

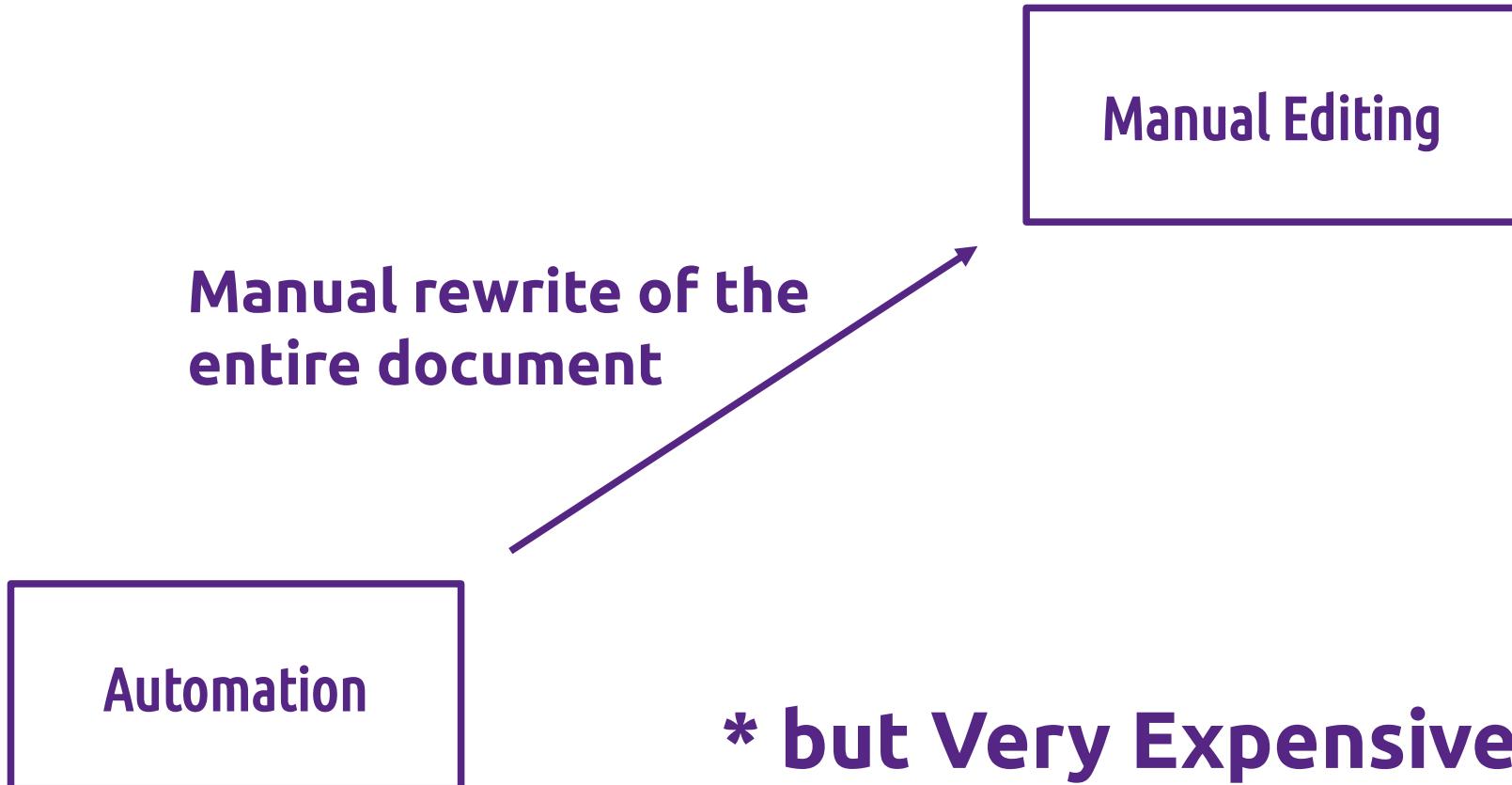
ODF Advocacy Open Project @ OASIS

ODF Advocacy Open Project
and experiences migrating organisations
to LibreOffice (and FOSS)

Italo Vignoli



Perfect Interoperability is Easy *



Interoperability without Standards



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*





Open Document Format

the true document standard
which offers freedom of choice



Basic Concepts

- ODF is solid and robust
- ODF is consistent across OS
- ODF is truly interoperable
- ODF is predictable
- **ODF is a better standard file format
for users of personal productivity SW**



ODF @ OASIS

- **ODF Technical Committee**
 - Manages the technical evolution of the standard
 - Development oriented, focused on specifications
- **ODF Advocacy Open Project**
 - Just relaunched, announcement in May 2019
 - Education, communication & marketing oriented



ODF Advocacy on GitHub

 OASIS OPEN PROJECTS

Welcome to the home of the ODF Advocacy Open Project.

The ODF Advocacy project works to create awareness and educate the world about the benefits of using the OpenDocument Format OASIS Standard (also published as ISO/IEC 26300).

ODF is an XML-based file format for personal productivity applications such as office suites, word processors, text/document editors, spreadsheets, and presentation software. Use of ODF guarantees access to your data forever, ensuring that data can be transferred between different computers and operating systems, without having to worry about vendor lock-in or license fees.

The ODF Advocacy project develops non-commercial, informational materials for a sustained communication campaign about the technical advantages and cost-savings of using standard-based document interoperability over proprietary formats.

ODF Advocacy is an [OASIS Open Project](#).



Purpose and Scope

- **Awareness:** Dedicated Website, Social Media Campaign, Media Outreach Campaign, Conference Program, Plugfests
- **Education:** What is a Document Standard?, Importance of Document Standards, Advantages of Document Standards, De Jure vs De Facto Standards
- **Marketing:** Impact of Standards on Productivity, Economic Value of Interoperability, Competitive Advantages of ODF, Standards & Innovation



Open Document Format

- **Independent** from a single product: anyone can write a software that handles an open format
- **Interoperable**: allows the transparent sharing of data between heterogeneous systems
- **Neutral**: it does not force the user to adopt – and often buy – a specific product, but leaves a wide choice based on features/quality vs price ratio
- **Perennial**: protects user developed contents from the “evolution” based obsolescence of technology



Digital Document

- Can be used only by those who have access to the decoder
- Primary purpose of a digital document is to use it in the future
- It should be readable and interpretable as long as possible, and ideally forever

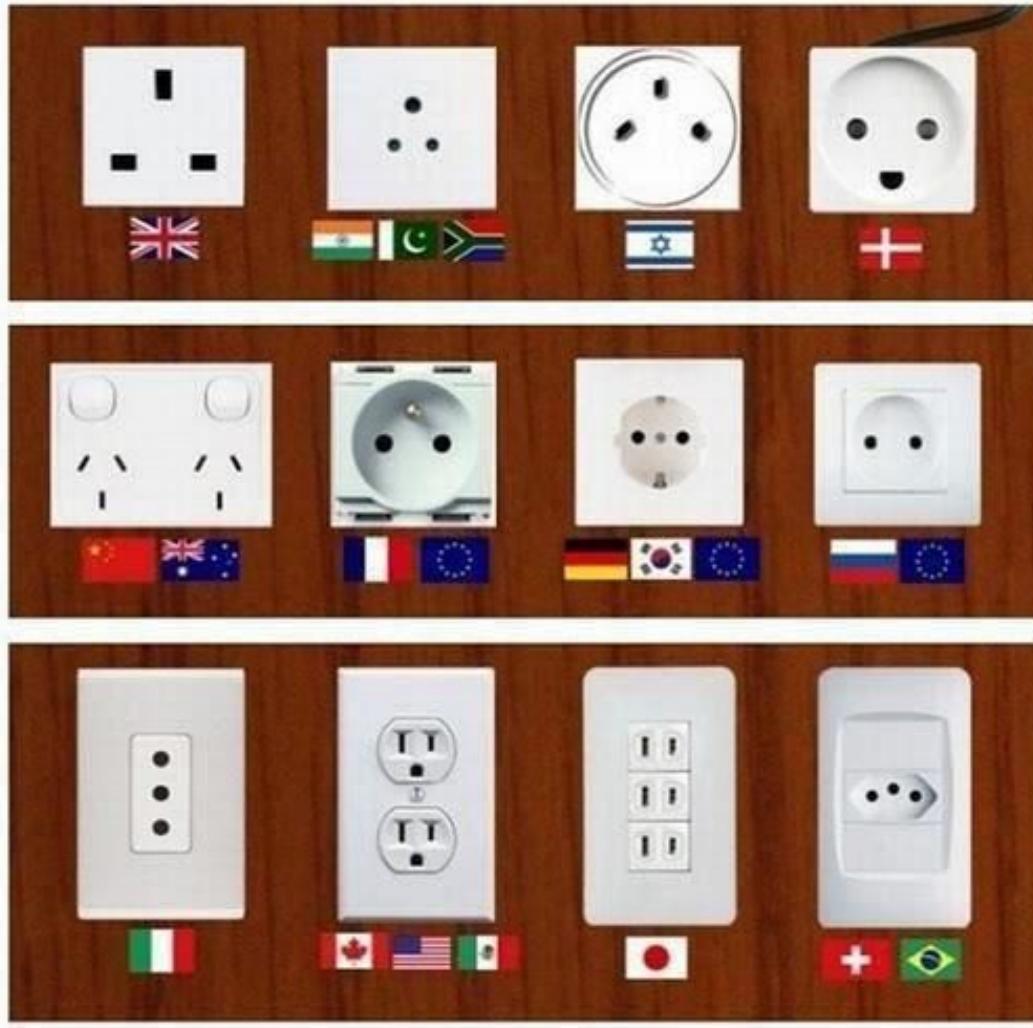


When the Decoder is Proprietary

- Your own ideas, encoded in a digital document, are at the mercy of the owner of the decoder
- You have lost your right to access and read your own documents in the future
- This possibility is dangerous for a digital society



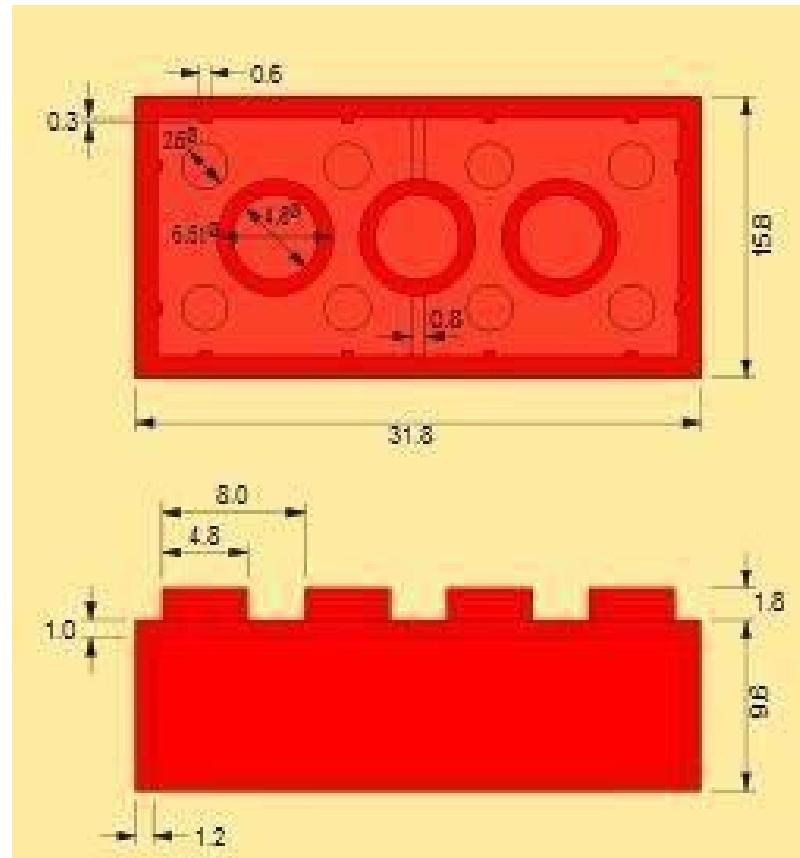




Standard and Interoperability

Interoperability is the ability of information and communication technology (ICT) systems, as well as of the business processes they support, to exchange data and enable the sharing of information and knowledge.

