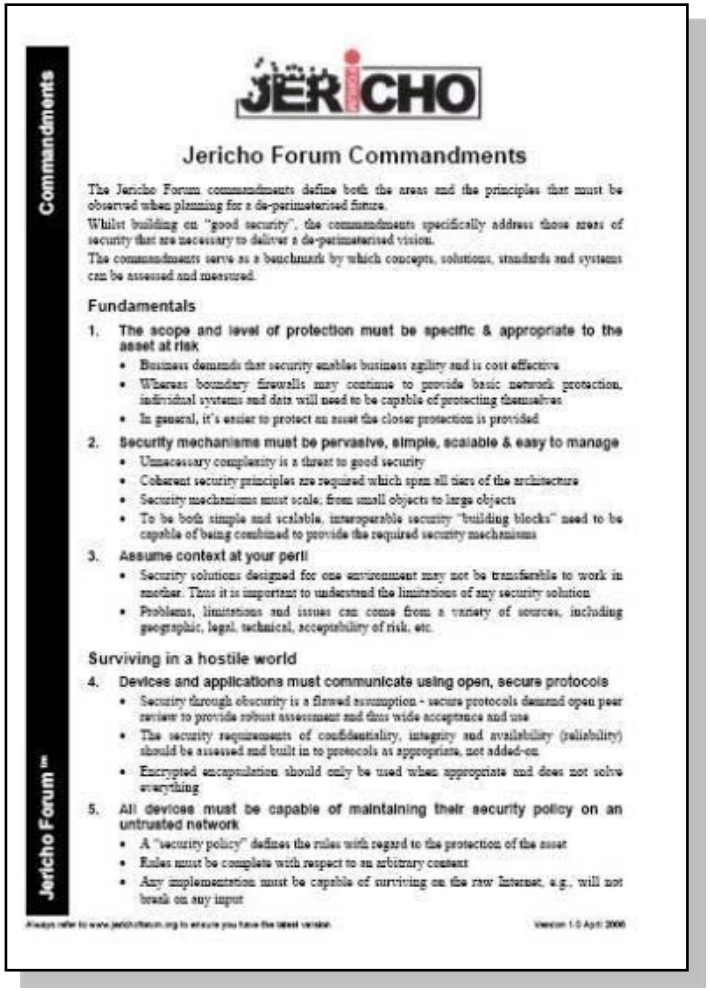
Jericho Forum®

Identity Webinar



Commandments

Jericho Forum Commandments

The Jericho Forum commandments define both the areas and the principles that must be observed when planning for a de-perimeterised future.

Whilst building on "good security", the commandments specifically address those areas of security that are necessary to deliver a de-perimeterised vision.

The commandments serve as a benchmark by which concepts, solutions, standards and systems can be assessed and measured.

Fundamentals

1. The scope and level of protection must be specific & appropriate to the asset at risk
   - Business demands that security enables business agility and is cost effective
   - Whereas boundary firewalls may continue to provide basic network protection, individual systems and data will need to be capable of protecting themselves
   - In general, it's easier to protect an asset the closer protection is provided
2. Security mechanisms must be pervasive, simple, scalable & easy to manage
   - Unnecessary complexity is a threat to good security
   - Coherent security principles are required which span all tiers of the architecture
   - Security mechanisms must scale; from small objects to large objects
   - To be both simple and scalable, interoperable security "building blocks" need to be capable of being combined to provide the required security mechanisms
3. Assume context at your peril
   - Security solutions designed for one environment may not be transferable to work in another. Thus it is important to understand the limitations of any security solution
   - Problems, limitations and issues can come from a variety of sources, including geographic, legal, technical, acceptability of risk, etc.

Surviving in a hostile world

4. Devices and applications must communicate using open, secure protocols
   - Security through obscurity is a flawed assumption - secure protocols demand open peer review to provide robust assessment and thus wide acceptance and use
   - The security requirements of confidentiality, integrity and availability (reliability) should be assessed and built in to protocols as appropriate, not added-on
   - Encrypted encapsulation should only be used when appropriate and does not solve everything
5. All devices must be capable of maintaining their security policy on an untrusted network
   - A "security policy" defines the rules with regard to the protection of the asset
   - Rules must be complete with respect to an arbitrary context
   - Any implementation must be capable of surviving on the raw Internet, e.g., will not break on any input

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Jericho Forum™

Jericho Forum Commandments

Identity Commandments

"Identity" Commandments

The Jericho Forum® Identity, Entitlement & Access Management (IdEA) Commandments define the principles that must be observed when planning an identity eco-system.

