AUGUST 24–26, 2009

NEW YORK MARRIOTT MARQUIS

NEW YORK CITY

SpeechTEK|2009

The Voice Solutions Showcase

SPEECH IN THE ENTERPRISE

WWW.SPEECHTEK.COM

- Analytics
- Mobile Devices
- Multimodal Technology
- Natural Language
- On-Demand Solutions
- Outbound Messaging
- Security/Voice Biometrics
- Speech and Video
- Voice Search

KEYNOTE SPEAKERS

Paul Greenberg
President, The 56 Group, & Author, *CRM at the Speed of Light*

Jeffrey F. Rayport
Founder and Chairman of Marketspace, LLC, & Author, *Best Face Forward: Why Companies Must Improve Their Service Interfaces With Customers*

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Welcome to SpeechTEK 2009
Speech in the Enterprise

Speech technology has become a strategic asset for today's enterprises. In call centers, it is fulfilling the dual promises of reducing costs and improving customer satisfaction by enabling self-service through IVR systems while offering a positive and engaging interaction. More speech vendors are furthering these efforts by delivering their solutions via the on-demand model, making their solutions available at a lower cost. But the latest developments in speech technology don't end there.

Enterprises are also using speech technology to achieve operational efficiencies beyond the call center. Some are already using outbound, automated messaging to quickly send out promotions or alerts (i.e., reminders to refill prescription medication). Others are bolstering security and privacy efforts with speaker identification and verification technology. Employees are using speech technology to quickly reset passwords, sign up for benefits, and find information on company policies over the phone—a huge benefit for organizations with a geographically dispersed, virtual workforce. Field employees are also using speech systems as their primary point of contact to access enterprise information such as customer data, order status, and even access their office PCs.

Speech has clearly made a positive impact on enterprises, both within the organization and in communicating with customers, which is why the theme for this year's conference is Speech in the Enterprise. At SpeechTEK 2009, you will hear how many diverse organizations are succeeding with speech technology and learn from industry experts how speech technology can benefit your organization as well.

SpeechTEK 2009 is the world's biggest speech technology conference and exhibition. Nowhere else can you find so much information on the latest ideas, technologies, services, and solutions. This year, we offer more leading-edge information and opportunities for interaction with industry movers and shakers.

Your organization can take full advantage of all that speech technology has to offer while here at SpeechTEK 2009 by discussing how these exciting new technologies will drive the future. This program describes the many activities and opportunities that will help your company chart a successful course with speech technology.

Welcome to SpeechTEK 2009, our best conference ever.

SpeechTEK|2009
The Voice Solutions Showcase

Conference Chairs
James A. Larson
VP, Larson Technical Services

Susan L. Hura
Principal, SpeechUsability

Director, SpeechTEK Program Planning
David Myron, Editorial Director, *CRM* and *Speech Technology* magazines

Please Recycle

Please recycle this program.

ATTEND SPEECHTEK 2009 TO LEARN HOW TO:

- Meet business goals with speech
- Improve customer satisfaction rates
- Utilize the right tools and environments
- Grow your business
- Solve speech application problems

- Design a successful speech customer experience
- Apply the latest principles in VUI design
- Use the latest advances in speech technology
- Plan and manage successful speech deployments

HEAR THESE TOPICS AND MORE:

- The state of the speech technology industry
- Understanding caller behavior
- Delivering a personalized caller experience
- Building trust in outbound calls
- Legal compliance for speech
- VUI error protection and recovery
- Evolving standards
- Advanced interaction techniques
- Bilingual Spanish/English design

AUGUST 24–26, 2009 ■ NEW YORK MARRIOTT MARQUIS, NEW YORK CITY

Evening Receptions

SpeechTEK invites attendees with a Networking Pass or above to a Welcome Reception Monday evening in the Exhibit Hall from 5:00 p.m. – 7:00 p.m. as well as the Tuesday evening reception from 5:30 p.m. – 7:00 p.m. on the 9th floor. Mingle with exhibitors, speakers, and conference attendees while enjoying a glass of wine and hors d'oeuvres.

CD-ROMs

Most sessions are being recorded and CD-ROMs may be purchased at the conference. Visit the Mondo Digital Solutions table (please ask at the registration desk for exact location) for more information or visit www.mondodigitalsolutions.com.

Press Room/Media Center *sponsored by* CONVERGYS Outthinking Outdoing

The press area will be available in the Gilbert Room on the 4th floor Monday from 9:00 a.m. – 7:00 p.m., Tuesday from 9:00 a.m. – 6:30 p.m., and Wednesday from 9:00 a.m. – 4:00 p.m.

Continental Breakfast & Coffee Breaks

A continental breakfast will be provided for conference attendees each morning from 8:00 a.m. to 9:00 a.m. before the keynote session. Additional coffee breaks will take place each morning and afternoon. Please check the schedule for exact times and locations. Thank you to our Tuesday breakfast sponsor, Convergys, and Tuesday morning break sponsor, LumenVox.

Presentation Links

Get access to many PowerPoint presentations and websites used in conjunction with the SpeechTEK 2009 sessions! Links will be posted on the SpeechTEK.com website soon after the conference.

SpeechTEK University

If you are considering deploying a speech application or looking to increase your knowledgebase, be sure to attend a SpeechTEK University course. SpeechTEK University courses are in-depth, focused, 3-hour seminars on topics of special interest to speech technology and information technology professionals. Taught by experienced instructors, these courses offer a structured learning experience. These are separately priced or may be purchased as part of your conference registration. See pages 8 and 9 for detailed course information.

SpeechTEK Lab/Demos

This year marks our second SpeechTEK Labs, in which attendees can sample the latest speech technology products, talk to developers, and speak openly to our expert panel of judges about the technology. These Labs will provide objective evaluations of new speech technology and show how speech is breaking new ground in various industries. As an added benefit, the judges will issue ratings of the tools to provide further guidance. Demos will showcase some of the ways companies are incorporating speech technology into different enterprise areas and what various speech technology vendor R&D departments are working on. See page 26 for more information.

Speech Technology Magazine Awards

While at the conference, find out the winners of *Speech Technology* magazine's 2009 Speech Industry awards.

Sunrise Discussions

SpeechTEK will host early morning discussions on Monday, Tuesday, and Wednesday for business professionals, project leaders, designers, and developers to openly talk about a variety of topics. This is a great opportunity for attendees to network, discuss challenges, and share ideas with peers and speech technology professionals.

Company Workshops

If you are interested in learning more about Convergys Corporation, Tellme, or Genesys Telecommunications Laboratories, please make sure you visit their company-sponsored workshops. More information can be found on page 39 of this program. *NOTE: The Tellme workshop is invitation-only.*

Email Stations

Email stations will be open in the Exhibit Hall during regular exhibit hours for attendees to check their email.

Exhibit Hall Hours

Monday, August 24 . . . . 5:00 p.m. – 7:00 p.m.
Grand Opening Reception
Tuesday, August 25 . . . . 10:00 a.m. – 5:30 p.m.
Wednesday, August 26 . . . . 10:00 a.m. – 2:00 p.m.

Registration Desk Hours

Sunday, August 23 . . . . .12:00 p.m. – 7:00 p.m.
Monday, August 24 . . . . .7:00 a.m. – 7:00 p.m.
Tuesday, August 25 . . . . .7:30 a.m. – 5:30 p.m.
Wednesday, August 26 . . . . .8:00 a.m. – 2:00 p.m.
Thursday, August 27 . . . . .8:00 a.m. – 1:30 p.m.

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SpeechTEK 2009
The Voice Solutions Showcase

All Keynotes and Sponsored Keynote lunches will take place in the Broadway Ballroom on the 6th floor.

MONDAY ■ 9:00 a.m. – 10:00 a.m.

WELCOME & OPENING KEYNOTE ■ Voice of the Customer

Paul Greenberg, *President, The 56 Group, & Author,* CRM at the Speed of Light

Companies should pay attention to the voice of the customer—that's the voice from their larynx, not the one in your head. Customers are not what they were 5 years ago. What companies have to do to respond to customers is also not the same as it was 5 years ago. The use of social media tools and the growth of digital communities have given the customer control of the conversation and, when it comes to business, control over the business ecosystem. Technologies, such as call recording and speech analytics, are not valuable if there is no intent on understanding what the customer is saying. Innovations in speech and other domains are useless unless they are valuable to the enhancement of the customer experience—the one that the customer owns.

SpeechTEK Lab/Demos

This year marks our second SpeechTEK Labs, in which attendees can sample the latest speech technology products, talk to developers, and speak openly to our expert panel of judges about the technology. These Labs will provide objective evaluations of new speech technology and show how speech is breaking new ground in various industries. As an added benefit, the judges will issue ratings of the tools to provide further guidance. Demos will showcase some of the ways companies are incorporating speech technology into different enterprise areas and what various speech technology vendor R&D departments are working on.

MONDAY ■ 10:15 a.m. – 12:00 p.m.
LAB 1 ■ Speech Synthesis
Caroline Henton, *Talknowledgy*

MONDAY ■ 1:15 p.m. – 3:00 p.m.
LAB 2 ■ Speaker Identification and Verification
Judith Markowitz, *Consultant, J. Markowitz Consulting*

TUESDAY ■ 10:45 a.m. – 12:30 p.m.
LAB 3 ■ Mobile Devices
Bill Scholz, *Newspeech, LLC; President, AVIOS*
Tom Schalk, *Vice President, Voice Technology, ATX Group, Inc*

TUESDAY ■ 1:45 p.m. – 3:30 p.m.
DEMO 1 ■ The Voice-Enabled Enterprise
Deborah Dahl, *Principal, Conversational Technologies*

WEDNESDAY ■ 10:45 a.m. – 12:30 p.m.
DEMO 2 ■ In Beta: Products in R&D
Moshe Yudkowsky, *President, Disaggregate*

TUESDAY ■ 9:00 a.m. - 10:00 a.m.

KEYNOTE ■ Best Voice Forward

Jeffrey F. Rayport, *Founder and Chairman of Marketspace, LLC, & Author,* Best Face Forward: Why Companies Must Improve Their Service Interfaces With Customers

Speech technology is moving beyond the call center and into other parts of enterprises. This naturally brings additional challenges and considerations. However, companies can learn from sophistication that is emerging in other customer-facing technologies. Hear insight from Jeffrey F. Rayport, a renowned author, former Harvard University business school professor, and the founder and chairman of Marketspace, LLC, a strategy practice that helps companies improve the way they interact with customers and markets.

WEDNESDAY ■ 9:00 a.m. - 10:00 a.m.

KEYNOTE PANEL ■ SaaS in Speech

MODERATOR: **Nancy Jamison,** *Jamison Consulting*

PANELISTS:
Paul Watson, *Convergys*
Jaime Bertasi, *Tellme, a Microsoft subsidiary*
RJ Auburn, *Voxeo*
Dan Reed, *Voxify*

The low-cost, high-value of the software-as-a-service (SaaS) model, which has already revolutionized the CRM market, is now making inroads into the speech industry. With SaaS (and the disaggregation of VXML from the stack), new offerings can be provided, including hosted deployment, managed services, or a hybrid approach. Hear what some of the leading SaaS speech technology vendors have to say about SaaS in the speech technology industry.

Sponsored Keynote Lunches

MONDAY ■ 12:00 p.m. – 1:15 p.m.

Bring Meaning and Value to Enterprise Speech *sponsored by* Autonomy

Steven Graff, *Vice President of Technology and Chief Architect, Autonomy*

Harnessing voice information across the enterprise to impact customer service, gather intelligence, determine business strategy and minimize risk requires meaning and context.

TUESDAY ■ 12:30 p.m. – 1:45 p.m.

sponsored by **Tellme.** *A Microsoft Subsidiary*

Breakfast & Coffee Breaks

A continental breakfast will be provided for conference attendees each morning from 8:00 a.m. to 9:00 a.m. before the keynote session. Additional coffee breaks will take place each morning and afternoon. Please check the schedule for exact times and locations.

CONFERENCE AT-A-GLANCE

9:00 a.m. – 10:00 a.m. **WELCOME & OPENING KEYNOTE** ◼ **Voice of the Customer** ◼ Paul Greenberg

	TRACK A ◼ Astor Ballroom (7th Floor) **BUSINESS STRATEGIES**	**TRACK B** ◼ Empire Complex (7th Floor) **VUI DESIGN PRINCIPLES**	**TRACK C** ◼ Soho Complex (7th Floor) **ADVANCED SPEECH TECHNOLOGIES**
10:15 a.m. – 11:00 a.m.	**A101** High-Value Solutions on a Low Budget ◼ Nachnani & Reed	**B101** The Value of Standards ◼ Rolandi & Burton	**C101** Trends Toward Natural Speech ◼ Bacchiani
11:15 a.m. – 12:00 p.m.	**A102** Delivering Personalized Caller Experiences ◼ Pollock & Eyler	**B102** Efficient Design ◼ Hunter & Olvera	**C102** Models of Dialogue Management ◼ Wohlsen & Wilde, Thomson

12:00 p.m. – 1:15 p.m. **KEYNOTE LUNCH** *sponsored by* Autonomy ◼ **Bring Meaning and Value to Enterprise Speech** ◼ Steven Graff

1:15 p.m. – 2:00 p.m.	**A103** Focusing on Customers ◼ Martin & Kaiser	**B103** Data for Design ◼ Shinn & Gilbert	**C103** Advanced Dialogue Strategies ◼ Kalkbrenner & Phillips
2:15 p.m. – 3:00 p.m.	**A104** Panel—Using Analytics to Drive Value	**B104** Philosophy and Practice for VUI ◼ Krogh & Bloom	**C104** Voice Interaction Optimization ◼ Burnett, Suendermann & Liscombe
3:15 p.m. – 4:00 p.m.	**A105** Building Trust in Outbound Calls ◼ Smith & Leathem	**B105** Delivering Better Experiences ◼ Li & Wright	**C105** Natural Communication Technology ◼ Zitouni & Hirschberg
4:15 p.m. – 5:00 p.m.	**A106** Panel—Trends in Voice Search	**B106** VUI on the Road ◼ Kaushansky & Miners	**C106** Evolving Standards, Part I ◼ Barnett & Rehor

5:00 p.m. – 7:00 p.m. **GRAND OPENING RECEPTION** ◼ In the Exhibit Hall

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9:00 a.m. – 10:00 a.m. **KEYNOTE** ◼ **Best Voice Forward** ◼ Jeffrey F. Rayport

10:00 a.m. – 10:45 a.m. **BREAK** *sponsored by* LumenVox ◼ Visit the Exhibits

	TRACK A ◼ Astor Ballroom (7th Floor) **BUSINESS STRATEGIES**	**TRACK B** ◼ Empire Complex (7th Floor) **VUI DESIGN PRINCIPLES**	**TRACK C** ◼ Soho Complex (7th Floor) **ADVANCED SPEECH TECHNOLOGIES**
10:45 a.m. – 11:30 a.m.	**A201** Panel—The Alignment Index 2009	**B201** Error Prevention and Recovery ◼ Underdahl & Nguyen	**C201** Evolving Standards, Part II ◼ Baggia & Lepore
11:45 a.m. – 12:30 p.m.	**A202** Balancing Automation and Agent Interactions ◼ Tucker & Thompson	**B202** Acoustics for VUIDs ◼ Costa & Halperin	**C202** Advanced Interaction Techniques ◼ Gavalda & Beigi

12:30 p.m. – 1:45 p.m. **KEYNOTE LUNCH** *sponsored by* Tellme. *A Microsoft Subsidiary*

1:45 p.m. – 2:30 p.m.	**A203** Legal Compliance for Speech ◼ Tziahana & Raman	**B203** Understanding Caller Behavior ◼ Galles & Milroy	**C203** Natural Language Processing ◼ Wooters & DePalma
2:45 p.m. – 3:30 p.m.	**A204** Cross-Modal User Experience ◼ Glidden Zhu & Yudkowsky	**B204** Usability Plus ◼ Hanchar & Wilson, Milroy	**C204** Advanced ASR Applications ◼ Balchandran & Nguyen

3:30 p.m. – 4:15 p.m. **BREAK** ◼ Visit the Exhibits

4:15 p.m. – 5:15 p.m.	**A205** A Look Ahead ◼ Meisel & Hunter	**B205** Improving Alphanumeric Recognition ◼ Witt-Ehsani, Keller, & Shinn	**C205** Next-Gen Dialogue Systems ◼ Gilbert & Johnston, Paek & Pieraccini

5:30 p.m. – 7:00 p.m. **RECEPTION** ◼ 9th Floor

9:00 a.m. – 10:00 a.m. **KEYNOTE PANEL** ◼ **SaaS in Speech**

10:00 a.m. – 10:45 a.m. **BREAK** ◼ Visit the Exhibits

	TRACK A ◼ Astor Ballroom (7th Floor) **BUSINESS STRATEGIES**	**TRACK B** ◼ Empire Complex (7th Floor) **VUI DESIGN PRINCIPLES**	**TRACK C** ◼ Soho Complex (7th Floor) **BEST PRACTICES FOR DEVELOPERS**
10:45 a.m. – 11:30 a.m.	**A301** Panel—Hosting Relationships	**B301** Bilingual Spanish/English Design ◼ Ahlén & Olvera	**C301** VUI Considerations for Speaker Verification ◼ DeLucia & Attwater
11:45 a.m. – 12:30 p.m.	**A302** Measuring Customer Experience ◼ Mesbur & Goss	**B302** Designing for Cultural Differences ◼ Limbo & Solàrzano	**C302** Improving Grammars ◼ Boucher & Keller

12:30 p.m. – 1:45 p.m. **ATTENDEE LUNCH**

1:45 p.m. – 2:30 p.m.	**A303** Evolution of Multimodal Customer Care ◼ Reavely & Pieraccini	**B303** Challenging Contexts of Use ◼ Parks & Gardner	**C303** New Development Languages ◼ Barnett & Dahl
2:45 p.m. – 3:45 p.m.	**A304** Emerging Trends in Speech ◼ Cascio, Joe & Brinsmead	**B304** Panel—The VUI Showdown: Data on Menu Design	**C304** Tuning ◼ Fisher & Rosenberg