*European Interoperability
Framework, IDABC*



Benefits of Interoperability

- **FINANCIAL**
 - Cost savings for users
 - Reduced operation costs for owners
 - Vendor lock-in avoidance for owners
 - Facilitate reuse, sharing & adoption
- **QUALITY**
 - High service satisfaction for users
 - Improved compliance for owners
 - Better data quality for owners
 - Better data availability for users
 - Improved security for owners
- **TIME**
 - Owner time savings
 - User time savings
- **OTHER**
 - Foster innovation
 - Increase transparency
 - Protection of user's rights
 - Furthering public policy goals
 - Reduced CO2 emissions

Cost of Inadequate Interoperability (1)

NIST GCR 04-867



U.S. Department of Commerce
Technology Administration
National Institute of Standards and Technology

Advanced Technology Program
Information Technology and Electronics Office
Gaithersburg, Maryland 20899

Cost Analysis of Inadequate Interoperability in the U.S. Capital Facilities Industry

Michael P. Gallaher, Alan C. O'Connor, John L. Dettbarn, Jr., and Linda T. Gilday



Cost of Inadequate Interoperability (2)

Table 6-5. Costs of Inadequate Interoperability for Architects and Engineers

Life-Cycle Phase	Cost Category	Cost Component	Average Cost per Square Foot	Average Cost per Square Meter	Inadequate Interoperability Cost Estimate (\$Thousands)
Planning, Engineering, and Design		Inefficient business process management costs	0.31	3.37	356,126
		Redundant CAx systems costs	0.0001	0.001	158
		Productivity losses and training costs for redundant CAx systems	0.04	0.45	47,947
		Redundant IT support staffing for CAx systems	0.0004	0.005	501
		Data translation costs	0.002	0.02	2,139
Avoidance Costs		Interoperability research and development expenditures	0.02	0.21	22,234
		Manual reentry costs	0.41	4.38	462,734
Mitigation Costs		Design and construction information verification costs	0.10	1.08	114,342
		Reworking design files costs	0.0009	0.009	968
		Avoidance costs	0.38	3.85	429,106
		Mitigation costs	0.51	5.47	578,044
	Subtotal		0.89	9.32	1,007,150

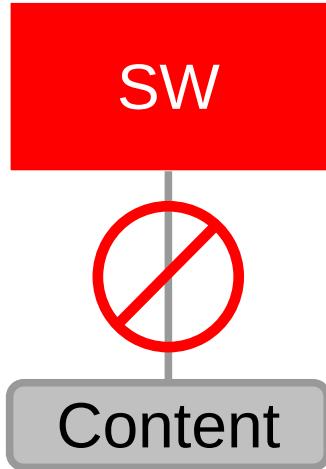
Cost of Inadequate Interoperability (3)

Construction	Avoidance Costs	Inefficient business process management costs	0.04	0.41	43,290	
		Redundant CAx systems costs	0.00003	0.0003	28	
		Productivity losses and training costs for redundant CAx systems	0.007	0.08	8,461	
		Redundant IT support staffing for CAx systems	0.00008	0.0008	88	
		Data translation costs	0.0003	0.004	378	
		Interoperability research and development expenditures	0.003	0.04	3,924	
		Manual reentry costs	0.024	0.26	27,750	
Mitigation Costs		Design and construction information verification costs	0.006	0.07	7,377	
		RFI management costs	0.05	0.53	55,656	
Subtotal		Avoidance costs	0.05	0.49	56,169	
		Mitigation costs	0.08	0.86	90,783	
		Subtotal	0.13	1.35	146,952	
Operations and Maintenance	Mitigation Costs	Post-construction redundant information transfer costs	0.01	0.15	15,660	
Total Cost					1,169,762	

Source: RTI estimates; totals may not sum correctly due to rounding.



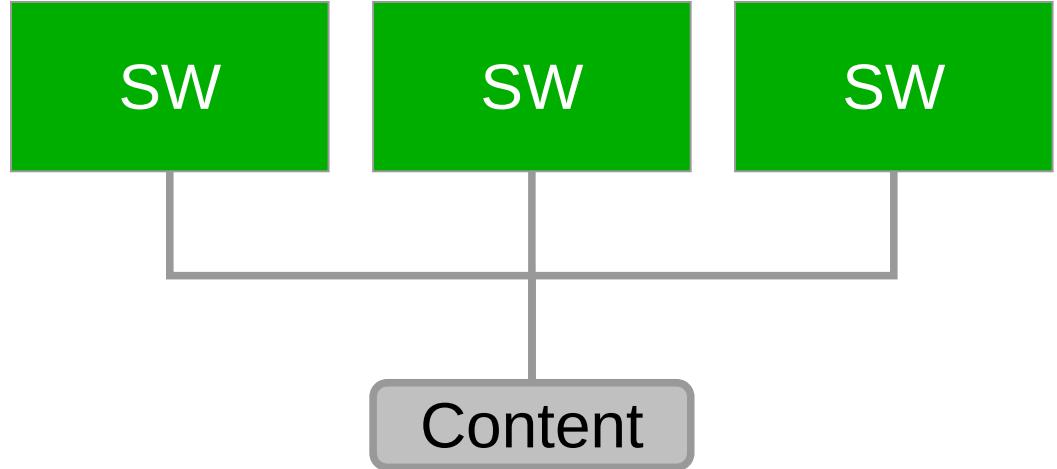
ODF Based Interoperability



Old Style

Content closely related to the application used to create it

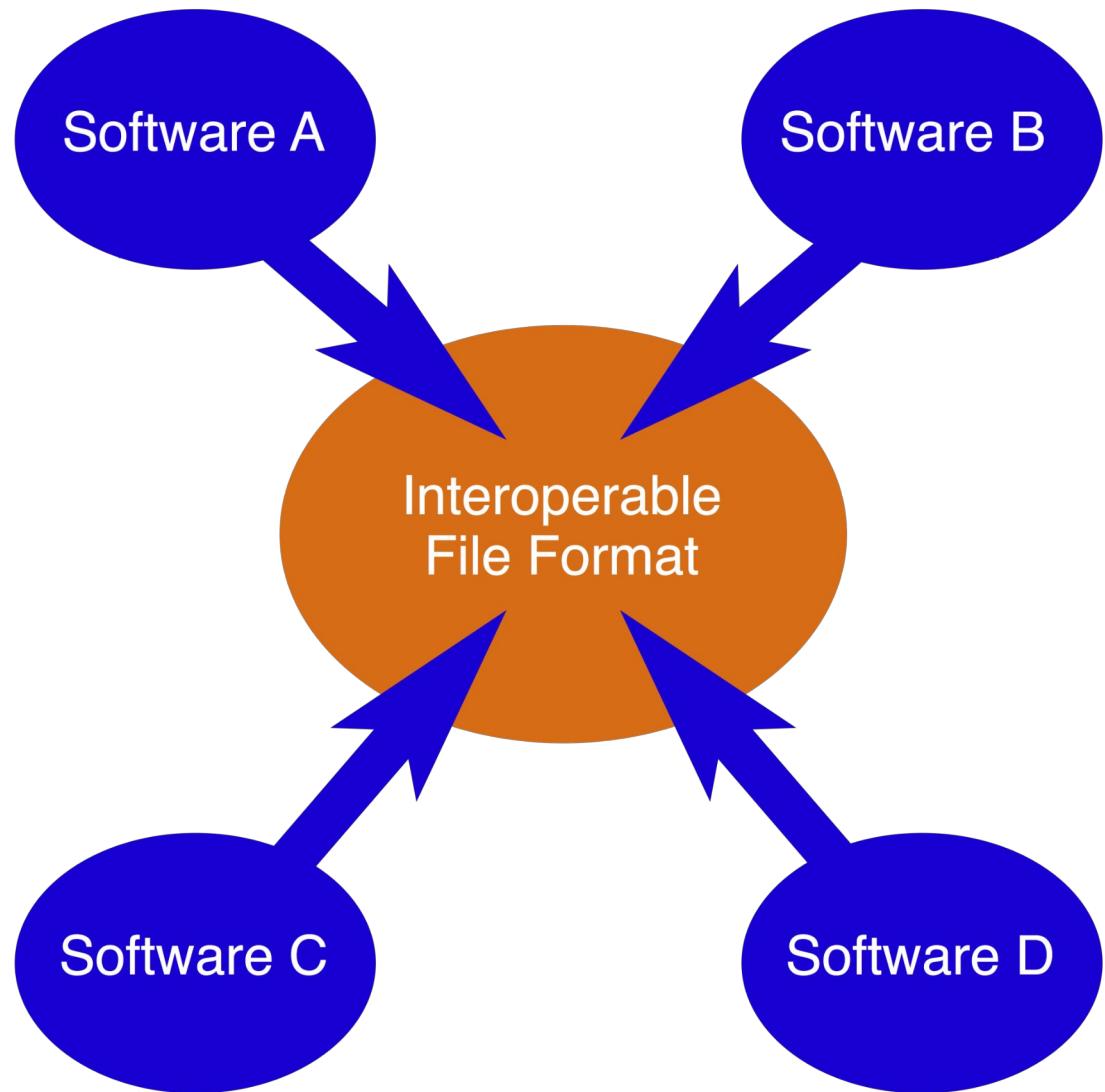
Controlled by the application developer and not by the user

