

# Asia PKI Consortium

June 2019

## Hong Kong Government Certificate Authority

HKPKI Forum  
21 June 2019

# HK Government CA compliant to WebTrust

The screenshot shows the homepage of the Hongkong Post e-Cert website. The browser address bar displays 'https://www.ecert.gov.hk/index.html'. The page features a navigation menu with 'About Us', 'Products & Services', 'News', and 'About PKI'. A central banner reads 'The solution for e-Security'. Below this, there are several sections: 'e-Cert services that meet your needs' with a renewal notice for 27/10/2018, 'What's New' with links to 'Apply for e-Cert', 'Usage of e-Cert', 'e-Cert User Guide', 'Search and Download Certificate', and 'Certification Practice Statement'. A 'PKI Video' section is also present. On the left, there is a section for 'e-Cheque' for e-Cert extension with a list of user guides. At the bottom, there are logos for Certification Authorities (WebTrust, W3C WAI-AA WCAG 2.0), CERTIZEN, and Hongkong Post. The footer includes '2017 © | Important Notices | Privacy Policy' and 'Last revision date: 28 September 2018'. A red circle highlights the WebTrust logo in the bottom left corner.

Hong Kong Government Certification Authority has been certified compliance to the international Webtrust audit standard for 12 consecutive years and is the only recognized certification authority in Hong Kong that meets that international audit standards.

At present, mainstream browsers, including Microsoft IE, Google Chrome, Apple Safari, Mozilla Firefox and Oracle Opera built-in trust anchor of Hongkong Post Certification Authority Root certificate.

# Hong Kong Government CA - ([www.eCert.gov.hk](http://www.eCert.gov.hk))

**By Virtue**

- Establishment under ETO (Cap. 553) as public CA

**Perpetual**

- No expiry of license period

**Auditable**

- Perform vulnerability scanning quarterly
- Security penetration test annually
- Security Risk Assessment semi-annually

# International Standards of CAs

**WebTrust certified**

- WebTrust for Certification Authorities
- WebTrust for SSL Baseline with Network Security
- WebTrust for Extended Validation - SSL

