SecureScrypt

Germany

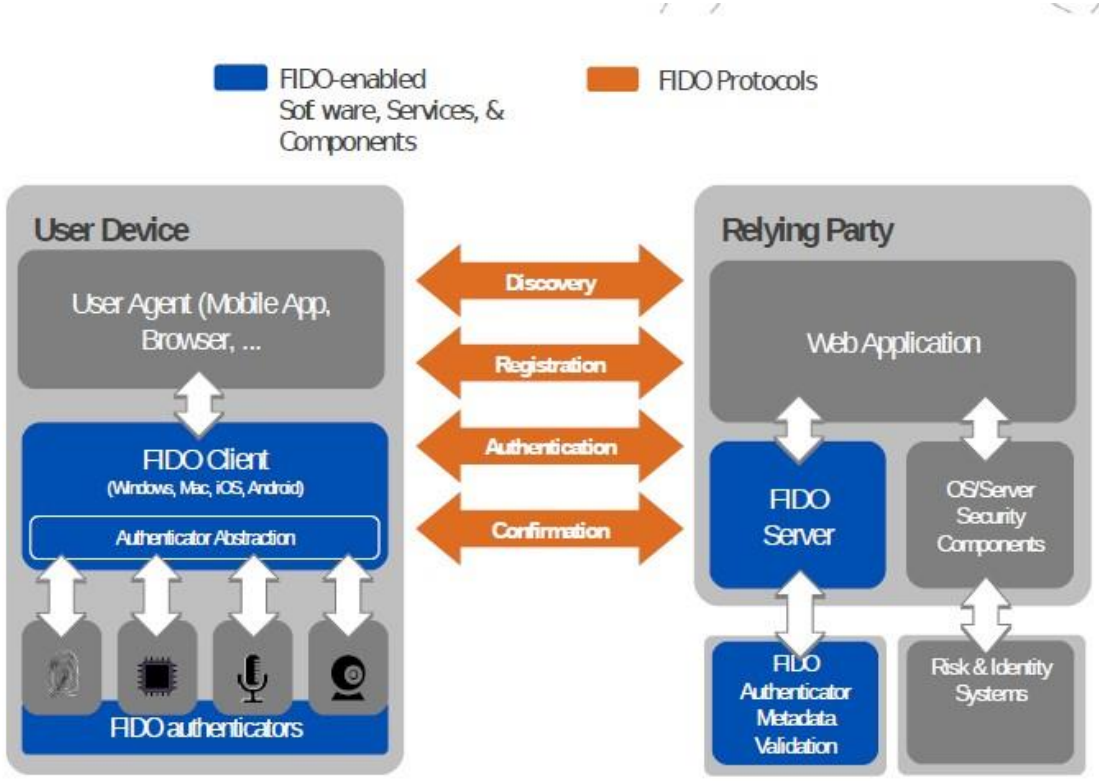
Strong Password less (FIDO) Authentication with Secure MicroSD Cards

Fast IDentity Online Password Less verification, overcoming the lack of interoperability among strong authentication devices. Founders and users are among others PayPal, Lenovo and all association members.

About FIDO UAF

- FIDO UAF strong authentication framework enables online services and websites, whether on the open Internet or within enterprises, to transparently leverage native security features of end-user computing devices for strong user authentication and to reduce the problems associated with creating and remembering many online credentials.

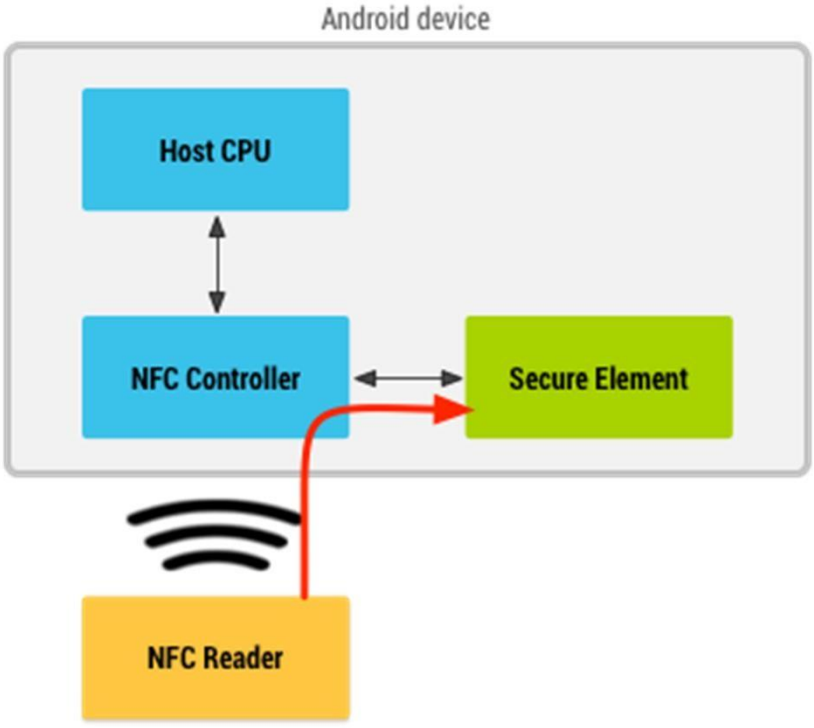
- FIDO UAF high-level architecture is illustrated on the following picture



