

The logo for IQ Services, featuring the word "iqservices" in a lowercase, sans-serif font. The "i" and "q" are green, while "services" is blue. Below the text is a horizontal line with five colored dots (red, orange, green, blue, purple) underneath it.

iqservices

Proactive Testing for Confident Customer Interactions



***Great Customer Experiences Start with
Consistently Performing Technology***

Contact Center Performance Forum Webinar
August 6, 2009

Presented by Mike Burke, IQ Services

Agenda

- Introduction
- What's available to help you
- What's in it for you
- What you can learn from proactive testing
- Q & A

IQ Services background

- Started from pain in 1996
 - Call center solution implementations often crashed & burned
 - Outages and impairments went unnoticed for hours or days
- Norstan alums wanted dull Monday mornings
 - There had to be a better way!
- So what do we do?
 - Test and monitor customer-facing solutions
 - Voice and Web
 - Remote and non-invasive
 - 100% services model
 - ASP, hosted, managed, outsourced, SaaS
 - Do not sell hardware, do not license software
 - OpEx, not CapEx
 - Consulting related to testing

Proactive Performance Validation

What is it?

- Sampling and reporting upon the customer experience
 - Initiate voice and web interactions remotely and automatically
 - Access customer-facing solutions via PSTN & Internet
 - Test calls, test browsers
 - Exercise technology
 - Measure response times
 - Validate responses
- Validate availability & performance of contact center technology
 - Outside in – like customers use them
 - Complementary to internally generated metrics and logs

“Big whoop!” you say. “So what’s in it for me?”

Proactive Performance Validation

What's in it for you?

- Improved customer satisfaction
- More efficient agents
- Reduced cost of operation
- Optimized return on investment
- True perspective on the customer experience
- Life's better for everyone

Why is proactive performance validation important?

Typical Issues



Dropped Calls

Busy Signal

No Voice Recognition

Slow Response

Echo

Static

Network Intercepts

No Host Response

No Answer

Low Volume



Broken Links



Results from one month of automated surveillance

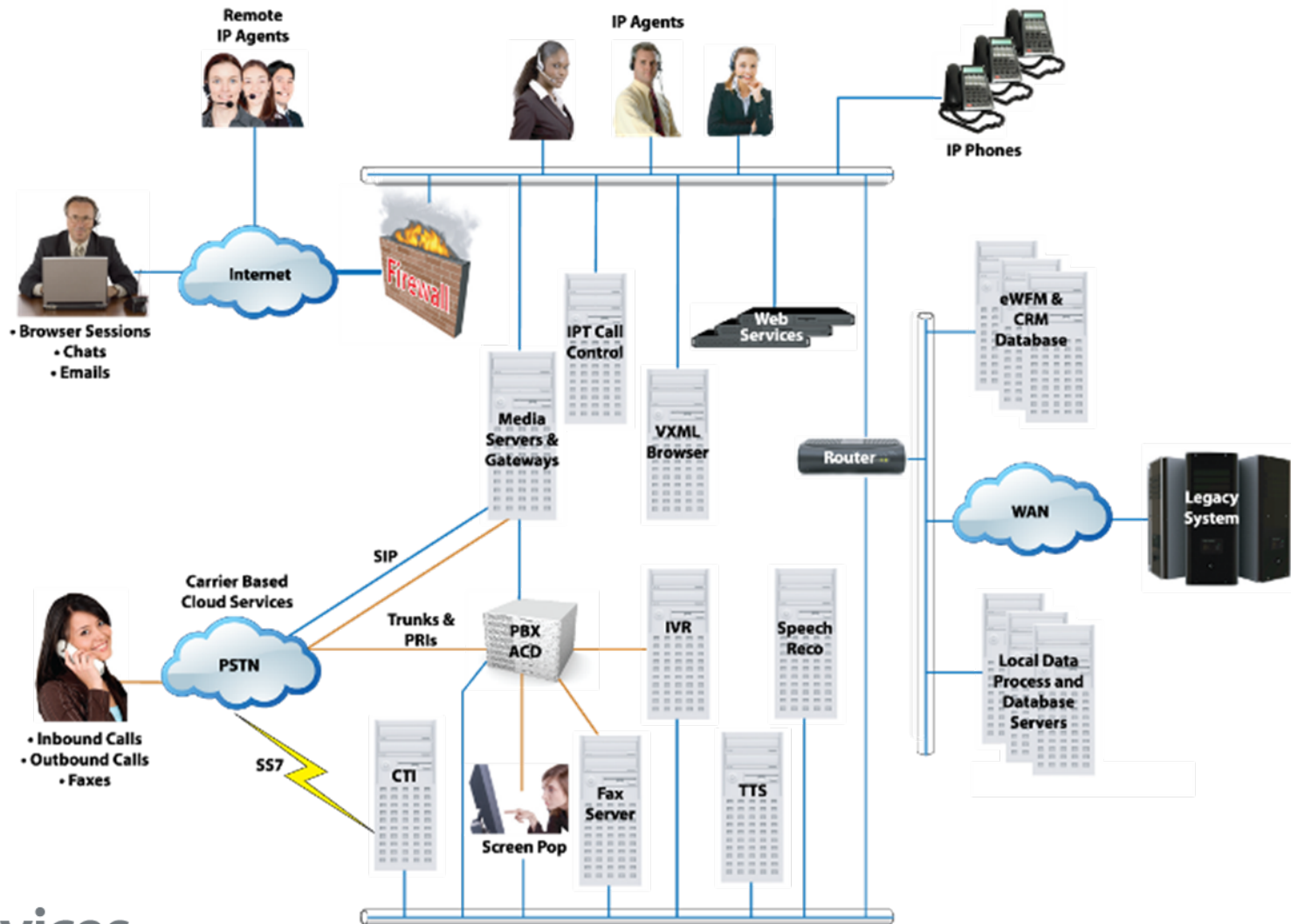
540,000 test interactions (calls & browsers) initiated during a recent month

