eGovernment Domain Discussion

Vice Chair

Mr. Tahseen Ahmad Khan

Domain Coordinator

Mr. Kaushik Srinivasan

Project Leader – Blockchain/IoT

Ms. Virginia Cram Martos

Date

Oct 16, 2018

Room

Huagang Room

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eGovernment Domain Discussion

- Agenda for the day

Time	Topic	Speaker and Comments
9.00	Opening Remarks	Mr. Tahseen Ahmad Khan, Vice Chair, UN/CEFACT
9.15	International Convention – Mutual Recognition – Next Steps IoT Whitepaper Project	Mr. Kaushik Srinivasan, Domain Coordinator Ms. Virginia Cram Martos, Project Leader, IoT Whitepaper Project
10.30	Coffee Break	
11.00	Digital ID for Trade Electronic Notary Data Retention Use of Artificial Intelligence in Trade Facilitation	Working Group
12.30	Lunch Break	

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- Agenda for the day

Time	Topic	Speaker and Comments
14.00	Discussion on privacy laws and its implication on Foreign Trade Supply Chain with special emphasis on IoT, Blockchain	Working Group
	Closing Remarks	Mr. Tahseen Ahmad Khan, Vice Chair, UN/CEFACT
15.30	Coffee Break	

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- International Convention - Trusted Trans-boundary electronic interaction/Mutual Recognition mechanism
  - Cross-border trade requires acceptance of electronic documents by multiple jurisdictions
  - Currently, efforts around mutual recognition are regional or domain specific
  - This project was taken up to develop a framework convention which is intergovernmental
  - Whitepaper approved by Bureau
  - Position Paper prepared and finalized
    - Link to position paper
    - Highlights benefits of cross border trade
    - Regional efforts around mutual recognition and need for framework convention
    - Assessment of Impact

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- International Convention - Trusted Trans-boundary electronic interaction/Mutual Recognition mechanism
  - Suggested Next Steps

    - Understand existing instruments including UNCITRAL Model Laws and any bi-lateral, multi-lateral agreements in facilitating trusted trans-boundary electronic interaction
    - Speak to relevant stakeholders who were part of teams responsible for creation and/or implementation of these instruments to understand their effectiveness
    - Prepare a draft proposal with the findings to be presented to the Bureau
    - Hold discussions with country missions with these findings to ascertain their support for a framework convention
    - Prepare a final proposal with inputs from the above points to be presented to the Bureau and UN/CEFACT plenary
  - To discuss
    - How to arrange for resources for carrying on the above activities
    - Project Team formation
    - Project proposal for the considerations of the Bureau

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- Whitepaper for IoT

  - Following IoT Conferences held as part of eGov work programme

    - Apr 24 conference at Geneva to highlight the positive impact IoT can have on trade facilitation.

    - Oct 15 conference at Hangzhou to highlight use cases and implementation examples

  - After the Geneva conference, a proposal for whitepaper project on IoT was prepared. This proposal was approved by the Bureau recently

  - [Link to proposal document](#)

  - Virginia Cram Martos will be the project leader and will commence work post completion of the Blockchain project

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- Whitepaper for IoT

    - Based on inputs from the conferences and discussions, the project scope will include

        - How IoT technology could be used to facilitate trade and related processes
        - How existing UN/CEFACT deliverables could be used by IoT applications
        - Possible changes to UN/CEFACT deliverables, or new deliverables, that could be considered in order to support IoT trade facilitation related applications
        - Key issues to consider while collecting, analyzing and distributing IoT data

