Continues to Trigger Market Growth

The multitude of customer touch points help in augmenting the efficacy from IVR and web-based self-service solutions. There is a vast portfolio of customer touch points that can be harnessed towards strong cross-sell and up-sell of products and services. This creates opportunities for revenue growth. Further, automation of customer service creates room to reduce the efforts of live agents is also cost efficient.

Figure 1-1 outlines the market drivers ranked in order of impact for the North American IVR and web-based self-service market from 2006-2012.

Figure 1-1

IVR and Web-Based Self-Service Market: Market Drivers Ranked in Order of Impact (North America), 2006-2012

Rank	Driver	1-2 Years	3-4 Years	5-7 Years
1	Cost Reduction is the Biggest Driver of Adoption of IVR and Web-based Self-Service	High	High	High
2	Increasing Interest in Speech Applications Creates Opportunities for Greater Interest in Voice and Web-based Self-Service Solutions	High	High	High
3	Hosted Self-Service Provides Vendors with New Avenues for Growth	High	High	High
4	The Emergence of IP-Based Solutions Drives New Revenue Growth from the Installed Base	High	High	High
5	Replacement Cycle of the IVR Market Creates Avenues for New Investments in Voice Self-Service Solutions	High	High	Medium
6	New Open Standards Helps Enterprise in Easier Upward Migration in the Technological Value Chain	High	Medium	Medium
7	Negation of the Legislation Defining the 'Do Not Call' Syndrome, Drives a Wider Space to Tap Opportunities for Revenue Growth	Medium	Medium	Low
8	Automation of Customer Service Delivery Models Across Multiple Channels Continues to Trigger Market Growth	Medium	Low	Low

Source: Frost & Sullivan

Market Challenges

Lack of Channel Integration at Multiple Customer Touch Points Retards the Realization of a Unified View of the Customer

Multiple customer touch points such as web, chat, IVR and email necessitate sound integra-tion of capturing customer behavior in self-service solutions. Lack of channel integra-tion can create negative effects on the business benefits of such investments.

Lack of Robustness in the Back-End Systems and Other Databases Dilutes Value from IVR and Web-based Self-Service Solutions

Self-service solutions and successful customer service resolution need to be constantly inte-grated into the back-end systems of an enterprise. The lack of robustness in these back-end databases will not provide a real-time, unified view of the customer. This will in turn impact service quality and retard the successful redemption of specific customer requirements.

Lack of Updated Information in Voice and Web-based Self-Service Systems Creates Customer Dissatisfaction

IVR and web-based self-service solutions are streamlined to include the most updated infor-mation in their menus. But this is not often the case. Further, the lack of co-ordination between the expertise resting in live agents and self-service systems tend to delay the real-time updation of current information. This creates customer ripples leading to customer dissatisfaction.

Long Automated Menus Retard the Potential Growth from IVR and Web-Based Solutions

Most IVR and web-based self-service solutions tend to have elongated menus, which increase the time in resolving customer service queries. In addition to this long wait, such menus also chip in with offerings that tap cross-selling opportunities, thus delaying the time spent on the self-service solution. This tests customer patience and thereby overall dilution in service quality levels.

Organization Resistance to Adopt Voice & Web-based Self-Service Models Reduces the Quicker Growth of the Market

Securing buy-in from decision-makers across the enterprise is always a long-drawn process that could cause delays in eventual IT adoption. IVR and web-based self-service investments are no exception.

Demographic Disparity Dilutes the Full Value of Voice and Web-based Self-Service Solutions

Self-service solutions find it hard to demarcate among different demographics. For example, a customer query from a retired professor is very different from that of a college student. One plays on inherent factors such as timeliness, patience, maturity levels, tolerance imbalances and such other personal attributes. Catering to the different needs of different customer segments with individual profiles is a huge challenge facing the market. These factors make it difficult for companies to derive complete value from their IVR and web-based self-service investments.

Customer Perception that a Human Interface is Better than an Automated Counterpart Poses Serious Challenges to the Successful Deployment of Speech Solutions

Even though IVR and web-based self-service solutions are configured to address customer queries electronically, there will always be a segment of customers who prefer human inter-face or agent interaction in resolving their queries. It is difficult for vendors to segment this section of the population, considering the volume of self-service transactions. These segments of the population pose a serious challenge in a speech solution environment.

Figure 1-2 outlines the market challenges ranked in order of impact for the North American IVR and web-based self-service market from 2006-2012.

Figure 1-2

IVR and Web-Based Self-Service Market: Market Challenges Ranked in Order of Impact (North America), 2006-2012

Rank	Challenge	1-2 Years	3-4 Years	5-7 Years
1	Lack of Channel Integration at Multiple Customer Touch Points Retards the Realization of a Unified View of the Customer	High	High	High
2	Lack of Robustness in the Back-End Systems and Other Databases Dilutes Value from IVR and Web-based Self-Service Solutions	High	High	High
3	Lack of Updated Information in Voice and Web-based Self-Service Systems Creates Customer Dissatisfaction	High	High	High
4	Long Automated Menus Retard the Potential Growth from IVR and Web-Based Solutions	High	Medium	Medium
5	Organization Resistance to Adopt Voice & Web-based Self-Service Models Reduces the Quicker Growth of the Market	Medium	Medium	Medium
6	Demographic Disparity Dilutes the Full Value of Voice and Web-based Self-Service Solutions	Medium	Low	Low
7	Customer Perception that a Human Interface is Better than an Automated Counterpart Poses Serious Challenges to the Successful Deployment of Speech Solutions	Medium	Low	Low

Source: Frost & Sullivan

Market Analysis

Market Analysis 2005

Cost Optimization vs. Revenue Generation

The North American IVR and web-based self-service market is characterized by the presence of both enterprise vendors and best-of-breed solution providers who are continually seeking avenues for revenue growth. However, customer interest in these solutions is primarily driven by the need for cost optimization and creating greater efficiency in operations. This has made the voice and web-based self-service market extremely competitive with vendors outwitting one another on product functionality and cutthroat pricing.

In addition to cost optimization, vendors are considering novel approaches in converting IVR and web-based solutions as an avenue for new revenues. The highly competitive nature of the industry is creating a higher need for value-added service delivery, with increased scope for cross-sell and up-sell opportunities. Vendors are integrating their IVR and web-based solu-tions with business intelligence software to identify their customer behavior and tailoring their marketing efforts to generate higher buy-in from the same installed base.

At a parallel level, assisted IVR and web-based self-service such as live collaboration or web call back are important avenues to provide information on new product launches, attractive discounts, announce campaigns and other initiatives to create new business opportunities. Such initiatives also help in countering established legal hurdles such as the 'Do No Call' legislation in North America.

IVR and Web-based Self-Service - A Comparative Analysis

Although the web-based self-service market is at a nascent stage, vendors are creating greater robustness in their CRM systems, IT infrastructure, back-end systems and databases to develop a firm background to generate higher value from such solutions. This is critical in the light of integrating front-end, intuitive web-based self-service systems with customer records in the back-end, towards identifying customer history, transaction records and mapping suitable campaigns and programs for future growth. It is also critical to note that the increasing penetration of mobile phones and greater access to the internet by the mobile workforce, are critical elements in the growth path of web-based self-service solutions.

IVR solutions are in a highly mature and commoditized stage. The pricing of these solutions are likely to dwindle over time, especially factoring in their interface with hardware. However, growth from IVR solutions is likely to be triggered by the replacement cycle of first-generation customers. This replacement is also likely to be in next-generation systems, which could be at a premium. The emergence of IP IVR will also be significant in the growth of the overall IVR self-service market. Also, open standards are continuously presenting higher value to customers, creating attractive avenues for revenue growth in the installed base.

