

# Create accessible Tables with axesWord<sup>®</sup>

V10.2022





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### **1** Basics

#### **1.1 Requirements for accessible tables**

Tables should always have marked header cells. For accessible tables, header cells, so-called "Table Header Cells", have to be correctly labeled, so that the important reference for understanding the content can be established for each data cell. Correctly marked header cells can be recognized by screen readers and be read in conjunction with the content of the related data cells.

In PDF, as with HTML, there is the Scope attribute. It is used to define, if a header cell is related to a column or a row. It makes it clear to which data cells the respective head cell refers.

For complex tables, the Scope attribute is not sufficient. There, an association between data cells and header cells must be set by using header IDs.

### **1.2 Checking tables**

You can use the PAC Preview to verify that the table was created correctly with table headers.



## 2 Understanding the basic principle

### 2.1 Mapping paragraph styles to PDF tags

axesWord® relies on additional information that can be attached to paragraph styles. This additional information is set to the appropriate styles by mapping paragraph styles to PDF tags (including essential attributes). We call this combination of tag and essential attributes "role". Check or change this mapping in the **Dialog box: Document Settings**: go to the **Ribbon Tab: axesPDF**, click the **Button: Document Settings**. In the **Dialog box: Document Settings** in the **Ribbon tab: Role Mapping** is a list of all paragraph styles available in the document.

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Style 'Header Row' Header Cell (Simple Table) ings e Row
Header $\rightarrow$ Level 1 Header $\rightarrow$ Level 2 Header $\rightarrow$ Level 3 Header $\rightarrow$ Level 3 Header $\rightarrow$ Level 5 Header $\downarrow$ Level 2 Header $\downarrow$ Level 2 Header $\downarrow$ Level 3 Header $\downarrow$ Level 3 Header $\downarrow$ Level 4 Header $\downarrow$ Level 5 Header $\downarrow$ Level 5	Header Cell (Simple Table) ings e Row
Header Row HTML Adresse HTML Vorformatiert Index 1 Index 2 Index 3 Index 4 Index 5 Index 5 Index 6 Index 7 Index 8 Index 9 Index 9 Index 9 Index 9 Index 9 Index 9 Index 9 Index 9 Index 1 Kein Leerraum Kein Leerraum	

Figure 1: Dialog box "Document Settings" > Tab "Role Mapping"

Clicking on a paragraph style displays the corresponding role mapping and settings in the right part of the dialog box. Both can be edited.

For example, for the paragraph style "Header Row", the **role: Header Cell** (Simple Table) with the Scope: Row is set. This mapping allows you to assign the scope attribute "Row" to a style.

Always use this style now when you create a row heading in a simple table. Similarly, the style "Header Column" was created in this example document.



For complex tables, there are separate styles: for example, "Header  $\rightarrow$  Level 1" stands for a row header at outline level 1, "Header  $\downarrow$  Level 2" for a level 2 column header.

yles	Role of Style 'Header Row'	
yles ieader $\rightarrow$ Level 1 ieader $\rightarrow$ Level 2 ieader $\rightarrow$ Level 3 ieader $\rightarrow$ Level 5 ieader $\rightarrow$ Level 5 ieader $\downarrow$ Level 2 ieader $\downarrow$ Level 2 ieader $\downarrow$ Level 4 ieader $\downarrow$ Level 4 ieader $\downarrow$ Level 5 ieader $\downarrow$ Level 5 ieader $\downarrow$ Level 5 ieader $\downarrow$ Level 7 ieader $\downarrow$ Level 7	Role of Style 'Header Row'  Header Cell (Simple Table)  Default  Paragraph Heading List Continue Caption  Koron BlockQuote Header Cell (Simple Table) Header Cell (Complex Table)  Artifact	

Figure 2: Dialog Box: Document Settings > Selecting the role for a style



Kole Mapping Initial View			
tyles	R	Role of Style 'Header Row'	
Header $\rightarrow$ Level 1 Header $\rightarrow$ Level 2 Header $\rightarrow$ Level 3 Header $\rightarrow$ Level 4 Header $\rightarrow$ Level 5 Header $\downarrow$ Level 2 Header $\downarrow$ Level 2 Header $\downarrow$ Level 2 Header $\downarrow$ Level 3 Header $\downarrow$ Level 3 Header $\downarrow$ Level 5 Header $\downarrow$ Level 7 Header $\downarrow$ Level 8 Header $\downarrow$ Level 9 Index 1 Index 3 Index 4 Index 5 Index 6 Index 7 Index 8 Index 9 Indexiberschrift Intensives Zitat Kommentartext Kommentartext Kommentarthema		Header Cell (Simple Table)  Settings Scope  Row Column Row Both	

Figure 3: Dialog Box: Document Settings > Select the Scope attribute.



## **3** Procedure

#### 3.1 Checklist

1. Check if the table is a data table (as opposed to a layout table)

Identify the header cells (marked in yellow here). Styles for header cells usually start with "Header".

Location Date		Temperature	<mark>Weather</mark>	
		<mark>Maximum</mark>	<mark>Minimum</mark>	
<mark>Bern</mark>	<mark>29.04.2020</mark>	20 °C	10 °C	sunny
	<mark>30.04.2020</mark>	18 °C	9 °C	light rain
<mark>Lugano</mark>	<mark>29.04.2020</mark>	21 °C	14 °C	cloudy
	<mark>30.04.2020</mark>	20 °C	13 °C	light drizzle
<mark>Zürich</mark>	<mark>29.04.2020</mark>	23 °C	13 °C	cloudy
	<mark>30.04.2020</mark>	20 °C	11 °C	light rain

 Determine if there are column and/or row headers (identified in the names of the styles by the down arrow "↓" for the column- and the right arrow "→" for the row-headers).

Location <mark>↓</mark> Date <mark>↓</mark>		Temperature <mark>↓</mark>	Weather <mark>↓</mark>	
		Maximum <mark>↓</mark>	Minimum <mark>↓</mark>	
Bern <mark>→</mark>	29.04.2020 <mark>→</mark>	20 °C	10 °C	sunny
	30.04.2020 <mark>→</mark>	18 °C	9 °C	light rain
Lugano <mark>→</mark>	29.04.2020 <mark>→</mark>	21 °C	14 °C	cloudy
	30.04.2020 <mark>→</mark>	20 °C	13 °C	light drizzle
Zürich <mark>→</mark>	29.04.2020 <mark>→</mark>	23 °C	13 °C	cloudy
	30.04.2020 <mark>→</mark>	20 °C	11 °C	light rain

The setting, whether it is a column or row header, is made in the **Dialog box: Document Settings** in the **Drop-down list box: Direction Down** and in the **Drop-down list box: Direction Right**.

