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# Speech Recognition, Call Quality and the Customer Experience

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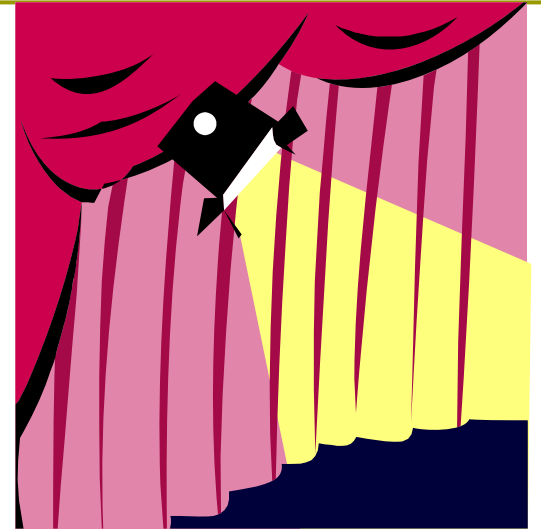
- ▣ In its early stages, how has 3<sup>rd</sup> generation speech automation deployment influenced call quality and customer experience?



# Setting the Stage

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1. Source of data
2. Quality Model
3. Method
4. Sample
5. Measurement continuity



# 1. Performance Index<sup>SM</sup>

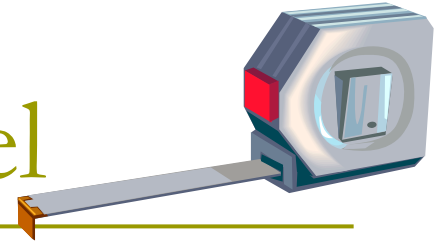
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- ❑ Semi-annual quality audits of the leading DA companies in the US conducted by PGL.
- ❑ Index is offered to the DA industry in the US, Canada and the UK as a quality benchmarking tool
- ❑ Has included a separate section on automated DA since Spring 2004
- ❑ Conclusions are taken from the results of the Fall 2003 (Pre) and Fall 2004 (Post) Performance Indexes

## 2. PGL's Measurement Model

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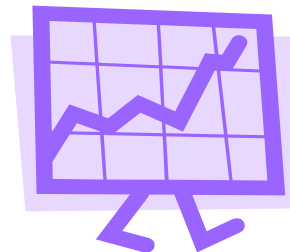


- ❑ Is based upon the traditional Telco and Bellcore quality measures of Courtesy, Accuracy and Productivity
- ❑ Is based upon the absence of customer “frustrators” or the presence of customer satisfiers identified in Focus Groups of DA users
  - Give me the correct report and give me it quickly
  - Listen to me/limit requests for repeats
  - Be engaged with me
  - Communicate with me/acknowledge me
- ❑ Includes all DA stakeholders in that it requires the demonstration of customer advocacy **as well as** practices that promote efficient call-handling.

## 2. Contd. – Measurement Elements

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- Customer Fulfillment<sup>SM</sup> – Focus groups strongly suggest it is the definitive DA measure
  - Data/Operator Accuracy
- Customer Care<sup>SM</sup> – completes the 360 degree view of quality
  - Customer advocacy and call-handling efficiency



## 3a. Method - Fulfillment

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- ❑ Verify sample with the OLEC
- ❑ Contact listing owner where discrepancies arise
- ❑ Once an inaccurate condition has been determined, auditors call back and request the listing from a second operator and/or do a reverse search to determine if the error should be assigned to the database or the operator.

## 3b. Method - Care

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- Observes and measures behaviors that **detract** from Customer Care<sup>SM</sup> in the areas of:
  - Acknowledging the customer
  - Tone of Service
  - Call-handling efficiency
  - Problem Solving
  - Understanding the request



# 4. Sample

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- ❑ Proprietary call and customer composites create a real-life national 300-listing DA test sample which includes:
  - Accurate % Bus/Res/Gov requests
  - Accurate % requests for new numbers
  - Small % requests with an expected No Find report
  - Requests that require disambiguation
  - Customer can/cannot spell
  - Customer gives call details in order/out of order
  - Customer has incomplete details
  - Customer requests using an alias



# 5. Measurement Continuity

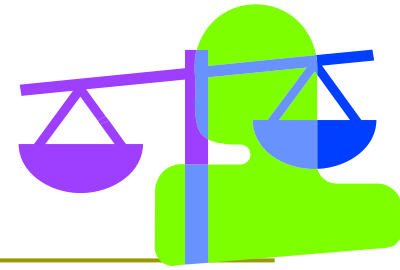
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- In order to determine changes in quality and customer experience, Index subscribers requested that the service delivered via new automated systems be measured with the same quality elements used to measure operator and voice/store/forward environments



# Call Quality/CSat Correlation

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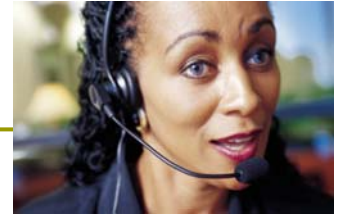