Whilst building on "good practice", these commandments specifically address those areas that will allow "identity" processes to operate on a global, de-perimeterised scale; this necessitates open and interoperable standards and a commitment to implement such standards by both identity providers and identity consumers[1].

The IdEA commandments serve as a benchmark by which Identity, Entitlement and Access Management concepts, solutions, standards and systems can be assessed and measured. They are supported by a Jericho Forum IdEA Glossary and other related documents. They also build on the higher level Jericho Forum Commandments, in particular Commandments 2, 8, 9 and 10.

Identity and Core Identity

1. All core identities must be protected to ensure their secrecy and integrity
   - Core identifiers[2] must never need to be disclosed and are uniquely and verifiably connected with the related Entity
   - Core identifiers must have a verifiable level of confidence
   - Core identifiers must only be connected to a persona via a one-way linkage (one-way trust)
   - An Entity has Primacy over all the identities and activities of its personae
   - Entities must never be compelled to reveal a persona, or that two (or more) personas are linked to the same core identity[3]
2. Identifiers must be able to be trusted
   - Identifiers must be appropriately unique and related to the entity's core identifier to enable a definable level of [system] trust of the entity to exist.
   - The identifier for a persona (even if serial pseudo-anonymous[4]) can be used to develop reputational trust of that persona, for example for credit transactions.
   - The identifier for a persona when linked to other attributes or other personas can develop contextual trust, for example linkage to government issued attributes / identifiers.
3. The authoritative source of identity will be the unique identifier[5] or credentials offered by the persona representing that entity
   - Entities have primacy over all linkages of their personas with their public identifiers
   - The strength of the identity offered will define the level of trust that can be placed in the related persona, especially when a verified identifier or verifiable credentials are offered.

Multiple Identities (Persona)

4. An Entity can have multiple, separate Personas (Identities) and related unique identifiers[5]
   - A Principal or resource owner may choose when to create a Persona (Identity) and related Unique Identifier, and which attributes are connected to that persona.

1 Jericho Commandment #4 and #6 apply to ensuring open, secure and interoperable standards
2 A core identifier may refer to a physical, biological or digital entity
3 Derived pseudo-anonymity guarantees the same entity in multiple interactions without being able to identify the actual entity
4 A 3rd party (e.g. organisation) may choose to create a shadow or internal identifier for an entity for internal purposes
5 We consider this as something that should be enshrined in privacy law, and/or in UN Declaration of Human Rights

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Jericho Forum Identity Commandments

Freely available at www.jerichoforum.org/publications.htm


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Photo © Paul Simmonds

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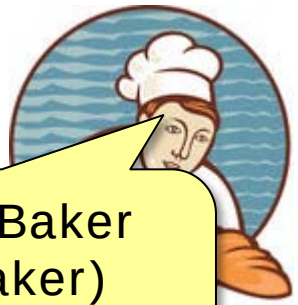
Q3

15 miles

Parents: David & Mary

Tom David-son (Tom Davidson) Attribute: Son of David & Mary



Tom the Baker (Tom Baker) Reputation: Good Bread

Same Person
or same ***Core Identity***

Facial Biometric
or ***Core Identifier***
Immutably linked

Two ***Personas***

Name: Tom Davidson
Age: 19
Address: Little Plumton
Father: David
Mother: Mary

Village Persona

15 miles

Name: Tom Baker
Occupation: Bread Seller
Reputation: Good
Business Address: Cart
Business Hours: Mon-Fri

Town Persona

Primacy: Yes

Royalty Free Clipart: http://www.clipartof.com/portfolio/patrimonio/

Key aspects for privacy & primacy

- Immutable linking of Core Identity to Core Identifier
  - The only thing we really care about is serial pseudo-anonymity
- Free to set up as many (or as few) Persona's
- The entity must have primacy over all it's personas
- One way trust from unique identifier to a persona
- Thus not able to go "back up the tree"
- Acid test: can you anonymously vote?