One cannot ignore the growing presence of the hosted self-service market. Although this market is in an infant stage, the growing power of the internet and the increasing need of enterprises for low-cost solutions are likely to propel the demand for hosted solutions in the future. An increasing number of vendors are outlining strategies and product roadmaps to factor in hosted versions of their offerings to target their installed base. The emergence of hosted self-service solutions is thus likely to create new revenue opportunities for vendors, which is expected to be critical in a high competitive industry.

Enhancements in Solution Functionality

From a solution standpoint, IVR and web-based self-service functionality is undergoing radical changes following extensive research on customer behavior. Embedding speech tech-nologies in natural languages and the expansion of the vocabulary content to identify and capture key customer phrases have contributed to the market growth.

Further, expansion in search capabilities, increasing the first time service resolution rate, continuous updation of voice and web-based self-service menus with current information, more informed customer interactions and reducing agent interface have been critical factors in attaining a more satisfied customer base. The fundamental rule of customer service that the cost of acquiring a new customer is higher than the cost of retaining a happy installed base is exemplified in the IVR and web-based self-service market.

Market Consolidation

The spate of market consolidation has a severe impact on the IVR and web-based self-service market. On one hand, customer concerns of support for their solutions following mergers and acquisitions is rampant, while on the other hand, integration of two entities, combining the solution portfolio and drafting a future roadmap continue to stall faster growth of the market. Also, the higher maturity in customer understanding of the value from a self-service solution necessitates strong market messaging, robust, integrated functionality and continu-ously high standards of service delivery on both voice and web-based platforms. There is an increasing recognition that IVR and web-based self service is an ongoing process rather than a one-time deployment or automation initiative.

Market Penetration

The adoption of IVR and web-based self-service functionality has thus far been largely concentrated in the enterprise segment. This is a result of the more expensive nature of the original IVR solutions, which could best be addressed by larger IT budgets from the enter-prise segment.

However, the rampant uptake in web-based self-service and the advent of hosted self-service solutions is creating opportunities for vendors to make inroads into the small and medium business (SMB) segment. Frost & Sullivan believes that this market is likely to be signifi-cantly driven by the adoption from the SMB segment in the future, as web interfaces provide the benefits of easy deployment and low costs, which are very attractive to this customer segment.

Some of the key verticals adopting IVR and web-based self-service solutions include financial services, telecommunications, travel and hospitality, retail, healthcare, utilities and government.

Final Analysis

The overall IVR and web-based self-service market is marked by significant presence of the contact center vendors. Their established presence in other segments of contact center such as ACD, workforce management helps these vendors to append web self-service and IVR capa-bilities to their portfolio towards leveraging on cross-sell and up-sell opportunities. Frost & Sullivan believes that the web-based self-service solutions and hosted self-service are likely to be at the forefront of this growth in the future.

Revenue Forecasts

The North American IVR and Web-based Self-Service market is estimated at US $930.3 million in 2005, and is expected to grow at a CAGR of 15.8% to reach a market size of about US $2.59 billion by 2012.

IVR based self-service accounts for the largest segment of this market at around US $621.0 million in 2005,and is expected to reach a size of about US $1.70 billion in 2012, growing at a CAGR of 15.5% during 2006-2012.The voice self-service market was about two-thirds the overall self-service market.

Web-based self service represented 33.2% of the self-service market in 2005, at about US $309.3 million and is expected to grow at a CAGR of 16.2% during 2006-2012, to reach a size of around US $887.3 million in 2012.

Figure 1-3 and Chart 1.1 present the Revenue Forecasts for the Total IVR and Web-based Self-Service Market for 2005-2012.

Figure 1-3

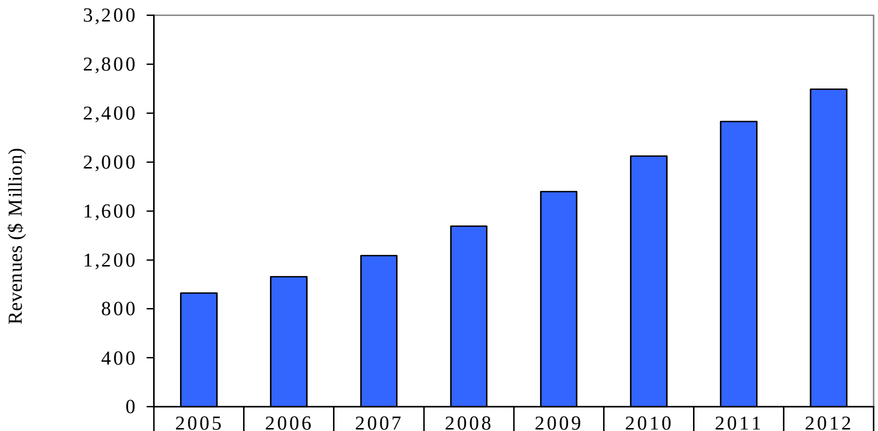
IVR and Web-Based Self-Service Market: Revenue Forecasts of Total Self-Service (North America), 2005-2012

Year	**Revenues ($ Million)**	**Revenue Growth Rate (%)**
2005	930.3	---
2006	1,062.4	14.2
2007	1,235.7	16.3
2008	1,475.0	19.4
2009	1,759.2	19.3
2010	2,048.4	16.4
2011	2,331.6	13.8
2012	2,595.2	11.3
Compound Annual Growth Rate (2005-2012): 15.8 %		

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Chart 1.1

IVR and Web-Based Self-Service Market: Revenue Forecasts of Total Self-Service (North America), 2005-2012



	2005	2006	2007	2008	2009	2010	2011	2012
IVR and Web-Based Self-Service	930.3	1062.4	1235.7	1475.0	1759.2	2048.4	2331.6	2595.2

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Figure 1-4 and Chart 1.2 provide the Revenue Mix by Channel for 2005.

Figure 1-4

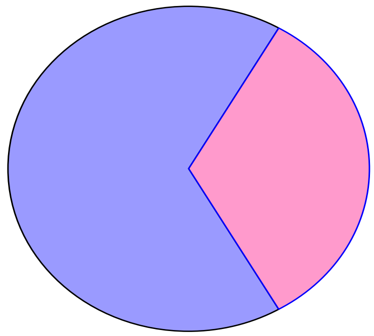
IVR and Web-Based Self-Service Market: Revenue Mix by Channel (North America), 2005

Self-Service Channel	**Revenues ($ Million)**	**Revenue Mix (%)**
Interactive Voice Response Market (IVR)	621.0	66.8
Web-Based Self-Service	309.3	33.2
Total Market	930.3	100.0

Note: All figures are rounded. Source: Frost & Sullivan

Chart 1.2

IVR and Web-Based Self-Service Market: Revenue Mix by Channel (North America), 2005



Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Figure 1-5 and Chart 1.3 show the Revenue Forecasts by Channel for 2005-2012.

