

Quick Beam

Stephen Braithwaite

2018

Overview

- ▶ Purpose
- ▶ Basics
- ▶ Bullet Points
- ▶ Images
- ▶ Columns

Topic 1

Purpose

Purpose

- ▶ Quick end easy creation of presentations:-
 1. Quick and easy creation of nested bullet points and enumeration.
 2. Quick and easy addition of images and columns.
 3. Background colour.
- ▶ Output from Quickbeam is processed by Latex Beamer , which does every thing else, such as:-
 - ▶ Equation editor.
 - ▶ Tables
 - ▶ Fonts and background images.

Purpose

Purpose

- * Quick and easy creation of presentations:-
 - + Quick and easy creation of nested bullet points and enumeration.
 - + Quick and easy addition of images.
 - + Management of columns
- * Output from Quickbeam is processed by Latex Beamer , which does every thing else, such as:-
 - * Equation editor.
 - * Fonts
 - * Tables

Code used to produce previous slide.

Topic 2

Basics

Example of Quickbeam Source

For an example of how to use it:-

- ▶ Please view the source code for this documentation.
 - ▶ <https://github.com/drbraithw8/quickbeam/tree/master/MainDocumentation>

Comment Lines

- ▶ Lines beginning with "`//`" are comment lines.
 - ▶ Such lines are ignored.

Literal Lines

- ▶ Lines that begin with "`#`" are passed through to LaTeX without modification.
- ▶ Use this for:-
 - ▶ Header preamble
 - ▶ Tables.
 - ▶ A frame that uses features QuickBeam does not provide.
 - ▶ etc.

Mandatory preamble.

```
#\documentclass[18pt]{beamer}
#\usepackage[utf8]{inputenc}
#\title{Quick Beam}
#\author{Stephen Braithwaite}
#\date{2019}
#\setbeamerfont{frametitle}{size=\Huge}
#\definecolor{exampleColor}{rgb}{1,1,.8}
#\begin{document}
#\frame{\titlepage}
```

The mandatory preamble uses literal lines.

Frames (Slides)

- ▶ Frames (slides) are separated by blank lines.
 - ▶ Blank lines do not exist within a frame.
 - ▶ If you need them, then use :-
 - ▶ literal lines
 - ▶ or comments.

Frames (Slides)

- ▶ Each frame begins with a page header.
- ▶ Each header is followed by an underline.
 - ▶ that consists of a row of minus signs.

Frames (Slides)

Pages (Slides)

- * Pages (slides) are separated by blank lines.
- * Blank lines do not exist within a page.
- * If you need them, then use :-
 - * literal lines
 - * or comments.

Pages (Slides)

- * Each page begins with a page header.
- * Each header is followed by an underline.
- * that consists of a row of minus signs.

Pages (Slides)

@image threeSlides.png

Three slides separated with a blank line.

Three slides separated with blank lines.

Topic 3

Bullet Points

Bullet Points

- ▶ Lines beginning with "*" are bullet points.
- ▶ The "*" is preceded only by zero or more tabs.
- ▶ Bullet point level is given by the number of tabs.
- ▶ First level of bulleting is preceded by zero tabs.
- ▶ Bullet lines can take several lines.
- ▶ A literal line won't terminate a bullet level.

Enumerated Points

- ▶ Lines that begin with a plus sign are enumerated points.
- ▶ Enumerated points are just like bullet points:
 - ▶ The rules that apply to Bullet point also apply to Enumerated points.
 - ▶ These rules are given in the previous slide.
- ▶ Bullet points and enumerated points can be nested.

Topic 4

Images and Columns

Images

- ▶ Images are specified on a single line.
- ▶ Like this:- @image square.png 0.4
- ▶ The line consists of 3 fields separated by spaces:-
 1. The "@image".
 - ▶ The "@image" must be at the beginning of the line.
 2. The file name of the image.
 - ▶ The file must exist in the directory "Images".
 - ▶ "Images" is a subdirectory of the current directory.
 3. The scaling factor
 - ▶ This must be a floating point number.
 - ▶ It adjusts the size of the image.

Images

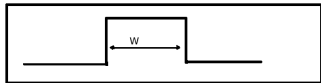
Images

@image image.png 0.7

This image shows the code for this slide.

This image shows the code for this slide.

Images to the Left



Source: Stephen Brinshaw

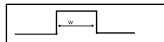
- ▶ Image on the left and bullets on the right.
- ▶ Like this:- `@imageLeft 0.4 square.png 0.2`
 - ▶ Arg #1, "0.4": left column width.
 - ▶ Arg #2, "square.png": file name for image.
 - ▶ Arg #3, "0.2": image scaling factor.
- ▶ There is no `imageRight`.

Images to the Left

```
Images to the Left
-----
@imageLeft 0.4 imageLeft.png 0.4
*   This image shows
*   the code for
*   this slide.
```

- ▶ This image
- ▶ shows the code
- ▶ for this slide.

Images to the Left



Source: RStudio Webinars

- ▶ `@imageLeft colWidth fname imScale`
- ▶ , is equivalent to:-
 - ▶ `@column colWidth`
 - ▶ `@image fname imScale`
 - ▶ `@column`

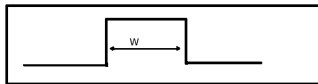
Columns

- ▶ For all but the right hand column:- `@column 0.4`
 - ▶ The things that follow go into a column with width 0.4.
- ▶ For the last column:- `@column`
 - ▶ The things that follow go into another column.
 - ▶ Dont give the column width for the last column.
- ▶ You cant put `@imageLeft` in a column, because it already uses columns.