MONDAY, AUGUST 24

TRACK D ■ Duffy/Columbia (7th Floor)
SOLUTIONS

D101 Panel—How to Make Speaker Verification Applications Good for Business

D102 Speaker Verification in the Real World ■ Aley-Raz, Markowitz

SPEECHTEK LAB/DEMOS ■ Harlem Room

LAB 1 Speech Synthesis ■ Henton

KEYNOTE LUNCH *sponsored by* Autonomy

D103 CCS—Mobile Speech ■ Gilbert & Safadi

D104 CCS—Making Call Steering Work Right ■ Saad & Fisher

D105 CCS—Improving Business Systems ■ Sayad & Duquaine

D106 Security ■ York & Belkin

LAB 2 Speaker Identification and Verification ■ Markowitz

GRAND OPENING RECEPTION ■ In the Exhibit Hall

TUESDAY, AUGUST 25

BREAK *sponsored by* LumenVox *Speech Understood* ■ Visit the Exhibits

TRACK D ■ Duffy/Columbia (7th Floor)
SOLUTIONS

D201 CCS—Special Solutions ■ O'Dowd & Williams

D202 CCS—Finding People ■ Kruse & Hampton

SPEECHTEK LAB/DEMOS ■ Harlem Room

LAB 3 Mobile Devices ■ Scholz & Schalk

KEYNOTE LUNCH *sponsored by* Tellme. *A Microsoft Subsidiary*

D203 Multimedia in the Call Center ■ Fullam & Yuschik

D204 CCS—Speech in Government ■ Agarwal, Kumar, & McClintock

DEMO 1 The Voice-Enabled Enterprise ■ Dahl

BREAK ■ Visit the Exhibits

D205 CCS—Analytics ■ Danese & Hoffmann

RECEPTION ■ 9th Floor

WEDNESDAY, AUGUST 26

BREAK ■ Visit the Exhibits

TRACK D ■ Duffy/Columbia (7th Floor)
SOLUTIONS

D301 CCS—Designing Documentation ■ Budd & Owens

D302 CCS—How Airlines Improve Service With IVR ■ Trank & Lough

SPEECHTEK LAB/DEMOS ■ Harlem Room

DEMO 2 In Beta: Products in R&D ■ Yudkowsky

ATTENDEE LUNCH

D303 Adding Video to Voice ■ Matula & Cooper

D304 Panel—Best Practices for Developers

Sunrise Discussions

SpeechTEK will host early morning discussions on Monday, Tuesday, and Wednesday for business professionals, project leaders, designers, and developers to openly talk about the topics listed below. This is a great opportunity for attendees to network, discuss challenges, and share ideas with peers and speech technology professionals.

8:00 a.m. – 8:45 a.m. daily

MONDAY, AUGUST 24

SD101
Designing Speech and Multimodal Apps for Seniors ■ *Dahl*

SD102
Keeping Customers and Agents Happy ■ *Jenkins*

SD103
VoiceXML Forum Platform Certification Program ■ *Rehor & Sutherland*

SD104
New Dialogue Engine Paradigms ■ *Coin*

TUESDAY, AUGUST 25

SD201
Competence in Voice Experience Design ■ *Polkosky*

SD202
Challenges of Speech Interfaces for the Car ■ *Boyce*

SD203
Scripting Languages for Speech Application ■ *Chen*

SD204
Getting Human in 2009 ■ *Bouzid*

WEDNESDAY, AUGUST 26

SD301
How to Approach a Multilingual System Design ■ *Shaked*

SD302
Long-Term Speech App. Monitoring, Maintenance, and Expansion ■ *Witt-Ehsani*

SD303
Building Voice Mashups Using SIP Servlets ■ *Auburn*

Exhibit Hours

MONDAY, AUGUST 24
5:00 p.m. – 7:00 p.m. ■ Grand Opening Reception

TUESDAY, AUGUST 25
10:00 a.m. – 5:30 p.m.

WEDNESDAY, AUGUST 26
10:00 a.m. – 2:00 p.m.

SpeechTEK University

SpeechTEK University courses provide in-depth, 3-hour seminars on compelling topics for speech technology and information technology professionals. Experienced speech technology practitioners teach each seminar in an intimate classroom setting to foster an educational and structured learning experience. If you are considering deploying a speech application, looking to increase your knowledgebase in one of the key areas below, or you simply need a speech technology refresher, attend a SpeechTEK University course. These courses are separately priced or may be purchased as part of your conference registration.

SUNDAY, AUGUST 23

1:30 p.m. – 4:30 p.m.

STKU-1 ■ Introduction to Speech Technologies

James Larson, *Vice President, Larson Technical Services*
Designed for attendees new to the speech technology arena, this tutorial provides an overview of today's key speech technologies. What are the major differences between dictation and conversational recognition engines? Should you use statistical language models (SLMs) or speech grammars, and do they need semantic tags? Should you use concatenative- or parameter-based speech synthesis engines? Do speaker identification and verification really work? Is there a need for touchtone recognition in interactive voice response systems? Who drives the speech dialogue? The user, the computer, or both? Where can natural language processing technologies such as natural language recognition, machine translation, response generation, and summarization be used today? Can speech technologies be embedded in mobile devices, or do they require a backend server? Should you use POTS, VoIP, or some other communication strategy? Untangle the voice standards alphabet: VoiceXML, SSML, SRGS, CCXML, PLS, and SCXML.

STKU-2 ■ Introduction to Voice User Interface Design

Eduardo Olvera, *Senior User Interface Designer, Nuance Communications*
Jump-start your knowledge in the field of voice user interface design! This session is designed to quickly get those new to VUI design up-to-speed so they can make the most of the Principles of VUI Design track at the conference. This tutorial will illustrate why VUI design is the make-or-break factor for speech applications and how to make smart design decisions from Day 1. Learn how to encourage customers to accept and use speech automation by focusing on the perceptions and reactions of end users throughout the design process. This tutorial will cover the basics in VUI design: technology current and future state (including multimodality), speech project methodology, design principles and caller's rules for efficient, no-nonsense call flows; and evaluation techniques to learn what works and what real customers think.

THURSDAY, AUGUST 27

9:00 a.m. – 12:00 p.m.

STKU-3 ■ Improving Grammars

Judi Halperin, Senior Consultant Self-Service Solutions, Avaya, Inc. &
Jenni McKienzie, VUI Designer, Travelocity
Back by popular demand! This course (first offered in 2008) will get you going with grXML grammars. The first half will start with a quick overview of grXML structure so we can analyze sample grammars, then look at guiding principles and best practices. Plus, we'll examine some cases when applying best practices really isn't best (there's always a loophole!). Once you have basic grammars down, the second half will explore testing, tuning, and how you can add cool, advanced stuff to further constrain your grammar and optimize recognition. Whether you're a VUI designer, developer, manager, analyst, QA specialist, or anybody else, if things like lexicons, rulerefs, OOG, and FA-out are a bit fuzzy to you, or you just want to better understand how to use grammars to boost performance of your speech applications, this course is for you.

STKU-4 ■ Natural Language Processing

Deborah Dahl, Principal, Conversational Technologies
Natural language (NL) processing is supporting increasingly sophisticated speech dialogues. This session will introduce NL processing and its role in current and future speech applications to understand what NL is, techniques for processing NL, and where NL processing is heading. We will describe how to use statistical language models (SLMs) and speech grammars with semantic tags for processing NL. Attendees will develop tagged grammars illustrating the techniques discussed in the tutorial. We will also discuss the roles of emerging standards and research in future applications and how standards such as Extensible MultiModal Annotation (EMMA) will contribute to more sophisticated applications. This session will conclude with a brief look at some recent topics in NL research.

STKU-5 ■ Tricks of the Trade: Applying Linguistics to Voice User Interface Design

Mary Constance Parks, Senior VUID, Nuance Communications
Businesses employing speech technology depend on a successful match between their implementations and the natural human capacity to understand and use speech. When the two align, the results can delight. When they don't, the results can be increased failures and reduced caller satisfaction. Linguistics, the scientific study of natural language, can provide helpful insights into how to create, evaluate, and improve voice user interfaces (VUIs) so that users' innate abilities and expectations align with what is experienced. This tutorial will introduce participants to key linguistic principles and applied methods that have high impact on the caller experience and business outcomes. Technologists, business owners, and VUI designers will all gain insights into pain points that can be better understood and resolved through tricks of the linguistic trade. Prior to the tutorial, participants will receive a set of activities to be completed in advance. Completion of activities is not mandatory but highly encouraged.

STKU-6 ■ Advanced Speech Application Tuning Topics

Yves Normandin, CEO, Nu Echo, Inc.
This course will teach participants a rigorous, data-driven speech application tuning methodology that will enable them to build robust speech applications that effectively deal with how real users actually behave, not how we would like them to behave. Topics include utterance and dialogue-level performance metrics, managing out-of-grammar utterances, techniques to effectively identify and address performance problems, dealing with multi-token utterances, tuning phonetic dictionaries, computing enhanced confidence scores, setting confidence thresholds, and running dialogue simulations. The presentation will be illustrated by numerous examples and interactive demonstrations using field data from real-life applications.

12:00 p.m. – 1:30 p.m.
BREAK

1:30 p.m. – 4:30 p.m.

STKU-7 ■ Success Metrics for Speech Applications

Peter Leppik, CEO, Vocal Laboratories, Inc.
Emily Selene de Rotstein, VP, Sales and Marketing, Vocal Laboratories, Inc.
Ensuring the success or failure of a speech application requires determining the relevant success criteria, measuring the performance of the application based on those metrics, and taking the appropriate actions at each stage of development to ensure the criteria are met. This tutorial will discuss how to determine success criteria, based on the business goals of the project; benchmarking the application metrics to ensure the success criteria are appropriate and achievable; evaluating the performance of competing application prototypes; and ensuring continued application success after project completion through continuous improvement.

STKU-8 ■ Quantifying the Impact of CTI on the Enterprise

Holger Stoltze, CTI Product Manager, Syntellect
A computer telephony integration (CTI) application offers businesses the ability to increase profits by not only lowering expenses, but also, and perhaps more importantly, through brand differentiation and increased customer loyalty. Implementing CTI has numerous benefits to the enterprise and the caller. It is able to dramatically improve customer satisfaction while simultaneously reducing call center costs and improve security by eliminating a potential breach point. The presentation will define CTI, outline its benefits and impact on the caller experience, and quantify the return on investment.

STKU-9 ■ Using Stories to Gather User-Based Requirements

Lizanne Kaiser, Customer Experience Designer, Genesys Telecommunications Laboratories, an Alcatel-Lucent Company
The success of a speech solution often depends on whether the right requirements are gathered and captured in a useful way. An application can be "built to spec" and still not thrive if requirements and success metrics are ill-conceived. This hands-on workshop will present specific techniques for capturing the user-based requirements more likely to lead to successful project outcomes. Benefits of this approach include the ability to do the following: differentiate various types of users who will interact with the speech solution; create contextual stories around the high-level goals for each type of user; break down high-level goals into manageable requirements; and specify acceptance criteria so stakeholders can agree when requirements are met. This workshop builds upon Mike Cohn's (2004) work on User Roles and User Stories, which will be introduced and applied to speech projects through group exercises.

STKU-10 ■ Voice Biometrics to the Aid of Preventing Identity Theft

Raghunath Raman, Senior Vice President, VoiceVault, Inc.
The proliferation of the internet and digital applications has had many ramifications—a significant one being a spurt in faceless electronic transactions and fraudulent activities such as identity theft. The majority of identity theft, which is on the rise, happens in the non-internet world. Abuse also happens in the digital world, with significant attempts being made to prevent fraudulent online activity. Voice biometrics assists in the perpetration of false identities and makes the hurdle very difficult to overcome. The session will include a live demonstration for speaker verification in which randomly selected speakers can enroll their voices and verify against their voiceprints. Also covered will be the basics of digital signal processing and speaker identification; how noise filters work and how to account for various channels; the effectiveness of voice verification methods; drawing a balance between security and convenience; and the basics of voiceprint representation.

Sunrise Discussions

8:00 a.m. – 8:45 a.m.

SD101 ■ Designing Speech and Multimodal Apps for Seniors

MODERATOR: *Deborah Dahl, Principal, Conversational Technologies*
Speech applications can potentially be more useable than applications that require dexterity with a mouse or keyboard, or the ability to read text in a tiny font. However, changes in vision, hearing, and physical mobility that occur as people age can affect the usability of speech and multimodal applications. Applications for a population that includes older users must take these changes into account in the user interface design process so that the applications are usable by both older and younger users. This session will discuss such topics as speech rate, volume, pauses and timing, vocabulary, menu complexity, user control of the interface, multimodality, accommodating both older and younger users, and social considerations, as well as additional topics of interest to the attendees.

SD102 ■ Keeping Customers and Agents Happy

MODERATOR: *James Jenkins, President/CEO, IQ Services*
Everyone knows you need to train and monitor your agents to help your company retain those valuable customers. But many businesses drop the customer experience ball when they forget about the importance of monitoring and tuning the self-service and communication technologies that sit in front of those agents. IT and contact center managers are invited to join this discussion about tips and techniques for optimizing the performance of speech-based contact center applications. Participants are encouraged to share exam-ples of previous challenges and successful methods. The moderator will also share a list of ideas, examples and stories to keep the conversation rolling.

SD103 ■ VoiceXML Forum Platform Certification Program

MODERATORS:
Ken Rehor, Voice Technology Group, Cisco; Conformance Committee Co-Chair, VoiceXML Forum, & Ian Sutherland, Consulting Member of Technical Staff, Voice Lab, Oracle USA Inc.
The VoiceXML Forum's Platform Certification Program has helped to stabilize and mature the speech and contact center industry by encouraging the cross-vendor interoperability of platforms, tools, and applications. Certification has become a key speech system RFP criterion for savvy companies adopting speech. A new version of the test suite is now available along with a redesigned testing support system that greatly simplifies configuration and execution of the tests. In this session vendors will learn how to take advantage of the new tests, support software, and testing program to validate their products.

SD104 ■ New Dialogue Engine Paradigms

MODERATOR: *Emmet Coin, Speech Scientist, ejTalk*
The rate of improvement in the richness and complexity of human-computer dialogue is slowing. Why? Doesn't the end user want more sophistication, power, and naturalness? Or, with current technology, is it just too difficult to make anything much more complicated? As developers, what incremental design upgrade could you use today? Do we know what steps to take? As a business paying for the development of a voice system, what more could a system do for your customers? If there is a will in the community to do better, then why aren't we? What should our next steps be?

9:00 a.m. – 10:00 a.m.

KEYNOTE ■ Voice of the Customer

Paul Greenberg, President, The 56 Group & Author,
CRM at the Speed of Light
Companies should pay attention to the voice of the customer. Customers aren't what they were 5 years ago. What companies have to do to respond to customers is also not the same. Social media tools and the growth of digital communities have given the customer control of the conversation and control over the business ecosystem. Technologies are not valuable if there is no intent on understanding what the customer is saying. Innovations in speech and other domains are useless unless they are valuable to the enhancement of the customer experience—the one that the customer owns.

10:15 a.m. – 11:00 a.m.

A101 ■ High-Value Solutions on a Low Budget

MODERATOR: *David C. Martin, Principal Consultant-Speech Engineering, Avaya, Inc.*

Speech Solutions in a Down Economy

Harkishin Nachnani, Manager, VUI Design and Speech Science, Convergys Corp.
A well-planned automation road map can guide key decision makers to make fiscally responsible funding decisions. This presentation will provide a proven methodology for creating a self-service automation road map by identifying a list of candidate applications, quantifying the benefits using ROI models and prioritizing these applications into small manageable releases. You will also learn how to create a customer-centric adoption strategy that will get your callers ready, excited, and motivated to use your self-service applications.

Top 10 Speech Crimes in a Recession and Clues to Prevent Them

Dan Reed, Corporate Vice President, Voxify, Inc.
Enterprises turn to speech self-service in a recession to increase customer service and reduce costs. Be wary of speech crimes being committed by vendors that lock you into high-risk projects, inflexible applications, and charges for application changes that will bleed your budget. Crime scene investigation will reveal: 1) top 10 speech crimes and the clues to prevent them; 2) most-requested speech applications in a recession; and 3) customer service survival strategies.

B101 ■ The Value of Standards

MODERATOR: *Melanie Polkosky, Human Factors Psychologist & Consultant, IBM*

Toward a Standard VUI Design and Development Methodology

Walter Rolandi, Principal Usability Scientist, TuVox, Inc.
Speech community: This is a call to action! There is no apparent standard for designing, testing, and developing voice user interfaces, nor any strong consensus as to what would constitute a complete methodology. Non-VUI standards are incomplete and in many ways irrelevant to VUI design. This presentation will address the problems of nonstandardized VUI development methodologies and encourage movement toward standardization. Audience participation and feedback will be specifically encouraged.

Style Guides: Is Your Design Coordinated?

Michele Burton, Senior VUI Designer, Convergys Corp.
Over the life of an IVR project, team members often change and vital history is soon forgotten. The solution? Style guides. For designers, this doc-

Session Rooms

KEYNOTES ■ Broadway Ballroom	**TRACK C** ■ Soho Complex
TRACK A ■ Astor Ballroom	**TRACK D** ■ Duffy/Columbia
TRACK B ■ Empire Complex	**LAB/DEMOS** ■ Harlem Room

ument details the style of that IVR to keep the "feel" consistent, even if the designers change. This presentation will explore when style guides should be created, what's important to put in them, and explain the guide's benefits. We'll also explore having similar documents for development and speech science as well.

C101 ■ Trends Toward Natural Speech

MODERATOR: *Bill Scholz, President, NewSpeech LLC*
Michiel Bacchiani, Techlead Manager, Audio Indexing Speech Group, Google
Research in speech technology has received a lot of attention, especially over the last 30 years. Due to the convergence of algorithmic improvements and increases in available computation, speech systems have moved from small artificial tasks to processing more natural speech. This talk will provide a high-level overview of the algorithms that have provided this ramp up, some of the related applications that this has sparked, and the current research focus.