Figure 1-5

IVR and Web-Based Self-Service Market: Revenue Forecasts by Self-Service Channel (North America), 2005-2012

Year	Interactive Voice Response ($ Million)	Web-Based Self-Service ($ Million)	Total ($ Million)
2005	621.0	309.3	930.3
2006	703.0	359.4	1,062.4
2007	809.1	426.6	1,235.7
2008	958.8	516.2	1,475.0
2009	1,150.6	608.6	1,759.2
2010	1,347.3	701.1	2,048.4
2011	1,538.6	793.0	2,331.6
2012	1,707.9	887.3	2,595.2
Compound Annual Growth Rate (2005-2012): 15.8%			

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

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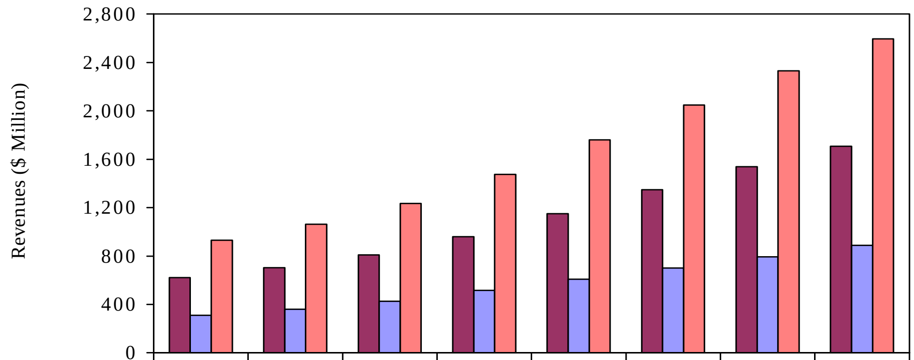
IVR and Web-Based Self-Service Market: Revenue Forecasts by Self-Service Channel (North America), 2005-2012



	2005	2006	2007	2008	2009	2010	2011	2012
INTERACTIVE VOICE RESPONSE	621.0	703.0	809.1	958.8	1150.6	1347.3	1538.6	1707.9
WEB-BASED SELF-SERVICE	309.3	359.4	426.6	516.2	608.6	701.1	793.0	887.3
TOTAL	930.3	1062.4	1235.7	1475.0	1759.2	2048.4	2331.6	2595.2

Year

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Figure 1-6 and Chart 1.4 outline the Revenue Forecasts for IVR Channel for 2005-2012.

F i g u r e 1 - 6

IVR and Web-Based Self-Service Market: Revenue Forecasts for Interactive Voice Response Channel (North America), 2005-2012

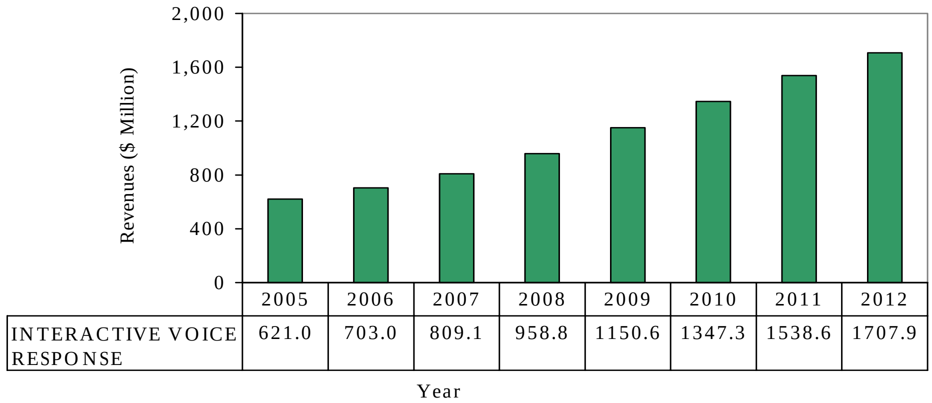
Year	**Revenues ($ Million)**	**Revenue Growth Rate (%)**
2005	621.0	---
2006	703.0	13.2
2007	809.1	15.1
2008	958.8	18.5
2009	1,150.6	20.0
2010	1,347.3	17.1
2011	1,538.6	14.2
2012	1,707.9	11.0

Compound Annual Growth Rate (2005-2012): 15.5%

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Chart 1.4

IVR and Web-Based Self-Service Market: Revenue Forecasts for Interactive Voice Response Channel (North America), 2005-2012



Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Figure 1-7 and Chart 1.5 show the Revenue Forecasts for the Web-based Self-Service Channel for 2005-2012.

Figure 1-7

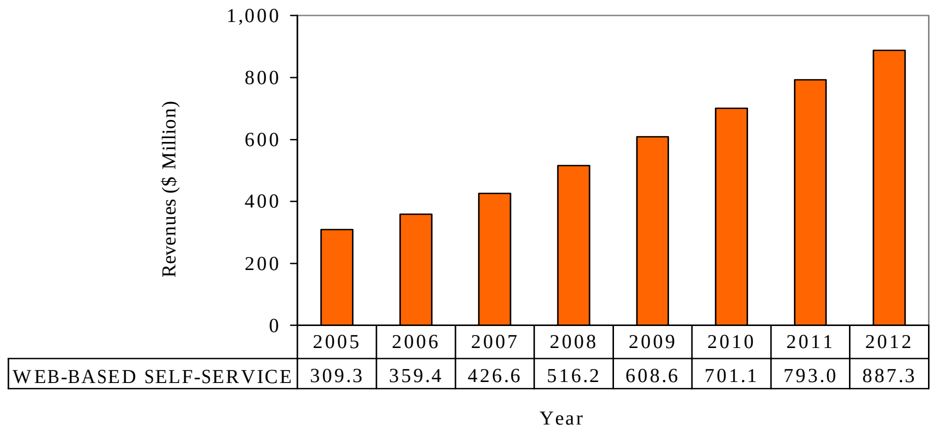
IVR and Web-Based Self-Service Market: Revenue Forecasts for Web-Based Self-Service Channel (North America), 2005-2012

Year	**Revenues ($ Million)**	**Revenue Growth Rate (%)**
2005	309.3	---
2006	359.4	16.2
2007	426.6	18.7
2008	516.2	21.0
2009	608.6	17.9
2010	701.1	15.2
2011	793.0	13.1
2012	887.3	11.9
Compound Annual Growth Rate (2005-2012): 16.2%		

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Chart 1.5

IVR and Web-Based Self-Service Market: Revenue Forecasts for Web-Based Self-Service Channel (North America), 2005-2012



Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Vendor Market Share for Interactive Voice Response Channel

Figure 1-8 and Chart 1.6 outline the Vendor Market Share by Revenues for the Interactive Voice Response Channel, 2005.

Figure 1-8

IVR and Web-Based Self-Service Market: Vendor Market Share by Revenues for Interactive Voice Response Channel (North America), 2005

Company	**2005 (%)**
Avaya	22.9
Nortel Networks	19.0
Intervoice*	13.2
Genesys Telecommunications**	5.8
IBM	5.3
Cisco***	4.2
Aspect Software	2.9
Others****	26.7
Total Interactive Voice Response Self-Service Market	100.0

Key: *Market share of Intervoice includes Edify.
** Market share of Genesys Telecommunications includes Voicegenie.
***Market share of Cisco includes Audium.
****Others include Angel.com, AT&T, BeVocal, Computer Talk Technology, Convergys, EDS, Envox, Fluency, Interactive Intelligence, Message Technologies, Microsoft, Nuance, Pulse, Qwest, Syntellect, Tellme Networks, TuVox, Verizon Business, Voxeo, Voxify, West Interactive, XO Communications.