For a column heading, the setting **Direction Down** is set to **Yes** and the setting **Direction Right** is set to **No**.



Role Mapping Initial View		
tyles		Role of Style 'Header ↓ Level 1'
Header $\rightarrow$ Level 1	÷	Header Cell (Complex Table)
Header $\rightarrow$ Level 2		
Header $\rightarrow$ Level 3		Sattings
Header $\rightarrow$ Level 4		Securitys
Header $\rightarrow$ Level 5		Outline Level
Header ↓ Level 1		· · · · · · · · · · · · · · · · · · ·
Header 1 Level 2		1,
Header ↓ Level 2 only 1st column		Direction Down
Header ↓ Level 3		
Header ↓ Level 4		Yes
Header ↓ Level 5		
Header Column		Direction Right
Header Row		
HTML Adresse		No
HTML Vorformatiert		
Index 1	'	Direction Up
Index 2		
Index 3		NO
Index 4		
Index 5		Direction Lett
Index 6		No
Index /		
Index 8		Scope of a merged beader cell
Index 9 Tedevőbereebeitt		
Indexuberschnit		All Columns/Rows
Intensives Zitat		+++
Kein Leerraum		When belongs a merged child cell to the Scope?
Kommentartext		
Kommentarthema		First Column/Row is in the Scope
Konfzeile	*	

For a row heading, the setting **Direction Down** is set to **No** and the setting **Direction Right** is set to **Yes**.



Role Mapping Initia	l View							
Styles			F	Role o	fStyle 'Header → Level 1'			
Header $\rightarrow$ Level 1		*			Hander Call (Complex Table)			
Header → Level 2					Header Cell (Complex Table)			
Header $\rightarrow$ Level 3				50	tings			
Header $\rightarrow$ Level 4				- 50	ungs			
Header $\rightarrow$ Level 5				Ou	ine Level			
Header 🕽 Level 1								
Header 🕽 Level 2							1	- <b>+</b>
Header 1 Level 2 only 1st	column			Dire	ction Down			
Header 🕹 Level 3								
Header 🕽 Level 4					No			Ŧ
Header 🕹 Level 5								
Header Column				Dire	ction Right			
Header Row								
HTML Adresse					➡ Yes			*
HTML Vorformatiert								
Index 1				Dire	ction Up			
Index 2								
Index 3					No			*
Index 4								
Index 5				Dire	ction Left			
Index 6								
Index 7					NO			*
Index 8								
Index 9				Sco	oe ot a merged header cell			
Indexüberschrift	-				All Columna Rouse			
Inhaltsverzeichnisüberschr	ift				All Columns/Rows			· ·
Intensives Zitat						7		
Kein Leerraum				Wh	en beiongs a merged child ceil to the So	cope?		
Kommentartext					First Column/Row is in the Scope			-
Kommentarthema		-			This country tow is in the scope			*
Konfzeile			I L					_

3. Determine outline level: Please note: This has to be done for all header cells, regardless of whether they apply to rows or columns (the corresponding outline levels are indicated by a number in the following figure).

You always start counting from the hierarchically highest (usually either from above or from the left) and go to the hierarchically lower header cells (see green arrows).

The counting method in the red arrow is not allowed, otherwise an incorrect value is determined here. As a rule of thumb, you always have to use the **highest** count value as the outline level for different counting directions. "Bern" has the "Header  $\rightarrow$  Level 2" style in this example

<b>Location</b>	Date 1	Temperature 1	Weather 1	
1		Maximum 2	Minimum <sup>2</sup>	
Bern	29.04.2020	20 °C	10 °C	sunny
	30.04.2020	18 °C	9 °C	light rain
Lugano	29.04.2020	21 °C	14 °C	cloudy
	30.04.2020	20 °C	13 °C	light drizzle
Zurich 👌	29.04.2020	23 °C	13 °C	cloudy
	30.04.2020	20 °C	11 °C	light rain



The outline level is set in the **Dialog box: Document Settings** in the **Spin box: Outline Level**.

- 4. Deduce which styles and document settings are required
  - a. Is it a header cell that is not merged?

Then the styles specified in point 4 with the default settings are sufficient. Example:

	Highest temperature	Lowest temperature	Weather
29.04.2020	23 °C	13 °C	Cloudy
30.04.2020	20 °C	11 °C	Rain
01.05.2020	19 °C	8 °C	Cloudy

In this example, there are no merged header cells. All header cells apply to either one column or one row.

In the **Dialog box: Document Settings**, the default values can be retained (in the **Drop-down list box: Scope of a merged header cell** this is the **Menu option: All Columns/Rows**).

Role Mapping	Initial View		
Styles		Role of Style 'Header ↓ Level 1'	
Avida Avida Avida Abbildungszeicher Aufzählungszeicher Aufzählungszeicher Aufzählungszeicher Beschriftung Blocktext Data cell Data Dokumentstruktur E-Mail-Signatur E-Mail-Signatur E-Mail-Signatur Fußizeile Grußformel Header $\rightarrow$ Level 1 Header $\rightarrow$ Level 2 Header $\rightarrow$ Level 3 Header $\downarrow$ Level 3	nis 1 2 1 3 4 5 schrift nly 1. column nly 1. column	No         Direction Down         Image: Settings         Outline Level         Direction Down         Image: Settings         Direction Down         Image: Settings         Direction Down         Image: Settings         Direction Down         Image: Settings         Direction Right         Image: Settings         No         Direction Left         Image: Scope of a merged header cell         Image: All Columns/Rows         When belongs a merged child cell to the Scope?         Image: First Column/Row is in the Scope	1 ÷

**b.** Is it a merged header cell that applies to all hierarchically deeper columns/rows?

Then the styles specified in point 4 with the default settings are sufficient.

