

Contact:
Jim McClure
Apollo Public Relations
630.845.8424
jim@apollopr.com

For Immediate Release

**Frontier Of Natural Speech Technology Advanced In
Public Housing Registration Program**

OVERVIEW

Advanced natural speech technology successfully handled high volumes of callers with widely diverse backgrounds in a politically sensitive application. More than 90% of all calls received were successfully completed with typical callers being asked for over forty pieces of information, and, in many cases, more than 100 pieces of information.

Housing authorities universally face a daunting, politically sensitive task. They operate housing facilities for low to moderate income families through their public housing and rent assistance programs. Housing authorities are service providers that are under tremendous pressure to keep costs low, and yet to fairly and equitably assign housing that becomes available.

The Housing Authority of the City of Milwaukee (HACM) provides rent-subsidized housing to approximately 9,400 households throughout the City of Milwaukee. Typically when HACM “opens” its waiting list for housing, thousands of people apply, and the waiting list is then “closed” until the list is exhausted. Historically, the waiting list remains closed for several years, and whenever HACM opens its waiting lists, the public response is high. This year the Housing Authority decided to concurrently register applicants for both its public housing and rent assistance programs. Thus one registration served two separate Housing Authority programs.

This was potentially an overwhelming challenge. Each registrant’s application is unique. The demographics of the Housing Authority’s clientele could not be more diverse – the elderly, disabled, handicapped, immigrants, families with children, and persons with various education levels. The registrant must agree to a criminal background check in order to be considered.

more ▶

Household sizes range from one person to ten or more. Very detailed information is required such as the age, gender, race and social security number for each person in the household. A single call could require obtaining over 100 items of information for a single registrant, and many of those items could require multiple questions and responses. And the information had to be accurate. There is no room for any group feeling disenfranchised or that the registration process is cumbersome.

According to Susan July, Economic Development and Social Services Manager, HACM had opened waiting list registration twice in the past decade and different registration approaches were taken. In 1991, a telemarketing firm was hired to handle the calls. Nearly 20,000 calls were taken over a two-week period. But following the telephone interview, forms were filled out and mailed by registrants. Hand-written registration documents and prohibitive staff commitment resulted in a slowed registration process and endless hours of data entry. In 1998, registration was taken in person at HACM's office. While this system provided for face-to-face contact with registrants, it forced them to wait in line outside. Again, data entry was extensive using this method of registration. This year, HACM recognized the problem of managing thousands of people waiting in line to register in front of their facilities in the middle of winter.

Recognizing the shortcomings faced in prior years, HACM sought alternatives means of registration. The complexity of the call, not to mention that many callers might not have touch-tone phones, precluded using conventional Interactive Voice Response (IVR) or generic speech recognition. Additionally, because of the political sensitivity of the registration, IVR was not considered appropriate. Instead HACM selected the natural speech technologies of ConServIT Integrated Teleservices, a service of Conversational Voice Technologies Corporation, in Gurnee, Illinois for what was to be one of the most complex and demanding programs the 30-year-old company had ever encountered. Their system had to be able to handle the flood of registrations anticipated.

ConServIT started by obtaining the toll free, easy-to-remember, vanity number 877-RENT-HOME for the campaign. To meet the federal requirements to aggressively circulate information regarding the opening of registrations, HACM placed advertisements in the *Milwaukee Journal-Sentinel* and in local community papers. Direct mail literature was sent to social service organizations in the greater Milwaukee area.

The information obtained by ConServIT from callers had to be complete, and accurate. Registrations were to be accepted in chronological order. If any registrants' calls were lost or their information was entered in error, those registrants could lose their eligibility for housing, a significant economic loss for low income families and individuals. Callers that give up by hanging up halfway through the call would be unacceptable, just as would callers that did not spell their names.