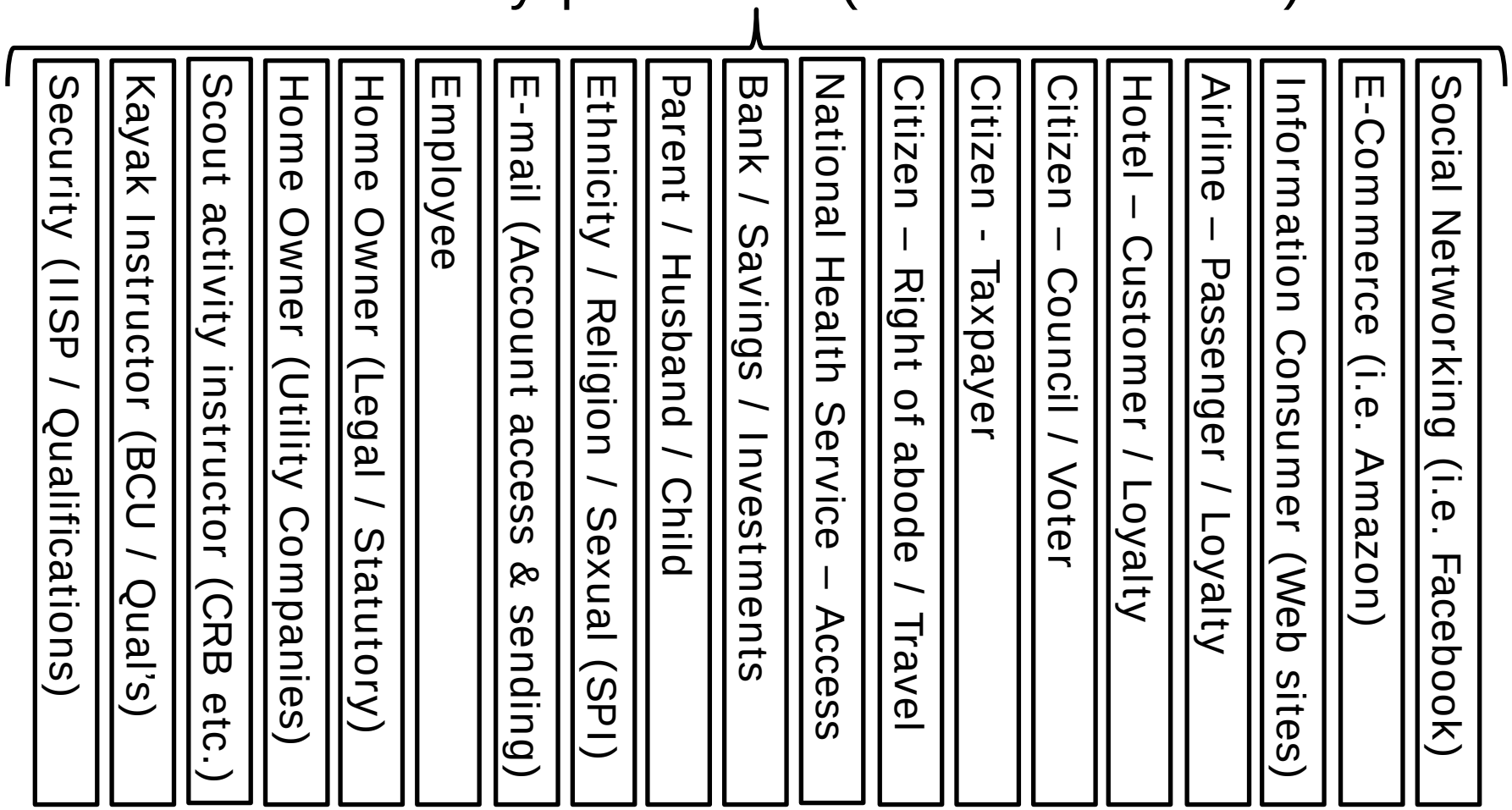
Entities

- Users
- Devices
- Organizations
- Code
- Agents

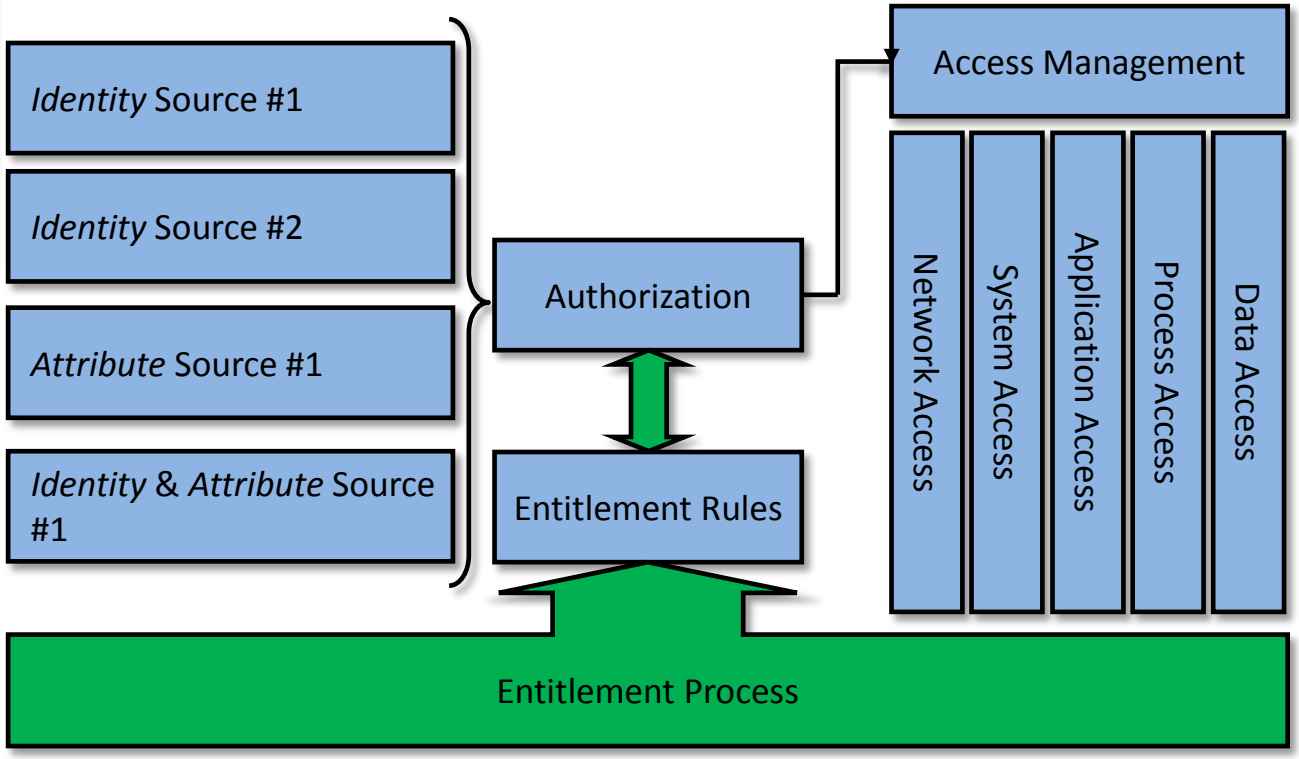
Note:
Data is not an entity unless self-protecting – then it's code!

Core Identity

Some of my persona's (Paul Simmonds)

