eID-developments

PI.lab dag, 11 dec, 2015

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11 dec. 2015

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Outline

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Where we are, sofar

Background

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- The NL government is in the process of introducing a new national electronic identity — abbreviated as eID
  - the system is called Idensys

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pilab.nl/index.php/2015/11/09/
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  - Not everyone was amused . . . especially not by the (harsh) tone

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- eID-topic has been hijacked by the Ministry of Economic Affairs
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  - commercial interests of a few companies are leading
  - privacy parlance is empty ritual

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  - interoperability does not exist, via differences of pseudonyms
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- PIA has prominent positive conclusions; critique is hidden
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- The blog calls for a comparison between centralised and decentralised architectures — as a basis for a conscious choice

Where we are, sofar

Important underlying architectural choice

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Where is identity information of users stored?

- **centralised**: under control of intermediate parties
- **decentralised**: under control of the users

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Two concrete realisation of these architectures:

- centralised: Idensys
- decentralised: IRMA

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- centralised: Idensys
- decentralised: IRMA

Our aim is to give a conceptual analysis of the two architectures — and not to go into the details

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Centralised versus decentralised, schematically

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Centralised: everything goes via the Identity Provider

Decentralised: everyting goes via the User

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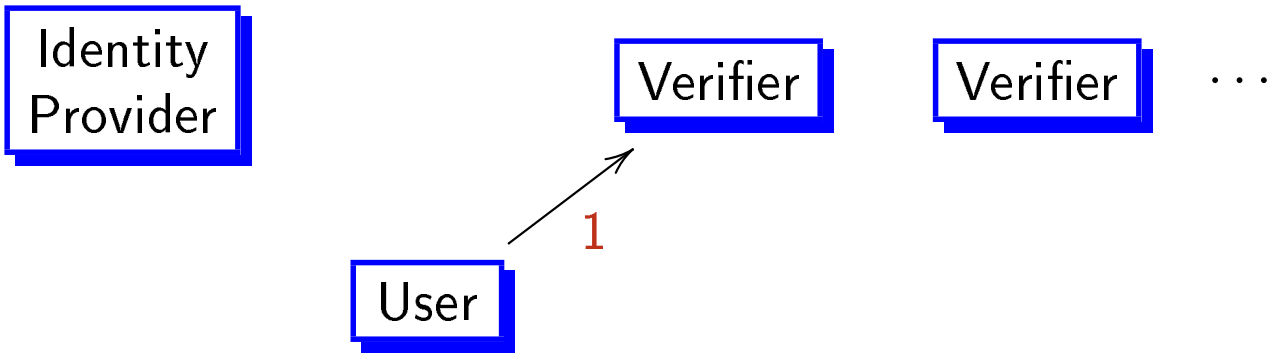

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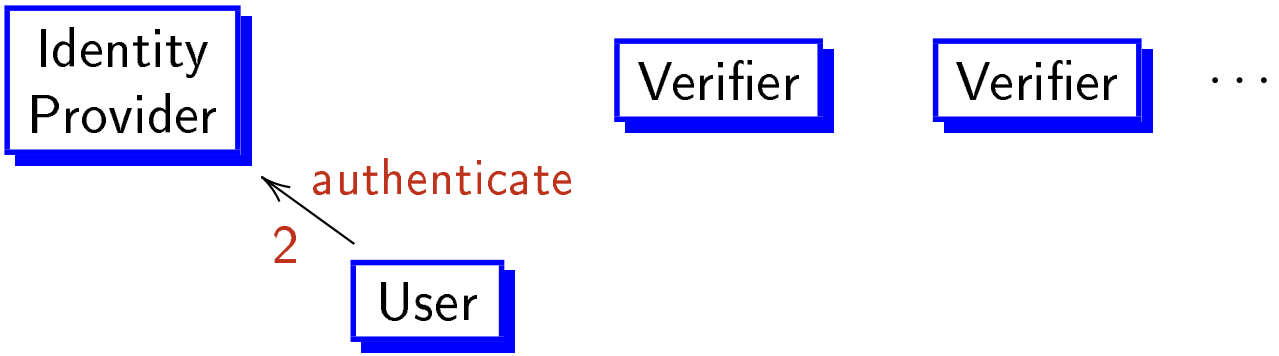