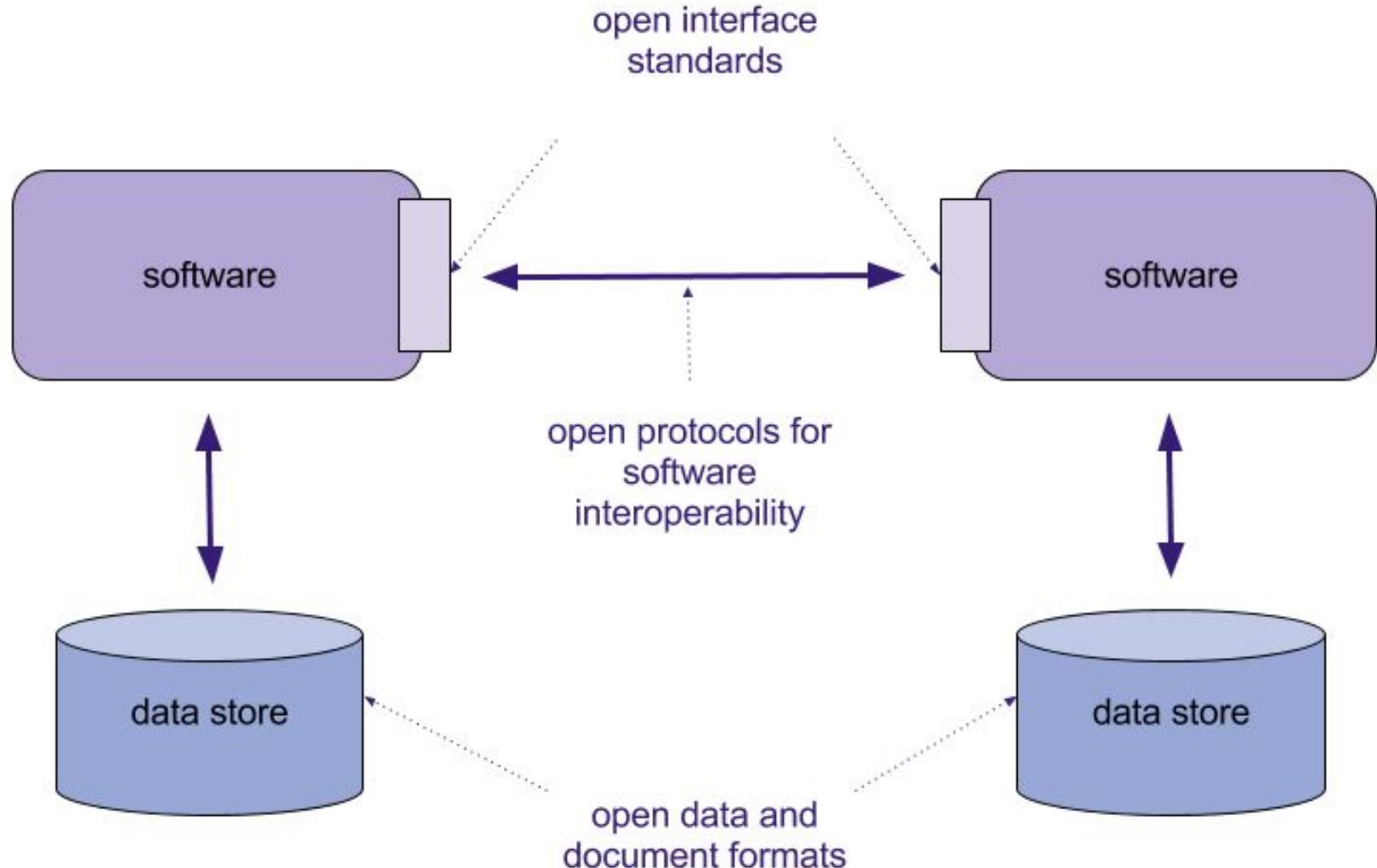


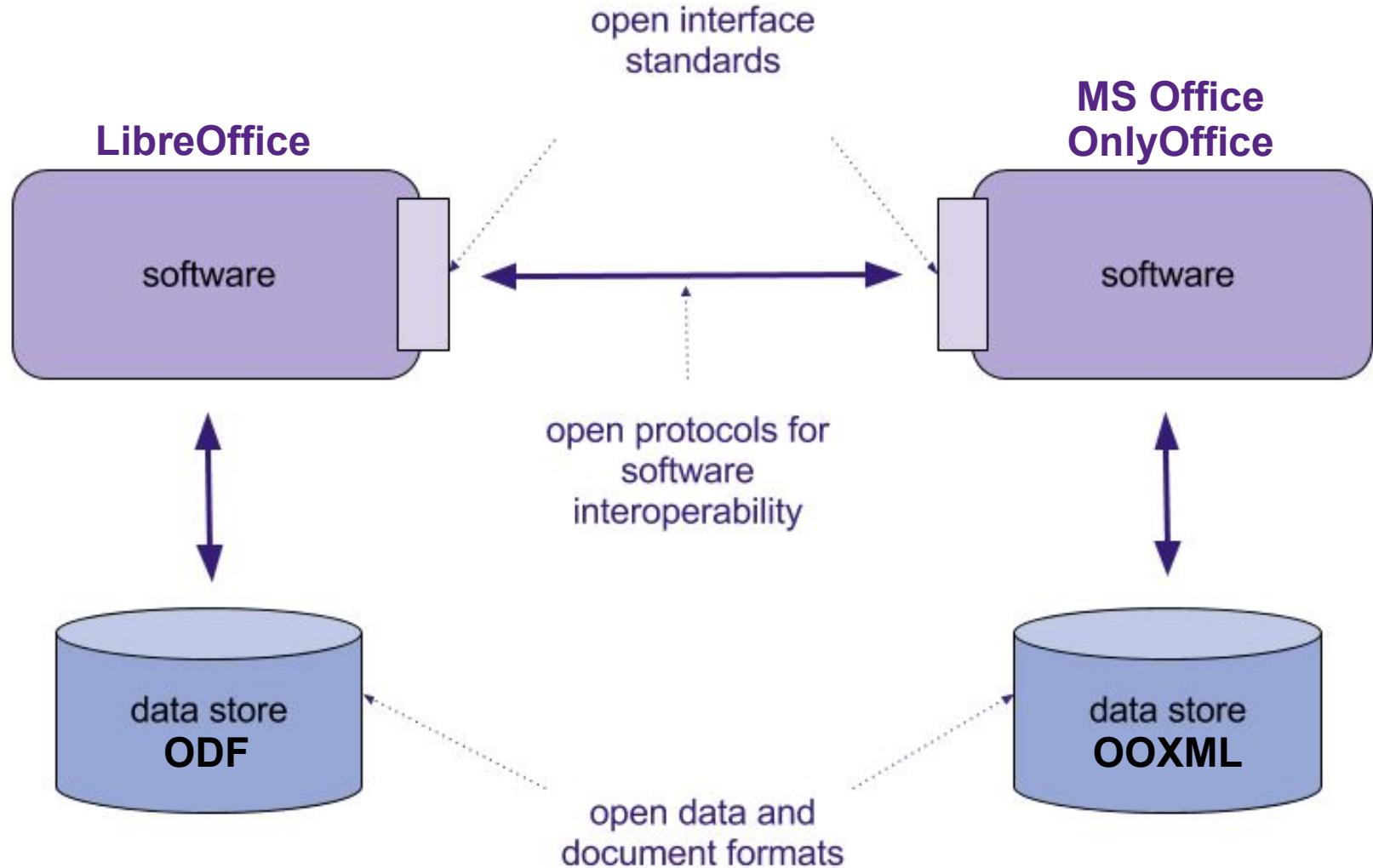
New Style

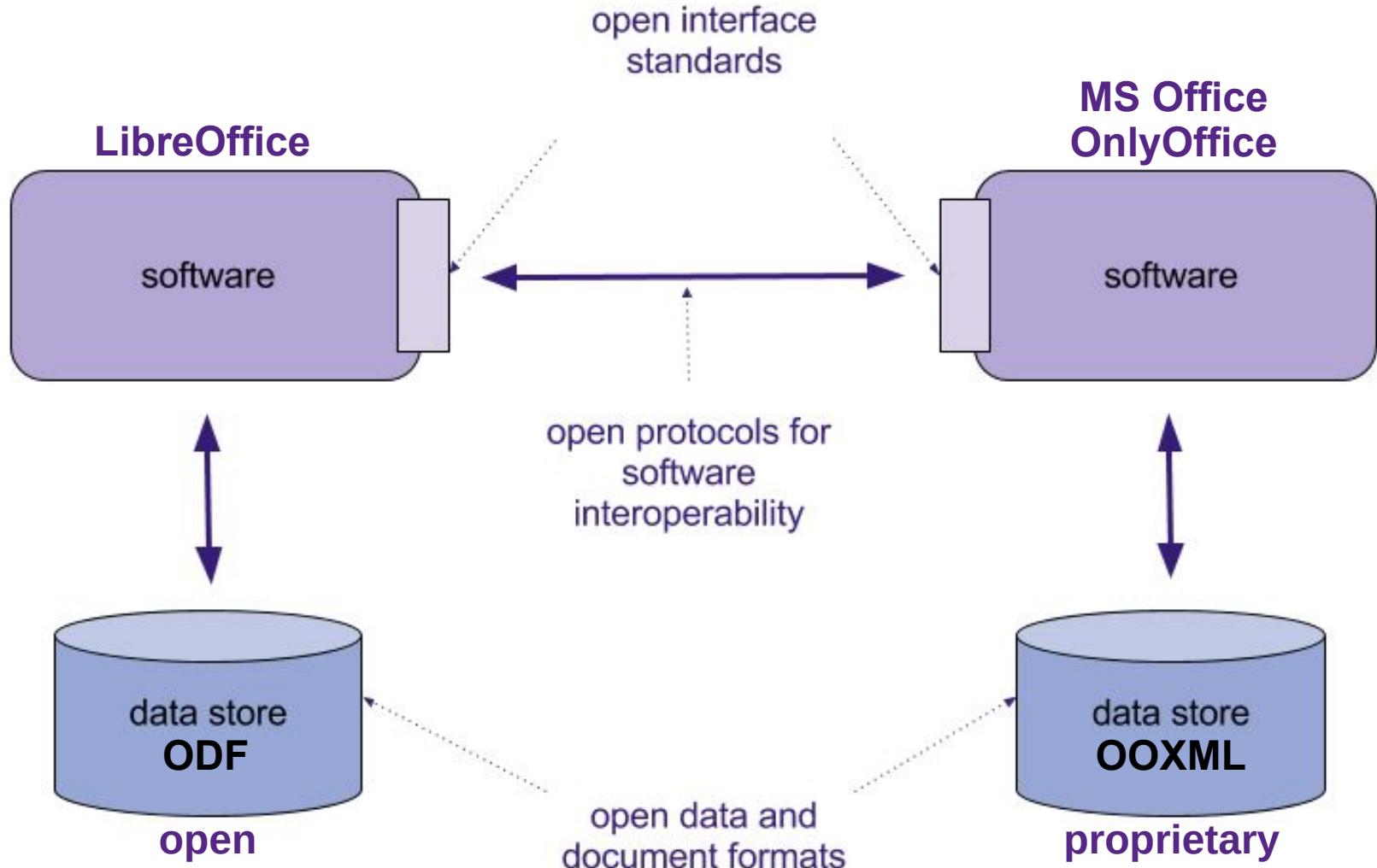
Content represented through an open standard which is not controlled by a single vendor, so many applications can create and modify it

