

fluency



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Fluency 2006 Consumer Perceptions into Speech Recognition Survey



Table of Contents

1.	Introduction.....	2
2.	Key Findings	3
3.	Methodology	4
4.	Survey Results.....	4
4.1	Experience with Speech Technology.....	4
4.2	Preferences	7
4.3	Using Speech System as Alternative to Internet.....	9
5.	Speech System Trials.....	10
5.1	Travel/Transport Speech System Trial	10
5.2	Public Sector Speech System Trial.....	13
5.3	Utilities Speech System Trial	15
5.4	Retail Banking Speech System Trial.....	18
5.5	Retail Speech System Trial	20
5.6	Insurance.....	21



1. Introduction

Keeping the Customer Satisfied

There is no doubt that an increasing shift is taking place in the way that consumers interact with organisations, both private and public, to purchase goods, pay for products and services and request information. Consumer attitudes and expectations are more demanding and through increasing Web adoption; information and services are available 24 hours a day, 7 days a week and customers are used to getting what they want, when they want it.

In this tough competitive business landscape it is imperative for businesses that deliver customer service to retain existing customers and foster a new customer-base. It's all about keeping the customer satisfied.

The truth is that speech recognition has almost unlimited potential to radically reinvent the customer contact experience, while meeting all of a customer service directors' tough targets for call management efficiency.

For the customer, the right speech recognition tool can turn a passive call to a contact centre into the voice-controlled equivalent of a full Web experience, allowing the caller to locate the information, products or services they need and process these without input from an agent.

This hits all the contact centre sweet spots – personalising the customer experience, cutting call queues, enabling calls to be dealt with effectively first time, maximising the use of agents' time and knowledge, and reducing operating costs (potentially by up to 80%).

Many high profile, household names have used speech recognition systems to cut call queues and improve the customer experience. For hotel chain Travelodge, this has enabled the company to match online price deals with those offered on the phone, since the cost of sale is now equally low in both cases. This is a massive business benefit – and all made possible by the integration of speech recognition technology with the company's business applications, enabling customers to find and book hotels over the phone, using only a virtual agent.

As speech recognition rapidly gains popularity globally, few customer focused organisations can fail to have these solutions on their radar. It's a pretty brave company that's ignoring this trend altogether. But what about the consumer? How do they perceive speech recognition and which transactions do they believe most lend themselves to this technology?

The purpose of this Fluency Consumer Perception Survey into Speech Recognition which targeted a range of consumers across the UK during July and August 2006, was to gain a unique insight into consumer views, experiences, likes and dislikes through a series of face to face interviews and by asking them to pilot sample transactions using speech, ranging from paying a gas and council tax bill to transferring bank funds.

Fluency's interest in the survey findings is fuelled by its pioneering role in helping hundreds of organisations develop and deliver configurable speech recognition applications to automate their call centres.



2. Key Findings

During a series of face to face interviews consumers were asked to pilot sample transactions using speech, ranging from paying a gas and council tax bill to transferring bank funds. The research was quantitative comprising 100 interviews across different segments of the UK population.

Key findings from the research were as follows:

- There is good experience with speech technology with 58% of the sample surveyed having used it recently.
- Among those who use it the experience is mainly positive (81%) and this is reasonably consistent across age groups and gender.
- 69% think speech recognition systems have improved over the last year although 22% are undecided. A higher number of younger users (92%) think it has improved.
- The main attractions to users of a speech system are that it will speed things up (65%) and avoid having to wait in a queue (49%).
- Most (80%) prefer to continue to wait in a queue after 2 minutes than use the speech system. However after 5 minutes this drops to 46% with 54% now happy to use the speech system and after 10 minutes the portion preferring to wait has dropped to 28% with 72% happy to use the speech system.
- There is positive endorsement of speech technology as an alternative to the Internet for purchasing items (58%) and this is even stronger if a better deal can be obtained (66%).
- In trials of speech systems across travel, public sector, utility banking and retail sectors, the vast majority of people are able to successfully complete transactions using speech technology.
- For the tasks themselves, participants are very willing to use speech technology for obtaining information such as travel times, balances, location of services, etc. but are less willing for critical applications such as financial transactions, reporting gas leaks or a change of address.
- Overall while the first choice preference is to deal with a live agent, a speech system is the second choice by far over touch-tone dialling techniques.

The top 3 preferred transactions for using speech across verticals were:

Travel/Transport- Catalogue/brochure requests, check ticket status & check arrival/departure time

Public Sector- Location of services, status of local services, reception & directory services.

Utilities- Give meter reading, check balance & getting service updates

Retail Banking- Find nearest branch or ATM, Request a statement & Obtain Account Information

Retail- Catalogue/brochure requests, check order status & order product.

Insurance- Get a quick quote, checking insurance renewal date & checking no claims bonus.

3. Methodology

Fluency Voice Technology commissioned The Independent Fieldwork Company of Enfield, London to carry out face-to-face interviews across a broad sample of respondents in the UK. The interviews were conducted during July and August 2006 and lasted approximately 30-40 minutes each. It was mainly quantitative with some qualitative questions and included respondent interaction where they tried telephone speech systems for various tasks.

The total sample size was restricted to 100 respondents and therefore interpretations of results should not be taken as statistically significant particularly for sub categories but used mainly as indicators.