D101 ■ Panel: How to Make Speaker Verification Applications Good for Business

MODERATOR: *Dr. Judith Markowitz, President, J. Markowitz Consultants*
PANELISTS:
David Attwater, Senior Scientist, Enterprise Integration Group
Alexey Khitrov, VP, Strategic Development, Speech Technology Center
Brian Eastley, Director, Market Strategy: Hosted Solutions, Convergys Corp.
Julia Webb, Executive Vice President, VoiceVault
Valene Skerpac, President, iBiometrics, Inc.
Pure accuracy is only one factor that determines whether a deployment of speaker identification and verification (SIV) is successful. Furthermore, it is often not the most important factor. The panelists offer a range of viewpoints on the topic that include such perspectives as human factors, security management, and the use of other authentication factors. All panelists have had hands-on experience developing and/or evaluating speaker-verification applications.

LAB 1 ■ Speech Synthesis

Caroline Henton, Talknowledgy
Sample the latest commercially available speech synthesis solutions. Talk to developers and speak openly to our SpeechTEK Lab judge, Caroline Henton, about the speech synthesis tools she will be evaluating. Find out firsthand the strengths and weaknesses of each system and give the companies your feedback.

11:15 a.m. – 12:00 p.m.

A102 ■ Delivering Personalized Caller Experiences

MODERATOR: *Peter Krogh, Director of Solutions Architecture, SpeechCycle*

Eight Components of Customer Personalization You Can Leverage

Bruce Pollock, Vice President, Strategic Growth and Planning, West Interactive Corp.
Traditional customer contact methods treat most customers the same under most circumstances. Some enterprises have sophisticated data warehouses and customer segmentation schemes, yet this information is not leveraged effectively in the customer contact environment. In the future, enterprises that fail to leverage what they know about customers stand to lose market share to competitors who take a smarter, data-driven, personalized approach to speech applications and other automated customer contact methods. This session will discuss key components of advanced customer personalization for speech and other applications.

Getting to Know You: Evolving Personalization With Frequency of Use

Leah Eyler, Speech Applications Consultant, Dimension Data
Technology is becoming increasingly more targeted toward users, incorporating ancillary technology and data, and using word spotting and data mining techniques to specifically target users. This trend continues to grow

within speech applications to more customer-direct applications. This presentation will examine adaptive VUI based on frequency of use and adjusting user experience. This is based on research and will look at personalization and supporting technologies, VUI techniques for becoming more personal, and user responses to increased familiarity and when to maintain distance.

B102 ■ Efficient Design

MODERATOR: *Susan Boyce, Principal Designer & Manager, Tellme, A Microsoft Subsidiary*

From Best Practices to Proven Patterns: The Voice Design Palette

Phillip Hunter, Founder, Principal Designer, design-outloud
Voice user interaction and interface have struggled with definitions of appropriate approaches and starting points. However, other design practices have organized responses to the issues. We have few due to a lack of extensive formal education and continued struggles with internal debates and uncertainties. One practiced and valid approach is to create design patterns for commonly encountered situations to create a library of resources to help quickly form design foundations. More than recipes or magic spells, design pattern collections provide structures, approaches, and rationales so the designer can select a starting point for customized creativity.

Truths and Myths About Reusable Designs

Eduardo Olvera, Senior User Interface Designer, Nuance Communications
Designers often rely on accumulated peer experiences and designs of projects of similar nature. But what about designs that need to be leveraged and reused by the same customer for other subsidiaries or that cater to a wide variety of customers? Can user requirements be captured the standard way? This session will explore the details of reusable design in practice and types of techniques available (such as patterns, modules, etc.), including their unique challenges and impact on the field.

C102 ■ Models of Dialogue Management

MODERATOR: *Bill Scholz, President, NewSpeech LLC*

Application of a Rule-Based Dialogue Manager in a Medical Conversational Speech System

Bob Wohlsen, Consultant, Voice Technology Solutions, &
Lorin Wilde, Chief Technical Officer, SB&E, Inc.
Most commercial voice applications employ a form of finite state control mechanism for dialogue management. However, there are classes of applications where such an approach is impractical because of the complexity of the task or because of a caller's limited understanding of the domain. Such is the case in our application involving diabetes management, where we are employing a rules-based approach for dialogue management derived from the domain itself.

Building Blocks for Advanced Dialogues

David L. Thomson, SVP, Speech Technology, SpinVox
The VoiceXML Tools Committee has been studying methods and architectures to support next-generation conversational systems—machines that appear intelligent to the user. Our objective is to find ways to make services of tomorrow scalable, maintainable, compatible with emerging standards, and able to be designed at a reasonable cost. This presentation will review proposed architectures and algorithms and will relate examples of current systems with humanlike reasoning abilities.

D102 ■ Speaker Verification in the Real World

MODERATOR: *Judith Markowitz, President, J. Markowitz Consultants*

Know Your Enemy—Real-Time Fraudsters Detection Using Voice Biometrics

Almog Aley-Raz, CEO, PerSay
Leumi, the second-largest bank in Israel, is the first to deploy text-independent voice biometrics technology. This case study will focus on the recent rollout of a unique fraudsters' detection functionality, enabling the bank to identify known fraudsters as they interact with the bank's agents. The solu-

tion, which is based on PerSay FreeSpeech platform, utilizes unique techniques that minimize false-alarm rate and increase detection accuracy. Accuracy rates observed in large-scale fraud attacks will be presented.

Speaker Verification in the Real World

Judith Markowitz, *President, J. Markowitz Consultants*
This session will cover the work being done in several standards bodies, including the results of the W3C's recent workshop on speaker identification and verification (SIV). It will also cover the collaboration between the VoiceXML Forum and the American National Standards Institute (ANSI) on a data interchange format, the data interchange format being developed by the International Standards Organization (ISO), and the SIV in the second version of the Media Resources Control Protocol V2 (MRCP V2) by the Internet Enterprise Technology Forum (IETF).

LAB 1 ■ Speech Synthesis *(continued)*

12:00 p.m. – 1:15 p.m. ■ *Broadway Ballroom, 6th Floor*
SPONSORED KEYNOTE LUNCH ■ *sponsored by* Autonomy

Bring Meaning and Value to Enterprise Speech

Steven Graff, *Vice President of Technology and Chief Architect, Autonomy*
Harnessing voice information across the enterprise to impact customer service, gather intelligence, determine business strategy, and minimize risk requires meaning and context.

1:15 p.m. – 2:00 p.m.

A103 ■ Focusing on Customers

MODERATOR: **Harkishin Nachnani,** *Senior Manager, Hosted VUI Design & Speech Science, Convergys Corp.*

Whosability?

David Martin, *Principal Consultant, Avaya Inc.*
We talk of usable solutions, but usable to who? How usable should these solutions be based on constrained budgets and crashed project timelines? Balancing such deployment pressures against usability best practices in a time of economic downturn creates tension between delivering an application that serves the business's self-interest while still making it inherently usable to the caller. Providers and stakeholders should remember that these solutions must be designed to solve the problems of everyday users to meet corporate objectives and put the correct perspective on the who in usability.

Valuing Customer Conversations

Lizanne Kaiser, *Customer Experience Designer, Genesys, an Alcatel-Lucent Company*
Companies are spending more time talking to customers they don't want to talk to (low-value, frequent-contact, costly customers) and not enough time talking with those they do (affluent, time-constrained customers). This presentation will explore how your speech-enabled automated phone system can be instrumented in supporting value-based customer segmentation and contact center resource alignment to extract costs, drive revenue, and deepen valuable customer relationships.

B103 ■ Data for Design

Moderator: **Simonie J. Wilson,** *Speech Scientist, Convergys Corp.*

The Impact of IVR Voice Talent Selection on Intelligibility

Phil Shinn, *Principal Consultant, Voice Applications Services, Genesys Telecommunications Laboratories, an Alcatel-Lucent Company*
The majority of IVR systems in production today use a female voice. As listeners age, however, they typically lose their high-frequency hearing first. For those with presbycusia, this results in a relative difficulty in understanding female voices, as compared to male voices, which typically have lower formant and fundamental frequencies. The goal of this presentation is to make voice user interface designers aware of the impact of voice talent selection on intelligibility for some user populations.

VUI Design for Anonymous Name Spelling in Public Environments

Juan Gilbert, *Professor & Chair, Clemson University*
As cell phones and other conversational technologies have become invisibly pervasive, privacy has become a serious issue. For example, if you need to give your account number or name in a public place using your cell phone or some other conversational technology your identity may be compromised by a nearby eavesdropper. This presentation will demonstrate an approach for anonymous spelling that has been implemented in an electronic voting system for candidate write-ins using voice.

C103 ■ Advanced Dialogue Strategies

MODERATOR: **Tom Schalk,** *Vice President, Voice Technology, ATX, a subsidiary of Cross Country Automotive Services*

Intelligent Environments

Stefan Kalkbrenner, *CEO, Institute of Multimedia Engineering*
This presentation describes a research project known as Mobile Adaptive Assistance (MAA) that deals with human-machine interaction within a networked, intelligent environment. The system unifies the user interfaces of various devices and provides a VUI with the goal of allowing the user easy and natural communication. To process user requests accurately, the system uses knowledge of the current situation and the environment, linguistic analysis of user statements, and use of multiple levels of abstraction of the real world to link to the eventual action on real devices. Although this project is still in the development phase, it demonstrates that speech could be the ideal interface for ubiquitous computing!

Automatic Output Mode Selection for Multimodal Applications

Mike Phillips, *CTO, Vlingo*
Multimodal systems are now being used in a variety of situations ranging from quiet offices to walking down the street to driving in a car. These differing situations will bias users to rely more or less on each available input and output modality. This talk will address the key decisions around the design of systems to be used in these environments and will include results from Vlingo's in-field deployments.

D103 ■ Mobile Speech

MODERATOR: **James Barnett,** *Director, Genesys Telecommunications Laboratories, an Alcatel-Lucent Company*

Mobile Voice Search of Business Listings

Mazin Gilbert, *Executive Director, AT&T*
The proliferation of mobile devices and advances in speech processing are enabling a new and exciting set of voice applications that provide users with the ability to adopt natural voice interfaces to quickly and easily find information, whether searching for videos, music, and business listings or surfing the web. This presentation will review the technologies and challenges behind mobile voice search and report on case studies and performance statistics from AT&T's business listing Speak4it application.

Mobile Speech-to-Speech Translator

Rami Safadi, *CTO, Sakhr Software*
Based on 15-plus years of research and development in Arabic natural language processing (NLP), the Sakhr Mobile S2S Translator is the world's first and only live mobile speech-to-speech (S2S) application. The Sakhr Mobile S2S Translator is easy-to-use yet provides instant and accurate translations—anywhere you want. Speak English or Arabic into a mobile phone such as the iPhone or BlackBerry, then hear the audio translation and see the text translation. The application leverages server-based speech processing and cloud computing.

LAB 2 ■ Speaker Identification and Verification

Judith Markowitz, *Consultant, J. Markowitz Consulting*
This lab gives you hands-on experience with the products of major companies offering speaker-recognition technology and solutions. You will be shown the best each company has to offer, both with regard to application design and performance for enrollment, verification, and related technolo-

gies. Then we will ask you to give SpeechTEK and the companies in the lab your feedback.

2:15 p.m. – 3:00 p.m.

A104 ■ Panel: Using Analytics to Drive Value

PANELISTS:
Anna Convery, *Chief Marketing Officer, ClickFox*
Diego Lomanto, *Senior Solutions Manager, Verint Witness Actionable Solutions*
Mike Moore, *Analytics Manager, West Corp.*
Mike Hutchison, *VP Professional Service, Nexidia, Inc.*

In today's economy, call centers face the challenge of cutting costs while maintaining superior customer service. Analytics offers unparalleled ability to harness the huge amount of customer data available to identify opportunities for increased efficiency and better customer experience. Join us to hear industry experts discuss how analytics can help your call center face tough economic times.

B104 ■ Philosophy and Practice for VUI

MODERATOR: **Silke Witt-Ehsani,** *Vice President, VUI Design Center, TuVox*

Burgling the Playwright's Toolbox

Peter Krogh, *Director of Solutions Architecture, SpeechCycle, Inc.*

IVR design can and should be based on well-established dramatic structures. Working from the top down, a VUI designer should first explicitly define the overall objective of the application, then each smaller and more granular structure in turn. As more detail is added to the design, the dictates of the parent structure are honored and amplified. An existing application will be rewritten according to these principles and analyzed by Jon Bloom in the next presentation.

Handling the Truth:
Data-Driven Design for Rich Phone Applications

Jonathan Bloom, *Senior Voice Interaction Designer, SpeechCycle, Inc.*

Voice interaction designers often evaluate their work using high-level metrics such as automation rates and call duration. But what about deeper statistical analyses? We will present five design changes that were put into production for a high-speed internet troubleshooter, review the methods used to analyze the changes, and discuss their performance. One of the design changes we assess will be that presented by Peter Krogh in the previous presentation.

C104 ■ Voice Interaction Optimization

MODERATOR: **Tom Schalk,** *Vice President, Voice Technology, ATX, a subsidiary of Cross Country Automotive Services*

Optimizing Speech Recognizer Rejection Thresholds

Dan Burnett, *Director, Speech Technologies, Voxeo Corp.*

This session will explain ASR (automatic speech recognizer) confidence rejection thresholds: what they are, where they come from, and their criticality to your ASR-enabled IVR. We describe the steps necessary to optimize this important threshold value throughout your application, covering transcription, the importance of grammar coverage, and an explanation of terms such as the Equal Error Rate. This session is ideal for those ready to take their ASR-enabled IVR tuning to the next level.

Using Statistical Grammars for the Continuous Improvement of Large-Scale Spoken Dialogue Systems

David Suendermann, *Principal Speech Scientist, SpeechCycle, Inc.*
Jackson Liscombe, *Speech Engineer, SpeechCycle, Inc.*

Statistical spoken language understanding grammars (SSLUs) are often used only at the top recognition contexts of modern large-scale spoken

dialogue systems. We propose to use SSLUs at every recognition context and present a methodology of continuous improvement in which data are collected at every recognition context over an entire dialogue system. These data are used to automatically generate updated context-specific SSLUs at regular intervals and thus continually improve system performance over time. We have found that SSLUs significantly and consistently outperform even the most carefully designed rule-based grammars in a wide range of contexts in a corpus of more than 2 million utterances collected for a complex call-routing and troubleshooting dialogue system.

D104 ■ Making Call Steering Work Right

MODERATOR: *Deborah Dahl, Principal, Conversational Technologies*

Maximize Accurate Routing of Callers Using Call Steering

CCS *Tony Saad, Senior Manager, Medco Health*
One of the fundamental measures for a successful deployment of a call steering application is maximizing the accurate routing of callers so callers can use self-service completely in the IVR. In this session Medco Health will present a close look at deploying, maintaining, and measuring success rates of a call steering application. We will also present research on call steering with natural language speech recognition versus live-agent assisted routing. Comparison of performance statistics and of productivity gain/loss between the two methodologies will be presented.

Designing and Deploying a Natural Language Application —Key Processes, Results, and Lessons Learned

Aaron Fisher, *Director of Speech Services, West Interactive*
Designing, building and tuning large scale, enterprise speech applications is a complex task. When you throw natural language (NL) speech into the mix, the complexity can increase several-fold. However, complexity can be managed with rigorous, comprehensive project plans, strong project leadership, and thorough understanding of key components of the project life cycle of an NL application. This presentation will cover key processes for a successful NL project, potential issues and pitfalls to avoid, and will give real examples from some of the country's largest live production NL deployments.

LAB 2 ■ Speaker Identification and Verification
(continued)

Customer Case Studies

By Customers For Customers

Customer case study presentations marked with a Customer Case Study icon (**CCS**) give you insight into how speech technologies are being applied in real-world situations. Presenters share how they successfully procure, implement, and deploy existing speech applications and how they avoid common pitfalls. Customer case studies will be presented on automatic speech recognition solutions, analytics, and speaker authentication across a wide variety of industries. Listen to presentations from companies in the following industries:

- Airline
- Construction
- Distribution
- Healthcare
- Financial Services
- Location-Based Services
- Manufacturing
- Mailstream Technology Management
- Government
- Wireless Telecommunications

In addition to formal conference sessions, there are many networking opportunities to meet other customers, including breakfasts, session breaks, lunches, receptions, and informal gatherings of customers with similar interests.

3:15 p.m. – 4:00 p.m.

A105 ■ Building Trust in Outbound Calls

MODERATOR: *Kristie Goss, Senior VUI Designer, Convergys Corp.*

Who's Calling Me Now? Outbound Applications

Michael Smith, *Self-Service Solution Opportunity Architect, Avaya, Inc.*
In an effort to increase customer service, many business initiatives are emerging toward proactive engagement of customers by reaching out to them. A feature-rich, proactive solution must first build a trusting relationship with the customer, and then customers will participate in the interaction. Technologies may assist—with speaker verification leading the way—but simple, well-designed user interfaces are also important. This session will explore ways to leverage outbound self-service in a manner that customers will trust and use.

Outbound Arrears Handling: What Do You Think?

Caroline Leathem, *Interaction Specialist, Verizon Business EMEA*
In today's economic climate, arrears and collections management can be an ongoing battle for businesses. Offering a proactive over-the-phone system where the customer can be reminded of a missed payment, and then offered the opportunity to make a payment, broadens the options for the customer and increases the chances of receiving payments. In addition, it offers the caller an alternative to engaging with an agent on what can sometimes be a tricky personal topic. But will customers willingly engage with the outbound call? Find out how business and consumer attitudes toward outbound calls need to shape the technology.

