



LibreOffice
The Document Foundation

News from the ODF Toolkit

FOSDEM 2023

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ODF Toolkit

Main deliverables

- The Core: **ODFDOM**
<https://github.com/tdf/odftoolkit>
- Online Validator (or via commandline)
<https://odfvalidator.org/>

ODF → ODFDOM

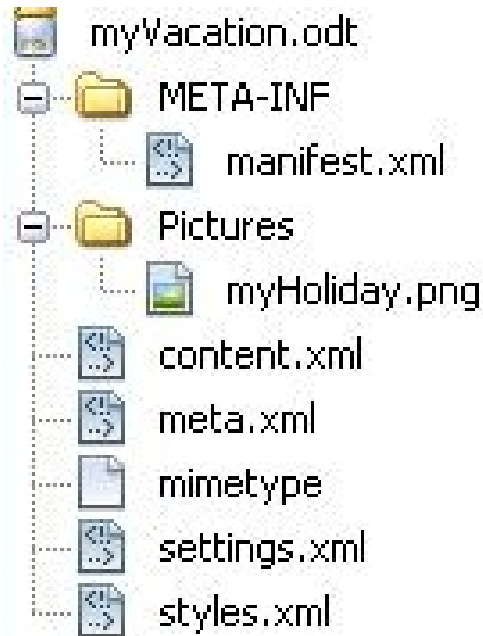
Relation

- **OASIS ODF Standard
(ODF Blueprint / Specification)**
- **TDF Project: ODFDOM
(ODF Implementation)**

OpenDocument Format (ODF)

In a Nutshell

- **OASIS ODF Standard == „Blueprint“ or „Cooking Recipe“**
- **ODF document is a ZIP:**



- **ODF Package**
(OASIS spec. part 2)
- **ODF XML**
(OASIS spec. part 3)

ODF → ODFDOM

Our High-Level Goal

- **Reducing Digital Gap
(Blueprint → Implementation)**
- **Ease ODF Usage / Development**
- **Digitalisation = Automation
(e.g. Generated Source Code)**

ODFDOM

Generated Code (Model)

- **ODF 1.3 has three XML grammars..**
 - ***Manifest XML***
 - **15 elements**
 - **18 attributes**
 - ***Signature XML***
 - **3 elements**
 - **2 elements**
 - ***Schema XML***
 - **606 elements**
 - **1317 attributes**

ODFDOM

Generated Code (Model)

- **ODF 1.3:**
 - DOM Sources from XML
 - Each XML element (class)
 - Each XML attribute (class)
 - Default Values extracted from Spec
 - ...
 - Constructor with all required (Sub)Data (in Spe)

