

Guide: Miniframes Navigation

1 Function documentation

The `render-miniframes` function generates a navigation bar showing the progress through sections and subsections using “miniframes” (dots or squares).

1.1 Parameters Reference

| Option | Type | Effect & Expected Values |
|---------------------------------|---------------|--|
| <code>structure</code> | array | Mandatory. The presentation structure typically obtained via <code>get-structure()</code> . |
| <code>current-slide-num</code> | int | Mandatory. The index of the active slide typically obtained via <code>get-current-logical-slide-number()</code> . |
| <code>style</code> | string | Layout mode: "compact" (all dots on one line) or "grid" (one line per subsection/subsubsection). Default: "grid". |
| <code>marker-shape</code> | string | "circle" (default) or "square". |
| <code>marker-size</code> | length | Diameter/width of the markers. Default: 4pt. |
| <code>active-color</code> | color | Color of the current slide's marker. Default: white. |
| <code>inactive-color</code> | color | Color of future slides' markers. Default: gray. |
| <code>fill</code> | color | Background color of the navigation bar block. Default: black. |
| <code>text-color</code> | color | Color of the section/subsection titles. Default: white. |
| <code>text-size</code> | length | Size of the titles. Default: 10pt. |
| <code>font</code> | string none | Font family for titles. Uses document default if none. |
| <code>align-mode</code> | string | Global horizontal alignment of the block: "left", "center", "right". |
| <code>dots-align</code> | string | Alignment of the dots within their section column: "left", "center", "right". |
| <code>navigation-pos</code> | string | Vertical position of dots relative to titles: "top" (dots above) or "bottom" (dots below). Default: "bottom". |
| <code>show-level1-titles</code> | bool | Whether to display the names of sections. |
| <code>show-level2-titles</code> | bool | In grid mode, whether to display subsection names. |
| <code>show-numbering</code> | bool | Whether to display heading numbers. Default: false. |
| <code>numbering-format</code> | string | Typst numbering format string (e.g., "1.1"). Default: "1.1". |
| <code>gap</code> | length | Horizontal space between sections. Default: 1.5em. |
| <code>line-spacing</code> | length | Vertical space between titles and dots. Default: 4pt. |
| <code>inset</code> | dict length | Internal padding of the bar block. Default: (x: 1em, y: 0.5em). |

| Option | Type | Effect & Expected Values |
|----------|---------------|---|
| radius | length dict | Corner rounding of the background block. Can be a single length for all corners, or a dictionary (e.g., (top: 5pt)) for specific corners. Default: 0pt. |
| width | length | Total width of the block. Default: 100%. |
| outset-x | length | Horizontal bleed. Useful to make the bar touch page edges. |

1.2 Structure Extraction

To work, the navigation bar needs to know the presentation structure. Two functions are provided to extract this data from metadata markers.

1.2.1 get-structure

`get-structure(slide-selector: auto, filter-selector: none)`

Scans the document for headings and slide markers. Returns a structure dictionary.

1.2.2 get-current-logical-slide-number

`get-current-logical-slide-number(slide-selector: auto, filter-selector: none)`

Determines the index of the current slide relative to the extracted structure.

1.2.3 Selection Parameters

| Option | Type | Description |
|-----------------|-----------------|---|
| slide-selector | selector auto | The metadata type used to identify slides. Default is (t: "LogicalSlide"). Useful for custom engines (e.g., Polylux). |
| filter-selector | selector none | If provided, only pages containing this selector will be counted. Useful to exclude transition slides that might share the same slide metadata. |

1.3 Function Signature

`render-miniframes(structure, current-slide-num, ...)`

1.3.1 The structure object

The structure argument is an array of section dictionaries. Each section has the following schema:

- **Section:** (title: content, loc: location, subsections: array)
- **Subsection:** (title: content, loc: location, slides: array) OR (title: content, loc: location, subsections: array) (if 3 levels are used).
- **Slide:** (number: integer, loc: location)

1.3.1.1 What is loc?

The loc field expects a Typst **location** object.