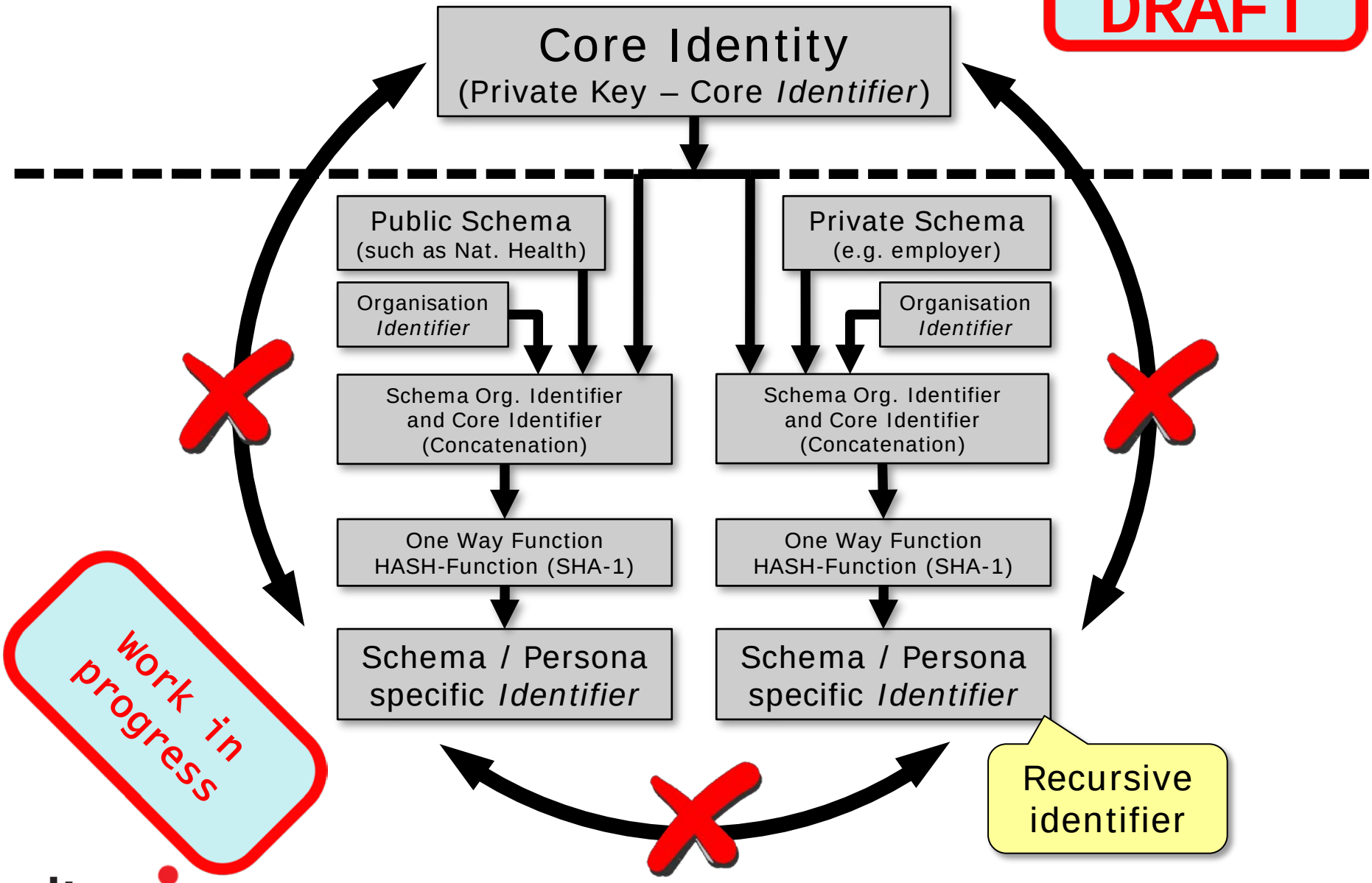


Personas of my *Core Identity*



Source: CSA Guidelines v3.0

DRAFT



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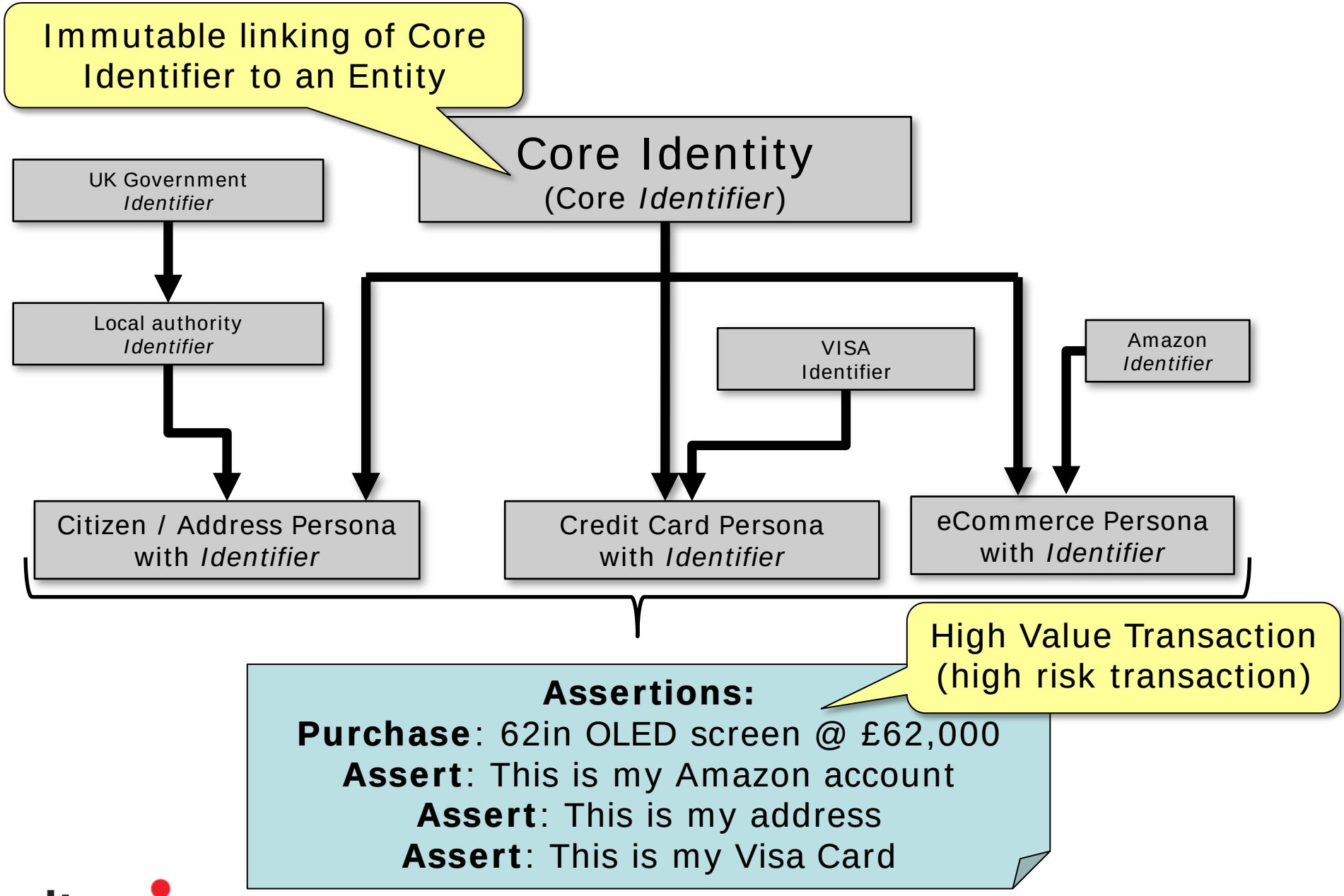
Immutable linking of Core Identifier to an Entity
Core Identity
(Core *Identifier*)
UK Government *Identifier*
Local authority *Identifier*
VISA Identifier
Amazon *Identifier*
Citizen / Address Persona with *Identifier*
Credit Card Persona with *Identifier*
eCommerce Persona with *Identifier*
High Value Transaction (high risk transaction)
Assertions:
Purchase: 62in OLED screen @ £62,000
Assert: This is my Amazon account
Assert: This is my address
Assert: This is my Visa Card

Government Schemes

- UK ID Scheme (failed)
- NSTIC (National Strategy for Trusted Identity in Cyberspace)
- STORK (pan-European recognition of electronic Ids)
- UK Cabinet Office initiatives
- Other Government ID Schemes
  - German “EID card”
  - Austrian “Citizen Card”
  - Estonian “ID Card”
  - Finland “Citizen Certificate”
  - Hong Kong “Smart ID Card”
  - Malaysian “MyCad”
- EURIM

Acid tests for a good Identify Ecosystem

- Secure – open to review by experts
- Trust eco-system – needs to be built on rock
- Open cryptography
- Recursive cryptography
- Open implementation reference model
- Implementable anywhere in the world

Read more in the Jericho Forum response to NSTIC

http://www.nist.gov/nstic/governance-comments/Jericho-Forum_NSTIC-NOI-July2011.pdf

Action List

- Read the JF Identity Commandments
- Implement identity for all entities
- Mobile Device Management to onboard user-owned BYOD
- Implement authentication with attributes and rules (entitlement rules)
- Have good Master Data Management processes
- Develop a good identity strategy
- Perform an Identity risk assessment as it's foundation
- Get involved in NSTIC
- Add a SAML capability (to existing corporate ID solution)
- Adopt Open Authentication (OAuth)

Questions & Comments

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Shaping security for tomorrow's world

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