



# Voice Biometrics

## 100m+ Successful Authentications

Brett Beranek, Senior Principal  
Solutions Marketing Manager

# Nuance Leadership

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**\$1.7 billion**

in FY12 revenue with 28%  
CAGR FY 06-12

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**7.5+ billion**

conversational interactions  
handled per year

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**35m+**

Voiceprints in use  
by our customers

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**1st**

in virtual agent  
deployments

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**4.5 billion**

mobile transactions  
annually

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**100m+**

Successful voice biometric  
verifications in 2012

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**1st**

and only virtual assistant that  
spans IVR, Mobile, Web and more

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**600 million**

Web conversations  
and growing

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**800**

solution experts  
worldwide

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# One Credential for Multiple Applications

Secure **employee to employee** ID validation



Secure **mobile app** authentication



Secure **web payments**



Centralized  
Voice Profile



Secure **contact center** authentication



Secure **high-risk credit card** transaction



Automated **password** reset



# Highlighted Voice Biometric Deployments Financial Institutions



<http://www.computerweekly.com/news/2240179218/Barclays-streamlines-phone-banking-with-voice-biometrics>



<http://security-today.com/articles/2010/05/12/israeli-banks-voice-biometrics.aspx>



<http://www.biometricupdate.com/201311/nuance-deploys-voice-biometrics-authentication-solution-at-tatra-bank>



<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aF9oH5v36.Mo>



[http://www.cio.com/article/686441/2011\\_CIO\\_100\\_How\\_Three\\_Companies\\_Are\\_Using\\_IT\\_to\\_Rethink\\_Consumer\\_Services](http://www.cio.com/article/686441/2011_CIO_100_How_Three_Companies_Are_Using_IT_to_Rethink_Consumer_Services)



<http://security.networksasia.net/content/indonesias-bni-deploys-mfa-password-reset-ease>



<http://voicebiocon.com/2013/03/12/nuance-targets-password-reset-technology-for-small-and-mid-sized-businesses/>



<http://www.businesswire.com/news/home/20100415005768/en/Top-3-Israeli-Banks-Roll-Customer-Facing>



# Highlighted Voice Biometric Deployments Telcom



<http://voicebiocon.com/2012/07/13/making-inroads-into-eastern-europe/>



[http://www.turkcell.com.tr/c/docs/announcements/announcements\\_20120302\\_GlobalBilgi\\_Voice\\_bio\\_and\\_satisfaction.pdf](http://www.turkcell.com.tr/c/docs/announcements/announcements_20120302_GlobalBilgi_Voice_bio_and_satisfaction.pdf)



[http://enterprise.alcatel-lucent.com/private/active\\_docs/customer\\_references/SS\\_NA\\_MTS\\_Allstream\\_Consulting\\_screen.pdf](http://enterprise.alcatel-lucent.com/private/active_docs/customer_references/SS_NA_MTS_Allstream_Consulting_screen.pdf)



<http://www.speechtechmag.com/Articles/?ArticleID=67963>



[http://www.computerworld.com.au/article/186527/austar\\_outfoxes\\_its\\_rival\\_biometrics\\_solution/](http://www.computerworld.com.au/article/186527/austar_outfoxes_its_rival_biometrics_solution/)

**POLSKA TELEFONIA CYFROWA S.A.**

[http://www.algotech.eu/news/news.html/8\\_170-t-mobile-as-the-first-in-poland-has-launched-a-voice-biometrics-based-service/2](http://www.algotech.eu/news/news.html/8_170-t-mobile-as-the-first-in-poland-has-launched-a-voice-biometrics-based-service/2)



# Partnership with Industry Leader in CONTACT CENTER FRAUD PREVENTION

**NICE**<sup>®</sup>

- GLOBAL LEADER IN THE CONTACT CENTER
- GLOBAL LEADER IN FRAUD PREVENTION

## MULTI-LAYERED ANALYTICS

- VOICE BIOMETRICS PLUS SPEECH, DESKTOP & TELEPHONY ANALYTICS

## END-TO-END FRAUD MANAGEMENT

- INTEGRATED TOOLS FOR INVESTIGATION & CASE MANAGEMENT

## FRAUD CONSORTIUM

- JOIN THE COMMUNITY THAT LEVERAGES NICE'S PEER-TO-PEER NETWORK OF KEY FRAUDSTER CREDENTIALS



# Key Barclays Data Points



- Pre Voice Biometrics
  - More than 10% of legitimate clients were failing authentication using the legacy interrogation process.
  - 1 in 4 fraudulent attempts were successful using the legacy interrogation process
  - **78% of customers dissatisfied with authentication process**
- With Voice Biometrics
  - 0 fraudulent attempts were successful against the VB authentication system
  - All transactions under £10k require only voice biometrics for authentication. Transactions above £10k utilize VB + security questions.
  - 95% Successful Authentication Rate with Passive Voice Biometrics
  - **3% to 4% Reduction in Operating Costs**
  - **93% Customers Rate the Authentication process a 9 or 10 out of 10**