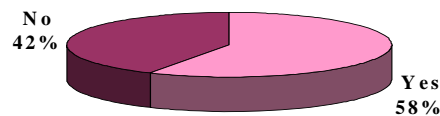
4. Survey Results

4.1 Experience with Speech Technology

Recent Use

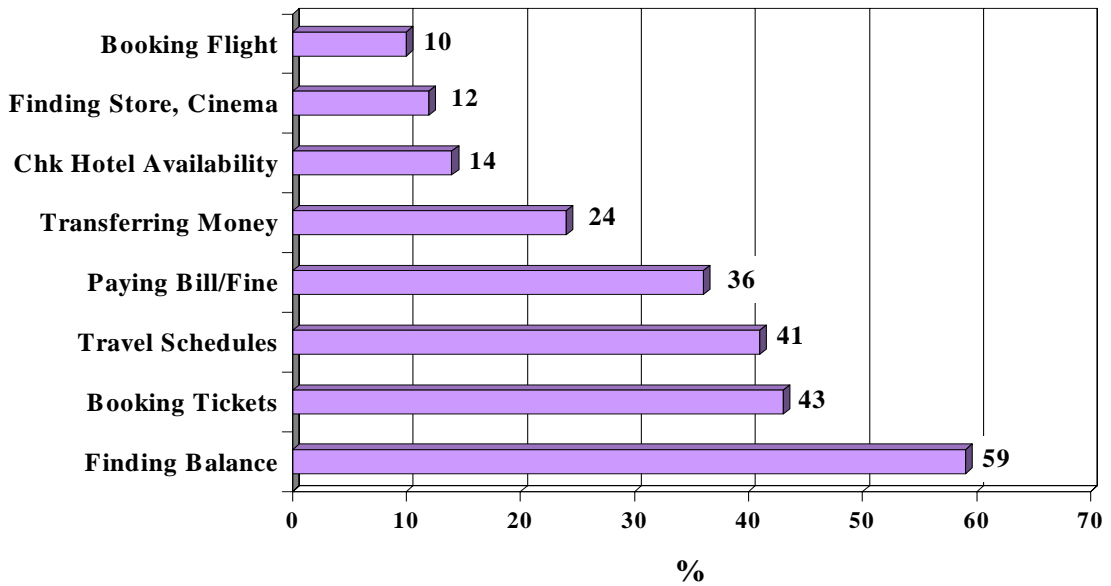
Over half of respondents were found to have used speech technology recently.

Whether Used Speech Technology Recently



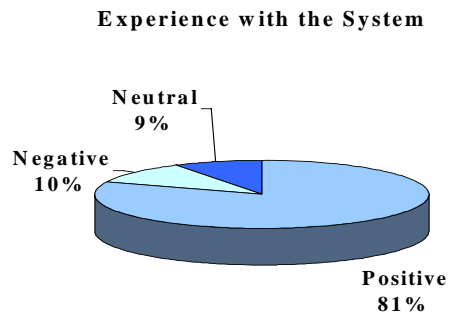
- There is consistency across age groups with both young and old having used it recently.
- A higher portion of males (68%) than females (51%) have used it.
- Highest in Scotland (90%) and lowest in the North of England (11%).

Main Services Where Used Speech Technology



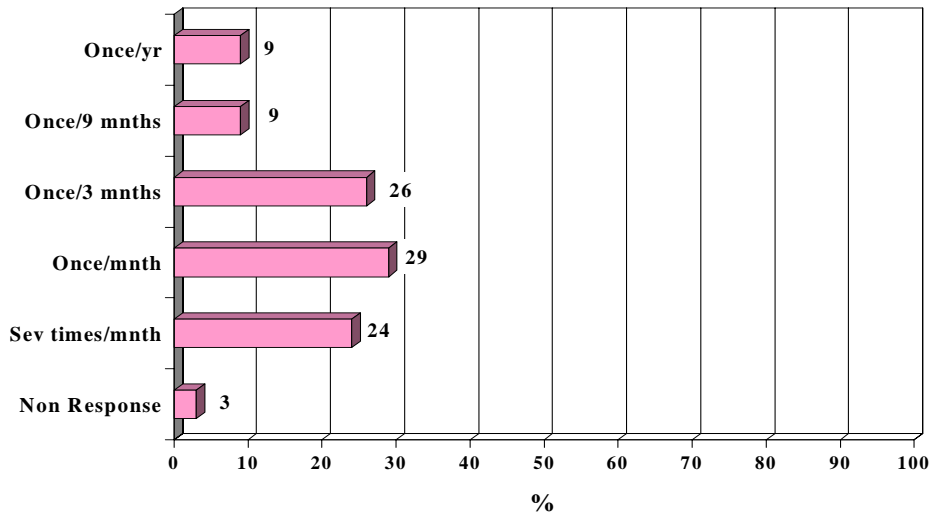
- The highest portion uses it for finding out about a balance (59%) although there are strong polar differences between younger (77% - under 25s) and older users (40% - over 60s).
- Also speech technology is popular for travel arrangements such as booking tickets (43%) and finding out about train or flight schedules (41%).
- Over a third uses it for paying a bill or fine (36%).

Experience Positive and Frequency of Use



- Among those who use it the experience is mainly positive (81%) and this is reasonably consistent across age groups and gender.

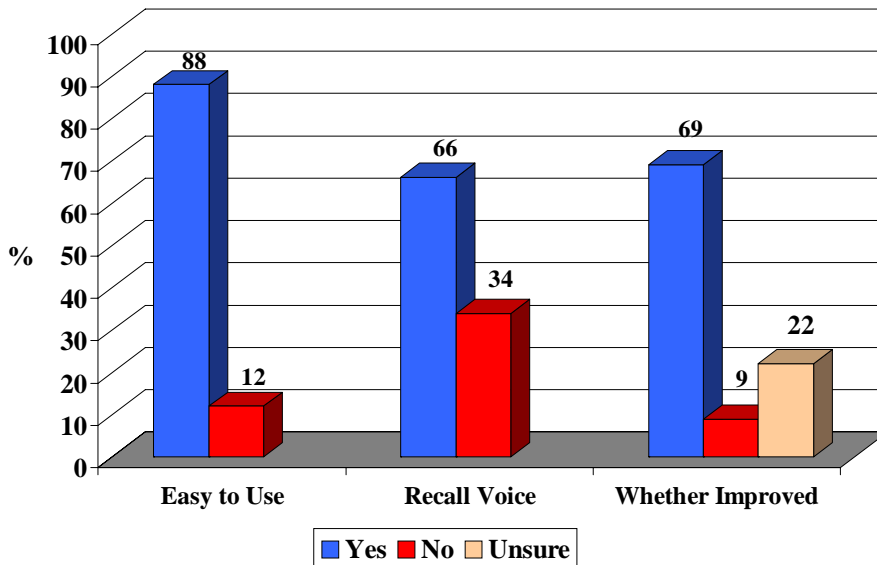
How Regularly Use Speech Self-Service Application



- The highest frequency of speech use is monthly (29%), once every 3 months (26%) or several times a year (24%).