**Trust by browsers**

- Issue SSL e-Cert(Server) which is trusted by major browsers

**Faster Response**

- Support Online Certificate Status Protocol (OCSP) for real-time status update

**Transparent**

- Support Certificate Transparency technology

# E-Cert for Government B/Ds, NGOs, Businesses and Public



Inland Revenue Department  
AEOI e-Cert



Hospital Authority  
Doctor's e-Cert



Licensed Banks  
Personal/Corporate Bank-Cert



General Purpose  
Personal/Organisational e-Cert

# Industry-wide e-Cheque Project



Service Launch Date

7 Dec 2015



e-Cheque Issuance

Voluntary



e-Cheque Presentment

Mandatory

- As an alternative payment method
- To promote e-commerce

# E-Cert and Bank-Cert

## E-Cert



**General Purpose  
Certificate**



KYC by CA,  
Cert kept by  
users,  
Cert stored on  
PKCS#11  
media

## Bank-Cert



**Special Purpose  
Certificate**

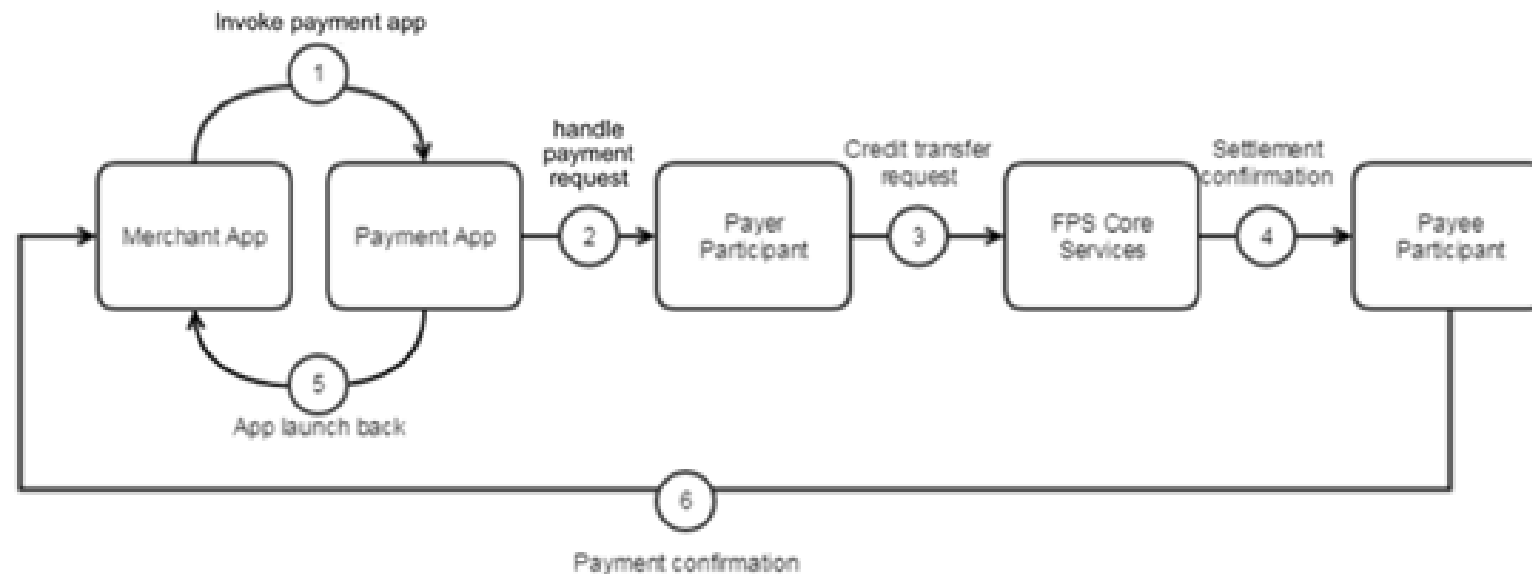


KYC by banks,  
Cert kept by  
banks,  
Cert stored in  
HSM

# Latest developments

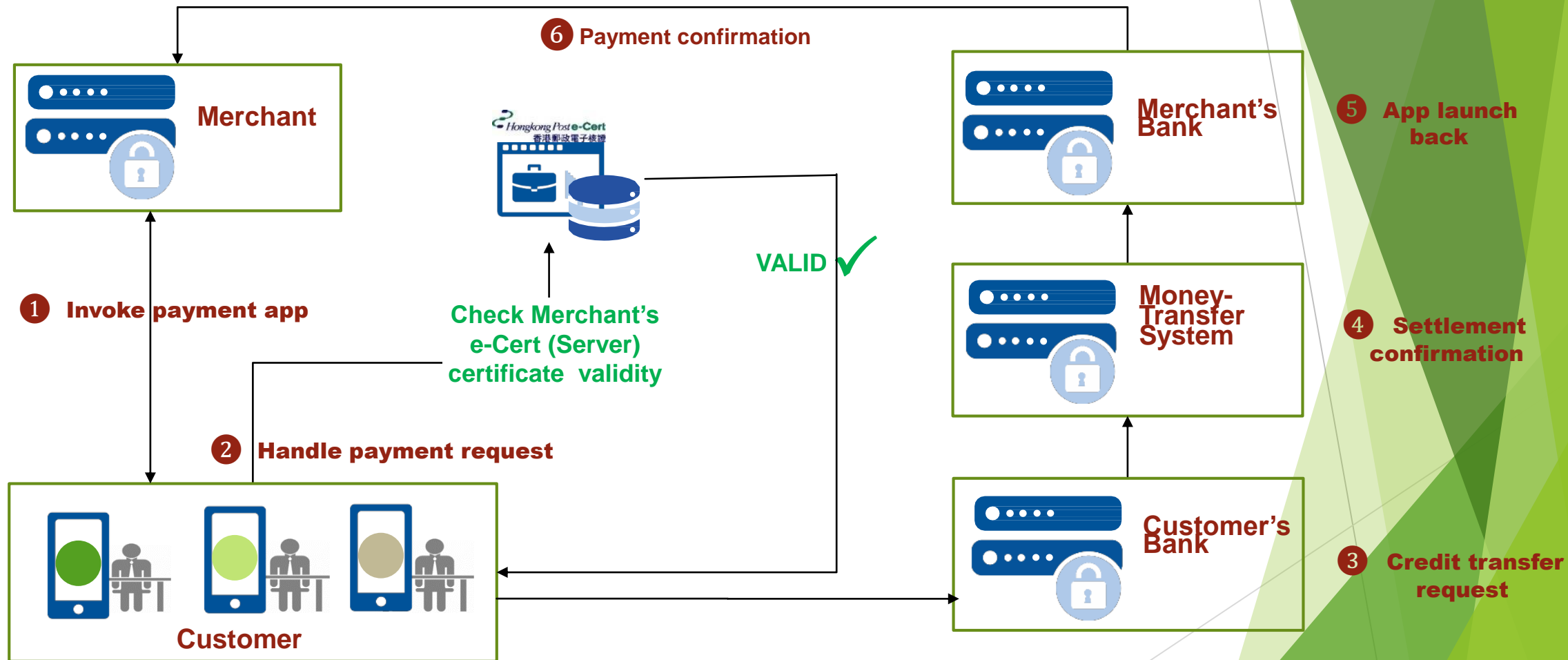
# Faster payment system - App-to-app invocation