#### Example:

Both the header cell "Temperature" and "Bern" apply to the two hierarchically lower cells.

Location	Date 0	Temperature	Weather	
		Maximum		
<b>Bern</b>	29.04.2020	20 °C	10 °C	sunny
	30.04.2020	18 °C	9 °C	light rain
<mark>Lugano</mark>	<mark>29.04.2020</mark>	21 °C	14 °C	cloudy
	<mark>30.04.2020</mark>	20 °C	13 °C	light drizzle
<mark>Zürich</mark>	<mark>29.04.2020</mark>	23 °C	13 °C	cloudy
	<mark>30.04.2020</mark>	20 °C	11 °C	light rain

The correct style is: Header  $\downarrow$  level n or Header  $\rightarrow$  Level n. In the Dialog box: Document Settings, the default values can be retained (in the Drop-down list box: Scope of a merged header cell this is the Menu option: All Columns/Rows).

Role Mapping	Initial View		
tyles		Role of Style 'Header ↓ Level 1'	
types Aufzählungszerzeid Anrede Aufzählungszeiche Aufzählungszeiche Aufzählungszeiche Aufzählungszeiche Aufzählungszeiche Beschriftung Blocktext Data cell Datam Dokumentstruktur E-Mai-Signatur E-Mai-Signatur E-Mai-Signatur E-Mai-Signatur E-Mai-Signatur Header → Level 3 Header → Level 3 Header ↓ Level 3 Header ↓ Level 3 Header ↓ Level 3 Header ↓ Level 3	nnis n n 2 n 3 n 4 n 5 rrschrift nly 1. column nly 1. column	Role of Style Header (Level 1         Image: Provide the style of the style         Image: Provide the style         Outline Level         Image: Provide the style         Im	1 ÷

c. Is it a merged header cell that applies only to the first column/row?

Then a style with the following special setting is required. Example:

Both the header cell "Switzerland" and "Germany" applies only to the first column.

Location	Date	Temperature		Weather
		Maximum	Minimum	
Switzerland				
Bern	29.04.2020	20 °C	10 °C	sunny
	30.04.2020	18 °C	9 °C	light rain
Lugano	29.04.2020	21 °C	14 °C	cloudy
	30.04.2020	20 °C	13 °C	light drizzle
Zurich	29.04.2020	23 °C	13 °C	cloudy
	30.04.2020	20 °C	11 °C	rain
Germany				
Munich	29.04.2020	21 °C	10 °C	cloudy
//	30.04.2020	20 °C	9 °C	light rain
Frankfurt	29.04.2020	19 °C	13 °C	sunny
	30.04.2020	17 °C	10 °C	cloudy
Berlin	29.04.2020	19 °C	12 °C	cloudy
	30.04.2020	17 °C	9 °C	light drizzle

The correct style is: Header  $\downarrow$  Level 2 only 1. column or Header  $\rightarrow$  Level n only 1. line.

The scope is set in the **Dialog box: Document Settings** in the **Dropdown list box: Scope of a merged header cell**. The **Menu option: First Columns/Rows** must be selected here.

Role Mapping	Initial View		
tyles		Role of Style 'Header ↓ Level 2 only 1. column'	
tyles Abbildungsverzeid Anrede Aufzählungszeiche Aufzählungszeiche Aufzählungszeiche Beschriftung Blocktext Data cell Datar Blocktext Endnotentext Endnotentext Endnotentext Endnotentext Endnotentext Euß_Endnotentext Euß_Endnotentext Fußzeile Grußformel Header → Level 1 Header → Level 3 Header → Level 5 Header → Level 5 Header → Level 5 Header → Level 5	hnis en 2 en 3 en 4 erschrift	Role of Style Header J Level 2 only 1. column'  Settings  Outine Level  Direction Down  Yes  Direction Right  No  Direction Up  No  Direction Left  First Columns/Rows	2 +
Header ↓ Level 3 (	only 1. column	When belongs a merged child cell to the Scope?	
Header ↓ Level 5		First Column/Row is in the Scope	*

**d.** Is it a header cell whose subcells are merged? And does the merged subcell belong to the scope of any of the head cells?

#### Example:

The merged subcell "Header  $\downarrow$  Level 2" falls within the scope of each header cell "Header  $\downarrow$  Level 1 any".

Header ↓ Level 1	Header↓ Level 1 any	Header ↓ Level 1 any	Header ↓ Level 1 any							
					Header	Level 2				
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										
					Header	Level 2				
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										
Header $\rightarrow$ Level 2										

The correct style is: **Header**  $\downarrow$  **Level n any** or **Header**  $\rightarrow$  **Level n any**. This setting is displayed in the **Dialog box: Document Settings** in the **Drop-down list box: When belongs a merged child cell to the Scope?** The **Menu option: Any Column/Row is in the Scope** must be selected here.

![](_page_14_Picture_0.jpeg)

Role Mapping	Initial View				
tyles	L		R	ole of Style 'Header ↓ Level 1 any'	
Header $\rightarrow$ Level 1		*		Haadar Call (Complex Table)	
Header $\rightarrow$ Level 2					
Header → Level 3				Cattions	
Header $\rightarrow$ Level 4			Γ	Setungs	
Header $\rightarrow$ Level 5				Outline Level	
Header ↓ Level 1					
					1 *
leader ↓ Level 2				Direction Down	
leader ↓ Level 2 d	only 1st column				
leader ↓ Level 3				Yes	-
leader ↓ Level 4				•	
leader ↓ Level 5				Direction Right	
leader Column					
leader Row				No	
ITML Adresse					
ITML Vorformatie	rt		·	Direction Up	
ndex 1					
ndex 2				No	-
ndex 3					
ndex 4				Direction Left	
ndex 5					
ndex 6				No	*
ndex 7					
ndex 8				Scope of a merged header cell	
ndex 9					
ndexüberschrift				All Columns/Rows	*
nhaltsverzeichnis	überschrift				
ntensives Zitat				When belongs a merged child cell to the Scope?	
(ein Leerraum					
Commentartext		-		Any Column/Row is in the Scope	*
		*	_ L		

![](_page_15_Picture_0.jpeg)

![](_page_15_Picture_1.jpeg)

