

# InMotion

## Behavioural Biometrics: Innovation in motion at Veridium



### CREATURES OF HABIT

One of the challenges with security innovation may also be what saves security - the fundamental human condition of resisting change. Does anyone actually upgrade software when prompted, or do we all wait till the last possible moment? We all know that we should NOT reuse passwords, but we all do it. Employees and customers will find short-cuts that bypass security- like writing down their passwords. Fundamentally, we are creatures of habit. This resistance to change is why user behavior is such a hot topic in security. Ironically, the fact that we are all creatures of habit may finally provide the insights necessary to prevent data breaches. Inferring risk by observing changes in human behavior is a valid means of identifying when a hacker is masquerading as a valid employee or customer.

*☞ We are  
what we  
repeatedly  
do. ☞*

*Aristotle*

### WHAT IS UBA?

User behavior analysis (UBA) is a process to detect insider threats, targeted attacks, and financial fraud. UBA solutions look at patterns of human behavior and apply statistical analysis to detect meaningful anomalies - anomalies that indicate potential threats. Big data analytics sparked hope, spawned dozens of startups and introduced terms such as user entity behavior analytics (UEBA). UEBA solutions expanded from just user activity to include entities - endpoints, applications, and networks. Identifying behavior that will rise above the noise and the weight of terabytes of data and deliver fast insights can become the pursuit of the holy grail in security today. At Veridium, we put a simple plan in motion for behavioral biometrics - to find anomalies early in the authentication stage and minimize risk.



## VERIDIUM INMOTION

Veridium has developed a patent-pending framework for UBA to protect your identity. With Veridium's biometric authentication platform, even your twin won't be able to log in using "your face." Spoofing someone's biometrics is harder with Veridium InMotion Behavioral Biometrics feature. The Veridium solution captures behavioral data on how you interact with your smartphone. Each time you authenticate using Veridium, your interactions are logged. Information on how you hold your smartphone is captured using your smartphone's sensors. After just a few authentications, a baseline is established to compare to future interactions. Suspicious movements will be reported immediately so that administrators can evaluate risk factors and can respond accordingly. Behavioral biometrics can be used to detect presentation attacks in a variety of scenarios. If users are unlucky enough to have their Touch ID fingerprint spoofed, Veridium can detect differences in usage patterns to spot imposters and stop them "in motion."

## SET BIOMETRICS IN MOTION

No matter what biometric technology you prefer - Touch ID, or facial recognition - the Veridium mobile app adds an additional layer of security. Many phones allow more than one user to register their biometrics which poses a challenge for security. Once a particular user starts to establish a pattern of usage, Veridium will report on any significant differences. Veridium is biometric agnostic. The UBA capability increases the reliability of all native biometrics for authentication. Mimicking a person's mannerism is difficult so Veridium's UBA feature reduces the probability that someone can masquerade as you even if they have your phone and successfully spoof your biometrics.



*Two pairs of identical twin brothers put the iPhone X's Face ID to the test. The result? A Face ID fail. "The iPhone knows a lot of things. It knows your fingerprints. It knows your friends and family. But if you have a look-alike relative, it might not be able to tell you apart."*

**Bustle, October 31, 2017**

## FACE THE MOTION

Face recognition has challenges with twins and family members with similar characteristics. With Veridium InMotion behavioral biometrics capabilities, these similar individuals will be easily distinguishable. The security relevance of easy to use native biometrics such as Touch ID, Face ID and others increases with behavioral biometrics.

## HOW DOES VERIDIUM'S UBA WORK

### Motion Detection

Veridium collects information from the motion sensors - the accelerometer and the gyroscope - when the user initiates biometric authentication. No personal information is stored - only motion patterns.

### Motion's 10

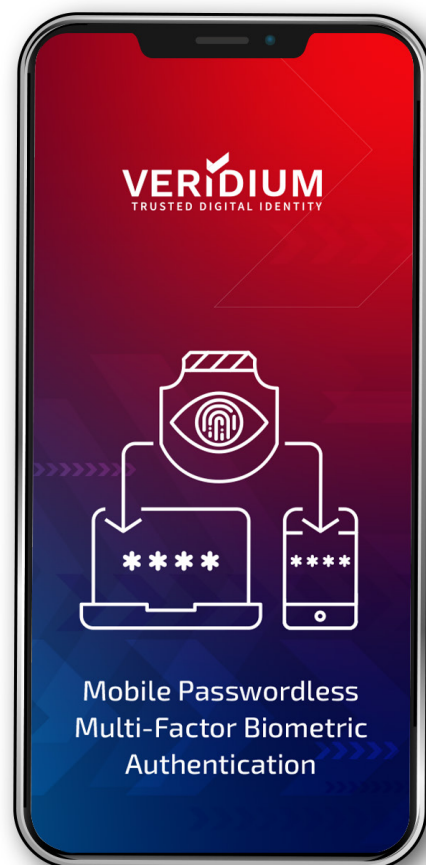
It requires just 10 authentications to get a baseline for most users. The model then continues to refine itself as it learns the user's behavior.

### Range of Motion

Once a pattern of authentications is established, Veridium will score the authentication with a confidence score. Based on risk factors, a low confidence score can initiate step-up authentication. The options for step-up authentication measures can range from contacting the user via SMS, email or a call. In high risk scenarios, a low confidence score and multiple failed attempts could initiate the blocking of a user completely. Variance is expected, we are all human, so these parameters are easily adaptable to different risk environments.

## MOVE TO ADOPT BIOMETRIC AUTHENTICATION

Veridium provides a secure and convenient multi-factor biometric authentication platform for employees and customers. VeridiumID, the independent authentication platform, allows enterprises to customize the user experience and choose the best biometrics for their security needs - from native (fingerprint or face) - to Veridium's proprietary 4 Fingers TouchlessID, or other 3rd party biometrics.



### ABOUT VERIDIUM

Veridium is a leader in the development of user-centric authentication solutions which link biometrics (what you are) to smart phones (what you have) for trusted digital identities. Our authentication platform and proprietary biometrics provide strong authentication, eliminating the need for passwords, tokens, or PINs - delivering multi-factor security with single-step convenience at a lower total cost of ownership than traditional MFA solutions.

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