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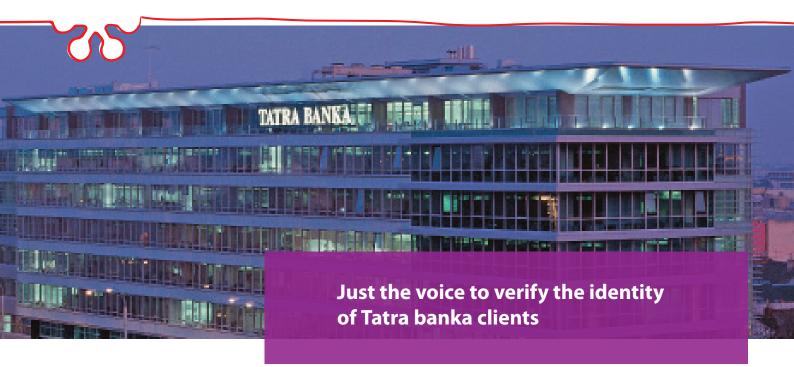
Just the voice to verify the identity of Tatra banka clients

"The average time of client identification process through the Card and Card ReaderTB is 1min, 21 sec. In comparison with 27 sec identification time through voice biometrics, we save 66% of the time in the client identification process."

Ľuboš Kováč
Head of contact center DIALOG Live at Tatra banka (2013)

1. REQUIREMENTS

- **a system ensuring that the verification is carried out naturally** during an ordinary conversation with the operator
- **a verification fast enough and at least as safe as Card and Card ReaderTB authentication**

2. SOLUTION

- **Nuance FreeSpeech voice biometrics technology**
- **extensive testing and debugging of the system** so that the verification is carried out fast enough to prevent unauthorized access to the system and prevent rejection of legitimate log-in attempts
- **integration with other banking systems** and creation of an **intuitive user interface** for agents of the contact center **DIALOG Live** (realized in collaboration with 2Ring Company using 2Ring AGENT DESKTOP solution)

3. RESULTS

- Tatra banka, as the first bank on the Slovak market as well as in Central and Eastern Europe, has offered their clients the **possibility of comfortable authentication through voice biometrics**
- Tatra banka clients now have **several options for authentication** in the contact center **DIALOG Live**, not only through their Card and Card ReaderTB systems
- introduction of **voice verification has proven attractive to clients** - after two years since the launch of this service, **DIALOG Live has registered 250,000 voice samples**
- resulting in **shortening the average length of calls** and an **increase in the efficiency of the contact center**, which will now be able to spend more time on selling activities

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Background

Over a long period, Tatra banka has shaped itself into the most innovative bank on the Slovak market. For example, in 2012 it was the first bank in the European Union to introduce a credit card integrated into their clients' mobile phones.

Voice biometrics has perfectly clicked with Tatra banka's profile. It enables the callers to the contact center to verify their identity based on their unique voice characteristics. No other bank in Slovakia, Central or Eastern Europe has offered anything similar through the years 2012 and 2013. Several successful projects worldwide, suggest that biometric technology is sufficiently mature for deployment in the banking sector. Managers of Tatra banka have considered using of voice biometric authentication for a long time. There was just one last thing to decide on - to choose one of the two technology alternatives.

Solution

The first voice verification option works in a way that the customer records an exact phrase which must then be repeated by the customer during the authentication process. The second option is that the system compares the caller's voice to a saved voice sample taken through the course of normal conversation and analyses the individual voice characteristics regardless of particular words.

*"We have decided for the second option because it is more natural. We are one of the few banks in the world that does not have an interactive voice system (IVR) in our contact center **DIALOG Live**. Clients get directly through to an operator and therefore we want them to be verified during the course of a natural conversation with the agent,"* explains Ľuboš Kováč, Head of contact center **DIALOG Live** at Tatra banka.

Results

A client who wants to be verified biometrically by calling the contact center **DIALOG Live**, must first record a sample of his/her voice to the system.

The next time the client calls, the contact center agent sees the profile of the calling client and a so called "traffic light" appears on the screen. At first, the light is red, but as soon as the biometric system verifies the identity of the caller it turns green and access to individual applications is unlocked to the agent, allowing him/her to perform necessary transactions.

In order to work reliably, quickly enough and at the same time achieve the required level of security, the solution must be set up, tested and integrated into existing systems carefully. It is, therefore, important to work with an experienced implementation partner.

"The most important part of the project is to find the right balance between the level of verification reliability and speed," summarizes Martin Hummel, Product Manager at Soitron. In other words, the system must not "let in" any unauthorized person, but on the other hand it cannot prevent legitimate access, and it must do both these things in a timely fashion.

