

eSign Applications

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Overview

Online Citizen Centric Services

Digital Signature

E-Sign Modalities

Basic Architecture

Potential Applications

Way Ahead

Online Citizen Centric Services

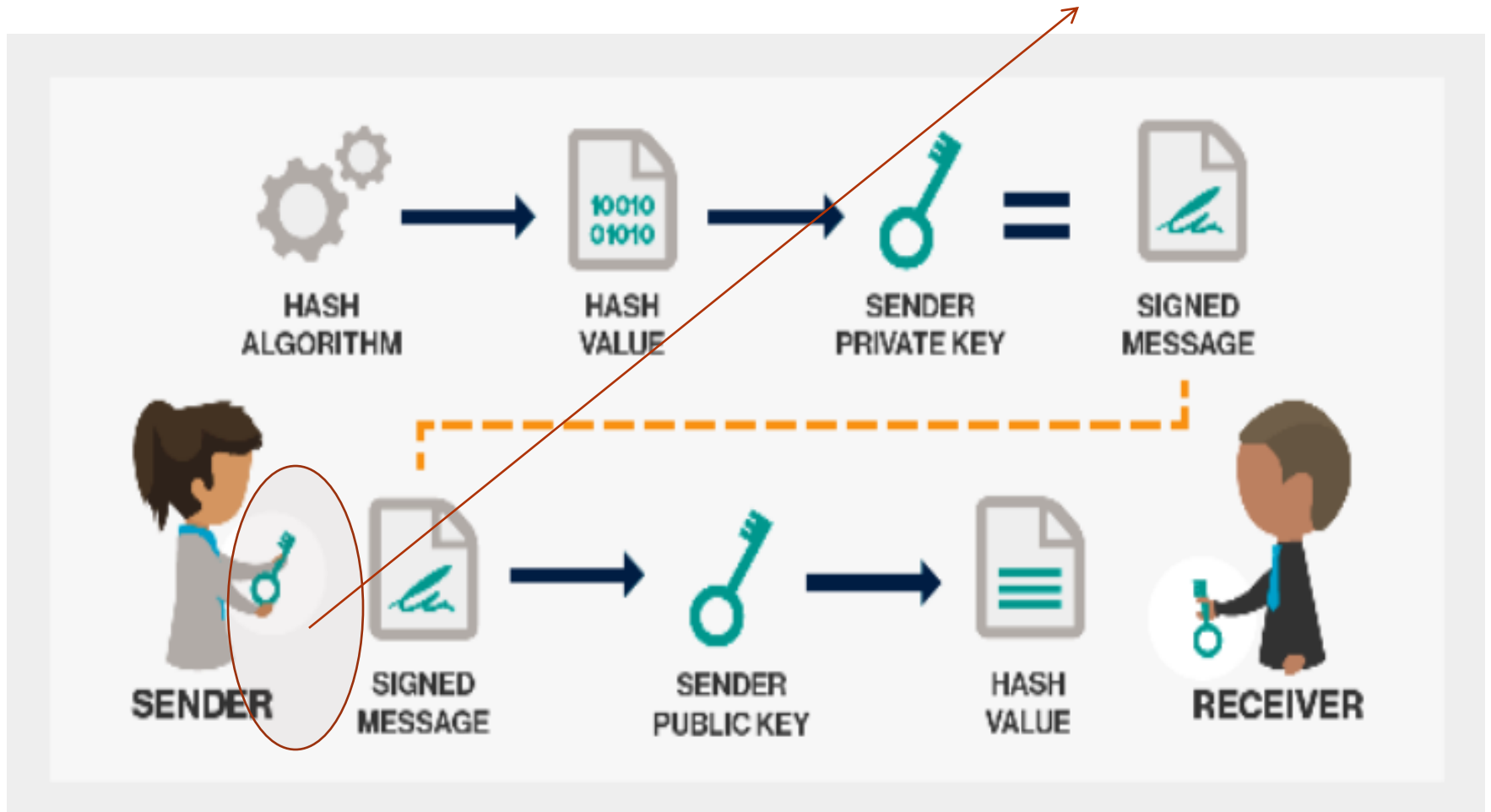
BFSI sector has been leading the way in bringing customer services online

