



The EU e-Signatures Directive and Authenticity

Hannelore Dekeyser
Vienna, April 5th 2006
DLM Forum



A worst case scenario

- You're being sued, and
 - Your evidence is in digital form ...
 - ... in an obsolete format ...
 - ... digitally signed ...
 - ... with outdated encryption algorithms
 - ... and the certificates have expired



A best case scenario

- You're bound to win, because
 - you have a hard copy
 - you migrated to an archival format and registered the signature's validation data
 - you have an emulator and a complete validation chain for the signature
- Sure?



Archivist's approach

- Is it an authentic record?
 - Integrity
 - essential characteristics
 - Identity
 - origin
 - context
- What's good for the archivist,
is good for the judge?



Legal approach

- YES!
 - Proving matters of fact
 - e.g. security webcam
 - All records are admissible as evidence
 - Judge decides if they are convincing
 - Authenticity is a primary concern

Open evidence system

Legal approach

- NO, not always!
 - Proving transactions
 - E.g. Belgium, France, Luxembourg require an **original** signed document to prove contractual agreements(*)
 - Belgium demands preservation of invoices in **original** form

Closed evidence system

Original signed document

- Handwritten signatures
 - The document that bears the mark placed on it by the signatories
 - ~~photocopies, scans or microfilms~~
- Electronic signatures
 - Any and all documents featuring the e-signature appended by the signatories.
 - ~~hard copy~~, migrated copy?

Original **signed** document

- *generic* electronic signature?
 - “data in electronic form which are attached to or logically associated with other electronic data and which serve as a **method of authentication**”
 - a name under an e-mail message
 - a scanned image of a handwritten signature
 - ...
 - Migrated version, emulated document
- NO! Some transactions require more...

Original **signed** document

- advanced electronic signature?
 - identifies the signatory uniquely, was created under his control and is linked to the data in such a manner that *any subsequent change is detectable*
 - digital signature technology
 - ~~Migrated version~~, emulated document

Original **signed** document

- qualified electronic signature?
 - an advanced electronic signature + safeguards:
 - secure-signature-creation device
 - qualified certificate
 - reliable certification service provider
 - e.g. digital signature technology
 - ~~Migrated version~~, emulated document



Overview

- Not original
 - hard copy
 - migrated record

=> not admissible

- Original
 - emulated record

=> admissible

- Exceptions
 - strict conditions
 - sector
 - materials/methods
 - ...

- Secondary concern:
 - Authenticity?



Transformed evidence

- eSignatures directive
 - + closed evidence system/originality requirement
 - = archiving problem
- Adapt legal framework
 - evaluate authenticity and integrity of records
 - evaluate preservation strategies on their merits

In cooperation with:



<http://www.edavid.be>

**Interdisciplinary Center for Law &
Information Technology
K.U.Leuven**



<http://www.law.kuleuven.ac.be/icri>



<http://www.ibbt.be>