

**Voice Search Conference - 2008**

# **Multimodal Agent-Mediated Call Center Services**

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**Relationship Technology Management**

**Multi-Channel Self-Care Solutions**

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**Multimodality**

**Call Center Service Types**

**Multimodal Transactions**

**Agent Behavior**

**Next Steps**

*relationship management*

**CONVERGYS**  
*Outthinking. Outdoing.*

# Who is Convergys?

<b>Three Service Areas</b>	<ul style="list-style-type: none"> <li>▪ Customer Management</li> <li>▪ Information Management</li> <li>▪ HR Management</li> </ul>
<b>Worldwide Capabilities</b>	<ul style="list-style-type: none"> <li>▪ 75,000 employees</li> <li>▪ 90 contact centers</li> <li>▪ Over 575 clients in 70+ countries</li> </ul>
<b>A Leading Publicly-owned Company</b>	<ul style="list-style-type: none"> <li>▪ NYSE, S&amp;P 500, Fortune 1000</li> <li>▪ <i>Fortune</i> Most Admired last 7 yrs</li> <li>▪ \$2.8 billion in revenues</li> </ul>

## What is Relationship Technology Management?

### Customer Needs

(Per Forrester)

- Consistent Channel Experience
- Advanced Self-Service Capabilities
- Live Support on e-channels
- Agents Who Know My History
- Proactive Support and Notification
- Extended Hours of Service

An Outside-In Approach to match customer needs to client needs

Multichannel multimodal solutions  
 Customer Experience  
 Analytics  
 Collaborative Solutions

### Client Needs

(Per Yankee Group)

- Enhanced Customer Experience
- Improved Revenue Opportunities
- Lower Operational Costs
- Lower Operational Costs

# What does “Multimodal” mean?

- **Remove single modality limits**  
synchronize all modalities (GUI and VUI)  
consistent terms (standard, common)  
match modality to the task => analytics
- **Adds More Value**  
visual : spoken :: parallel : serial ..... is this true??  
Navigation + Data Entry/Retrieval => Voice Search  
VoicePad for session memory
- **And leads to ...**  
“Wrapper” integration into existing application  
“Streamlined” work flow = solutions  
Training and Error Handling

# Value Proposition: Agent Multimodality



**Improve Customer Experience  
and  
Reduce Costs**



## **IF ..... Add VUI to a CRM GUI**

- Voice Activate screen-based actions
  - Navigate = move from screen to screen
  - Data entry = place data into a field
- Interweave into the agent's "flow"

## **THEN .....**

**Lower Handle Time**

Reduce handle time because less effort for frequent activities.

**Enhance Quality**

Standard flows improve consistent information transfer.

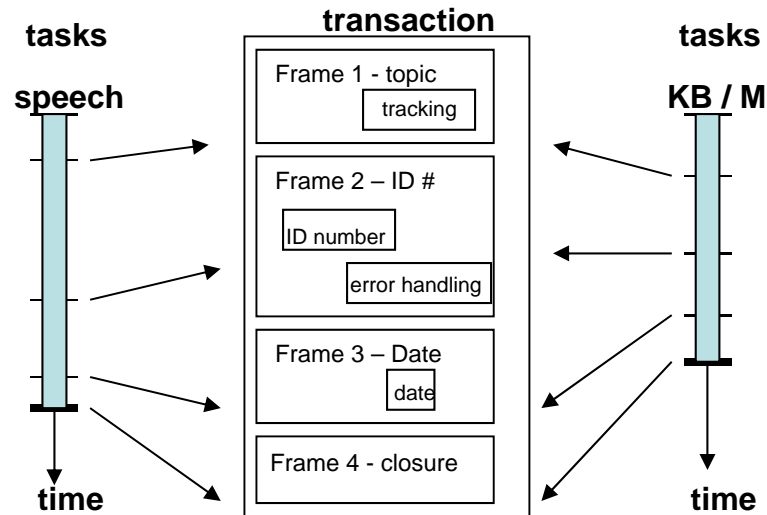
**Improve Satisfaction**

Increase "in-the-loop" communication, increase first call resolution.

