

Mobile Device Attributes Validation – MDAV

Kantara Summer Webinar
21 August 2018

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Lockstep Technologies



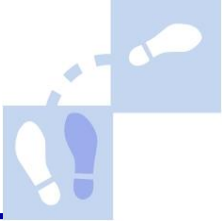
Acknowledgement



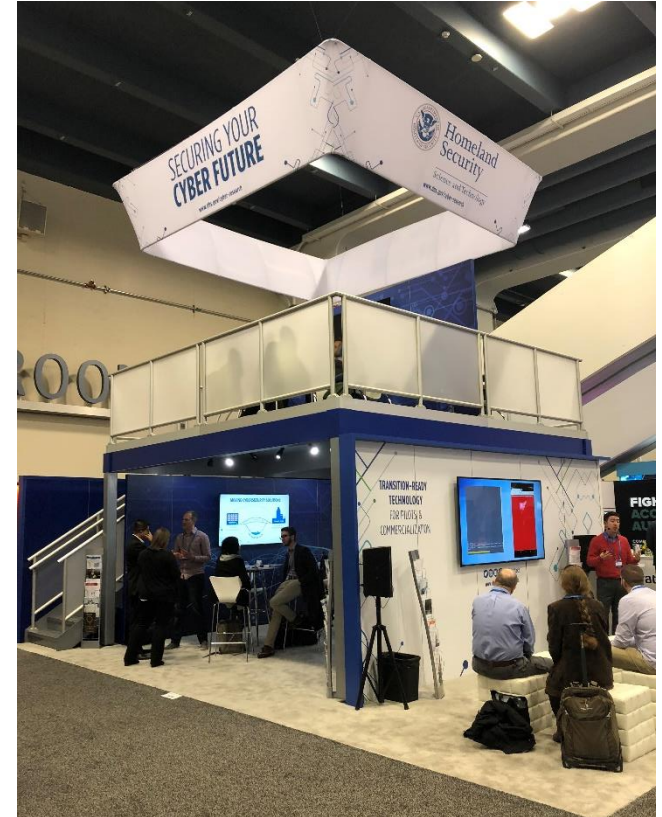
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DHS Science & Technology



The screenshot shows the DHS Science and Technology website. At the top left is the Homeland Security logo. To its right are social media icons for Facebook, Twitter, Instagram, LinkedIn, YouTube, and a search icon. Below these are navigation links: Topics, News, In Focus, How Do I?, Get Involved, and About DHS. A search bar is located to the right of these links. The main header features a blue banner with the text "Science and Technology". Below this is a navigation bar with links for "Our Work", "Business Opportunities", "S&T News", "About S&T", and "First Responders". The main content area has a purple background with the text "LEARN ABOUT THE IDENTITY, CREDENTIAL, AND ACCESS MANAGEMENT (ICAM) EDUCATIONAL SERIES". Below this are two columns of links: "EXECUTIVE PRIMER" and "ACQUISITION GUIDANCE" on the left, and "IMPLEMENTATION GUIDE" and "COMMON APPENDICES" on the right. At the bottom left is a "VISIT" button and the URL "DHS.GOV/SCIENCE-AND-TECHNOLOGY/ICAM". At the bottom right is the Homeland Security logo and the text "Science and Technology".



DHS Science & Technology



Homeland Security

Topics | News | In Focus | How Do I? | Get Involved | About DHS

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Science and Technology

Our Work | Business Opportunities | S&T News | About S&T | First Responders

LEARN ABOUT THE
IDENTITY, CREDENTIAL, AND ACCESS MANAGEMENT (ICAM)
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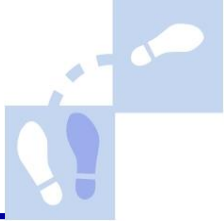
VISIT [DHS.GOV/SCIENCE-AND-TECHNOLOGY/ICAM](https://dhs.gov/science-and-technology/icam)

Homeland Security
Science and Technology

Cyber Security Division Technology Guide 2018

Homeland Security
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MDAV Team Profile