- **Purpose:** It defines the destination for navigation links. If a valid location is provided, clicking on the section title or the dot will take the user to that specific position in the PDF.
- **Disabling links:** If set to none, the element will be displayed normally but will not be clickable. This is used in the mock data of this guide.

1.3.2 The current-slide-num argument

An integer representing the current slide number. The function compares this value with the number field of each slide in the structure to determine its state:

- **Active:** `slide.number == current-slide-num`
- **Completed:** `slide.number < current-slide-num`
- **Future:** `slide.number > current-slide-num`

2 Basic usage

By default, the navigation bar uses the "grid" style and shows section titles.

```
render-miniframes(structure, 4)
```

Default Grid Style

| | | |
|--------------|-------------|---------|
| Introduction | Methodology | Results |
| Context ● ● | Data ● ● ● | ● ● |
| Goals ● | Tools ● | |

3 Layout Styles

3.1 Compact Mode

In "compact" mode, all slide markers of a section are grouped on a single line, regardless of subsections. This is useful for saving space in the header or footer.

```
render-miniframes(  
  structure, 4,  
  style: 'compact'  
)
```

Compact Mode

| | | |
|--------------|-------------|---------|
| Introduction | Methodology | Results |
| ● ● ● | ● ● ● ● | ● ● |

3.2 Grid Mode

The "grid" style is ideal for presentations with many subsections, as it aligns them vertically.

```
render-miniframes(  
  structure, 4,  
  style: 'grid',  
  show-level2-titles: true  
)
```

Grid Mode with Titles

| | | |
|--------------|-------------|---------|
| Introduction | Methodology | Results |
| Context ● ● | Data ● ● ● | ● ● |
| Goals ● | Tools ● | |

3.3 Hiding Titles

You can hide titles at different levels to obtain a minimalist bar.

```
render-miniframes(  
  structure, 4,  
  style: 'grid',  
  show-level2-titles: false  
)
```

Hiding Subsection Titles (Grid)

| | | |
|--------------|-------------|---------|
| Introduction | Methodology | Results |
| ● ● | ● ● ● | ● ● |
| ● | ● | |

```
render-miniframes(  
  structure, 4,  
  show-level1-titles: false  
)
```

Hiding Section Titles (Dots Only)

| | | |
|-------------|------------|-----|
| Context ● ● | Data ● ● ● | ● ● |
| Goals ● | Tools ● | |

4 Customization

4.1 Markers

Change the shape and size of the progress indicators.

```
render-miniframes(
  structure, 4,
  marker-shape: 'square',
  marker-size: 6pt
)
```

Square Markers

| Introduction | Methodology | Results |
|--------------|-------------|---------|
| Context | Data | |
| Goals | Tools | |

4.2 Colors & Typography

Fine-tune the appearance of markers and labels.

```
render-miniframes(
  structure, 4,
  active-color: yellow,
  inactive-color: gray,
  text-color: luma(200),
  text-size: 8pt,
  fill: rgb('#2d3436')
)
```

Colors & Fonts

| Introduction | Methodology | Results |
|--------------|-------------|---------|
| Context | Data | |
| Goals | Tools | |

4.3 Alignment & Spacing

Control the rhythm and positioning of the navigation elements.

```
render-miniframes(
  structure, 4,
  align-mode: 'center',
  dots-align: 'center',
  gap: 3em,
  line-spacing: 8pt
)
```

Centered & Airy

| Introduction | Methodology | Results |
|--------------|-------------|---------|
| Context | Data | |
| Goals | Tools | |

4.4 Advanced Layout

Use inset and width to integrate the bar into specific layout zones.

```
render-miniframes(
  structure, 4,
  width: 60%,
  align-mode: 'center',
  inset: 15pt,
  show-level1-titles: false
)
```

Compact Centered Bar

| | | |
|---------|-------|---------|
| Context | Data | Results |
| Goals | Tools | |

```
render-miniframes(
  structure, 4,
  radius: 10pt,
  fill: rgb('#34495e'),
  inset: (x: 2em, y: 1em)
)
```

Rounded Corners

| Introduction | Methodology | Results |
|--------------|-------------|---------|
| Context | Data | |
| Goals | Tools | |