Relatively Easy to Use for those Who Use It

Perception Of Speech Application



- 88% of those who use it find it easy and this is consistent across age groups, region and gender.
- There is reasonable recall of the voice of the application (66%) which is similar for males and females but lower recall rates among older people age 46 plus.

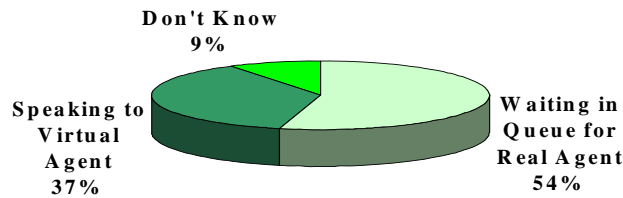
- 69% think speech recognition systems have improved over the last year although 22% are unsure. A higher number of younger users (92%) think it has improved.

4.2 Preferences

A series of questions were asked about preferences for using a virtual speech technology agent versus waiting in a queue to speak with a real agent.

Over a Third Prefer a Virtual Agent

Whether Prefer Waiting in Queue for Real Agent or Speaking to a Virtual Agent



- Although more than half (54%) still prefer waiting in a queue to speak to a real agent, just over a third (37%) of all respondents would prefer speaking to a virtual agent. Another 9% are undecided.
- A higher portion of the younger ages (54%: under 25 years; 50%: 26 to 35 years) would speak to the speech system. The lowest portion (13%) is in the 46 to 60 year group.

For those preferring to wait in a queue to speak to a real agent, they give as their main reasons:

Table 4.0: Main Reasons for Preferring Real Agent

Reason	% Saying*
I'd prefer to talk to someone directly to explain my reasons for the call.	80%
I can explain my reasons for calling in detail.	24%
I feel that my transaction will get done if I speak to a live agent.	30%

*Note: Percentages add up to more than 100% because of multiple responses.

- The main appeal of a real agent is being able to discuss issues directly with someone.

Table 4.1: Main Reasons for Preferring the Speech System

Reason	% Saying*
I can complete my transaction quickly without having to speak to anyone.	65%
I don't have to wait in a queue.	49%
I can call any time of day to get my transaction done.	30%
I can call on a hands free set while driving & speak to a virtual agent.	14%

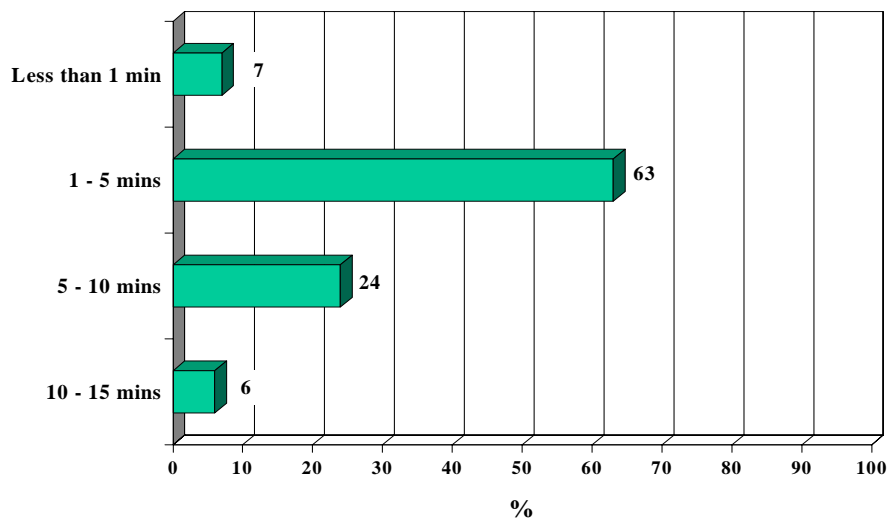
*Note: Percentages add up to more than 100% because of multiple responses.

- The main attractions of the speech system are that it will speed things up (65%) and avoid having to wait in a queue (49%).

Call Queue Waiting

Respondents were asked how long they were willing to wait in a call queue.

How Long Would Wait in Queue

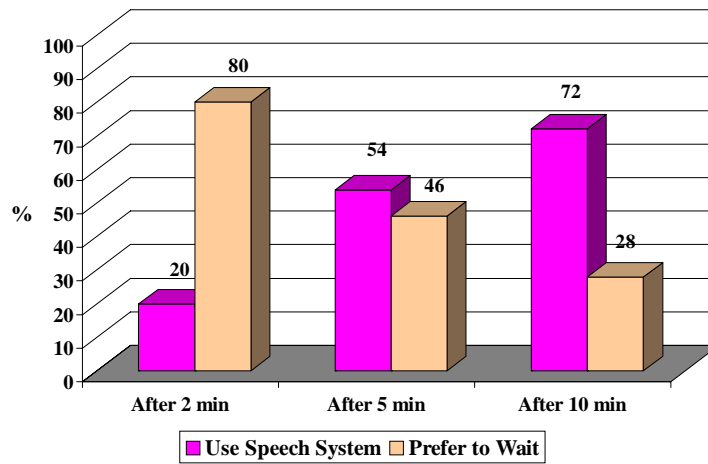


- 63% are willing to wait between 1 – 5 minutes in a queue to speak with a real agent.
- Another 24% will wait longer, between 5 – 10 minutes.
- But fewer (6%) are willing to wait 10 – 15 minutes.

Respondents were asked whether they would prefer to use a self-service speech system, if offered, or continue to wait in a queue once they had been waiting 2, 5 and 10 minutes.