# Multimodality Transactions and Tasks

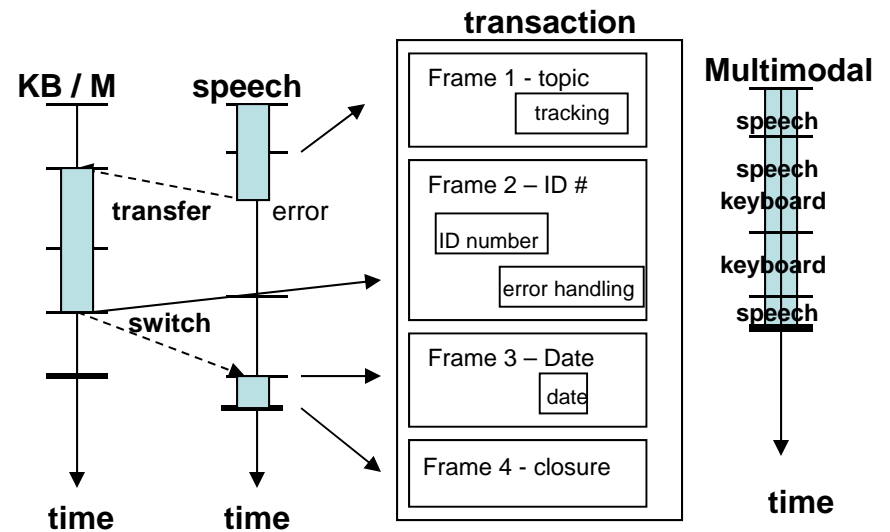
## Individual Modality Baselines

Transaction done in either modality



## Multiple Modalities

use a “comfortable” modality  
comfort level may change for task  
transaction appears easier and faster



Some tasks take less effort in a specific modality  
due to ease of use or complexity  
[analytics]

# What tasks should be voice-enabled?

## Transaction Type:

### Broad

access to all paths  
enable most paths completion  
easy navigation and data entry

### Deep

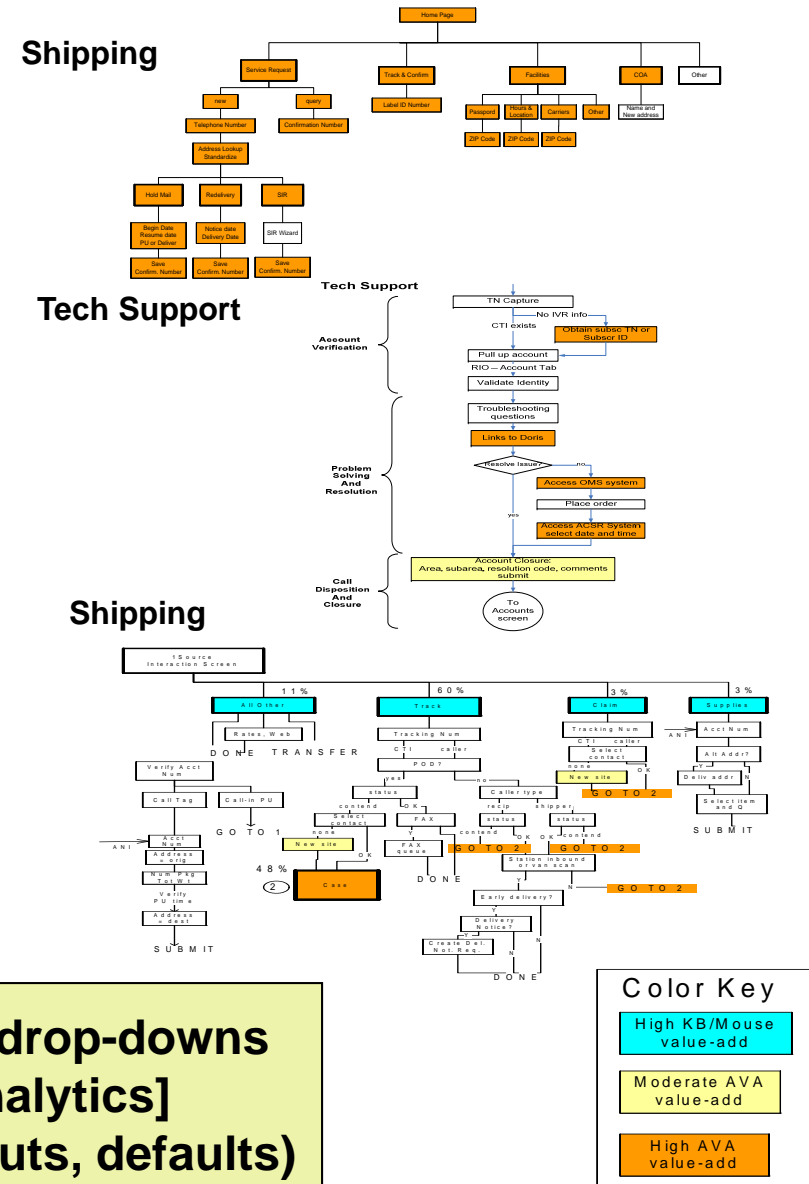
many steps to a transaction  
navigation from place to place  
often repeated step

