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WHITE PAPER

DELIVERING COST SAVINGS AND THE BEST CUSTOMER EXPERIENCE:

SPEECH VERSUS DTMF

JANUARY 2005

INTRODUCTION

The issue of providing customer care using solutions built with speech recognition technology versus DTMF (i.e., touch-tone)-based systems remains a topic of ongoing debate for many companies. Businesses that have deployed speech recognition cite the benefits of improved caller experience, higher customer satisfaction levels and reduced costs. Companies that have not deployed speech believe that their current customer care strategies that rely on DTMF-based IVR systems are already providing sufficiently high automation and self-service rates; they remain skeptical that the addition of speech recognition would yield sufficient incremental benefit to justify the investment.

The purpose of this white paper is to demonstrate the emergence of speech recognition and its advantages relative to DTMF. Specific topics addressed are:

- Rapidly increasing investment in speech recognition-based solutions compared to DTMF-based solutions.
- Continued dominance of the phone as the most preferred customer interaction channel.
- Cost savings, improved caller experience and greater customer satisfaction are the key reasons for replacing DTMF systems with speech recognition-based solutions.

BUSINESSES ARE INVESTING IN SPEECH RECOGNITION

The speech recognition market has reached an inflection point. After many years of speech recognition vendors touting the virtues of replacing frustrating touch-tone menus with easy-to-use voice commands and proclaiming that the next twelve months will be “the year that speech takes off,” 2004 is the first year that spending on speech technology has rivaled spending on IVR (DTMF) technology (Figure 1). With a compound annual growth rate of 52% versus 11% for DTMF spending over the last five years, speech recognition spending is poised to exceed DTMF spending by the end of 2005.

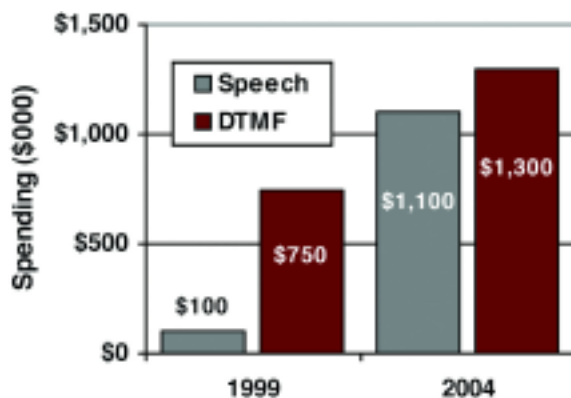


Figure 1: Spending on Speech Recognition and DTMF
(Source: Datamonitor 2004)

For some businesses, the decision to remain with their current DTMF system is based on the belief that other customer interaction channels such as Web and email will offload the volume of customer service interactions occurring over the phone. Decision makers at these companies are asking, “Why invest in improving the phone channel, while the majority of customer interactions are going to occur via the Web and email?”

Definitions:

Voice automation, DTMF

Voice automation works using speech recognition software. It allows callers to say in natural, conversational language the purpose of their call, e.g., “I want to check my claim status”. The speech recognition software then evaluates the caller’s statement and routes the call based on the intent of the caller.

DTMF (Dual Tone Multi-Frequency) works using a phone’s touch-tone keypad. Callers listen to a menu of options and then press the digit on the telephone keypad that most closely matches their objective. The IVR system then routes the call based on the menu selection.

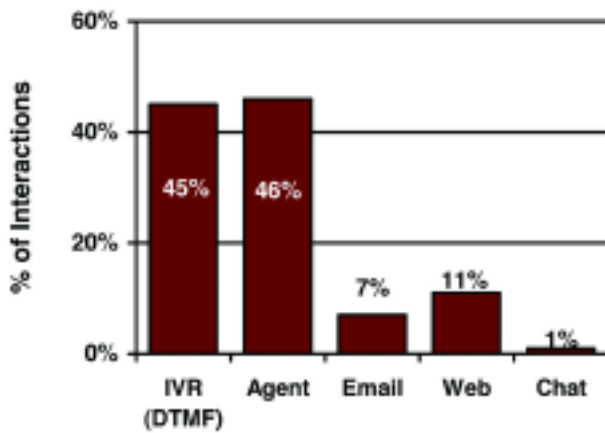


Figure 2: Channels for Customer Service
(Sources: Forrester 2003)

This would be an appropriate position to take if in fact phone-based interactions were being transferred to other channels such as the Web and email. Yet a study conducted by Forrester Research indicates that over 90% of interactions between consumers and enterprise occur over the phone and nearly half these interactions (45%) occur with the IVR system (Figure 2). According to The Yankee Group, the volume of interactions over the phone will continue to grow 4% annually. In contrast, other channels such as Web and email are nearly an order of magnitude smaller in terms of volume of interactions handled.