Test result	% of all interactions
Busy	0.2%
Ring/No Answer or Dead Air	0.2%
Unexpected greeting or response	0.6%
Host interaction issue	0.9%
Dropped call	0.5%
Issue identified & notification generated	2.4%
Issue logged, no notification	1.8%
Issue detected, all calls	4.2%

Typically, **4% to 5% of all surveillance calls identify an issue**

Your situation...

How do you know it all works together?



That's a lot of boxes...

Why is all that technology there?

- **Better customer service**
 - Interact in preferred mode
 - Transfers make re-calling unnecessary
 - Calls routed to agents based on caller & circumstance
 - Screen pops save time
- **Better agent experience**
 - Call context delivered with screen pop makes agent “smart” & more efficient
- **Save money**
 - Self-service interaction considerably less expensive than agent-assisted
 - Efficient agent interactions save time
- **Make money**
 - Cross-sell, upsell

What do you expect from your technology?

- **Toll-free network access**
 - Routing and hunting
 - ANI and DNIS delivery
 - Take back and transfer
- **CTI**
 - Skill-based routing
 - Load leveling among sites
 - Screen pop, context & content
- **Switch**
 - ACD functionality
 - Smooth transfer
- **SIP**
 - “Carrier quality” voice
 - Capacity
 - Cost effective
- **Self-service**
 - User identification & authentication
 - Efficient information retrieval
 - Virtual hold / Click to call
- **Speech recognition**
 - Natural language interaction
 - Caller directed experience, not directed dialogue
 - Easier than DTMF
- **Data access methods**
 - Efficient data retrieval
 - Around-the-clock availability
- **Fax services**
 - Efficient faxback
 - Around-the-clock availability

How does proactive validation improve customer experience?

- Technology is supposed to provide customers efficient access
 - To the info they require
 - Via the channel they prefer
 - To the proper agent
- Technology should not get in the way
 - Irritated before they get to an agent because of bad technology experience
 - Ring no-answer, Fast busy, Dead air
 - Excessive access time
 - Info not available
 - Dropped calls
 - Transfer & start all over again
- Proactive validation let's you observe, tune & verify your technology

But how?

- How does remote testing accomplish this?
- “Don’t I already have all sorts of instrumentation, internal metrics & cron-jobs telling me how things are working & whether or not something’s gone awry?”
- Maybe, but the inside out view is **not** the customer experience!
- What can you learn from carefully sampling and reporting upon customer experience?

Anatomy of a call...

