

ODF Advocacy Project

Why ODF is a better standard than OOXML

Italo Vignoli

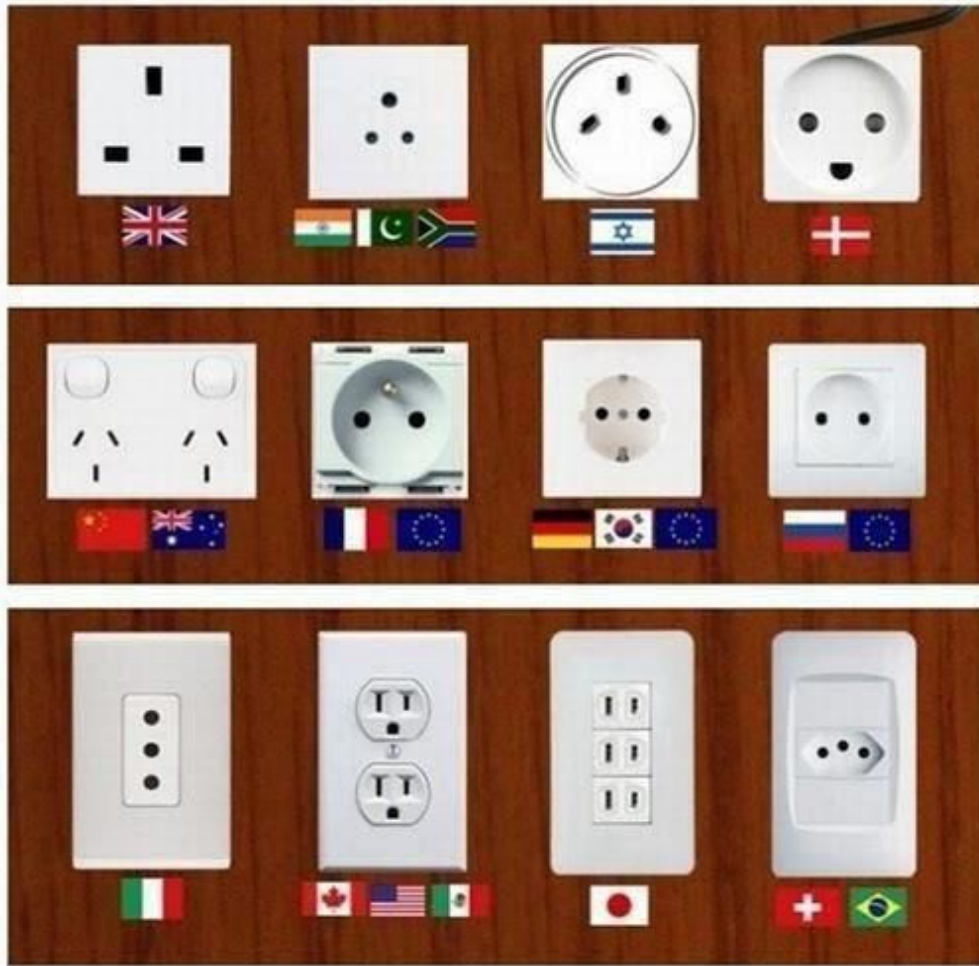


Definition of Standard (ISO)

- A document, established by consensus of subject matter experts and approved by a recognized body, that provides – for common and repeated use – guidance on the design, use or performance of materials, products, processes, services, systems or persons, aimed at the achievement of an optimum degree of order in a given context.
- Standards are voluntary agreements, developed within an open process that gives all stakeholders – including consumers – the opportunity to express their views and have them considered. This contributes to their fairness and market relevance, and promotes confidence in their use.

Advantages of Standards (ISO)

- Standards ensure consistency of essential features of goods and services, such as quality, economy, reliability, compatibility, interoperability, efficiency, ecology, safety and effectiveness.
- Standards codify the latest technology and facilitate its transfer. Standards are therefore an invaluable source of knowledge.
- Thus, standards avoid reinventing the wheel: they distil expert knowledge and make it available to all.