Within seconds

In Tatra banka most of the callers are authenticated by the system within the first seconds of conversation. Despite everything, the voice biometric security is not less than compared to the Card and Card ReaderTB and payment card through which the bank's clients have verified their identity when performing transactions via the contact center up to now. Of course, this verification option still remains, voice biometrics is just an alternative that clients may, but do not have to, choose.

Initial figures suggest that voice verification is successful. *"Our clients reacted very positively to the service - over 90 thousand voice samples have been created in the four months of its active operation,"* explains Juraj Bojkovský, Director of the Electronic Distribution Channels Division at Tatra banka (2013). After more than two years since the launch of voice biometrics in Tatra banka over 250, 000 voice samples have been created. Voice biometrics solution is used in 85% of all verifications of Tatra banka clients calling to **DIALOG Live**.

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Martin Hummel
Soitron, product manager

INTERESTING FACTS ABOUT SPEECH AND VOICE

In ancient times, people believed that the voice came from the heart. We know today that we are able to speak thanks to our vocal cords, but hardly anybody realizes how complicated this process is. Around a hundred different muscles are involved in speech - it is a sophisticated cooperation of chest, neck, jaw, tongue, and lips.

Speech is not only interesting from the physiological point of view. Uttering a single word, a greeting for example, can reveal whether the person is happy, bored, sad, angry or in a hurry. It may also indicate characteristics such as dominance or aggressiveness. British Prime Minister and 19th century writer, Benjamin Disraeli, even said that the voice was the best indicator of human nature. Each human voice is unique and forms an integral part of the individual human being. That is why many companies dedicated to biometrics, in other words the use of unique physiological characteristics to identify an individual, started experimenting with these tools a long time ago.

85%

85% of customers do not likea standard password authentication

(Source: Coleman Parkes Research, Opus Research)

74%

74% of customers will not get their required or requested information because at that moment they are unable to authenticate themselves

(Source: Coleman Parkes Research, Opus Research)

90%

90% of customers prefer voice biometrics compared to other methods of authentication

(Source: Coleman Parkes Research, Opus Research)

Popular and beneficial

The popularity of the new voice authentication method does not surprise the managers of Tatra banka. *"Clients are already tired of passwords to all systems they need to remember and they consider the method of being verified just by their voice to be a welcome simplification,"* recalls Juraj Bojkovský. Moreover, when they perform several operations within a single call to the contact center **DIALOG Live**, they do not need to - as in the past - verify themselves more than once. The initial authentication is sufficient for all operations that the client wants to perform. The biometric solution is not only beneficial for customers but also for the bank itself. As voice verification is faster than when using the Card and Card ReaderTB, the contact center efficiency increases and thus fewer operators will

be sufficient in order to provide the same level of service availability.Tatra banka, however, does not plan to make agents redundant but to make use of the released capacity to intensify sales activities.

Biometrics technology for voice recognition is not used only in banking. It is used, for example, for recharging prepaid mobile phone cards, validation of web transactions, or for authentication to mobile phone applications containing sensitive personal or corporate data. *"Sometimes, we need to perform a financial operation or transaction quickly and unexpectedly, either during a business trip or on vacation. Thanks to voice biometrics, we do not have to worry whether the necessary authentication 'device' is missing, as we have our voice, available anytime, anywhere,"* concludes Martin Hummel, Product Manager at Soitron.

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Tatra banka was established in 1990 as the first private bank in Slovakia. Currently it is a member of the RBI Group and one of the most successful subsidiaries of Raiffeisen Bank International AG in Central and Eastern Europe. As an innovation leader, it provides unique banking services and solutions in the management of funds, which has been confirmed by prestigious international awards. Via its network of 128 business outlets, it operates in all regions of Slovakia.

www.tatrabanka.sk

Nuance Communications, Inc.

Nuance Communications is a leading provider of voice and language solutions for businesses and consumers around the world. Its technologies, applications and services make the user experience more compelling by transforming the way people interact with information and how they create, share and use documents. Every day, millions of users and thousands of businesses experience Nuance's proven applications.

www.nuance.com

SOITRON, s.r.o., a member of the Soitron Group

Soitron is a Central European integrator operating in the IT market since 1991. The company's philosophy is to constantly move forward, and that is why it is a leader in implementing unique technologies and innovative solutions. It offers its clients products and services in the field of robotization and process automation, artificial intelligence, the Internet of Things (IoT), IT infrastructure, communication and cloud solutions, IT security, IT services and outsourcing, IT advisory and applications, and IT department digitalization. Its product portfolio includes smart police car solutions – Mosy and cyber security services – Void Security Operations Center.
Soitron, s.r.o. is a part of the Soitron Group and employs more than 800 international experts. The group brings together professional teams in Slovakia, the Czech Republic, Romania, Turkey, Bulgaria, Poland, and the UK.