

The ODS Reader

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Mapping, omissions, and round-trip expectations for the ODS reader	
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Status of This Memo

This document is an internal Zen discussion record authored in Typst and tracked in git. It intentionally follows RFC-style structure so the design scope, rationale, trade-offs, and operational constraints remain explicit. Documents that still use the placeholder number XXXXX are provisional drafts. Numbered ZDS documents are part of the project record.

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71. Abstract

The format record for zenfmt_ods (ai.insan.zenfmt.ods). An OpenDocument spreadsheet projects exactly like an XLSX workbook: each `table:table` becomes a level-two heading naming the sheet, followed by one table whose first row is the header. The pleasant difference from XLSX is that ODS cell values are typed in place — a date is already ISO 8601 text in `office:date-value` — so no serial-date arithmetic exists in this reader. The dangerous difference is repetition: `table:number-columns-repeated` can claim a run to column 16,384 in one attribute, so materialization is capped, not trusted.

72. Mapping

Every non-empty cell also carries a GridFacet (ZDS 0013): sheet name, zero-based row and column, value type, the formula source when present, the typed value as the source spelled it, and merge extents from the spanned attributes.

Source	Tree result	Facets
table:table	One heading (level 2) from table: naming then one table; the first row is table_head, the rest table_body. Sheets with no non-empty cells are skipped entirely.	GridFacet per non-empty cell, naming the sheet.
office:value-type="float"	The office: value attribute, verbatim.	Value type number; office: value cached.
office:value-type="percentage"	The fraction times one hundred with a % sign.	Value type number; the raw fraction cached.
office:value-type="date"	office:date value truncated at T: the ISO date, no arithmetic.	Value type date; office:date-value cached in full.
office:value-type="time"	office:time value (PT13H30M5S) reformat- ted as 13:30:05; un- parseable durations fall back	Value type time; the raw du- ration cached.

Source	Tree result	Facets
	to the displayed text.	
office:value-type="boolean"	TRUE or FALSE from office:boolean-value.	Value type boolean; office:boolean-cached.
String and currency cells	The displayed text: paragraph content, paragraphs joined with a space.	Value type text (number for currency); the display text cached.
table:number-columns-repeated, table:number-rows-repeated	Materialized up to the caps below; trailing empty cells and rows are grid filler and are trimmed.	Each materialized repeat is a real cell with its own coordinates.
table:covered-table-cell	Skipped: merged continuations fold into their originating cell, as in the ODT reader.	The originating cell's GridFacet carries merge_rows and merge_cols from the spanned attributes.
table:formula	Never evaluated; the cached typed value is used. ods:formula-without-	GridFacet.formula carries the formula source verbatim. ods:formula-of=

Source	Tree re- sult	Facets
	cached- value when there is none.	prefix in- cluded.
office:annotation	Dropped with ods.annotations- dropped.	none.

73. Deliberate omissions

What	Why
Cell styling, colors, borders, widths	A GFM table has none of it.
Charts, images, embedded objects	No tree node exists for them in a table cell, and inventing one is a ZDS 0002 amendment.
Custom number-format styles (number:number-style et al.)	Format-string interpretation is a rendering engine; the typed value is honest, a wrong rendering is not.
Hidden rows, columns, and sheets	Hiding is presentation; the data is the content. Everything converts.
Merged-cell geometry in the tree	table:number-columns-spanned is not carried to the cell payload; the covered cells are simply absent, keeping rows rectangular for GFM. The extents survive in the originating cell's GridFacet.

74. Round-trip expectations

None: ODS is read-only and no preservation namespace is written, for the same reason as XLSX — Markdown cannot carry cell-level typing, and the honest form of that feature is a CSV writer.

75. Security

The shared zenfmt_ooxml archive limits and the DTD-free XML parser apply unchanged. Repetition attributes are the format-specific hazard: repeated cells cap at 1,024 per row, repeated rows at 1,024 per attribute and 65,536 per sheet, and trailing empty runs collapse before emission, so a one-attribute filler run cannot amplify the input.

76. References

- ZDS 0002, *Reading the Office Formats*.

- ZDS 0005, *The XLSX Reader* (the conventions this reader mirrors).
- OASIS OpenDocument v1.3 Part 3, `table:*` and `office:*` attributes.