

# Virginia Credit Union delights members with secure account access.

Voice biometrics improves the member experience and agent satisfaction.

## Challenges

- Slow, complex, inefficient authentication processes
- Poor caller experience and use of member dollars
- Increasing sophistication of fraudsters
- Manual processes hurt VACU's innovation message

## Solutions

- Nuance FreeSpeech and FraudMiner quickly IDs callers and deters fraudsters
- Connects VACU's existing telephony and backend systems to Nuance APIs
- Custom, desktop pop-up window gives agents seamless, in-call verification

## Results

- Overall average handle times (AHT) decreased by 37 seconds compared to 2016
- Savings equivalent to 2 full time employees (FTE) per month from reduced AHT
- 79,000+ verified matches in the first year
- Design-to-deployment in under 6 months

## About Virginia Credit Union

Virginia Credit Union (VACU) is in the top ten percent of credit unions in the U.S. with assets of \$3.4 billion. VACU has branch offices in Richmond, Fredericksburg, Farmville, and Charlottesville and provides financial services to more than 260,000 member-owners. As a cooperative, VACU is focused on its members' success and is committed to the communities it serves, returning value to its members through attractive rates, lower fees, and free financial education resources.



### Challenge

As a credit union, the member experience drives everything VACU does, and new ideas about how to better serve members and make the banking experience even more frictionless are always considered—with a careful eye on using credit union resources wisely on behalf of the membership.

VACU cares deeply about the safety and security of its members. Ensuring secure access to accounts is critical, and VACU determined that its agent-driven authentication processes required too much time and relied on easily found information. At the same time, members said it was difficult to remember answers to complex, knowledge-based security questions. VACU wanted to improve this process, going beyond traditional methods like passwords, PINs, and other knowledge-based factors to offer an easier, faster, yet still highly secure authentication.

The credit union receives approximately 3,000 inbound member calls per day and each caller must be authenticated before accessing any account data. Any simplification of the authentication process needed to reduce the amount of time agents spent on each call, and needed to be easy for the member without requiring them to learn complex new methods.

VACU also wanted to demonstrate its technology leadership in member-facing systems. As a pioneering member of the credit union technology standards body, [CUFX](#), VACU is a leader in using advanced technology to improve the member experience.

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“Our authentication process was cumbersome, and members didn’t like it. We needed a smarter, better way to verify our members’ identity.”

Kate Hopson, AVP/Manager, Contact Center

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And finally, the VACU team wanted to leverage investments already made in existing IVR technology, extending its value and accelerating ROI by avoiding a full replacement of their current solution.

### Solution

With these goals in mind, VACU looked for a partner to help them reinvent their authentication strategy while maintaining the personal, high-touch member experience they are known for. Nuance, a leader in voice biometrics, rose to the top of the list based on their deep experience in speech technology and biometric authentication solutions.

Biometric authentication is the practice of recognizing and verifying a person’s identity through unique physical or behavioral traits. Today, millions of people worldwide rely on biometrics, such as fingerprints, facial recognition, and voice to securely log into a device, verify their identity, securely access accounts, and more.

Biometric technology was attractive to VACU for two reasons. First, members did not have to do or remember anything to be authenticated. Second, voice biometrics are considered more secure than PINs, passwords, and knowledge-based questions, which rely on information that fraudsters may be able to gain by other means and exploit.

### Building an advanced biometric solution that the VACU members love

In April 2016, VACU and Nuance began the re-design of the credit union’s caller authentication system. After first building a deep understanding of VACU’s specific needs and systems, Nuance recommended a set of biometric security capabilities, driven by the latest in artificial intelligence (AI) innovations. The resulting solution, called VACU Voice ID, blended two Nuance biometrics technologies: FreeSpeech™ and FraudMiner™.

FreeSpeech verifies a caller’s identity in the background during a natural conversation with an agent. The solution unobtrusively analyzes more than one hundred unique voice characteristics while the member is talking to the VACU agent, and compares these characteristics with the relevant stored voiceprint in seconds. The call is never interrupted and FreeSpeech works with any language or accent.

FraudMiner enables the Voice ID system to screen out fraudsters by using advanced voice biometrics technology to help fraud teams detect known criminals, uncover new fraud patterns, and prevent account takeovers.

### Intelligent software improves member experience and agent satisfaction

When a VACU member calls, Nuance’s FreeSpeech voice biometrics technology analyzes the member’s voice to compare it with their unique voiceprint on file. The system signals the call center representative in real time when the member’s identity has been confirmed so that their query or request can be resolved seamlessly. If identity is not confirmed, the caller is flagged for additional scrutiny.

