

# The notebeamer Package\*

Mingyu Xia <[myhsia@outlook.com](mailto:myhsia@outlook.com)>

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## 1 Introduction

The notebeamer package provides an easy way to input slides on note pages quickly, developed by expl3 based on tikz and l3graphics. It is compatible with T<sub>E</sub>X Live 2019 or later distributions and supports various compilation methods, such as pdfL<sub>A</sub>T<sub>E</sub>X, X<sub>Y</sub>L<sub>A</sub>T<sub>E</sub>X, ApL<sub>A</sub>T<sub>E</sub>X, LuaL<sub>A</sub>T<sub>E</sub>X, etc.

## 2 Usage

To load this package, write the line

```
\usepackage{notebeamer}
```

---

```
\includebeamer <[keyvals]> {<filename>} <[keyvals]>
```

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The `\includebeamer` command can create pages with note lines, and import the specific pages of the .pdf file on the left side of the note pages. The mandatory argument can set the .pdf file that will be inserted. The optional argument accepts the following keys

**color** = <str> can set the note lines' color (Default: black), this key's name could be omitted.

**ratio** = <fp num> can set imported slides' ratio and empty area's width (Default: 0.5).

**sep** = <dim> can set the vertical space between slides (Default: 2ex).

**nup** = <int> can set the number of slides on every page (Default: 3).

**pages** = <comma-separated list> can select pages to insert. The list could contain ranges of page numbers. (Default: 1).

**lhead, rhead** = <str> can set the left / right header of the pages.

Additionally, `\newgeometry` could be used for assistance. Such as

```
\newgeometry{margin = .75in}
\includebeamer
[ nup = 4, pages = {2-4, 6}, lines = 32, ratio = .28,
  Navy, lhead = Chapter 1, rhead = Page~\thepage
] { example-image-a4-numbered.pdf }
```

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\*<https://github.com/myhsia/notebeamer>, <https://ctan.org/pkg/notebeamer>

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## 3 The Source Code

```

1 <*package>
2 <@@=ntbm>
3 \ProvidesExplPackage {notebeamer} {2025-02-28} {v4.1A}
4   {Package provides macros for inputting slides on note papers quickly.}
5 \RequirePackage{l3graphics, tikz, tikzpagenodes}

```

### 3.1 User's Interface

`\includebeamer` Define the `\includebeamer` command.

```

6 \NewDocumentCommand \includebeamer { 0{} m 0{} }
7 {
8   \group_begin:
9   \keys_set:nn { notebeamer / includebeamer } { #1, #3 }
10  \__ntbm_include_aux:n {#2}
11  \group_end:
12 }

```

Key-value definitions for the `\includebeamer` command.

```

\l__ntbm_include_color_tl
\l__ntbm_include_pages_tl
\l__ntbm_include_nup_int
\l__ntbm_include_lines_int
\l__ntbm_include_ratio_fp
\l__ntbm_include_sep_dim
\l__ntbm_include_lhead_tl
\l__ntbm_include_rhead_tl
13 \keys_define:nn { notebeamer / includebeamer }
14 {
15   color .tl_set:N = \l__ntbm_include_color_tl,
16   color .initial:n = black,
17   pages .tl_set:N = \l__ntbm_include_pages_tl,
18   pages .initial:n = 1,
19   nup .int_set:N = \l__ntbm_include_nup_int,
20   nup .initial:n = 3,
21   lines .int_set:N = \l__ntbm_include_lines_int,
22   ratio .fp_set:N = \l__ntbm_include_ratio_fp,
23   ratio .initial:n = .5,
24   sep .dim_set:N = \l__ntbm_include_sep_dim,
25   sep .initial:n = 2ex,
26   lhead .tl_set:N = \l__ntbm_include_lhead_tl,
27   rhead .tl_set:N = \l__ntbm_include_rhead_tl,
28   unknown .code:n = \tl_if_novalue:nF {#1}
29   { \tl_set_eq:NN \l__ntbm_include_color_tl \l_keys_key_tl }
30 }

```

*(End of definition for `\includebeamer` and others. This function is documented on page 1.)*

