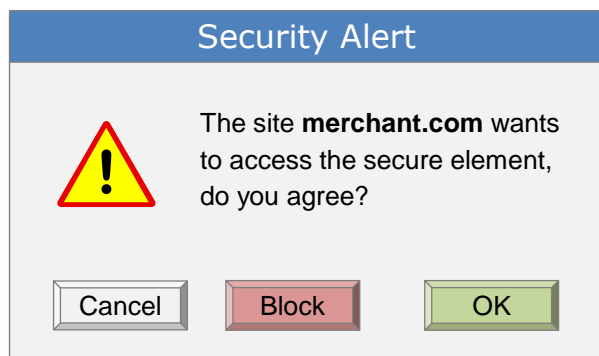


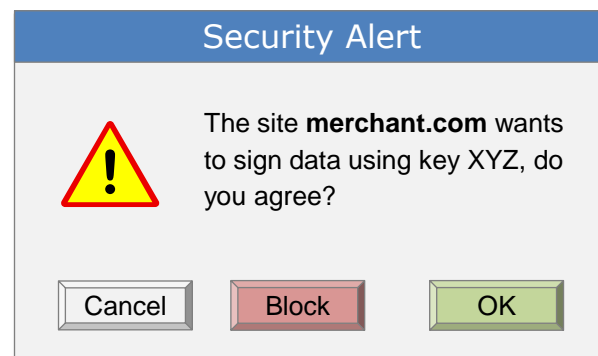
Exposing System APIs in the Open Web – “Permission Hell”

APDU Level Access



A web application wants to connect to a secure element. Since a browser does not “understand” APDU it can only offer a primitive security prompt.

PKCS #11 Level Access



Since the browser cannot know what the application is about to do with signed data, it can only offer a primitive security prompt.

Conclusion

Permissions are fine for things that ordinary users can understand like “Your Location” but quite unsuitable for a large class of sensitive system APIs and associated user data which in the native world always are dealt with as a part of a packaged application. The next page outlines a possible way to “emulate” this functionality on the Open Web. The primary advantages would be:

- Limit direct access to sensitive APIs
- High-level *service-oriented* schemes make applications less dependent on variations in platform APIs and architectures
- Provide *meaningful* information to users