Controlled by the user and not by the software vendor

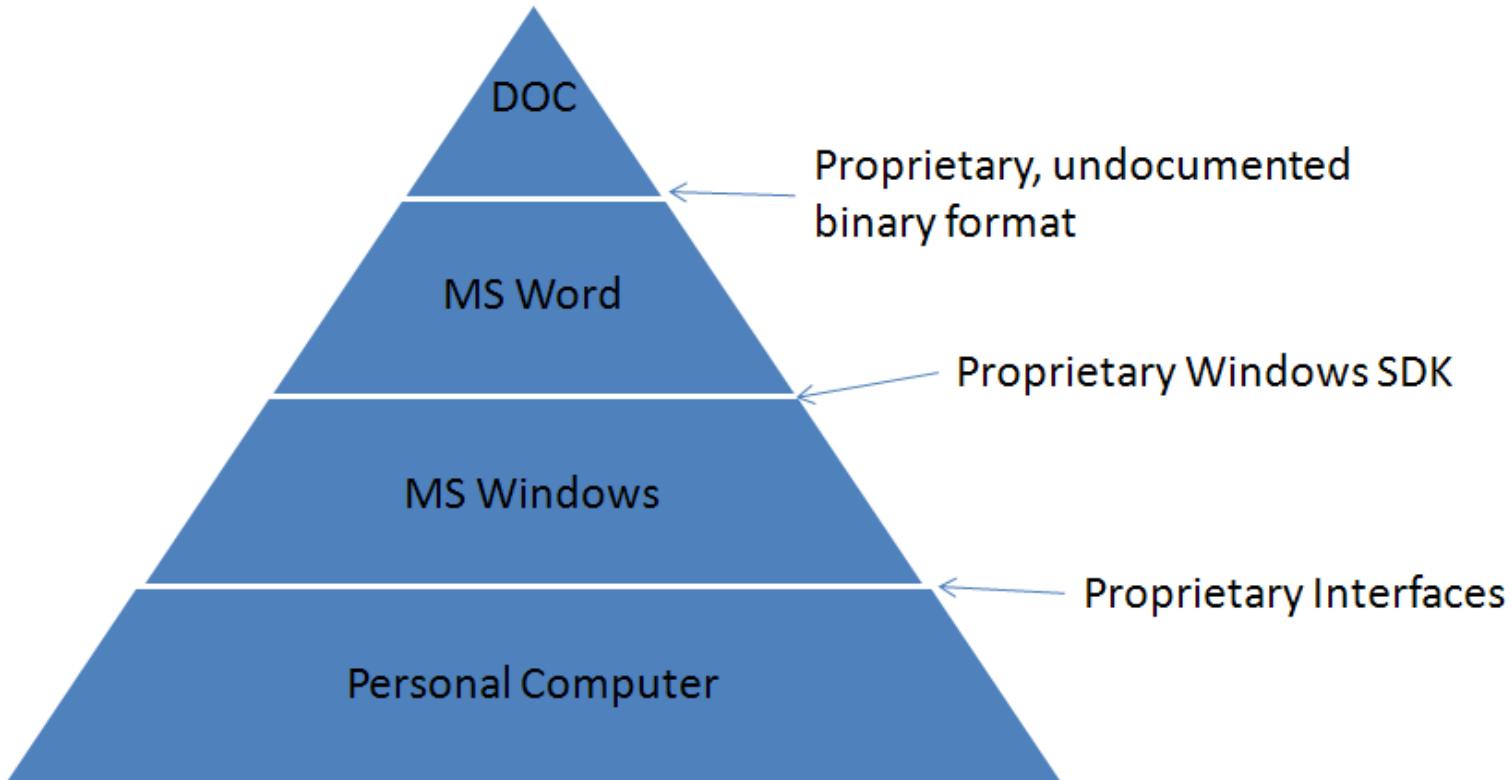




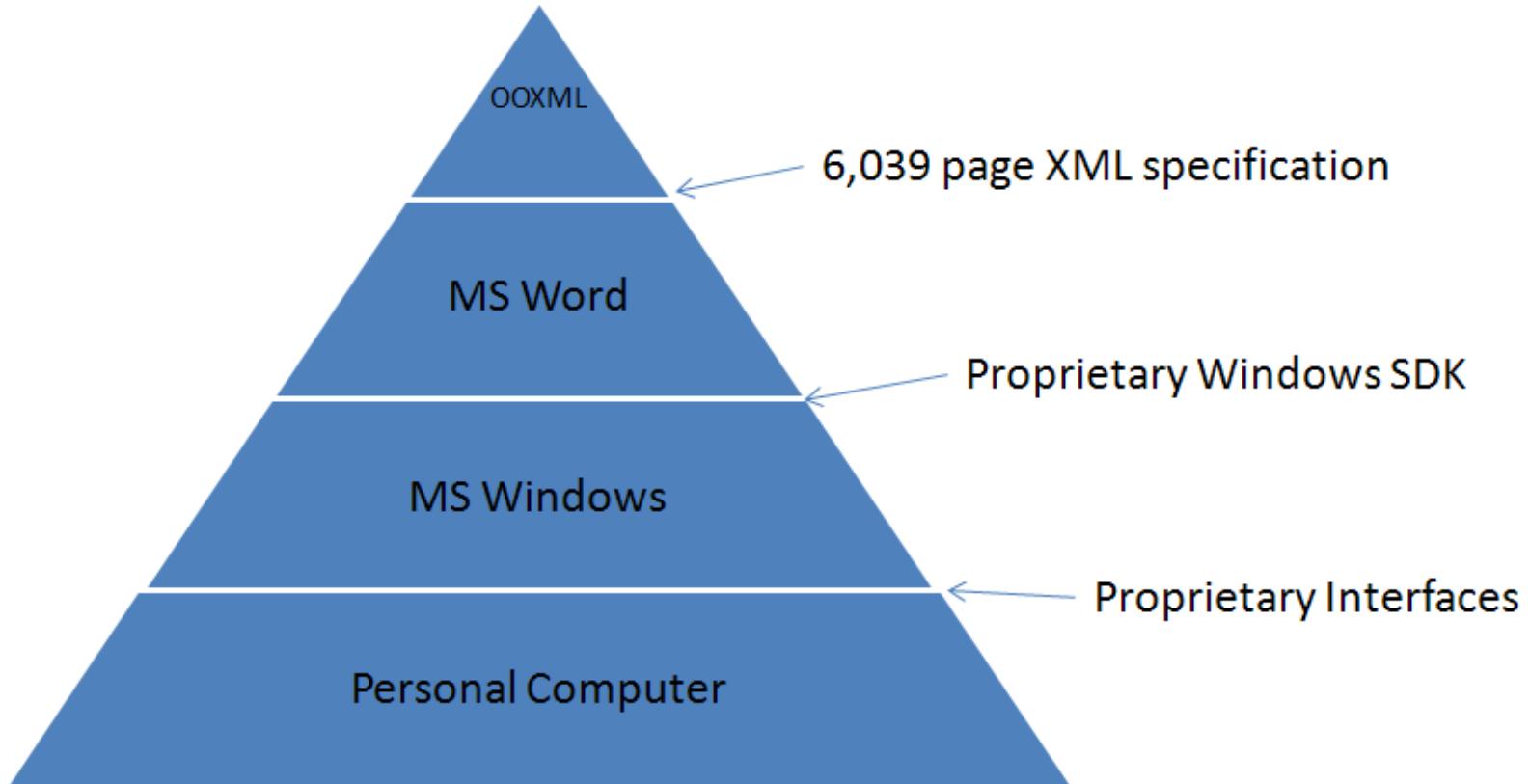




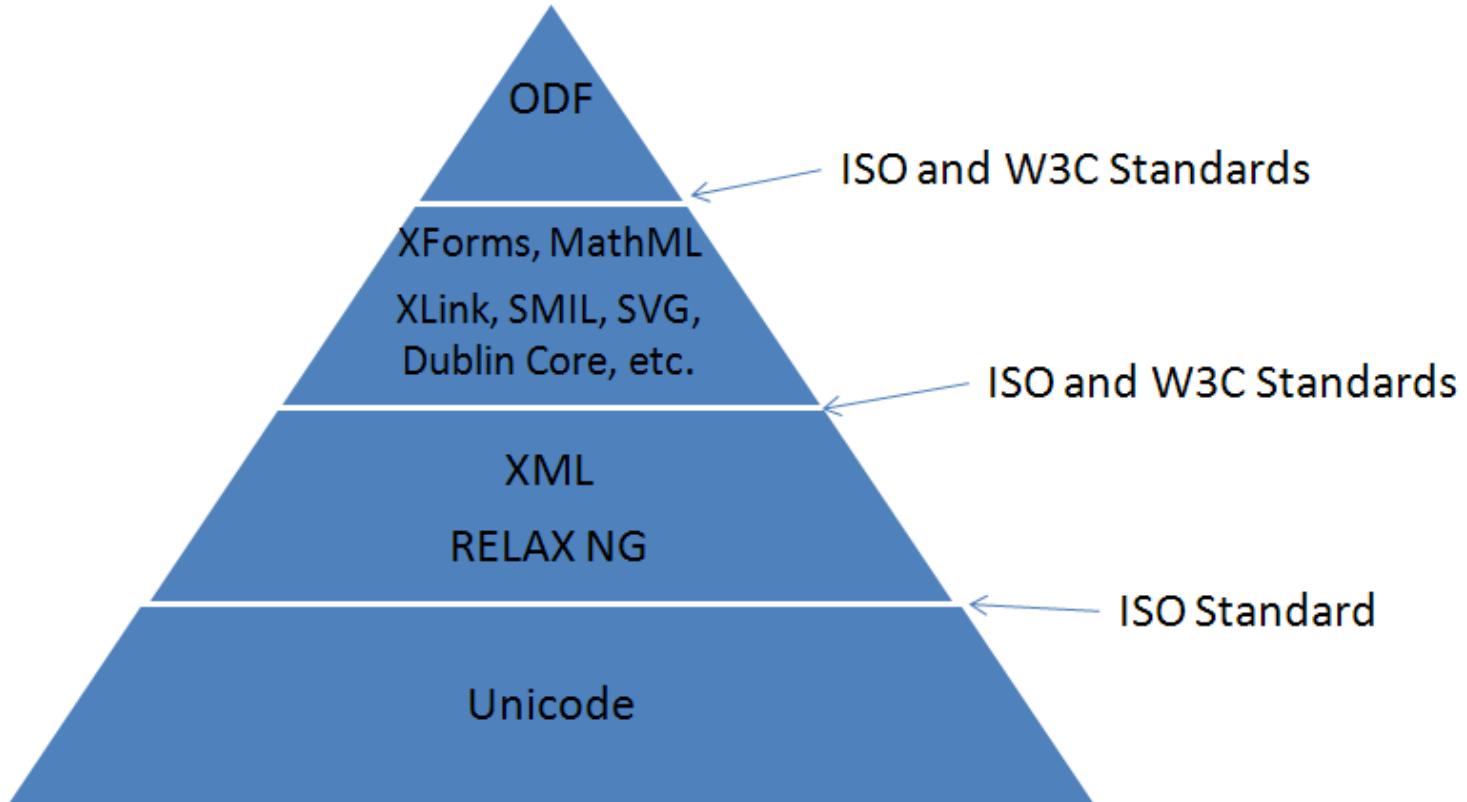
Proprietary File Stack



Pseudo-Standard File Stack



Standard File Stack



Lock In

WE CANNOT READ YOUR DOCUMENTS

DOCUMENTFREEDOM.ORG



PSF

How to Lock-in Your Clients

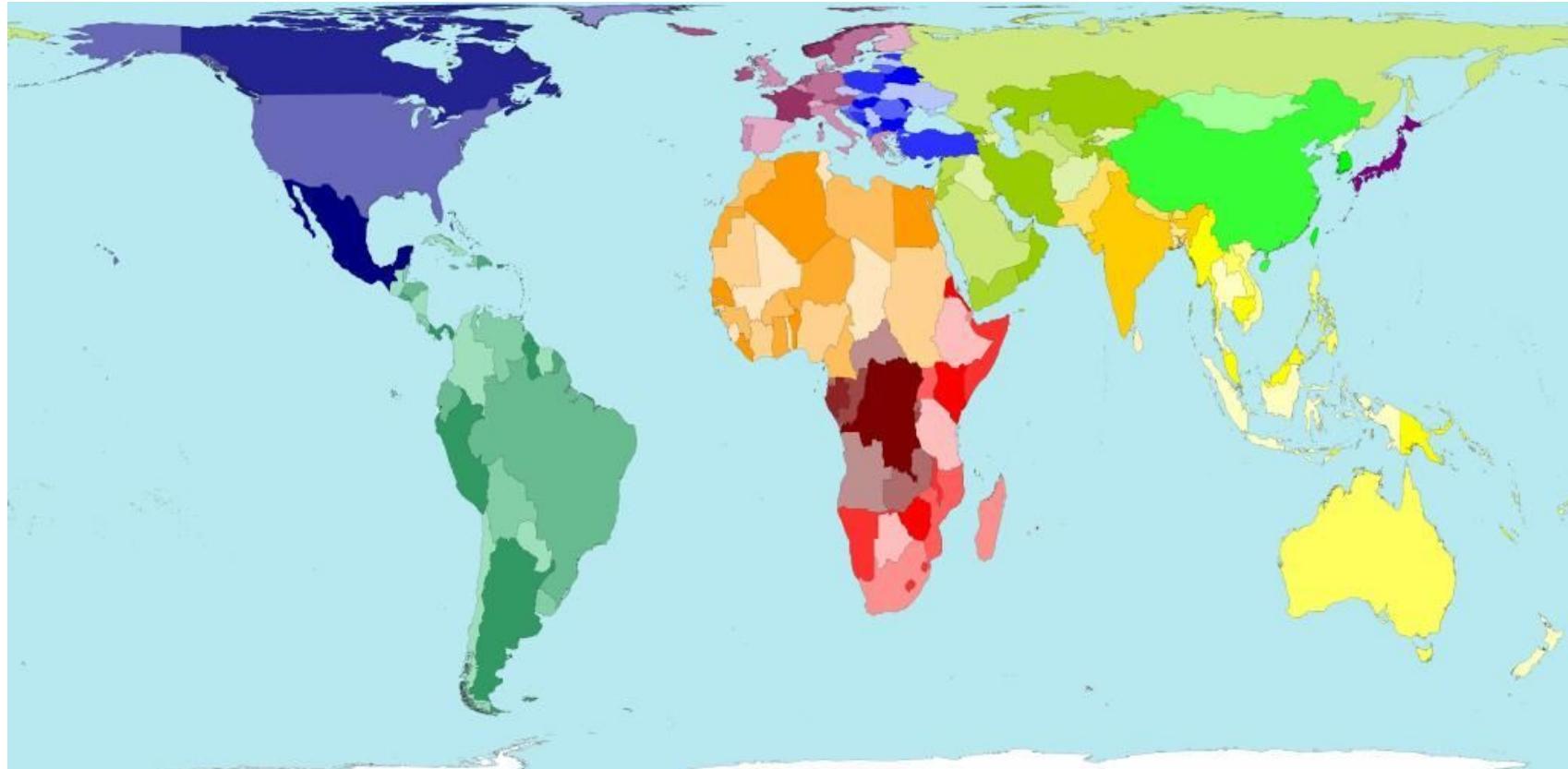
How Professional Services Firms Can Create Compelling Value for Clients Using Collaborative Technologies