    - The focus areas will include

        - Data Modelling, Process Standardization
        - Interoperability
        - Cyber Security Issues
        - Privacy
        - Legal aspects
        - Analytics/AI Integration, Blockchain Integration
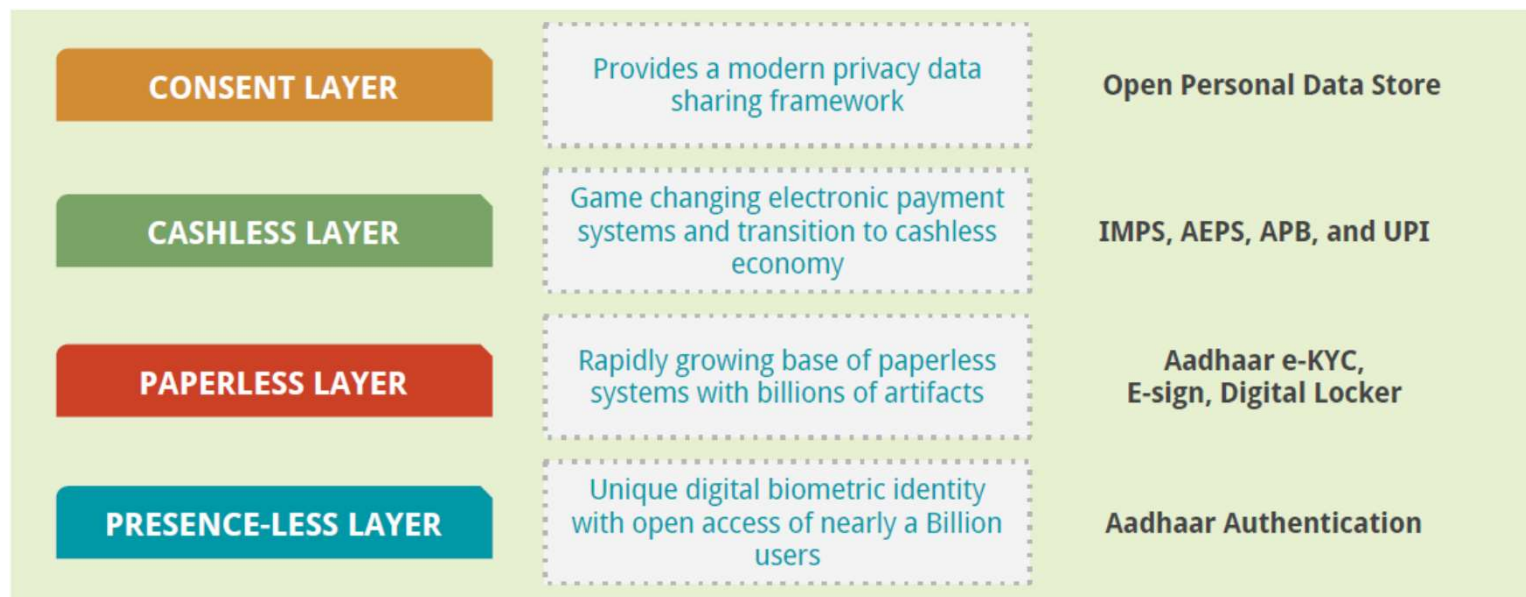
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- Digital ID for Trade
    - Digital ID systems which allow an entity to prove their identity online are opening new possibilities for cross-border trade by eliminating trade barriers and paperwork
    - Many forms of ID exist today which are largely physical and do not provide level of trust required for online trade.
    - Key challenges include
        - Inability to establish level of identity vetting
        - Susceptiblity of the ID to forgery
        - Inadequate information that allows one to uniquely establish the individual or business
    - Digital ID schemes that are well implemented
        - Allow users to establish their identity as part of an online transaction
        - Enable electronic Notaries or Trusted Authorities to verify this identity
        - Provide confidence to relying parties that could include both consumers and businesses
        - Ensure safe access and transfer of online information
        - Facilitate compliance with required regulatory regimes