B105 ■ Delivering Better Experiences

MODERATOR: *Walter Rolandi, Principal Usability Scientist, VUI Design and Assessment, TuVox*

Nice to Greet You …
Optimize Opening Prompt Performance

Grace Li, *Voice Interaction Designer, SpeechCycle, Inc.*
VUI designers are often under pressure to include bells and whistles in their opening prompts. These add-ons include the simple mention of an agent, branding, or basic instruction on using the system. What happens to caller experience when these are removed? This session will chronicle the transformation of an opening prompt believed to be an informative, branded, and reassuring greeting to a three-word introduction to the application. We will discuss the effects on caller experience through the presentation of data collected from production systems.

Why Does Your IVR Treat Me This Way?

Gary Wright, *President, Applied Speech Resources*
The work of Reeves and Nass showed that the reactions that people have to automated systems are similar to the reactions they have to real people exhibiting similar behavior. So why do we expect callers to want to interact with IVRs that demonstrate anti-social behavior? This talk will focus on some of the many ways that typical IVR behavior might be considered anti-social if coming from a real person—telling callers what to do, not following turn-taking rules, always talking about everything from its perspective rather than ours—and will provide field-tested suggestions on how to make the human-IVR interaction more closely fit human expectations of conversations.

C105 ■ Natural Communication Technology

MODERATOR: *Roberto Pieraccini, Chief Technology Officer, SpeechCycle*

A Global Perspective on Speech-to-Speech Technology

Imed Zitouni, *Senior Scientist at IBM Research*
Speech-to-speech translation technology has advanced to an interesting level in recent years. It is now possible to monitor foreign media in real time without language barriers. We even see applications, customized for military use, which allows bidirectional speech-to-speech translation in real time in a little devise using limited vocabulary. This presentation will show recent advances in the technology with an emphasis on crowd-sourcing (learning from live feedback) and real-time issues.

Recognizing Speaker State: Emotion, Charisma, Deception

Julia Hirschberg, Professor, Columbia University

Speakers' mental states are conveyed by acoustic/prosodic cues as well as words and gestures. Much research has been done to detect anger/frustration in IVR systems so upset customers can be redirected to a person. More recent research focuses on recognizing other speaker states, such as confidence/uncertainty in tutoring systems and emotions accompanying deception. This session will describe the current state of "speaker state" research and discuss how close it is to commercial application.

D105 ■ Improving Business Systems

Moderator: Ken Rehor, Voice Technology Group, Cisco

Transforming the Call Center Using Speech

CCS *Eddie Sayad, Manager, Australia Post CCC NSW/ACT, Australia Post*

This presentation will focus on the ways in which speech technology has been leveraged to transform the Australia Post NSW/ACT CCC over 18 months from a reactive call processing center to a proactive service and revenue-generating focused center. All voice services are now managed in real time via a web portal, which is managed by the call center administrators. The call center is using a mixture of inbound and outbound services which it can configure and turn on and off as required. We will show how this technology has allowed us to focus on revenue-generating activities and describe automation rates and customer satisfaction results achieved.

Improving Efficiency by Adding Speech to a Complex PBX

CCS *Luke Duquaine, Director of IT, Integrity Construction Group*

Milwaukee-based Integrity Construction Group faced a problem common to many modern businesses: Despite having a great phone system loaded with features, it couldn't take advantage of many of them without relying on a complicated cheat sheet. With about 80 users—plus an IVR and call center that allows customers to check job status in real time—remembering the sequence of keys required to transfer calls between extensions at four different locations proved impossible without the aid of cheat sheets taped to phones. By partnering with Schmooze Communications, Integrity Construction was able to solve these problems and increase its productivity. This has allowed for increased efficiency and productivity in every aspect of its business.

4:15 p.m. - 5:00 p.m.

A106 ■ Panel: Trends in Voice Search

MODERATOR: **Michael Cohen,** *Manager, Speech Technology Group, Google*

PANELISTS:
Johan Schalkwyk, *Manager, Mobile Speech Team, Google*
Han Shu, *Speech Scientist, Vlingo*
Geoffry Zweig, *Senior Researcher, Microsoft*

Within the past few years, voice search has gone from being an interesting research issue to an integral part of the speech technology industry. Hear what experts from the biggest names in voice search have to say about the current state of voice search, the challenges they've overcome and ones they still face, and what's on the horizon for this new technology.

B106 ■ VUI on the Road

MODERATOR: **Catherine Zhu,** *Senior Consultant, Self-Service Solutions, Avaya, Inc.*

Driving Design: What You Need to Know to Be Successful in the Car

Karen Kaushansky, User Experience Designer, Tellme Networks, Inc.

The car is becoming an increasingly complex environment, with more connected and in-dash devices. New interactions are being designed, including multimodal voice and touch interactive user experiences, as well as voice-only experiences. This talk will cover ideas that help understand the car environment, evaluate some examples of where basic voice design prin-

ciples are not being followed, and look at some of the new design principles emerging in this space.

In-Vehicle, Voice Interactive Personal Information Management

Ben Miners, Director, Product Development and Planning, Intelligent Mechatronic Systems

The in-vehicle environment presents interesting challenges to easily and safely access and manipulate personal information. This presentation focuses on an innovative application of speech technology in a platform designed specifically for in-vehicle use. This voice-driven interactive platform enables the driver to focus on the road ahead while remaining informed and connected through email, text messages, telephony, and other common forms of communication. Relevant usability and safety issues in real-world scenarios are highlighted in this customer case study in addition to covering scalability considerations for interactive in-vehicle use of speech technologies.

C106 ■ Evolving Standards, Part 1

MODERATOR: **Tom Schalk,** *Vice President, Voice Technology, ATX, a subsidiary of Cross Country Automotive Services*

Overview of VoiceXML 3

Jim Barnett, Director, Genesys Telecommunications Laboratories, an Alcatel-Lucent Company
Ken Rehor, Voice Technology Group, Cisco; Conformance Committee Co-Chair, VoiceXML Forum

This session is an introduction to VoiceXML 3. Subjects will include an introduction to the V3 architecture, relationship to SCXML, new speech functionality (i.e., SIV, VCR controls), as well as profiles and modularity.

D106 ■ Security

MODERATOR: **David Attwater,** *Senior Scientist, Enterprise Integration Group*

Securing Cloud Telephony

Dan York, Director of Emerging Communication Technology, Voxeo

As voice and self-service applications move increasingly into the cloud and to IP communications, what do you need to be concerned about regarding the security of hosted solutions? If you grow to trust the cloud, how can you be sure it will be there for you? What protections can you put in place? What backup plans can you establish? What questions should you ask potential hosted/cloud vendors? In this session, security professional Dan York will walk you through the basic risk areas of voice-over-IP security, explain how these relate to both hosted and hybrid configurations, and leave you with a concrete list of questions to ask when considering hosted/cloud options.

Using Fusion of Voice Technologies for Security Application

Shahar Belkin, CTO, FST21, Ltd.

Creating an automated access control system that will perform as good as—or better than—a human guard is challenging, especially when the system needs to be both preventive and user-friendly. We selected voice, as it is the most natural human machine interface while concurrently providing biometric information on the speaker. The fusion of speech recognition and speaker verification creates the ability to know who you are.

Grand Opening Reception

All SpeechTEK attendees are invited to a Grand Opening Reception from 5:00 p.m. – 7:00 p.m. in the Exhibit Hall on Monday, August 24. Network with exhibitors, speakers, and conference attendees while enjoying a glass of wine and light hors d'oeuvres.

Sunrise Discussions

8:00 a.m. – 8:45 a.m.

SD201 ■ Competence in Voice Experience Design

MODERATOR: *Melanie Polkosky, Human Factors Psychologist & Consultant, IBM Corp.*

Do you know what I know? It is widely known that the background and experience of voice interaction designers is diverse, which translates into challenges for this emerging field, hiring decisions, and on-the-job training programs. This session will focus on the nature of competence in voice interaction design, based on a job survey of designers and managers conducted in late 2008. Join us for an interactive discussion about the importance of specific skills, length of time required to become competent, and differences between designers'—and managers'—perceptions of competency in this role.

SD202 ■ Challenges of Speech Interfaces for the Car

MODERATOR: *Susan Boyce, Principal Designer & Manager, Tellme, a Microsoft Subsidiary*

In this Sunrise Discussion we'll lead a conversation on the desirability and challenges of speech interfaces for the car. We'll discuss user needs and pain points. Topics for discussion include interaction and turn-taking methods; balance of modalities; user-initiated versus system-initiated; form factor: cell phone versus custom in-car solutions; and challenges for speech technology in vehicles. Come with your in-car design challenges and experiences to get the conversation moving to 60 MPH.

SD203 ■ Scripting Languages for Speech Application

MODERATOR: *Wei Chen, Chief Architect, Voxeo*

ECMAScript, JavaScript, PHP, Python, Ruby, Groovy, and other scripting languages are used to develop speech applications. What are the strengths and weaknesses of each scripting language? Exchange insights with other speech application developers about the do's and don'ts of scripting languages.

SD204 ■ Getting Human in 2009

MODERATOR: *Ahmed Bouzid, Director, Partner Solutions, Angel.com*

The gethuman standard [www.gethuman.com] is a specification for how customer service phone systems and support should work. When the standard was published in 2006, gethuman promised to improve the customer experience of any organization that complies, making the telephone system and overall customer service easier, more effective and more efficient. Join us for a discussion of the current status of gethuman. Has the gethuman standard fulfilled its early promise? Which organizations have embraced this standard, and what benefits have they seen from it?

8:00 a.m. – 9:00 a.m.

BREAKFAST ■ sponsored by CONVERGYS Outthinking Outdoing

9:00 a.m. - 10:00 a.m.

KEYNOTE ■ Best Voice Forward

Jeffrey F. Rayport, Founder and Chairman of Marketspace, LLC, & Author, Best Face Forward: Why Companies Must Improve Their Service Interfaces With Customers

Speech technology is moving beyond the call center and into other parts of enterprises. This naturally brings additional challenges and considerations. However, companies can learn from sophistication that is emerging in other customer-facing technologies. Hear insight from Jeffrey F. Rayport, a renowned author, former Harvard University business school professor, and the founder and chairman of Marketspace, LLC, a strategy practice that helps companies improve the way they interact with customers and markets.

10:00 a.m. – 10:45 a.m.

BREAK IN THE EXHIBIT HALL

sponsored by LumenVox Speech Understood

10:45 a.m. – 11:30 a.m.

A201 ■ Panel: The Alignment Index 2009

MODERATOR: *Daniel Hong, Lead Analyst, Customer Interaction Technologies, Datamonitor*

PANELISTS:
Mike Bergelson, Director, Strategy, Cisco
Martin C. Dove, Managing Director, CIS Global, Dimension Data
Brooks Crichlow, Director of Marketing, Tellme, A Microsoft Subsidiary

Join us for a presentation on the results of the 2009 Alignment Index for speech self-service and a discussion among a panel of speech experts on what the results mean for the speech industry and consumers. Martin Dove of Dimension Data and Mike Bergelson of Cisco will take attendees through the results of the survey, then the panel will join in to discuss areas of misalignment between the industry and consumers and give recommendations for how to address these going forward.

B201 ■ Error Prevention and Recovery

MODERATOR: *Juan E. Gilbert, Professor & Chair, Clemson University*

What Happens Now? Error Handling Considerations for Multimodal Designs

Julie Underdahl, Senior User Interface Designer, Convergys Corp.

The multimodal experience brings both new excitement and new challenges. Error handling normally found in a VUI or GUI alone doesn't always make sense or work well when combined into multimodal design. This session explores several challenges to consider when designing error-handling strategies for a multimodal experience. Looking at a multimodal prototype for a mobile device, design strategies, and usability results from the prototype will be presented to help illustrate these error-handling design considerations.

Crying for Help: Using Predictive Models to Handle Struggling Callers and Decrease Call Duration

Patrick Nguyen, Chief Technology Officer, Voxify, Inc.

In most systems, the strategy for dealing with callers who are struggling is uniform regardless of their state in the system. As a result, some callers become frustrated because they are not transferred to a human agent soon enough and call duration is increased needlessly. A new strategy has been developed based on a predictive model that takes into account the probability of completing a task given the history of the caller's previous interactions with the system. Incorporating such predictive models into live systems to help struggling callers can have a positive impact on caller satisfaction and average call duration.

C201 ■ Evolving Standards, Part 2

MODERATOR: *Roberto Pieraccini, Chief Technology Officer, SpeechCycle*

Extended ASR Results: From N-best to Lattices

Paolo Baggia, Director of International Standards, Loquendo

The new W3C standard EMMA 1.0 allows the representation of extended ASR results. Many new annotations are available to open up exciting new scenarios for voice and multimodal applications. The focus of this presentation is on the availability of not only N-best ASR results, but also lattices, which will offer richer ASR results, especially with the use of SLMs for recognition. We will highlight the architectural changes now made possible by the introduction of EMMA 1.0 within VoiceXML platforms, as well as the impact on voice application development.

How Speech Recognition Works in the Service-Oriented Architecture

Michael Lepore, *Customer Contact Business Unit (CCBU), Cisco*

Spending on service-oriented architecture (SOA) is expected to grow significantly throughout 2009 and become one of the most significant areas of technology investment for the enterprise. New technologies make it possible for contact centers to tap into the SOA to drive more advanced speech applications with shorter development times and less risk. This session will focus on the technical standards and practices that allow a speech-enabled IVR to leverage the benefits of an existing or upcoming SOA investment with a heavy emphasis on practical how-to's and real-world examples drawn from the experiences of two large financial services companies.

D201 ■ Special Solutions

MODERATOR: **Moshe Yudkowsky,** *President, Disaggregate*

Using Outbound Calls for Proactive Healthcare and Preventive Treatment

CCS **Janet O'Dowd,** *Director, Auto Dialog Campaign Management, Health Dialog*

This presentation will discuss the deployment of an outbound automated application called Auto Dialog. Auto Dialog helps individuals better understand their medical issues by supplying them with tailored information based on their health history, enabling individuals to become more actively involved in their healthcare with their providers. The solution also provides the business benefit of reducing claims costs by focusing on proactive healthcare and preventive disease management and can reduce the amount of incoming calls for companies by addressing requests for basic information. The presentation will cover business challenges addressed by Health Dialog, implementation methods, and best practices for outbound applications.

Speech-Enabled Electronic Program Guide for Set-Top Boxes

CCS **Jon Williams,** *Managing Director, Pixsan*

Pixsan and Loquendo have used TTS to develop a speech-enabled Electronic Program Guide for set-top boxes, resulting in improved accessibility for all users, especially users with visual impairments. Williams will demonstrate this new user interface and examine the complex process of speech integration with the on-screen navigation found in today's TV reception.

LAB 3 ■ Mobile Devices

Bill Scholz, *Newspeech, LLC; President, AVIOS*
Tom Schalk, *Vice President, Voice Technology, ATX Group, a company of Cross Country Automotive Services*

This workshop will showcase the latest operating systems and development environments of industry leading handsets. Innovative applications and the SDKs used to build the applications for different handsets will be the primary focus. Then, we will ask you to give SpeechTEK and the companies in the lab your feedback.

11:45 a.m. – 12:30 p.m.

A202 ■ Balancing Automation and Agent Interactions

MODERATOR: **Bruce Pollock,** *Vice President, Strategic Growth and Planning, West Interactive Corp.*

Balancing Self-Service Customer Service With Live Agent Assistance

Darla Tucker, *Principal, Business Development, Convergys Corp.*

It is not practical to automate 100 percent of your call volume with a self-service voice portal solution. So how do you get to the delicate balance between automation and customer satisfaction? In this session, you'll see the optimum balance between self-service and agent assistance to maximize your investments, enhance your customer service, and drive down your contact center costs while weighing the pros and cons of CSAT versus self-service or agent-assisted calls.

Humans as Speech Recognizers

David L. Thomson, *SVP, Speech Technology, SpinVox*

What clever services are emerging that combine human and machine speech recognition? How can these services deliver amazing results as reasonable costs, including voicemail-to-email conversion, sophisticated self-help systems, and high-reliability services? Could recognition become so advanced that dialogue technology is the limiting factor? This session provides an insider's view into the technology and economics behind emerging speech recognition services, including hidden humans in a system, where these services are today, and how you can get them.

B202 ■ Acoustics for VUIDs

MODERATOR: **Charles Galles,** *Speech Analyst, Communications Enabled Business Solutions, Nortel*

What Can You See in an Audio File?

Robert Costa, *VUI Designer, Nuance Communications*

This presentation will explore how to get more from your utterance collection by examining audio files using speech visualization software. In a typical tuning exercise, it is common to look for out of grammar utterances and misrecognized words, but sometimes it is also important to be sure some of these problems are not caused by other issues related to the quality of the audio or improper setting of various parameters. This presentation will show ways to overcome these problems by displaying waveforms on-screen and pointing out various acoustic phenomena.

Say What? Acoustics for Prompt Writers

Judi Halperin, *Senior Consultant, Avaya, Inc.*

While the keywords and phrases selected by designers may mesh well with the background information gathered during the discovery process, in many cases they may be suboptimal for speech recognition. This session will involve a high-level discussion of phonetics and acoustics designed to provide prompt writers with an understanding of the impact the phrases they choose to use in their prompts (and their grammars) have on speech recognition and ultimately on the caller experience.

C202 ■ Advanced Interaction Technology

MODERATOR: **Roberto Pieraccini,** *Chief Technology Officer, SpeechCycle*

Phonetic-Based Real-Time Monitoring

Marsal Gavalda, *Vice President of Incubation, Nexidia, Inc.*

Phonetic-based real-time monitoring systems aim to provide instant awareness of call center interactions. This session will discuss the state of the art in implementation and deployment of real-time monitoring solutions, including integration with VoIP telephony platforms and customization of triggers and actions, and will present a new phonetic-based speech engine optimized for processing thousands of audio streams in real time with subsecond latency, as well as novel approaches to improve search accuracy such as auto-thresholding.