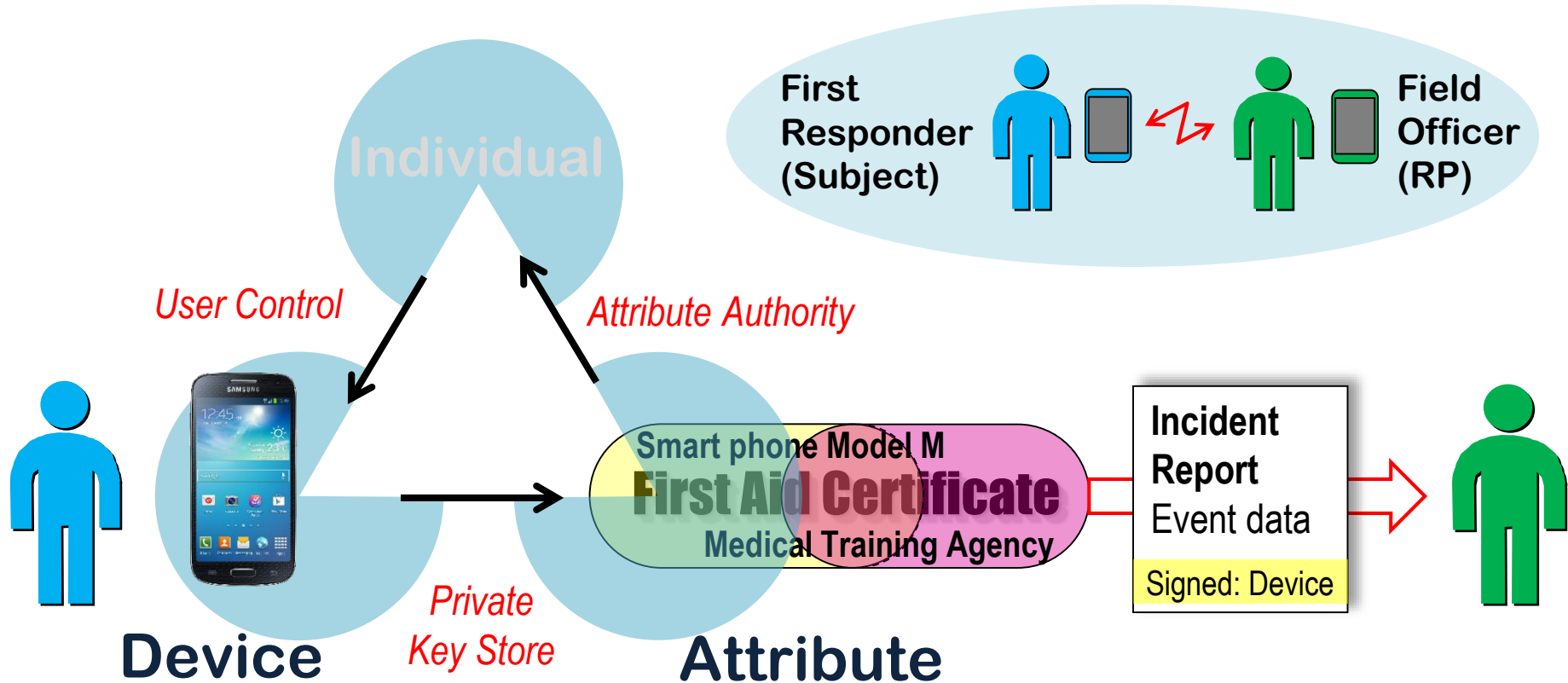
- **Lockstep**
 - Adam Madlin – Project Manager & Biz Dev
 - Les Chasen – Architect and Technical Lead
 - Steve Wilson – Managing Director
 - Bruce Goldsmith – Biz Dev
- **Kantara Identity & Privacy Incubator (KIPI)**
 - Ruth Puente, Colin Wallis
- **CCICADA, Rutgers University**
 - Prof Janne Lindqvist

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



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



Mobile Device Attributes Validation

DHS Cyber Security R&D Showcase 2017, Washington DC

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How do we provide Relying Parties with the verified information they need about a Subject to make a programmatic decision to accept or reject?

