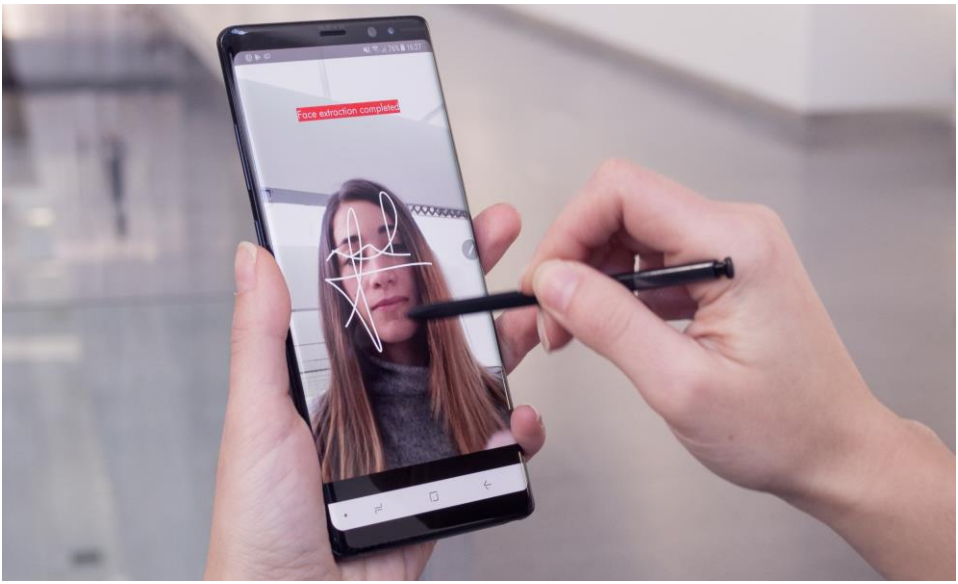
Future present of technology

Connectivity · Intelligence · Security



selfie&sign

Face and handwritten signature recognition technology

Selfie&Sign by Gradiant is a secure and easy-to-use solution for mobile biometric login.

Selfie&Sign secures facial recognition technology with an advanced anti-spoofing mechanism based on handwritten signature verification.

- ✓ **It is far more secure** than face-only authenticators
- ✓ **Through the use of simultaneous face and signature verification**, selfie&sign prevents spoofing attacks from photos, videos, and even 3D masks.
- ✓ **Forget about weird phone and head movements or awkward face expressions in public:** just sign while your face is automatically analysed
- ✓ **Fully embedded in your mobile phone**: no servers required for processing.

Functionalities

Gradiant Selfie&Sign combines Gradiant Face and Gradiant Signature SDKs in order to achieve a fusion biometric authenticator to verify simultaneously face and signature within mobile devices

Gradiant Face Modules

Image&Video acquisition

Acquisition and camera control modules for mobile devices allowing fast integration and development of third-party applications.

Face detection

- ✓ Fast face detection and tracking, optimized for mobile devices.
- ✓ Head pose estimation.

Face template extraction

- ✓ Face template extraction from static images or video sequences.
- ✓ Face templates can be built from single or multiple face images.
- ✓ Internal facial landmark detection for face alignment.
- ✓ Face image quality assessment to ensure the acquired faces meet the requirements for system security.

Matching

1:1 biometric template matching (both single-face and multiple-face templates supported), allowing an easy development of verification and identification applications.

Gradiant Signature Modules

Acquisition modules

Acquisition and control modules for mobile devices allowing fast integration and development of handwritten signature authentication enabled applications.

Signature security analysis module

- ✓ Analysis of single signature's complexity to avoid easy-to-forge signatures.
- ✓ Analysis of template's coherence (multiple signatures).

Signature template acquisition module

Handwritten signature template creation from one or several signatures.

Signature verification module

Signature template matching, allowing an easy development of verification applications.

Requirements

iOS

- ✓ Minimum OS: iOS device (iPhone, iPad) with iOS 8 or above.
- ✓ Minimum hardware requirements: Apple A7 processor or higher (iPhone 5s or above).
- ✓ Programming language: ObjectiveC API.

Android

- ✓ Minimum OS: Smartphone or tablet with Android 5.0 OS or above (API 21).
- ✓ Recommended hardware: modern Android device (64bit)
  - multi-core processor
  - >2GB RAM.
- ✓ Programming language: Java API.

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Performance

Recognition rates:

Face and signature are independent biometric traits: your face has no influence on your way of signing. In a combined verification scenario, access is only granted if every individual authenticator provides positive verification:

- ✓ FAR < 0.003% @ FRR ~4%

Package

Developer SDK for integration and deployment.

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