## 4 Example tables with simple headers and columns

### 4.1 Variant 1: Table with a header line at the top

Table 1: Weather forecast for the next 5 days for Zurich

Date	Max. Temperature	Min. Temperature	Weather
29.04.2020	23 °C	13 °C	cloudy
30.04.2020	20 °C	11 °C	light rain
01.05.2020	19 °C	8 °C	cloudy
02.05.2020	21 °C	13 °C	slightly cloudy
03.05.2020	20 °C	11 °C	slightly cloudy

#### 4.1.1 What styles are used with which role mapping?

Date	Max. Temperature	Min. Temperature	Weather
29.04.2020	Style: Header Column	13 °C	cloudy
30.04.2020	20 °C	11 °C	light rain
01.05.2020	19 °C	8 °C	cloudy
02.05.2020		12 °C	slightly cloudy
03.05.2020	Style: Data cell	c	slightly cloudy

Figure 4: Identification of the used styles in the sample table

![](_page_16_Picture_0.jpeg)

ole Mapping Initial View				
des			Dale of Style 'Header Column'	
eader → Level 1		1		
eader → Level 1	-		Header Cell (Simple Table)	-
eader →Level 3				
eader → Level 4			Settings	
eader → Level 5			Scope	
eader 1 Level 1				7
eader 1 Level 1 anv			Column	,
eader 🕽 Level 2				
eader 🕽 Level 2 only 1st column				
eader 🛛 Level 3				
eader 🕽 Level 4				
eader \downarrow Level 5				
eader Column				
eader Row				
TML Adresse				
TML Vorformatiert		1.		
ndex 1				
idex 2				
ndex 3				
idex 4				
idex 5				
idex 6				
ndex 7				
idex 8				
ndex 9				
ndexüberschrift				
nhaltsverzeichnisüberschrift				
itensives Zitat				
ein Leerraum				
ommentartext	-			

Figure 5: Role Mapping of the style "Header Column"

![](_page_17_Picture_0.jpeg)

Role Mapping Initial View				
tyles			Role of Style 'Data cell'	
Data cell	*		Default	
Datum				
Dokumentstruktur			Settings	
E-Mail-Signatur			Settings	
Endnotentext				
Fuß/-Endnotenüberschrift				
Fußnotentext				
ußzeile				
Grußformel				
leader → Level 1				
leader → Level 2				
leader → Level 3				
leader → Level 4				
leader → Level 5				
Header ↓ Level 1				
Header ↓ Level 1 any		·		
Header ↓ Level 2				
leader ↓ Level 2 only 1st column				
Header ↓ Level 3				
Header ↓ Level 4				
Header ↓ Level 5				
Header Column				
leader Row				
ITML Adresse				
-ITML Vorformatiert				
index 1				
index 2				
ndex 3				
index 4				
índex 5	-			

Figure 6: Role mapping of the style "Data cell"

#### 4.2 Variant 2: Table with a header column on the left

Table 2: Weather forecast for Zurich for the next 5 days

29.04.2020	23 °C	13 °C	cloudy
30.04.2020	20 °C	11 °C	light rain
01.05.2020	19 °C	8 °C	cloudy
02.05.2020	21 °C	13 °C	slightly cloudy
03.05.2020	20 °C	11 °C	slightly cloudy

![](_page_18_Picture_0.jpeg)

29.04.2020	23 °C	13 °C	cloudy
30.04.2020	20 °C	11 °C	light rain
01.05.2020	Style: Header Row	،c	cloudy
02.05.2020	21 °C	13 °C	Style: Data cell
03.05.2020	20 °C	11 °C	slightly cloudy

Figure 7: Identification of the used styles in the sample table

Role Mapping Initial View				
tyles			F	tole of Style 'Header Row'
Header → Level 1		1	[	Lander Coll (Courte Table)
Header → Level 2				Header Cell (Simple Table)
Header → Level 3				C-W
Header → Level 4			- [	Settings
Header → Level 5				Scope
Header ↓ Level 1				
Header ↓ Level 1 any				Row -
Header 👃 Level 2				
Header ↓ Level 2 only 1st column				
Header 1 Level 3				
Header ↓ Level 4				
Header J Level 5				
Header Column				
Header Row				
-ITML Adresse				
-TTML Vorformatiert			.	
index 1				
index 2				
index 3				
index 4				
index 5				
index 6				
ndex 7				
index 8				
index 9				
indexüberschrift				
nhaltsverzeichnisüberschrift				
intensives Zitat				
Kein Leerraum				
Kommentartext	-			

Figure 8: Role Mapping of the style "Header Row"

![](_page_19_Picture_0.jpeg)

Role Mapping Initial View				
tyles		1	Role of Style 'Data cell'	
Data cell Datum	-		Default	
Dokumentstruktur			Settings	
-Mail-Signatur	- 1 H			
Indnotentext				
Fuß/-Endnotenüberschrift				
ußnotentext				
ußzeile				
Grußformel				
leader → Level 1				
leader → Level 2				
leader $\rightarrow$ Level 3				
leader → Level 4				
leader $\rightarrow$ Level 5		.		
leader ↓ Level 1				
leader ↓ Level 1 any				
leader ↓ Level 2				
leader ↓ Level 2 only 1st column				
leader ↓ Level 3				
leader ↓ Level 4				
leader ↓ Level 5				
leader Column				
leader Row				
TIML Adresse				
HIML Vortormatiert				
ndex 1				
nuex 2				
index 4				
index 5				
index 5	*			

Figure 9: Role mapping of the style "Data cell"

# 4.3 Variant 3: Table with a header at the top and header column on the left

Table 3: Weather forecast for Zurich for the next 5 days

Date	Max. Temperature	Min. Temperature	Weather
29.04.2020	23 °C	13 °C	cloudy
30.04.2020	20 °C	11 °C	light rain
01.05.2020	19 °C	8 °C	cloudy
02.05.2020	21 °C	13 °C	slightly cloudy
03.05.2020	20 °C	11 °C	slightly cloudy

Date	Max. Temperature	Min. Temperature	Weather
29.04.2020	Style: Header Column	13 °C	cloudy
30.04.2020	20 °C	11 °C	light rain
01.05.2020	19 °C	8 °C	cloudy
02.05.2020		12 °C	Sebtly cloudy
03.05.2020	Style: Header Row	C S	Style: Data cell