Security and Legal aspects assume primacy

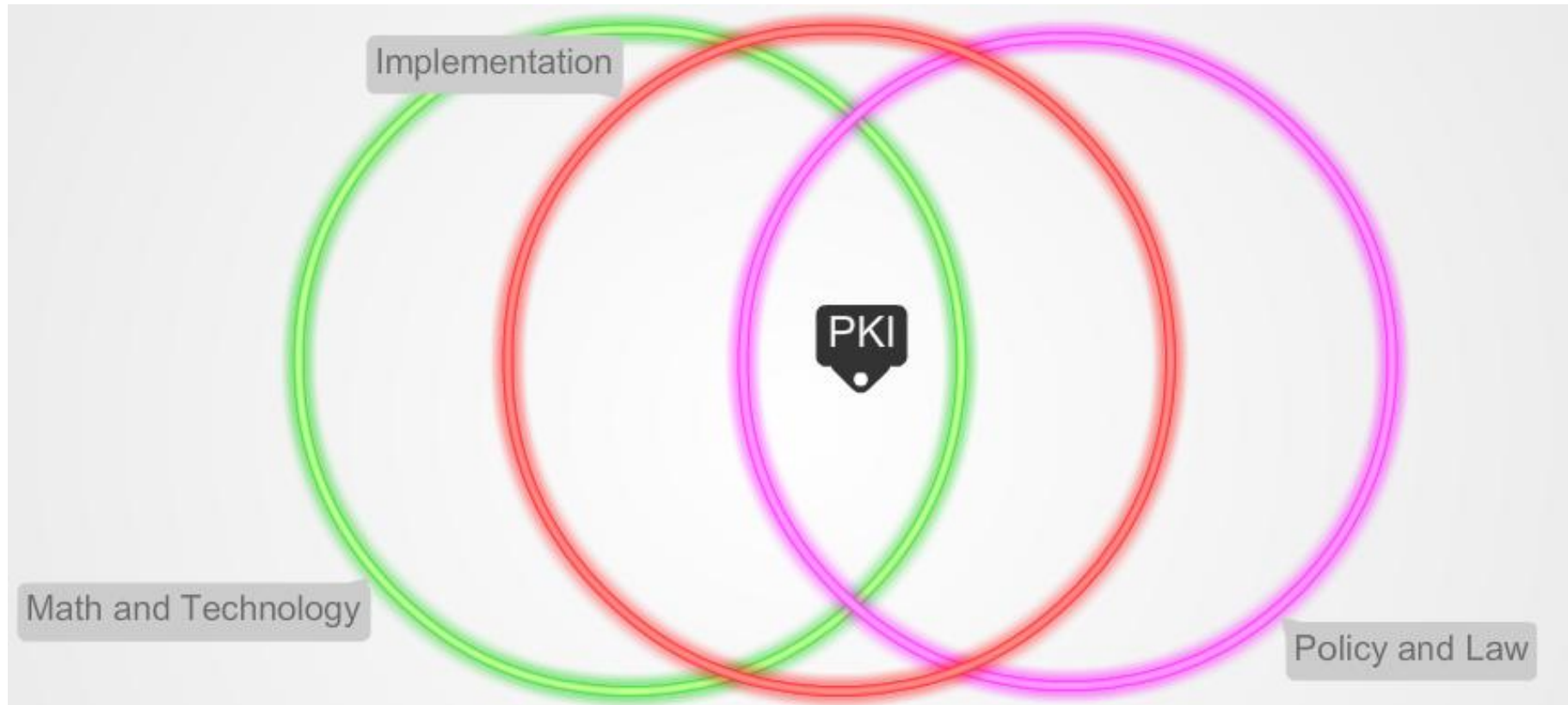
Without a customer digital signature, the transfer of services to online media is limited