A virtual triangle binds Attribute, Individual & Device

Introduction

Authentication and Authorization

Theory – "PKI Redux"

Benefits

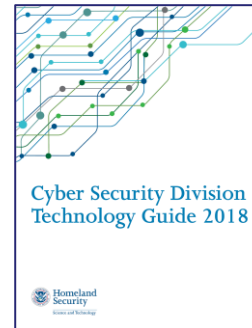
Other applications

References

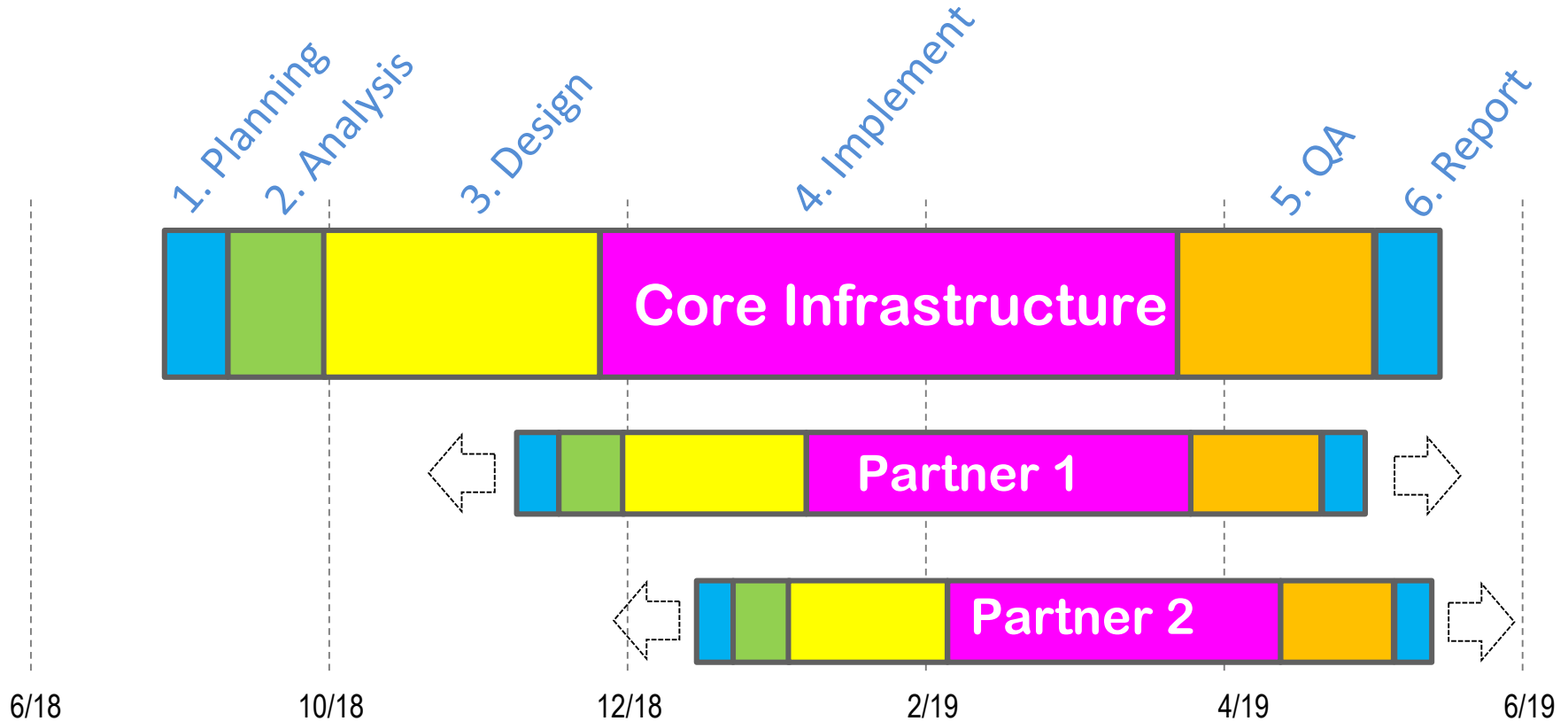
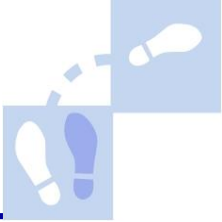
Acknowledgement