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- Digital ID for Trade
    - Some examples of Digital ID schemes include
        - AADHAAR (India's Digital ID)
        - E-Residency programme offered by Estonia
        - Australia's Digital Id program
        - GLEIF for KYC
        - Blockchain based Identity Systems
    - The e-Residency programme is interesting as it allows entities to
        - Establish an EU business online which can be administered independent of location
        - Digitally sign, authenticate and encrypt documents/contracts
        - Open an Estonian Bank Account and conduct e-Banking
        - Access international payment service providers
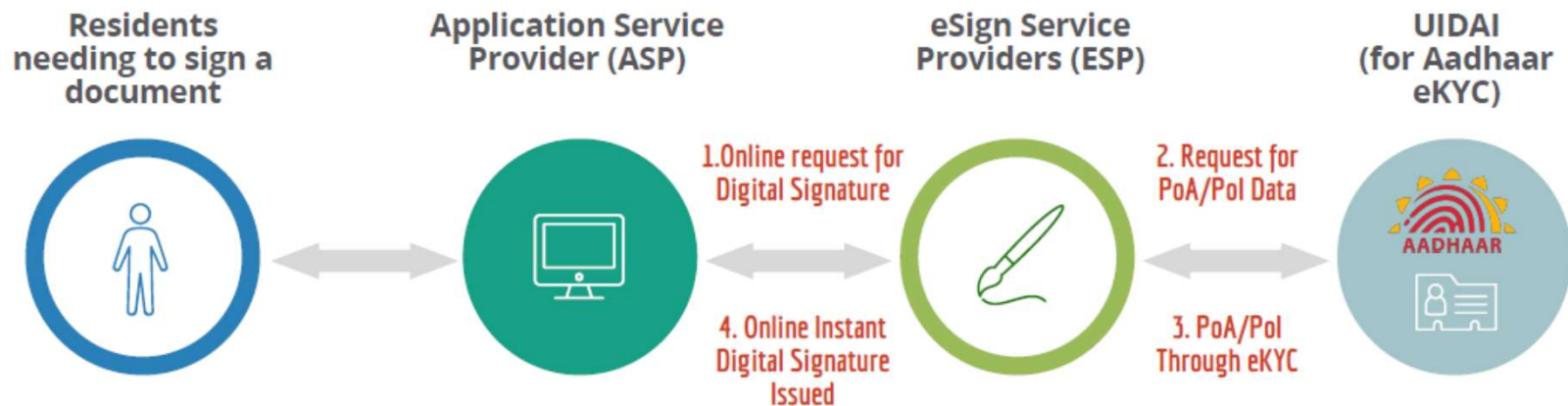
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- Digital ID for Trade
    - AADHAAR Project
        - The AADHAAR project is a digital ID that was given to every resident of India (1.2bn people) over the last 6 years
        - At the time of enrollment, users fingerprints, retina and mobile numbers were captured
        - A centralized authentication mechanism was created through which users could perfom KYC, Signing for the purpose of opening Bank Accounts, availing State Welfare, getting Telecom connections in a matter of minutes in a completely paperless manner

CONSENT LAYER	Provides a modern privacy data sharing framework	**Open Personal Data Store**
CASHLESS LAYER	Game changing electronic payment systems and transition to cashless economy	**IMPS, AEPS, APB, and UPI**
PAPERLESS LAYER	Rapidly growing base of paperless systems with billions of artifacts	**Aadhaar e-KYC, E-sign, Digital Locker**
PRESENCE-LESS LAYER	Unique digital biometric identity with open access of nearly a Billion users	**Aadhaar Authentication**

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- Digital ID for Trade
  - AADHAAR eSign – electronically signing documents with a digital ID from anytime, anywhere

Residents needing to sign a document	Application Service Provider (ASP)		eSign Service Providers (ESP)		UIDAI (for Aadhaar eKYC)
		1. Online request for Digital Signature		2. Request for PoA/PoI Data	
		4. Online Instant Digital Signature Issued		3. PoA/PoI Through eKYC	

- AADHAAR eSign Benefits
  - Legally valid as per Information Technology Act in India with full identity traceability and audit trail
  - Completely paperless workflows for eGovernance (Birth Certificates, Welfare), Banking, Telecom and other use cases (Account Opening, Employee Onboarding etc)
  - Costs were brought down from USD 2 to USD 5c
  - Time taken for workflow completion brought down to **minutes** as against several days in traditional paper based workflows