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

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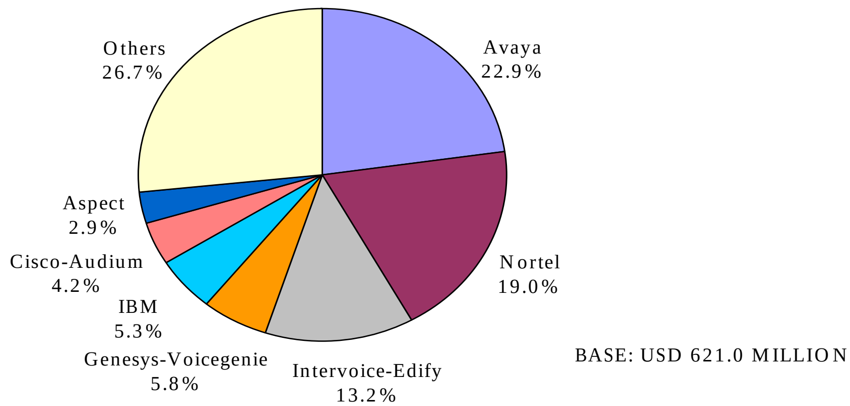
IVR and Web-Based Self-Service Market: Vendor Market Share by Revenues for Interactive Voice Response Channel (North America), 2005



Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Vendor Market Share for Web-Based Self-Service

Figure 1-9 and Chart 1.7 outline the Vendor Market Share by Revenues for the Web-based Self-Service Channel, 2005.

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IVR and Web-Based Self-Service Market: Vendor Market Share by Revenues for Web-Based Self-Service Channel (North America), 2005

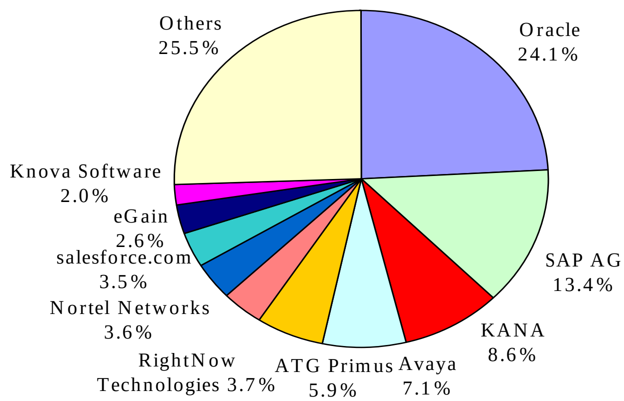
Company	2005 (%)
Oracle*	24.1
SAP AG	13.4
KANA	8.6
Avaya	7.1
ATG Primus	5.9
RightNow Technologies	3.7
Nortel Networks	3.6
Salesforce.com	3.5
eGain	2.6
Knova Software	2.0
Others**	25.5
Total Web-Based Self-Service Market	100.0

Key:* Oracle's market share is inclusive of Siebel Systems.
**Others include Amdocs, Conversagent, Conversive Inc, Inquira, iPhrase, Kaidara, LivePerson, Netonomy, noHold, Safe Harbor, SupportSoft, Talisma.

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Chart 1.7

IVR and Web-Based Self-Service Market: Vendor Market Share by Revenues for Web-Based Self-Service Channel (North America), 2005



BASE: USD 309.3 MILLION

Note: All figures are rounded; the base year is 2005. Source: Frost & Sullivan

Competitive Landscape

The Vendor landscape by and large consists of two camps:

Contact Center vendors such as Aspect, Avaya, Cisco, Genesys, Intervoice, Nortel, and others.

CRM vendors such as ATG Primus, eGain, KANA, Oracle-Siebel, RightNow, Salesforce.com, SAP, and others.

The IVR market is dominated by tier-1 contact center vendors while the web-based self service segment is dominated by CRM vendors. The tier-1 Contact center vendors have large installed bases, and multi-channel self service solutions provide good opportunity for nurturing and developing this installed base.

While the more robust and mature solutions are concentrated in the hands of the tier-1contact center vendors, there are a number of emerging niche solutions providers who are targeting specific segments of the market. These niche solution providers also embed sound enterprise software functionality that operates seamlessly in a web environment.

Frost & Sullivan believes that the shift in preference for on-demand solutions and the increasing traction of hosted solutions is likely to significantly impact the market. More number of vendors are expected to align and re-strategize their market position in the light of the emerging demand for on-demand or hosted solutions. This is likely to create a very competitive framework where successful penetration into new markets will be significantly governed by pricing, solution framework, and cost optimization of customer service in a web environment.

Aspect Software

Concerto Software acquired Aspect Communications in September 2005 to form Aspect Soft-ware, to drive an exclusive focus on the contact center industry. Leveraging more than 30 years of experience between the two merging entities, Aspect Software is poised to trans-form interactions across customer care, collections, sales and telemarketing functions.

Of the merging entities, Aspect Communications was already a reputed provider of self-service and contact center solutions in the U.S. Aspect's self-service solution is part of and integrates tightly with its complete contact center solution. For companies that want to deploy self-service independent of the contact center suite, Aspect provides Aspect® Customer Self Service.

Aspect Customer Self Service is a highly scalable, open platform that operates on industry-standard hardware, and offers the user a choice between a software-only solution and a combination of hardware and software solution. In August 2005, the new Aspect Customer Self Service v7.1 release included speech enhancements and CTI support in a VoIP environment. In conjunction with IVR-related product enhancements, the release of 7.1 also marked the availability of the speech-enabled auto attendant as part of the solution. All these enhancements are in addition to features released in version 7.0, namely, VoiceXML 2.0 support, broader server platform support, integration with leading industry standard telephony cards and a flexibility of choice between a software- only solution and a turnkey option.

With recent release of VoiceXML Studio (GUI drag-and-drop tool for developing VoiceXML applications) Aspect Software has further enhanced its self-service offering by providing Aspect Customer Self Service developers with an easy and intuitive environment for building standards-based speech applications. Aspect Software has a clearly defined self-service product roadmap for the future that includes, software only SIP support, VoiceXML 2.1,MRCP 2.0 support and a wider variety of speech applications.

Aspect Software also offers voice portal capabilities as part of its all-in-one contact center solution Aspect® EnsemblePro, that unites inbound, outbound, and multi-channel contact (voice, email, web-based) and quality monitoring capabilities on a single platform. Currently planned future release of Aspect EnsemblePro will leverage technological advancements in Aspect Customer Self Service to further enhance voice portal capabilities as well as enable customers to easily migrate from Aspect Customer Self Service to Aspect EnsemblePro by ensuring that investments in application development are preserved.

A representative sample of Aspect Software self-service customers includes Cablecomm GmbH, The Regence Group, Health Net and VW Credit Inc.

ATG Primus

ATG made its foray into the customer self-service space with the acquisition of Primus Knowledge Solutions in August 2004. This acquisition helped ATG add service capabilities to its robust e-commerce and marketing software solutions to the B2B segment.

ATG provides web self-service solutions in its umbrella service portfolio customer service that contains search, customer assisted service, email response management, helpdesk and peer-to-peer support. The web self-service solutions provide functionality in true natural language processing, unified access to any content type of location, seamless escalation to assisted service, multiple language support, analysis of customer experiences, analytics to pinpoint content and training gaps, industry-specific lexicons, and automated indexing and categorization.

The ATG self-service solution also provides flexible and dynamic web interfaces, adaptive navigation capabilities, customer profiling, personalized answers and guided interaction capabilities. These self-service solutions are also available in a hosted environment.

Avaya

Avaya is one of the leading global providers of communication applications, systems and services. Avaya has been in the IVR business since 1985 and introduced its first speech appli-cation in 2000. Its primary IVR product, Avaya Interactive Response is a traditional TDM-based enterprise IVR platform. The latest version Interactive Response 2.0 expands support for VoIP and MRCP integration as well as VoiceXML applications. It also features tighter integration with 3rd party speech platforms including IBM Websphere Voice Server and Nuance speech engine.