Figure 10: Identification of the used styles in the sample table

Role Mapping Initial View		
tyles	Role of Style 'Header Column'	
Header → Level 1		
Header $\rightarrow$ Level 2	Header Cell (Simple Table)	
Header $\rightarrow$ Level 3	C-W	
Header → Level 4	- Settings	
Header → Level 5	Scope	
Header ↓ Level 1		
Header ↓ Level 1 any	Column	-
Header ↓ Level 2		
Header ↓ Level 2 only 1st column		
leader ↓ Level 3		
leader ↓ Level 4		
leader ↓ Level 5		
leader Column		
leader Row		
-TTML Adresse		
ITML Vorformatiert		
index 1		
index 2		
index 3		
index 4		
index 5		
index 6		
index 7		
index 8		
index 9		
indexüberschrift		
nhaltsverzeichnisüberschrift		
ntensives Zitat		
Kein Leerraum		
Kommentartext	*	

Figure 11: Role Mapping of the style "Header Column"

![](_page_21_Picture_0.jpeg)

Role Mapping 🔰 Ini	tial View				
ityles			F	le of Style 'Header Row'	
ityles Header $\rightarrow$ Level 1 Header $\rightarrow$ Level 2 Header $\rightarrow$ Level 3 Header $\rightarrow$ Level 3 Header $\downarrow$ Level 4 Header $\downarrow$ Level 1 Header $\downarrow$ Level 1 Header $\downarrow$ Level 2 Header $\downarrow$ Level 2 Header $\downarrow$ Level 3 Header $\downarrow$ Level 3 Header $\downarrow$ Level 5 Header Column Header Column Header Row HTML Vorformatiert Index 1 Index 3 Index 4 Index 5 Index 6 Index 7 Index 8 Index 8 Index 9	st column		F	Header Cell (Simple Table) Settings Scope Row	
Indexüberschrift	-h-:0				
Intensives Zitat	unit				
Kein Leerraum					
			- 1		

Figure 12: Role Mapping of the style "Header Row"

![](_page_22_Picture_0.jpeg)

Document Settings				×
Role Mapping Initial View				
Styles			Role of Style 'Data cell'	
Data cell	•		Default	-
Datum			*	
Dokumentstruktur			– Settings –	
E-Mail-Signatur	10			
Endnotentext				
Fub/-Endnotenuberschrift				
Fubnotentext				
Fubzelle Crußformel				
Grubtormei				
Header Level 1				
Header -> Level 2				
Header → Level 5				
Header   Level 1				
Header   Level 1 any		1		
Header   Level 2				
Header 1 Level 2 only 1st column				
Header 1 Level 3				
Header Level 4				
Header J Level 5				
Header Column				
Header Row				
HTML Adresse				
HTML Vorformatiert				
Index 1				
Index 2				
Index 3				
Index 4				
Index 5	-			
		-		
			OK	Cancel
			ÖK	Curicel

Figure 13: Role mapping of the style "Data cell"

![](_page_23_Picture_1.jpeg)

### **5** Example tables with multiple headers

Table 4: Weather forecast for Zurich for the next 5 days

# 5.1 Variant 4: Table with multiple headers at the top and one header column on the left (marked via Scope attribute)

Date **Temperature** Weather Minimum Maximum 29.04.2020 23 °C 13 °C cloudy 30.04.2020 20 °C 11 °C light rain 01.05.2020 19 °C 3°C cloudy 21 °C 02.05.2020 13 °C slightly cloudy 20 °C 03.05.2020 11 °C slightly cloudy

Date	Temperature		Weather
	Maximum	Minimum	
29.04.2020	23 °C		cloudy
30.04.2020	20 °C	Style: Header Colur	nn rain
01.05.2020	19 °C	8 °C	cloudy
02.05.2020		12°C	Sobtly cloudy
03.05.2020	Style: Header Row	°C	Style: Data cell

Figure 14: Identification of the used styles in the sample table

![](_page_24_Picture_0.jpeg)

Styles       Role of Style 'Header Column'         Header → Level 1       Image: Style 'Header Column'         Header → Level 2       Image: Style 'Header Cell (Simple Table)         Header → Level 3       Settings         Header → Level 4       Scope         Header ↓ Level 1 any       Image: Scope         Header ↓ Level 2 only 1st column       Image: Column         Header ↓ Level 3       Image: Column         Header ↓ Level 5       Image: Column         Header ↓ Level 5       Image: Column         Header ↓ Level 5       Image: Column         Header Column       Image: Column         Header Stevel 5       Image: Column         Header Column       Image: Column         Header Stevel 5       Image: Column <th></th>	
Header → Level 1 Header → Level 2 Header → Level 3 Header → Level 3 Header → Level 4 Header ↓ Level 5 Header ↓ Level 2 only 1st column Header ↓ Level 2 Header ↓ Level 2 Header ↓ Level 4 Header ↓ Level 5 Header ↓ Leve	
HTML Vorformatiert Index 1 Index 2 Index 2 Index 3 Index 4 Index 5 Index 6 Index 7 Index 8 Index 9 IndexSextitet Kein Leernaum	

Figure 15: Role Mapping of the style "Header Column"

![](_page_25_Picture_0.jpeg)

Role Mapping 🔰 Ini	tial View				
ityles			F	le of Style 'Header Row'	
ityles Header $\rightarrow$ Level 1 Header $\rightarrow$ Level 2 Header $\rightarrow$ Level 3 Header $\rightarrow$ Level 3 Header $\downarrow$ Level 4 Header $\downarrow$ Level 1 Header $\downarrow$ Level 1 Header $\downarrow$ Level 2 Header $\downarrow$ Level 2 Header $\downarrow$ Level 3 Header $\downarrow$ Level 3 Header $\downarrow$ Level 5 Header Column Header Column Header Row HTML Vorformatiert Index 1 Index 3 Index 4 Index 5 Index 6 Index 7 Index 8 Index 8 Index 9	st column		F	Header Cell (Simple Table) Settings Scope Row	
Indexüberschrift	-h-:0				
Intensives Zitat	unit				
Kein Leerraum					
			- 1		

Figure 16: Role Mapping of the style "Header Row"