Enhancing The Service

User Needs a Digital Signature

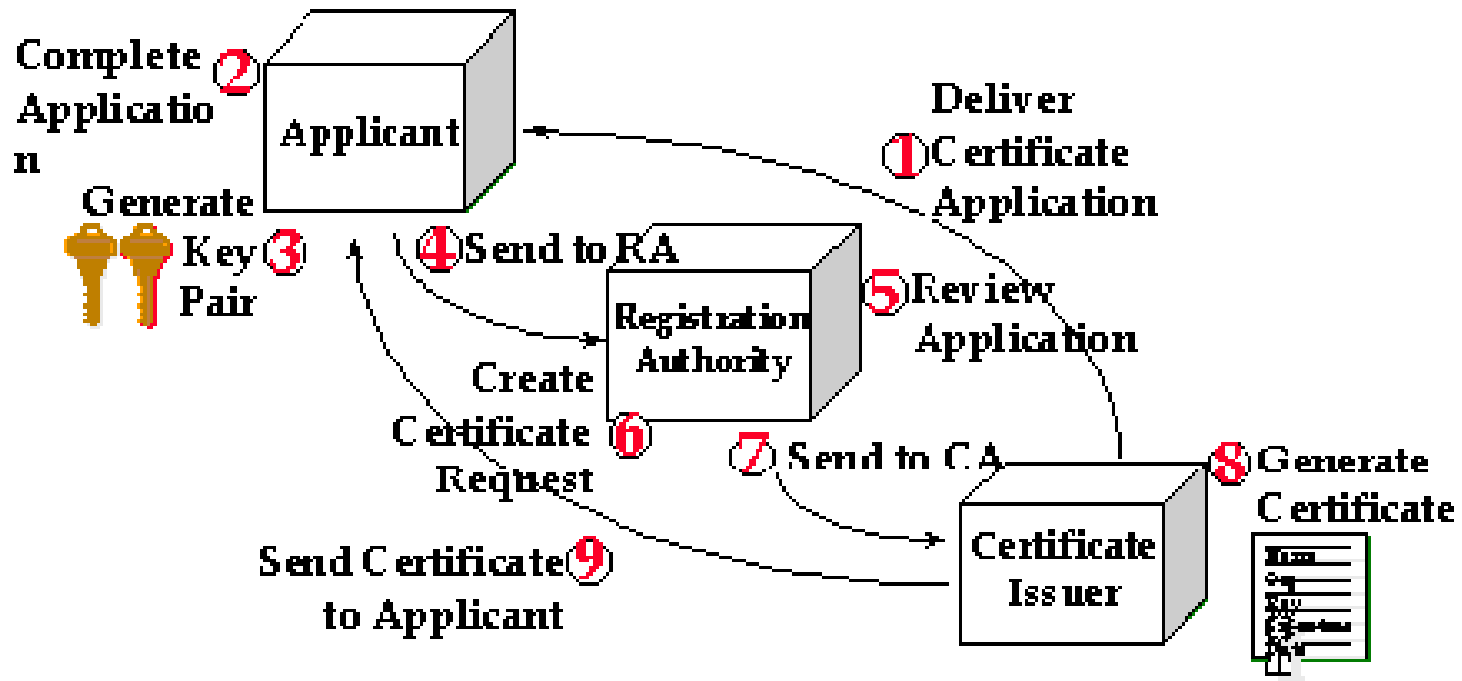


Public Key Infrastructure



- PKI – Public Key Infrastructure ecosystem is an intersection of:
 - Cryptography (Math) – Cryptographers/Researchers
 - Technology & Implementation – PKI System Developer
 - Policy & Law – PKI System & Users