Hence, companies that invest in speech recognition are optimizing the experience and efficiency of the channel that handles the greatest volume of customer interactions.

SPEECH RECOGNITION DELIVERS SAVINGS

A fundamental reason why businesses are investing in speech recognition is the compelling cost savings that speech recognition delivers over other communications channels used to provide customer service (Figure 3).

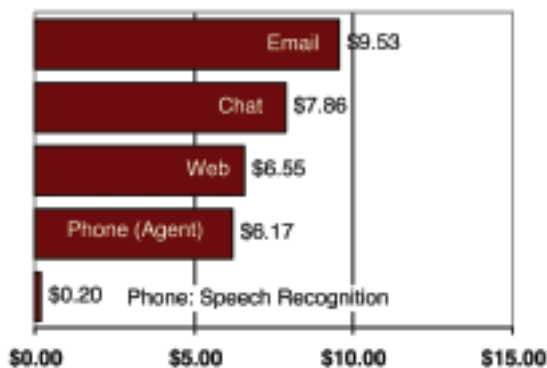


Figure 3: Costs of Resolving an Issue via Communication Channels
(Sources: Forrester, Giga, Nuance Customers)

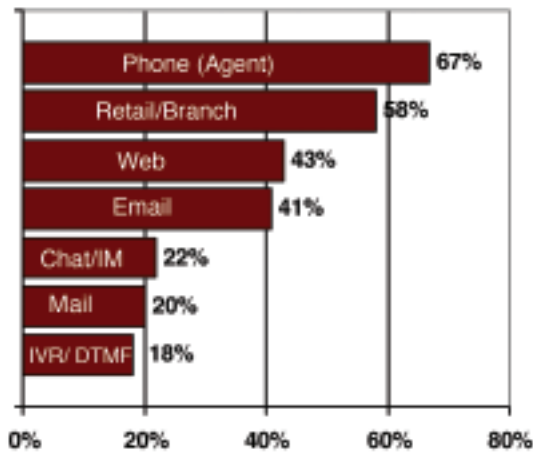
When compared specifically to DTMF systems, speech recognition also outperforms. With speech recognition, leading companies across a range of industries are able to boost customer self-service rates, reduce reliance on costly agents and realize significant costs savings.

Company	Self-Service Rate with DTMF	Self-Service Rate with Speech Recognition	Annual Cost Savings
North American Airline	50%	88%	\$1,000,000
Mutual Fund Company	45%	63%	\$1,000,000
Global Financial Services Firm	82%	90%	\$6,300,000

Furthermore, investments in speech recognition deliver a rapid payback – usually well under 12 months. Hence, enterprises are typically able to easily justify investments in their speech projects.

SPEECH RECOGNITION IMPROVES SERVICE LEVELS AND THE CUSTOMER EXPERIENCE

In 2003, Forrester Research conducted a study which included a question asking companies to rate the extent to which their company met customer needs across each of their major service channels (Figure 4). IVR (DTMF) was the lowest rated channel, with only 18% of companies indicating that their DTMF system almost always met customer needs.



How Often Are Needs Are Met?

Figure 4: Meeting Customer Needs and Service Channels (Source: Forrester, 2003)

In order to address the abysmal service levels offered by DTMF, businesses have turned to speech recognition. Studies show that consumers prefer using speech recognition systems over DTMF. A Harris Interactive study shows that 89% of consumers feel that speech recognition is preferable to DTMF (Figure 5).

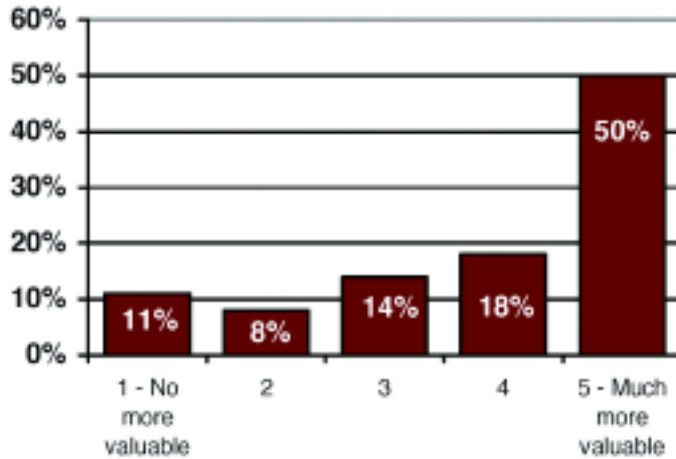


Figure 5: Consumers Find Speech Recognition More Valuable Than DTMF
(Source: Harris Interactive, 2004)

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