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

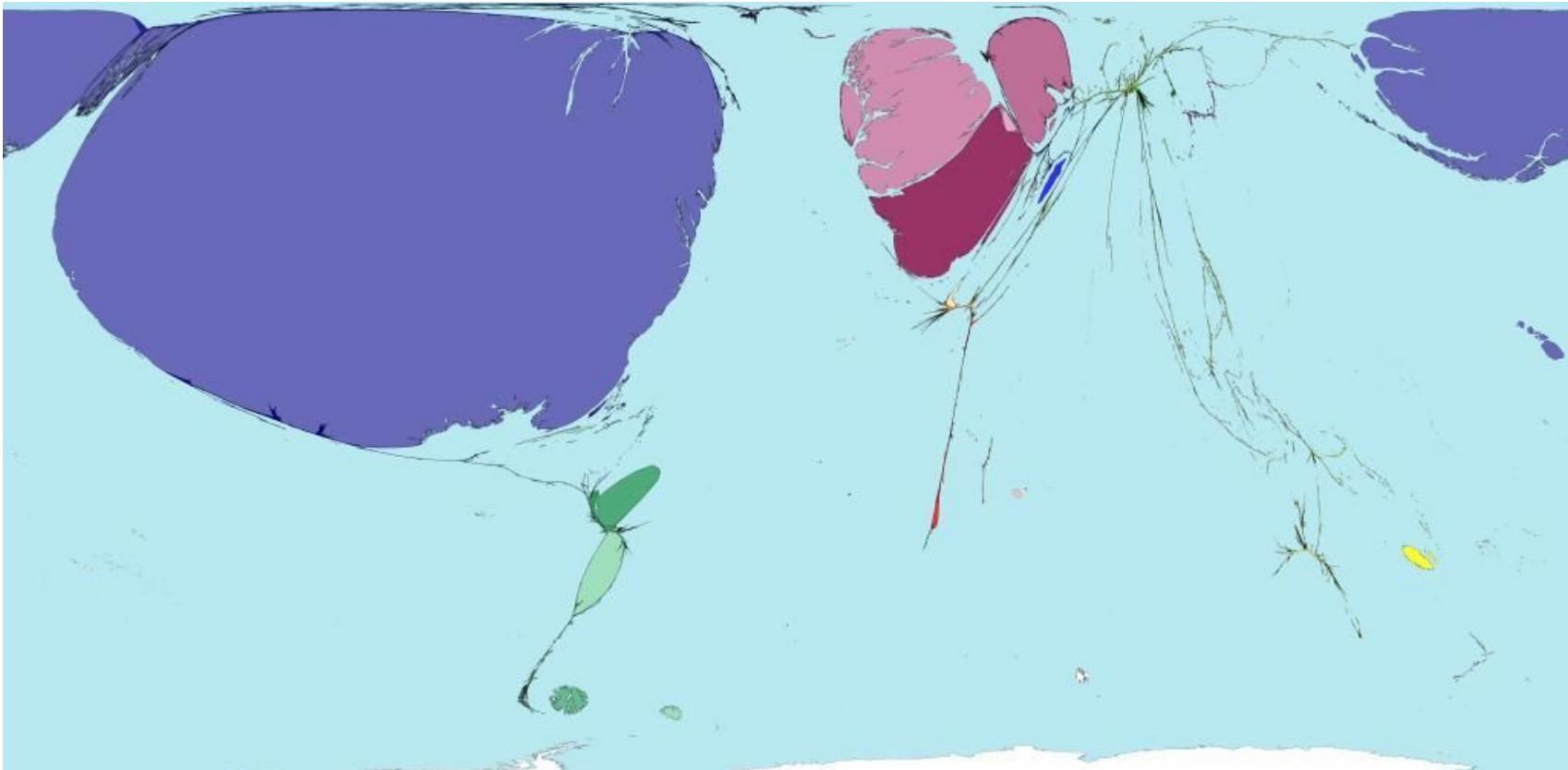
January 2004

>> A STRATEGIC WHITE PAPER FROM MICROSOFT BUSINESS SOLUTIONS

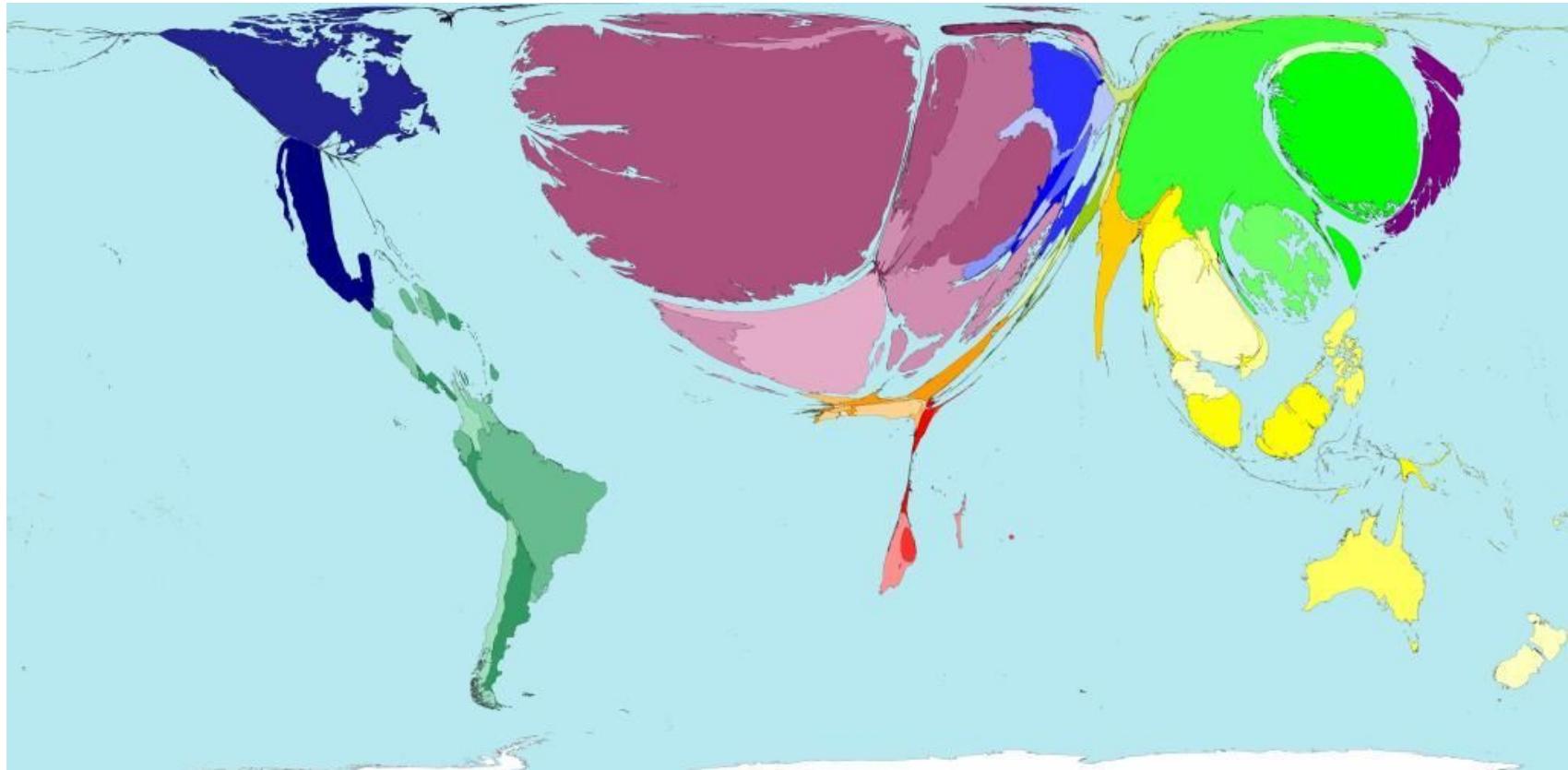
Superficie



Export Licenze Software



Import Licenze Software



De Jure vs De Facto Standards

- **DE JURE STANDARD:** transparent consensus from all stakeholders
- **DE FACTO STANDARD:** very large market share of a single company
- As such they are completely different, as are their value and effect on the market
- **DE JURE STANDARDS FOR DOCUMENT FORMATS**
 - Foster interoperability, create network externalities, prevent lock-in, cut transaction costs, create a transparent market and reduce variety
- **DE FACTO STANDARDS FOR DOCUMENT FORMATS**
 - Tend to be the exact opposite, to increase supplier-dependence and create an obfuscated market

Standardization Process

ODF

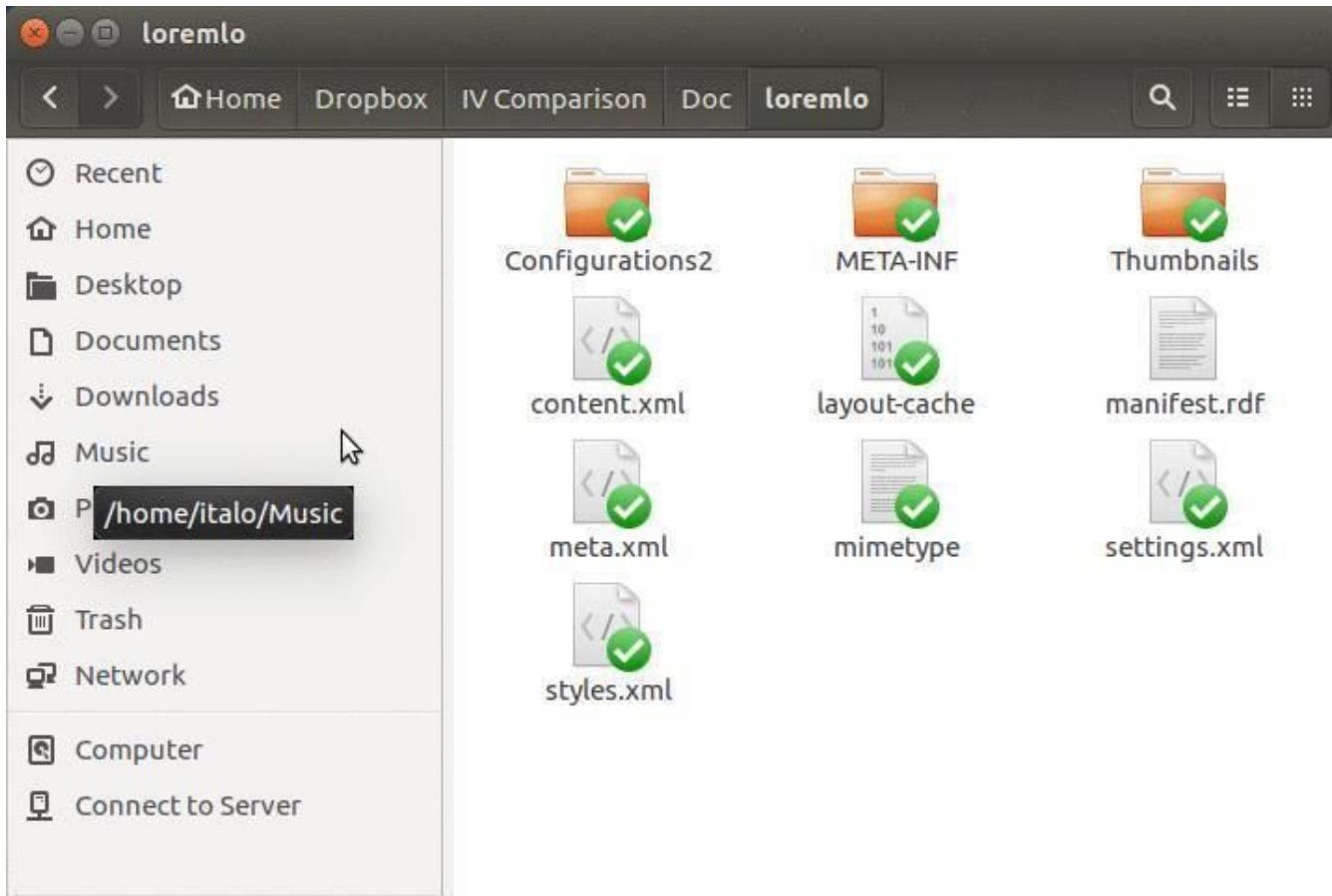
- Based on OOo XML format
- Dec 12, 2002: document format presented to OASIS
- May 1, 2005: ODF released by OASIS
- Nov 16, 2005: ODF presented to ISO/IEC JTC1 based on Publicly Available Specification (PAS)
- May 3, 2006: ODF approved as ISO/IEC IS 26300 standard
- Review: 720 pages in 1239 days

OOXML

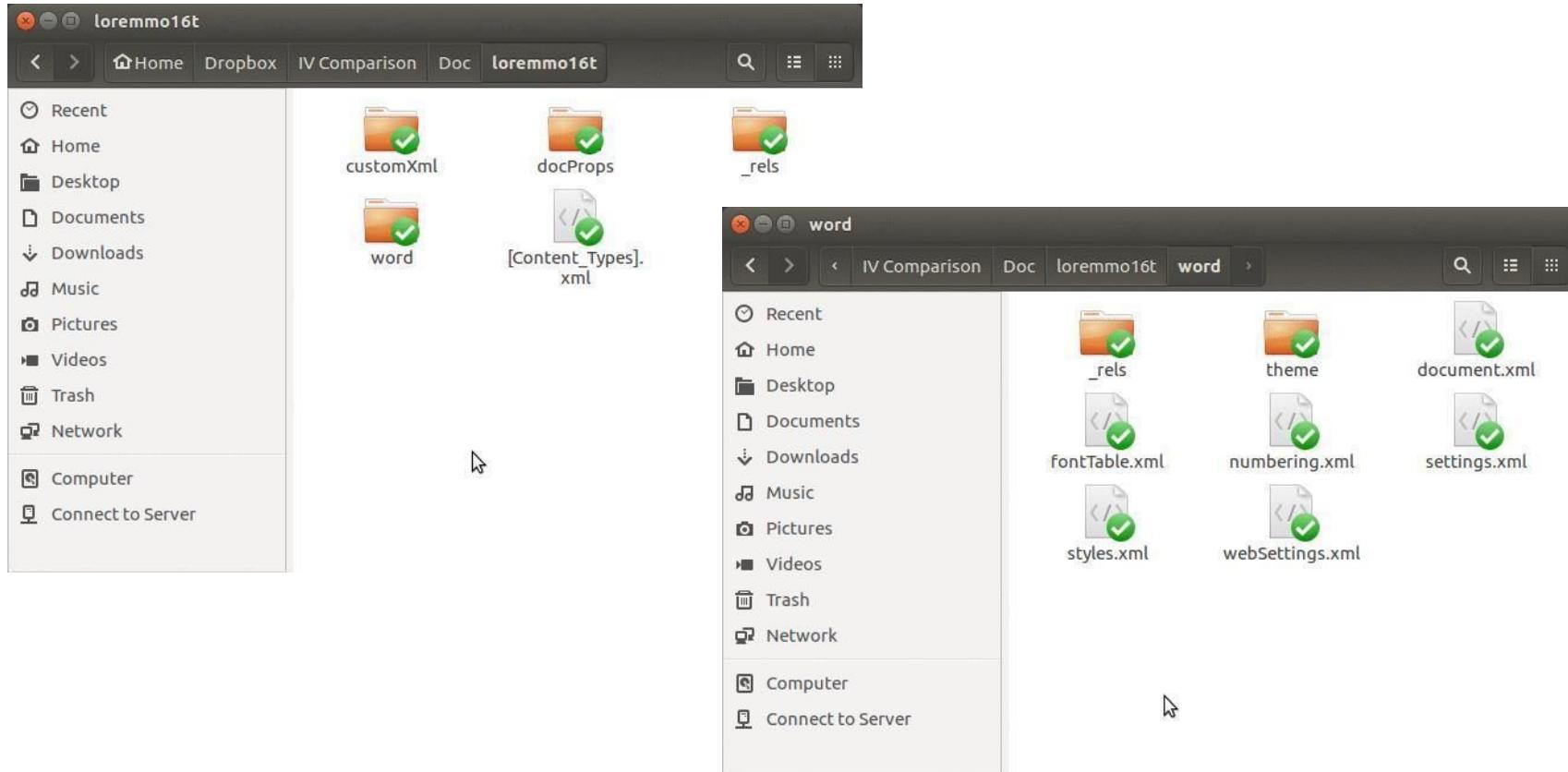
- Based on Microsoft Office 2003 XML format
- Dec 15, 2005: document format presented to ECMA
- Dec 31, 2006: ECMA standard approved by General Assembly
- Jan 31, 2007: OOXML presented to ISO/IEC JTC1 based on Fast Track
- Mar 31, 2008: OOXML pseudo standard approved
- Review: 7200 pages in 838 days