## Recurring Component

validation, notes  
few seconds, many times

## Task Types:

- most frequent task(s) – navigation, buttons, drop-downs
- repetitive use cases, standard processes [analytics]
- streamlines for multi-step processes (shortcuts, defaults)
- shortcuts to other desktop or web apps



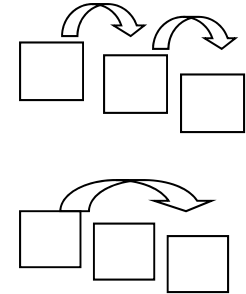
# Transaction: Screen Sequence vs. Work Flow

**Transaction Context = Package Delivery**

**GUI - step-by-step or MMUI shortcuts**

Multi-step utterances

Autolaunch next action(s), assumptions  $\Leftrightarrow$  interaction analytics



## Streamline

Follow dialog flow

VoicePad when data occurs

Jump to screen(s) [voice search]

## Ex., Vacation Hold Streamline

**May I Help You?**

I can help you **Hold Delivery.**

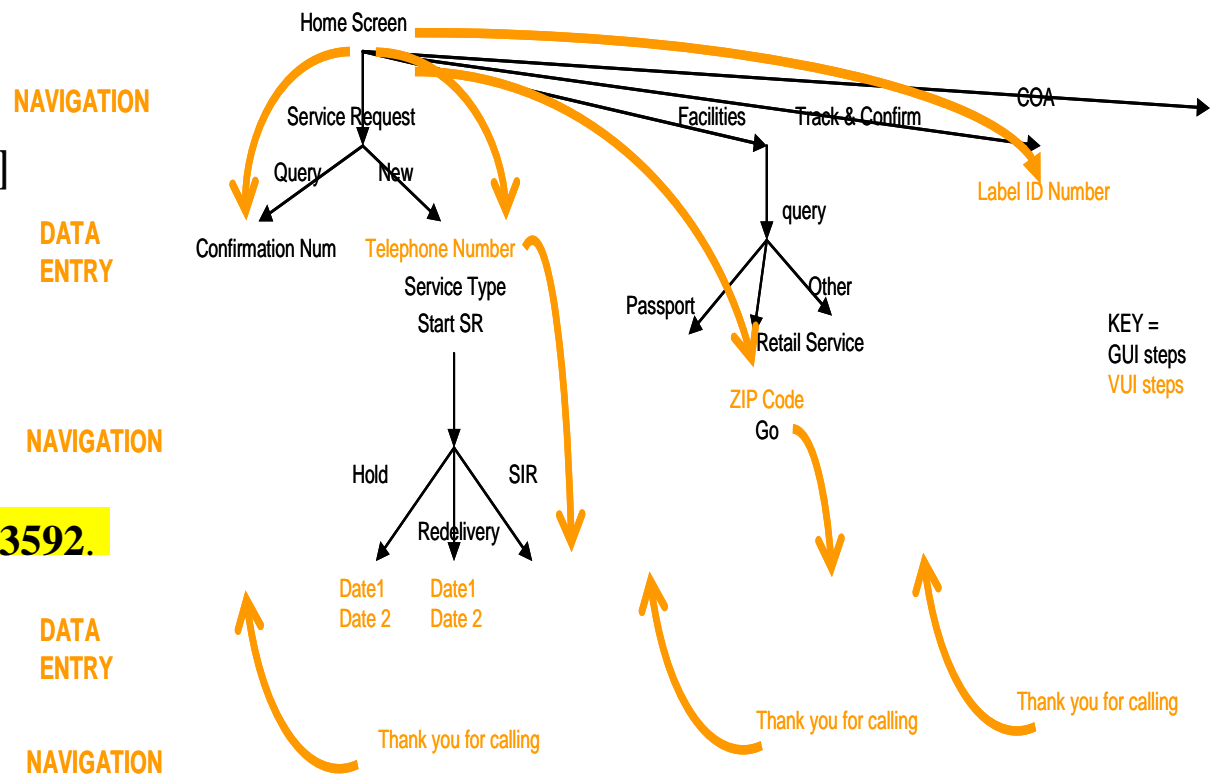
**Begin on June 20th.**

**Resume on June 28th.**

Your Telephone number is **660 694 3592.**

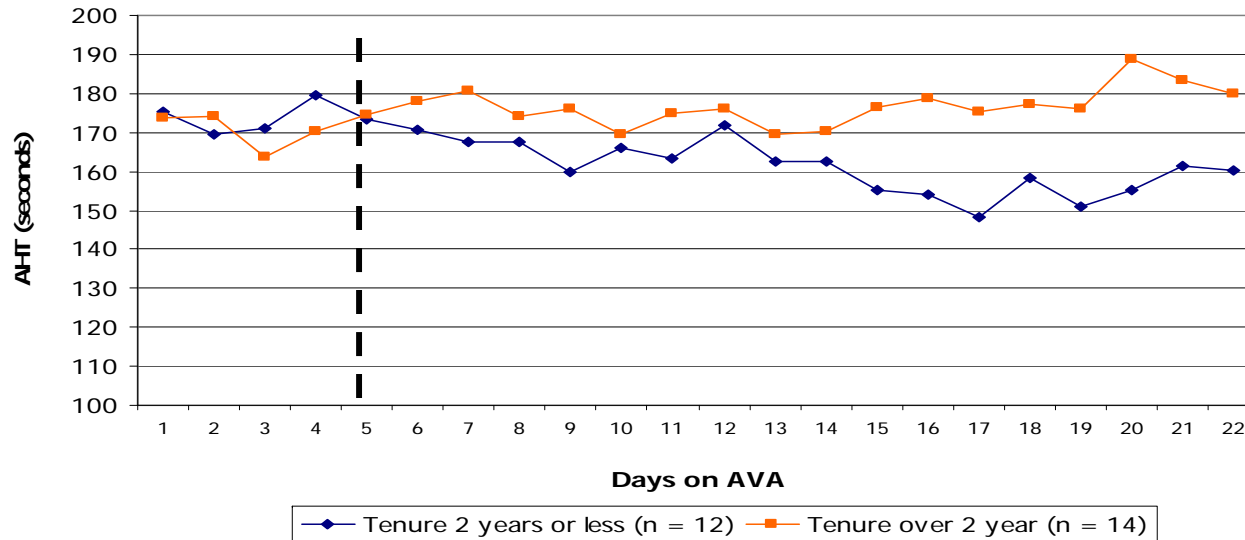
I'll **save** this transaction.

**Thank you for calling.**



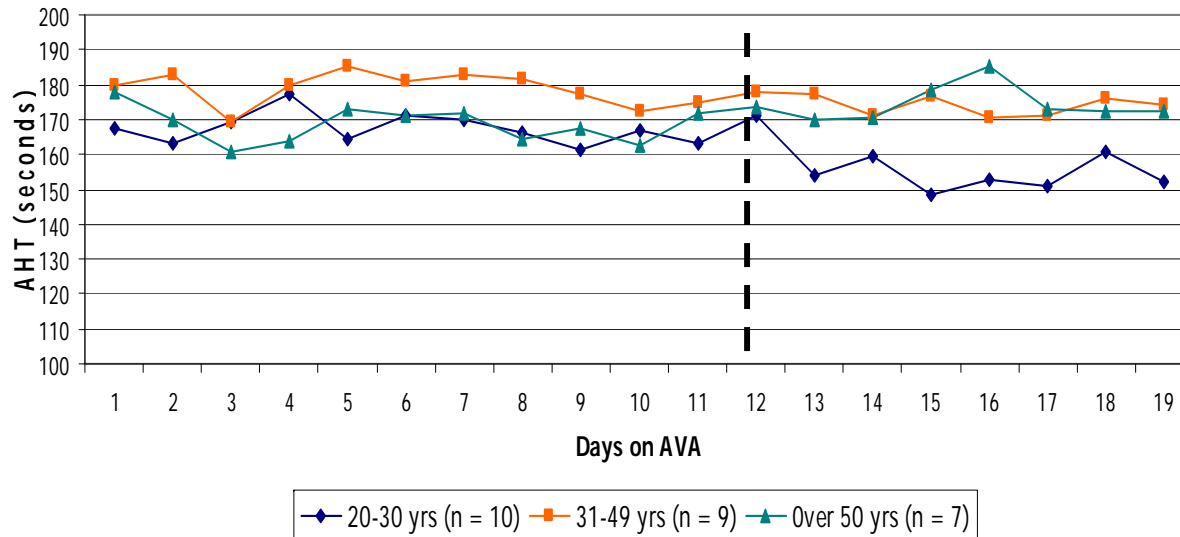
# Multimodal Agent Behavior: Demographics