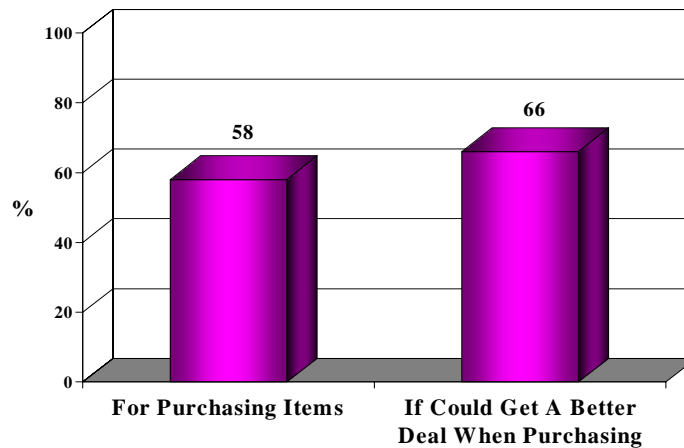
Whether Wait or Use Speech System After Lapse of Time



- Most (80%) prefer to continue to wait after 2 minutes than use the speech system.
- Interestingly after 5 minutes this drops to 46% with 54% now happy to use the speech system.
- After 10 minutes this drops to 28% with 72% happy to use the speech system.

4.3 Using Speech System as Alternative to Internet

Happy To Use Speech System As An Alternative To The Internet



There is positive endorsement to using a speech system as an alternative to the Internet for purchasing items (58%) and this is even stronger if a better deal can be obtained (66%).

5. Speech System Trials

Respondents were asked to trial the speech system across different sectors by dialling a number and trying a transaction. The various sectors used in the trial were:

1. Travel/Transport – order a holiday brochure
2. Public Sector – pay a council tax bill
3. Utilities – pay a gas bill
4. Retail Banking – check balance and transfer funds
5. Retail – check whether can get a digital TV service in area

Following the trials in each sector respondents were asked the same series of questions which they could either agree or disagree with on a five-point scale.

- ❖ Strongly Agree
- ❖ Agree
- ❖ Undecided
- ❖ Disagree
- ❖ Strongly Disagree

The main trial questions are shown in table 6.1.

Table 5.1: Main Questions Asked Following Each Sector Speech Trial

Questions
The system was easy to use.
The system covered everything I needed to do to complete the transaction.
I thought the service was efficient.
I enjoyed using the service.
I would be happy to use it again.

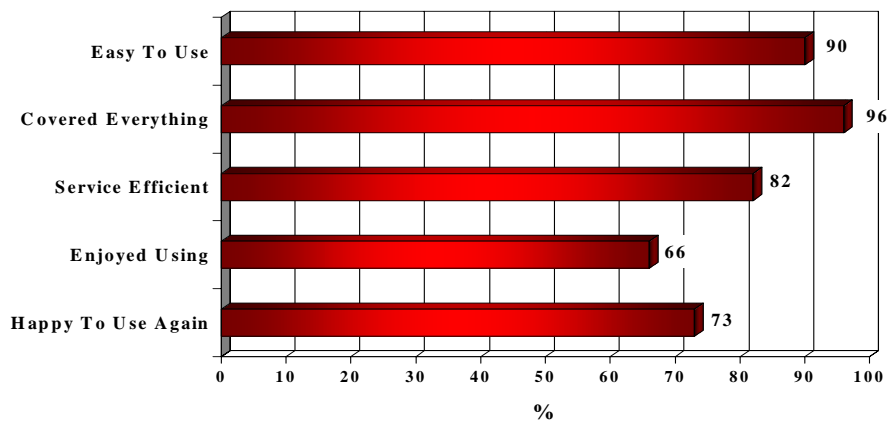
Additionally, for each sector, questions were asked about preferences for using speech for specific transactions. The list of these questions is shown in each of the sector sections, which follow.

5.1 Travel/Transport Speech System Trial

Interviewees were asked to dial a number and were given the task to order a specific holiday brochure from a menu of options using the speech system. The graph below displays the consolidated feedback immediately following the speech trial.



Travel/Transport Trials Feedback



- A high percentage agrees the speech system covered everything (96%) and is easy to use (90%).
- They agree too that the service is efficient (82%) and while ready to use it again (73%) a much smaller number actually enjoyed using it (66%) although 13% were undecided.

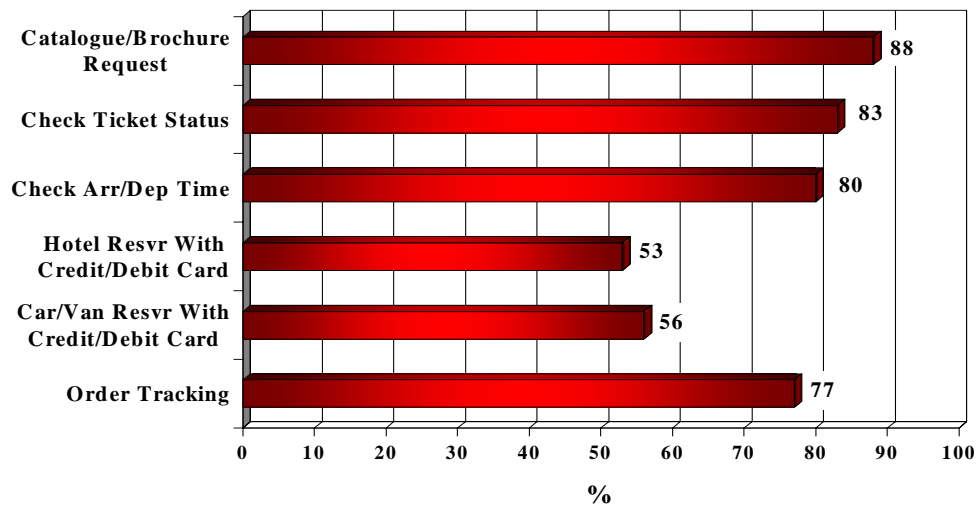
Travel/Transport- Transactions Suited To Speech

Respondents were then asked about preferences for using speech for specific transactions within the travel/transport sector illustrated below.