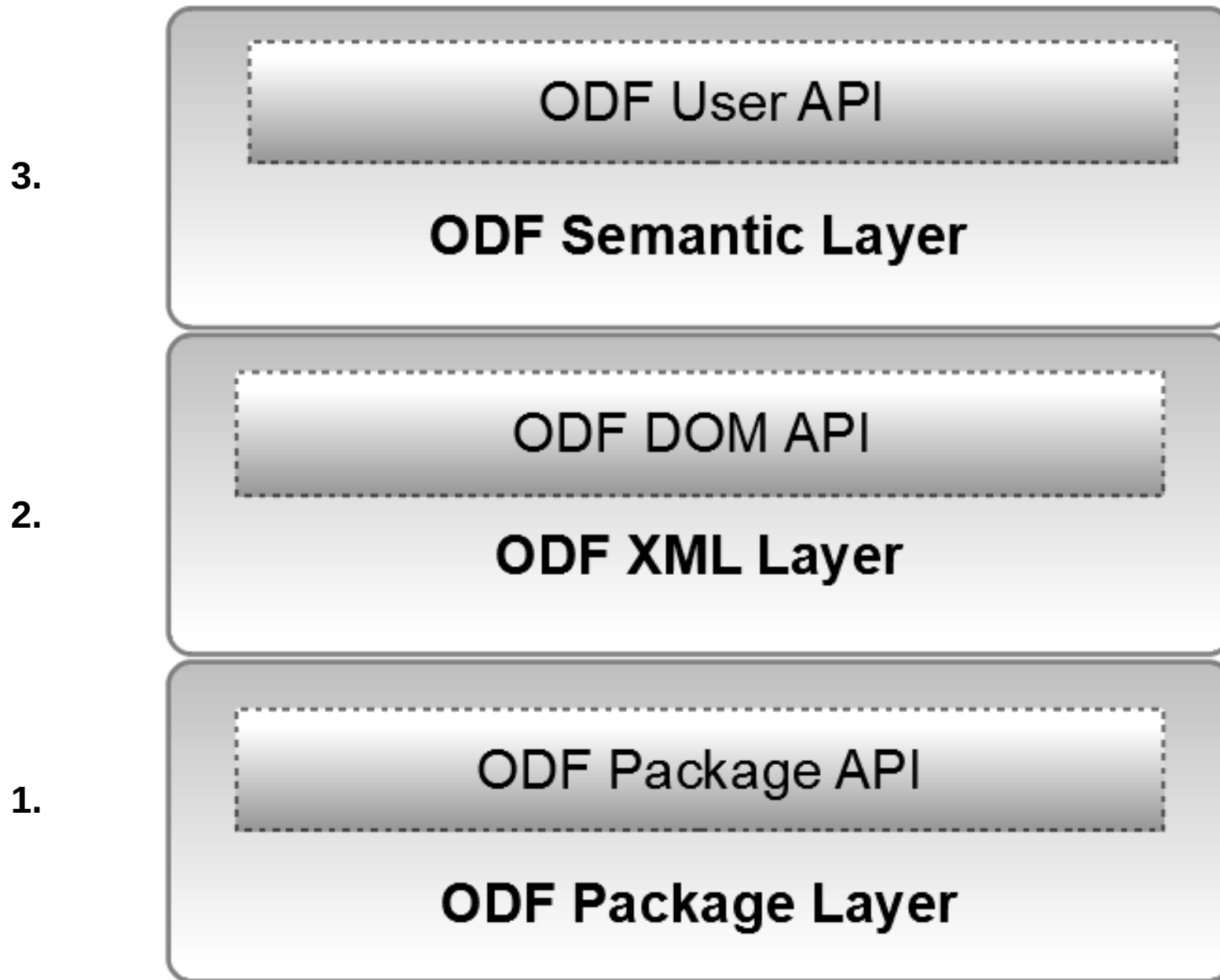
ODFDOM

Improve Generation

- **Possible Improvements ODF Spec**
 - Attribute A „active“ when Attribute B is „present“ (conditions)
 - XML Change of User Change (e.g. insertColumn)
 - XML Puzzles known to User (e.g. Table, Image..)

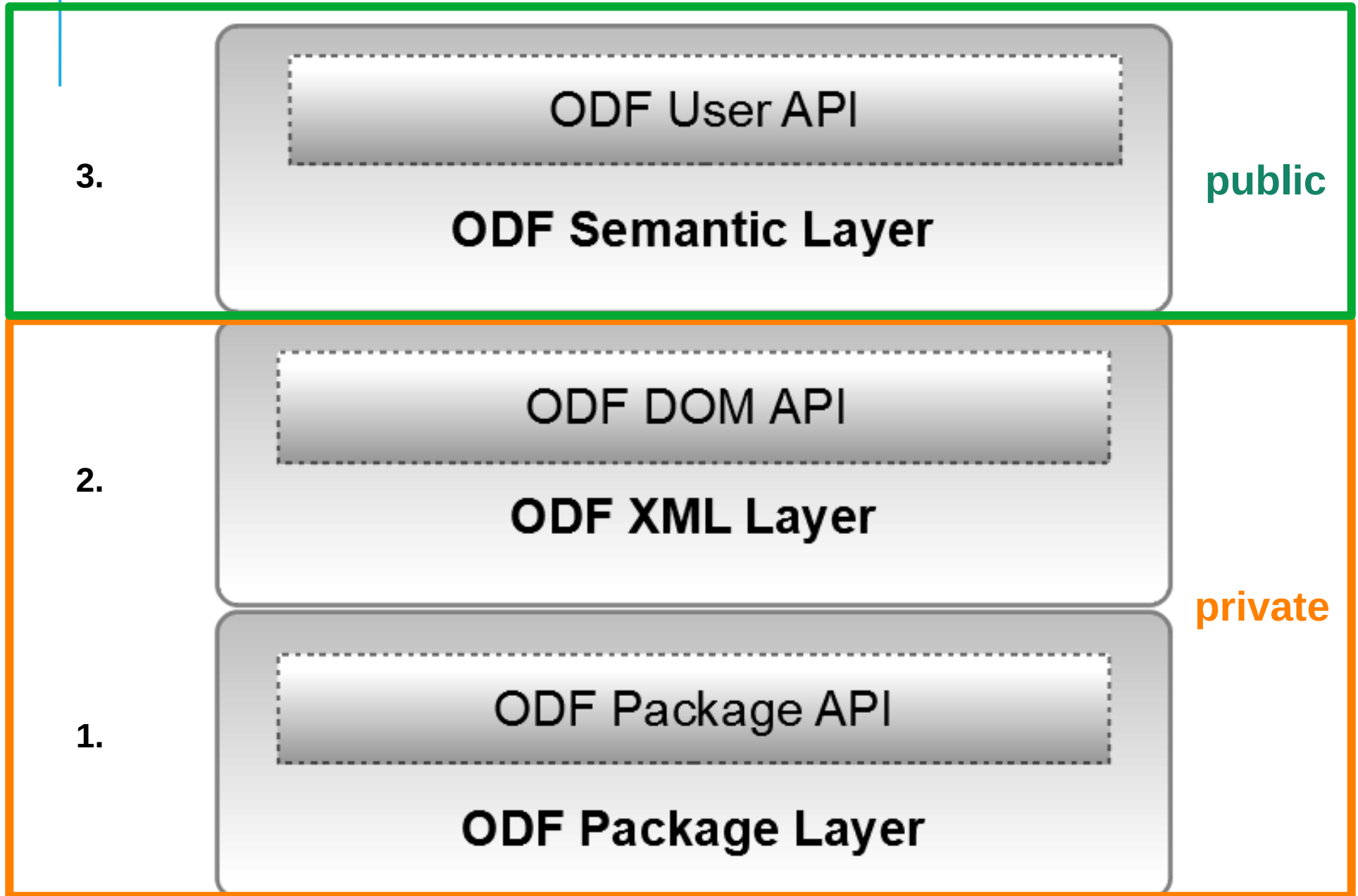
ODFDOM

Architecture



ODFDOM

Architecture (in spe)



