UNESCAP Webinar
Trends in Digital Identity Verification for Secure Cross-Border Paperless Trade
United Nations Transparency Protocol (UNTP)

Steve Capell
UNTP Project lead
https://unefact.github.io/spec-untp
Date: 08-08-2024
Transparency is the sunlight that exposes greenwashing

But it has to work AT SCALE to have any impact

Thousands of platforms, millions of value-chains, billions of products

UNTP

1 million UN DPPs per day
That takes a lot of moving parts to come together

**SECURE the data**
- Decentralised Access Control (DAC)
  - Prove authority to access sensitive data, no matter where it is located.
- Digital Identity Anchor (DIA)
  - Get proof of identity and role from a trust authority and use it anywhere
- Verifiable Credentials Profile (VCP)
  - Make all credentials tamper-proof, verifiable, revokable & interoperable

**FIND the data**
- Identity Resolver (IDR)
- Get list of links
- Scan barcode on the box or the document
- Digital Traceability Event (DTE)
- Get the data
- Traceability
- Digital Product Passport (DPP)
- Transparency
- Digital Conformity Credential (DCC)
- Trust
- Lookup meaning

**VALUE the data**
- Business Case Template (BCT)
  - Individual organisation business case for UNTP implementation
- Community Activation Program (CAP)
  - A community level business case for collective action.
- Value Assessment Framework (VAF)
  - Ongoing post-implementation reporting to track value.

**UNDERSTAND the data**
- Sustainability Vocabulary Catalogue (SVC)
  - IFRS/GRI etc maps to catalogs
  - ISO/IEC etc
  - UNEP/FAO etc
  - ESRS/SEC etc
- 1000's Sectoral/local rules
- Global references
- 1000's Sectoral/local rules
- Global references
We’ll take a look at “finding & securing the data”

**SECURE the data**
- Decentralised Access Control (DAC)
  - Prove authority to access sensitive data, no matter where it is located.
- Digital Identity Anchor (DIA)
  - Get proof of identity and role from a trust authority and use it anywhere
- Verifiable Credentials Profile (VCP)
  - Make all credentials tamper-proof, verifiable, revokable & interoperable

**FIND the data**
- Identity Resolver (IDR)
  - Get list of links
- Scan barcode on the box or the document
- Digital Traceability Event (DTE)
  - Get the data
- Digital Product Passport (DPP)
  - Transparency
  - Lookup meaning
- Digital Conformity Credential (DCC)
  - Trust
- Get proof of identity and role from a trust authority and use it anywhere

**VALUE the data**
- Business Case Template (BCT)
  - Individual organisation business case for UNTP implementation
- Community Activation Program (CAP)
  - A community level business case for collective action.
- Value Assessment Framework (VAF)
  - Ongoing post-implementation reporting to track value.

**UNDERSTAND the data**
- Verifiable Credentials Profile (VCP)
  - 1000's Sectoral/local rules
- Global references
  - Sustainability Vocabulary Catalogue (SVC)
- Catalogs
  - IFRS/GRI etc
  - ISO/IEC etc
  - UNEP/FAO etc
  - ESRS/SEC etc
  - UN/CEFACT
  - ABNT
  - MLA
  - RBA
  - ASC
  - TSM
  - NGER
  - VCS
  - IRMA
  - etc.
  - maps to
  - IFRS/GRI etc
  - ISO/IEC etc
  - UNEP/FAO etc
  - ESRS/SEC etc
  - UN/CEFACT
  - ABNT
  - MLA
  - RBA
  - ASC
  - TSM
  - NGER
  - VCS
  - IRMA
  - etc.

Sustainable and Digital Trade Facilitation Week  |  8-12 July 2024  |  Geneva
The Identity Resolver (IDR) is the signpost to verifiable data.

And must work whether the identity is of a product, a facility, or a legal entity

- **Products**
  - Clothing item
    - Id = SGTIN
  - Cow
    - Id = NLIS

- **Facilities**
  - Chemical Plant
    - Id = GLN
  - Farm
    - Id = PIC

- **Entities**
  - Brand
    - Id = vLEI
  - Farmer
    - Id = ABN

And must work with today's identifiers such as 1-D barcodes or “ABN”:"12345678910"
How does that work? As easy as 123 (or D-R-V)

1. **Discover**
   - **Identified product**: Billions of these
   - **Scan product**
   - **Or find the Id in a document**

2. **Resolve**
   - **Identity Resolver (IDR)**
   - **Query IDR**: productID
   - **Resolve product id -> URL**
     - Using ISO 18975
   - **Return Link List**
     - linktype:DPP
     - linktype:PCDS
     - linktype:DIA
   - **Get DPP & DIA &and verify them**
     - Using W3C Verifiable Credentials

3. **Verify**
   - **Digital Identity Anchor (DIA)**
   - **Manufacturer or Brand**: Thousands of these
Here’s another scenario – trade finance

Finance Institution

Human - OR - Machine

Scan Invoice QR
Or find the Id in a document

Resolve business id -> URL
Using ISO 18975

Query IDR
businessID

Return Link List
linktype:EntityRecord
Linktype:DIA

Identity Resolver (IDR)

Get INV & DIA and verify them
Using W3C Verifiable Credentials

Digital Invoice Credential

link

Digital Identity Anchor (DIA)

Get INV & DIA and verify them
Using W3C Verifiable Credentials

Manufacturer or Brand
Thousands of these

National Business Register
One of these per jurisdiction

Commercial Invoice
Billions of these

1 Discover

2 Verify

3 Resolve
Why is this so important for UNTP?

- It works even when there are non-participating intermediaries like a sale-yard or a distributor. If you have the ID you can always get the data.
- It works over any distance or time. For example a car battery at a recycling plant after 5 years of use. How would the recycler even know who to ask?
- It is equally usable by humans or machines. For example the issuer does not have to know whether to push via API or send a PDF. Just go 100% digital without any dependencies.
- It is flexible to support any kind of data. A DPP is just one link type. Also get material safety data sheets, product circularity data sheets, and so on.
- It imposes very low overhead on existing registry operators. Just add one new data item. The link resolver for that member ID is over there at this URL.
- Data integrity is very high. Data sets can be signed for integrity and encrypted for confidentiality. Confidently share what delivers value.
- In short – it’s far more scalable than any other data exchange mechanism. We need this to reach our goal of 1 million DPPs issued per day!
What does this mean for you?

If you run any kind of authoritative register such as:
• A national business register
• A land/location register
• A product register

Then you’ve done 90% of the hard work already!
• Managing registrations
• Managing updates
• Managing identity

Just add a resolver service and issue identity anchor credentials
• Allows your members to prove their ID to any other party (eg a bank)
• Allows your members to expand upon the core data in your registry
• Minimally just one new attribute (a resolver URL) and a few lines of code to issue credentials
Thank you!

Steve Capell
UNTP Project lead
https://uncefact.github.io/spec-untp
Date: 08-08-2024