### 3.2 Internal Auxiliary

```

\l__ntbm_nup_dim
\l__ntbm_include_ratio_dim
31 \dim_new:N \l__ntbm_nup_dim
32 \dim_new:N \l__ntbm_include_ratio_dim

```

*(End of definition for `\l__ntbm_nup_dim` and `\l__ntbm_include_ratio_dim`.)*

$\backslash l\_ntbm\_pages\_total\_int$ $\backslash l\_ntbm\_pages\_residue\_int$	Store the number of total physical pages and residue logical pages. <pre> 33 \int_new:N \l__ntbm_pages_total_int 34 \int_new:N \l__ntbm_pages_residue_int  (End of definition for \l__ntbm_pages_total_int and \l__ntbm_pages_residue_int.)  \l__ntbm_tmpa_clist Store the results of \__ntbm_range_to_list:nN. 35 \clist_new:N \l__ntbm_tmpa_clist  (End of definition for \l__ntbm_tmpa_clist.)  \__ntbm_include_aux:n Define the auxiliary command for \includebeamer. 36 \cs_new_protected_nopar:Npn \__ntbm_include_aux:n #1 37 { 38   \graphics_get_pagecount:nN {#1} \l__ntbm_include_filepages_int 39   \dim_set:Nn \l__ntbm_nup_dim { \textheight/\l__ntbm_include_nup_int } 40   \dim_set:Nn \l__ntbm_include_ratio_dim 41     { \fp_use:N \l__ntbm_include_ratio_fp \textwidth } 42   \tl_if_eq:NnTF \l__ntbm_include_pages_tl { - } 43     { 44       \__ntbm_range_to_list:nN 45       { 1 - \l__ntbm_include_filepages_int } \l__ntbm_tmpa_clist 46     } 47     { 48       \exp_args:NV \__ntbm_range_to_list:nN 49       { \l__ntbm_include_pages_tl } \l__ntbm_tmpa_clist 50     } 51   \int_set:Nn \l__ntbm_pages_total_int 52     { 53       \fp_eval:n 54       { ceil 55         ( \clist_count:N \l__ntbm_tmpa_clist/ 56           \l__ntbm_include_nup_int,0 57         ) - 1 58       } 59     } 60   \int_set:Nn \l__ntbm_pages_residue_int 61     { 62       \int_eval:n 63       { 64         \clist_count:N \l__ntbm_tmpa_clist - 65         \l__ntbm_include_nup_int * \l__ntbm_pages_total_int 66       } 67     } 68   \int_step_inline:nn { \int_use:N \l__ntbm_pages_total_int } 69     { 70       \clearpage 71       \__ntbm_empty_note_aux: 72       \int_step_inline:nn { \l__ntbm_include_nup_int } 73       { </pre>
--	--

```

74         \tikz [ remember~picture, overlay ]
75         \node [ xshift = \l__ntbm_include_ratio_dim/2,
76                 yshift = \fp_eval:n { -###1 + .5 } \l__ntbm_nup_dim
77                 ] at (current~page~text~area.north~west)
78         {
79             \includegraphics
80             [ height = \dim_eval:n
81               { \l__ntbm_nup_dim - \l__ntbm_include_sep_dim },
82               page = \clist_item:Nn \l__ntbm_tmpa_clist
83                 { ###1 + \l__ntbm_include_nup_int * ( ##1 - 1 ) }
84             ] {##1}
85         };
86     }
87     \clearpage
88 }
89 \__ntbm_empty_note_aux:
90 \int_step_inline:nn { \int_use:N \l__ntbm_pages_residue_int }
91 {
92     \tikz [ remember~picture, overlay ]
93     \node [ xshift = \l__ntbm_include_ratio_dim/2,
94             yshift = \fp_eval:n { ( -##1 + .5 ) } \l__ntbm_nup_dim
95             ] at (current~page~text~area.north~west)
96     {
97         \includegraphics
98         [ height = \dim_eval:n
99           { \l__ntbm_nup_dim - \l__ntbm_include_sep_dim },
100          page = \clist_item:Nn \l__ntbm_tmpa_clist
101            {
102              \l__ntbm_include_nup_int *
103              \l__ntbm_pages_total_int + ##1
104            }
105          ] {##1}
106     };
107 }
108 \clearpage
109 }

```

(End of definition for \\_\_ntbm\_include\_aux:n.)