Speaker Recognition in Distance Learning

Homayoon Beigi, *President, Recognition Technologies, Inc.*

This presentation will discuss the use of speaker recognition techniques for conducting language proficiency testing and rating. The proficiency testing is being used for 60-plus languages, and the speaker verification system introduced is a language-independent and text-independent system that is utilized to eliminate the need for an active proctor in a long-distance oral proficiency examination. We will discuss techniques derived from the speaker recognition discipline that are used for the automatic rating of oral proficiency interviews. The cases presented here are solutions that are currently being utilized in a real system.

Session Rooms

KEYNOTES ■ Broadway Ballroom		**TRACK C** ■ Soho Complex	
TRACK A ■ Astor Ballroom		**TRACK D** ■ Duffy/Columbia	
TRACK B ■ Empire Complex		**LAB/DEMOS** ■ Harlem Room	

D202 ■ Finding People

MODERATOR: *Matthew Yuschik, Human Factors Specialist, Multi-Channel Self Care, Convergys Corp.*

Providing Safe, Hands-Free Access to Corporate Directories

CCS *Tim Kruse, Vice President, Sales, Business Development, Incendonet, Inc.*

Because of recent legislation, Boston Sand & Gravel Co. needed a solution to allow mixer truck drivers and customers to interact with their phone system in a safe, hands-free manner. A speech-enabled auto-attendant with customizable VoiceXML templates allows them to retain the IVR functionality customers had grown accustomed to, while adding speech-driven menu options. Callers now speak a prompted menu option or the name of the person or department they wish to reach.

Welcome to the Numberless Enterprise

CCS *Stewart Hampton, Director, Sales & Marketing, Lyrix, Inc.*

PeopleFind is a cloud-based, speech-enhanced address book for connecting people and teams. Integrating ASR and TTS technologies from Loquendo and Nuance, PeopleFind enables a speech-assisted directory for business that unifies contacts across personal, social, and corporate directories.

LAB 3 ■ Mobile Devices *(continued)*

12:30 p.m. – 1:45 p.m. ■ *Broadway Ballroom, 6th Floor*
SPONSORED KEYNOTE LUNCH ■ *sponsored by* Tell**me.**
A Microsoft® Subsidiary

1:45 p.m. – 2:30 p.m.

A203 ■ Legal Compliance for Speech

MODERATOR: *Gary Wright, President, Applied Speech Resources*

Bridging Audio With Compliance, Litigation, and Governance

George Tziahana, VP, Compliance, Autonomy Corp.

Audio is becoming commonplace in legal and regulatory investigations, but recordings that are stored outside of an information governance strategy can result in high costs and risks to the organization. This session will discuss the growing need to automate audio governance processes, including real-time monitoring, retention management, and legal hold. Additionally, you will be introduced to meaning-based computing, an automated approach that enables governance by processing audio information based on its conceptual and contextual meaning.

Voice Biometrics and the Regulatory Framework

Raghunath Raman, Senior Vice President, VoiceVault, Inc.

There is plenty of debate around the topic of the legal standing of voice biometrics in the court of law in the U.S. and Canada. This session will highlight various legal cases with precedence, examine compliance across industries, and discuss the issue of privacy as it relates to protection of personally identifiable information. Examples of deployments in the insurance, financial, and healthcare industry will be presented.

B203 ■ Understanding Caller Behavior

MODERATOR: *Phil Shinn, Principal Consultant, Voice Application Services, Genesys Telecommunications Laboratories, an Alcatel-Lucent company*

Lost! Recovering Callers From a VUI Labyrinth

Charles Galles, Speech Scientist, Nortel Networks

You've gone through design and implementation and have just deployed that new application. What should you expect? How will you know if the application is meeting your objectives? What if your callers are not ending up in the right place. What if they are lost? Join us for a practical look at how to equip your callers with a package of "bread crumbs" to follow. Learn best practices and simple analysis techniques to optimize any application.

Understanding Caller Behavior in an Efficient, Effective Manner Using Customer IVR Traffic Lights

Jim Milroy, Director Creative Services, West Interactive

Nobody likes a long, congested commute, and customers don't like long, misguided calls in an IVR. Many times callers abandon the IVR for reasons that do not relate to the exact module in which they hung up. The Caller Traffic Light is a high-level flow that exposes these trends by displaying cause and effect. Caller Traffic Lights not only express caller satisfaction in a simple graphic flow chart, they provide an invaluable reference tool on measured customer behavioral patterns.

C203 ■ Natural Language Processing

MODERATOR: *Bill Scholz, President, NewSpeech LLC*

Advancing Speech Recognition With Natural Language Understanding

Charles Wooters, Chief Technology Officer, Next IT Corp.

This presentation will describe new technology developed by Next IT Corp. that enables the expansion of IVRs to emulate humanlike interactive behavior.

The Intersection of Speech and Translation

Donald A. DePalma, Chief Research Officer, Common Sense Advisory, Inc.

Of all natural language processing (NLP) technologies, automated translation of speech comes the closest to the ideal of removing language barriers. In this presentation, Donald DePalma surveys the state of the technology for machine interpretation, probes the market potential for voice-activated instantaneous interpretation, and discusses the trends and challenges facing the sector.

D203 ■ Multimedia in the Call Center

MODERATOR: *David L. Thomson, SVP, Speech Technology, SpinVox*

Multimedia Enhancements for the Next-Generation Contact Center

Chris Fullam, Director of Product Management, Media Enabling Product Group, Dialogic Corp.

Combining video with voice to enhance multimedia services is an important development in the next-generation call center. Customers often encounter an IVR system when they call a contact center because standard queries can be satisfied without agent intervention. But video offers the potential to enhance the customer's IVR experience. This presentation will discuss the market trends driving the latest advancements in contact center solutions, as well as the key multimedia standards and technical components behind these advancements.

Multimodal Migration From the Call Center to the End User

Matthew Yuschik, Human Factors Specialist, Convergys Corp.

A multimodal user interface for a call center agent provides a framework for evolving the completion of an entire transaction to the end user. In the call center, voice and graphics can be used interchangeably by the agent in a step-by-step manner to follow the sequence of graphical user interface (GUI) screens designed by a programmer. However, voice modality changes the focus from the GUI screens to the caller's model of the transaction-based flow and enables the agent and caller to interact at the caller's pace and flow, with the agent providing guidance only as necessary. This multimodal approach also applies to a hand-held device for self-service by an end user, where the transaction complexity is simplified with voice input and graphic output.

DEMO 1 ■ The Voice-Enabled Enterprise

Deborah Dahl, Principal, Conversational Technologies

From traditional desktop dictation to multimodal applications supporting an increasingly mobile workforce, voice applications are becoming more and more pervasive in the enterprise. All kinds of platforms are involved, including telephone, desktop, and mobile devices as well as special purpose devices. This session will showcase a set of thought-provoking and inspiring enterprise voice applications, and give attendees the chance to interact one-on-one with the vendors and with the applications.

2:45 p.m. – 3:30 p.m.

A204 ■ Cross-Modal User Experience

MODERATOR: *Phillip Hunter, Founder, Principal Designer, design-outloud*

Speech and the Big Picture: Implementing Solutions With Overall Customer Experience in Mind

Catherine Zhu, Senior Consultant, Self-Service Solutions, Avaya, Inc.

In today's fast-paced, mobile world, businesses interact with customers in a variety of ways. It's not just your website, agents, and IVR anymore. Nowadays, customer touch points can include emails, texts, and podcasts. And don't forget the more traditional contact methods through advertisements, commercials, and, of course, face-to-face in-store interactions. What's a company to do with its speech solution in such a diverse environment? This session will explore how your solution should fit into your overall customer experience strategy.

No Pop Quiz: Align Your Bill With Your IVR

Moshe Yudkowsky, President, Disaggregate

When your customers call your IVR system, they're often holding their bills in their hands. Customers use their bills, but bills aren't organized to provide the information they need to navigate the call. Even something as simple as an improperly formatted account number can cause trouble. Does your bill help your callers through the call, or does your bill persuade them to talk to a live operator instead? We'll discuss how to align your bill and your IVR system to help reduce expensive human-handled calls.

B204 ■ Usability Plus

MODERATOR: *Judi Halperin, Senior Speech Engineer, Avaya*

Usability and Tuning: A Marriage Made in VUI Heaven

Wesley Hanchar, Usability Engineer, &
Simonie J. Wilson, Speech Scientist, Convergys Corp.

Usability and tuning are essential to successful VUI design and caller satisfaction. Together, they provide more benefit to an application than either would alone. Traditional approaches separate these two processes into distinct development phases, but recognizing the overlap in purpose of the two fosters a deeply collaborative approach, where information is fed from usability engineers to tuning scientists and vice versa. We will provide real-world examples of this synergy between tuning and usability.

Supercharge Your Customer Focus Group; Combine It With Innovative Usability Testing

Jim Milroy, Director, Creative Services, West Interactive

Customer focus groups are an effective method for gathering information about what people think and how they feel about a current application, service, or product. WOZ testing is an effective tool as well for zeroing in on the usability of specific, future-focused speech applications planned for deployment. Yet, conducted in isolation from one another, these tests can create ambiguous and/or confusing conclusions on key next steps to take when refining your application designs. By combining customer focus groups with WOZ/usability testing techniques in a unique hybrid approach, the speech application/IVR is treated as a consumer product that is both discussed in general terms (the current design) and directly experimented with (new design alternatives) in the same session.

C204 ■ Advanced ASR Applications

MODERATOR: *Tom Schalk, Vice President, Voice Technology, ATX, a company of Cross Country Automotive Services*

Conversational Interfaces for Entertainment Content Management

Rajesh Balchandran, Research Staff Member, IBM TJ Watson Research Center

This presentation describes and demonstrates DICIT—a dialogue management-based natural language multimodal interface for controlling and interacting with a television. Using multi-token freeform requests, users can not only control basic TV functions but also efficiently filter and locate programs of interest from thousands of programs listed in the electronic program guide.

DICIT also includes far-field microphone technologies to enable users to interact from a distance—instead of using a close-talking microphone.

So Many Answers, So Little Time: Unstructured Voice Search

Patrick Nguyen, CTO, Voxify, Inc.

Information access is a daunting task when it comes to context-based, unstructured voice search on large collections of free-text documents such as frequently asked questions. Menu-driven approaches to voice search are inefficient and require intensive application design. Learn about a new information-retrieval-based solution that improves usability and streamlines design. You will learn about information-retrieval-based solutions; techniques for retrieval that includes VUI, text processing, and query construction; and research in context-based, unstructured search

D204 ■ Speech in Government

MODERATOR: *James A. Larson, Vice President, Larson Technical Services*

Use of Hindi Text to Speech Synthesis Engine for a Public Grievance Redress System in Semi-Rural India

CCS *Vibhu Agarwal, President, Prologix Software Solutions Pvt. Ltd.*
CCS *Amod Kumar, Special Secretary, Revenue, Government of UP, India at UP Government*

A unique project started by an energetic government officer in Uttar Pradesh, India, has become an indispensable tool in improving accountability of people responsible for delivering public services. Started in 2004 with nothing more than a shoe-string budget and plenty of enthusiasm, Lokvani has become a tool that enables people to track the management of civic amenities at the district level. The model is built around an information portal that is monitored by the district administrator's office on a daily basis. Designed to meet the unique needs of the local population, it provides a no-frills mechanism for people to interface with public officers in a simple and transparent manner via the telephone, which has a higher penetration than PCs or the internet. Moreover, the system remains sustainable by enabling local individuals and small businesses to set up licensed kiosks that provide access to the portal.

Serving the Swelling Ranks of the Unemployed With Speech

CCS *Nelson McClintock, IVR Administrator, Colorado Department of Labor*

Given our current economic environment, it's no secret that unemployment is on the rise. While others face slowdowns, state agencies tasked with processing unemployment cases are flooded with claims. In Colorado, residents must go through a claims process for unemployment to verify continued benefits eligibility every 2 weeks. Colorado Department of Labor and Employment (CDLE) cannot afford the number of agents needed to handle the amount of calls received and knew it needed a self-service solution. CDLE determined that it was time to move on and in the end chose speech. Learn about how CDLE made its decision, the design and deployment methods used, the positive feedback received, and lessons learned.

DEMO 1 ■ The Voice-Enabled Enterprise *(continued)*

3:30 p.m. – 4:15 p.m.

BREAK IN THE EXHIBIT HALL

4:15 p.m. – 5:15 p.m.

A205 ■ A Look Ahead

MODERATOR: *Lizanne Kaiser, Customer Experience Designer, Genesys Telecommunications Laboratories, an Alcatel-Lucent company*

The Return of the Voice Web: Contact Centers as Voice Sites

William Meisel, President, TMA Associates

Increasingly, callers will be reaching contact centers through speech-enabled directory assistance and voice search. Callers will thus be more

accepting of speech automation and expect a rapid response. Volumes of calls will increase. This "Voice Web" will demand "voice sites" and require a change in the operation and philosophy of call centers. Analyst Bill Meisel will give practical advice on dealing with this paradigm change.

People Get Ready: Sensible Mobility, Data Clouds, and a Long IVR Goodbye

Phillip Hunter, *Founder and Principal Designer, design-outloud*

Are we witnesses to the dawn of a new interaction age and the apex of IVR customer service? What major shifts will happen? How must businesses and contact centers adapt? What part will speech play? Factors such as increased appreciation for customer experience, voice in the data channel, P2P social models, hand-held computers, and the distribution of information are driving upheavals in customer service, from product ordering to tutorials, including contextual mobile interactions that demand greater power and flexibility in the machines we interact with. Get ready for dramatic changes now.

B205 ■ Improving Alphanumeric Recognition

MODERATOR: **Jenni McKienzie,** *Senior Business Solutions Advisor, Travelocity*

Alphanumeric Pattern Capture

Silke Witt-Ehsani, *Vice President, Design Center, TuVox, Inc.*

A recurring speech application challenge is around the recognition of alphanumeric patterns. Such identifiers are often an integral part of a company's business operations, and capturing such identifiers from a caller is often crucial to what functionality can be implemented in a speech application. The speaker will present a number of strategies that demonstrate that the solution to such challenges can only be achieved with a tightly integrated combination of VUI design, speech science, and application logic. Data from two applications will be presented to show how it was possible to substantially increase the success rate for challenging alphanumeric recognition tasks over several tuning cycles, analyzing both call recordings and transcriptions by implementing a combination of strategies.

Recognizing Alphanumeric Strings

Stephen Keller, *Project Manager, LumenVox*

Effectively recognizing alphanumerics is a difficult task, even for humans under optimal telephony conditions. For an automatic speech recognizer, the task is harder still. By making the most of the capabilities of SRGS and SISR, combined with some intelligent post-processing, you can achieve good success rates for even this demanding task. Attendees will learn how to make the most of the logic available to them in SISR and use this information to perform database lookups or other secondary matching strategies to improve alphanumeric recognition.

Alphanumeric Recognition: A Practical Guide

Phil Shinn, *Principal Consultant, Voice Applications Services, Genesys Telecommunications Laboratories, an Alcatel-Lucent Company*

Recognizing letters of the alphabet is a hard problem for humans and machines, but sometimes it just has to be done. There are a number of tips and tricks you can use to make sure your speech application scores an "A as in apple" rather than an "F as in Frank." This practical guide reviews various strategies you can use to make the grade.

C205 ■ Next-Generation Dialogue Systems

MODERATOR: **Bill Scholz,** *President, NewSpeech LLC*

Adaptive Learning and Personalization in Mobile Voice Search

Mazin Gilbert, *Executive Director, AT&T*
Michael Johnston, *Principal Technical Staff, AT&T*

The increasing need for natural voice interfaces to quickly and easily explore the wealth of content on mobile devices is giving rise to new technology challenges in speech and language processing. Among these challenges is the ability to learn and adapt to the user with minimal or no supervision. Learning can involve optimizing models, grammars, and the user interface based on many data streams including audio, usage profile, and meta information. This talk will review our ongoing research toward creating advanced mobile voice search services that adapt and learn with minimal or no super-

vision. Our research enables adaptation to users' voice and other usage data to provide personalized models and grammars.

Automating Dialogue Management Using Machine Learning: A Critical Survey

Tim Paek, *Researcher, Microsoft Research*
Roberto Pieraccini, *Chief Technology Officer, SpeechCycle*

Abstract dialogue management concerns what action or response dialogue systems should take in response to user input. Recently, academic researchers have been pursuing methods for automating the design of dialogue management using machine learning techniques such as reinforcement learning. This talk will provide a survey of these techniques from an industry perspective, critically evaluating to what extent they are ready for commercial deployment. This talk will also highlight machine learning approaches with more practical import.

D205 ■ Analytics

MODERATOR: **Matthew Yuschik,** *Human Factors Specialist, Multi-Channel Self-Care, Convergys Corp.*

How Pitney Bowes Uses Speech Analytics to Contain Costs

CCS **Emily C. Danese,** *Manager of Business Analysis and Operational Improvements, Pitney Bowes*

In today's economy, everyone is concerned with cutting costs, but the best organizations practice customer-centric cost containment. They are using speech analytics to analyze customer interactions to cut costs with minimal impact on customer experience by finding the key drivers of customer satisfaction so that they can focus investments on the activities that customers value most. In this session, attendees will learn how Pitney Bowes created an organizational model and process around the use of speech analytics in the contact center and leveraged the voice of the customer to cut costs.

Seven Secrets Revealed: How to Use Speech Analytics to Improve Customer Satisfaction

CCS **Percy Hoffmann,** *Director, Customer Strategy and Operations, Cricket Communications*

Most companies are aware that their customers face daily challenges using the goods and services they offer. However a majority of them are not acutely aware of what those challenges are and how often they are impacting customers. Speech analytics is a valuable tool that can be used to identify and quantify the challenges faced by customers who in turn will generate actionable feedback to improve business processes and automation systems. In this session, attendees will learn how Cricket Communications proactively used speech analytics to identify and quantify areas of customer confusion to improve business processes, streamline automation, and improve customer satisfaction.