Programming the system, and anticipating the natural language conversational possibilities was difficult because of the nature of the inquiries. "What made this program so very difficult is that, because of the short duration of the program, there would be no opportunity to alter the script to adjust for unanticipated difficulties encountered by callers. It had to be right the first time using ConServIT's decades of experience with natural language script," noted ConServIT's President, Peter Theis. "There was no second chance."

The entire registration call was conversational with no touch-tone input. Anticipating natural language conversational possibilities for the automated systems was challenging due to the nature of the inquiries. For example, a simple question such as “What race are you?” is politically insensitive. Similarly, if the caller is provided a list of “race” options, such as Asian, Caucasian, American Indian, etc., the category for Hispanic is potentially controversial, since Hispanic people could also be Asian or African American. These issues were successfully addressed using ConServIT.

The program was originally planned to run from 4:00 Wednesday morning, January 26th through no longer than the following Saturday at midnight. Because the number of application openings was limited, HACM knew the registration process would be terminated before everyone who wanted to be registered was registered. HACM specifically wanted people to have access twenty-four hours a day. By using the phone as the registration medium, callers accessing the system at any one time would be limited in numbers, so that callers that were working on a night shift would have the opportunity to call in during the day before registrations were closed. Callers waiting to get into the system would be waiting in the comfort of their homes rather than in front of an office building.

The calls came in until the program was terminated 35 hours later at 3:00 PM Thursday when registrations were closed after taking nearly 16,500 calls. Information was gathered on 39,494 people in 14,638 households, averaging 2.7 people per household. ConServIT had been monitoring the yield so it was known in advance approximately how many calls were required to obtain the desired level of registrants. “These results would probably not have been attainable using any other method of handling phone calls,” states Mr. Theis.

What was not recognized, however, was how the characteristics of the calls changed as the program continued. Initially, the yield exceeded 95%, yield being the percentage of all calls that resulted in complete registrations. As the campaign approached completion, the yield decreased to 89%. The length of the call also decreased significantly as the program continued. Initially the calls averaged 10 minutes in length, with some extending to 30 minutes. The average number of residents initially for each registrant was six people. However, for the campaign as a whole, it was only 2.7 people per household. This change in the demographics was not anticipated.

Of the 16,488 calls handled, only 351 calls (2%) were incomplete, having insufficient information to process the registration. 1,315 callers (9%) hung up before giving any response. However, these included callers that were specifically asked to hang up and call back again if they did not have the social security number for the registrant and each resident. That such a large proportion of the caller base was fully prepared speaks highly of the effectiveness of the pre-registration organization and publicity. It is noteworthy that there were only 17 prank calls.

The information received from the caller was converted by ConServIT to digital text and transmitted to the Information Systems Department at HACM for registration processing. One file transmitted included information about those that agreed to a criminal background check and therefore could be eligible for registration, and the second file for persons who were disqualified because they did not agree.

HACM wanted the names of the latter group of people in case they subsequently called inquiring why they were not registered.

"In Milwaukee, we believe that residents of public housing deserve to live in good neighborhoods – and we want to make sure that all eligible citizens have access to these assisted housing programs," said Mayor John Norquist. "The parties involved in accepting public housing applications this year deserve high praise. They handled a large volume of calls and ensured that all citizens – including the disabled, the elderly and families with young children – were able to register for housing."

The Housing Authority achieved all its objectives. It acquired complete registrations without any of the headaches or expense of bringing in additional personnel or occupying their already lean staff with data input. They accomplished this without complaints from the people they serve, or the political establishment. Only two calls were received by the office of Milwaukee's mayor. It was a smooth operation done in a most cost effective manner.

About ConServIT, a service of Conversational Voice Technologies

ConServIT provides automated inbound teleservices using proprietary voice processing, switching, and reporting technologies. ConServIT is a leading provider of automated call handling services and database management of information. More information, including a real telephone call handled by ConServIT, is available at www.conservit.com or 1-800-994-4400. E-mail: sales@conservit.com.