Acknowledgement

The research in this presentation is conducted under contract with the U.S Department of Homeland Security (DHS) Science and Technology Directorate (S&T) and sponsored by Kantara Initiative Inc.

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Cyber Security Division
Technology Guide 2018
MDAV Team Profile

• Lockstep
  – Adam Madlin – Project Manager & Biz Dev
  – Les Chasen – Architect and Technical Lead
  – Steve Wilson – Managing Director
  – Bruce Goldsmith – Biz Dev

• Kantara Identity & Privacy Incubator (KIPI)
  – Ruth Puente, Colin Wallis

• CCICADA, Rutgers University
  – Prof Janne Lindqvist
The need

• First Responders (keystone customers)
  – tamper resistant storage in mobiles
  – prove credentials in low/zero network setting
  – provenance of credential issuer and of carriage

• Broader users
  – manage multiple attributes
  – anonymously, pseudonymously
  – decouple attribute issuers, devices, and RPs.
“Stepwise” Attribute Certificates

First Aid Certificate
Medical Training Agency

First Responder (Subject)
Field Officer (RP)

Signed: Device

Device
Smart phone Model M
First Aid Certificate
Medical Training Agency

Incident Report
Event data

User Control
Attribute Authority

Private Key Store

Individual

Device
Attribute

User Control
Attribute Authority

First Responder (Subject)
Field Officer (RP)

Signed: Device
MDAV Phase 2 Execution

• Deliverables
  – Working & Tested Prototype
  – Architecture
  – Video and Marketing Brief

• http://mdav.us

• Cloud Id Summit 6/2017
• Cyber Showcase 7/2017
• DHS S&T Cyber Guide 2018
Phase 3 PoC candidates

- Financial Services ("KYC Once", CNP)
- Clinical trials
- Personal Data Wallet
MDAV Benefits

- Transforms the integrity and privacy of attributes
- Provenance of attributes, issuers and devices
- Disclosure minimization; anonymous if desired
- Matches many supposed qualities of blockchain yet –
  - works offline
  - fast to process
  - leverages mature, standard PKI stack & services
  - simple, elegant architecture & governance
  - low risk.
Discussion

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