PKI - Registration/Certification



- Application
- Subject Authentication
- Certificate Generation

- Certificate Distribution
- Certificate Revocation

E-Sign Modalities

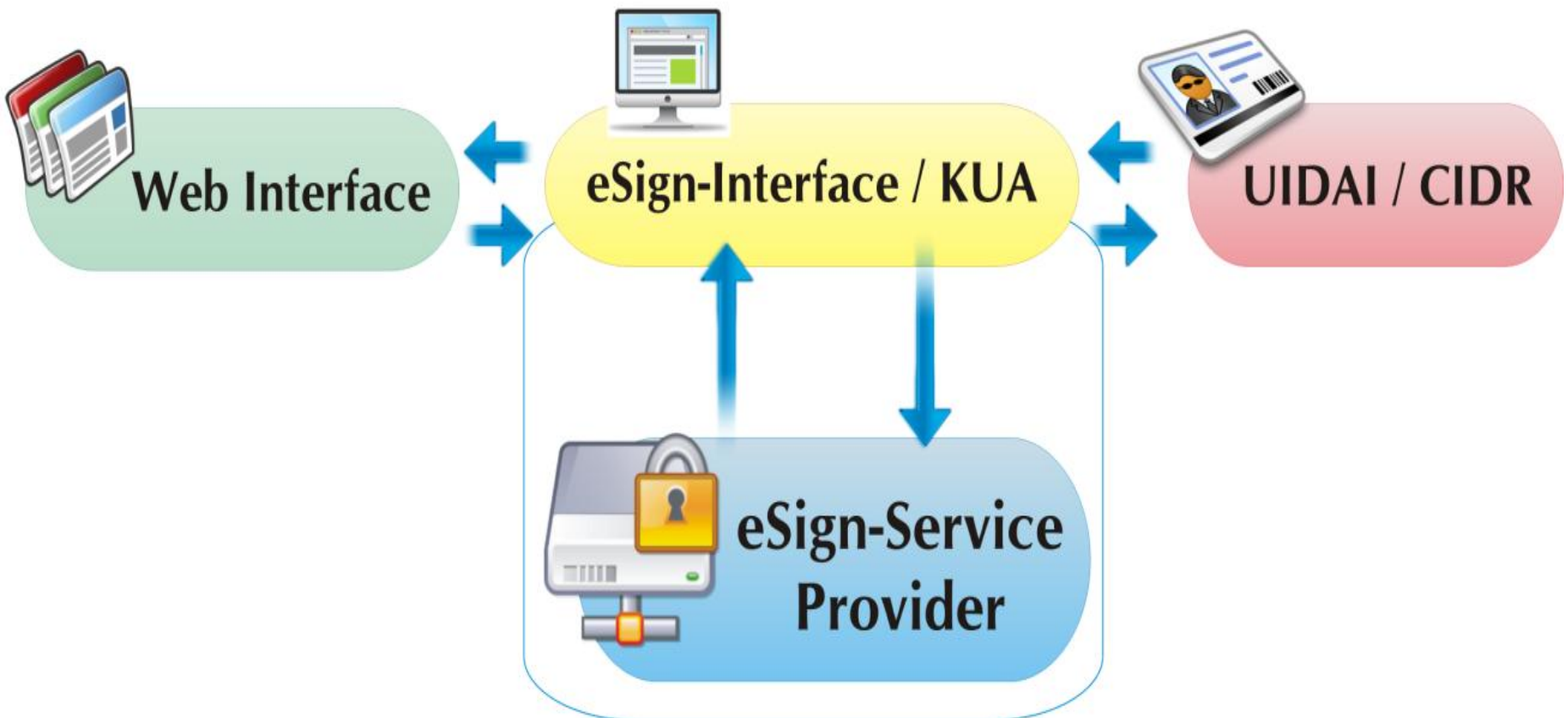
A legal way for users to digitally sign documents instantly without registering for a DSC

e-Hastakshar initiative enables anyone with valid Aadhaar ID and registered mobile number to digitally sign documents on-line