![](_page_26_Picture_0.jpeg)

cole Mapping Initial View			
yles		Role of Style 'Data cell'	
ata cell	*	und a ch	
atum	1	C Default	
okumentstruktur		C-11/	
-Mail-Signatur		Settings	
indnotentext			
uß/-Endnotenüberschrift			
ußnotentext			
ußzeile			
Grußformel			
leader → Level 1			
leader → Level 2			
leader → Level 3			
leader → Level 4			
leader → Level 5			
leader ↓ Level 1			
leader 🛛 Level 1 any			
leader 🕽 Level 2			
leader ↓ Level 2 only 1st column			
leader 🕽 Level 3			
leader 🕽 Level 4			
leader ↓ Level 5			
leader Column			
leader Row			
ITML Adresse			
ITML Vorformatiert			
ndex 1			
ndex 2			
ndex 3			
ndex 4			
ndex 5	+		

Figure 17: Role mapping of the style "Data cell"

# 5.2 Variant 5: Table with multiple header lines at the top and header columns on the left (identified via header IDs)

Table 5: Weather forecast for the next 2 days for selected locations in Switzerland

Location	Date	Temperature	emperature	
		Maximum	Minimum	
Bern	29.04.2020	20 °C	10 °C	sunny
	30.04.2020	18 °C	9 °C	light rain
Lugano	29.04.2020	21 °C	14 °C	cloudy
	30.04.2020	20 °C	13 °C	light drizzle
Zürich	29.04.2020	23 °C	13 °C	cloudy
	30.04.2020	20 °C	11 °C	light rain

Consider which column and row headings are required for this table and which outline level:

This table requires 5 styles:

![](_page_27_Picture_0.jpeg)

![](_page_27_Figure_1.jpeg)

Figure 18: Identification of the used styles in the sample table

Role Mapping Initial View	v				
yles			Role of Style 'Header ↓ Level 1'		
leader → Level 1		*	Header Cell (Complex Table)		
leader → Level 2			Ineader Cell (Complex Table)		
leader → Level 3			- Settings		
leader → Level 4			Seconds		
leader → Level 5			Outline Level		
leader ↓ Level 1		_		1 *	
leader ↓ Level 1 any				1 <del>-</del> -	
leader ↓ Level 2			Direction Down		
eader 🛛 Level 2 only 1st column	I				
eader 🕽 Level 3			Yes	*	,
eader ↓ Level 4			+		
eader ↓ Level 5			Direction Right		
eader Column					
eader Row		- L.	No	*	,
ITML Adresse					
TML Vorformatiert		· .	Direction Up		
ndex 1					
ndex 2			No	*	'
ndex 3					
ndex 4			Direction Left		
ndex 5					
ndex 6			No	*	
ndex 7					
ndex 8			Scope of a merged header cell		
ndex 9			All Columna Davia		
ndexüberschrift				*	
nhaltsverzeichnisüberschrift					
ntensives Zitat			When belongs a merged child cell to the Scope?		
ein Leerraum			Eirst Column/Row is in the Scene	_	ĺ
Commentartext		-	First Column/Row is in the Scope	*	

Figure 19: Role Mapping of the style "Header  $\downarrow$  Level 1"

![](_page_28_Picture_0.jpeg)

Role Mapping	Initial View			
tyles			Role of Style 'Header ↓ Level 2'	
Header $\rightarrow$ Level 1		÷	Header Cell (Compley Table)	
leader → Level 2				
Header → Level 3			Cattings	
leader → Level 4			- Settings	
leader $\rightarrow$ Level 5			Outline Level	
leader ↓ Level 1				2 4
leader ↓ Level 1 a	any			_ <u> </u>
eader 🕽 Level 2			Direction Down	
leader ↓ Level 2 d	only 1st column			
leader ↓ Level 3			Yes	-
leader ↓ Level 4			+	
eader ↓ Level 5			Direction Right	
eader Column				
leader Row			No	-
ITML Adresse				
TML Vorformatie	rt		Direction Up	
ndex 1				
ndex 2			No	-
ndex 3				
ndex 4			Direction Left	
ndex 5				
ndex 6			No	-
ndex 7				
ndex 8			Scope of a merged header cell	
ndex 9				
ndexüberschrift			All Columns/Rows	
nhaltsverzeichnis	überschrift			
ntensives Zitat			When belongs a merged child cell to the Scope?	
(ein Leerraum				
Commentartext		-	First Column/Row is in the Scope	*
·				

Figure 20: Role Mapping of the style "Header  $\downarrow$  Level 2"

![](_page_29_Picture_0.jpeg)

2S		Role of Style 'Header $\rightarrow$ Level 2'	
der → Level 1	-	Header Cell (Complex Table)	
ider → Level 2			
der → Level 3		_ Sattings	
der $\rightarrow$ Level 4		Settings	
der → Level 5		Outline Level	
der↓Level 1			2 4
der↓Level 1 any			~ 1
der ↓ Level 2		Direction Down	
der ↓ Level 2 only 1st column			
ider ↓ Level 3		No	
ider↓Level 4			
der ↓ Level 5		Direction Right	
der Column			
der Row		Yes	
/L Adresse			
1L Vorformatiert		Direction Up	
ex 1			
ex 2		No	
ex 3			
ex 4		Direction Left	
ex 5			
ex 6		No	
ex 7			
ex 8		Scope of a merged header cell	
ex 9		All Columna Davia	
exüberschrift			
altsverzeichnisüberschrift			
ensives Zitat		When beiongs a merged child cell to the Scope?	
n Leerraum		First Column/Dow is in the Scope	
mentartext	-	<ul> <li>First Column/Row is in the scope</li> </ul>	

Figure 21: Role Mapping of the style "Header  $\rightarrow$  Level 2"

![](_page_30_Picture_0.jpeg)

