Ensuring the Digital Sovereignty of Documents

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Digital Document Sovereignty: a quick overview:

» Intersecting problems
  » Document leakage
  » Document portability & platform tying
  » Document collaboration
  » Document software deployment

» Potential Solutions
  » Encryption & Key management
  » Cloud deployment
  » On-premise, Open Source
Some perspective: PCs & Networks & Documents
The very old days: 80’s - 90’s

» Collaboration ==

» Everyone comes & sits around the same CRT
  » „Shared Documents“ via sharing the same PC

» Or – we print-out & post documents around the world, or floppies ...

» I still see footers: “to avoid wasting paper, please don’t print out this E-mail”
LANs - Netware / NT / network effects ... 90’s onwards

» A feast of new networking protocols & standards:
  » IPX/SPX, TCP/IP, DCE/SMB, Token-Ring, Ethernet, etc. etc. Storage + Auth ...

» Document data – not standardized: RTF ? - DOC/XLS/PPT

» But Word 6.0 takes ~90%+ market share in mid 90's
Global networks & E-mail - 2000’s

» E-mail projects standards across the world ... standard protocols

» Plain-text → *still* migrating to HTML E-mail ... TNEF?

» Unencrypted posting of mails around the world

» attaching Office documents ... **what version**?
The problem of document portability

» A „Legacy Rich“ feature-set
  » Extremely complex Microsoft Office file format(s)
    » A historic challenge for interoperability,
    » many trillion Office documents extant

» Open Document Format: ODF 2002 → onwards
  » Encouraging open-ness, documentation, standardization in file formats!

» Microsoft Open-XML – 2005 → onwards
  » Excellent work: codifying decades of curious & arbitrary design decisions
    » multiple, incompatible generations of form technology eg.

» Still getting E-mailed all around the world - ~daily ...
Documents - tied to a closed platform?

» The Web – an Open Platform
  » The dominant vertical application interface
  » Cross-platform, cross device form-factor ...
    » by 2012 (20+ of work) → we could even generate & play web-audio!
  » Often a complete mess of cargo-culted, type-unsafe Javascript
  » But delivers
» Tie to Proprietary desktops:
  » Mail ? → good alternatives around
  » Office Productivity
The amazing success of advert supported FLOSS:

Browser usage - statcounter

Any proprietary cores?

khtml / webkit / Blink derived

A Linux desktop technology break-out

Other
Edge Legacy
IE
Firefox
UC Browser
Android
Samsung Internet
Opera
Edge
Safari
Chrome

Statcounter - CC
Devices are changing: OS market share - statcounter

![Graph showing OS market share changes over time. The graph includes lines for Windows, Android, iOS, OS X, Unknown, Linux, and Others. The Y-axis represents the market share percentage, ranging from 0 to 100. The X-axis represents time, from 2009 to 2022, with intervals of one year. The graph shows a decrease in Windows market share and an increase in Android market share over the years.](Statcounter - CC)
Desktops are changing more slowly

Statcounter - CC
MS Office Online tied to Desktop / Windows
Managing Document Editing Software ...

» Control / Deploy
  » Individual PCs:
    » Touch + shoe leather
  » Networked PCs
    » Remote Machine Management
» Previously – could test & deploy
» Proprietary Cloud Software:
  » Little to no control
  » Hyper-Centralized

» What does a Digitally Sovereign solution look like
  » Control updates
  » Control versions
  » Custom support & bespoke feature / fixing.
» Federated
TOGETHER STRONG.

Security & Encryption
What is the solution?
Central Digital signing of everything (RMS)

How can we show people a document, and control their access:?

- e.g. disable copy/paste, print, save-as, control views etc.

**Step 1:** encrypt the document

**Step 2:** send the key to Azure

**Step 3:** mail it

**Step 4:** check system and app is fully signed, and policy is ok & Decrypt document.

Windows OS

Bootloader

BIOS
End to end encryption?
Documents never leave the server
TOGETHER STRONG.

Open Source
Digital Sovereignty: Open Source

» Scope for changing proprietary software:
  » Approximately zero
» Even simple UX wins
  » Things that would take only seconds to fix
  » Next-to-impossible ...
» As software gets more complex
  » As it gets „cleverer“
» We need to be able to fix it.
» Open Source a pre-requisite for Digital Sovereignty
Liberating your documents together

- Open Source Document editing
- Best of breed security
- Interoperability – bring your content
- Easy, centrally managed cloud deployment
- Excited to work here: come & see me for a demo.
- Coalition of partners working to restore people’s freedom:
APRIL, 2024
8TH - TEAM BUILDING
9TH & 10TH - COOL DAYS
CAMBRIDGE, UK
TOGETHER STRONG.

Come and talk to us!
Free your documents
VIELEN DANK!

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Any Questions?