White Paper: Contact Center Automation

Why Update Your Speech-Enabled Call Center Solution

Abstract

Demands on call centers are increasing - there is a need to automate more, to automate faster, and to provide self-service to a larger customer base. Existing self-service applications, built around previous business environment, may no longer reflect current product/service offerings. The speech technology available only a few years ago is now out-dated, and not capable of providing the reliability or degree of automation needed to satisfy customer expectations, caller sophistication, and increasing call volumes.

Introduction

You made a wise decision – a few years ago you used speech recognition technology to automate many of your call center functions, and you've already reaped many of the benefits, both in terms of cost savings and agent productivity. But your business environment as well as your customers has changed. Mergers and acquisitions may have imposed re-organizations within your company, and more and more aggressive competition has fueled the need for even greater cost-savings. These changes have impacted your call center, and you wonder whether your self-service solution needs to be updated to keep up with these changes.

This paper describes some of the changes that may signal a need to update your call-center speech recognition solution.

What Has Changed

- **Product/Service Mixtures**

As a result of new marketing strategies, the demand for certain products and services increases, while that for other products and services wanes. As new products or services are added, speech recognition menus that reflect the old product mix will need to be altered.

- **Customer expectations**

Callers today are demanding more from call-centers. Influenced largely by the exposure to web site self-service applications, they want the convenience of 24/7 accessibility. They want fast and friendly access to information and services. Additionally, callers want to be in control of how they interact with the call-center, either through self-service or agent-assisted service. And more and more they want some degree of personalization in the service they receive. Unfortunately, many speech applications, built with the sole goal of cutting costs, and hence, fall short of meeting these increasing caller demands. Thus, to maintain or improve customer satisfaction, applications may have to be re-designed using the best practices in caller-centered voice interface design.

- **Call volumes**

A few years ago, experts predicted that web-based contact centers would make call centers obsolete. However, for a substantial number of businesses that have implemented self-service

Web sites, the volume of calls to their call centers has increased[1]. For these businesses, in order to continue to keep agent costs down, there is a need to find more functions that can be fully or partially automated.

- **Caller sophistication**

At the time when call volume is increasing, the types of questions that callers have to be addressed by the call center has changed. Customers can get answers to the most frequently asked questions or handle simple transactions from web sites, so they call the call centers when they need more complex issues addressed[2]. As a consequence, the average amount of time that agent spends per call increases. By automating the more mundane portions of each call, such as collecting the caller's address or account number, speech recognition can be used to offset some of the additional load on agents.

- **Caller Demographics**

According to the 2000 U.S. census, 11% of Americans were born outside of the United States. This represents a 57% increase from 1990. Also, 17.9% of Americans speak a language other than English at home. As the population changes, so will the caller base to call-centers. To keep up with these changes, call-center applications that originally supported only English-speaker callers will need to be augmented with support for additional languages.

- **Mobile phone usage**

Cell-phone usage has increased dramatically in the past few years. Currently, 70% of the households within the United States have at least one cell phone[3], (compared to 57% on 2000), and the total number of minutes of cell phone usage has exceeded that of landline usage. In other countries where the costs of providing mobile service are less than the costs of providing landline service, the penetration rates are even higher. These statistics underscore the increasing need for automated self-service applications to support mobile phone users.

Along with the increase in cellular usage has come an increase in the passage of hands-free legislation. For instance, in the beginning of 2001, at least 23 nations (including England) had completely banned the use of hand-held devices for drivers. And in the United States of America, 40 states had considered and possibly passed some type of restrictions on hand-held devices.

These statistics underscore two needs for an automated call-center to evolve with the needs of its callers:

  - To replace DTMF input with speech input in order to accommodate hands-free requirements
  - To offer applications that will work well in noisy environments

- **Speech Technology**

Fortunately, re-designing and streamlining your existing IVR application and taking advantage of recent advantages in speech recognition technology can upgrade your speech application to meet the increasing demands of your call center. For example, improvements in speed, accuracy,

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[1] Barkai, Joe. "When Self-Help Doesn't Work", ContactCenterWorld.com, October 14, 2003.
[2] "Cost Drove the Call Center Explosion of the '90s
What Can We Expect in the Upcoming Decade
June 1999, Janice Waugh
e-Summit International online Journal

[3] Jaques, Robert. "Wireless Edges Out Fixed-Line for the First Time", vunet.com, Personal Computer World, October 21, 2004. http://www.pcw.co.uk/news/1135414

and computer memory usage means that larger call volumes can be handled quicker and with fewer resources. Cell-phone users can be accommodated because newer speech recognition technology provides greater robustness in noisy environments. Recognition vendors are providing support for more and more languages, so non-native English speakers can use the self-service applications. Accuracy for large-vocabulary recognition tasks has improved dramatically,, thus expanding the number of functions that can be fully automated with speech recognition. For example, it is now possible to automate such complex tasks as address collection with great success. Finally, improvements in related speech technologies, such as, speaker verification and text-to-speech have expanded the potential for automating call-centers even more.

How RSI Can Help

RSI has extensive experience in developing IVR applications ranging from DTMF to Natural Language Speech Recognition using VXML. It has to its advantage an ISO 9001:2000 and CMM Level 4 Offshore Center of Excellence to deliver cost-effective solutions.

Whether you are looking for business case development, design consultation, mentoring, temporary development resources or outsourcing, our speech team equipped with state of the art infrastructure is ready to address your needs. Let us know how we may begin helping you. Please do contact us via email at marketing@realsoftinc.com or call us at +1 609 409 3636.