# IVR Authentication



- Over **97%** successful authentication rate
- **70%** of their customer base **enrolled** within 6 months of launch
- Reduced AHT by over **22 seconds**
- **Reduced call center fraud** over PIN-based authentication



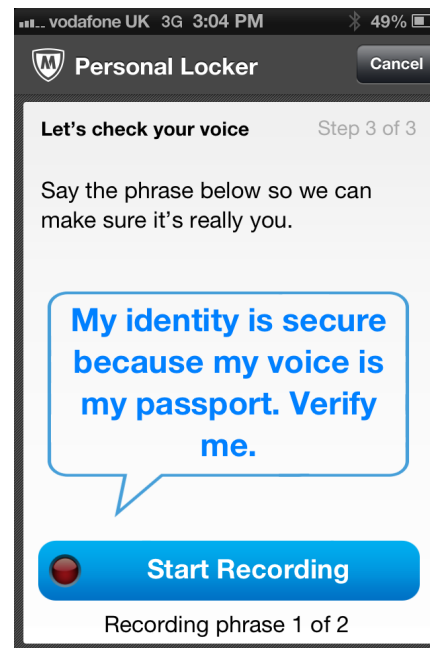


*“For the employee, FastReset eliminates the frustration of forgotten passwords and security questions, which we’ve all experienced. And for the organization it cuts costs by automating the process, allowing the help desk team to focus on more complex call types. It’s really a win-win for all of us.”*

Don Westermann, CTO, Eastern Bank

# Why VB for the Mobile App?

- Increase self-serve usage by reducing authentication failure rates
- Add self-serve high-risk transaction capabilities
- Enroll customer voiceprints for use within other channels



# Why are Enterprises Deploying Voice Biometrics?

- Customers **Love It!**
  - Improved customer retention
  - New customer acquisition
- VB **security** benefits are proven
  - Consistently reduces fraud over PIN, password or Q&A
- VB **financial** benefits are compelling
  - Improved self-service, reducing call center costs
  - Increased revenue (with agent handled calls)

90%

prefer **voice**  
**biometrics** over  
alternative  
authentication  
methods

# Consumer Experience Study

94.4

Mean Learnability Score

86.6

Mean Usability Score



KATE CALDWELL

INTERACTION EXPERIENCE

# More Secure than Alternatives

Figure: **Vulnerability to Fraud**

	<b>Physical Tokens</b>	<b>PIN/PWD</b>	<b>Challenge Questions</b>	<b>Voice Biometrics</b>
<b>Theft</b>	High	Medium	Medium	Low
<b>Discovery/Guessing</b>	Low	High	High	Low
<b>Brute Force</b>	Low	High	High	Low
<b>Eavesdropping</b>	Low/Medium	High	High	Low
<b>Hacking/Cracking</b>	Low/Medium	Medium	Medium	Low
<b>Phishing</b>	Low	Medium	Medium	Low
<b>Vishing</b>	Low	High	High	None
<b>Smishing</b>	None	High	High	None
<b>Credential Sharing</b>	Med	High	High	Low
<b>Social Engineering</b>	None	Medium	High	None

Source: Opus Research (2013)

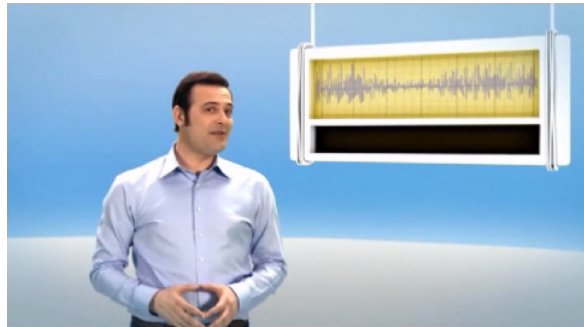
# How does VB compare to other biometrics?

Information	U	N	P	C	A	E
DNA	Yes	Yes	Yes	Poor	Poor	*****
Gait	Yes	No	Poor	Yes	Yes	***
Keystroke dynamics	Yes	Yes	Poor	Yes	Yes	****
Voice	Yes	Yes	Poor	Yes	Yes	****
Iris	Yes	Yes	Yes	Yes	Poor	*****
Face	Yes	No	Poor	Yes	Yes	****
Hand geometry	Yes	No	Yes	Yes	Yes	****
Fingerprint	Yes	Yes	Yes	Yes	Fair	****

**Table 1.** Comparison study of biometric modalities in terms of universality (U), uniqueness (N), permanency (P), collectability (C), acceptability (A) and performance (E). For the performance, the number of stars is related to the modality's performance (i.e., EER) in the literature [3].



# Use of Voice Biometrics in Advertising by Telcos



# Voice Biometrics

Easy - Secure - Cross-Channel Authentication