5:30 p.m. – 7:00 p.m.
RECEPTION

Sunrise Discussions

8:00 a.m. – 8:45 a.m.

SD301 ■ How to Approach a Multilingual System Design

MODERATOR: **Nava Shaked,** *CEO, NavaShaked.com*

In this session we will suggest a checklist for issues needed to be taken into consideration when designing a multilingual speech system. We will go over them, make a prioritized list, and see how it differs from one organization to another. In addition, we will present the important do's and don'ts in designing a multilingual system and finally offer some insights from experience to give the audience a head start. The session will be interactive as much as possible to discuss and share actual problems and solutions for these challenges.

SD302 ■ Long-Term Speech Application Monitoring, Maintenance, and Expansion

MODERATOR: **Silke Witt-Ehsani,** *Vice President Design Center, TuVox, Inc.*

Now that speech applications are often running for a number of years, it has become critical to have a viable approach to measure performance over time as well as to maintain and update an application. This session is targeted at both people responsible for their company's speech applications as well as speech application professionals who are in contact with the same speech application year after year. This session will outline the elements of a speech application's lifecycle beyond initial go-live and present best practices. Attendees will be asked to share their best and worst experiences with maintaining applications.

SD303 ■ Taking a SIP of Java—Building Voice Mashups Using SIP Servlets

MODERATOR: **RJ Auburn,** *CTO, Voxeo*

The Java world has seen more than its fair share of telephony APIs come and go over the years. Things like JAIN SIP, JTAPI, Parlay, and JAIN SLEE have been showing up on product road maps for several years now, but SIP Servlets (just released as a 1.1) are finally seeing some industrywide adoption in application servers, both closed and open source. SIP servlets provide a simple API that mimics the widely deployed HTTP servlet model, allowing for Java developers to easily adapt their existing code and framework for communication applications. This session will provide a short introduction to SIP servlets and show people how they can quickly create a converged application using the technology. We will also show how you can quickly plug into simple web APIs using SOAP and REST to create quick web mashups.

9:00 a.m. - 10:00 a.m.

KEYNOTE PANEL ■ SaaS in Speech

The low-cost, high-value of the software-as-a-service (SaaS) model, which has already revolutionized the CRM market, is now making inroads into the speech industry. With SaaS (and the disaggregation of VXML from the stack), new offerings can be provided, including hosted deployment, managed services, or a hybrid approach. Hear what some of the leading SaaS speech technology vendors have to say about SaaS in the speech technology industry.

10:00 a.m. – 10:45 a.m.

BREAK IN THE EXHIBIT HALL

10:45 a.m. – 11:30 a.m.

A301 ■ Panel: Hosting Relationships

MODERATOR: **Elaine Cascio,** *VP, Vanguard Communications Corp.*

PANELISTS:
Steve Gass, *Director of Products and Services, West Corp.*
Laura Marino, *Director of Product Management, Nuance On-Demand, Nuance Communications*
Rhonda Gibler, *SVP Sales, West Interactive*

Hosted speech solutions offer significant benefits for many organizations making their first forays into speech technology. But automated speech applications and your business grow and change over time, and your relationship with your hosting provider should change as well. Learn how to get the most out of your ongoing relationship with your hosting provider in the face of the inevitable changes in your business.

B301 ■ Bilingual Spanish/English Design

MODERATOR: **Mary Constance Parks,** *Senior Voice User Interface Designer, Nuance Communications*

¡Dígame! Tell Me What I Need to Say

Sondra Ahlén, *Principal VUI Consultant & Owner, SAVIC*

Speech applications need to be designed differently for Spanish than for English. Cultural and language differences, including "Spanglish," affect design requirements and how callers interact with the application. Our usability study of a U.S. English/Spanish application uncovered new issues. Menu items, back-off strategies, the preference for touchtone versus speech, and even how to choose participants for a bilingual usability test must be considered. This presentation will provide a stepping stone for creating better Spanish language speech applications.

How to Present Names of Geographical Locations in Spanish Systems

Eduardo Olvera, *Senior User Interface Designer, Nuance Communications*

When Spanish-speaking users call an automated system in the U.S., the resulting conversation might not be entirely in Spanish, particularly when dealing with names of geographical locations. The way an IVR presents such information can help or hinder usability, and it can make a statement about how a company relates to its Hispanic customers. This presentation will examine key factors for making the best possible choice, such as caller background (demographics, caller preferences, acculturation), inherent characteristics of the location names, common usage, and the purpose of the system.

C301 ■ VUI Considerations for Speaker Verification

MODERATOR: **Judith Markowitz,** *President, J. Markowitz Consultants*

Considering Text Dependency for Speaker Verification

Ron DeLucia, *Senior Consultant, Self Service Solutions, Avaya*

Choosing between text-dependent or text-independent verification greatly impacts the caller's enrollment process, performed to effectively capture the caller's voice print, and the authentication process, used to optimally identify the caller afterward. We also consider functionality such as "liveness" testing that can be used to thwart potential recorded attacks, and the simple "single step" authentication and identification process. Each of these aspects will guide your selection between text-dependent and text-independent verification and ensure that your design attains a proper balance between security and convenience.

Session Rooms

KEYNOTES ■ Broadway Ballroom	**TRACK C** ■ Soho Complex
TRACK A ■ Astor Ballroom	**TRACK D** ■ Duffy/Columbia
TRACK B ■ Empire Complex	**LAB/DEMOS** ■ Harlem Room

Designing for Customer Acceptance of Voice Biometrics

David Attwater, Senior Scientist, Enterprise Integration Group

This presentation will discuss the key factors underlying customer acceptance of voice biometrics. Based on direct evidence from customer testing in Europe and the U.S., it will address the topics of customer trust and the role of brand in acceptance of biometric technology, mapping customer understanding of biometrics to dialogue design principles, customer perception of trade-offs between security and enrollment, and authentication time and effort.

D301 ■ Designing Documentation

Moderator: Bob Cooper, CEO, Swampfox Inc.

Documenting the Complete Design

CCS *Brian Budd, Lead Engineer, Barclays Bank PLC*

The voice user interface forms the hub of the design for any IVR system, with every other part of the design needing to support it. This presentation will share design documentation lessons learned from the implementation of a self-service application for a major U.K. financial institution, giving details of the strategies and techniques used for document production and management, what worked, what didn't work, and ideas for future improvements.

A Picture Is Worth a Thousand Words: A Different Approach to VUI Design Documentation

Karen Owens, IVR Speech Engineer, Avaya, Inc.

This presentation will cover an emerging process for VUI design that uses a combination of hidden data and automatic data extraction to create a comprehensive design document. First, the presentation will address the pros and cons of commonly used VUI design documentation. Next, it will show how to create hidden data in Visio objects, how to display the hidden data through data graphics, and finally, how to extract and format the hidden data.

DEMO 2 ■ In Beta: Products in R&D

Moshe Yudkowsky, President, Disaggregate

SpeechTek's "In Beta" lab will showcase products and services in beta — that is, ones that are not quite ready for full commercial deployment, but ready enough for friendly testing and early adopters. Participating companies will showcase beta products and services with hands-on, individual or small-group demonstrations. Attendees can expect short, informative, and educational discussions about new and interesting products related to speech technology.

11:45 a.m. – 12:30 p.m.

A302 ■ Measuring Customer Experience

MODERATOR: *Eduardo Olvera, Senior User Interface Designer, Nuance Communications*

CEI: The Caller Experience Index

James Mesbur, Voice Interaction Designer, SpeechCycle, Inc.

Understanding and evaluating the Caller Experience (CE) provided by voice-driven applications is key to measuring whether a system is achieving its business goals. Knowing how callers perceive a system can help guide business and design decisions by pointing out when callers have trouble versus get helped. SpeechCycle will discuss why this is a critical success factor and talk about methods it has pioneered for measuring caller experience in near real time, providing valuable feedback about true application performance.

A Solid Approach to Measuring and Improving CSAT

Kristie Goss, Senior VUI Designer, Convergys Corp.

This presentation covers an experiment that was conducted to identify what impacts customer satisfaction. Additionally, this talk provides a list of CSAT factors that can be used to determine which enhancements may help or hurt customer satisfaction. A methodology for prioritizing each factor will also be presented. VUI designers and business stakeholders will learn an approach for accurately measuring CSAT, how to choose the best CSAT question(s), and a method for improving CSAT

B302 ■ Designing for Cultural Differences

Six Ways to Bulletproof Your Multicultural Global Speech Deployment

Summer Limbo, Speech Analyst, West Interactive

English speakers globally interact with dialogues differently, depending on their country of origin, culture, and cultural norms. When deploying speech applications in a global context, VUI and grammar designers need to have sensitivity to multicultural differences in the manner in which English is spoken. While most VUI designers realize that designing in another language (such as Spanish) is fundamentally different than designing for English, less is known about the differences in how the English language is spoken globally. Dialogue designs and grammars must reflect these differences for real success.

¡Viva la Diferencia! Diversity and Unconventional Approaches Toward Reaching and Keeping Spanish-Speaking Callers

Ramón Solórzano, Jr., Anthropology, University of Massachusetts Amherst

This presentation will provide new independent research on the factors that come into play when Hispanic consumers choose which language they want to use in an IVR. We present preliminary findings from consumer interviews, using anthropological methodology to observe activities in everyday settings to sift out less visible cultural perspectives. This study challenges the assumption that people who are primarily Spanish speakers prefer to use Spanish IVRs and takes into account variables such as time in the U.S., dynamics of bilingual acquisition, dialectical differences, education level, and attitudes toward English and Spanish.

C302 ■ Improving Grammars

MODERATOR: *Dan Burnett, Director of Speech Technologies, Voxeo*

The Art and Science of Speech Grammar Coverage Analysis

Dominique Boucher, Lead Software Developer, Nu Echo, Inc.

As the speech recognition grammars required by today's applications become increasingly complex, identifying and fixing grammar coverage problems can become quite challenging. Using real-life examples, this session will provide an overview of some of the best practices and techniques for effective speech grammar debugging and coverage analysis. In particular, we will showcase tools no speech scientist should live without: an interactive sentence explorer and a sophisticated, highly customizable sentence generator.

How to Effectively Add Weights to SRGS Grammars

Stephen Keller, Project Manager, LumenVox

Weighting is an important and often misunderstood tool in the grammar toolbox. By adding weights to SRGS grammars, developers can help automatic speech recognizers distinguish between similar-sounding words, significantly improving the accuracy of grammar-based recognizers. However, the misuse of weights will almost certainly decrease accuracy. This presentation discusses how weights are used in SRGS grammars, outlines strategies for collecting the data necessary to apply correct weighting, details a strategy of testing, and using real-world grammars and application results, demonstrates how weighting can improve the success of a speech application.

D302 ■ How Airlines Improve Service With IVR

MODERATOR: *Valentine Matula, Director, Multimedia Research, Avaya*

Improving Flight information Services With Automated Speech Recognition

CCS *Michael Trank, Product Manager, APEX Voice Communications*

Live customer service representatives were getting overloaded with routine flight information questions at one of the leading ultra low-cost carriers based in the U.S. The time-consuming task for representatives to provide flight information was automated with the deployment of the OmniVox3D SIP Application Server and Service Delivery Platform from APEX Voice Communications. Callers looking for flight departure and arrival informa-

tion simply speak the flight number, departure and arrival city, or airport code to receive the requested information. By accessing the same database as customers on the web, OmniVox3D ensures that the same information is made available to customers calling the automated flight information service.

How Continental Airlines Uses Outbound IVRs to Transform the Customer Experience

CCS **Sonja Lough,** *Manager Self-Service Communications, Continental Airlines*

Continental has been a leader in the development and deployment of self-service technologies for many years. Utilizing a multichannel strategy has enabled the adoption of self-service across multiple touch points and customer groups. In 2008, Continental launched its first outbound IVR for flight check-in. While this application offers an experience similar to that of the online or kiosk check-in experience, it has been designed to leverage the unique capabilities of the voice channel and uses a module-based design, which allows new features to be integrated seamlessly. The outbound flight check-in IVR has since been extended to become an inbound IVR, based on its success and modularity.

DEMO 2 ■ In Beta: Products in R&D *(continued)*

12:30 p.m. – 1:45 p.m.
ATTENDEE LUNCH

1:45 p.m. – 2:30 p.m.

A303 ■ Evolution of Multimodal Customer Care

MODERATOR: **Darla Tucker,** *Principle User Experience Consultant, Convergys Corp.*

Evolving Applications From Single to Multimodality: Assessing Impact of Change

Simon Reavely, *Principal Architect, Orange Labs Boston*

Mobile devices provide a personalized portal to a vast amount of searchable information. Although the GUI on mobile devices remains an efficient output modality, it is believed that providing access to data sources using voice recognition and text-to-speech will significantly enhance accessibility and uptake. We examine the existing starting points that include IVRs and thick/thin graphical applications. We discuss where and how to change applications to support multimodality and consider trade-offs.

The Multimodal Wireless Future of Customer Care

Roberto Pieraccini, *Chief Technology Officer, SpeechCycle, Inc.*

The increasing adoption of wireless communications and smartphones creates the conditions for the evolution of traditional self-service customer care toward a multimodal interaction paradigm. The combination of separate GUI and VUI modes of interaction into a multimodal interface (MUI) allows people to take advantage of their complementary nature for an improved user experience. MUI, together with enterprise voice search—the multimodal evolution of natural language call routing—will drive adoption of self-service customer care toward higher levels of automation.

B303 ■ Challenging Contexts of Use

MODERATOR: **Michael Smith,** *Self-Service Solution Opportunity Architect, Avaya*

They're Not Always Listening: Designing for Distracted Callers

Mary Constance Parks, *Senior Voice User Interface Designer, Nuance Communications*

Speech applications are often designed with the underlying assumption that callers are listening to all the prompts throughout the call. Therefore, when callers do get distracted, they are often left without a means of completing their tasks or achieving their goals. This talk will provide examples of distraction and describe its impact on the caller experience. Specific techniques will be shown that can help callers succeed at tasks, even when they have been distracted.

Prescription for Healthcare IVRs

Nancy Gardner, *Senior Analyst, Convergys Corp.*

This prescription for improved customer satisfaction and increased call containment focuses on these best practices: caller-authentication solutions that meet HIPAA guidelines and address concerns about personal privacy and security; assistive dialogue design strategies geared toward an aging population; and intelligent use of back-end customer information. This presentation examines solutions in real-world healthcare applications such as prescription refill, new member enrollment, and claim status.

C303 ■ New Development Languages

MODERATOR: **Ian Sutherland,** *Consulting Member of Technical Staff, Voice Lab, Oracle USA Inc.*

Invoking External Resources From SCXML

Jim Barnett, *Director, Genesys Telecommunications Laboratories, an Alcatel-Lucent Company*

SCXML is a new W3C language for describing control flow. This talk will describe SCXML's mechanisms for communicating with external entities. It will cover communicating with other SCXML sessions, loading data from external sources, invoking external services, and sending and receiving external events.

Improving Dialogues With EMMA

Deborah Dahl, *Principal, Conversational Technologies*

The Extensible MultiModal Annotation specification (EMMA) is a standard of the World Wide Web Consortium for representing user input. While most commonly used for representing the interpretation of spoken input in dialogues, EMMA provides a great deal of additional information that can also be taken advantage of in speech applications. This presentation will discuss various ways in which this additional information can be used.

D303 ■ Adding Video to Voice

MODERATOR: **Paolo Baggia,** *Director of International Standards, Loquendo*

Deploying Interactive Voice & Video Response Applications—Challenges and Solutions

Valentine Matula, *Director, Multimedia Research, Avaya, Inc.*

Creating an interactive voice and video response travel application for an international deployment involves many parties: the IVVR platform provider's R&D team, in-country sales team, and a business partner for local support; the hosting in-country mobile phone carrier; a travel industry company; and the consumer. This talk will cover the challenges in delivering an IVVR solution that can host not only a travel application, but a stream of applications for a range of hosted customers.

VoiceXML and Video: Which Road Leads to Rome

Bob Cooper, *CEO, Swampfox Inc.*

This session will focus on various approaches to adding video support to VoiceXML platforms and the pros and cons of each. The talk will discuss aspects of VXML 3 and how it, as well as some supporting standards such as SMIL, is well suited to support video. The session will begin by looking at the user experience needed for various interactions and then consider this when looking at the underlying technology.

2:45 p.m. – 3:45 p.m.

A304 ■ Emerging Trends in Speech

MODERATOR: **Phillip Hunter,** *Founder, Principal Designer, design-outloud*

Elaine Cascio, *Vice President, Vanguard Communications Corp.*
Ryan Joe, *Associate Analyst, Datamonitor*
Aphrodite Brinsmead, *Associate Analyst, Datamonitor*

As companies strive for greater customer intimacy through personalized service, customer-based sales and proactive outreach, what is the role of speech? Hear real-life examples of successful, customer intimate applications and crit-

ical steps you can take to use speech to engage and not alienate customers. We'll cover the best ways to combine speech with live interactions to enhance the customer experience and how your company can leverage the power of speech for higher levels of customer intimacy and loyalty.

B304 ■ Panel: The VUI Showdown: Data for Menu Design

MODERATOR: **Peter Leppik,** *CEO, Vocal Laboratories, Inc.*
PANELISTS:
Jenni McKienzie, *Senior Business Solutions Advisor, Travelocity*
Silke Witt-Ehsani, *Vice President, VUI Design Center, TuVox*

Every VUID's favorite session returns for 2009! This year we've established a theme for the VUI Showdown: best practices in menu design. The Showdown will begin with a show-and-tell of empirical data from several ongoing studies of menu design. Be prepared to listen critically and chime in with your own experiences. Bring your opinions to help set the course for follow-up research and take part in the always-lively discussion.

C304 ■ Tuning

MODERATOR: **Dominique Boucher,** *Lead Software Developer, Nu Echo Inc.*

"Get Human" With Text-to-Speech: Advanced TTS Tuning Techniques to Make Your Application Sound Great!