## 2.3 Flow

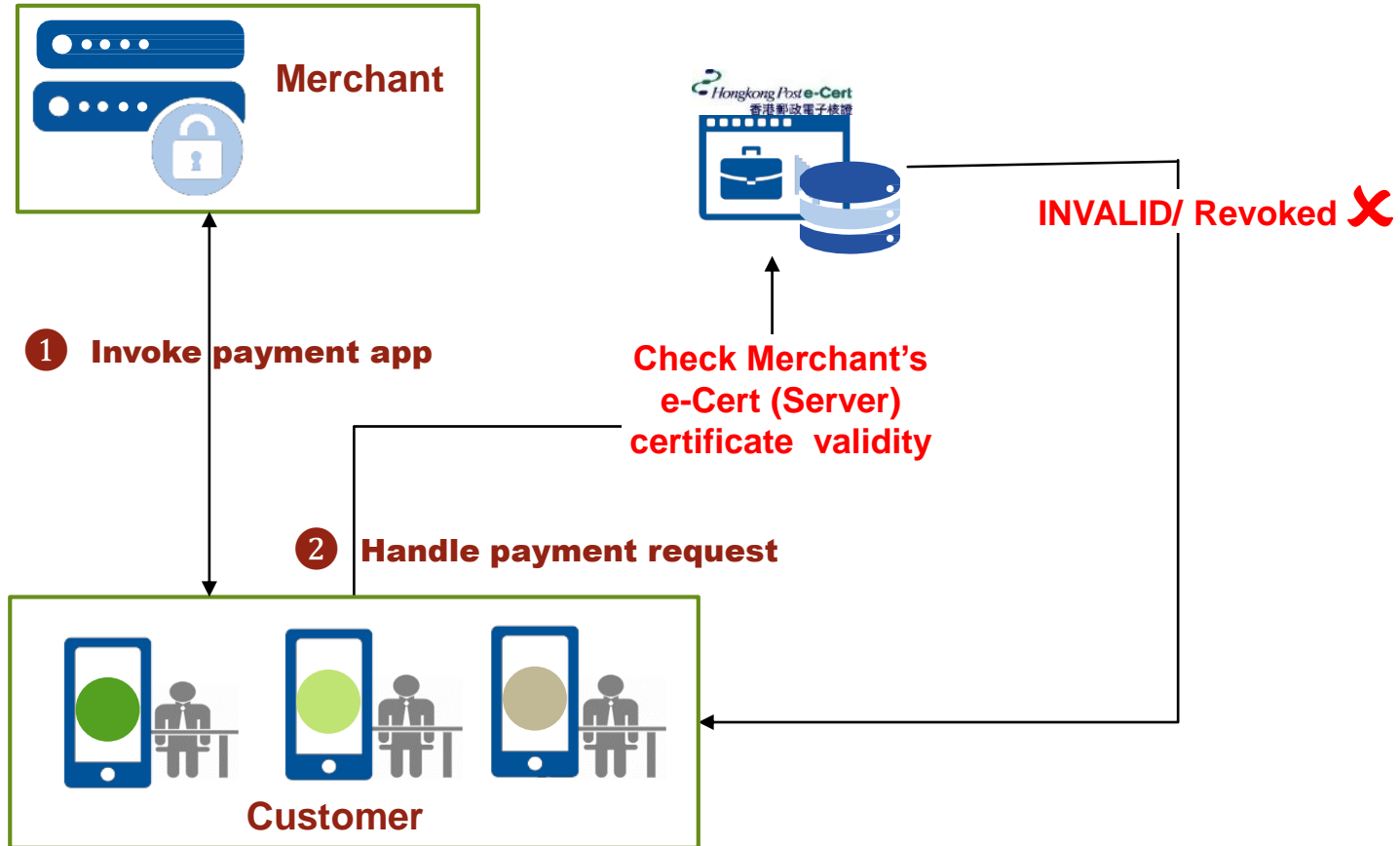


This use case is simulating a user using his/her Mobile phone and Merchant App to purchase goods or services and would like to use FPS payment to complete the transaction.

# Data flow e-Cert (Server) status (VALID)



# Data flow e-Cert (Server) status (INVALID/Revoked)



# Hong Kong eID development

- ▶ In May 2018, Hong Kong received approved commitment of HKD112 million to develop the eID system. The Office of the Government Chief Information Officer(OGCIO) initiated an open tendering exercise for development and maintenance of the eID system in August 2018 and awarded the service contracts in end-February 2019. Work related to design and development has started, the system is expected to come into operation in mid-2020.
- ▶ The eID will be available for all Hong Kong residents free of charge starting from mid-2020.
- ▶ Two versions of eID is proposed:
  - ▶ Basic version - Non-face-to-face online registration for authentication only
  - ▶ Full version - additional in-person identity verification for authentication and digital signing with digital certificate
- ▶ The OGCIO is actively promoting the adoption of eID by government bureaux/departments in their existing or planned e-government services. It is expected there will be 26 e-government services adopted upon its launch in mid-2020. Most e-government services (over 110) will accept user login using eID by mid-2021 while the remaining 20 or so e-government services will adopt eID progressively by 2023.

# Hong Kong eID registration flow



1) Take a photo of the HKID card for verification against forgery



2) Confirm the data captured from the HKID card



3) Take a selfie photo for photo verification against impersonation

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the slide, creating a modern, layered effect. The rest of the background is plain white.

# Thank You

HKPKI Forum