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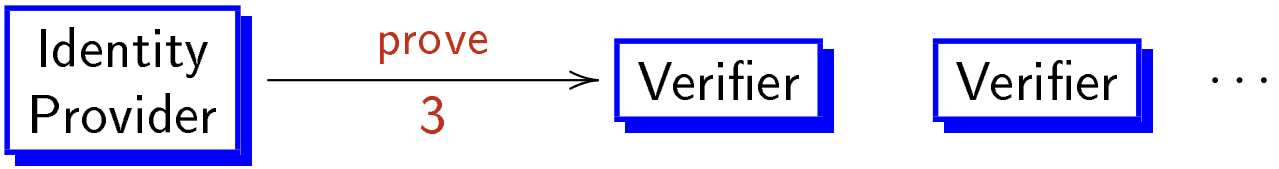

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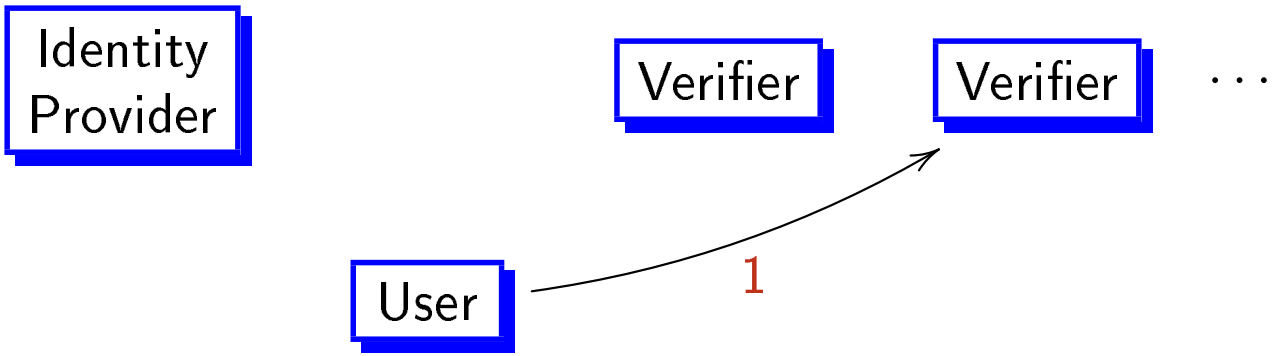

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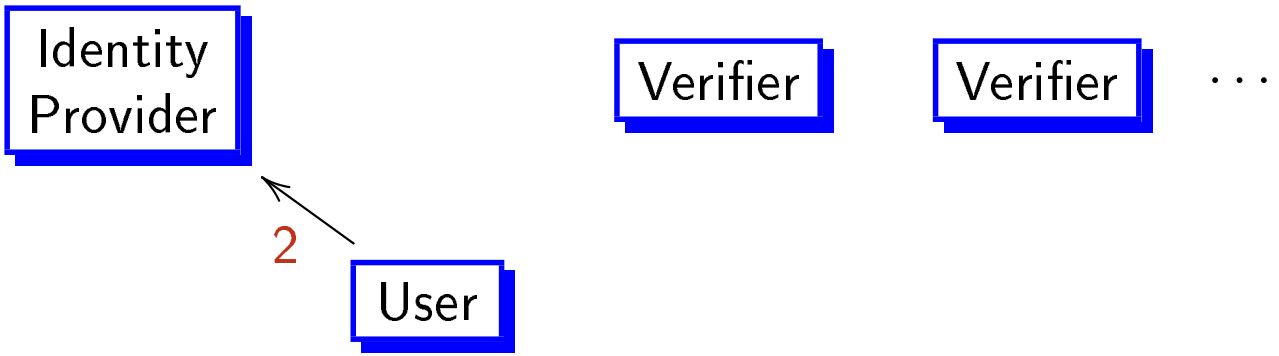