“I’ve had members tell me how much they love the Voice ID application, because it takes only seconds to verify their identity without all of the questions we used to ask.”

Kate Hopson, AVP/Manager, Contact Center

As part of the VACU solution, Nuance also created a custom component – a speaker verification controller – that connects the voice biometrics APIs to VACU’s existing computer telephony integration (CTI) layer and backend account systems. This tight integration enables an intuitive, agent desktop pop up window that communicates positive authentication within seconds while the agent is talking with the member.

Voice ID measures over 140 distinct characteristics, from physical elements such as the size and shape of a person’s mouth, vocal tract, and diaphragm, to behavioral elements such as the speed of speech and pronunciation, to create a voiceprint that is totally unique to each individual.

While voices can be impersonated, Nuance voice biometrics solutions cannot be tricked because they analyze physical traits that are not distinguished by the human ear.

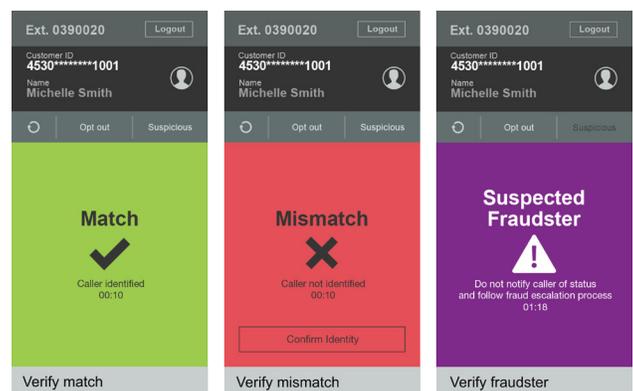
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Virginia Credit Union (VACU) was an early adopter of mobile banking technology and remains an innovator in offering convenient and secure technological solutions to its members.

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#### Happy agents and happy members

As frustrating as the old authentication system was for members, it was frustrating for contact center agents as well. Today, VACU agents are excited about the new system, which allows them to spend less time authenticating members and more time addressing members’ specific needs. Voice ID reduces average call handling times, significantly improves member and agent satisfaction, and maintains a high-touch, high-quality caller experience for members.



#### Results

Using Nuance’s Fast-Start + (a rapid design/test/deploy process), voice biometrics experts from Nuance worked closely with the VACU team to bring the new solution online in under six months. VACU used a combination of out-of-the-box assets that need only minimum customization for the specific financial services environment the credit union operates in, and professional services to develop the backend integration, so the team was able to quickly deliver a robust, integrated solution.

And the solution, deployed in October 2016, has been a big success to date.

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Today, VACU has trained 20,000 voiceprints from their most frequent contact center users, and has obtained over 79,000 Verified Match results.

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“Nuance fielded an amazing team to deliver this project. We’ve done a lot of big technology projects at VACU, and this was one of best-run initiatives we’ve ever seen.”

Paul Hendricks, SVP and Chief Information Officer

#### Rapid deployment, accelerated value

Since launching the VACU Voice ID solution, overall handle time has decreased by 37 seconds per call compared to 2016. With approximately 60,000 agent-handled calls per month, this represents a significant savings in agent labor costs. The new authentication process has reduced time on each call compared to traditional verification methods, and delivered a clearly improved member experience.

Over the last year, VACU has averaged savings equivalent to two FTE per month in reduced call handling times, and member feedback about the verification process has been very positive.

They’ve also been able to significantly mitigate fraud risk, with Voice ID identifying and rejecting attempts by fraudsters to access member information.

As time goes by, the value Voice ID delivers is increasing, and the VACU team continues to refine and expand use of the system, evaluating future automation capability to help members do more, faster. Members are delighted, agents are happier, and transactions are more secure using Nuance voice biometrics.

#### Learn more

Nuance Enterprise is the global leader in biometric security, allowing consumers to choose how they authenticate while mitigating fraud at some of the world’s leading organizations. To learn more, view please email us at [customerexperienceexperts@nuance.com](mailto:customerexperienceexperts@nuance.com) or visit [www.nuance.com/voice-biometrics/](http://www.nuance.com/voice-biometrics/).



#### About Nuance Communications, Inc.

Nuance Enterprise is reinventing the relationship between enterprises and consumers through customer engagement solutions powered by artificial intelligence. We aim to be the market leading provider of intelligent self- and assisted-service solutions delivered to large enterprises around the world. These solutions are differentiated by speech, voice biometrics, virtual assistant, web chat and cognitive technologies; enabling cross-channel customer service for IVR, mobile and web, Inbound and Outbound; and magnified by the design and development skill of a global professional services team. We serve Fortune 2500 companies across the globe with a mix of direct and channel partner selling models.