Standards may be hidden to common users, as in the case of electricity.

These are proprietary plugs which hide a standard voltage to allow users to power their devices in any location, by means of an adaptor.

Document format standards are never visible to end users, because software shows only the surface of the content iceberg.

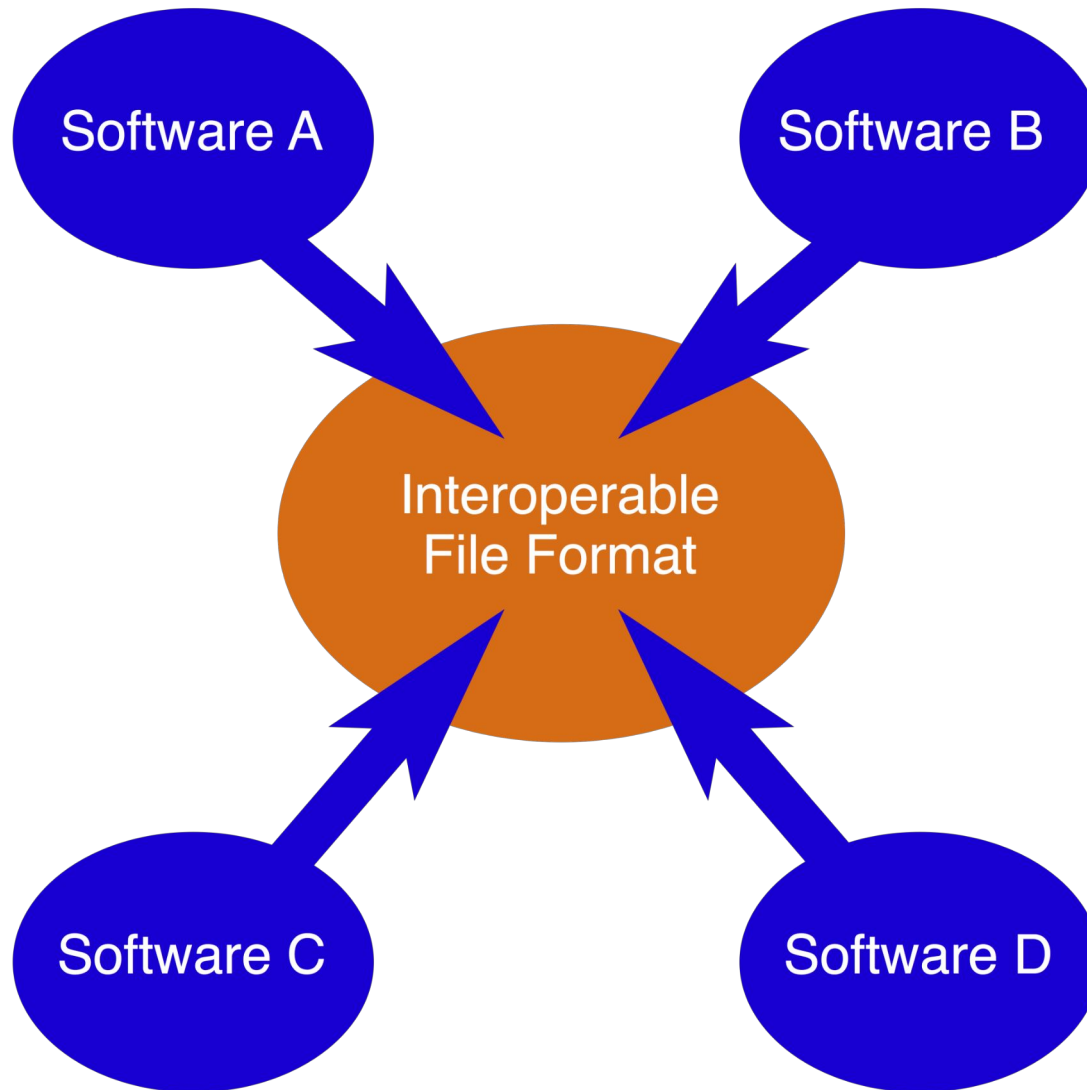
Importance of the HTML Standard

- It was the standardization of the HTML format that allowed the web to take off. And not just the fact that it's a standard, but the fact that it's open and royalty-free...
- Had HTML not been free and open, and a proprietary technology, the business of selling HTML and competing products would have been born...
- This means we need standards, because this avoids competition over technology, and fuels the value-added business built on the platform...

*Tim Berners-Lee, CERN
world wide web inventor*

Change of Paradigm

- **Analogic Document (Past)**
 - Focused on the Printed Version
 - Value in Retaining the Visual Aspect
 - Document Created for Others to Read
- **Digital Document (Future)**
 - Focused on Exchange of Contents
 - Value in Preserving Contents over Aspect
 - Document Created for Others to Add Value





Open Document Format

the true document standard
which offers freedom of choice

ODF Characteristics

- ODF is simple, solid, robust and secure
- ODF is consistent across operating systems
- ODF is based on many existing ISO standards
- ODF is predictable and consistent in term of behavior vs contents and formats
- ODF is human readable by normal users

ODF Philosophy

- The philosophy behind the ODF standard document format was to design a mechanism in a vendor neutral manner from the ground up using existing standards wherever possible
- Although this means that software vendors would need to tweak their individual packages more than if they continued down their original routes the benefits for interoperability were important enough to justify this

OOXML Characteristics

- OOXML is artificially complex, and insecure
- OOXML is not consistent across operating systems and platforms (desktop, mobile and cloud)
- OOXML completely ignores many ISO standards, and reinvents the wheel when this is not necessary
- OOXML is unpredictable and not consistent in term of behavior versus contents and formats
- OOXML is not human readable even by power users

OOXML Philosophy

- The OOXML pseudo-standard document format appears to be designed by Microsoft for Microsoft products, and to inter-operate with the Microsoft environment
- Little thought appears to have been exercised for interoperability with non-Microsoft environments or compliance with established vendor-neutral standards

ODF vs OOXML Strategic Difference

- ODF has been designed as a document standard for the next 20-50 years, to liberate users from the lock-in strategy built into yesterday's and today's proprietary formats, and foster interoperability
- OOXML has been designed as a pseudo-standard document format to propagate yesterday's document issues and lock-in strategy for the next 20-50 years, to the detriment of users and interoperability