Caller Action

- Dial
- Menu selection
- Account number entry
- Vocalized password
- Balance inquiry
- 0-out

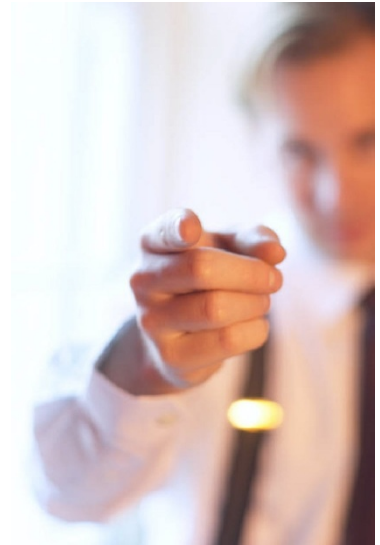
Infrastructure element exercised

- Toll-free network access
- ANI & DNIS delivery
- Switch and IVR
- Speech Recognition
- Local data dip
- Authentication engine
- VXML / web services / legacy DB
- Text-to-speech engine
- Network take-back-and-transfer
- Skill-based routing
- CTI screenpop
- SIP – MPLS – QoS

What kind of testing?

Two kinds of testing stop the finger pointing

- Surveillance – continuous monitoring
- HeartBeat™ (voice), WebBeat™ and FaxBeat™
 - One interaction at a time
 - Around the clock
 - Immediate notifications when issues detected
 - **Fully automated**
- Specific, one-time event
- StressTest™ load/performance testing
 - Calibrated loads up to 20,000 concurrent calls and browsers
 - Single channel or multichannel
 - One-time, periodic or regression testing
 - Real-time results. **Team setting.** Conference call going throughout.



Voice channel HeartBeat™

- **Inbound to your contact center**
 - Test calls follow defined test case scripts
 - Access via PSTN, just like real customers
 - Exercise DNIS & ANI lookup, IVR, ACD & CTI applications
 - Real or test account info to access and exercise data access methods
 - Local and remote
 - Speech recognition utterances or DTMF inputs
- **What do you learn?**
 - Complete **Recordings** of test calls from calling party end
 - **Response times** measured for key steps of every test call
 - **Responses** captured at key steps & validated against expectation
- **What happens?**
 - **Fully automated** test calling & notification process
 - Immediate notifications when unexpected conditions arise
 - Page, call, SMS, email with recording, SNMP traps, web services
 - Escalate notifications
 - Realtime results published to a website
 - Weekly summary reports



Web channel WebBeat™

- **Inbound to your contact center**

- Browsers follow defined test case scripts
- Access via Web, just like real customers
- Exercise redirection servers, firewalls, data processes
 - More than just a ping or a traceroute!
- Real or test account info
- Exercise chat
- Click to call, specify an ANI and a callback time

- **What do you learn?**

- **Transcripts** for sessions that went awry
- **Response times** measured for every step of every test browser
- **Responses** captured at every step & validated against expectation