Table 5.2: Travel/Transport – Specific Transaction Questions

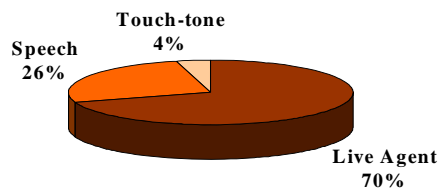
Questions
Catalogue/Brochure request.
Check ticket status.
Hotel reservations with credit/debit card payment.
Car/Van hire reservations with credit/debit card payment.
Order tracking.

Travel/Transport – Preference For Using Speech For Specific Transactions



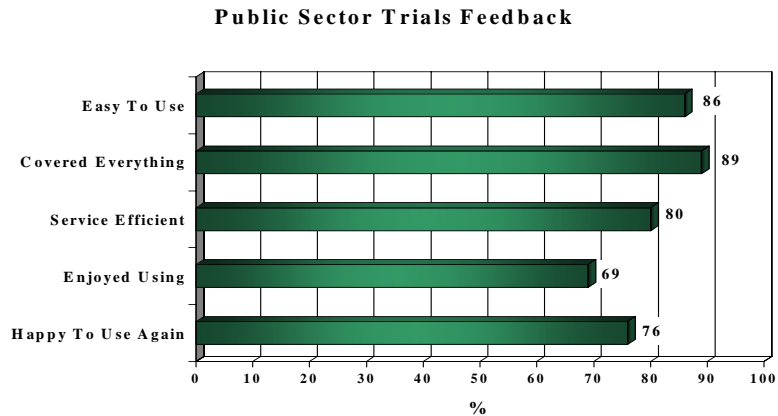
- Respondents are happier to use the speech system for obtaining information in connection with travel/transport such as requesting brochures (88%), checking on tickets (83%), arrival/departure times (80%) and order tracking (77%).

Travel/Transport - Preferred Method of Communication (First Choice)



- But they are less happy where it involves a financial transaction such as hotel (53%) or car (56%) reservations using credit/debit cards.
- Overall first choice preference (70%) for travel/transport communications is a live agent.
- A speech system is preferred (26%) over touch-tone (4%), the least preferred choice.

5.2 Public Sector Speech System Trial



Interviewees were asked to dial a number and were given the task to pay off a council tax bill from a menu of options using the speech system. The graph below displays the consolidated feedback immediately following the speech trial.

- There is good agreement for many aspects of the trial with the speech system in the public sector for ease of use (86%), coverage (89%), efficiency (80%) and happiness to use again (76%).
- However users feel less strongly about their enjoyment (69%).

Public Sector- Transactions Suited To Speech

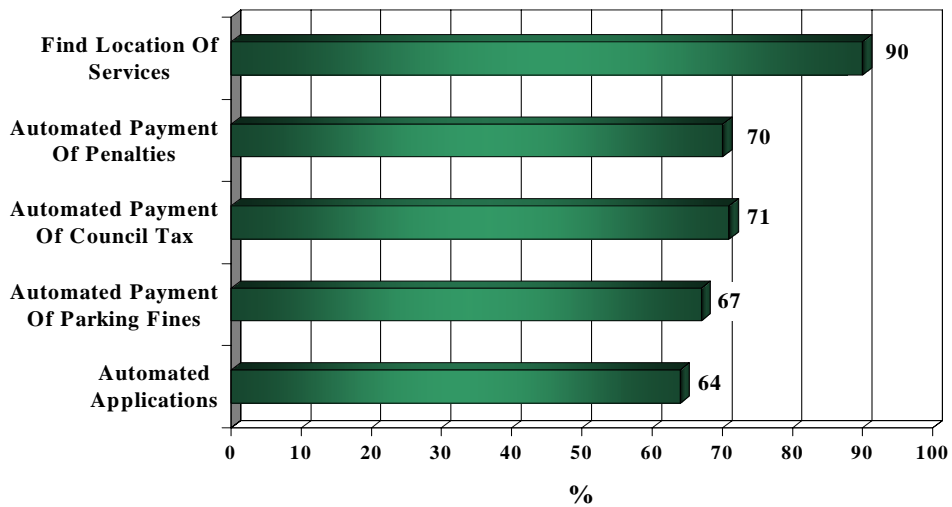
Respondents were then asked about preferences for using speech for specific transactions within the public sector illustrated below.



Table 5.3: Public Sector – Specific Transaction Questions

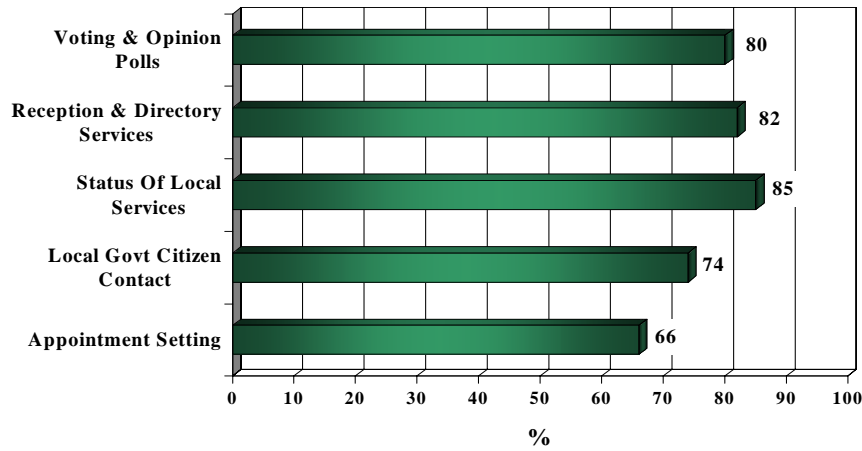
Questions
To find out location of services (i.e. nearest court, office branches, nearest libraries, leisure centre, benefit offices, schools).
To make automated payment of fixed penalties.
To make automated payment of council tax.
To make automated payment of parking fines.
To make automated applications (i.e. passport registration, vehicle registration).
Voting and opinion polls (i.e. local elections).
Reception and directory services (i.e. directing your call to appropriate person/extension).
Status of local services (i.e. if a school is closed due to bad weather, industrial action).
Local Government Citizen Contact (i.e. reporting missed bins, abandoned car, bulky waste, pest control).
Appointment Setting and Reminders (i.e. Making doctor appointments).