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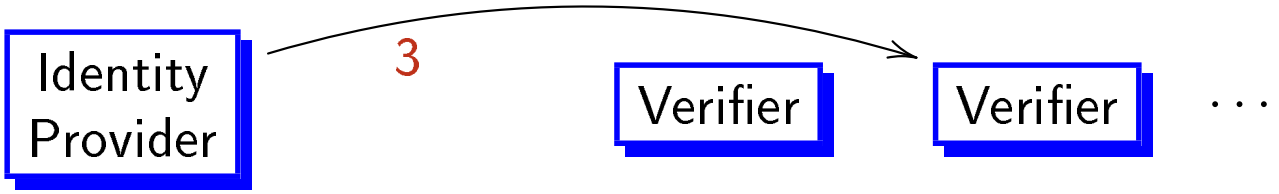

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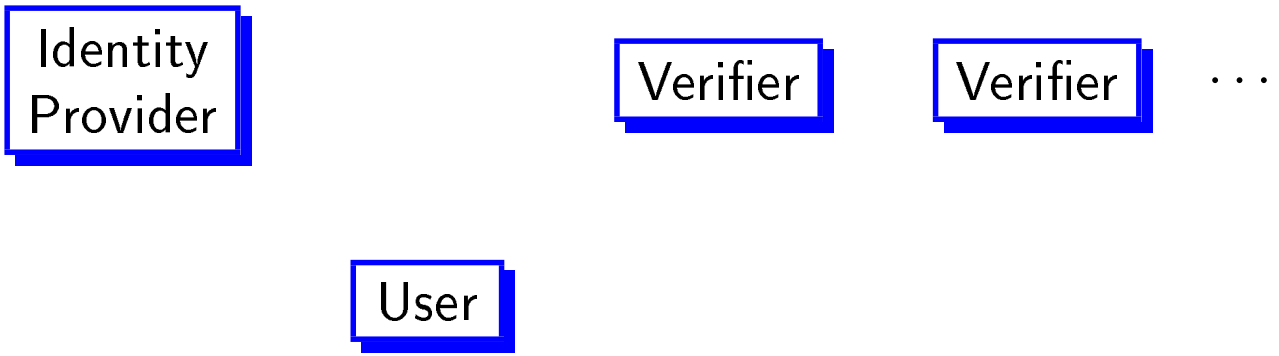

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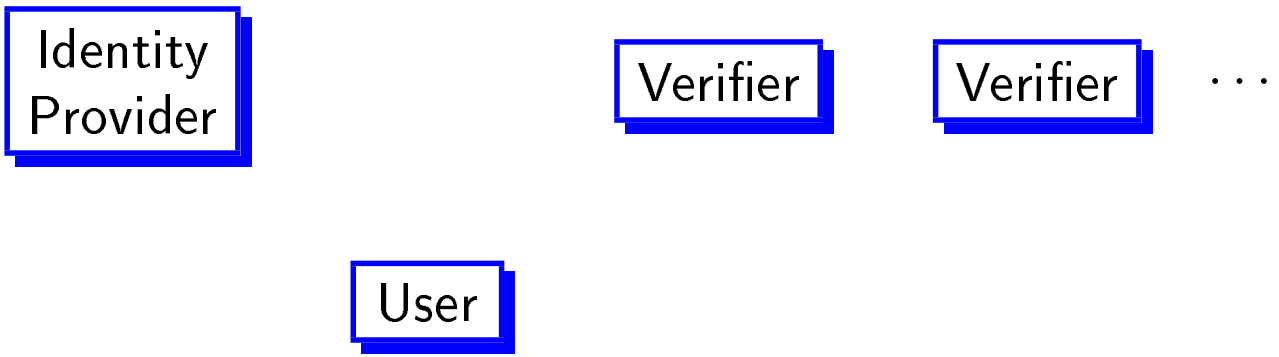

