Groningen Declaration the future of academic data digital portability

Victoriano Giralt

Chairperson Groningen Declaration Network

Credentials Work Group Conference call November 18th, 2014

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Diploma mill



http://www.uma.es/servicio-central-de-informatica/info/7785/museo_impresion/

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"All your documents are born digital"

Thomas C. Black, @stanford.edu

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Digital Diploma Deposits

- Fraud prevention
- Friction reduction
- Loss recovery

Digital Diploma Deposits

What's all this about? What has identity to do with it?

- Data ownership
- Privacy rights
- Identification
- Access
- Comparability
- Compatibility
- Aceptation
- Recognition

Information in electronic form, our main character

in electronic form, our main character

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in electronic form, our main character

+ Easy to transport

in electronic form, our main character

- + Easy to transport
- + Easy to store

in electronic form, our main character

- Easy to transport
- + Easy to store
- + Easy to process

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in electronic form, our main character

- + Easy to transport
- + Easy to store
- + Easy to process
- + Easy to retrieve

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in electronic form, our main character

- + Easy to transport
- + Easy to store
- + Easy to process
- + Easy to retrieve
- + Easy to create

in electronic form, our main character

- + Easy to transport
- + Easy to store
- + Easy to process
- + Easy to retrieve
- + Easy to create
- + Easy for the environment

The big tree killer

bad for the environment



CC-BY-SA 2.0 M J Richardson <http://www.geograph.org.uk/photo/510110>

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The big tree killer

bad for the environment



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The big tree killer

bad for information freedom



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Information caught in the paper jail

as soon as it gets printed

01010 10101		.010101010	101010
10101 01010	010101 1010101010	101010101	010101
			-
10101 1010	01010: 010101010	01010101	0101
01010 10101	L0101 DI01010101	.010101010	10101(
10101 01010	01010: 1010101010	101010101	010101
01010 10101	L0101 101010101010101	010101010	10101(
10101 01010	01010 01010101010	101010101	010101
10101 1010	010101 010101010	01010101	0101
01010 10101	10101 10101010101	010101010	10101(
10101 01010	01010: 01010101010	101010101	010101
01010 10101	L0101 1010101010101	010101010	10101(
1010 01010	0101	101010101	010101
10101 01010	10101 10101010	01010101	10101
01010 10101	10101 10101010101	010101010	10101(
10101 01010	01010	101010101	010101

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freedom lost in the paper jail

01010	1010101010	0101010101	010101010	101010
10101	0101010101	1010101010	101010101	010101
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10101	101010101	010101010	01010101	0101
01010	1010101010	0101010101	010101010	10101(
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10101	10101010	10101010	01010101	0101
01010	1010101010	0101010101	010101010	101010
10101	010101010	1010101010	101010101	010101
01010	101010101	0101010101	010101010	10101(
10101	01010101	.01010101	101010101	010101
10101	0101010	10101010	01010101	N 10101
01010	101010101	0101010101	010101010	101010
10101	010101010101	1010101010	101010101	010101

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freedom lost in the paper jail

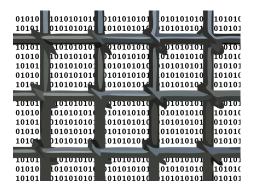
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10101	101010101	010101010	01010101	0101
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01010	1010101010	0101010101	.010101010	L0101(
10101	010101010	101010101	101010101	010101
10101	101010101	10101010	01010101	0101
01010	101010101	0101010101	010101010	10101(
10101	010101010	010101010	101010101	010101
01010	101010101	0101010101	010101010	L0101(
1010	01010101	01010101	101010101	010101
10101	0101010	10101010	01010101	10101
01010	1010101010	0101010101	010101010	01010
10101	0101010101	1010101010	101010101	010101

- Difficult to transport

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freedom lost in the paper jail

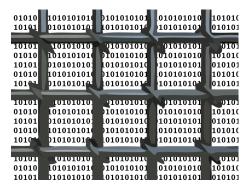


- Difficult to transport
- Difficult to preserve

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freedom lost in the paper jail



- Difficult to transport
- Difficult to preserve
- Difficult to retrieve

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freedom lost in the paper jail

