Trusted Internet
Towards the realization of the secure use of information for people

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Agenda

• Overview of the session
  • Purpose
    • Give short presentation of overview on the trusted Internet that makes arbitrary data verifiable on the Internet, discuss and gather feedback.
  • Goal
    • To find partners to discuss it with.

• Positioning of the trusted Internet (5min.)

• Proposal of the trusted Internet (15 min.)

• Open discussion (30 min.)

• Wrap-up (5 min.)
Issue

• There is no way to confirm the credibility of data on the Internet

There might be flooding!

Stock up on supplies

Feels danger, anxiety, panic, heavy traffic, shortage of disaster supplies

SNS

There might be flooding!

View

Spread

Social and economic confusion

Citizen

Post

News

Flooding in Tamagawa River

Viewer

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Trust in Business

Verification of source authenticity

Prevention of spoofing and tampering

Verification with trusted people

Relationships bring truth

Need more ways to build trustworthy on anybody and anything

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Our approach / Trusted Internet

• Can provide endorsements to judge the credibility of this article

Humans and devices endorse the article from various aspects

Citizen

There might be flooding!

Endorser

The poster is a neighbor.

10 minutes ago

The water level is low.

Viewer

Suspicious!

Because the water level is low now at that point.
Architecture

- Introduce an endorsement layer on the Internet

Can get endorsements for target data from the endorsement layer in the trusted Internet.
Endorsement graph

• Endorsements on the endorsement layer constitute endorsement graph
  • Contains the relations between article, data and endorsements
  • Verifiable each endorsement with digital signature

There might be flooding!

- poster : Z
- signature : ...
- river water level: low
- signature : ...

Location : XX
date : YY
signature : ...

company B (Camera vendor)

tamper resistance: true
signature : ...

government officer

affiliate: E
experience : 3 years
signature : ...

camera C by company B

vendor : B
signature : ...

city K

endorser

don't contain
Generation of endorsement graph

- Endorsers add endorsements in relation to the article at any time
- Viewers request additional endorsements if needed
Presentation of endorsement graph

• Display additional information based on the endorsement graph
Conclusion

• Trusted Internet helps people make proper decision with endorsements
  • Endorsements can be added to the endorsement graph anytime from devices on the real world

There might be flooding!

Endorsement layer

I don’t believe this article.

Endorsement graphs grow over time and leads people to proper decision.
Discussion

• Use cases, stakeholders, related technologies, standards, similar activities?
  • Ex. W3C Verifiable Credentials, W3C Web of Things, W3C Web Annotation
• Ecosystem: Addition of endorsements
  • Mechanisms that encourage issuers to add endorsements (Rules/Technology)
• The others
Thank you

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