About HCE (Host-based Card Emulation)

- Android 4.4 (KitKat) introduces an additional method of card emulation that does not involve a secure element, called *host-based card emulation*. This allows any Android application to emulate a card, even more also to use secure microSD card and talk directly to the NFC reader.

- HCE high-level architecture is illustrated on the following picture



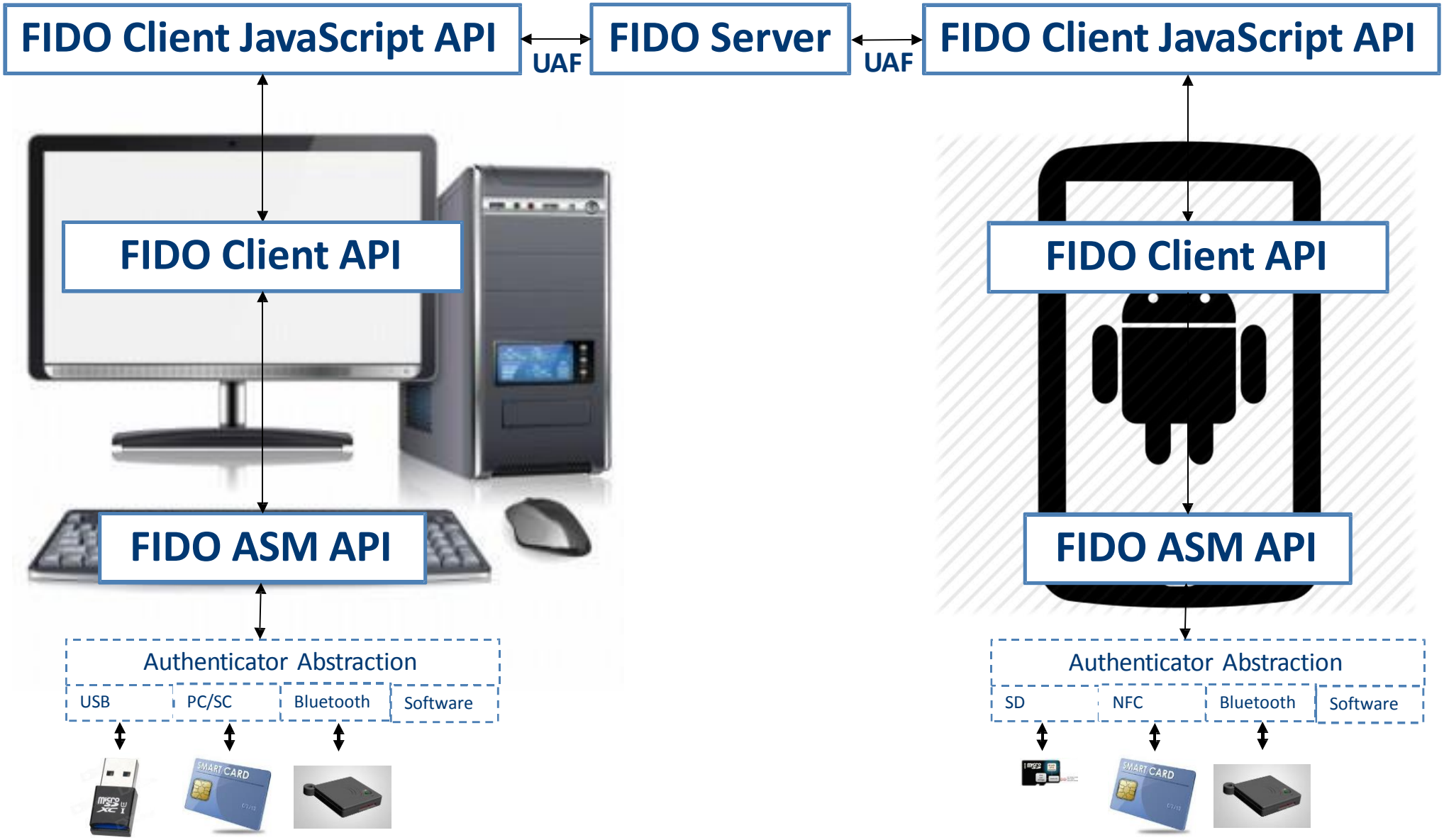
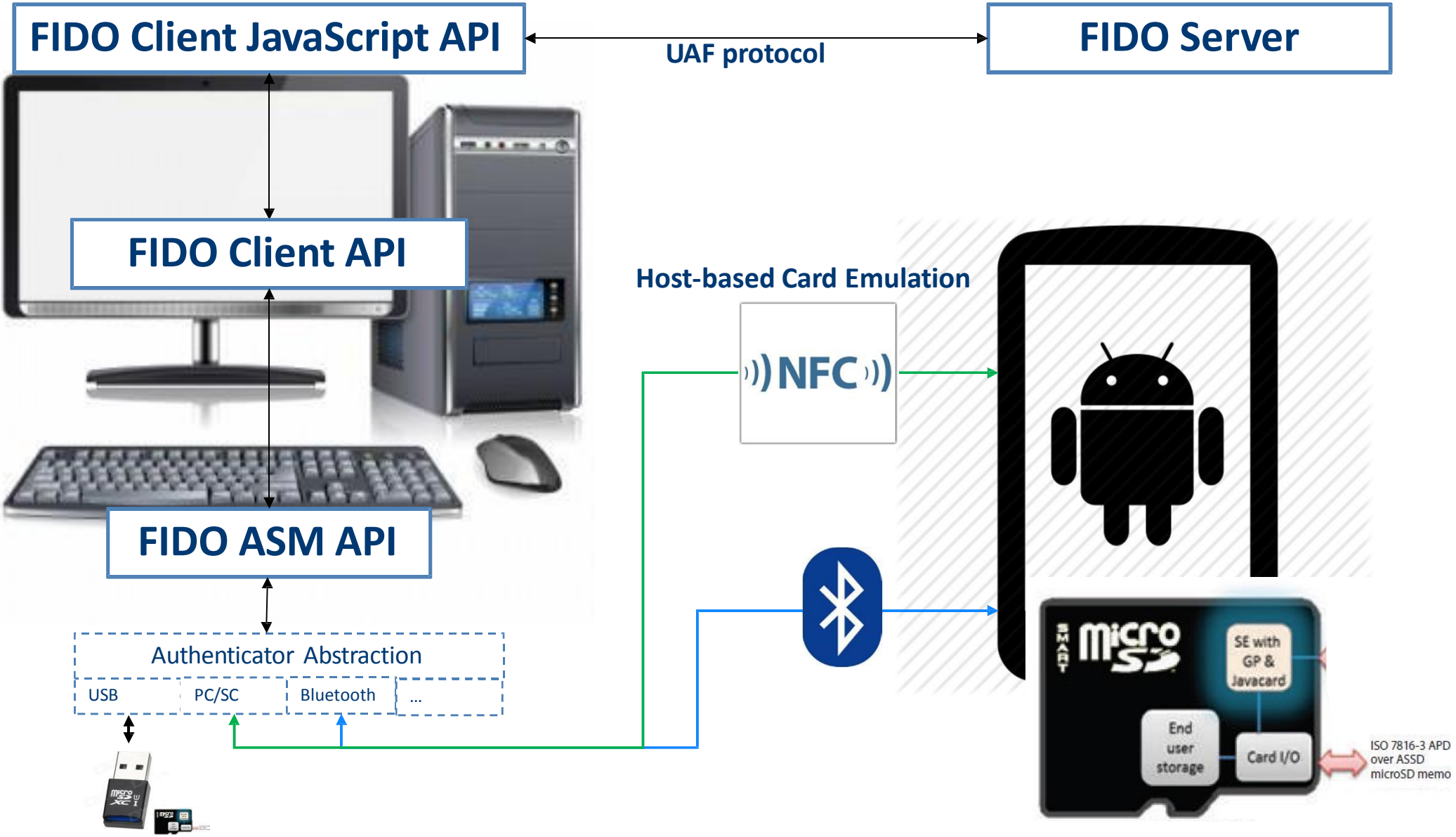
Use Cases

- Secure microSD card as an independent secure element form factor in an Android phone in combination with FIDO authentication technology and HCE/NFC and Bluetoooth communication interfaces is enabling the following use cases

- Mobile Use Cases
  - FIDO password-free authentication using secure microSD card inserted into the phone (user authentication for various use cases where strong authentication is required like Online Shopping, Remote Access,…)
  - Classical NFC contactless use cases like Mobile Payment, Mobile Ticketing, Loyalty Programs,…

- PC Use Cases
  - FIDO password-free authentication using secure microSD card (inserted into the phone) over NFC/HCE interface
  - FIDO password-free authentication using secure microSD card (inserted into the phone) over Bluetooth interface

FIDO-based Passwordless Authentication - Architecture



Passwordless Authentication with smartSD Card