Many differing types of claims, in a wide variety of contexts are required to be shared. There is also a variety of methods for proving 'claims' and most cases seem to rely on paper-based workflow, and there is limited adoption of digital signatures.

Even when it’s possible to issue grades or credits, for example, where there is an international standard for sharing, there is no way to provide additional context, and there is no way to certify interns or provide standard recommendation letters.

This means that academic freedom can be disrupted by bureaucracy.

A permanent record is required, and a centralised database would be a very risky solution to the provision of a permanent record.

The system needs to enable participation, must work across device types, must not be complicated to use, and must not use technology that creates lock-in.

Making the signature process akin to an e-banking process will mean the process will be familiar to most people, and will include the benefit of MFA.

An interesting aspect is the social construction of authenticity: how will users trust it, like an official stamp?

This work builds on initiatives like eduBadges, EELISA, Erasmus without paper, etc.

Technology selected for signatures was W3C Verifiable Claims.

Solana chosen as the blockchain platform.

Legal research was undertaken to ensure GDPR compliance and the legal framework for digital signature is available.

An ‘account score’ is given to a user based on the quality of the information stored at the IdP.

There are rules as to the level of score than can be used for the various levels of certification.

A code book has been designed, as it is understood that many users would not want to use an application like Google Authenticator.

The service contains a verifier function.

There is potential to productise this into something very meaningful to our community.

Question: is there a way to revoke a signature? e.g. if a user cheated in an exam.

Answer: it's designed so as it's not possible to revoke the PDFs, but additional information can be overlayed.

Question: how similar or different is this to the eduSIGN service that SUNET produced, and, the SWITCH service.

Answer: there is a difference, but we'd need to follow up for further details on the SUNET initiative. Re SWITCH Verify (for diplomas, long-lasting signatures): the approach is similar, they store hashes of the document on a blockchain, but the difference is that the technical information is hidden behind properties and not included in the printed document.

There is also SWITCH Sign: for contracts (short term).
### Discussion

How can we make this actionable?

An ‘as a service’ variable would be a good approach to use.

It would be interesting to see how we could bridge this into the world of wallets. e.g. once a signed document has been created, how can that be digitally represented in a Wallet.

What is clear is that users don’t know what to get signed, how to sign it, and what needs to be done to make it legal. What would be useful in the space, more broadly would be the information to help users understand what needs to be done.

There is a potential to take signatures forward in WP8 GN5.

### Future meetings:

- **Monday 19th September, 14:00-16:00 CET** [https://events.geant.org/event/1130/](https://events.geant.org/event/1130/)
  - Update on the EU Wallet pilots /initiative (Klaas or Leif)
  - Microsoft Product Manager for ION DLT for MS Authenticator? TBC
  - Niels to present after the conclusion of the ION DLT pilot
- **Monday 21st November, 14:00-16:00 CET** [https://events.geant.org/event/1131/](https://events.geant.org/event/1131/)

### Post event survey:
[https://events.geant.org/event/1129/manage/surveys/](https://events.geant.org/event/1129/manage/surveys/)

### Meeting recording:

### Attending:

- Niels van Dijk, SURF
- Robert Ott, SWITCH
- Gert De Braekeleer, Belnet
- Mihály Héder, BME
- Craig Dillon, HEAnet
- Leif Johannsen, SUNET
- Dubravko Penezić, SRCE
- Jose Manuel Macías, SIR/redIRIS
- Nicole Harris, GEANT
- Victoriano Giralt, redIRIS
- Wolfgang Pempe, DFN-AAI

### Apologies:

- Janos Mohácsi, KIFÜ