In November 2005, Avaya introduced its web services based speech self-service platform, the Avaya Voice Portal. Common elements between the Avaya Interactive Response and the Voice Portal include the Avaya Dialog Designer (ADD), and a licensing mechanism that allows transfer of licenses. Introduced in September 2005,the Avaya Dialog Designer 3.0 is an open VXML application development environment. The Dialog Designer features a common VXML 2.0 browser for use with Avaya Voice Portal and Interactive Response, helping reduce design risks. Thus, applications written in VXML on Avaya Interactive Response can also be seamlessly migrated to the Voice Portal platform.

Avaya also offers a series of pre-built and highly configurable voice applications for vertical markets. Pre-built packaged applications planned for release include vertical solutions for Financial Services and Travel. Avaya also announced an extended alliance with IBM to jointly deliver speech-enabled self-service solutions by bringing together Avaya Interactive Response with IBM WebSphere Voice Server enabling enterprises to incorporate speech easily into a range of business processes.

Avaya Interactive Response integrates tightly with Avaya's multi-channel contact manage-ment platform - the Avaya Interaction Center that manages agent-assisted and self-service interactions across multiple channels including voice, email, web collaboration and SMS. The Avaya Interaction Center is an open, IP standards based platform that offers the ability to leverage integration with enterprise data, third party enterprise applications and multi-vendor switching systems. Avaya's mid-market offering, Avaya Contact Center Express also features multi-channel support.

Migrating customers from previous versions of Avaya Interactive Response to an Avaya Voice portal environment presents a significant opportunity for Avaya to protect and grow its installed base over the next few years. Their mid-market offering, Avaya Contact Center Express also shows sound growth potential.

Cisco Systems

Cisco's Unified IP IVR solutions are contained in the Cisco Unified Communications port-folio, which in turn is a segment of the Cisco Business Communication Solutions. The Cisco Unified IP IVR solution is composed of five main elements, namely:

- IP IVR Editor - a Windows GUI based application development environment to create applications in a drag and drop interface
- IP IVR Engine - a run time environment that executes IP IVR flows
- Step libraries in JavaBeans that provide the programming constructs or steps
- Flow depository, a storage center for all flows and configuration data using Lightweight Data Access Protocol.
- Reporting applications

Cisco also offers IVR solutions for Contact Centers, as a part of the Cisco ICM Enterprise and Cisco IPCC Enterprise Editions, both of which are strategic platforms to migrate to the next level of customer interface in a contact center environment i.e. towards a Customer Interaction Network.

The Cisco IVR for Contact Centers is available as both a premise solution and as a network-based IVR solution that interfaces with Cisco's Pre-Routing and Post-Routing func-tion of calls. Such interface provide benefits such as caller identification and segmenta-tion, support for skills-based routing, IVR load balancing, call queuing, consoli-dated reporting, and delivery of IVR data to answering sources within the enterprise.

The Cisco IVR for Contact Centers has an open IVR interface based on industry-standard Computer Supported Telecommunications Applications messaging that permits any vendor, other than Cisco to provide support.

ClickFox Inc

ClickFox Inc is a unique analytics solution provider for the self-service industry with stated focus on Fortune 1000 companies who have deployed multi-channel self-service solutions. With an industry benchmark of Customer Business Intelligence (CBI), ClickFox assists companies to derive value-added insights from their customer experience across multiple channel touch points such as IVR, web, speech recognition, interactive kiosks and enterprise applications.

The software solutions from ClickFox continually apply the dynamics of the CBI on multiple interactions towards developing a better understanding of customer needs. These solutions explain customer behavior both within and across different service channels. ClickFox offers software solutions for IVR, web, cross-channel and also artificial intelligence to automati-cally generate alerts for anomalous behavior such as excessive back-and-forth, low utilization and high abandonment.

For IVR, ClickFox helps answer the "why" behind critical business metrics such as churn, customer hang-ups, resolution of calls and transfer to agents. These solutions also enhance speech diagnostics by identifying issues not related to grammar. Further, the IVR solutions are an improvement over their speech reporting tools in their ability to identify the usability and call flow issues of customers.

The Web solution from ClickFox goes beyond providing mere web analytics capabilities. The CBI functionality enables decision-makers to understand key metrics such as user experience, brand experience, delivery levels on the web, complementary status of the web to other chan-nels, linking offline initiatives with web initiatives to drive business results. This solu-tion provides intuitive, visual navigation of customer movements on the web thus providing value-addition beyond hits, page views and viewing time.

Cross channel solutions present marketers with a sound understanding of user behavior across multiple channels. ClickFox helps gauge reasons for call drop-offs by channel, user preferences by channel used, and also help in better utilization of resources to provide a seamless customer experience in self-service. This view of interactions from the customers' perspective allows companies to see complete, start-to-finish experiences as customers engage multiple service channels to complete a single task.

Artificial Intelligence statistically proves the effectiveness of self-service systems and provides proactive alerts for marked departures from set processes or unique customer behavior. These solutions help in diagnosing business performance and in identifying areas for improvement in the future.

The key differentiator in ClickFox solutions is the ability to detail the key reasons for numerous business metrics, thus enabling the enterprise to take actionable steps to improve the customer experience. The evolution of ClickFox has paralleled the growth in both web and IVR traffic in the self-service market, as marketers look to understanding customer behavior to drive greater cross-sell and up-sell capabilities. The most critical benefits of the CBI approach include a visualization of a customer experience, evaluating the effectiveness of a process and identifying improvement areas and comparative performance across channels to identify the most preferred-channel.

A representative sample of ClickFox customers includes Bell South, PayPal, Bank of America, Coca-Cola, IBM, Merck and Sprint.

Conversive Inc

Conversive is a niche specialist in conversational self-service solutions. With exclusive focus on web-enabled customer service delivery, Conversive offers a range of solutions to both the enterprise class and mid-market segments of customers across different verticals. In addition to customer service resolution, Conversive self-service solutions are also available for enter-prises to deploy for internal usage amongst employees.

Conversive Enterprise Class solutions operate on a highly modular architecture, are written in Microsoft .NET and operate on Microsoft servers. The Enterprise Class products include AnswerAgent and Assisted AnswerAgent. These solutions are targeted at Fortune 1000 companies.

The first of the two solutions, AnswerAgen®t uses natural language processing to converse with customers in a completely automated web environment and provides for logging all customer interactions. AnswerAgent is scalable and highly agnostic across integration plat-forms that help supporting integration initiatives in tandem with the company’s growth. The AnswerAgent uses the Conversive CAP5 Engine to send back responses to customers online via text answers, or with a text-to-speech engine, using an animated character, and allows the user’s question to be escalated to a variety of paths - a search engine, site and/or web links, forms, email, or \escalation a chat client.

The second Enterprise Class solution, Assisted ResponseAgent®, provides all the func-tion-ality of the AnswerAgent, but offers automatic, seamless and transparent escalation to a live, online customer service representative using Conversive’s patent pending escalation process and the proprietary Conversive AssistedResponse Agent interface.

Conversive Business Class solutions are composed of two products namely, AnswerAgent and EasyAgent. While the AnswerAgent in the Business Class solutions is the same offering as that of the Enterprise Class portfolio, the EasyAgent solution is a less expensive, scaled-down version with easily user-customizable templates and forms. EasyAgent also provides for a testing platform that allows users to check the look and feel of the company's online inter-face. The Business Class solutions are used for both lead generation and customer service resolution by smaller and mid-market companies.