Reuse of Existing Standards

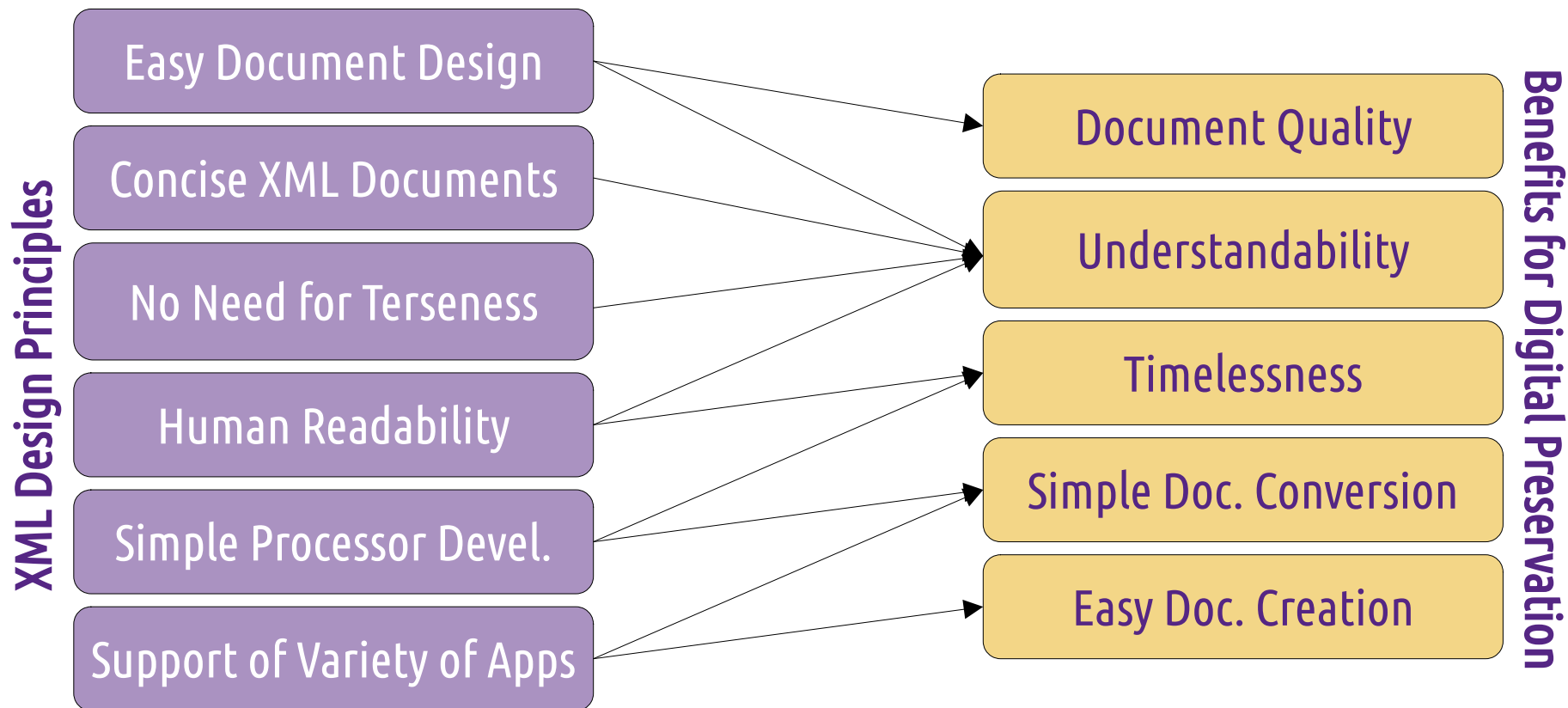
ODF

- Dublin Core
- XLS:FO
- SVG
- MathML
- XLink
- SMIL
- XForms

OOXML

- Dublin Core

XML Design Advantages



Brain & Computer

Brain
Red

Computer
#FF0000

Brain & Computer

ODF (LibreOffice)

- Writer
fo:color="#FF0000"
- Calc
fo:color="#FF0000"
- Impress
fo:color="#FF0000"

OOXML (MS Office)

- Word
w:color w:val="FF0000"
- Excel
color rgb="FFFF0000"
- PowerPoint
a:srgbClr val="FF0000"

OOXML Transitional and Strict

- As of 2020, the Office default for .docx, .xlsx and .pptx is Transitional OOXML, a proprietary document format which was created as a bridge from legacy MS Office formats and the approved ISO Standard.
- OOXML Strict is the ISO approved open standard, but being the non publicized last option available from MS Office “file, save as...” menu has never been adopted, so 100% of existing OOXML files we are referring to are proprietary.

