

# MOBILE AUTHENTICATION MATURITY & TRENDS

**26 April 2016 – Intelligent Authentication Conference**

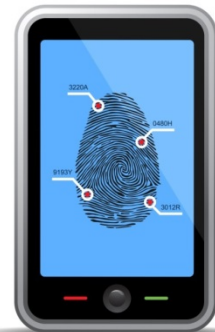
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# The Need For Intelligent Mobile Authentication

- Two connected megatrends:
  - The rise of mobile computing
  - Cloud and SaaS
- Mobile & Cloud – legacy authentication not fit for purpose
- Failure of traditional monolithic authentication solutions:
  - Passwords
  - Siloed 2FA
- The need to support legacy IT



# Intelligent Mobile Authentication – Leverage What's Already There

## Secure Hardware:

SIM, Secure Enclave & Element

## Secure Processing:

Trusted Execution Zone (TEE) includes TrustZone

## Short-range Radio:

NFC & BLE

## Device Fingerprinting:

IMEI/IMSI + SIM data + other hardwired data

**Camera:** Facial & Eye Biometrics - Liveness



## GPS & Cellular:

Geolocation / Network Behavior

## Touchscreen:

Behavioral Analysis

## Microphone:

Voice Biometrics

## Embedded Biometric

**Sensors:** Fingerprint, Voice & Iris Biometrics + emerging including heartrate (ECG)

# Mobile Authentication Trends - OTP Dominates

## 1. One-Time-Passwords (OTPs)

1. Soft-tokens (generated on device using an app)
2. SMS delivered (2-step verification – OAuth - popular with large service providers)



Source: Google



# Mobile Authentication Trends – Cloud Integration



- Risk-Based Authentication
- Identity Federation
- Risk Management Systems
- Enterprise Mobility Management
- Network based behavioral analysis
- Standards-based Authentication & Authorization
- Threat intelligence & Protection

## Mobile Authentication Trends - Industry Standards/Initiatives

- Industry standards and initiatives facilitating emergence of intelligent mobile authentication
  - OpenID Connect
  - SAML
  - GSMA Mobile Connect
  - FIDO
  - IEEE 2410 BOPS
- Leverage built-in security of mobile including biometric sensor

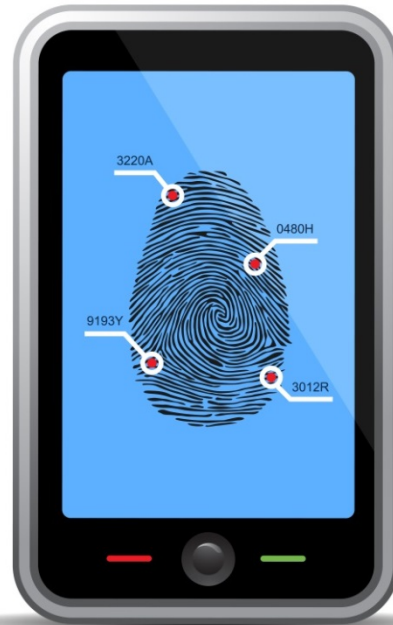


# Mobile Authentication Trends – Mobile Biometrics

**Voice**

**Iris**

**Facial**



**Behavioral**

**Ear**

**Eye Vein**

**Fingerprint**

**By 2017 – over 1 billion mobile devices with fingerprint sensors**



**Thank you.**

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