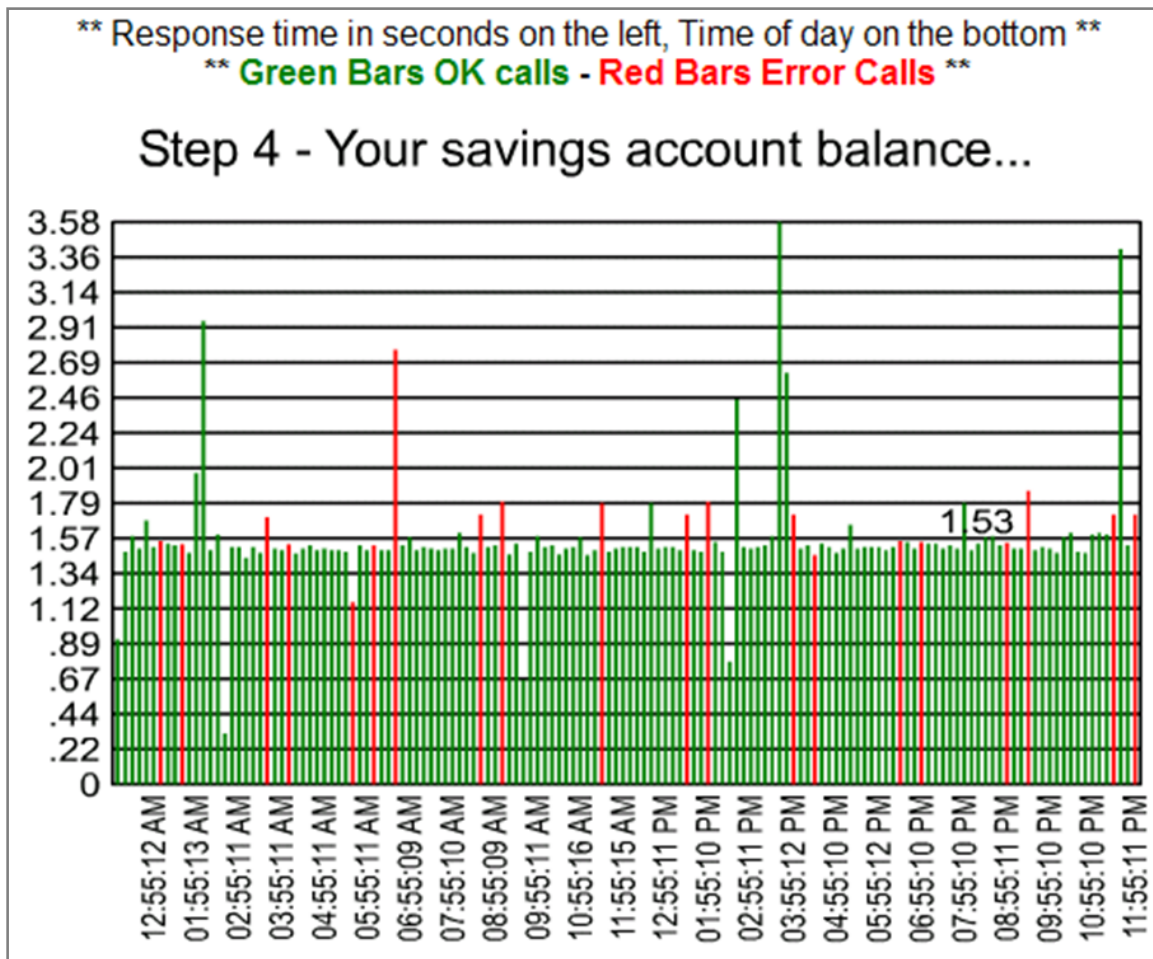
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Typical surveillance results

Response time graph for host dip step of periodic test call



One day of test call results

6 test calls/hour

Note response time variability

Failed response was "I'm sorry, we are currently experiencing technical difficulties..."

Monitoring is helpful, but...

...how can I find out if it all works together?

- What can I do if monitoring tells me there are intermittent issues?
 - Assessment load test at 3am Sunday morning
- Can I handle the upcoming rush from the new marketing campaign?
- Can I identify issues prior to going live?
 - New implementation
 - Expansion
 - New technology
 - Software upgrades

Issues identified during typical load test engagement

- Types of issues

- Infrastructure
 - Switches not properly configured
 - Conflict among applications
 - Inefficiencies within applications
 - Competition for scarce resources
- Capacity
 - TDM channels not turned up
 - IP pipes not big enough
 - Server capacity inadequate
- Configuration
 - Inadequate / incorrect licensing
 - Routing, hunting and queuing



- Typically, 3 major issues identified & documented

- Mobile phone provider identified **87 severe customer affecting issues** pre-deployment
- Contact center vendor identified **chronic issue with customer-provided infrastructure**
- Utility determined **40% of it's PRIs never turned up!!!**
- Financial services company determined their **Business Continuity plan was incomplete**
- Retailer discovered **only 5,000 of its 8,500 channels could take traffic**