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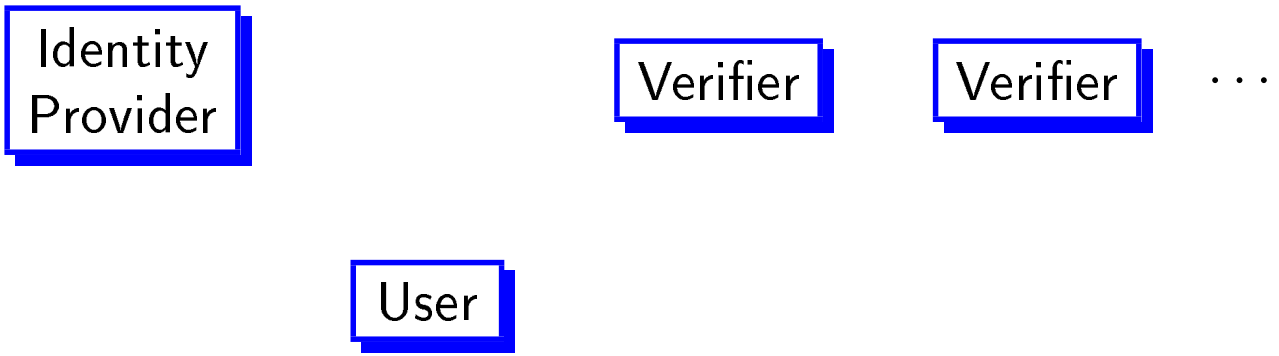

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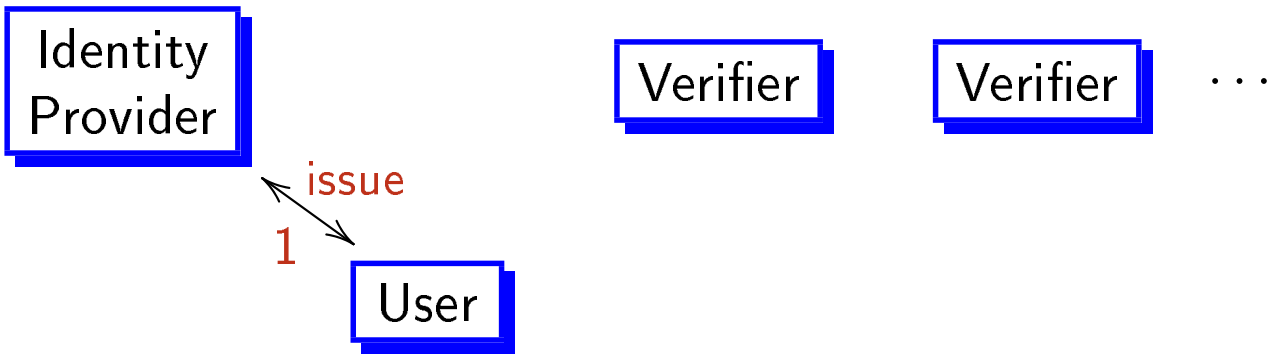

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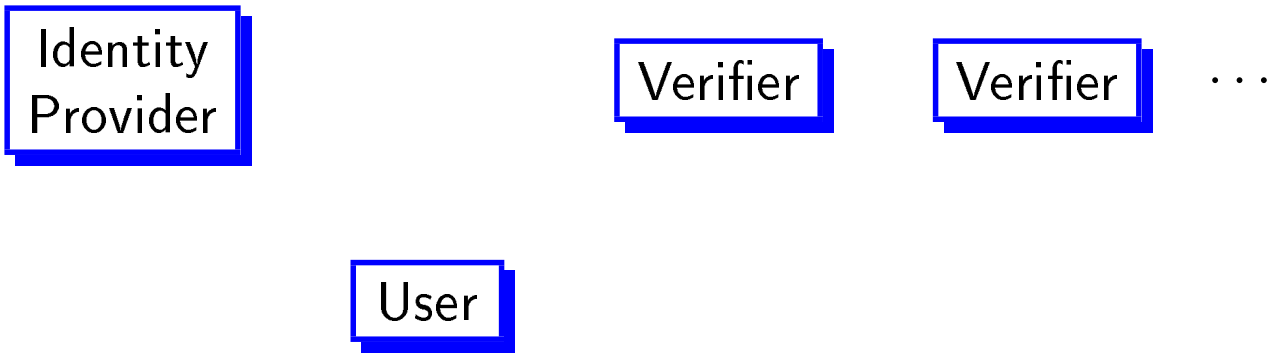