Role Mapping Initial View			
tyles		Role of Style 'Header $\rightarrow$ Level 3'	
Header $\rightarrow$ Level 1	*	Header Cell (Complex Table)	
Header → Level 2			
Header $\rightarrow$ Level 3		Settings	
Header → Level 4		Sectings	
Header $\rightarrow$ Level 5		Outline Level	
Header 🕽 Level 1			2 *
Header ↓ Level 1 any			
Header 🛛 Level 2		Direction Down	
Header ↓ Level 2 only 1st column			
Header 🛛 Level 3		No	*
Header 🕽 Level 4			
Header 🕽 Level 5		Direction Right	
Header Column			
Header Row		∎ → Yes	*
HTML Adresse			
HTML Vorformatiert		Direction Up	
Index 1			
Index 2		No	*
Index 3			
Index 4		Direction Left	
Index 5			
Index 6		No	*
Index 7			
Index 8		Scope of a merged header cell	
Index 9		All Columna Davia	
Indexüberschrift		All Columns/Rows	*
Inhaltsverzeichnisüberschrift			
Intensives Zitat		when beiongs a merged child cell to the Scope?	
Kein Leerraum		First Calumn Daw is in the Scene	_
Kommentartext	-	<ul> <li>First Column/kow is in the Scope</li> </ul>	*
/			

Figure 22: Role Mapping of the style "Header  $\rightarrow$  Level 3"

![](_page_31_Picture_0.jpeg)

tyles Role of Style 'Data cell'     Data cal   Datum   Dokumentstruktur   E-Mail Signatur   Endnotentext   Euß/E-Indotenüberschrift   Euß/E-Indotenüberschrift   Euß/E-Indotenüberschrift   Euß/E-Indotenüberschrift   Eußele   Sußformel   teader - Level 1   teader - Level 3   teader - Level 3   teader - Level 4   teader - Level 5   teader J Level 1 any   teader J Level 2 only 1st column   teader J Level 5   teader J Level 5   teader J Level 5   teader J Level 6   teader J Level 7   teader J Level 8   teader J Level 8   teader J Level 8   teader J Level 8   teader Column   teader 1 Level 8   teader Level 8   teader Level 8   teader J Level 8   teader J Level 8   teader 1 Level 8 <t< th=""><th>Role Mapping Initial View</th><th></th><th></th></t<>	Role Mapping Initial View		
Data cell Datum Dotaumentstruktur E-Mail-Signatur E-M	tyles	Role of Style 'Data cell'	
index 4	State cellData cellDatarDatarDokumentstrukturE-Mai-SignaturEndnotentextFuß/-EndnotenüberschriftFußnotentextFußzeileGrußformelHeader $\rightarrow$ Level 1Header $\rightarrow$ Level 2Header $\rightarrow$ Level 3Header $\rightarrow$ Level 5Header $\downarrow$ Level 1 anyHeader $\downarrow$ Level 2 only 1st columnHeader $\downarrow$ Level 4Header $\downarrow$ Level 5Header ColumnHeader SwHTML AdresseHTML VorformatiertIndex 1Index 3Index 3Index 4	Settings	*

Figure 23: Role mapping of the style "Data cell"

![](_page_32_Picture_0.jpeg)

# 6 Complex tables

### 6.1 Nested table

Table 6: Weather forecast for the next 2 days for selected locations in Switzerland and Germany

Location	Date	Temperature		Weather	
		Maximum	Minimum		
Switzerland					
Bern	29.04.2020	20 °C	10 °C	sunny	
	30.04.2020	18 °C	9 °C	light rain	
Lugano	29.04.2020	21 °C	14 °C	cloudy	
	30.04.2020	20 °C	13 °C	light drizzle	
Zurich	29.04.2020	23 °C	13 °C	cloudy	
	30.04.2020	20 °C	11 °C	rain	
Germany					
Munich	29.04.2020	21 °C	10 °C	cloudy	
	30.04.2020	20 °C	9 °C	light rain	
Frankfurt	29.04.2020	19 °C	13 °C	sunny	
	30.04.2020	17 °C	10 °C	cloudy	
Berlin	29.04.2020	19 °C	12 °C	cloudy	
	30.04.2020	17 °C	9 °C	light drizzle	

![](_page_33_Picture_1.jpeg)

![](_page_33_Figure_2.jpeg)

Figure 24: Identification of the used styles in the sample table

![](_page_34_Picture_0.jpeg)

Role Mapping	Initial View			
yles			Role of Style 'Header ↓ Level 1'	
leader $\rightarrow$ Level 1		*	Header Coll (Complex Table)	
leader → Level 2				
leader → Level 3			Sattings	
leader → Level 4			- Settings	
leader → Level 5			Outline Level	
eader↓Level 1				
ieader↓Level 1a	any			1 <del>v</del>
leader ↓ Level 2			Direction Down	
eader↓Level 2 d	only 1st column			
eader↓Level 3			Yes	-
eader↓Level 4			+	
eader↓Level 5			Direction Right	
eader Column				
eader Row			No	*
TML Adresse				
TML Vorformatie	rt		Direction Up	
ndex 1				
ndex 2			No	*
ndex 3				
ndex 4			Direction Left	
ndex 5				
ndex 6			No	*
ndex 7				
ndex 8			Scope of a merged header cell	
ndex 9				
ndexüberschrift			All Columns/Rows	*
nhaltsverzeichnis	überschrift			
ntensives Zitat			When belongs a merged child cell to the Scope?	
ein Leerraum			First Column Douvisis in the Conne	_
ommentartext		*	<ul> <li>First Column/Kow is in the Scope</li> </ul>	*

Figure 25: Role Mapping of the style "Header  $\downarrow$  Level 1"

![](_page_35_Picture_0.jpeg)

Role Mapping	Initial View			
tyles			Role of Style 'Header ↓ Level 2'	
Header $\rightarrow$ Level 1		÷	Header Cell (Compley Table)	
leader → Level 2				
Header → Level 3			Cattings	
leader → Level 4			- Settings	
leader $\rightarrow$ Level 5			Outline Level	
leader ↓ Level 1				2 4
leader ↓ Level 1a	any			_ <u> </u>
eader 🕽 Level 2			Direction Down	
leader ↓ Level 2 d	only 1st column			
leader ↓ Level 3			Yes	-
leader ↓ Level 4			+	
eader ↓ Level 5			Direction Right	
eader Column				
leader Row			No	-
ITML Adresse				
TML Vorformatie	rt		Direction Up	
ndex 1				
ndex 2			No	-
ndex 3				
ndex 4			Direction Left	
ndex 5				
ndex 6			No	-
ndex 7				
ndex 8			Scope of a merged header cell	
ndex 9				
ndexüberschrift			All Columns/Rows	
nhaltsverzeichnis	überschrift			
ntensives Zitat			When belongs a merged child cell to the Scope?	
(ein Leerraum				
Commentartext		-	First Column/Row is in the Scope	*
·				