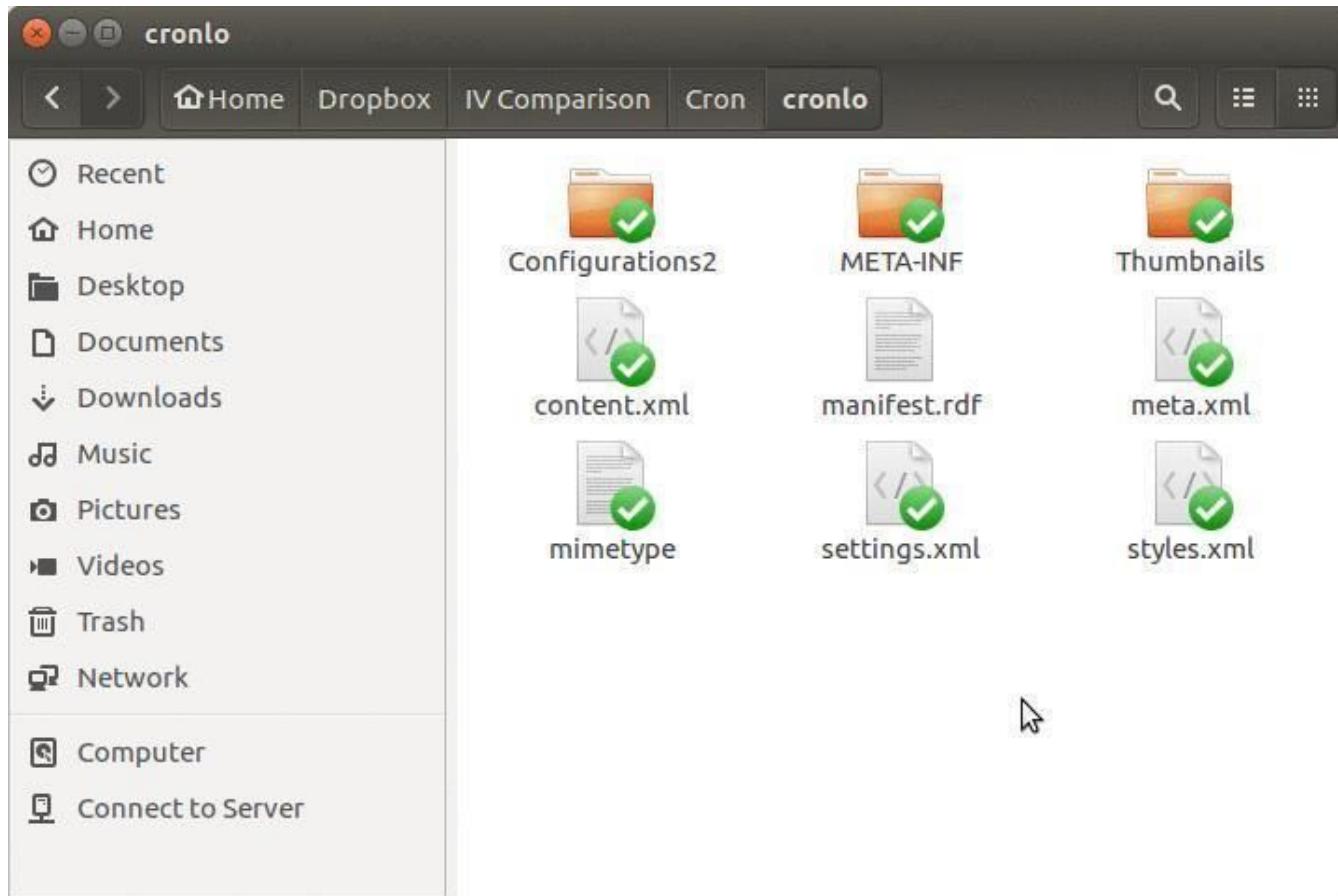
Inside ODT



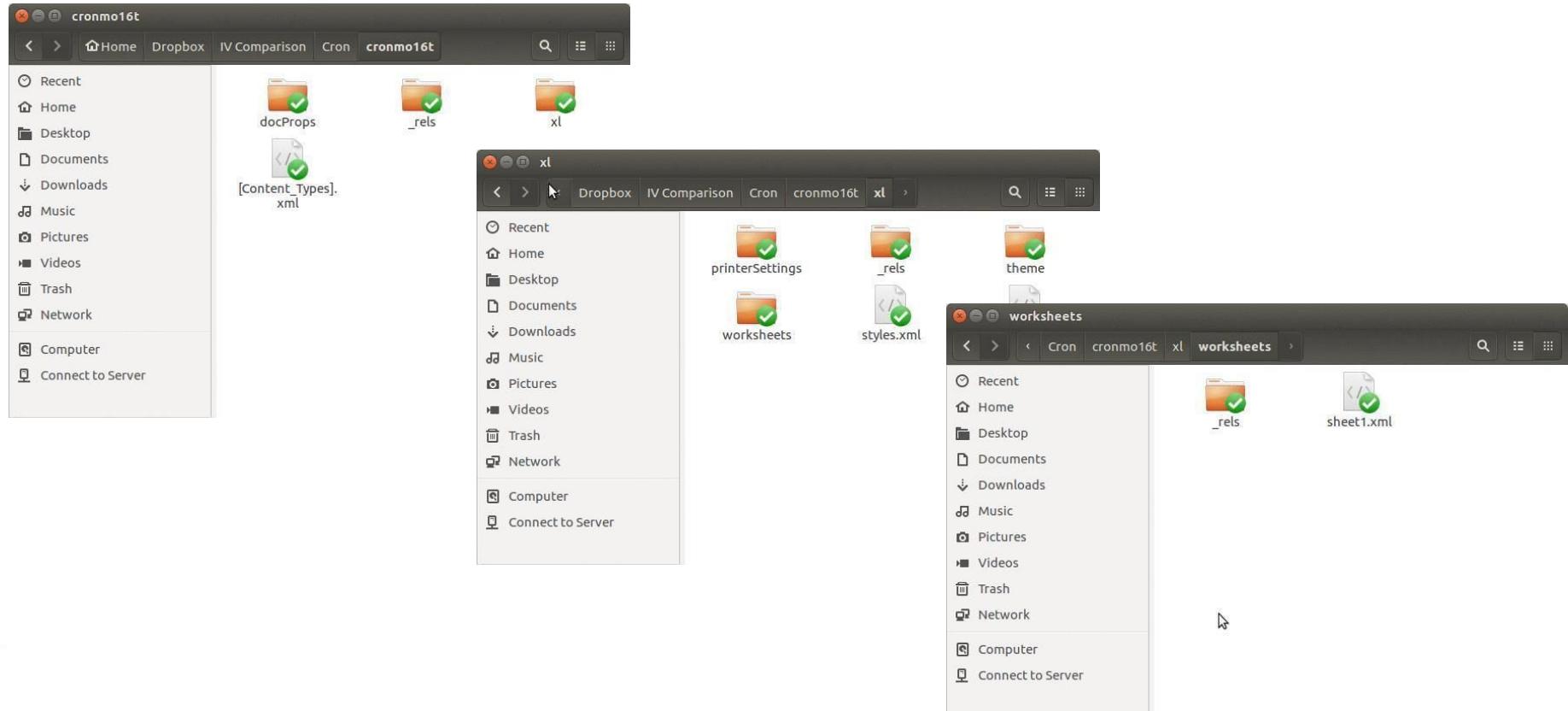
Inside DOCX



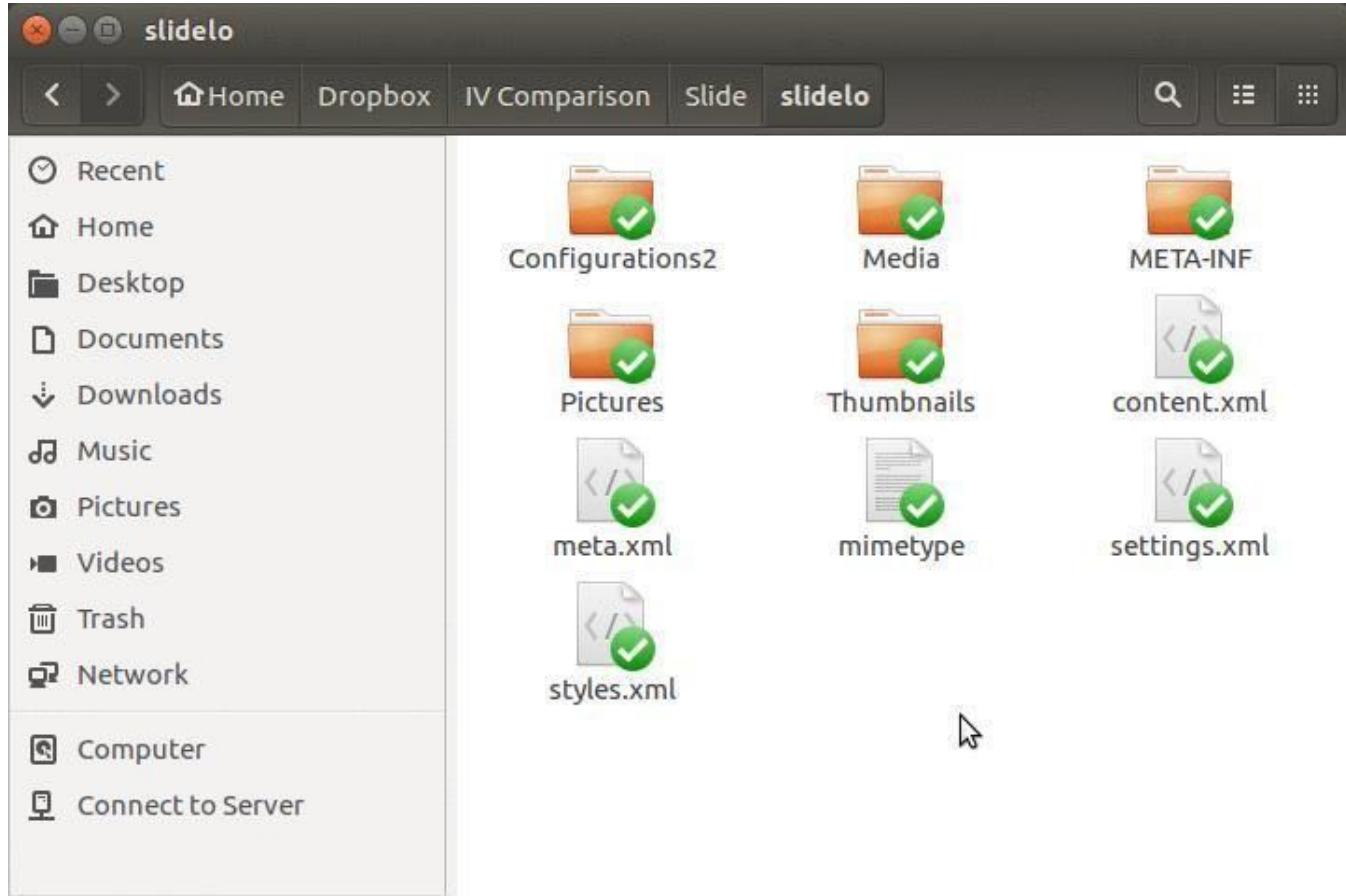
Inside ODS



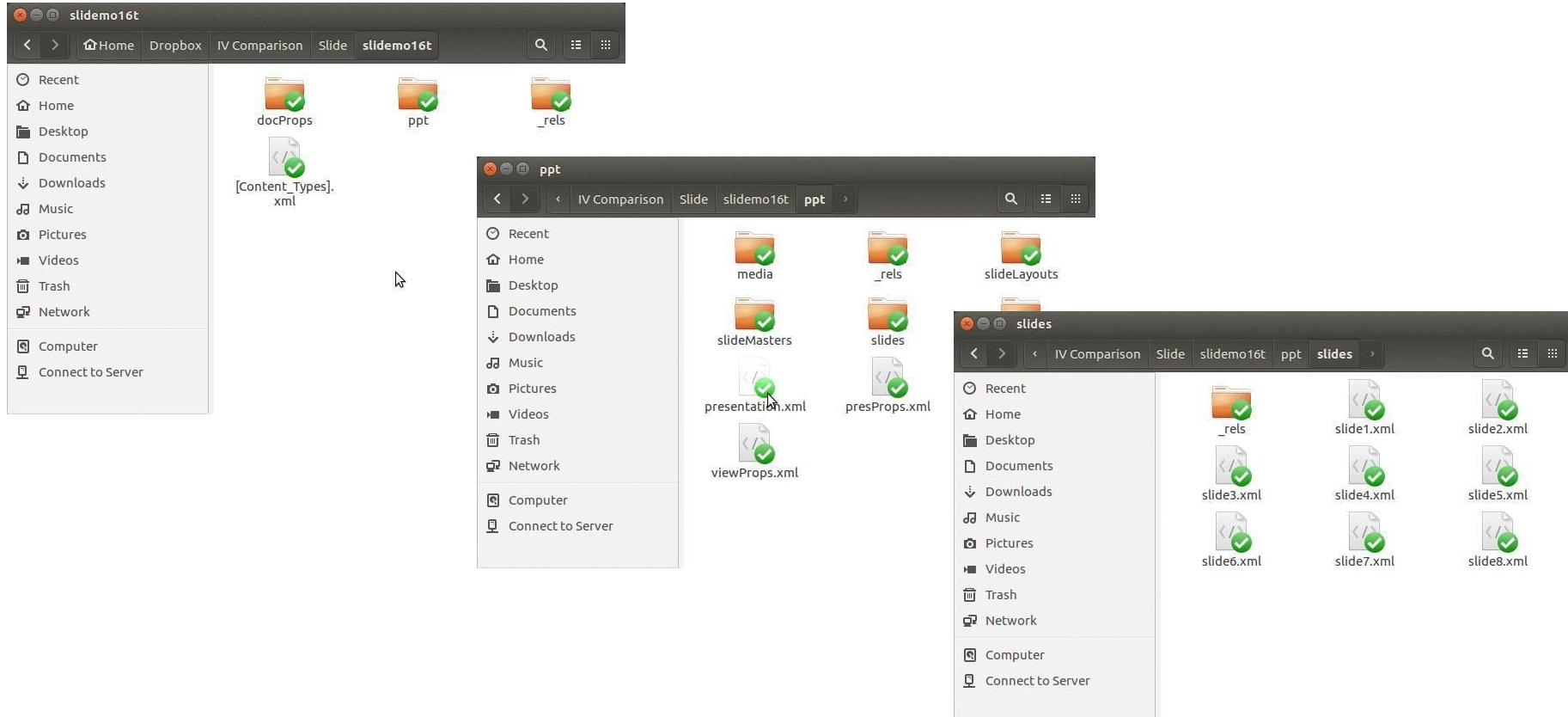
Inside XLSX



Inside ODP



Inside PPTX



Reuse of Existing Standards

ODF

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

OOXML

- Dublin Core



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)

LibreOffice as Shakespeare (ODT)

2017

<text:p text:style-name="P1">To be, or not to be,
that is the question</text:p>

2018

<text:p text:style-name="P1">To be, or not to be,
that is the question</text:p>

2019

<text:p text:style-name="P1">To be, or not to be,
that is the question</text:p>



MS Office as Shakespeare (DOCX)