## TENURE



Separation at day 5

## AGE

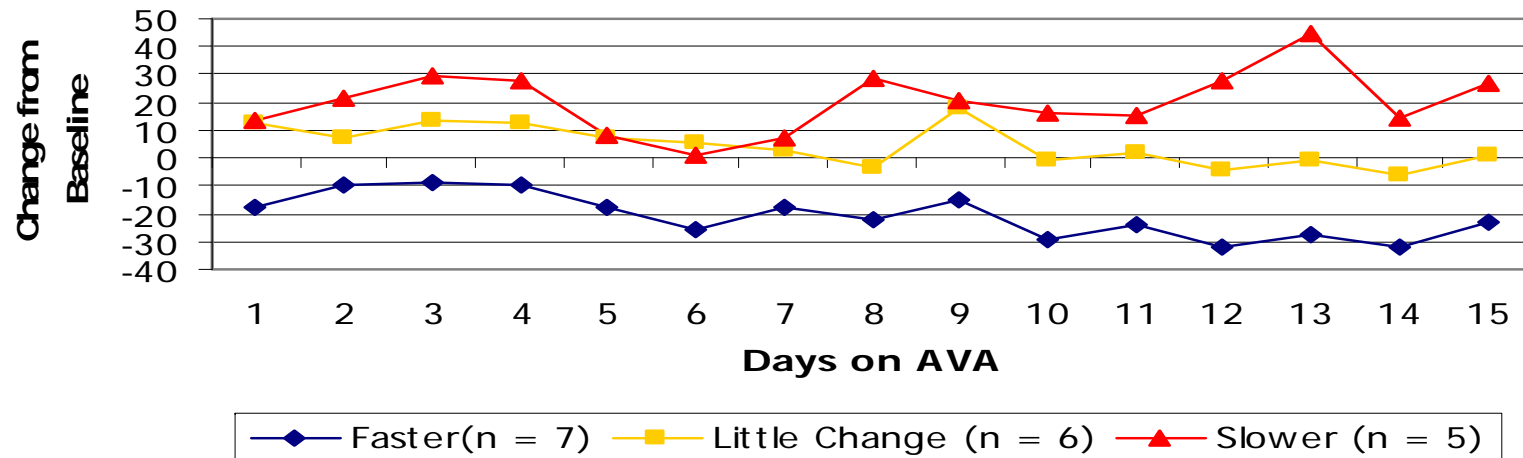


Separation at day 12



# Multimodal AHT- Performance Groups

## AVA Group - w/o CTI Agents



### Successful Agent

- Comfortable with new technology
- Shorter tenure
- Uses most of AVA most of the time
- Uses conference mode

### Mismatched Agent

- Longer tenure
- Resistant to technology changes
- Extensive use of Mute mode
- Dependent on a notepad or scratchpad

# Multimodal Agent Preference Scores



## Verbatims

Service

AVA made a big difference for Hold, Redelivery, Local Office and any Service Request

Training

Need more Hands-on practice with the Push-To-Talk and simulated calls

Voice Processing

Sometimes needed to repeat numbers, short one-syllable words, alphas

Platform

Willing to use AVA longer

# Multimodal Call Center Tool – Next Steps

## 1. Voice Search

**Streamlines and Context**

**Smaller Vocabulary**

**Wrapper**

## 2. Self-Care Analytics

**Best Practices**

**Multimodal from begin to end**

## 3. Dialog Flow Model

**Training - Sequence of Modules**

**Mixed Initiative**

**VoicePad**