First Responder (Subject) **Field Officer (Relying Party)**

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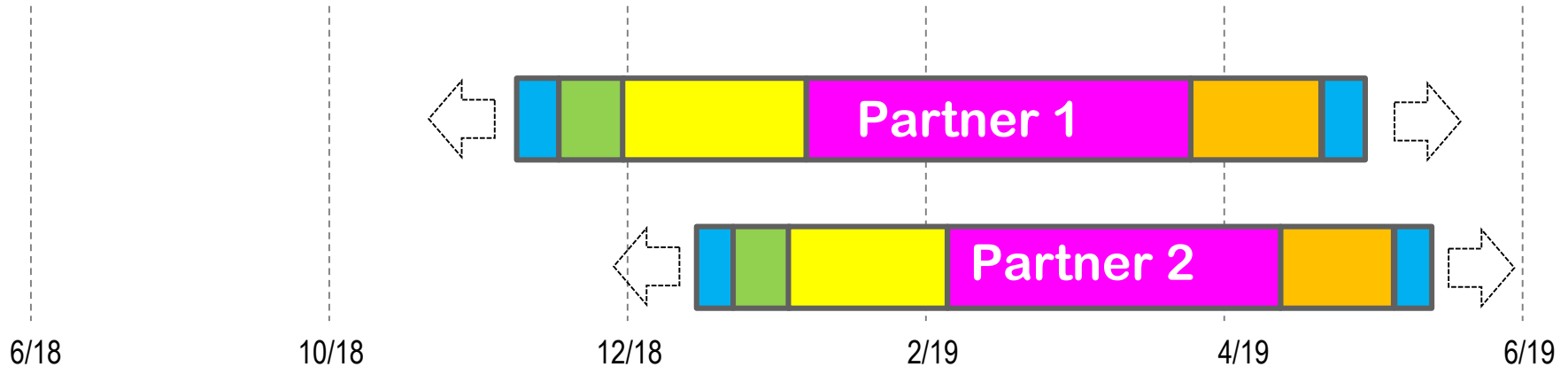
MDAV Phase 3 *Transition*



Phase 3 PoC candidates



- Financial Services (“KYC Once”, CNP)
- Clinical trials
- Personal Data Wallet

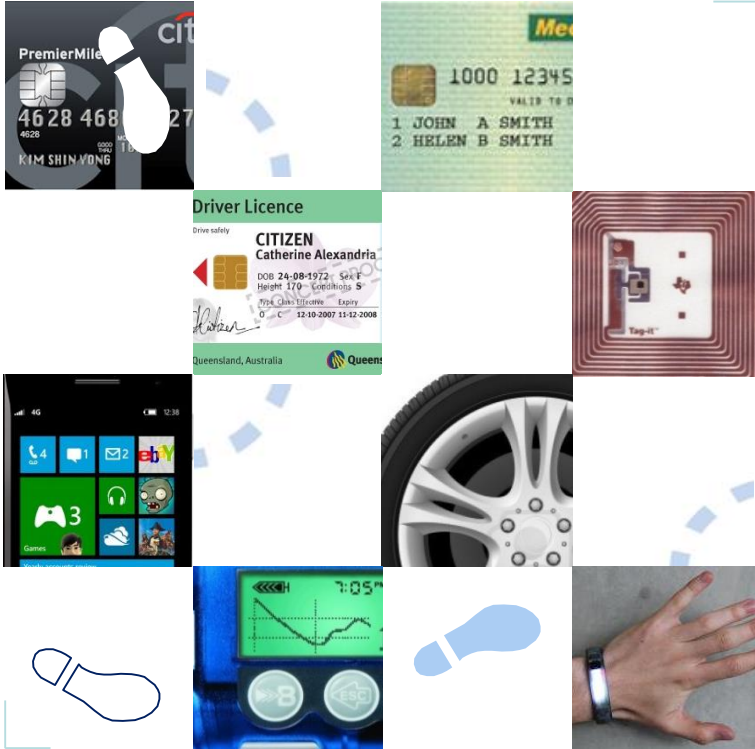


MDAV Benefits



- **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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