Aaron Fisher, *Director of Speech Services, West Interactive*

Many callers dislike listening to text-to-speech because it sounds robotic and unnatural. While TTS engines today are much better than they used to be, the capabilities of the engine itself is only one driver of the overall quality and audibility of text-to-speech. Other drivers are equally—if not more—important. But these challenges can be addressed and text-to-speech can be made to sound very natural—it just takes time, resources, and a strong commitment to providing an outstanding VUI. Enterprises that devote resources toward analyzing and tuning the text-to-speech component of their applications on a regular basis, will reap the benefits of a better VUI and improved overall caller experience.

Getting Top Performance From Your Speech Application With Advanced Tuning Techniques

Aaron Fisher, *Director of Speech Services, West Interactive*

Despite all of the best efforts during the initial VUI design and implementation of a speech-enabled IVR application, changes in the business landscape require continuous monitoring of application performance. Without the utilization of continuous advanced tuning, application performance can erode over time. Avoid this pitfall by planning and allocating resources toward regularly scheduled tuning. This session will offer tuning techniques to ensure ongoing improvements to your application and a successful caller experience.

A Top-Down/Bottom-Up Approach to Optimizing IVR Performance to Meet SLAs

Doug Rosenberg, *Technical Consultant, Speech Science, Convergys Corp.*

Optimizing IVR performance to meet clients' service level agreements requires analyzing a wide range of data. There are several methods that can be used to evaluate the data in order to provide recommendations with the biggest benefits. This presentation describes a top-down and bottom-up approach that is driven by SLAs and performance data. These techniques are useful for the VUI designer during design phase and the tuning analyst during post-deployment optimization phase.

D304 ■ Panel: Best Practices for Developers

MODERATOR: **James A. Larson,** *Vice President, Larson Technical Services*
PANELISTS:
Brian Budd, *Lead Engineer, Barclays Bank PLC*
Sonja Lough, *Manager, Self-Service Communications, Continental Airlines*

Speech technology customers will summarize their experiences by enumerating best practices for designing, deploying, and using speech technology. Benefit from the experiences of those who have been in the trenches. Avoid the mistakes made by others.

SPEECHTEK LAB/DEMOS

This year marks our second SpeechTEK Labs, in which attendees can sample the latest speech technology products, talk to developers, and speak openly to our expert panel of judges about the technology. These Labs will provide objective evaluations of new speech technology and show how speech is breaking new ground in various industries. As an added benefit, the judges will issue ratings of the tools to provide further guidance. Demos will showcase some of the ways companies are incorporating speech technology into different enterprise areas and what various speech technology vendor R&D departments are working on.

All SpeechTEK Lab/Demos will be in the Harlem Room.

MONDAY, AUGUST 24

10:15 a.m. – 12:00 p.m.

LAB 1 ▪ Speech Synthesis

Caroline Henton, *Talknowledgy*
Sample the latest commercially available speech synthesis solutions. Talk to developers and speak openly to our SpeechTEK Lab judge, Caroline Henton, about the speech synthesis tools she will be evaluating. Find out firsthand the strengths and weaknesses of each system and give the companies your feedback.

PARTICIPANTS:
Cepstral ▪ IVONA ▪ Lessac Technologies, Inc. ▪ Loquendo ▪ Tellme

1:15 p.m. – 3:00 p.m.

LAB 2 ▪ Speaker Identification and Verification

Judith Markowitz, *Consultant, J. Markowitz Consulting*
This lab gives you hands-on experience with the products of major companies offering speaker-recognition technology and solutions. You will be shown the best each company has to offer, both with regard to application design and performance for enrollment, verification, and related technologies. Then we will ask you to give SpeechTEK and the companies in the lab your feedback.

PARTICIPANTS:
Avaya ▪ Convergys ▪ Nuance Communications ▪ Persay ▪ Recognition Technologies ▪ Speech Technology Center ▪ VoiceVault

WEDNESDAY, AUGUST 26

10:45 a.m. – 12:30 p.m.

DEMO 2 ▪ In Beta: Products in R&D

Moshe Yudkowsky, *President, Disaggregate*
SpeechTek's "In Beta" lab will showcase products and services in beta — that is, ones that are not quite ready for full commercial deployment, but ready enough for friendly testing and early adopters. Participating companies will showcase beta products and services with hands-on, individual or small-group demonstrations. Attendees can expect short, informative, and educational discussions about new and interesting products related to speech technology.

PARTICIPANTS:
Deutsche Telekom, Laboratories—Multimodal Application Builder
Loquendo
RebelVox—RebelVox LLC will demonstration a radical new take on integrated voice communications that removes the separation between live voice and messaging, works for any number of participants, integrates voice seamlessly with text, and delivers dramatic new levels of efficiency for users.
Voxeo

TUESDAY, AUGUST 25

10:45 a.m. – 12:30 p.m.

LAB 3 ▪ Mobile Devices

Bill Scholz, *Newspeech, LLC; President, AVIOS*
Tom Schalk, *Vice President, Voice Technology, ATX Group, a company of Cross Country Automotive Services*
This workshop will showcase the latest operating systems and development environments of industry leading handsets. Innovative applications and the SDKs used to build the applications for different handsets will be the primary focus. Then, we will ask you to give SpeechTEK and the companies in the lab your feedback.

PARTICIPANTS:
Nokia ▪ Novauris ▪ Nuance ▪ Tellme ▪ Vlingo ▪ VoiceObjects

1:45 p.m. – 3:30 p.m.

DEMO 1 ▪ The Voice-Enabled Enterprise

Deborah Dahl, *Principal, Conversational Technologies*
From traditional desktop dictation to multimodal applications supporting an increasingly mobile workforce, voice applications are becoming more and more pervasive in the enterprise. All kinds of platforms are involved, including telephone, desktop, and mobile devices as well as special purpose devices. This session will give attendees the chance to interact one-on-one with the vendors and with the applications.

PARTICIPANTS:
Autonomy etalk—In this demo, Autonomy's Qfiniti Explore uses meaning-based computing technology to provide speech and content analytics that delivers conceptual search, automated clustering, hot and breaking topics, and script adherence functionality.
Cisco/Datria—Come and try innovative enterprise mobility solutions from Cisco and Datria, including award-winning use of VoIP and inexpensive wireless phones to perform warehouse voice picking.
Loquendo MicroAutomation—This demonstration provides a sample of utilizing Loquendo speech recognition to authenticate an employee through speech verification.
LumenVox—Incendonet's SpeechBridge gives companies a speech driven auto-attendant, mobile email access, calendaring, and a complete, standards-based IVR speech platform for an endless variety of proven speech enabled applications that can be easily deployed in under an hour!
Lyrix Mobiso 6.0—From BlackBerry and the web, mobile business users download the Mobiso application and immediately sync contacts, social networks, and corporate addressbook entries with the powerful cloud-based Mobiso intelligent addressbook.
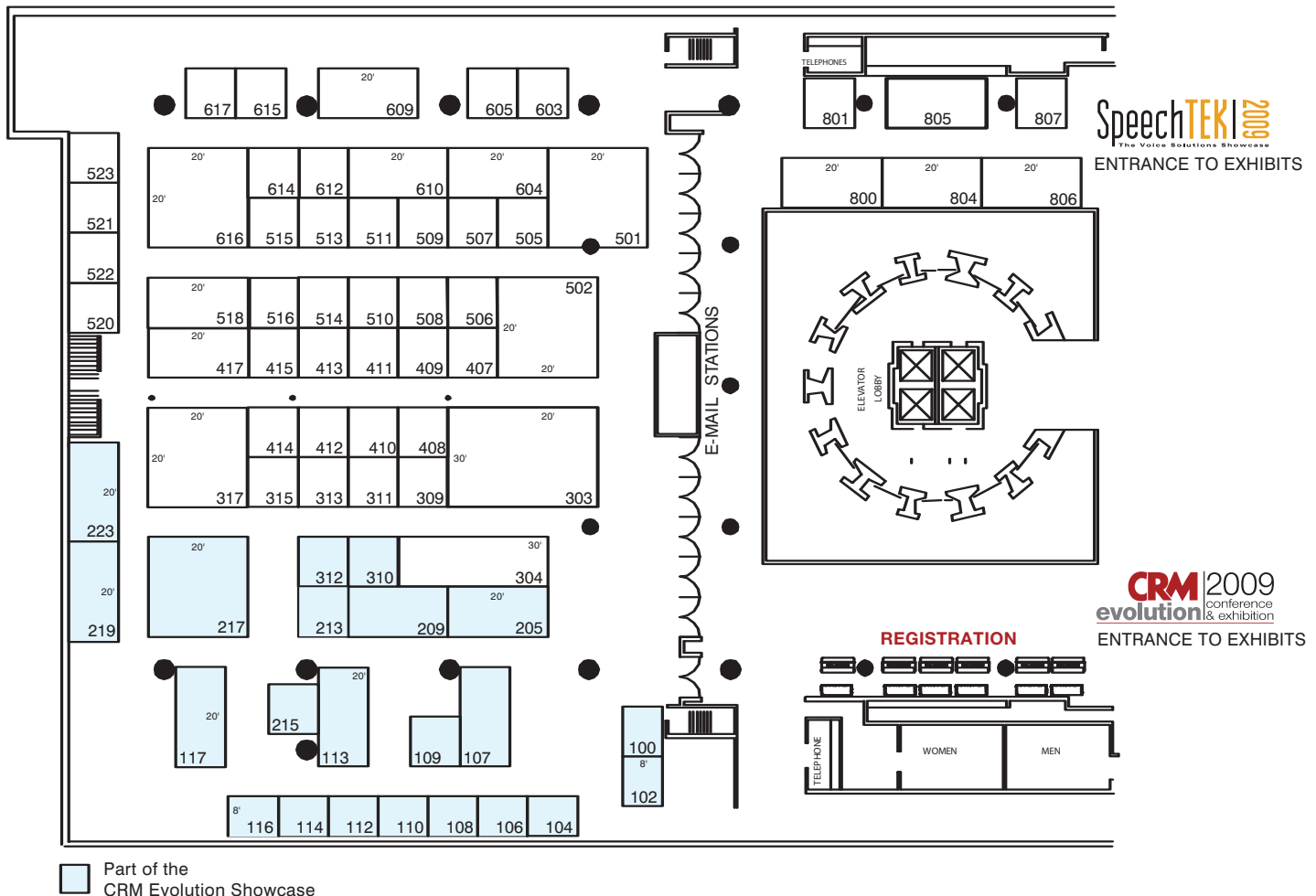**Openstream**—SmartAssistant handles (announces and reads) incoming calls, text messages, emails, schedules, and events and allows users to respond using voice, touch, or keypress as appropriate.
Speech Technology Center—Voice Pin is an ideal solution to ensure security of corporate or personal data on mobile devices and VoiceKey Service is a software application for voice verification.
Tellme

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Angel.com 806

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Autonomy 506

Avaya 604

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Cisco 610

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West Corporation 502

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1300 E. Arapaho, Suite 206
Richardson, TX 75081
PH: 972-331-1700
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www.acclaimtelecom.com

Booth #614

Acclaim Telecom is a full-service provider of IVR/speech recognition system solutions. We specialize in the analysis, design and deployment of Microsoft OCS 2007 Speech Server applications and Convergys (Intervoice) using current tools and technologies. From hosting your existing Microsoft speech application to implementing a new design from the ground up, Acclaim Telecom has over 15 years of solid industry experience to support your projects.

Angel.com

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McClean, VA 22102
PH: 888-MyAngel
FAX: 703-770-1321
www.angel.com

Booth #806

Angel.com combines powerful business voice technologies with simplified implementation and management. Our open software-as-a-service platform facilitates information-driven, personalized communications and transactions, improving business efficiency and enhancing caller satisfaction. Over 1,600 customers use Angel.com to more efficiently and cost-effectively build and manage call centers and IVR solutions like phone surveys, payment lines, and more.

Aspect Software

300 Apollo Drive
Chelmsford, MA 01824
PH: 888-412-7728
www.aspect.com

Booth #501

Aspect provides software and consulting services that turn the potential of unified communications into real business results across the enterprise and in the contact center. By combining Aspect Unified IP and Tellme Voice Self Service, Aspect brings to market an innovative hybrid, premise- and network-based contact center solution.

Exhibit Hours

Monday, August 24 . . . . .5:00 p.m. – 7:00 p.m.
Grand Opening Reception
Tuesday, August 25 . . . . .10:00 a.m. – 5:30 p.m.
Wednesday, August 26 . . . . .10:00 a.m. – 2:00 p.m.

Autonomy

2200 Ross Avenue
Suite 3500
Dallas, TX 75201
PH: 214-981-3100
FAX: 214-981-3500
www.autonomy.com

Booth #506
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Autonomy is a global leader in infrastructure software for the enterprise and is spearheading the Meaning-Based Computing movement. Autonomy's technology allows computers to harness the full richness of human information, forming a conceptual and contextual understanding of any piece of electronic data, including unstructured information, such as text, email, webpages, voice, or video

Avaya

211 Mount Airy Road
Basking Ridge, NJ 07920
PH: 866-Go-Avaya
www.avaya.com

Booth #604

Deliver exceptional value to your business and customers with video- and voice-enabled self-service solutions. Experience the ease of application creation through Avaya Dialog Designer, and leverage the resources of the Avaya DevConnect developer program to jump-start your speech-enabled application efforts. Avaya is a global leader in communication systems, applications and services, serving over 1 million customers from small businesses up to more than 90% of the Fortune 500 companies.

Cepstral

1801 E. Carson Street, Suite 200
Pittsburgh, PA 15203
PH: 412-432-0400
www.voiceforge.com/demo

Booth #303

Cepstral specializes in text-to-speech and offers the world's largest catalog of English voices. Cepstral TTS engines power embedded desktop and server markets. NEW!! VoiceForge—a hosted (SaaS) voice platform delivering on-demand audio for telephony, media sites, virtual worlds, consumer internet devices, and web applications. "Fun" character voices available at our website.

Cisco

170 West Tasman Drive
San Jose, CA 95134
PH: 408-526-4000
www.cisco.com/go/cvp

Booth #610

Cisco Unified Communications Solutions enable collaboration with a secure, rich-media experience that allows organizations to increase productivity and improve their competitive advantage through speed and innovation. Cisco Unified Customer Voice Portal provides award-winning, speech-enabled voice and video self-service, either as a standalone IVR system or seamlessly integrated with a contact center.

ClickFox

3445 Peachtree Road
Suite 1250
Atlanta, GA 30326
PH: 404-316-9475
www.clickfox.com

Booth #609

ClickFox, the defining leader of customer experience analytics (CEA) solutions, translates interactions from all enterprise touch points into an intuitive, visual map, revealing quickly and easily what customers actually do and why, so that companies can align customer needs to their business objectives. For more information visit our website.

Contact Solutions, Inc.

11911 Freedom Drive
Suite 1100
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PH: 866-979-3339
FAX: 703-480-1676
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Contact automation is about savings, so at Contact Solutions we pay our employees to continually find NEW savings for our customers. Our on-demand service includes a continuous improvement methodology—applied to every application, as a standard service—that identifies new automation opportunities. Our customer's save more, because we continually automate more.

Convergys Corporation

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PH: 800-344-3000
www.convergys.com

Booth #304
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Convergys is a global leader in relationship management. We provide solutions that drive more value from the relationships our clients have with their customers and employees. Convergys turns these everyday interactions into a source of profit and strategic advantage for our clients. For more than 30 years, our unique combination of domain expertise, operational excellence, and innovative technologies has delivered process improvement and actionable business insight to clients that now span more than 70 countries and 35 languages. Convergys is a member of the S&P 500 and has been voted a Fortune Most Admired Company for 7 consecutive years. We have approximately 75,000 employees in 84 customer contact centers and other facilities in the U.S., Canada, Latin America, Europe, the Middle East, and Asia, and our global headquarters in Cincinnati, Ohio. For more information, visit our website.

CRM Magazine

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Booth #317

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CSIdentity

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FAX: 512-617-6805
www.csidentity.com

Booth #407

CSIdentity is the technology leader in providing identity theft protection services to businesses and con-

sumers. CSIdentity SAFE provides comprehensive background screening, identity verification, alternate names/alias search, authentication and ongoing criminal monitoring. CSIdentity Protector provides full-service identity theft protection, insurance and restoration. CSIdentity Breach provides proactive breach preparation services from discovery to resolution.

EMPIRIX

20 Crosby Drive
Bedford, MA 01730
PH: 781-266-3200
FAX: 781-266-3201
www.empirix.com

Booth #521

When quality matters, choose Empirix. Our testing and monitoring solutions assure the quality of your customer and agent experience by helping you find and fix problems prior to deployment, eliminating costly issues that arise during production. We also help you prepare for the future by validating that your contact center performs at higher anticipated call volumes and that disaster/contingency processes work as planned.

First Data

6200 South Quebec St., Suite 370
Greenwood Village, CO 80111
PH: 404-921-3361
FAX: 404-921-5145
www.firstdata.com

Booth #505

First Data powers the global economy by making it easy, fast and secure for people and businesses to buy goods and services using virtually any form of electronic payment. First Data securely processes the transaction and harnesses the power of the data to deliver intelligence and insight for millions of merchant locations and thousands of card issuers.

Genesys Telecommunications Laboratories

2001 Junipero Serra Blvd.
Daly City, CA 94014-3891
PH: 650-466-1100
FAX: 650-466-1260
www.genesyslab.com

Booth #315
Bronze Sponsor

Genesys, an Alcatel company, is 100% focused on software for customer service. Genesys directs more than 100 million customer interactions every day, allowing enterprises to achieve key business objectives by tying together customer interactions, people, and customer information in both traditional telephony and IP environments. For more information visit us at our website.

GM Voices

2001 Westside Parkway
Suite 240
Alpharetta, GA 30004
PH: 770-752-4500
FAX: 770-752-4545
www.gmvoices.com

Booth #410

GM Voices produces high-quality voice prompts in over 90 languages, recording only professional voice actors from its state-of-the-art studios. By humanizing voice applications, GM Voices increases caller containment and improves customer experience. Weekly recording sessions provide economical, quick and predictable delivery of ready-to-use audio files for use on any platform.