2017

<w:t>To be</w:t>

<w:t>,</w:t>

<w:t xml:space="preserve"> or not to be</w:t>

<w:t>,</w:t>

<w:t xml:space="preserve"> that </w:t>

<w:t>is the question</w:t>

MS Office as Shakespeare (DOCX)

2018

<w:t>To be</w:t>

<w:t>, or</w:t>

<w:t xml:space="preserve"> not to be</w:t>

<w:t>,</w:t>

<w:t xml:space="preserve"> that is the</w:t>

<w:t xml:space="preserve"> question</w:t>



MS Office as Shakespeare (DOCX)

2019

<w:t>To be</w:t>

<w:t>,</w:t>

<w:t xml:space="preserve"> or not to be, that </w:t>

<w:t>is the question</w:t>



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"



Microsoft Office

	A	B	C	D	E	F
1	01/02/1900					
2	02/02/1900					
3	03/02/1900					
4	04/02/1900					
5	05/02/1900					
6	06/02/1900					
7	07/02/1900					
8	08/02/1900					
9	09/02/1900					
10	10/02/1900					
11	11/02/1900					
12	12/02/1900					
13	13/02/1900					
14	14/02/1900					
15	15/02/1900					
16	16/02/1900					
17	17/02/1900					
18	18/02/1900					
19	19/02/1900					
20	20/02/1900					
21	21/02/1900					
22	22/02/1900					
23	23/02/1900					
24	24/02/1900					
25	25/02/1900					
26	26/02/1900					
27	27/02/1900					
28	28/02/1900					
29	29/02/1900					
30						

LibreOffice

	A	B	C	D
1	01/02/1900			
2	02/02/1900			
3	03/02/1900			
4	04/02/1900			
5	05/02/1900			
6	06/02/1900			
7	07/02/1900			
8	08/02/1900			
9	09/02/1900			
10	10/02/1900			
11	11/02/1900			
12	12/02/1900			
13	13/02/1900			
14	14/02/1900			
15	15/02/1900			
16	16/02/1900			
17	17/02/1900			
18	18/02/1900			
19	19/02/1900			
20	20/02/1900			
21	21/02/1900			
22	22/02/1900			
23	23/02/1900			
24	24/02/1900			
25	25/02/1900			
26	26/02/1900			
27	27/02/1900			
28	28/02/1900			
29	01/03/1900			
30				

Writing Dates the Excel Way

Event	Calc	Excel
Italo Vignoli Birthday		19948
Italo Vignoli Graduation		28813
Italo Vignoli First Job		29860
Italo Vignoli First Computer		30560
Italo Vignoli Wedding		30933
Italo Vignoli Installs OOo		37623
LibreOffice Announcement		40449

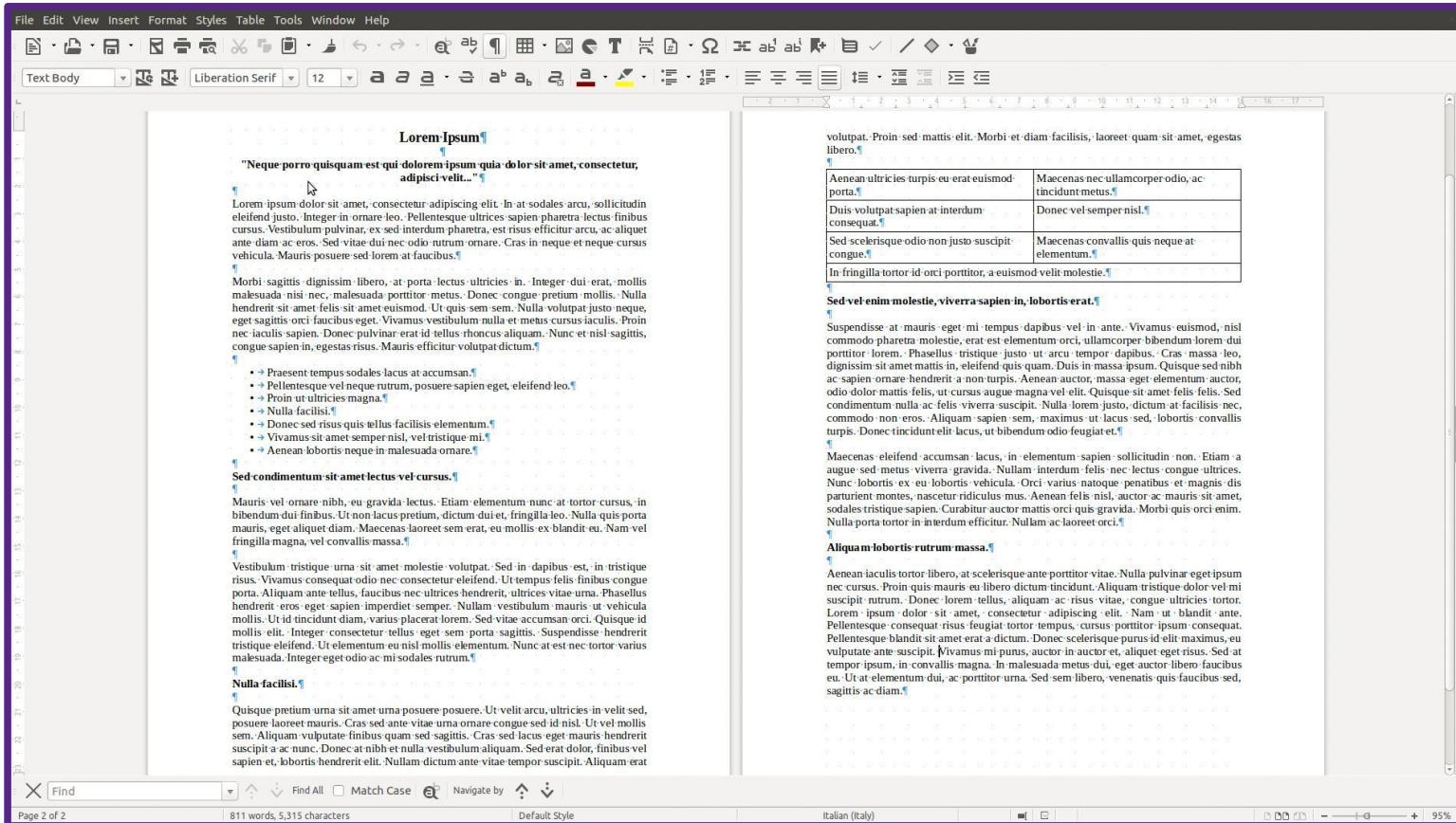


Writing Dates the Excel Way

Event	Calc	Excel
Italo Vignoli Birthday	12/08/1954	19948
Italo Vignoli Graduation	19/11/1978	28813
Italo Vignoli First Job	01/10/1981	29860
Italo Vignoli First Computer	01/09/1983	30560
Italo Vignoli Wedding	08/09/1984	30933
Italo Vignoli Installs Ooo	02/01/2003	37623
LibreOffice Announcement	28/09/2010	40449



Comparison ODF/ooXML



Length in Lines of the XML File

Version	Lines of XML
ODF 1.2 (any version of) LibreOffice	222
OOXML 2010 Transitional (MS Office Windows)	1040
OOXML 2011 Transitional (MS Office MacOS)	12854
OOXML 2013 Transitional (MS Office Windows)	1590
OOXML 2016 Transitional (MS Office Windows)	11667
OOXML 2016 Transitional (MS Office MacOS)	11646
OOXML 2019 Transitional (MS Office Windows)	7085



“Seasonality” of MS Office XML Files

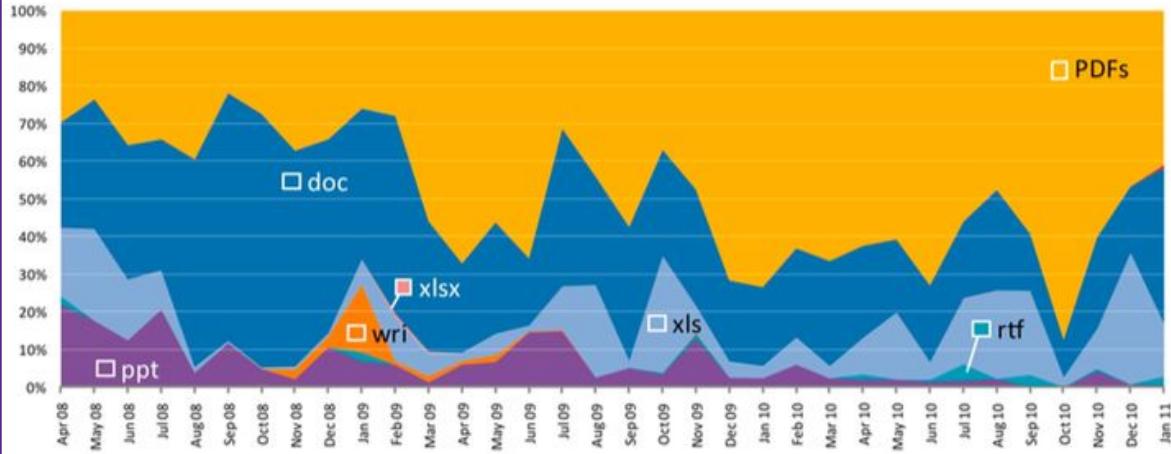
Versione	Lines of XML
Windows OOXML 2013 Transitional Summer 2017	1590
Windows OOXML 2013 Transitional Winter 2018	13515
Windows OOXML 2016 Transitional Summer 2017	11667
Windows OOXML 2016 Transitional Winter 2018	969
Windows OOXML 2016 Transitional Fall 2018	11288
Windows OOXML 2016 Transitional Spring 2019	7085
MacOS OOXML 2016 Transitional Summer 2017	11646
MacOS OOXML 2016 Transitional Fall 2018	854
MacOS OOXML 2016 Transitional Spring 2019	7731



Document Vulnerabilities in 2011



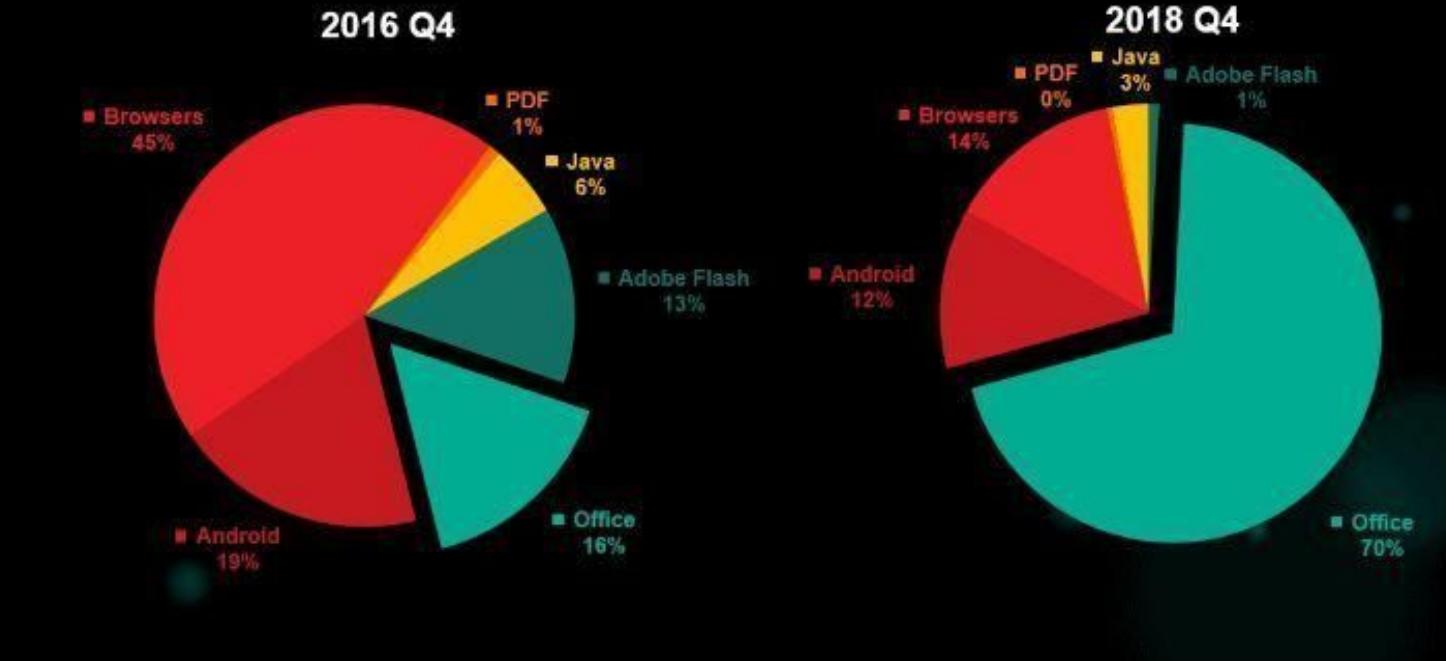
Document File Types Used in Targeted Attacks