Public Sector – Preference For Using Speech For Specific Transactions



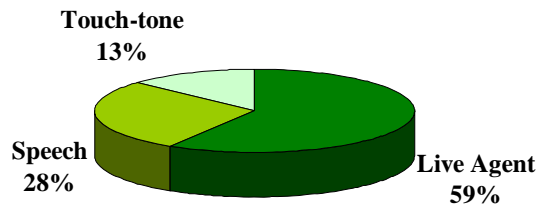


Public Sector – Preference For Using Speech For Specific Transactions



- Respondents are more content to use it for information purposes such as finding locations of services (90%), checking the status of local services (85%) such as school closures, for voting & opinion polls (80%), reception & directory services (82%) and local government citizen contact (74%) such as reporting missed bins, abandoned cars and pest control.

Public Sector - Preferred Method of Communication (First Choice)



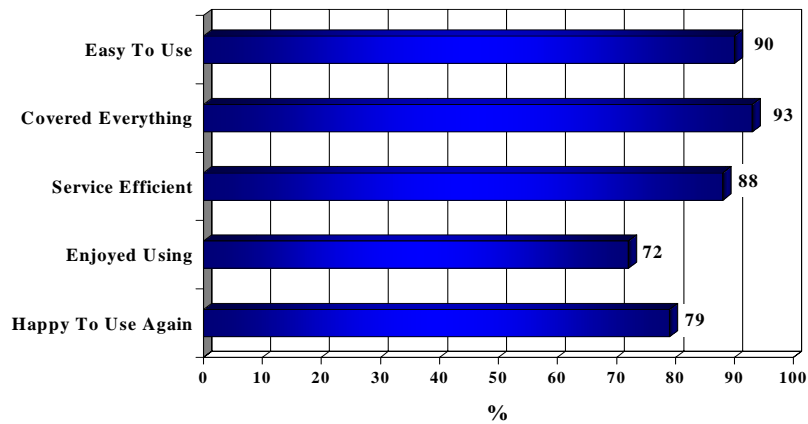
- Respondents are less happy about using the speech system for automated applications (i.e. passport registration, vehicle registration). (64%) and for appointment setting & reminders (66%).
- Overall first choice preference (59%) for public sector communications is a live agent.
- A speech system is preferred (28%) over touch-tone (13%), which is the least preferred choice.

5.3 Utilities Speech System Trial

Interviewees were asked to dial a number and were given the task to pay a gas bill from a menu of options using the speech system. The graph below displays the consolidated feedback immediately following the speech trial.



Utilities Trials Feedback



- There is good agreement for many aspects of the trial with the speech system in the utilities sector with users favouring it for ease of use (90%), coverage (93%) and efficiency (88%).
- While they feel less strongly about their enjoyment overall (72%) a higher number are pleased to use it again (79%).

Utilities- Transactions Suited To Speech

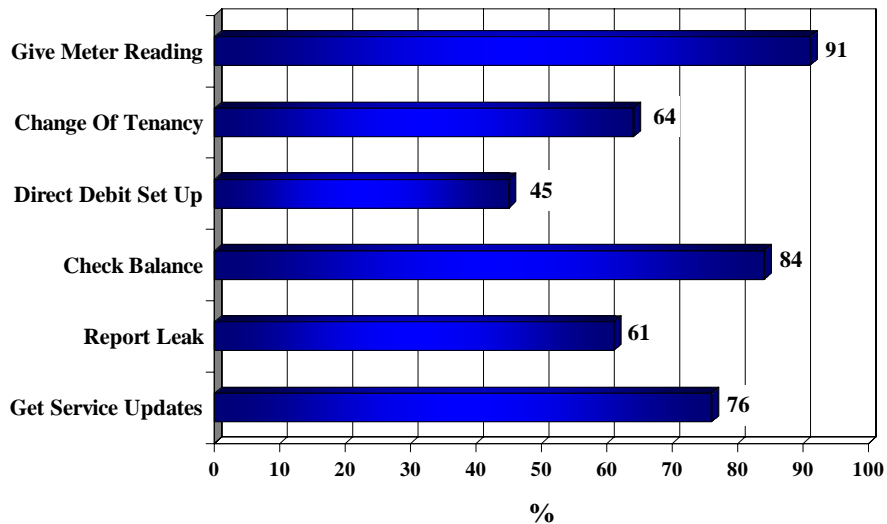
Respondents were then asked about preferences for using speech for specific transactions within the Utilities sector illustrated below.

Table 5.4: Utilities – Specific Transaction Questions

Questions
Give meter reading.
Change of Tenancy (supplying new address).
Direct debit set-up.
Check balance.
Report a leak.
To get service updates (i.e. road works, loss of supply, water discolour).

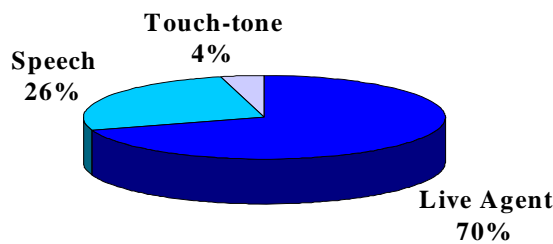


Utilities – Preference For Using Speech For Specific Transactions



- The highest scoring transactions for using speech are meter reading (91%), checking balances (84%) and getting service updates (76%).
- For the more critical applications, respondents are less happy about using speech e.g. for a change of tenancy/address (64%), reporting a leak (61%) and setting up a direct debit (45%).

