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Biometrics and Identity in the Digital World

At its simplest, biometric identification is the purest and most non-discriminatory form of personal identification. Because it is based on an individual's unique physical attributes, it is the only way to positively identify an individual, maintain integrity in business transactions and protect users against identity theft.

In today's complex digital world, we all have multiple virtual identities but only one truly unique physical identity. And yet, ironically, we continue to rely on these very insecure and inconvenient virtual identities (e.g., usernames/passwords) for personal authentication rather than focus on something that is truly unique and more robust and reliable.

The use of biometric technologies is the most effective, secure, and privacy enhancing means of identification available today. Contrary to popular belief, biometrics is not new or radical. Man has used biometrics throughout recorded history to uniquely identify individuals, starting with the first handprint "signatures" of authors of paintings on cave walls over 30,000 years ago. What makes modern biometric use highly effective is technology that enables precise measurement coupled with computational power that allows measurements to be rapidly converted to unique and secure identifiers that are easily used to determine and protect a person's true identity.

Since virtually everything we do today is dependent on knowing "who" with a high degree of certainty, modern biometric technologies, like fingerprint, facial recognition, iris and others, are helping us to meet the pressing need to authenticate identity in today's world. Here's how:

Biometric technologies enhance collective security, reduce risk and make us safer because knowing "who" matters if one is really serious about:

- Controlling access and protecting borders, aviation and maritime facilities, critical infrastructure
- Tracking and identifying terrorists

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- Reducing the percentage of unsolved crimes
- Preventing professional and academic test-taking fraud
- Creating secure online transactions
- Combating fraud and identity theft
- Healthcare safety, including controlling distribution of narcotic drugs so only authorized persons can access and distribute pharmaceutical drugs; the correct prescriptions go to the right person compliance with HIPPA privacy
- Enabling remote banking in rural areas of the world

Biometric technologies also enhance individual security by:

- Preventing imposters from claiming your identity and rendering personal identity theft obsolete
- Protecting personal data that is increasingly being stored online and in mobile devices
- Providing simple, easy means for government to ensure that the proper individuals are being served; and not being scammed by ill-intentioned, unauthorized imposters

Biometric technologies can also reduce waste, fraud and abuse by raising the bar on security and convenience for users by:

- Streamlining access to mobile applications
- Using biometrics to securely replace hard-to-remember passwords and IDs
- Obviating the need for so many individual IDs and easily cracked passwords
- Avoiding identity theft and the associated months-long recovery challenges
- Providing the opportunity for individualized services
- Speeding authorized people through checkpoints and border crossings
- Decreasing stigma of access to public aid programs
- Ensuring access by all citizens to qualified government benefits

Biometric technologies "enables," rather than "limits," access and quality of services for both users and providers by:

- Ensuring only qualified people are provided benefits
- Lowering the costs of immigration control at border crossings by means of automated e-gates and biometric identification
- Using biometrics to narrow the scope of kinship investigations for immigration and adoption purposes
- Developing ways of quickly uniting relatives with loved ones in disaster situations
- Producing credentials for first responders to enable quick access to disaster areas
- Improving remote access to benefits and services, reducing travel costs and associated energy consumption and pollution

And biometrics can do all this and yet preserve user privacy as:

- No one else can gain access to your personal data because no one else has your unique biometric attribute that permits access
- The risk that a person can steal your identity and, posing as you, collect benefits; board an airplane; get a job; gain access to your personal data, etc., is greatly reduced or eliminated
- Systems or services provided by Government or business could easily be created in such a way as to allow users to opt in or opt out if they felt that privacy was in any way being challenged. A user's right to privacy need not be infringed. Systems could easily be set up in such a way as to allow those of us who wish to take full advantage of government services to opt in. Those who choose to opt in are not surrendering their right to privacy. They are simply acknowledging that it is reasonable for them to surrender their right to anonymity. We are, and should always be,

guaranteed our right to privacy but there is no right to anonymity if goods or services are being provided for us or to us. These services are by definition based on user identity.

In short, the role of biometrics in protecting user identity, guaranteeing that goods and services are making their way only to bona fide recipients, and reducing fraud and abuse is without equal. For only by knowing "who" with some high degree of certainty can government or business ensure that only those entitled are being served. To do otherwise is both an economic and social injustice, as biometrics technology has now advanced to a level where the performance is proven and the benefits are real and measurable, and easily outweigh the costs.