Source: Symantec MessageLabs Intelligence, February 2011 Intelligence Report

Document Vulnerabilities in 2018

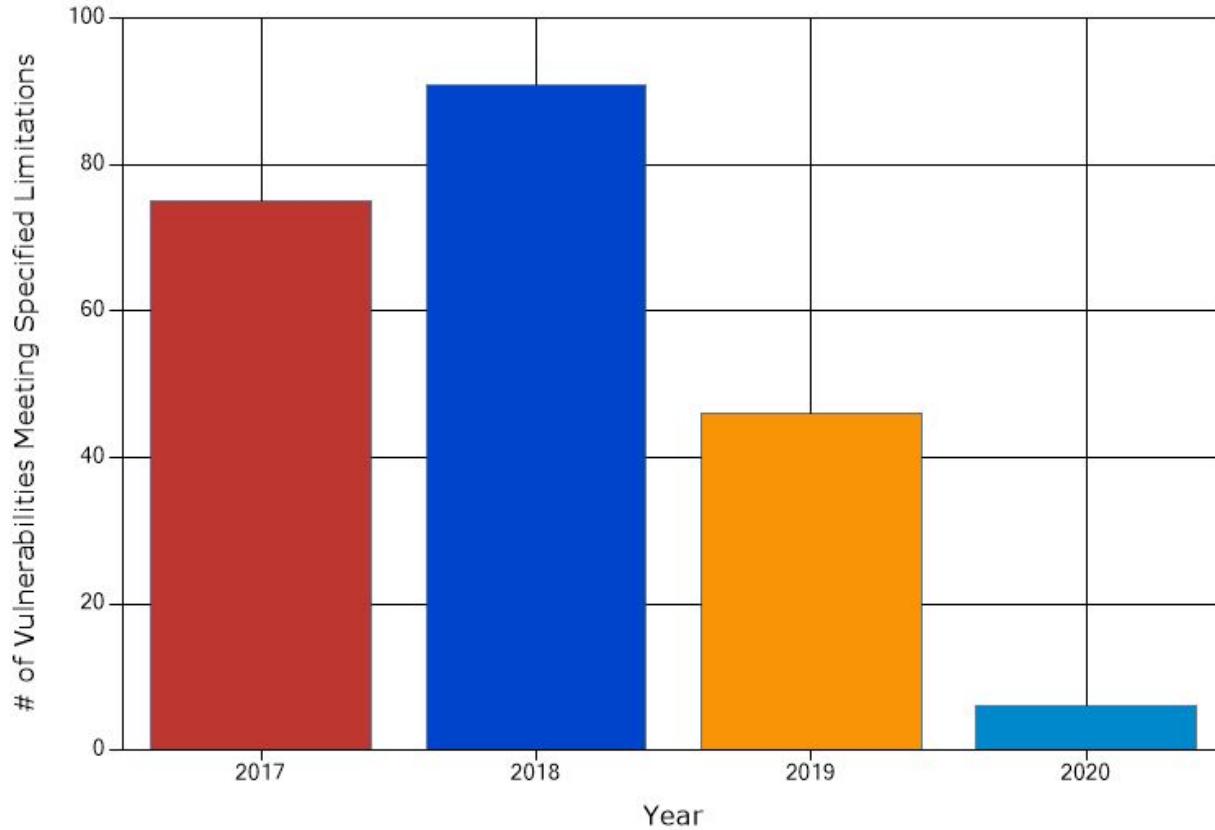
Targeted platforms by attacked users



Search Parameters:

- Results Type: Statistics
- Keyword (text search): microsoft office
- Search Type: Search Last 3 Years

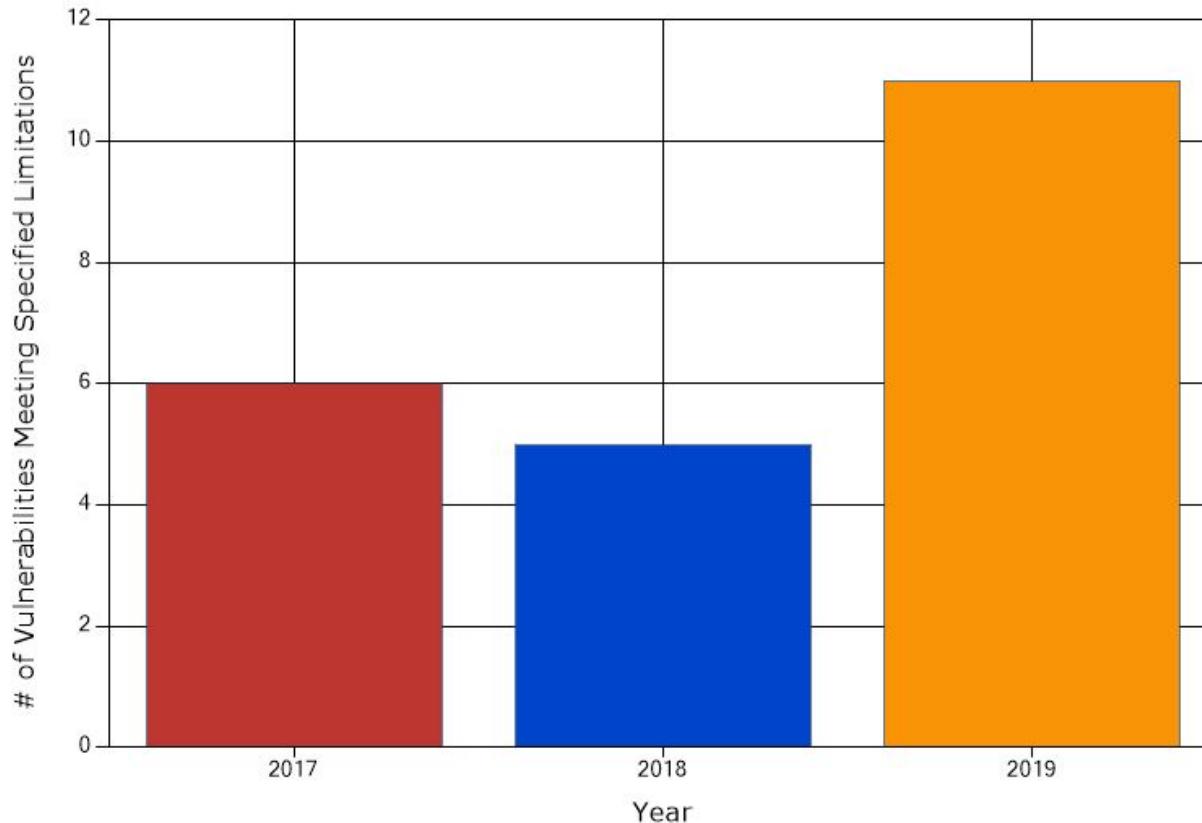
Total Matches By Year



Search Parameters:

- Results Type: Statistics
- Keyword (text search): libreoffice
- Search Type: Search Last 3 Years

Total Matches By Year



ODF is a Standard

- France
- Netherlands
- Portugal
- United Kingdom
- Sweden
- Taiwan



Migration Experiences (1)

Project	Desktops
French Government	500.000
Region of Valencia (Spain)	120.000
Italian Ministry of Defence	100.000
French Gendarmerie	72.000
Hospitals in Copenhagen Region	25.000
Taiwan Ministry of Finance	24.000
City of Toulouse (France)	9.000

Migration Experiences (2)

Project	Desktops
Lithuania Police Department	8.000
Central Region of Denmark	8.000
Taiwan Yi-Lan County	8.000
Schools in Tallinn (Estonia)	4.000
City of Bari (Italy)	1.700
Healthcare 5 Veneto (Italy)	1.500
City of Las Tirana (Albania)	1.000



Migration Experiences (3)

Project	Desktops
Healthcare System	45.000
Federal Bailiffs Service	35.000
Several Regional Administrations	unknown
Russian Helicopters	unknown
VimpelCom	unknown
Gazprom Teploenergo Yaroslavl	unknown
Citygroup	31.000

Project Management

Communications

Analysis

- Documents
- VBA Macros
- Integration

Impact Test

- Bug Fixes
- Compatibility
- Interoperab.

Training

- Trainers
- End Users
- Third Parties

Deployment

Long Term Supported Software

Support

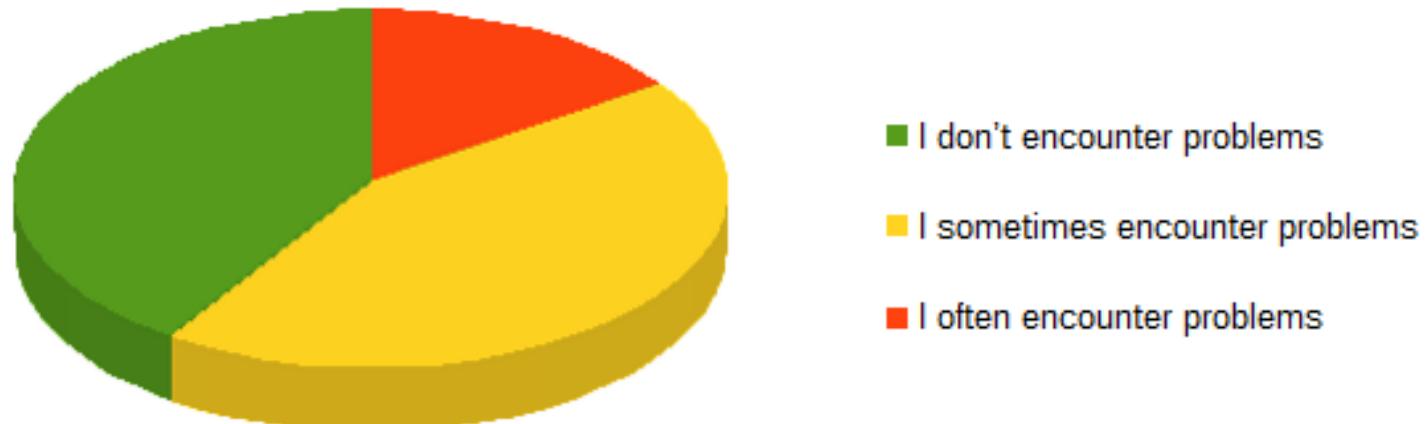
- Bug Fixes
- Compatibility
- Interoperab.

Evolution

- New Feature Development
- Integration

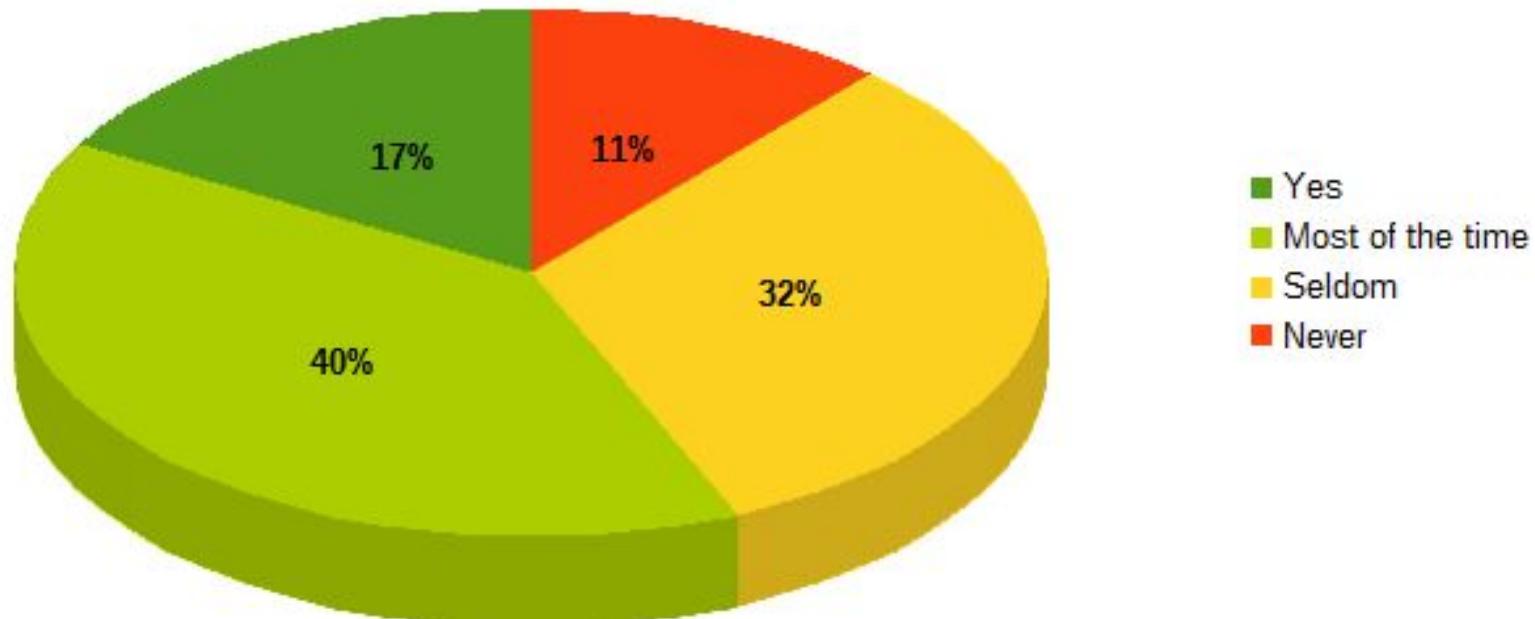
Research from Nantes Metropole

What happens when sharing documents outside the organization?



Research from Nantes Metropole

Do staff from other companies accept to use LibreOffice when you ask them?



Nantes: Dealing with Others

- SUPPLIERS & SATELLITES
 - Wherever we have control we require ODF usage
- OTHER ADMINISTRATIONS, PARTNERS
 - Where we don't have control we recommend ODF



Thank You !

Italo Vignoli
Chair, ODF Advocacy
italo@libreoffice.org
+39 348 5653829

