

Addressability is The Missing Link (in the Web of Trust)

LinkedClaims: An Open Standard for Addressable Claims

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Abstract

Trust and credibility of information is critical to a functioning society. While cryptographic signing and blockchain validation provide technical verification, they are insufficient to predict the truth of an assertion. This paper introduces LinkedClaims, an open standard for addressable claims that enables cross-domain credibility assessment. We present the technical specification, analyze existing implementations across diverse domains, and outline the ecosystem development pathway.

*Organization 1

[†]Organization 2

[‡]Their Organizations

1 Abstract & Technical Specification

1.1 Cross-system Trust Verification Challenge

1.2 Open Standard Solution

1.3 Technical Requirements Overview

2 Technical Architecture & Security

2.1 URI-addressability Requirements

2.2 Hashability and Cryptographic Standards

2.3 Security Analysis

2.4 Integration Flexibility

2.5 Privacy Preservation Architecture

3 Implementation Analysis

3.1 Compliance Testing Framework

3.2 Implementation Examples

3.2.1 Skill Credentials System

- US Chamber of Commerce Implementation
- Cross-border Recognition Patterns
- Integration with Educational Systems

3.2.2 Supply Chain Verification

- UN CRM Implementation
- Traceability Architecture
- Multi-party Validation Flows

3.2.3 Environmental Monitoring

- Open Forest Protocol Integration
- Sensor Data Validation

- Impact Assessment Framework

3.2.4 Philanthropic Impact Tracking

- Grant Outcome Verification
- Impact Measurement Standards
- Cross-organization Validation

3.2.5 Blockchain Wallet Credentials

- Identity Verification Patterns
- Privacy-preserving Claims
- Cross-chain Compatibility

3.3 Integration Patterns

3.3.1 Blockchain Compatibility

3.3.2 Verifiable Credentials Alignment

3.3.3 Web Embedding Methods

3.4 Open Source Libraries

3.5 Private Data Handling Patterns

4 Community Applications & Use Cases

4.1 Current Implementations

4.2 Network Effects

4.3 Cross-domain Benefits

4.4 Public/Private Data Models

5 Ecosystem Development

5.1 Integration Pathways

5.2 Partnership Examples

5.3 Network Growth Patterns

5.4 Commercial Implementation Opportunities

5.5 Value Capture Models

5.6 Marketplace Dynamics

6 Technical Roadmap

6.1 Standards Development

6.2 Research Directions

6.3 Open Challenges

6.4 Community Contribution Framework

6.5 Commercial Extension Patterns

References

A Technical Implementation Details

B Integration Examples

C Security Considerations