One of the unique attributes of Conversive solutions is the Conversive Interface that allows users to alter the presentation layout in an online environment. The legacy of the Conversive interface dates back to 1999, when the first web-based interface was built, following which a speech-enabled animated interface came into force.

A representative sample of Conversive customers includes NBC, Acura, Qantas Airways, and Public Service Electric & Gas.

eGain

eGain is one of the first market players to offer a web collaboration and web self-service tools in both hosted and on-premise versions in 1999. In 2000, the merger with Inference helped eGain make its foray into knowledge management applications for contact centers. The composition of eGain's solutions is around a complete and innovative suite in customer service and contact center software.

eGain Self-Service is a web self-service solutions that is a part of the overall eGain service portfolio. The eGain Self-Service solution is built around two innovative features which include:

- Configuration ability to adapt to specific customer need using a variety of tools such as FAQ, search, browse, guided help and virtual agents.
- Identification of knowledge bottlenecks through self-service usage analysis and user feedback to generate alerts and review tasks for appropriate content owners.

eGain Self-Service is replete with a range of functionality such as a common knowledge base of articles with links to external content, dynamic folders that update new items or amended items or expired items, FAQs, natural language basic and advanced search, a highly extend-able browse facility that overlays different access structures over both internal and external content, interactive search, configurable web templates to build a large number of user interfaces to the knowledge base, context-sensitive escalation, web-based authoring tools and configurable authoring workflows.

Genesys Telecommunications

Genesys, an Alcatel company, entered the speech IVR market with the acquisition of Telera in 2002,a pioneer in the voice web application platform space, branding the product as the Genesys Voice Platform (GVP). GVP is a software-only, open standards-based product that uses off-the-shelf hardware, VoiceXML and a web development environment for developing speech self-service applications.

Genesys has seen impressive acceptance and growth for the GVP resulting in notable IVR market share gain in a relatively short time-span. GVP has been the fastest growing product in Genesys' history with over 525 customers in the first three years with over 40% growth in 2005.

- Genesys Voice Platform is available in three editions:
- Enterprise Edition, the premise-based IVR solution
- Network Edition, a hosted IVR solution for service providers and large enterprises with multi-site contact center operations
- Developer Edition, built for developers creating applications on the Genesys Voice Platform

In July 2005, Genesys introduced an IP enabled version of the Genesys Voice Platform (GVP).This was in addition to the IP offering already available for its carrier customers. The IP-enabled enterprise edition of GVP supports Genesys' strategy to expand IP capabilities throughout the Genesys Voice Platform product portfolio. Some of the future enhancements that can be expected with the GVP include CCXML compliance, VXML 2.1 standard compli-ance and a module that does application control reporting.

Genesys has partnerships with speech application vendors such as TuVox, Apptera, and Voxify. Genesys has historically been a partner of both ScanSoft and Nuance. The merger of the two companies has strengthened Genesys's relationship with the speech technology vendors and it claims to currently be one of the largest partners of the new Nuance's speech technology. IBM was added to Genesys's core speech technology partner list in October 2005.Genesys and IBM announced a technology and reseller agreement in which the Genesys Voice Platform (GVP) technology offering would be expanded to include the IBM WebSphere Voice Server (WVS) speech solutions.

Genesys strives to offer its voice portal as part of its complete contact center software-only solution. The company believes that automated self-service is only the first interface in a service-oriented environment, which is complete only when integrated with multi-channel (voice, email, web-collaboration) self service and agent-assisted service. Along these lines, Genesys has ensured that the GVP is tightly integrated with the Genesys Contact Center suite of products.

In May 2006, Genesys completed its acquisition of VoiceGenie, a leading open stand-ards-based Voice Portal platform vendor. VoiceGenie had grown by leaps and bounds since its inception in 2000 and had gained notable traction in the enterprise as well as service provider voice self service market. VoiceGenie was one of the first companies to provide support for the VXML 1.0 and 2.0. The company had maintained a track record of being in front of the technology curve and differentiated itself by releasing product versions compliant with the latest industry standards.

Following this acquisition, Genesys has essentially displaced a leading pure-play Voice Portal competitor, thus strengthening its position in the overall IVR market dominated by Avaya, Nortel and Intervoice. VoiceGenie's footing in the Service provider market will also help strengthen Genesys' standing within Alcatel, especially in the context of the proposed Alcatel-Lucent merger. VoiceGenie has a substantial service provider presence in both contact center voice self service and next generation network self-services such as enhanced directory assistance, speech enabled voice mail and color ring back tones at service providers such as BellSouth, Orange and mobilkom Austria.

InterVoice

Intervoice, considered to be one of the pioneers in the IVR market currently has over 23,000 IVR systems deployed worldwide. IQTalk has been the legacy IVR platform for Inter-voice. Intervoice's next-generation Omvia Voice Framework supports the traditional Intervoice platforms, as well as the newer Omvia Media Server. Intervoice has been progres-sively moving its products towards a web-centric model that facilitates better inte-gration with IT infrastructure and other customer contact channels. The Omvia Solu-tions Framework is Intervoice's next step in it's evolution towards open standards and a Web services-centric delivery model. It has abstracted and centralized call control into a sepa-rate product called the Omvia Media Gateway.

Through the Omvia Media Server, Intervoice provides a standards-based environment for the creation, deployment and hosting of speech-enabled services from a single platform. The product provides support for Media Resource Control Protocol (MRCP), VXML 2.1 and CCXML, and is available in both TDM and IP configurations.

Intervoice also offers InVision Studio, a full-featured design, development and debugging tool for the creation of VoiceXML applications. Intervoice will also be releasing a new product called Omvia Studio, which is based on the Eclipse framework tool used by many Web and Java developers. The new product will make it easier for Web developers to create voice content for their Web applications. In addition, in a recently announced partnership with BEA, Intervoice will be working with BEA customers to voice-enable their Web portal applications, making it possible for users to access the same content on the Web or the phone using the same application code base.

Intervoice is one of the very few vendors that provide both SALT and VXML browsers for the marketplace. The company has chosen to promote SALT to show its belief in the future of multimodal applications. It maintains a strategic alliance with Microsoft that enables it to engage in sales, marketing and technology development for the SALT-based Microsoft .NET Speech Server platform.

Intervoice also has a managed services division providing delivery, management and moni-toring of network-based services, applications and equipment. Intervoice also provides industry-specific solutions for specific vertical markets including telecommunications, finan-cial services, healthcare, human resources, travel, government and utilities.

In addition to typical self-service functionality, in a move to provide a more intelligent and integrated experience for customers, Intervoice has added the ability to adapt the caller expe-rience based on customer preferences, segmentation, business rules, or past behavior. These solutions, called Intervoice Adaptive Interaction systems, are expected to use CRM data of key information on individual callers, and use that data to personalize the self-service dialogue. This will make it possible for companies to communicate targeted messages that meet each caller’s need versus treating every caller the same.

In November 2005, Intervoice signed the agreement to purchase Edify, another prominent IVR solution provider, from S1. S1 had strong roots in the financial industry. Edify leveraged this expertise to build pre-packaged applications for the banking industry. Edify’s banking application - Edify Voice Banking, is a software application that enables banking estab-lish-ments to automate customer interactions and provide access to account, branch, and other financial information through speech-enabled self-service.S1 continues to sell and support Voice Banking from Edify following Edify’s merger with Intervoice. Edify also has pre-packaged applications for Utilities and Retail markets. Edify’s IVR customer base includes marquee names such as Chase, ABN Amro, Dell, Sony, Wal-mart, SBC, Sprint and others.