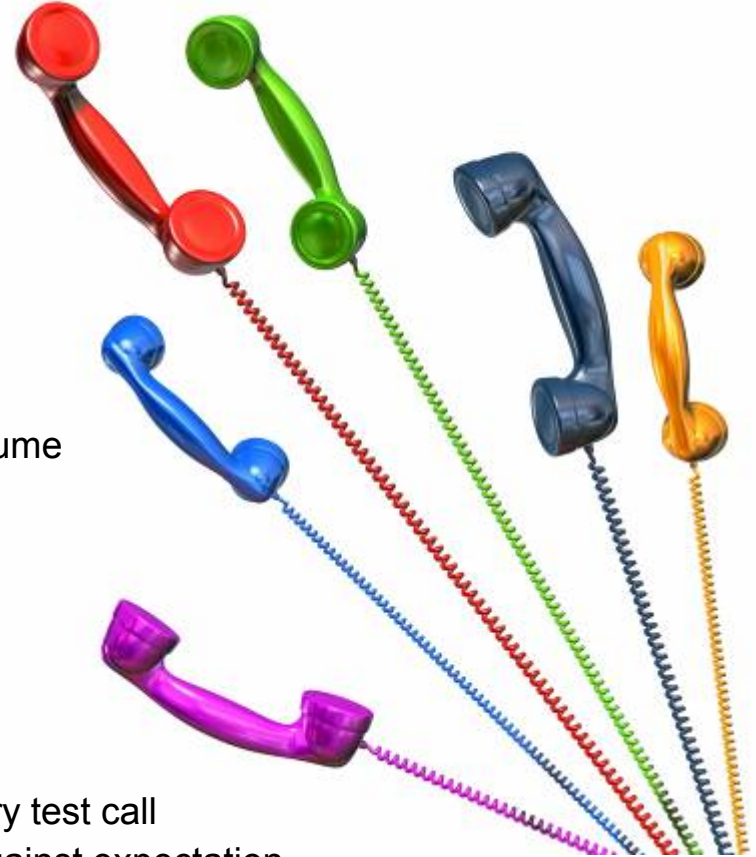
Voice Channel StressTest™

Inbound to your call center

- Team testing process
- One-time event
- Concurrent calls, tens, hundreds, thousands
 - Erlangs or BHCC
- Faxes in or out
- **Walk before you run**
 - Start small and gradually ramp up to intended volume
- **Push up against your design margin(s)**

What do you learn?

- Solution performance under a variety of conditions
 - Complete **Recordings** of test calls
 - **Response times** measured for every step of every test call
 - **Responses** captured at every step & validated against expectation
- Exercise business continuity and disaster recovery contingency plans
- Realtime results published to a website
- Detailed summary reports