Utilities - Preferred Method of Communication (First Choice)

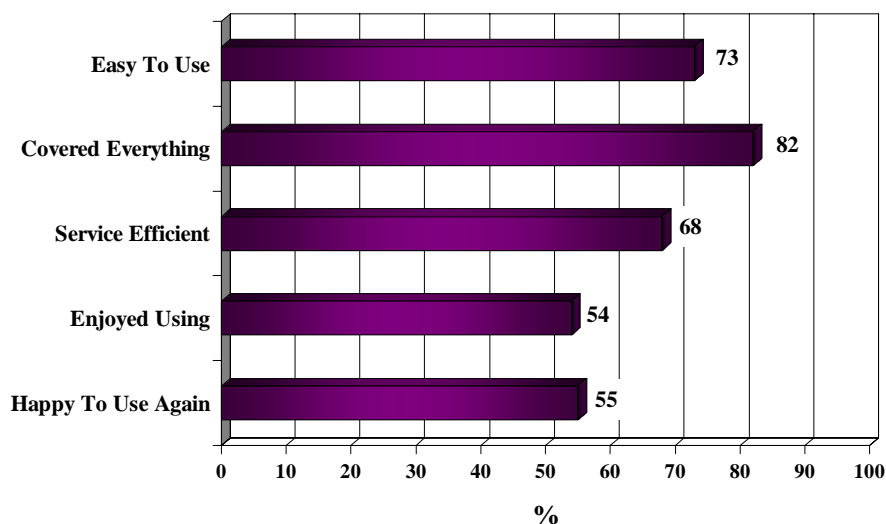


- Overall first choice preference (70%) for utilities communications is a live agent.
- A speech system is preferred (26%) over touch-tone (4%), which is the least preferred choice.

5.4 Retail Banking Speech System Trial

Interviewees were asked to dial a number and were given the task to check and transfer funds from a menu of options using the speech system. The graph below displays the consolidated feedback immediately following the speech trial.

Retail Banking Trials Feedback



- While the system is considered easy to use (73%) and covered everything well (82%), there are lower scores on enjoyment (54%) or future use (55%) in the banking sector.
- Those in Scotland, the North and the Midlands also 'disagree' about wanting to use the speech system again for banking transactions. They will require more convincing than those in the South/South East.

Retail Banking Transactions Suited To Speech

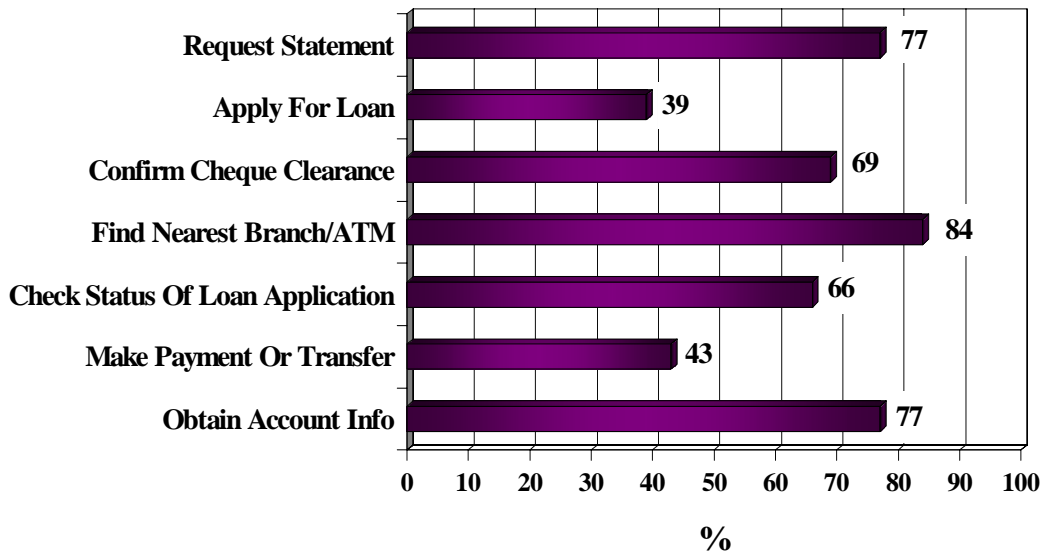
Respondents were then asked about preferences for using speech for specific transactions within the Retail Banking sector illustrated below.

Table 5.5: Retail Banking – Specific Transaction Questions

Questions
Obtain account information.
Make a payment or transfer.
Check status of loan applications.
Finding my nearest branch or ATM.
Confirm cheque clearance.
Apply for a loan.
Request an itemised statement.