This merger strengthens Intervoice’s competitive positioning in the IVR market. Both compa-nies have a strong commitment to speech and are very active in the development and deployment of innovative speech-based self-service applications. Both Intervoice and Edify are expected to bring out independent releases of their current solutions through 2006 and work towards the merging of products after that.

KANA

KANA is a leading provider of customer service solutions, catering to the self-service needs of around 600 companies globally across multiple channels of web, chat, email, and call centers. These solutions are available to customers in 20 different languages. The successful deployment of these solutions is a function of solutions strength, scalability across products, focused initiative on the enterprise segment, aggressive marketing and drawing on the merits of both in-house expertise and key partnerships with leading global consulting firms.

KANA's web self-service solutions have helped companies in reducing agent interface by an average of 20% and created higher customer satisfaction levels. These self-service solutions are contained in three distinct areas namely, KANA IQ for Agent and Customer Self-Service, KANA Response for Email Escalation and KANA Response Live for Live Chat and Collabo-ration. The KANA Customer IQ solution provides automated guidance to customers through their Self-service experience, thus reducing the agent call volume and providing scal-ability in operations and reliability in enabling better customer experience. Typical func-tionality in the KANA Customer IQ include advice driven assistance that uses self-service methodologies to clarify questions, provides diagnostic interviews, dynamic FAQs, popular language and natural language search.

The unified knowledge functionality works with KANA's Agent IQ towards providing intelli-gent guidance and multiple search and retrieval techniques, across a single knowl-edge-base. This unified approach helps in achieving scale, and reducing maintenance costs of operation. The KANA Customer IQ also provides room for multi-channel escalation across email and chat collaboration in areas such as live chat, email, web page co-browsing, and synchronized form filling that contributes to faster self-service and improvement in agent productivity in other channels. These solutions are also cost-effective and can be rapidly deployed.

Representative sample of KANA customers include AT & T, Bank of America, eBay, Jet Blue, MetLife, Palm, Staples, State of California, TD Waterhouse, Verizon Wireless, Xerox and Yahoo.

Knova Software

Knova Software was formed following the merger between ServiceWare Technologies and Kanisa in early 2005.Knova Software self-service solutions are contained in the service reso-lution management umbrella of solutions. These solutions are built on next-generation search and knowledge management platform that automate the resolution process across multiple channels.

Knova 6.5 is the flagship service resolution management solution that offers functionality in contact center, self-service, forums, field service, and knowledge management. The KNOVA Self Service is a comprehensive, next-generation web-based self-service solution that aligns itself with business workflows, rather than integrating with siloed applications suites. The KNOVA Self-Service approach is in providing a guided search towards customer service reso-lution, rather than mere identification of customer pain points in the resolution process. Typical self-service resolution processes in this solution includes, web-based tools, inter-views, documentation, trouble-shooting, advice from expert forums, escalation to the support center.

In terms of self-service product attributes, the KNOVA Self-Service solution provides a range of functionality such as resolution wizards, guided natural language search, personalized portal and proactive service, knowledge capture workflow, integration with CRM incident workflow, root cause analytics, knowledge source manager and easy maintenance and scala-bility in a J2EE native web architecture.

A sample list of Knova's customers includes AOL, McAfee and Intuit.

Nortel Networks

Nortel Networks has been recognized as a leading provider of self-service IVR solutions for more than thirty years and was a pioneer in deploying one of the first commercial speech applications more than fifteen years ago. Nortel's current self-service portfolio comprises of a multimedia platform, GUI and web-based tools, speech technology, and network services that improve the customer experience.

Nortel's product strategy is to bring together contact center, self-service, advanced speech, unified messaging, and multimedia collaboration into a cohesive application environment with a common media server, tools, and reporting and administration. In June 2005, Nortel introduced the Nortel Applications Center, a framework to provide improved customer service via IP-enabled video communications, virtual contact center, real-time multimedia, collaboration, unified messaging, advanced speech, and computer-telephony integration for contact centers.

For the IVR market Nortel offers a range of voice response solutions targeting different busi-ness segments that range in size and functionality. Its portfolio includes the Business Communication Manager Integrated Voice Response (BCM IVR) which is targeted at the very small end. The key focus of the portfolio includes Media Processing Server (MPS 500 and MPS 1000) platforms. The MPS 500 scales from 24 to 240 ports and is targeted at small and mid-sized businesses. Nortel offers the MPS 500 as an all inclusive, complete turnkey self-service solution, or it is available in a user's choice of platform if they prefer. The MPS 1000 is targeted at medium-to-very large enterprises and service providers that need more than 192 ports. MPS 1000 scales up to 11,000 ports on a single system and offers redundancy along with advanced functionality compatible with carrier requirements. The MPS 500 and MPS 1000 are both very suitable for hosted environments.

Nortel's MPS 500 and MPS 1000 products support advanced speech technologies and VoIP capabilities (both H.323 and SIP). Both are VXML 2.0 compliant. The MPS platforms offer expanded IVR functionality, while providing investment protection to traditional Periphonics Voice Processing Series/Information Server (VPS/is) customers. Applications written for VPS/is can be easily adapted for use on the MPS platforms as well.

In the BCM-IVR, the MPS software has been ported into Nortel's Business Communication Manager (BCM) converged voice and data switch. The BCM IVR is scalable from 2 to 24 ports and is targeted towards the lower end of the market. The BCM-IVR is a value-add product best suited for a multi-site operation with decentralized self-service. Examples of application areas include the multi-store pharmacy, an auto parts dealer or an educational institution all of which have utilized the BCM self-service.

Nortel also offers a Web-Centric Self-Service (WCSS) solution. It utilizes both a VXML and CCXML interpreter. WCSS supports modular development and deployment of applications and allows integrated access to multiple applications within a single session. Nortel is also an end-to-end solution provider for customers deploying speech-enabled self-service applica-tions. Nortel's large and very strong Professional Services team, includes a studio for professional recording services as part of the offering and is available to design, develop and implement very complex speech applications. The dedicated team focuses on speech applica-tion development and addresses discovery sessions, voice user interface development, speech grammar, tuning of speech applications and usability testing.

Nortel has been the largest reseller of ScanSoft speech technologies and was Nuance's largest reseller prior to that. Nortel is likely to continue to be one of the largest resellers of Nuance in the current merged Nuance/ScanSoft entity, with support for leading ASR, TTS and Authentication products as well.

Nortel additionally has strong partnerships with vendors that enhance their portfolio, providing complete, end-to-end solutions, without requiring multiple vendor support.

Nortel's IVR customer base includes American Airlines, TD Waterhouse, Sprint, American Express, HP, PG&E, Canadian National Railway (CN Rail),Bank of America, BellSouth, and United States Postal Service. Nortel also has many city, state, and government customers. They are recognized globally as having the largest VOIP and speech applications in deployment.

Oracle Corporation

Oracle iSupport 11i is the flagship web self-service solution from Oracle, as a part of its CRM portfolio of solutions and targeted at large and medium enterprises. The iSupport provides a portal-based, interactive self-service experience to both employees and customers and is integrated with the overall Oracle Service portfolio. The iSupport solution is also inte-grated with Oracle TeleService, a live, agent-assisted service, thus providing avenues to create higher customer service resolution at lower costs.