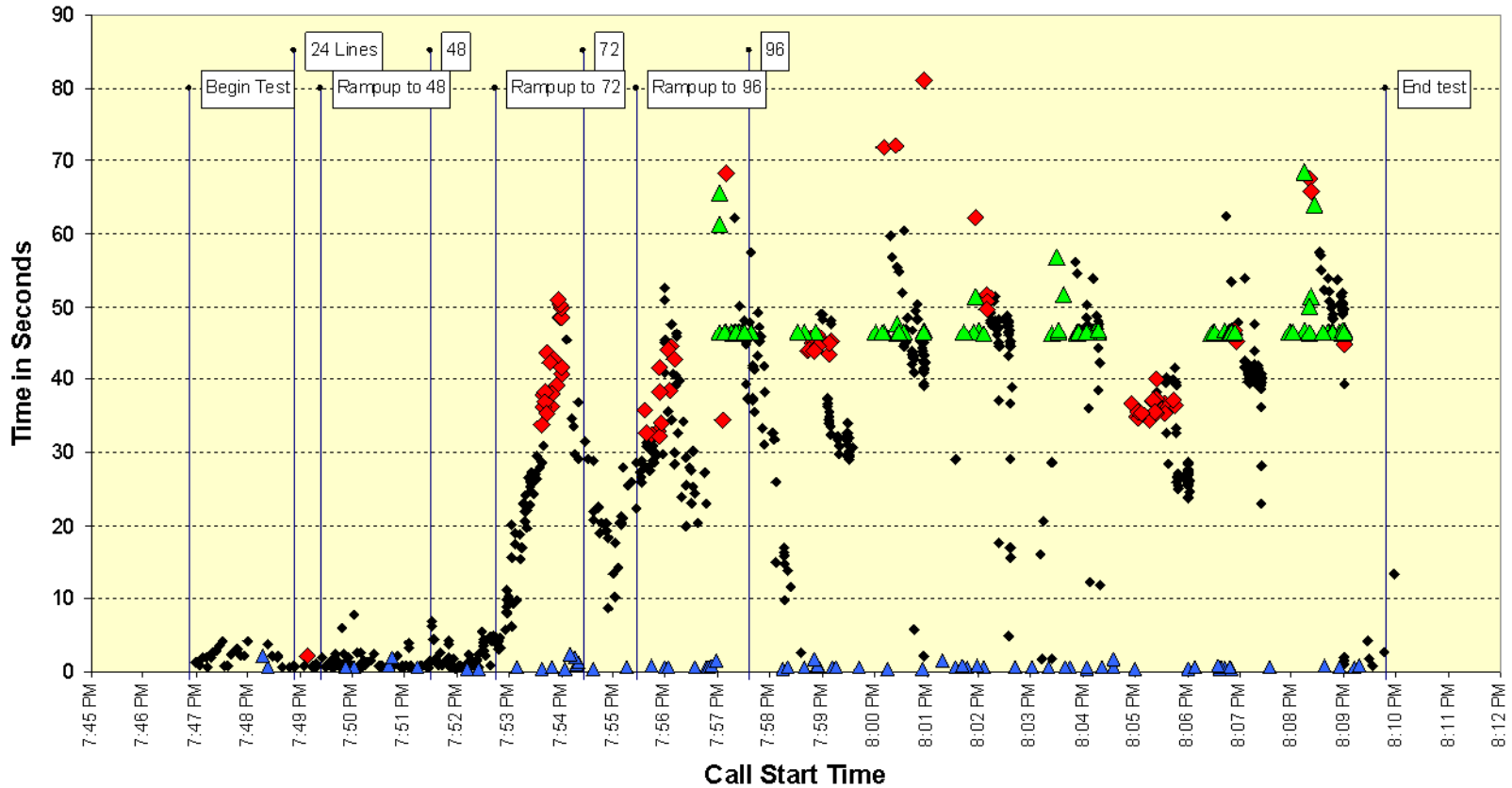


Issues jump of the screen

ABC Company - Response Time

Time after entering account number until hearing expected response for Path 1 "Please enter last 4 digits..." and Path 3 "Please enter your 4 digit PIN..."
05/29/03 - 931 Total calls

- ◆ Path 1 calls that heard expected response " Please enter last four digits..." - 648 calls
- ▲ Path 3 calls that heard expected response " Please enter 4 digit PIN" - 72 calls
- ◆ Path 1 calls heard "Please wait while I transfer your call..." - 88 calls
- ▲ Path 1 calls dropped while waiting to hear prompt "Please enter last 4 digits..." - 123 calls



Voice channel Outbound

- **Outbound from your dialer**
 - Test facility configured to answer incoming calls from PSTN
 - Live answer, answering machine, voicemail, RNA, silence
 - Call classification only, or continue to interact
 - CSR interaction or self-service
- **What can you learn?**
 - Dialer's behavior during a real campaign
 - Call classification accuracy
 - FTC Compliance – 2-second rule
 - Opt-out mechanism
 - What happens when call is transferred
 - Complete **Recordings** of test calls from called party end
 - **Response times** measured for every step of every test call
 - Test equipment generates an input & waits for system to respond
 - **Responses** captured at every step & validated against expectation
 - Realtime results published to a website
 - Detailed summary reports

How does proactive testing and monitoring improve the agent experience?

- **Agents aren't IT** – they're not there to debug the technology
- If there are issues, testing identifies them
- Agents helped by the technology, not impaired
 - Calls delivered, not dropped
 - Timely, without daily slowdowns or glitches
 - Avoid the angry customer
 - Outbound dialer connects agents to live answers, not machines
 - FTC guidelines observed
 - CTI does its job
 - Screenpop latency
 - Missing info
 - Incorrect context or info



...Reduce cost?

- Access
 - What if people can't access their info?
 - Web or voice self-service?
- Performance
 - What happens if...
 - Response times increase or calls are dropped?
 - Links break?
 - Click-to-call or Virtual hold stop working?
 - Are there time-of-day / day-of-week dependencies?
- Containment
 - Self-service handles interactions efficiently
 - Bad experience with technology causes customers to 0-out
 - GetHuman.com offers direct to agent technology bypass

...Improve Customer Experience and Impact ROI?

- **Customer satisfaction**
 - I want the info & I want it now!
 - Screen pops with valid info & context
- **Resource consumption**
 - Toll-free charges for extended phone calls
 - Containment
- **Live transaction handling vs. self-service**
 - What are your numbers for:
 - Phone support - \$25?
 - Chat support - \$18?
 - Email transaction - \$15?
 - Voice self-service - \$8?
 - Web self-service - \$5?
- **YouTube or GetHuman.com**
 - **Your name here!!!**



Summary

- You have access to detailed analytics and recordings of your agent interactions...
- ...Equivalent information is available for technology interactions
- You don't have to wait for someone to complain to find out about issues
- You can identify and address technology issues before they boil over and swamp your agents
- You can find out what your customers already know!

Q&A

- What's on your mind?
- Thank you!!!
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