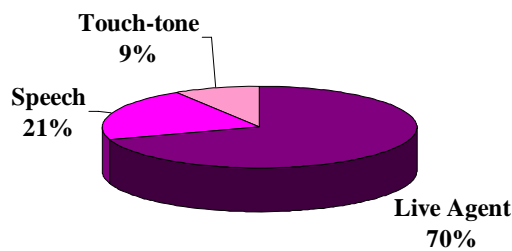


Retail Banking – Preference For Using Speech For Specific Transactions



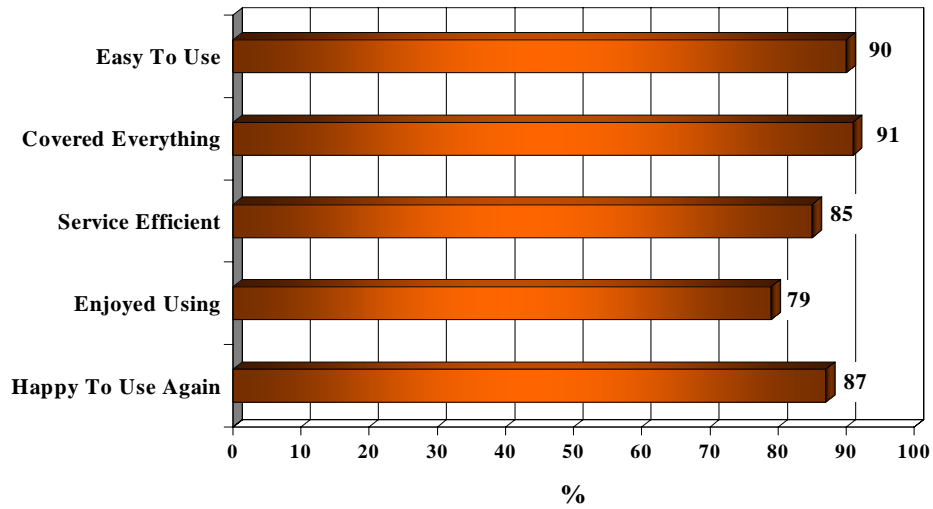
- There is good agreement to use the speech system for obtaining general information such as account information (77%) or finding the nearest branch/ATM (84%), request a statement (77%) and to some extent to confirm cheque clearance (69%).
- But less agreement on the transactional tasks such as making a payment or transfer (43%) and applying for a loan (39%).

Retail Banking - Preferred Method of Communication (First Choice)





Retail Trials Feedback



- Overall first choice preference (70%) for retail banking communications is a live agent.
- A speech system is preferred (21%) over touch-tone (9%), which is the least preferred choice.

5.5 Retail Speech System Trial

Interviewees were asked to dial a number and were given the task to check whether they could get a digital TV service in their area. The graph below displays the consolidated feedback immediately following the speech trial.

- There is good agreement for all aspects of the trial with the speech system when using it to obtain information in a retail situation and the system seems well suited to these tasks. Users find it easy to use (90%), coverage good (91%), efficient (85%). They appear to enjoy using it (79%) and are ready to use it again (87%).
- Specific lower agreement levels occur more with those respondents living in the North of England and the Midlands/East Anglia regions. Higher agreement is found for those in Scotland and in the South/South East.

Retail- Transactions Suited To Speech

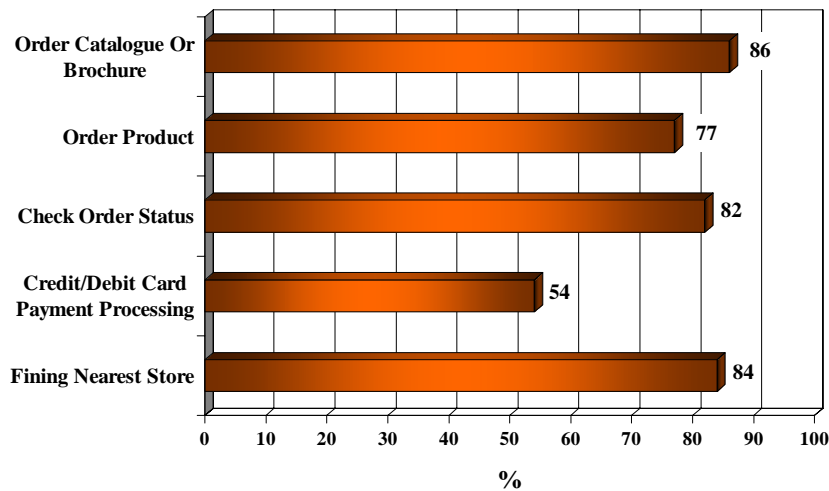
Respondents were then asked about preferences for using speech for specific transactions within the Retail sector illustrated below.

Table 5.6: Retail – Specific Transaction Questions

Questions
Catalogue/brochure ordering.
Order product.
Checking order status.
Credit/debit card payment processing.
Finding my nearest store.

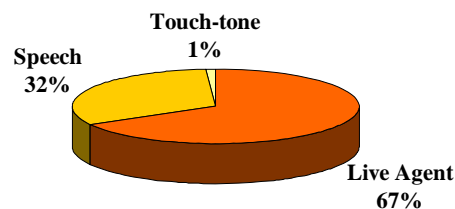


Retail – Preference For Using Speech For Specific Transactions



- Users are happy to use the speech system to order catalogues (86%), check order status (82%), find the nearest shop (84%) and even order products (77%).
- However when it comes to a financial transaction, there is much less agreement about using the speech, e.g. a credit/debit card payment (54%).
- For credit/debit card payment processing, the highest agreement levels are found in Scotland.

Retail - Preferred Method of Communication (First Choice)



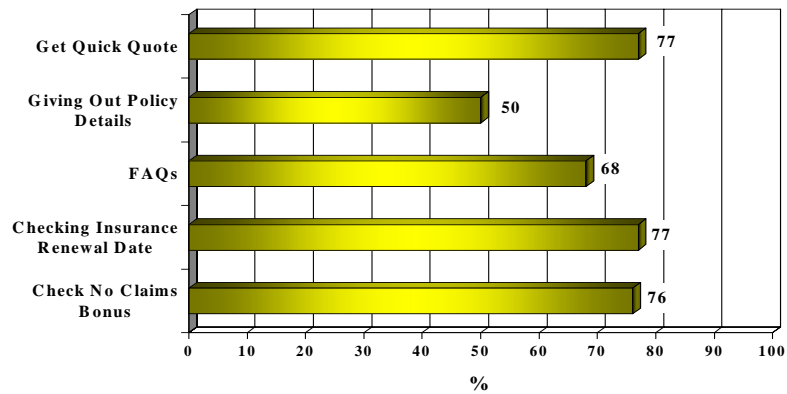
- Overall first choice preference (67%) for retail communications is a live agent.
- A speech system is preferred (32%) significantly over touch-tone (1%).

5.6 Insurance

Speech system trial tasks were not carried out for this sector however respondents were asked to comment on the suitability of using speech for several insurance transactions.



Insurance – Preference For Using Speech For Specific Transactions



- There is good agreement for obtaining general information in insurance such as getting a quick quote (77%), checking renewal dates (77%), checking no claims bonus (76%) and even FAQs (68%) to some extent.
- Respondents are more reluctant to use it to give policy details out (50%), particularly older users.