Key functionality in Oracle iSupport 11i includes multiple personalized support sites, multi-lingual support, personalized homepage content, proactive and targeted notifications to customers about special events, product upgrades, recalls, reporting and tracking service requests online, rule-based automated notification of service request contracts, support for attachments, knowledge management, technical library, interactive online forums with forum moderators, transactional inquiries, returns, up-sell and cross-sell and web call back requests.

Oracle’s acquisition of Siebel Systems also brought in the Siebel Self-Service and eBilling functionality into the Oracle product umbrella. Typical functionality of these solutions include Siebel EasyPay, Siebel eBilling Manager, Siebel ePayment Manager and Siebel eState-ment Manager, that addresses the differing cycles of the billing process and customer service thereof.

Oracle's self-service system also includes the legacy self-service functionality from its acquisi-tion of Peoplesoft. This functionality is inclusive of the JD Edwards' self-service solu-tions. The entire suite of self-service functionality is integrated into the overall Oracle CRM product portfolio and aligned to best fit the customer needs.

RightNow Technologies

RightNow Technologies provides solutions across sales, marketing and customer service in both on-premise and in an on-demand environment, with a substantial customer preference for the on-demand version. The self-service solutions are a significant component of the RightNow Service portfolio.

The key benefits from RightNow web self-service solutions include a 24/7 information source for customers to receive immediate access to information, major reduction in phone and email workloads resulting in significant cost savings, complete insight into customer needs to dynamically address their changing requirements, automatic communication of updated content to customers. These solutions are effective in their delivery mechanism across multiple channels providing customers a seamless web self-service experience as well as a seamless transition to additional channels such as email and phone.

The crux of RightNow web self-service solutions lies in its patented self-learning knowledge foundation that allows companies to manage diverse, unstructured data and provide accu-rate, relevant and current information to customers instantly. RightNow's patented approach focuses on automatically predicting questions and presenting answers so that customers are presented with the information they need without even having to enter a search query. RightNow's technology also automates knowledge base construction and main-tenance. The knowledge foundation's self-learning capabilities dynamically respond to customer behaviors, continually enhancing and refining the knowledge repository over time. The knowledge foundation also provides automated workflows for new content creation and periodic content review.

RightNow also provides voice self-service functionality, allowing customers access the same knowledge foundation and retrieve the same information via speech prompts as they do via web input. The access of voice features to the knowledge foundation also helps in dynami-cally addressing the customer service queries in a self-service environment.

Other features of the self-service functionality include live chat and collaboration, automatic case management, email response management including auto acknowledgement and auto response.

A sample list of RightNow's customers include Air Canada, Motorola, LG Electronics, Nikon, IBM, SAS, The Princeton Review, U.S. Census Bureau, and Dun & Bradstreet.

salesforce.com

The self-service functionality of salesforce.com is contained in the salesforce Service and Support portfolio. This web self-service solution is integrated with the knowledge base in the salesforce Service and Support framework that allows customers to easily search for informa-tion, log in issues, update or check current status using a web portal. These func-tionality is enhanced by a self-learning engine that provides for self-learning, ranking, automated solution matching and also provides an interactive self-service environment on the web. These solutions are easily integrated in salesforce.com's flagship on-demand CRM solu-tions and can be integrated to any web environment to provide a seamless web self-service to customers.

salesforce.com's web self-service solution can also be integrated with computer telephony integration with no additional requirement of programming expertise. Other functionality includes case escalation, knowledge management, self-service case management and addi-tional measurement capabilities such as history tracking and case metrics to resolve customer service issues.

A sample list of salesforce.com's self-service customers include Postini, MISYS.

SAP AG

mySAP CRM contains the key functionality for key business processes in marketing, sales and service. The mySAP CRM Solution Map outlines the positioning of individual modules of various functionality, within these business processes. The Solution Map also presents three platforms viz, E-Commerce, Channel Management and Interaction Center that are cross-functional and cut across all three critical business processes of marketing, sales and service.

The mySAP CRM solution provides for an E-Commerce platform that helps translate the web into a profitable interaction channel for customers. The self-service functionality is embedded in this E-Commerce platform that provides a seamless web experience for customers. This E-Commerce platform is composed of three pillars namely, E-Marketing, E-Sales and E-Service, of which the self-service attributes fall under the ambit of E-Service.

Talisma

Talisma is an established Customer Interaction Management (CIM) solutions provider with over 700 customers worldwide. The CIM solutions operate in an integrated framework across multiple channels in the customer service space such as email, chat, and web self-service with a mature CIM web services platform, and an extremely robust knowledgebase.

Talisma' self-service functionality is closely integrated with the Talisma Knowledgebase, a central repository of customer information, to provide a seamless customer service experi-ence to customers across different verticals. The typical functionality in the Talisma Knowledgebase include content authoring, content management and workflow tools, self-service and agent portals, search solution and retrieval, FAQ generator, category clas-sifi-cation, glossary system, ad manager, discussion forum, reports, bulk import and third party compatibility and APIs.

The other segments of the CIM suite include solutions that address customer service issues across email, chat, and phone. Other functionality include features to track the effectiveness of various campaigns. All customer service interactions in the Talisma CIM are routed through the Talisma CIM Suite Customer Interaction Hub, which is a centralized and admin-istrative center that presents a unified view of the customer.

The Talisma CIM suite helps enterprises in providing exceptional customer service experi-ences, contextual knowledge about the installed base, avenues to identify areas in process improvement, reduce call load on the agent workforce, and share customer informa-tion in an integrated communication framework. Talisma's specific focus on web self-service is based on its legacy knowledgebase, and targeted marketing of the web channel towards achieving faster customer service resolution.

A sample list of Talisma's customers includes Dell, Siemens, AOL, Epson, The U.S. Navy, Aetna, United Airlines and Signal.

Strategic Recommendations

Strategic Recommendations to Vendors

Frost & Sullivan presents the following strategic recommendations to vendors to achieve high market penetration and revenue growth in the future.

Target Hosted Self-Service Solutions to the SMB Segment from a Long-Term Perspective

The IVR and web-based self-service solutions are directed to help enterprises optimize their costs and gain better customer service delivery mechanisms. Most vendors are developing solutions in a hosted environment, which is a comparatively inexpensive alternative to their on-premise counterparts. Small and medium businesses are perennially looking for low-cost solutions that help them provide higher value to their customer base. Further, as the small and medium businesses grow, their needs for low-cost customer service solutions are likely to grow in tandem with that growth. This could provide vendors with an excellent revenue stream for a longer period of time.

Upcoming Replacement Cycle of IVR Solutions is an Opportunity to Scale Up IVR Functionality

Vendors would do well to make the best use of the upcoming replacement cycle of IVR solu-tions over the next couple of years. Escalation from traditional IVR solutions to IP-based IVR solutions would help vendors provide higher value to their customers. The pressure on IVR solutions placed by the increasing presence of web-based self-service solu-tions can also be negated to an extent, with the deployment of next generation IVR solu-tions on open standards such as VXML and SALT.

Standalone Solutions can Provide Incremental Revenue Opportunities

The IVR and web-based self-service market has so far been dominated by large contact center vendors who have catered to service needs of their installed base of customers. Most of these enterprise contracts have been for an entire suite of contact center solutions, inclusive of IVR and web-based self-service. However, as a number of companies look to upgrade their customer service functionality, contact center vendors can look to create revenue oppor-tuni-ties via sale of standalone applications. This is especially relevant to firms whose IT budgets and business size does not warrant a full-scale contact center deployment.