ODFDOM

Model without View

- **ODFDOM represents ODF Model**
- **No View (e.g. Page Breaks)**
- **PDF export requires View (e.g. LO)
(ODF Spec is not strict on View)**

ODF Toolkit

Highlights

- **Released:**
 - Version 0.11.0
ODF 1.2 support [2022-12-21]
(Code Generator refactored)
 - Multi-Schema-Validator [2022-07-22]
- **Upcoming:**
 - ODF 1.3 release [nowish]
 - ODF 1.4 release [later this year]

OASIS ODF TC

Highlights

- **Previous Releases:**
 - ODF 1.2: 29 September 2011
 - ODF 1.3: 27 April 2021
- **Closing on ODF 1.4:**
 - ODF 1.4 issue set (66 currently)
 - ODF 1.4 issue set (23 candidates)

ODFDOM

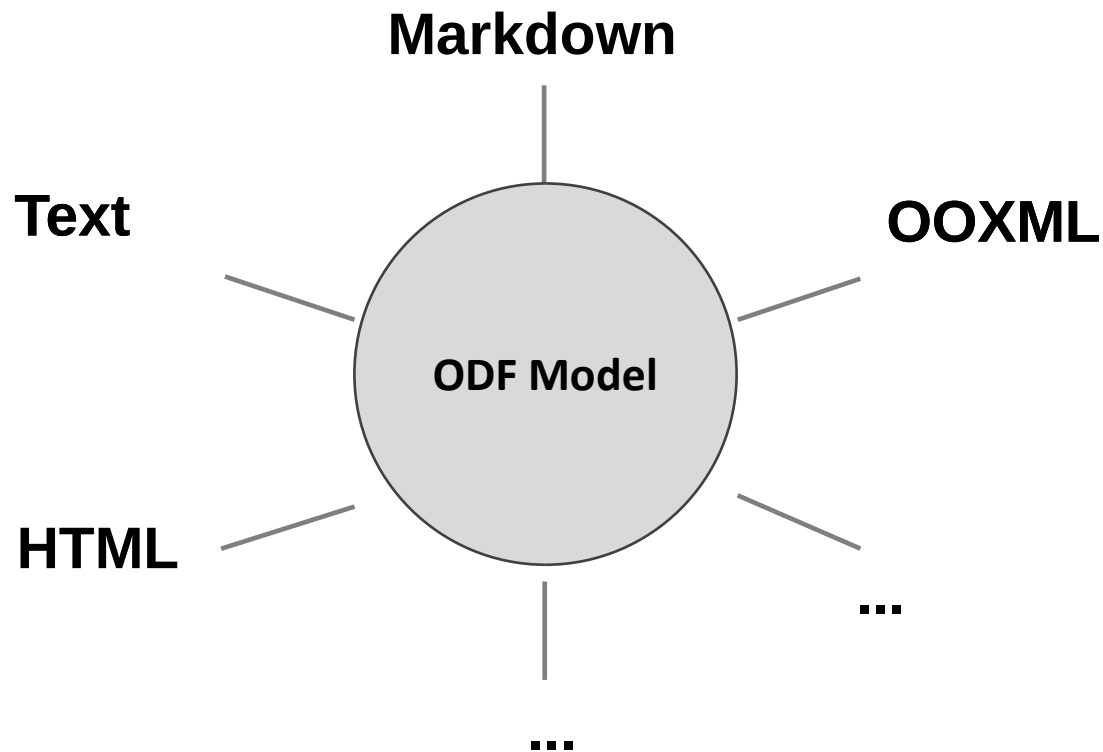
Spin-Off Projects

- **ODF Plugin for Search Engine (re-lsearch):**
 - Extracting Text & Metadata via **ODFDOM based plugin**

ODFDOM

Syntax Hub (Future Design?)

- **ODF Model being Syntax Hub (adding Plugin for exports)**



ODF Toolkit

Resources

- **Website:**

<https://odftoolkit.org/>

<https://tdf.github.io/odftoolkit/docs/> (latest)

- **Sources:**

<https://github.com/tdf/odftoolkit>

- **Online Validator (hosted by TDF)**

<https://odfvalidator.org/>

- **ODF Specification**

<http://docs.oasis-open.org/office/OpenDocument/v1.3/os/>

- **ODF Specification Tooling**

<https://github.com/oasis-tcs/odf-tc/>