

# **BIOMETRIC SUMMIT NEW YORK 2019**





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Biometric technology continues to innovate rapidly with new uses appearing to make the process of authentication and verification more convenient and secure to support the increasing use of digital identity.

We caught up with three leading companies – B-Secur, ID R&D and Typing DNA to find out about their innovative biometric technology products and solutions, and their thoughts about trends for the future.

#### Tell us about how your business has grown with some of your recent highlights and how you're expecting to evolve. Raul Popa, CEO and Co-founder, TypingDNA:

We started TypingDNA committed to improving our technology and providing the best typing biometrics authentication solutions. Joining organisations such as the International Biometrics + Identity Association (IBIA) and the European Association for Biometrics, along with our participation in the prestigious Techstars NYC accelerator gave us the opportunity to be closer to our customers in the USA. Over the past year, our dedication to seamless and frictionless integration of typing biometrics authentication solutions has helped us reach one million users, an achievement we're really proud of.

Our mission is to improve security without compromising user experience. Most importantly we are currently working on complementing our range of multifactor biometrics solutions with products which are easy to use and to integrate within already existing business systems.

#### Ben Carter, CCO, B-Secur:

In the last four and a half years we've had a rapid journey from a deep R&D university-lead project through to now having around 40 full-time employees, working across technology, science, commercial and operations. This growth has been driven by the development of 'HeartKey', a world-first, next generation biometric product. I'm excited to see that ECG technology is moving into the mainstream something just recently underlined by the announcement of ECG technology within the Apple Watch Series 4. We are seeing increasing demand for ECG technology coming from industries including automotive, healthcare and health and wellness. We believe we are on a precipice of seeing ECG technology coming out of the hospital and into the home, within everyday devices.

#### Alexey Khitrov, CEO and Co-founder, ID R&D

The past year has been one of tremendous growth for us. We doubled both our number of signed contracts and the size of our staff, opened a West Coast headquarters and we launched the first biometric authentication solution for messaging. We also released an update to our IDVoice, which uses a new generation of technology called x-Vector to deliver the fastest and most accurate text-independent verification solution on the market. Lastly, we saw great reception from the industry, including being named a Top Pick for Fintech by TechCrunch and a finalist in Microsoft's Innovate AI competition, as well as being accepted into the Plug antd Play Accelerator program, the Google Cloud Startup Program, and the Microsoft IoT and AI Insider Labs program.

Over the next 18 months we expect to see a huge growth in demand for the conversational interface (Cl). Customers are used to talking to Alexa at home, to Siri or Google on their mobile, to their car radio etc, and consequently want that kind of experience across all their technological interactions. Voice has become king of the Ul, and businesses are rushing to offer it. But enterprises want to ensure that a more seamless user experience is still highly secure. The ability to combine these two counter-directional trends of robust security and a user-friendly UX is where ID R&D sees the opportunity to apply our scientific and technical capabilities and change the way customers engage with the enterprise.

#### Where are you seeing the greatest demand for biometrics?

**Alexey Khitrov:** The greatest demand thus far has been in financial services, not surprisingly because they have so much at risk and want to use all the tools available to improve security. However, the conversations we're having across a number of verticals, such as healthcare and telco show that biometrics appeal to them as well. And the fact that voice is now king is obviously driving strong interest in a whole range of voice activated devices, like smart speakers, and also anything where voice is a desirable interface, like in cars and TVs.



### For those looking to deploy biometric technology in their organisation, or in their products, what are the key things that you would advise them to consider?

**Alexey Khitrov:** Best practices would mean that organizations should deploy a multi-modal biometrics solution. With just one modality, bad actors can still figure out ways to trick the system. Second, you must think about spoofing and build in an anti-spoofing layer. Third, you are far more secure against fraudster attacks if you implement continuous verification. This is where everyone wants to be and eventually needs to be. If you're starting out now, design for multi-modal, continuous verification from the beginning.

**Ben Carter:** Understanding the potential of each biometric modality and their corresponding use cases is essential alongside the benefits for implementing each e.g. comprehending the impact of stress in the workplace or reducing staff absence and turnover. And of course, the efficient management and security of health data – something that is often sensitive and personal.

**Raul Popa:** As Alexey says, this is in the financial system due to its higher vulnerability to cyber-attacks. As much as users try to strengthen their passwords and memorable information it is not quite enough to be protected online. The banking sector has been shaken up by the emergence of challenger banks, which focus on app-based online activity, as well as by regulations like PSD2 which mean that banks need to implement stronger authentication for their customers. The solution is simply to apply multifactor authentication (MFA) to transactions, accounts and generally to customers' digital activity. But to be able to compete with newer online financial institutions, banks must also ensure seamless and frictionless integration of MFA. We can now do this without impacting user experience. It is interesting to look at behavioral biometrics as the answer to the simple question: Who are you?

We are often so caught up in our day to day business that we might forget passwords or pincodes and we can even lose phones and other devices which might be required during authentication. However, who we are remains the same. And importantly, behavioral biometrics can be used as an MFA option which does not affect user experience, since this is implicitly done in the background

**Ben Carter:** We're also seeing a growing and significant ecosystem where all devices have IoT connectivity and consumers will be able to access their ECG health and wellness information all day, every day. We believe this will be a fundamental development in how individuals manage their health.

So looking at how the use of biometrics technology can improve our everyday lives, what do you think the future has in store?

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**Ben Carter:** Machine Learning (ML) and AI technology will unlock new insights into the data we're collecting. When applied to biometric tech we can rapidly increase the security of our systems by utilising features that would not have been obvious or recognised with traditional methods. As biometrics become more accepted multi-modal solutions are becoming more popular to further increase security; ML and AI provides a reliable method of collating and integrating these technologies into a seamless experience for the user, managing the system inputs to determine the appropriate modalities and parameters to use.

The data collected during a biometric authentication doesn't necessarily need to be limited to security. Some biometrics can reveal more information about a person e.g. ECG can give us heart health and stress data, facial recognition gives us basic emotional mapping which can feed into a wider IoT system – for example smart cities that can predict when and where people will be more stressed due to external events or more tired and therefore may be more likely to be involved in an accident. There's a wealth of information and data coming from the human body that we're beginning to collect, and machine learning and AI are the tools we can use to ensure we're getting the full benefit. So your car, your phone, your watch etc. will be helping you live a longer and healthier life.

**Alexey Khitrov:** Without a doubt, I see biometrics as absolutely changing our lives for the better. Imagine a day when your technology knows you as well as your friends and family do. You don't have to constantly verify yourself for transactions, but can go through the day with all of your technology delivering a personalized and secure experience.

Your phone, your ATM, your car, your thermostat, your doctor's office, etc – biometrics enables all industries, applications, and devices to know you automatically without any effort on your part.

#### What do you feel the most exciting innovation is for biometric technology at the moment? And what do you think the next 'big thing' will be?

Raul Popa: It is crucial to look at the development of even more seamless and frictionless behavioral biometrics solutions which follow the authenticated user throughout the entire session. People are moving towards a more digitalized life and this implies that the need for online security is bigger than ever before. Hence, we believe innovation in our field lies at the heart of continuous authentication, as with the use of multiple devices and accounts, it is no longer enough to only ensure that the person who logs in is who they say they are, but it is also necessary to constantly check their identity. Typing biometrics are key to behavioral biometrics and we are optimistic that the level of product adaptation to users' needs and the demand for typing biometrics are ascending.





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