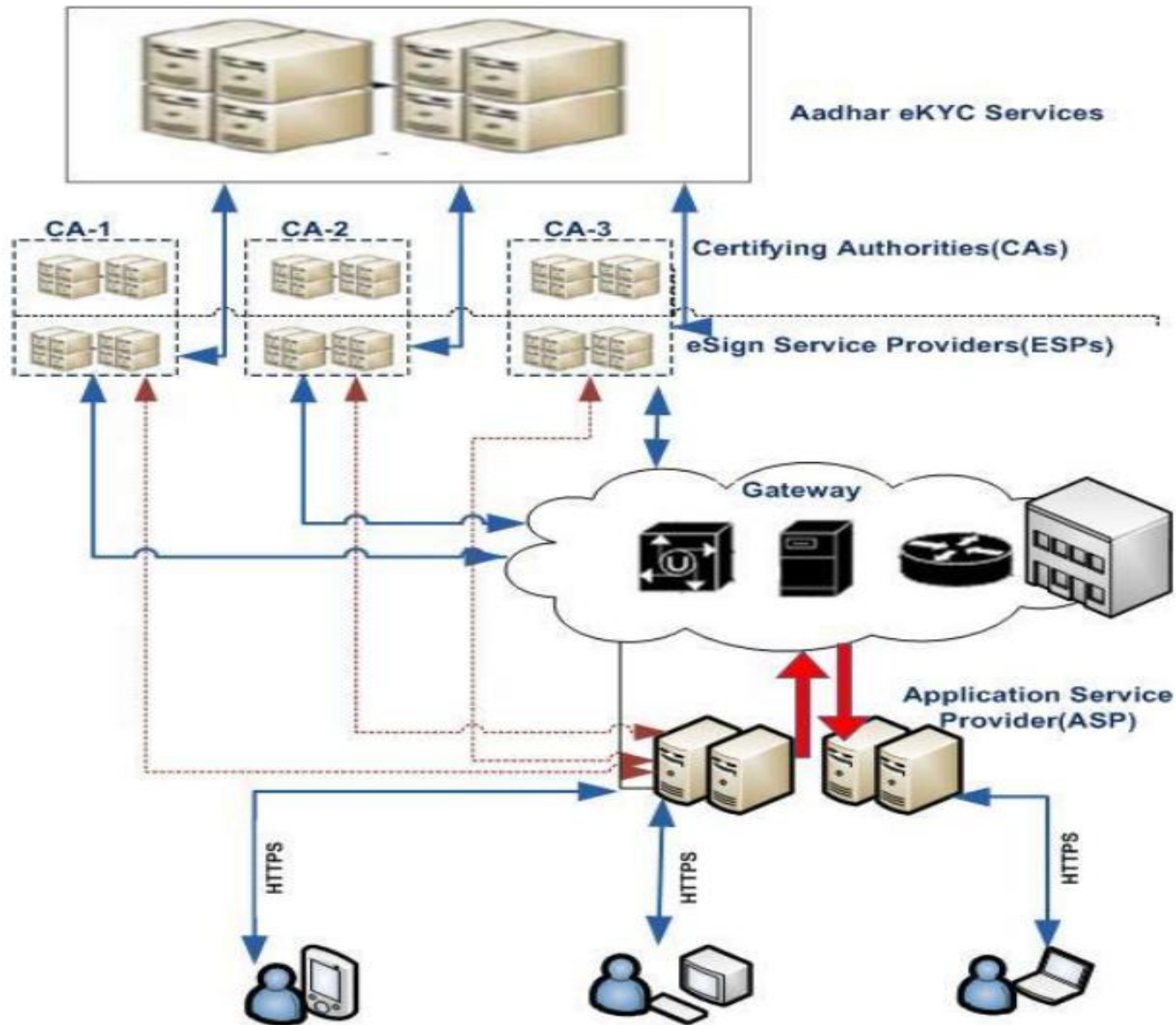
eSign service to the applicant is for one-time signing usage and shall be of class “Aadhaar-eKYC – OTP”

C-DAC plays the role of a Certifying Authority (CA) under the Controller of Certifying Authorities (CCA)

e-Hastakshar Architecture



e-Hastakshar Architecture



eSign Workflow



Without eSign

Subscriber :

- Application to CA for DSC (soft/hard mode)
- Key generation and safe custody(iToken, Smart card)

PKI :

- Manual verification of credentials (VA)
- Issuance & communication of DSC

Constrains Mass adoption and integration with services

- Cumbersome application process
- Key and token management

eSign

Electronic Authentication Techniques & Procedure Rules, 2015

- - *Legal validity to authentication & eKYC using Aadhaar*

eSign facilitates Digital Signatures by an Aadhaar holder

- Registered & active mobile number is a prerequisite
- OTP and Biometric authentication methods
- eKYC treated as verified PoI and PoA (Registration)

Potential Applications

Bringing currently manual transactions online

- Cheque/Draft issuance and transmission
- KYC
- Newer paradigms enabling people without conventional banking facilities to join the mainstream

Every paper form that is currently signed

Challenges

1. Originally Seen and Verified – for PAN Card Verification prior to opening an account for a customer. CCA allows for DSC.

2. In Person Verification for Account Opening . Replaced by a few regulators to currently allow Biometric eKYC as a substitute .This still requires physical presence of the customer.

3. ECS Mandate - Payment instruction for Direct Debit of funds is required to be physically signed. Banks still not accepting digitally signed ECS instructions.

4. Power of Attorney (POA) Document collected by Depository Participants/Broking Houses to open DEMAT account with Depositories (NSDL/CDSL) is currently a physical document.

5. Stock Holding corporation is still issuing all Electronic stamp papers only in Physically printed form.

Way Ahead

CDAC

- 3 Agencies including NIC preparing to go live as ASPs
- 35+ agencies engaging at multiple levels

Key personnel

- DG CDAC Dr Rajat Moona
- Dr Hemang Darbari
 - Executive Director, CDAC Pune
- Cdr LR Prakash (Retd)
 - Director CDAC Chennai
- Dr N Subramanian
 - Associate Director, CDAC Corporate Office

E-Hastakshar

A paradigm shift occurs when a question is asked from inside the current paradigm that can only be answered from outside of it.

M Goldberg

The Art of the Question