OOXML Strict Support

- MS Office 2010: NO
- MS Office 2013: YES, but default is Transitional
- MS Office 2016: YES, but default is Transitional
- MS Office 2019: YES, but default is Transitional
- MS Office macOS: NO
- MS Office 365: NO
- According to Microsoft statements in 2007, OOXML Strict should have been the default since Office 2010

OOXML Poor XML

- Poor names and inconsistent naming conventions for elements and attributes
- Ecma 376 contradicts the goals of XML which are
 - XML documents should be human-legible and reasonably clear
 - Terseness in XML markup is of minimal importance
- Instead, Ecma 376 often uses unclear names and inconsistent naming conventions
 - These include unnecessary vowel removals, name truncations, and unusual abbreviations, as described in next slide

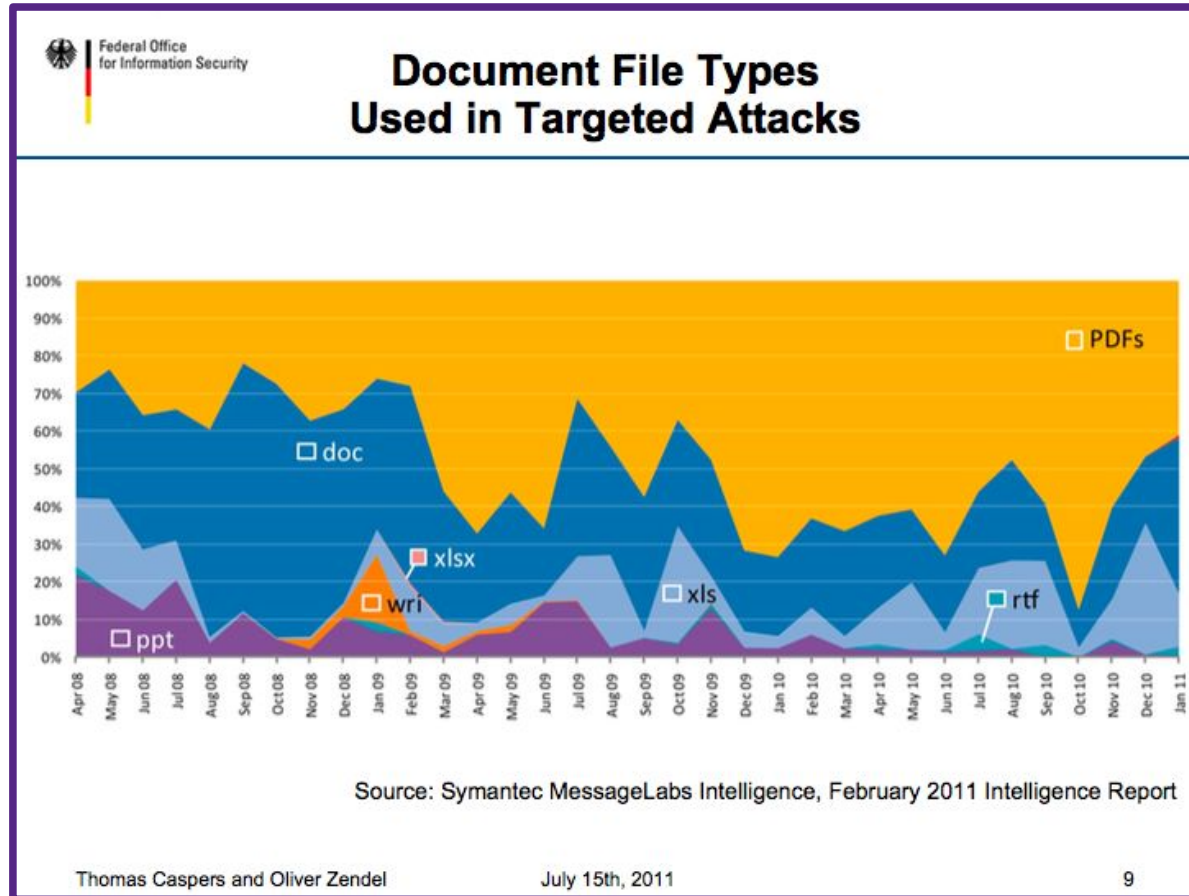
Examples of Poor XML

- In VML (5.1.10.45, page 4413) "outerShdw" (Outer Shadow Effect) has its second word devoid of vowels, but its Child Elements and Attributes have different naming conventions: e.g. scrgbClr, algn, blurRad, dir, dist, rotWithShape
- In WordprocessingML (2.15.1.78, page 2020) "settings" (Document Settings) has a large list of Child Elements, and within that it has significant contradictory naming conventions, e.g. ActiveWritingStyle, attachedSchema, documentType, docVars, endnotePr, hdrShapeDefaults