01010	1010101010	0101010101	.010101010	10101(
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10101	101010101	010101010	01010101	0101
01010	1010101010	0101010101	010101010	10101(
10101	010101010:	1010101010	101010101	010101
01010	1010101010	0101010101	010101010	10101(
10101	010101010	101010101	101010101	010101
10101	10101010	101010101	01010101	0101
01010	1010101010	0101010101	010101010	101010
10101	01010101010	1010101010	101010101	010101
01010	101010101	0101010101	010101010	10101(
1010	01010101	101010101	101010101	010101
10101	0101010	10101010	01010101	N 10101
01010	1010101010	0101010101	010101010	101010
10101	b101010101	010101010	101010101	010101

- Difficult to transport
- Difficult to preserve
- Difficult to retrieve
- Too easy to create

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freedom lost in the paper jail

01010	10101010101	0101010101	.010101010	10101(
10101	0101010101	1010101010	101010101	010101
10101	101010101	010101010	01010101	0101
01010	1010101010	DI01010101	010101010	10101(
10101	0101010101	1010101010	101010101	010101
01010	1010101010	0101010101	010101010	10101(
10101	010101010	101010101	101010101	010101
10101	10101010	10101010	01010101	0101
01010	101010101	0101010101	010101010	101010
10101	010101010	1010101010	101010101	010101
01010	101010101	0101010101	010101010	101010
1010	010101010	01010101014	101010101	010101
10101				N 10101
01010	101010101	0101010101	010101010	101010
10101	010101010	01010101010	101010101	010101

- Difficult to transport
- Difficult to preserve
- Difficult to retrieve
- Too easy to create
- Bad for the environment

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Standards Trust

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TCP/IP BGP SMTP HTTP IMAP XMPP X.509 TLS SAML OAuth OpenID SOAP XML ReST JSON PDF ODF SCHAC MLO ELM ELMO

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http://www.eid-stork.eu/

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http://www.edugain.org/

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http://www.groningendeclaration.org/

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Behavioral trust

- person to person
- institution to institution
- person to institution
- reputation based
- supported by *feelings*

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Trust

Technical trust

- institution to institution
- institution to *network*
- system to system
- procedure based
- supported by technology



The three laws of crypto

- Confidentiality
- Integrity
- Non repudiation

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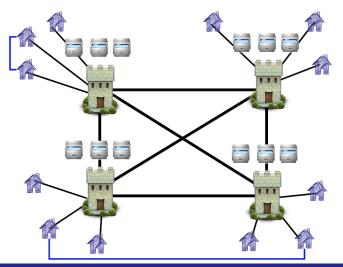


National Digital Deposit

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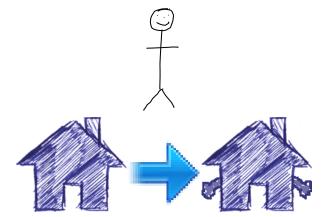
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Trust Fabric



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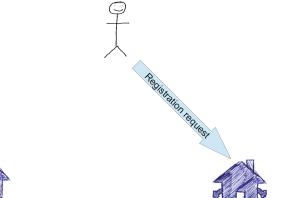
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student wants to go from home to receiving institution

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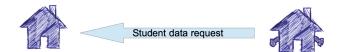
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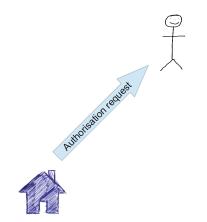
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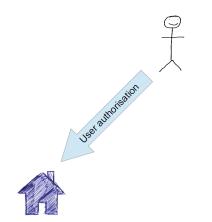
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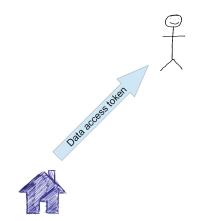
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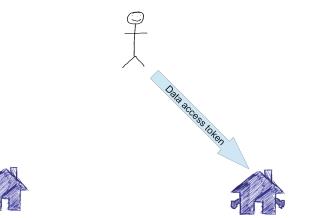
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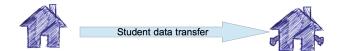




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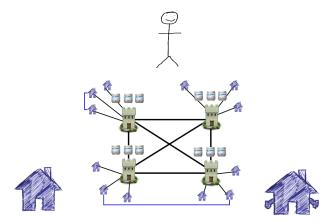
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