\\_\_ntbm\_empty\_note\_aux: Define the auxiliary command for creating empty note line page.

```

110 \cs_new_protected_nopar:Nn \__ntbm_empty_note_aux:
111 {
112     \tikzpicture [ remember~picture, overlay ]
113     \draw [ very~thick, \l__ntbm_include_color_tl!80 ]
114         (current~page~text~area.north~west) --
115         (current~page~text~area.north~east)
116     node [ at~start, above~right, font = \Large \bfseries ]
117         { \l__ntbm_include_lhead_tl }
118     node [ above~left, font = \Large \bfseries ]
119         { \l__ntbm_include_rhead_tl };

```

```

120 \draw [ very-thick, \l__ntbm_include_color_tl!80 ]
121 (current~page~text~area.south-west) --
122 (current~page~text~area.south-east);
123 \int_step_inline:nn { \l__ntbm_include_lines_int - 1 }
124 {
125 \draw [ thick, \l__ntbm_include_color_tl!60 ]
126 ([xshift = \l__ntbm_include_ratio_dim,
127 yshift = -\textheight/\l__ntbm_include_lines_int * ##1
128 ]current~page~text~area.north-west) ---+
129 (\dim_eval:n { \textwidth - \l__ntbm_include_ratio_dim },0);
130 }
131 \endtikzpicture
132 \pagestyle{empty}
133 }

```

(End of definition for \\_\_ntbm\_empty\_note\_aux:.)

\l\_\_ntbm\_tmpa\_seq Store the results of 2D array segmentation.

```

\l__ntbm_tmppb_seq 134 \seq_new:N \l__ntbm_tmpa_seq
135 \seq_new:N \l__ntbm_tmppb_seq

```

(End of definition for \l\_\_ntbm\_tmpa\_seq and \l\_\_ntbm\_tmppb\_seq.)

\\_\_ntbm\_range\_to\_list:nN Convert the combination of number and number range to a list.

```

136 \cs_new_protected_nopar:Npn \__ntbm_range_to_list:nN #1#2
137 {
138 \clist_clear:N #2
139 \seq_set_split:Nnn \l__ntbm_tmpa_seq { , } {#1}
140 \seq_map_inline:Nn \l__ntbm_tmpa_seq
141 {
142 \tl_if_in:nnTF {##1} { - }
143 {
144 \seq_set_split:Nnn \l__ntbm_tmppb_seq { - } {##1}
145 \int_step_inline:nnn
146 { \seq_item:Nn \l__ntbm_tmppb_seq { 1 } }
147 { \seq_item:Nn \l__ntbm_tmppb_seq { 2 } }
148 { \clist_put_right:Nn #2 {###1} }
149 } { \clist_put_right:Nn #2 {##1} }
150 }
151 }

```

(End of definition for \\_\_ntbm\_range\_to\_list:nN.)

```

152 \</package>

```

## Index

The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

### B

\bfseries ..... [116](#), [118](#) [6](#)

