

## Security Solutions

### Bolster your network's authentication

Network authentication has come a long way. In the beginning, there was no authentication, and users shared information without any access controls. There seemed to be no need to secure networks.

But as we all know, times have changed. We no longer use networks simply for information sharing. They run our businesses and hold our most vital secrets--and it's important that we keep those secrets secured.

#### Authentication 101

Authentication is the basis for network security. It currently relies on three standard methods to regulate access control. But using only one method weakens the security process. In addition, each method has its own weakness.

For example, if you use something physical (such as a smart card or token), the user could lose it, or someone could steal it. If you use some kind of knowledge (such as a password), someone could guess it or crack it. If you use technology such as biometrics, it's often costly and problematic.

These methods can leave your network vulnerable. They're only as reliable as the security of the authentication device or medium--or the ability to fake a valid response.

You can achieve greater security by combining these methods. But even with the addition of encryption, the inherent vulnerability of each method still exists. And don't forget that a hacker can always crack algorithmic encryption.

Total security requires the addition of an authentication method that someone can't break, reproduce, or crack.

#### A new layer

That authentication method is the addition of a location-specific digital fingerprint (LSDF). You can create an LSDF by sampling the radio frequency to create a dynamic entropy table of secrets.

You then have an authentication secret that no one can guess, reproduce, or crack. LSDF is unique to a specific location and time. It originates naturally and is unpredictable.

You can crack algorithms, but you can't calculate or derive this naturally

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occurring, physics-based phenomena. Now that the final layer of authentication security has arrived, how do you leverage that technology to secure your network?

### **Authentication in action**

This security enhancement is enormous when it comes to wireless networks. The reason most companies aren't using wireless today is because the signal might extend beyond a physically controlled boundary. However, now you can secure and authenticate that wireless footprint based on the physical location of the person accessing that wireless signal.

Most organizations haven't leveraged wireless capability specifically because of the lack of security associated with a radio broadcast network. This technology is the solution to your wireless dilemma.

### **Final thoughts**

Don't let aging authentication methods and the lack of traditional security processes keep your network architecture in the dark ages. To learn more about adding this final layer of authentication security to your network, check out the home page of [Digital Authentication Technologies, Inc.](#)

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### **We want your feedback**

What's your take on physics-based authentication? Does your company use a combination of the three authentication methods? Have you implemented a fourth authentication method? [Share your comments](#) in our discussion forum, or [e-mail us your thoughts](#) about the potential of physics-based authentication.

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