Gold Systems

4840 Pearl East Circle
Suite #106
Boulder, CO 80301
PH: 303-447-2774
FAX: 303-447-0814
www.goldsys.com

Booth #411

Gold Systems develops and deploys voice-driven communications solutions utilizing IVR, text-to-speech and speech recognition. Our offerings include implementing unified communications and messaging telephony interfaces, customized contact center solutions, and password management for telephone-based self-service. Gold Systems is a top-tier partner to leading speech and messaging vendors, including Microsoft, Avaya, Nuance.

GyrusLogic, Inc.

4802 E. Ray Road, #23-158
Phoenix, AZ 85048
PH: 602-432-1995
www.gyruslogic.com

Booth #520

GyrusLogic's conversational dialogue tools will help you create a natural language application or augment a directed dialogue application, reducing your total operational costs. The developed application is intuitive, conversational and understands what the user is trying to communicate regardless of how the request may be phrased. GyrusLogic's solutions are extendable to all forms of input, be it web chat, phone, or smartphone (iPhone).

Inference Communications

407 Waverley Road
Malvern East, Victoria 3145, Australia
PH: +61 1 800 4 SPEECH
FAX: +61 03 9571 6904
www.inferencecommunications.com

Booth #309

Inference Communications is a specialist natural language speech recognition technology and solutions company. Inference's offerings include a wide range of prepackaged speech solutions that can be customized, managed and maintained by the customer via a simple web interface. All solutions are underpinned by Inference's award winning grammatical inference technology.

IQ Services

6601 Lyndale Avenue, Suite 300
Minneapolis, MN 55423
PH: 612-243-5114
www.iq-services.com

Booth #408

IQ Services delivers proactive performance validation services for communications and contact center solutions. Throughout the communications solution life cycle, IQ Services offers performance and load testing, application feature testing, availability and performance monitoring, investment protection planning, and other testing services for businesses expecting high system efficiency and customer satisfaction.

Language Weaver, Inc.

4640 Admiralty Way, Suite 1210
Marina del Ray, CA 90292
PH: 310-437-7300
www.languageweaver.com

Booth #603

Language Weaver is a leader in automated language translation, delivering solutions to quickly and accurately translate digital content into dozens of languages. Focused on solutions for customer care and user-generated content, Language Weaver provides trusted quality translations that maintain and extend brand voice across languages for global audiences.

Loquendo

745 Fifth Avenue, 27th Floor
New York, NY 10151
PH: 212-310-9075
www.loquendo.com

Booth #509

The winner of Market Leader-Best Speech Engine at the 2008 and 2007 Speech Industry Awards, Loquendo is the leading innovator in speech recognition and speech synthesis, providing a complete range of technologies for server, embedded and desktop solutions. Currently available in 26 languages with 63 voices and constantly growing, Loquendo's best-in-breed technologies enhance customer satisfaction and greatly reduce costs.

LumenVox & Partners

3615 Kearny Villa Road, Suite 202
San Diego, CA 92123
PH: 858-707-7700
FAX: 858-707-7072
www.lumenvox.com

Booth #303

LumenVox speech recognition technology is a building block of your successful speech solution. We provide the tools that you should be using in your IVR or other applications. Through accurate recognition and excellent support, our software helps hundreds of contact centers, platform providers, IVR developers, system integrators and IP-PBX vendors achieve their speech integration goals. To ensure your success, we combine post-deployment tools; customer service; the most affordable speech technology in the industry; and video, webinar and hands-on training. By reducing operating costs, increasing customer satisfaction, and improving employee productivity, speech recognition solves an organization's challenges and modernizes customer interactions.

Message Technologies Inc.

1995 North Park Place
Atlanta, GA 30339
PH: 770-240-8000
FAX: 770-240-7474
www.messagetech.com

Booth #510

Message Technologies, Inc. (MTI) provides affordable, best-of-breed IVR and speech application hosting solutions. Since 1982, more than 2,000 companies and partners have counted on us to optimize and improve their IVR performance by pro-

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viding a reliable hosted infrastructure to support their customer solutions.

MicroAutomation

10550 Linden Lake Plaza
Manassas, VA 20109
PH: 800-817-2771
FAX: 703-366-3850
www.microautomation.com

Booth #511

MicroAutomation is a full-service integrator of automated call center solutions. We specialize in implementing speech self-service and call control applications in addition to comprehensive analytics and reporting solutions to enhance the customer experience. MicroAutomation helps companies maximize the efficiency of their existing call center infrastructures and empowers their customer service strategies.

NeoSpeech, Inc.

1290 Oakmead Parkway, Suite 318
Sunnyvale, CA 94085
PH: 408-914-2710
FAX: 408-914-2710
www.neospeech.com

Booth #313

NeoSpeech is the fastest growing provider of text-to-speech software

and applications for the mobile, enterprise, entertainment and education markets.

Nexidia, Inc.

3565 Piedmont Road NE
Building 2, Suite 400
Atlanta, GA 30305
PH: 404-495-7236
FAX: 404-495-7221
www.nexidia.com

Booth #805

Nexidia's flexible, affordable speech analytics solutions enable contact centers to tap into the actual voice of the customer and extract the type of compelling intelligence that drives business growth—all at speeds never before imagined. Organizations can improve operational efficiency, enhance customer experience and capitalize on new business opportunities.

NICE Systems

301 Route 17 North, 10th Floor
Rutherford, NJ 07070
PH: 201-549-1723
FAX: 201-964-2610
www.nice.com

Booth #523

NICE Systems (NASDAQ: NICE) is the leading provider of solutions that

deliver strategic and operational insights to the enterprise's organizations by recording and analyzing telephone calls; website, email, and chat content; customer transactions, and radio communications. NICE is also the leading provider of Interaction Analytics Business Solution, designed to improve contact center operational efficiency and drive strategic enterprise initiatives.

Nortel

195 The West Mall
Toronto, Ontario M9C 5K1
Canada
PH: 800-4NORTEL
www.nortel.com/selfservice

Booth #801

Nortel is a recognized leader in delivering communications capabilities that make the promise of business made simple a reality for our customers. Our next-generation technologies, for both service provider and enterprise networks, support multimedia and business-critical applications. Nortel's technologies are designed to help eliminate today's barriers to efficiency, speed and performance by simplifying networks and connecting people to the information they need, when they need it.

Nortel does business in more than 150 countries around the world.

Nuance Communications

One Wayside Road
Burlington, MA 01803
PH: 781-565-5000
www.nuance.com

Bronze Sponsor

Nuance provides tailored customer service solutions that support intuitive and pleasing interactions between companies and their customers. Our full suite of customer care solutions—including speech-enabled IVR, full-service hosting, proactive outbound notifications, routing and CTI services, desktop optimization and business consulting—enable organizations with complex and evolving customer care operations to earn-happy, loyal customers.

Nu Echo Inc.

460 Sainte-Catherine W, Suite 424
Montreal, QC H3B 1A7 Canada
PH: 514-861-3246
FAX: 514-861-1676
www.NuEcho.com

Booth #513

Nu Echo develops high-performance speech applications and development tools. Building upon 2 decades of experience in speech applications development and a full suite of application development, tuning, and testing tools, Nu Echo is uniquely equipped to deliver applications that simply work better.

Openstream
Making Communications Smarter

Openstream Inc.

One Executive Drive, Suite 400
Somerset, NJ 08873
PH: 732-507-7030
FAX: 732-507-7035
www.openstream.com

Booth #514

Openstream is a leading provider of secure, standards- based multimodal, mobile platform and applications for enterprises, content providers and carriers worldwide that offer cost-saving and brand-loyalty-enhancing mobile applications.

PTP
Performance Technology Partners, LLC

Performance Technology Partners, (PTP)

11246 Gold Express Dr., Suite 101
Gold River, CA 95670
PH: 916-791-8263
FAX: 916-266-8708
www.performtechnology.com

Booth #508

PTP is a contact center system integrator. We leverage contact center technologies to design exceptional customer experiences. Our expert consultants range from project management, VUI design, technical archi-

tecture design, development and system integration to testing, tuning, and maintenance.

Real Soft, Inc.

2540 Route 130 North, Suite 118
Cranbury, NJ 08512
PH: 619-409-3636
www.realsoftinc.com

Booth #303

Real Soft, Inc. offers contact center products and professional services across financial services, telecom, retail, government, and healthcare domains. Real Soft has proven proficiency in interactive voice response, advanced speech recognition, customer relationship management and IP-based voice platforms. Real Soft's suite of speech enabled applications consists of solutions such as Insta Alert for proactive notification and alert management, FirstContact for automated dialing on IVR, Smart Call Back for call back management, and Universal CTI for complex CTI integrations. For sales or product inquiries, please contact marketing@realsoftinc.com.

Red Shift Company

2601 S. Lemay Avenue #7-512
Fort Collins, CO 80525
PH: 866-818-2084
www.redshiftcompany.com

Booth #303

Red Shift Company, through its patent pending discoveries and third-party validations has advanced the state of the art of automatic speech recognition. These technology-changing discoveries serve as the foundation for the future of speech and hearing industries.

Resolvity

1333 Corporate Drive, Suite 220
Irving, TX 75022
PH: 972-518-0863
FAX: 972-518-0959
www.resolvity.com

Booth #617

Resolvity's on-demand speech IVR solutions automate a wide range of customer support calls —inbound customer service, natural language call routing, level 1 tech support, and

outbound notifications. These solutions have been deployed in a wide variety of industries. Resolvity's technology can be integrated seamlessly with a company's existing IVR to deliver a compelling ROI.

Servion Global Solutions Inc.

600 Alexander Road
Princeton, NJ 08540
PH: 609-987-0044
FAX: 609-987-8797
www.servion.com

Booth #615

Servion specializes in customer interaction management (CIM) solutions that help companies provide a superior customer experience. Servion takes a consulting-led approach to optimize customer interaction for its clients, drawing from a proven combination of deep contact optimization experience, business acumen and broad contact center technology knowledge. With more than 400 customers and more than 1,000 installations in 41 countries, Servion's products and solutions handle in excess of 600 million multimedia interactions per month.

SpeechCycle, Inc.

26 Broadway
New York, NY 10004
PH: 646-826-2300
www.speechcycle.com

Booth #501

SpeechCycle is an award-winning pioneer in delivering contact center automation solutions for U.S. and global service providers and enterprises, in partnership with Tellme Networks' on-demand voice platform. SpeechCycle Rich Phone Applications (RPAs) rapidly pay for themselves in today's global economic uncertainty and C-level mandates to improve overall customer experience.

Speech Technology Center, Ltd.

4 Krasutskogo str
Saint Petersburg, 196084 Russia
PH: +7 812 331-0665
FAX: +7 812 327-9297
www.speechpro.com

Booth #413

Speech Technology Center is a global technological leader in a number of the fastest-growing voice-based technology sectors, including forensic examination, noise cancellation, multichannel and hand-held digital recording, IVR-engines, biometric voice authentication and identification. With over 18 years of experience and 100 specialists' strong R&D team, STC offers a wide variety of cutting-edge technological solutions.

Speech TECHNOLOGY

Speech Technology Magazine

2628 Wilhite Court, Suite 100
Lexington, KY 40503
PH: 859-278-2223
FAX: 859-278-7364
www.speechtechmag.com

Booth #317

Speech Technology magazine is recognized worldwide as the leading source of news, information, and analysis relating to the speech technology industry. It also provides additional sources of news, information, and analysis through online communities at www.speechtechmag.com and www. speechtek.com as well as with opt-in electronic distribution networks, STM eWeekly and SpeechSource. Subscribe FREE today at www.speech techmag.com/subscribe.

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1310 Villa Street
Mountain View, CA 94041
PH: 650-693-1009
www.tellme.com

Booth #501
Gold Sponsor

Tellme lets people simply say what they want and get it. Tellme works with other Microsoft groups to deliver speech innovations, making it easier to find information, connect with people and enhance business processes. The Tellme platform improves automation and customer service performance for businesses across 2 billion+ calls every year. Tellme-powered proactive and personalized self-service interactions help clients build stronger customer relationships while reducing the cost of providing customer care. The Tellme on-demand pay as you go model delivers faster ROI by eliminating upfront capital expenditure and lowering ongoing operating expense.

Tetco-Voxpilot

24 rue du Moulin des Bruyeres
Courbevoie 92400, France
PH: +33 1 40 80 90 00
www.tetcovoxpilot.com

Booth #412

Tetco-Voxpilot, provides interactive video and voice services; it is part of the Tetco Group, which specializes in the video, voice, and data convergence market. Thanks to a channel of

Evening Receptions

SpeechTEK invites attendees with a Networking Pass or above to a Grand Opening Reception held Monday evening in the Exhibit Hall from 5:00 p.m. – 7:00 p.m. as well as the Tuesday evening reception from 5:30 p.m. – 7:00 p.m. on the 9th floor. Mingle with exhibitors, speakers, and conference attendees while enjoying a glass of wine and light hors d'oeuvres.

key partners, the Tetco group provides operators and businesses with innovative solutions allowing them to rapidly enhance their creation of value.

Verint Witness Actionable Solutions

330 South Service Road
Melville, NY 11747
PH: 631-962-9600
FAX: 631-962-9085
www.verint.com

Booth #415

Verint Witness Actionable Solutions is the leader in analytics-driven workforce optimization software and services. Its solutions are designed to help organizations capture customer intelligence, uncover business trends, discover the root cause of employee and customer behavior, and optimize the customer experience.

Vocal Laboratories, Inc.

8421 Wayzata Blvd.
Suite 260
Golden Valley, MN 55426
PH: 952-941-6580
FAX: 952-941-0819
www.vocalabs.com

Booth #507

Vocal Laboratories Inc. (Vocalabs) helps leading brands improve customer service by collecting timely, actionable feedback about customer service quality. We interview customers immediately after a customer service call, retail store visit or IVR interaction while the memory of the experience is still fresh. Using our powerful reporting and analysis tools, clients discover and share insights to improve business decisions. Vocalabs' customers include Fortune 1000 companies, telecommunications carriers, industry consultants and equipment vendors. Our award-winning services include live-agent surveys and usability testing for speech recognition and IVR systems. We also provide syndicated research on phone-based customer service quality across a range of industries. Learn more at our website.

VoltDelta OnDemand Solutions

560 Lexington Avenue
14th Floor
New York, NY 10022
PH: 781-255-0747
www.voltdelta.com

Booth #605

VoltDelta OnDemand Solutions takes advantage of caller data, agent enabling technologies, and experienced VUI design to deliver uniquely innovative voice recognition applications. Multi-channel communications including voice and SMS create contact experiences that improve satisfaction with an exceptional return on investment. VoltDelta currently automates over 2 billion calls per year.

Voxeo

189 S. Orange Ave., #2050
Orlando, FL 32801
PH: 407-418-1800
FAX: 407-650-3007
www.voxeo.com

Booth #800

Voxeo makes unified communications and unified self-service applications easy to build and deploy. Voxeo's approach has made it the leading choice for enterprises and developers that prefer powerful simplicity where expensive complexity once reigned. All of Voxeo's products and services are available for free development and trial use at www.voxeo.com/stek09.

Walsh Media, Inc.

2100 Clearwater Dr., Suite 201
Oak Brook, IL 60523
PH: 630-574-8008
FAX: 630-574-8118
www.walshmedia.com

Booth #515

Walsh Media provides professional voice solutions to enhance the customer experience in contact center applications. We are advancing best practices in personal design, script enhancement, recording and prompt development for IVR and speech recognition, voice coaching, international talent and translation. Best practices and consistent ongoing support are all services provided by Walsh Media.

West Corporation

11650 Miracle Hills Drive
Omaha, NE 68154
PH: 800-841-9000
FAX: 402-963-1602
www.west.com

Booth #502

West Interactive is a leading provider of hosted and managed automated customer contact solutions, custom speech applications, automated notifications, customer surveys, network-based call routing and analytic services. We make self-service a positive customer experience that drives customer satisfaction, reduces costs and generates revenue. For more information, please call or visit our website.

Win Prizes and See Your Twitter Comments Live!

Sponsored by Contact Solutions

Follow us at www.twitter.com/speechtech August 24–26 for your chance to win prizes and to see your comments live on the big screen next to the registration area on the 5th floor.

Stay on top of the action as *Speech Technology* magazine's editorial team sends Tweets throughout the conference.

COMPANY WORKSHOPS

Company workshops are open to all attendees and are located in the Manhattan Ballroom on the 8th Floor.

TUESDAY, AUGUST 25

Convergys Corporation

10:30 a.m. – 12:30 p.m.

Multimodal Development: Live in New York!

Graham Allen, Director, Product Management
Dave Pelland, Director, Enterprise Solutions
Jeff Kosa, Solutions Architect

Stop talking about multimodal client interactions and start creating them. During this workshop, we will create a live multimodal application that not only combines voice and data to increase containment rates through visual clues, but also allows end users to respond simultaneously with data and/or voice. Jumpstart your multimodal development today!

Tellme, A Microsoft Subsidiary

3:30 p.m. – 5:30 p.m.

Outbound IVR: Best Practices for Maximum Performance

This workshop is invitation-only.

WEDNESDAY, AUGUST 26

Genesys Telecommunications Laboratories, an Alcatel-Lucent Company

10:30 a.m. – 12:30 p.m.

Genesys Intelligent Customer Front Door™: Transforming the Caller Experience

Mayur Anadkat, Product Marketing, Genesys

The traditional self-service model was built around cost containment and customer service automation. Genesys is redefining this legacy model with the intelligent Customer Front Door (iCFD) based on the caller's intent and contextual information in order to offer best resolution. iCFD combines voice self service software with best practices, routing and workflow into a single unified system that dynamically applies business processes to provide relevant, personalized service that can improve customer satisfaction and loyalty. Find out how iCFD delivers a much more inviting, intuitive, and intelligent customer experience.