<b>C</b>	
<code>\clearpage</code> .....	70, 87, 108
clist commands:	
<code>\clist_clear:N</code> .....	138
<code>\clist_count:N</code> .....	55, 64
<code>\clist_item:Nn</code> .....	82, 100
<code>\clist_new:N</code> .....	35
<code>\clist_put_right:Nn</code> .....	148, 149
cs commands:	
<code>\cs_new_protected_nopar:Nn</code> ....	110
<code>\cs_new_protected_nopar:Npn</code> .	36, 136
<b>D</b>	
dim commands:	
<code>\dim_eval:n</code> .....	80, 98, 129
<code>\dim_new:N</code> .....	31, 32
<code>\dim_set:Nn</code> .....	39, 40
<code>\draw</code> .....	113, 120, 125
<b>E</b>	
<code>\endtikzpicture</code> .....	131
exp commands:	
<code>\exp_args:NV</code> .....	48
<b>F</b>	
fp commands:	
<code>\fp_eval:n</code> .....	53, 76, 94
<code>\fp_use:N</code> .....	41
<b>G</b>	
graphics commands:	
<code>\graphics_get_pagecount:nN</code> .....	38
group commands:	
<code>\group_begin:</code> .....	8
<code>\group_end:</code> .....	11
<b>I</b>	
<code>\includebeamer</code> .....	1, 3, 4, 6
<code>\includegraphics</code> .....	79, 97
int commands:	
<code>\int_eval:n</code> .....	62
<code>\int_new:N</code> .....	33, 34
<code>\int_set:Nn</code> .....	51, 60
<code>\int_step_inline:nn</code> ..	68, 72, 90, 123
<code>\int_step_inline:nnn</code> .....	145
<code>\int_use:N</code> .....	68, 90
<b>K</b>	
keys commands:	
<code>\keys_define:nn</code> .....	13
<code>\l_keys_key_tl</code> .....	29
<code>\keys_set:nn</code> .....	9
<b>L</b>	
<code>\Large</code> .....	116, 118
<b>N</b>	
<code>\NewDocumentCommand</code> .....	6
<code>\node</code> .....	75, 93
ntbm internal commands:	
<code>\__ntbm_empty_note_aux:</code> .....	
.....	71, 89, 110, 110
<code>\__ntbm_include_aux:n</code> ....	10, 36, 36
<code>\l__ntbm_include_color_tl</code> .....	
.....	13, 113, 120, 125
<code>\l__ntbm_include_filepages_int</code> ..	
.....	38, 45
<code>\l__ntbm_include_lhead_tl</code> ...	13, 117
<code>\l__ntbm_include_lines_int</code> .....	
.....	13, 123, 127
<code>\l__ntbm_include_nup_int</code> .....	
.....	13, 39, 56, 65, 72, 83, 102
<code>\l__ntbm_include_pages_tl</code> .	13, 42, 49
<code>\l__ntbm_include_ratio_dim</code> .....	
.....	31, 40, 75, 93, 126, 129
<code>\l__ntbm_include_ratio_fp</code> ...	13, 41
<code>\l__ntbm_include_rhead_tl</code> ...	13, 119
<code>\l__ntbm_include_sep_dim</code> ..	13, 81, 99
<code>\l__ntbm_nup_dim</code> .	31, 39, 76, 81, 94, 99
<code>\l__ntbm_pages_residue_int</code> ..	33, 60, 90
<code>\l__ntbm_pages_total_int</code> .....	
.....	33, 51, 65, 68, 103
<code>\__ntbm_range_to_list:nN</code> .....	
.....	4, 44, 48, 136, 136
<code>\l__ntbm_tmpa_clist</code> .....	
.....	35, 45, 49, 55, 64, 82, 100
<code>\l__ntbm_tmpa_seq</code> ....	134, 139, 140
<code>\l__ntbm_tmpb_seq</code> ..	134, 144, 146, 147
<b>P</b>	
<code>\pagestyle</code> .....	132
<code>\ProvidesExplPackage</code> .....	3
<b>R</b>	
<code>\RequirePackage</code> .....	5
<b>S</b>	
seq commands:	
<code>\seq_item:Nn</code> .....	146, 147
<code>\seq_map_inline:Nn</code> .....	140
<code>\seq_new:N</code> .....	134, 135
<code>\seq_set_split:Nnn</code> .....	139, 144
<b>T</b>	
<code>\textheight</code> .....	39, 127
<code>\textwidth</code> .....	41, 129
<code>\tikz</code> .....	74, 92
<code>\tikzpicture</code> .....	112
tl commands:	
<code>\tl_if_eq:NnTF</code> .....	42
<code>\tl_if_in:nnTF</code> .....	142
<code>\tl_if_novalue:nTF</code> .....	28
<code>\tl_set_eq:NN</code> .....	29