Simplicity vs Hidden Complexity

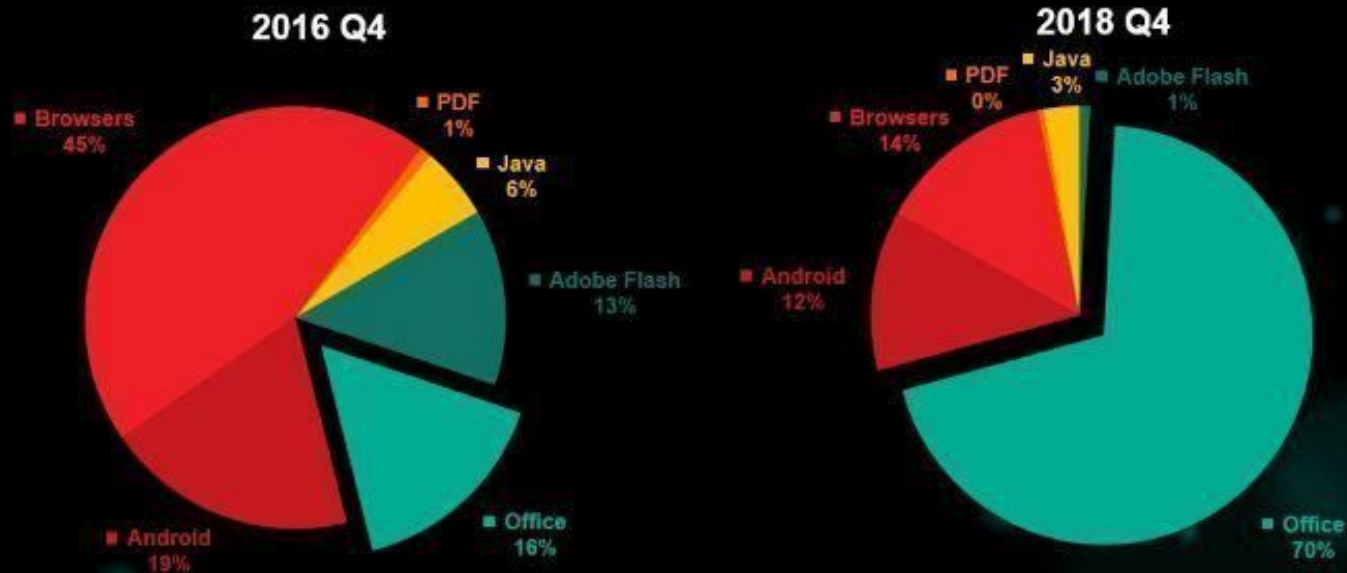
- **ODT / LibreOffice**
 - Reduced, very low or non existing complexity
 - XML files are human readable (as they should be)
- **OOXML / Microsoft Office**
 - Highest possible complexity vs technology
 - XML files are not human readable (contrary to what the XML standard language mandates)