Figure 26: Role Mapping of the style "Header  $\downarrow$  Level 2"

![](_page_36_Picture_0.jpeg)

Role Mapping	Initial View				
tyles			Role of Style 'Header ↓ Level 2 only 1st column'		
Header $\rightarrow$ Level 1		*	Hander Cell (Compley Table)		
Header $\rightarrow$ Level 2					
Header → Level 3			Calling		
leader $\rightarrow$ Level 4			Settings		
leader $\rightarrow$ Level 5			Outline Level		
leader ↓ Level 1				4	
leader ↓ Level 1 ar	ıy			_ <u> </u>	<i>y</i>
eader↓Level 2			Direction Down		
eader 🕽 Level 2 or					
eader ↓ Level 3			Yes	-	,
eader↓Level 4			+		-
eader↓Level 5			Direction Right		
eader Column					-
leader Row			No		,
ITML Adresse					-
ITML Vorformatiert			Direction Up		
ndex 1					
ndex 2			No		٢
ndex 3					-
ndex 4			Direction Left		
ndex 5					
ndex 6			No		ſ
ndex 7					
ndex 8			Scope of a merged header cell		
ndex 9			E Einst Columna Davia		
ndexüberschrift			First Columns/Rows		
nhaltsverzeichnisül	berschrift		When below a second dild call to the Occard		
ntensives Zitat			when belongs a merged child cell to the Scope?		
lein Leerraum			Eirst Column/Pow is in the Scope		
Commentartext		-			

Figure 27: Role Mapping of the style "Header ↓ Level 2 only 1st column"

![](_page_37_Picture_0.jpeg)

tole Mapping Initial View			
yles		Role of Style 'Header $\rightarrow$ Level 3'	
eader $\rightarrow$ Level 1	*	Header Cell (Complex Table)	
eader $\rightarrow$ Level 2			
eader $\rightarrow$ Level 3		Sattings	
eader → Level 4		- Settings	
eader → Level 5		Outline Level	
eader 🛛 Level 1	_		3 *
eader ↓ Level 1 any			J 4
eader 🕽 Level 2		Direction Down	
eader ↓ Level 2 only 1st column			
eader ↓ Level 3		No	-
eader ↓ Level 4			
eader ↓ Level 5		Direction Right	
eader Column			
eader Row		Yes	
TML Adresse			
TML Vorformatiert		Direction Up	
ndex 1			
ndex 2		No	*
idex 3			
ndex 4		Direction Left	
ndex 5		No	_
ndex 6		NO	
ndex /		Scope of a merged header cell	
Idex 8			
idex 9 vdovüborochrift		All Columns/Rows	-
halteverzeichnie überechrift			
tansiyan Zitat		When belongs a merged child cell to the Scope?	
ain Leerraum			
ommentartext		First Column/Row is in the Scope	-
	*		

Figure 28: Role Mapping of the style "Header  $\rightarrow$  Level 3"

![](_page_38_Picture_0.jpeg)

Role Mapping Initial View			
tyles	Role of Style 'He	ader → Level 4'	
Header → Level 1	A Header	Coll (Complex Table)	
Header $\rightarrow$ Level 2	Header	Cell (Complex Table)	
Header → Level 3	Settings		
Header $\rightarrow$ Level 4	- Settings -		
Header → Level 5	Outline Level		
Header ↓ Level 1			4 *
Header ↓ Level 1 any			· •
Header ↓ Level 2	Direction Dow	<i>i</i> n	
Header ↓ Level 2 only 1st column			
Header J Level 3	No		*
Header ↓ Level 4			
Header J Level 5	Direction Righ	it	
Header Column			
Header Row	. Yes		*
ITML Adresse			
HIML Vorformatient	Direction Up		
ndex 1	No		-
ndex 2	INO INO		Ť
ndex 3	Direction Left		
ndex 4	Directori Leit		
ndex 5	No		<b>.</b>
ndex 7			
index 8	Scope of a me	erged header cell	
index 0			
indexüberschrift	All Co	olumns/Rows	+
inhaltsverzeichnisüberschrift	111		
intensives Zitat	When belongs	s a merged child cell to the Scope?	
Kein Leerraum			
Commentartext	<b>↓</b> First	Column/Row is in the Scope	*
(	· · · · · · · · · · · · · · · · · · ·		

Figure 29: Role Mapping of the style "Header  $\rightarrow$  Level 4"

![](_page_39_Picture_0.jpeg)

Role Mapping Initial View				
tyles			Role of Style 'Data cell'	
Data cell	÷.		Default	
Jatum			*	
Jokumentstruktur			- Settings	
-Mail-Signatur	ίπ.			
ndnotentext				
uß/-Endnotenüberschrift				
ußnotentext				
ußzeile				
rußformel				
leader → Level 1				
leader $\rightarrow$ Level 2				
leader $\rightarrow$ Level 3	1			
leader → Level 4				
leader $\rightarrow$ Level 5		Ι.		
leader ↓ Level 1				
leader ↓ Level 1 any				
leader ↓ Level 2				
leader ↓ Level 2 only 1st column				
leader ↓ Level 3				
leader ↓ Level 4				
leader ↓ Level 5				
leader Column				
leader Row				
ITML Adresse				
ITML Vorformatiert				
ndex 1				
ndex 2				
ndex 3				
ndex 4				
ndex 5	-			

Figure 30: Role mapping of the style "Data cell"

![](_page_40_Picture_0.jpeg)

# 7 Keyboard shortcuts for table navigation with screen reader

Function: Tables	Screen reader JAWS	Screen reader NVDA
Dialog window with listing of all tables	Key: CRTL+Insert+T	
Jump to next table	Кеу: Т	Key: T
Jump/read to next cell on the left	Key: CTRL+ALT+Arrow Left	Key: Arrow Top
Jump/read to next cell on the right	Key: CTRL+ALT+Arrow Right	Key: Down arrow
Jump/read up within the column	Key: CTRL+ALT+Arrow Top	
Jump/read down within the column	Key: CTRL+ALT+Arrow Bottom	