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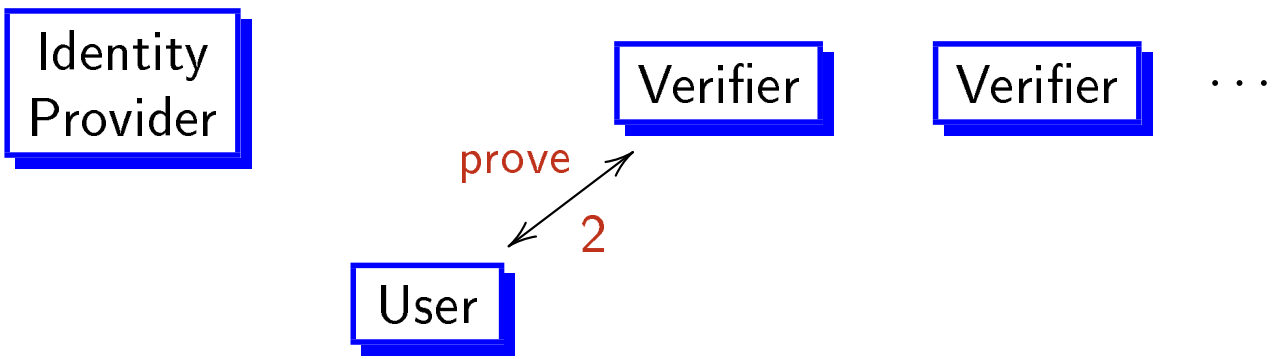

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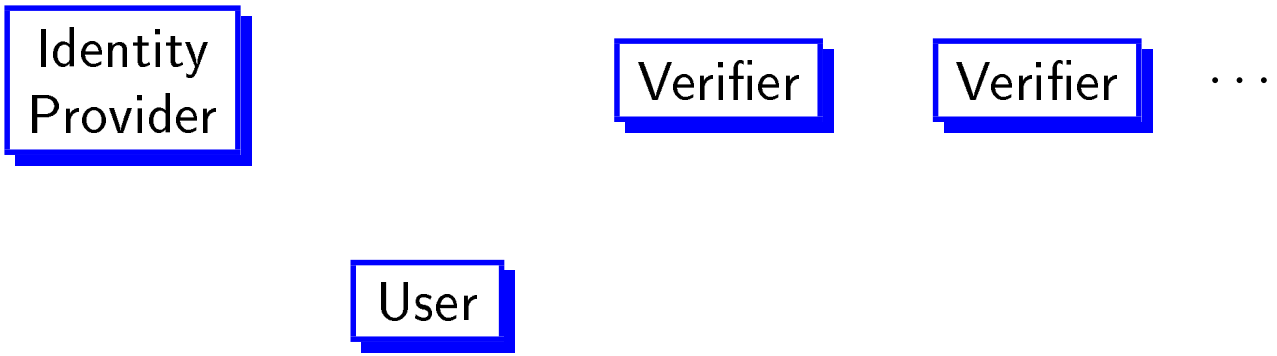

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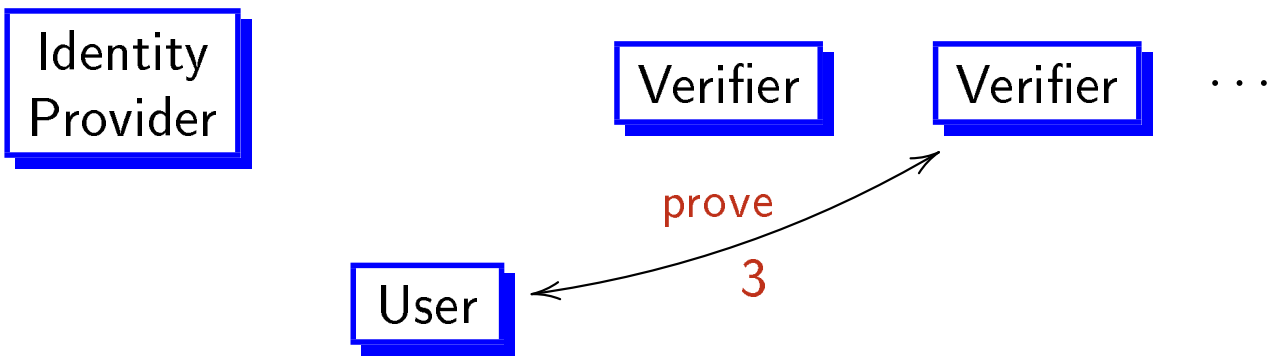