Document Malware in 2011



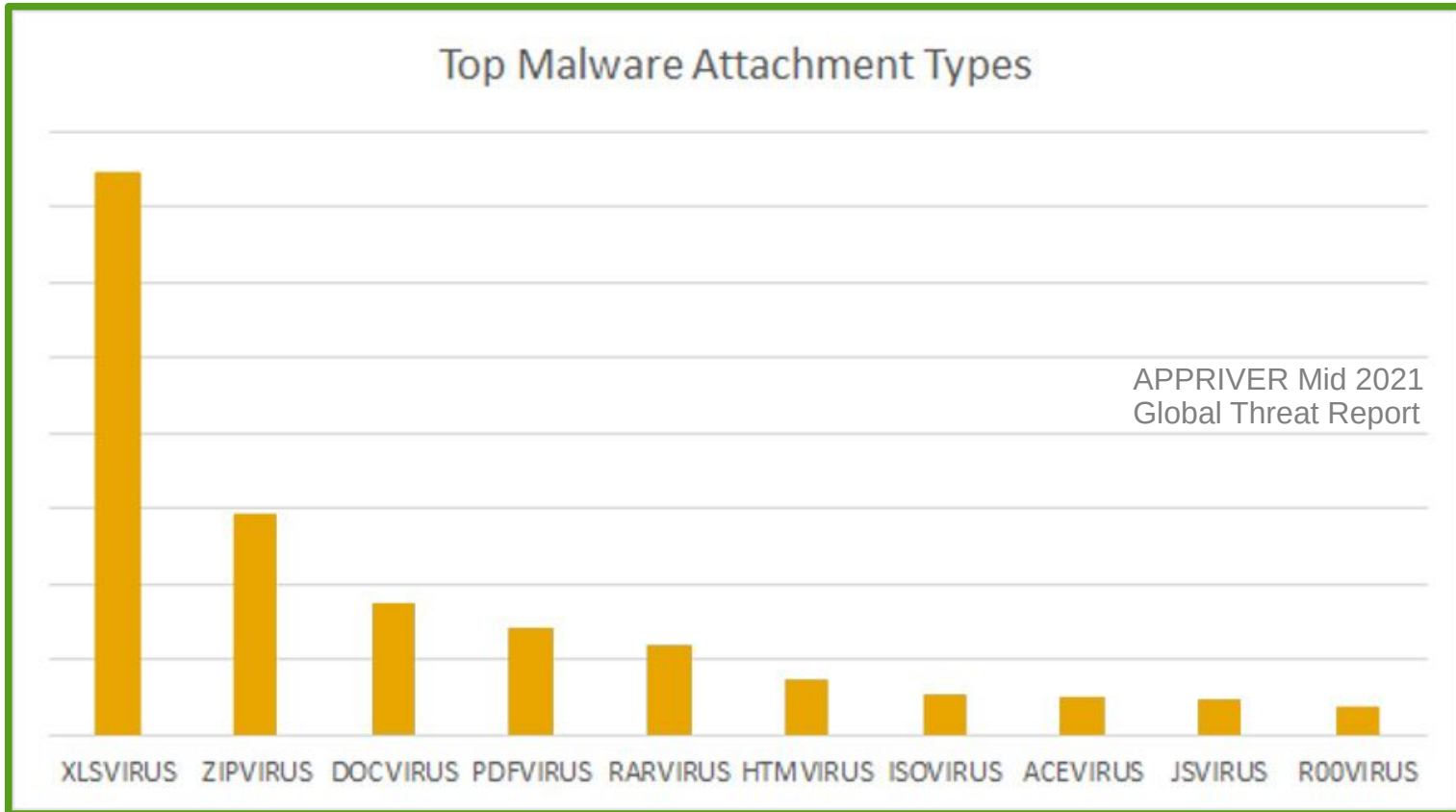
Document Malware in 2018

Targeted platforms by attacked users

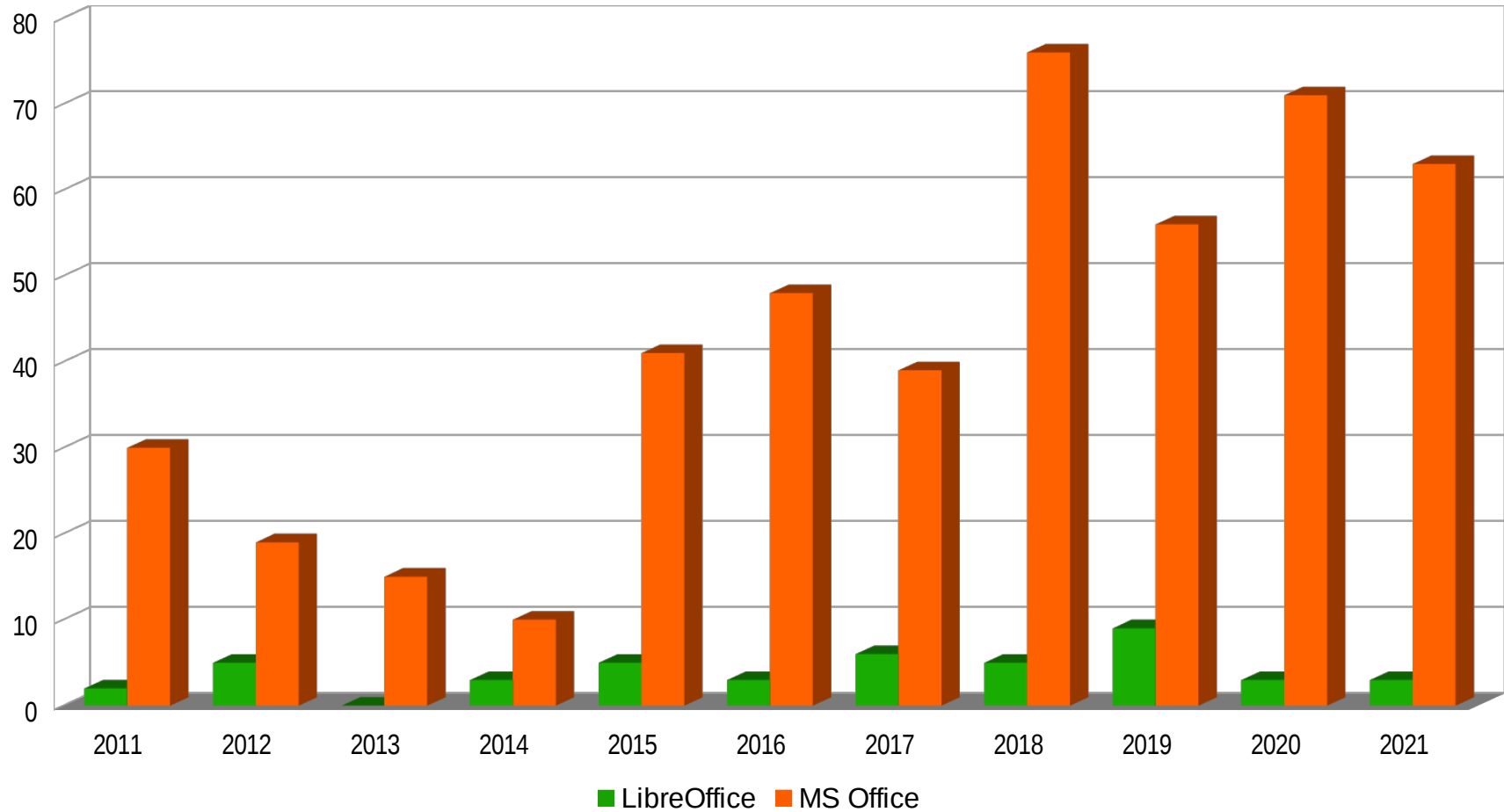


Source: Kaspersky Labs

Document Malware in 2021



Comparison of CVEs over Time





PSF

How to Lock-in Your Clients

How Professional Services Firms Can Create Compelling Value for Clients Using Collaborative Technologies

Ross Dawson
CEO, Advanced Human Technologies
Author, *Living Networks* and *Developing Knowledge-Based Client Relationships*

January 2004

>> A STRATEGIC WHITE PAPER FROM MICROSOFT BUSINESS SOLUTIONS



Thanks

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