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- Digital ID for Trade
    - While Digital ID systems hold a lot of promise, key aspects need to be studied
        - Standardization of ID Verification procedures, methodologies, information
        - Authentication, Authorization, Validation mechanisms
        - Cross border regulatory compliance
        - Mutual recognition issues
- Working Group to debate this subject and discuss next steps

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- Data Retention
  - According to IDC, we will create 1800 new exabytes of data this year
  - Organizations are generally required to implement proper information management tools and systems which can store, manage, secure, classify and retrieve information when needed for business or legal purposes
  - Some of the key issues include
    - Access
      - Ability to find records quickly based on appropriate roles and entitlements
    - Tools and associated Cost
      - With rapid growth in volume of data, storage systems have undergone massive change. Tools required to access data stored in older storage systems may no longer be supported
    - Risks and Compliance
      - Ensuring compliance in record keeping and how to decide what to keep and what to destroy?

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- Data Retention
  - Some of the key issues include
    - Productivity
      - Users spend an enormous amount of time in retrieving necessary data be it on emails or in physical documents
      - This results in huge wasted time for employees
- Cross border trade results in huge volume of data generated most of which today is physical in nature and is based on local laws
- Data Retention standards can aid in the preservation of relevant data and in addressing some of the above challenges that organizations are faced with
- Working group to debate this subject and discuss next steps

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- Artificial Intelligence for Trade Facilitation
  - Cross-border trade results in huge volume of structured and unstructured data as part of the buy-ship-pay process
  - Manual processes and analysis of data result in huge turn around times. Key areas include
    - Trade Negotitations
    - Trade Operations (customs, supply chain)
    - Trade transactions (letters of credit, trade finance)
  - Data driven decision making using Artificial Intelligence and Machine Learning can significantly speed up trade processes with reduced errors
  - These could include
    - Statistical and Predictive Models
      - For forecasting demand, fraud detection etc
    - Natural Language Processing
      - Mining text data (invoices, payments etc)
    - Computer Vision
      - Running analytics on images, videos

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- Artificial Intelligence for Trade Facilitation
  - When combined with other systems such as IoT and Blockchain, Artificial Intelligence systems can be powerful in facilitating cross-border trade
  - Working group to debate this topic and discuss next steps

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- Global Privacy Laws and their implication on Foreign Trade Supply Chain
  - GDPR
    - The General Data Protection Regulation or GDPR is a regulation in EU Law on data protection and privacy for all individuals within the EU or EEA.
    - GDPR aims to give control to individuals over their personal data and to simplify the regulatory environment for international business by unifying the regulation within the EU
    - GDPR is becoming a benchmark for many countries to implement data protection codes for ensuring privacy of individuals
  - Some of the other countries that have strong privacy laws include
    - US – which has several sector specific and state specific laws
    - Australia – made up of mix of Federal and State specific laws. Federal Privacy Act 1988 and Australian Privacy Principles apply to private sector entities above turnover thresholds
    - China – PRC Cyber Security Law and General Data Protection Law
    - India – Draft India Data Protection Code

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- Global Privacy Laws and their implication on Foreign Trade Supply Chain
  - Given the wide applicability of privacy laws, it is important to note that organizations that use a system that captures personal data may be subject to compliances to protect personal data.
  - The scope of these systems could include
    - Blockchain systems
    - IoT systems
    - Big Data Processing and Analytics systems
  - Working group to debate and discuss on various implementation examples and to evaluate if a separate programme of work on GDPR and other privacy laws may be required as part of eGovernment domain

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- Conclusion
  - Key cybersecurity related topics pertaining to global trade that are being considered as part of eGovernment domain work programme
    - International Convention on Mutual Recognition mechanism
    - IoT Whitepaper Project
    - Digital ID for Trade
    - Electronic Notary Services
    - Data Retention
    - Artificial Intelligence for Trade Facilitation
    - GDPR and its implications
- Topics to discuss
  - Should conferences be taken on any of the subjects during 2019 Geneva Forum?
  - Suggestions for including other areas of work as part of eGovernment domain work program

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Thank you