PDF Days Europe 2025

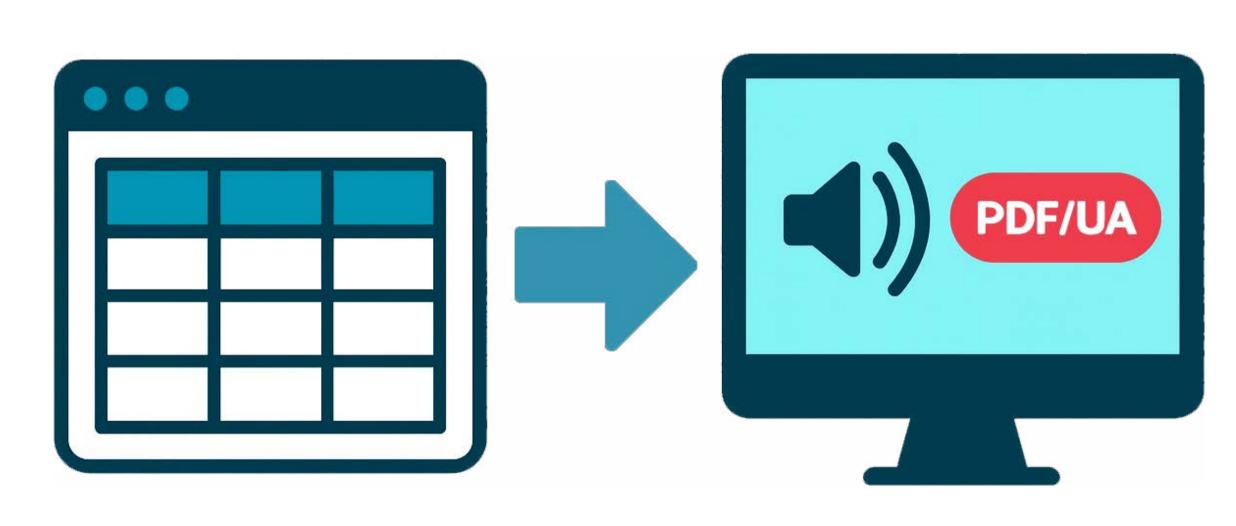
# Tagging Complex Tables for PDF/UA Compliance

Challenges, Best Practices, and Pitfalls



## WHY TAGGING TABLES MATTERS

Accessibility first – Assistive Technologies rely on correct table semantics.



Without proper tagging  $\rightarrow$  screen readers don't understand relationships

#### PITFALLS

**Layout tables** – in authoring tools tables are often used for easier alignment, but such structures must not be tagged with table tags

Complex tables – (multi level, nested) – can be hard to keep track of the association of headers and subheaders

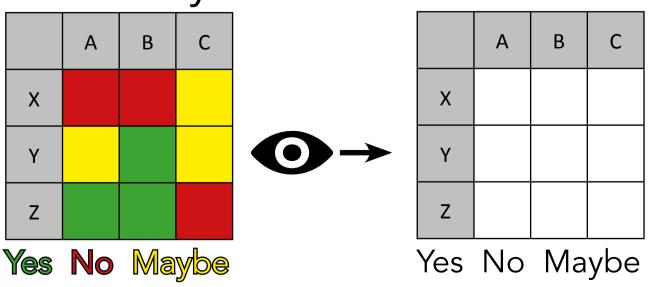
Repeating headers – when tables spanning multiple pages, headers might be repeating on the document pages, but in tagging only a single <THead> is allowed

#### CHALLENGES

Merged cells – extensive use of rowspan/colspan can lead to misalignment

|   | Α | В | CD |  |   | А | В | CD |  |
|---|---|---|----|--|---|---|---|----|--|
| Х |   |   |    |  | Х |   |   |    |  |
| Υ |   |   |    |  | Υ |   |   |    |  |
| Z |   |   |    |  | Z |   |   |    |  |

Data matrix – don't use color to convey information



Empty cells – different ways to approach, AT dependent

### ESSENTIAL TABLE ELEMENTS

| Tags  |   |   |  |  |  |  |  |
|---|---|---|--|--|--|--|--|
| <table></table>   | Defines the start of a table structure  |   |  |  |  |  |  |
| <tuble></tuble>   | Defines the start of a <b>table structure</b> (optional) Encapsulates a set of table rows <tr> indicating the <b>header of a table</b></tr> |   |  |  |  |  |  |
|   |   |   |  |  |  |  |  |
| <tbody></tbody>   | (optional) Encapsulates a set of table rows containing data / content cells   |   |  |  |  |  |  |
| <tfoot></tfoot>   | (optional) Encapsulates a set of table rows<br><tr> indicating the footer of a table</tr>   |   |  |  |  |  |  |
|   |   |   |  |  |  |  |  |
| <tr></tr>   | Defines a <b>row</b> of cells in a table, which can include both header and data cells  |   |  |  |  |  |  |
|   |   |   |  |  |  |  |  |
| <th></th>   |   | Defines a <b>header cell</b> in a table, which is header for (at least one) other cell(s) |  |  |  |  |  |
| <td></td> <td colspan="6">Indicates a cell that contains <b>data</b></td> |   | Indicates a cell that contains <b>data</b>  |  |  |  |  |  |
| <caption></caption>   | Brief <b>description</b> of table contents.  Must be first or last child of the <table> (optional but recommended)</table>                  |   |  |  |  |  |  |
| Attributes  |   |   |  |  |  |  |  |
| Summary   | A summary of the table's <b>purpose and structure</b> (optional, only PDF 1.7)  |   |  |  |  |  |  |
| Short   | A <b>short form</b> of the content in <b><th></th></b> cells (optional, only PDF 2.0)   |   |  |  |  |  |  |
| Scope  A B C D  X Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y                     | Defines the 'direction' for which this TH cell serves as a header.  Possible values are 'Column', 'Row', or 'Both'.                         |   |  |  |  |  |  |
| Headers   | Define which header cell relates to this cell.  Attribute Objects  / Attribute Object 1 << Dictionary>>  / Headers [Array]                  |   |  |  |  |  |  |

Requires unique IDs

defined on all cells.

Headers (Array) lists all associated cells

which serve as a header for this cell.

# BEST PRACTICES

Use <Table> tag – where appropriate

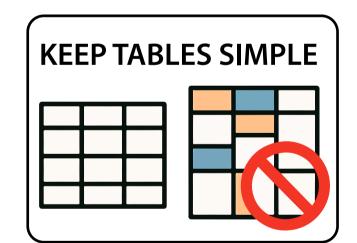
**Use** correct table tagging

→ Accessibility + Compliance

Define headers – almost all tables need headers defined. Use /Scope whereever possible and /Headers (headers+IDs) whereever needed. Cells referenced by /Headers are always <TH>.

**Empty cells** – are always <TD>

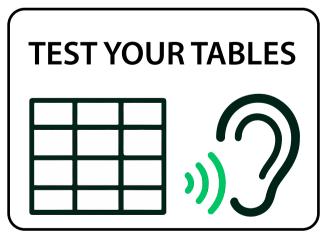
Avoid empty columns/rows – don't use table cells to separate content visually.



Comprehensible – keep complexity as low as possible. Tables that are visually hard to understand

also create challenges when tagging and consuming via screen readers.

**Verification** – use screen readers to test your tables and verify it is set up and read as expected.





Tagged PDF
Best Practice Guide
pdfa.org

