

Mar 19, 2026

# UNTP Technical WG

Invited [bvanderpol@usetappr.com](mailto:bvanderpol@usetappr.com) [markus@danubetech.com](mailto:markus@danubetech.com)  
[christian.orlowski@4therecord.io](mailto:christian.orlowski@4therecord.io) Dr. Susanne Guth-Orlowski [Nicholas Smith](#)  
Phil Archer ~~Jo Spenceer~~

Attachments [UNTP Technical WG](#) [Notes - UNTP Technical WG](#)

## Summary

Verifiable credential creation and linked data graph verification were discussed, along with a focus on mitigating proprietary verification systems.

### Formal Guidance on Verification

The group needs to consider formal guidance for verifying linked data graphs, such as ensuring all actors in an export chain have a required deforestation certification. This guidance could be provided through an actor publishing a set of essential constraints, similar to a conformity vocabulary catalog.

### Constraining Graphs with SHACL

SHACL is required to constrain the graph structure for complex verification checks across the transparency graph. Recognized DIDs can be enumerated within the SHACL constraint file to list valid certifiers for a retailer.

### Democratizing the Verification Process

Concern was raised about proprietary black box solutions dominating the market by providing non-transparent verification outcomes. The digital

identity anchor concept was clarified as the intended function to bind an economic operator's legal identity to their DID.

## Details

- **Discussion of Verifiable Credential Creation and Challenges:** Harley Thomas and Adrienna Zsakay discussed Adrienna Zsakay's initial work on creating a verifiable credential (VC), which they achieved using services from a third-party company. Adrienna Zsakay reported being stuck because they had downloaded wallets but could not open their VC and were attempting to figure out the reason. Harley Thomas humorously suggested that this technical hurdle was a situation where one would typically involve Chat GPT.
- **Need for Formal Guidance on Linked Data Graph Verification:** Harley Thomas introduced an issue concerning the verification of linked data graphs, using the example of verifying that red meat exported to the EU is deforestation-free. They suggested that verifying compliance requires checking constraints across multiple actors and systems, such as ensuring all farms and livestock properties have a linked deforestation certification from approved certifiers, and that this data is aggregated in an RDF dataset. Harley Thomas proposed that the group needs to consider providing more formal guidance on this process, possibly through a system similar to the conformity vocabulary catalog where an actor publishes a set of essential constraints.
- **Exploring Technical Constraints for Graph Verification with SHACL:** Phil Archer and Harley Thomas discussed the technical means of constraining data graphs, noting that while a JSON schema file can suffice for simple checks, SHACL (Shapes Constraint Language) is needed to constrain the graph structure. Phil Archer raised doubts about whether SHACL alone can ensure that data within constrained attributes—such as a URL—points to the valid external credentials needed for a Digital Product Passport (DPP). Harley Thomas clarified that they envision the SHACL constraints being applied to an RDF data set after traversing the entire transparency graph.
- **SHACL and Enumerating Valid DID Issuers:** The conversation addressed whether SHACL can enumerate a list of valid issuers (DIDs), as the retailer might want to reflect a list of approved certifiers provided by an industry or government organization rather than maintaining their own list. Harley Thomas suggested

that the recognized DIDs could serve as the enumerated list within the SHACL constraint file. Phil Archer confirmed that this approach would make sense for listing DIDs, although independent verification of the credential itself would still be necessary.

- **Addressing the Risk of Proprietary Verification Systems (Black Boxes):** Harley Thomas emphasized the importance of democratizing the verification process, expressing concern that proprietary "black box" solutions created by technology providers might dominate the market by checking the most constraints without transparency. They noted that non-technical users will primarily seek a simple "green tick" as the verification outcome. Harley Thomas committed to further breaking down this issue and investigating if SHACL files can link to one another to streamline the process of updating lists of recognized certifiers.
- **Investigation into Tracking Users via Human-Rendered UNP Credentials:** Harley Thomas raised a concern about Universal Network Protocol (UNP) credentials having a human-rendered capability, which presents an attack surface for tracking users, similar to how embedded code tracks email opens. Phil Archer responded that the current draft of the render method specification addresses this by mandating that VCs rendered in HTML must be displayed in an isolated iframe, ensuring a secure and isolated execution environment. Phil Archer also committed to finding the most up-to-date documentation on the render method specification and asking the working group about the potential for including a tracking pixel.
- **Review of Digital Wallets in the UNP Best Practices:** Harley Thomas confirmed that updates have been published to the UNP best practices regarding the use of digital wallets, reflecting the consensus that while the UNP is global and some use cases do not require a wallet (e.g., Australian livestock), the guidance will not preclude their use where legislatively required. Christian Orłowski suggested using the term "business wallet" instead of "EU digital identity wallet" for clarity, as the latter primarily targets humans. Christian Orłowski also noted they were having difficulty commenting on the page through GitLab.
- **Clarifying the Concept of Identity Credentials (Digital Identity Anchor):** Christian Orłowski introduced a new issue regarding the lack of a clear concept for "identity credentials" within the protocol, despite the critical need to verify actor identity in the supply chain. Phil Archer and Harley Thomas clarified that the **\*\*digital identity anchor\*\*** is intended to serve this function, binding an economic operator's legal identity (like an LEI or Australian business number) to their DID,

which can then be referenced when issuing a digital product passport. Christian Orłowski noted that the identity credential concept is not clearly visible in most current diagrams, which they found confusing.

- **Need for Simplified Training Modules for Decision Makers:** Adrienna Zsakay reported on the work of the Training and Guidance Working Group, focusing on creating learning modules for non-technical decision-makers (CEOs of micro and small businesses) to understand and adopt the UNP protocol within a two to three-hour period. Adrienna Zsakay stated the need to translate complex technical discussions, such as those regarding credentials and data creation, into simplified learning content. Harley Thomas agreed to follow up on a learning design canvas document that Adrienna Zsakay had previously shared.
- **Status Update on Conformity Vocabulary Catalog Criteria:** Christian Orłowski provided an update on discussions with Steve regarding the mandatory or optional status of the conformity topic within a claim, which is not yet fully resolved. Christian Orłowski also mentioned that Steve is investigating how to make one of three evidence-related attributes mandatory (e.g., link to schema, link to criterion, or link to reference) so that at least one form of evidence linkage is present in the claim. Phil Archer briefly noted that ongoing work in the Confidence Method working group is addressing similar issues related to evidence and assurance.

## Suggested next steps

- Harley Thomas will break down the issue around verifying linked data graphs into a couple of different issues and go through the transcript to discuss how to enumerate different things and if shackle files can be linked to one another.
- Harley Thomas will check the render method page to see if there is something to point to regarding UNTP credentials tracking users.
- Phil Archer will ask at the next relevant group meeting about including a tracking pixel in the rendering of UNP credentials.
- Christian Orłowski will have one more discussion with Steve about whether the conformity topic should be required or optional in the claim.
- Christian Orłowski will have a closer look at the issue regarding the registered ID being obtained after the DPP is created.

You should review Gemini's notes to make sure they're accurate. [Get tips and learn how Gemini takes notes](#)

Please provide feedback about using Gemini to take notes in a [short survey](#).