- ▣ Based upon the results of thousands of audit/survey combinations performed, PGL (and its clients) have confirmed over and over that:

**DA users who are both fulfilled and cared for will rate their DA service quality Very Good or Excellent (with a small correction for valid no find/ex directory reports).**

# Fulfillment – Large ILEC Pre- and Post- Deployment of Speech

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- Average Customer Fulfillment<sup>SM</sup> in September 2003 (pre automation) was 92%
- In September 2004 (post automation), it was 91%
- Pre automation there were 5.7% operator errors
- With about a third of calls fully automated, operator/system accuracy errors were 4.3%
- On the fully automated calls (no operator) only .9% resulted in an unfulfilled event

# Unfulfilled Events (Accuracy Errors) – Fully Automated

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- ❑ Requested listing in Charleston WV and system gave in South Carolina
- ❑ Other automated unfulfilled events were database related



# Customer Care<sup>SM</sup>



Care Element	Pre – Fall 2003 Occurrences	Post – Fall 2004 (Includes operator and automation)
Acknowledging	10.0%	3.0%
Tone of Service	1.3%	1.7%
Call-handling efficiency	1.3%	1.3%
Problem Solving	2.7%	3.3%
Understanding the Request	2.3%	13.7% Only 2 were system related

# Repeated to Operator on Partially Automated Calls



Total of Partially Automated Calls	None	Listing Repeated	Locality Repeated	Both Repeated	% of time Operator Required Details to be Repeated	OWT
Co A - <b>296</b>	210	30	22	34	29.1%	25 secs
Co B - <b>108</b>	18	15	12	63	83.3%	40.3 secs
Large ILEC - <b>185</b>	121	31	10	23	34.6%	30 secs

# Customer Care<sup>SM</sup> Fluctuates In Predictable Areas

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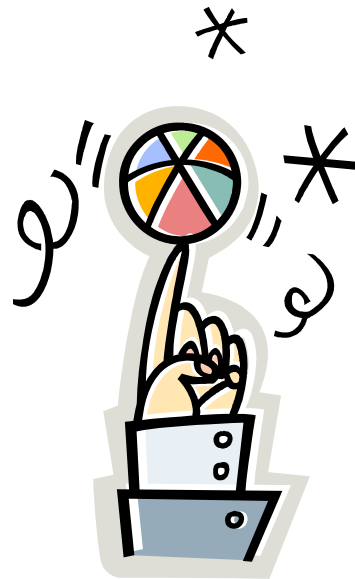


- ❑ Operators requested that call details be given a third time (repeated twice) in 40 of the 185 calls that reached the operator.
- ❑ Other contributing factors include:
  - Offering is unintelligible (2 auto vs 1 oper)
  - Failure to appropriately disambiguate (8 auto vs 2 oper)
  - Offering is totally unrelated to the request (4 auto vs 0 operator)
- ❑ Incidence of Acknowledging improved

# Company B Note

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- Automation success rate was the Highest
- Customer Care<sup>SM</sup> rate was the Lowest



# Still on Questioning - Automation Success with Successive Questions

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Large ILEC	# times Listing Requested/Provided to Speech System							
	1		2		3		4	
	#	%	#	%	#	%	#	%
<b>Total Calls Tested</b>	149	100.0%	63	100.0%	0	0.0%	1	100.0%
<b>Automation -</b>								
<b>Full</b>	107	71.8%	8	12.7%	0	0.0%	0	0.0%
<b>Partial</b>	42	28.2%	55	87.3%	0	0.0%	1	100.0%

Margin of error:	7.2%	8.2%	0.0%	0.0%
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# Total Call and Operator Work Time

- ❑ For callers who interact with the automated system and then the operator, average total call time was 70 seconds.
- ❑ Operator work time increased from 21.38 seconds to 30 seconds



# Customer Care<sup>SM</sup> Case Study – Large ILEC

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- ❑ Media quote from large ILEC at yearend 2004 - 30 percent decrease in customer satisfaction since automation
- ❑ PGL had measured their Customer Care<sup>SM</sup> in the seventy percentile.



# Conclusions

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- ❑ Where systems will disambiguate and confirm the report consistently, there is the potential for Fulfillment to increase.
- ❑ The hand-off from the automated system to the operator is fraught with opportunities to frustrate callers.
- ❑ On partially automated calls, where the hand off is ineffective, customers can easily be left with the impression that the call has taken longer than usual and/or that the “just occurred” interaction with the automated system was a “waste of time”.

# Conclusions

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- ❑ There is a huge opportunity to mitigate customer experience issues that are related to the operator handoff by focusing on operators' listening, memorization and recovery skills.
- ❑ There comes a point where the potential loss of customer goodwill from over-questioning has no benefit.
- ❑ The balance between call quality, customer experience and the push for more automation must be studied and tested constantly.