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    (and not just between pimp and verifier, like in Idensys)
- Users will have to re-construct their identity information in case of loss, theft, or renewal of these devices
  - they will also have to revoke the data on their old device

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Observation III

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  - they control and monitor all information flows
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- The dream-position for the information giants of the world
  - think of Baidu, Google, Facebook etc. in such a role
  - the fear of verifiers, as expressed by bol.com

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Observation IV

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- The public sector will thus have to play a steering role
  - or data protection authorities, or possibly judges, eventually

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Parliamentary subcommittee: 25 nov. 2015

MP Oosenbrug asks about central versus decentral

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Minister Plasterk answers

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Dan heb je twee modellen. Het ene model is dat je dat decentraal organiseert. Dus je hebt alle informatie op een drager staan, op een telefoon of op een kaartje, of wat dan ook, en dan is die makelaar puur een doorgeefluik.

The Minister's reasoning, continued

[...] wanneer je het decentraal maakt, dan ben je volledig van het middel afhankelijk, en de keuze zoals wij die hebben gemaakt is om te zeggen: wij kunnen het niet helemaal overzien, we denken nu aan een chipje op je paspoort of op je rijbewijs of op je bankpas, of misschien een appje op je telefoon. Ik was gisteren bij een bedrijf [...] Er zijn allerlei technische mogelijkheden, en we zouden niet bij dat stelsel op voorhand ons aan één techniek willen verbinden, en dat pleit er uiteindelijk voor, in de afweging zoals we hem hebben gemaakt, om die makelaar, dus ook de inhoud te laten dragen, zodat we dus met tokens, en sleutels en Google brillen, en weet ik wat voor dingen er nog komen, allemaal bij die informatie zouden kunnen. Maar ik ben het er mee eens, dat is wel een reële keuze.

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(The MPs accepted this answer without any further discussion.)

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"But, I agree, there is a real choice!" — and it has already been made!

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This difference is not the most important one!

- certainly because different technologies for user-pimp communication yield incompatible outcomes (pseudonyms) in Idensys
- the argument is weak, and disregards the more fundamental issues

Where we are, sofar

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(1) True end-to-end authentication with IRMA token via Idensys

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- The naive combination uses IRMA for user-authentication to Idensys central parties (*authenticatiediensten*)
  - this destroys all privacy-friendliness of IRMA, since transactions become traceable
- There are two "machiato" versions (think of "latte" or "cafe")

(1) True end-to-end authentication with IRMA token via Idensys
  - proposed by Eric Verheul
  - intermediate parties see nothing, but verifiers must do more
  - end-to-end may be required in certain sectors, like health

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(2) External apostiller check in every IRMA authentication
  - the apostiller is needed, but cannot see transaction details
  - it can be used for easy revocation and anti-fraud monitoring
  - current topic of research

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Where we are, sofar

Main points

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- Information flows and authentication requirements determine power relations in modern societies
- The choice of authentication architecture is extremely sensitive
  - substantial differences exist between central and decentral
  - power and (financial) control are key in the central approach
  - privacy and autonomy are leading in the decentral one

  What kind of society do we prefer to live in?
- The NL authorities have made their choice very early on
  - flimsy technical differences are exaggerated now
  - value-laden discussion is avoided altogether
- Who will defend "the public good" in the digital world?
  - a sombre mood is what remains.
  - a lost opportunity for privacy

See the PI.lab blog for more (cheerful) discussion.

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Finally . . .