Columns

Demonstration of the use of columns

- ▶ Example
- ▶ Column



Source: Stephen Brathwaite

- ▶ An image to the right

Other Stuff

Columns

Demonstration of the use of columns

- ▶ Economy
- ▶ Climate
- ▶ Weather
- ▶ Oceanography
- ▶ Road Traffic
- ▶ Psychology
- ▶ Sport
- ▶ Agriculture
- ▶ New products
- ▶ Physics
- ▶ Chemistry
- ▶ Epidemiology
- ▶ Network traffic
- ▶ Product distribution

Columns

Columns

Demonstration of the use of columns

@column 0.3

- * Economy
- * Climate
- * Weather
- * Oceanography
- * Road Traffic

@column 0.3

- * Psychology
- * Sport
- * Agriculture
- * New products
- * Physics

@column

- * Chemistry
- * Epidemiology
- * Network traffic
- * Product distribution

Code for the previous slide

Topic 5

Closing

Close

- ▶ @close will close or terminate:-
 - ▶ list items (bulleted or numeric)
 - ▶ lists (including nested lists)
 - ▶ columns (including imageLeft)
 - ▶ , but not a slide (frame).
- ▶ It can be used to terminate lists or columns in preparation to insert a table.
- ▶ You only need one @close to close everything.

Close Lists

- ▶ `@closeLists` will close or terminate lists (bulleted or numeric).
- ▶ You only need one `@closeLists` to close all the lists.
- ▶ When in a column, it can be used to place non bulleted text after bulleted text without closing the column.

Topic 6

Background Color and Topic Slides

Background Colour

- ▶ You need to define a background colour at the beginning of the document in the normal way for LaTeX, like this:-

```
#\definecolor{exampleColour}{rgb}{1,1,.8}
```

- ▶ The "#" at the beginning of the line is needed to pass this directly to LaTeX.
- ▶ Then apply the colour to any frame like this:-
`@bgcolor exampleColour`
 - ▶ The line goes anywhere in the frame after the underline.
 - ▶ The line consists of 2 fields separated by spaces:-
 1. The "@bgcolor" must be at the beginning of the line.
 2. The LaTeX color that you have defined.

Topic Slides

- ▶ Quickbeam provides a shorthand for topic slides.
 - ▶ @topic "Text of the topic"
- ▶ It has two arguments:-
 1. @topic
 2. "Text of the topic"

The quotes make several words into one argument.
- ▶ It is in place of a frame or slide.
 - ▶ It is preceded by a blank line.
 - ▶ Then you put the @topic line.
 - ▶ It is followed by a blank line.

Topic 7

Blank Lines and Tables

Blank Lines

- ▶ Quickbeam does not support blank lines.
- ▶ Latex Beamer does that, e.g. :-
 - ▶ Stuff.
 - ▶ More stuff.

 - ▶ Other stuff.

```
* Stuff
* More stuff
* \bigbreak
* Other stuff
```

Tables

- ▶ Quickbeam has no feature to support tables.
 - ▶ Latex Beamer does that, e.g. :-

example:-

Time Domain	Frequency Domain
real symmetric	real symmetric
real asymmetric	complex symmetric
complex symmetric	real symmetric
complex asymmetric	complex asymmetric

Tables

Tables

```
-----  
* Quickbeam has no feature to support tables.  
* Latex Beamer does that, e.g. :-  
@close  
\large  
example:- \\  
\begin{tabular}{|c|c|}  
\hline  
Time Domain & Frequency Domain \\  
\hline  
real symmetric & real symmetric \\  
real asymmetric & complex symmetric \\  
complex symmetric & real symmetric \\  
complex asymmetric & complex asymmetric \\  
\hline  
\end{tabular}
```

Code to produce the previous slide

Topic 8

Escapes

Escapes

- Normally you need to escape special characters if the following are to appear as literals in a Latex Beamer slide:-

char	Escape	char	Escape
\	\textbackslash	&	\&
<	\textless	%	\%
>	\textgreater	\$	\\$
~	\textasciitilde	#	\#
^	\textasciicircum	-	\-
{	\{	}	\}

Note that these special characters do not apply to Quickbeam's @lines which are never passed on to LaTeX.

- When you turn on an escape in quickbeam, then the chosen characters are automatically escaped so that LaTeX will see the escape and produce the literal character.

Turning all escapes on or off

- ▶ '@escOff all' turns all escapes off.
 - ▶ This is the default in Quickbeam.
- ▶ '@escOn all' turns all escapes on.
 - ▶ If you are prone to LaTeX errors from un-escaped characters, then consider putting this in the latex preamble.
 - ▶ You can then turn escapes off for various special characters whenever you need to make a table or include an equation.
 - ▶ Or you could bypass Quickbeam escapes by using "#" at the beginning of a line, which passes the remainder of the line directly to LaTeX.

Turning only some escapes

- ▶ '@escOff <escape characters> turns off escapes for the given escape characters. For example:-
 - ▶ @escOff "\{}&"
 - ▶ Turns escapes off for the backslash, left brace, right brace and ampersand characters.
 - ▶ Suitable for making a table.
 - ▶ @escOff "\^_"
 - ▶ Turns escapes off for the backslash, tilde, and underscore characters.
 - ▶ Suitable for making an equation.
- ▶ '@escOn <escape characters>. For example:-
 - ▶ @escOn "<>"
 - ▶ Turns on escapes for the angular brackets.
 - ▶ Suitable for example HTML code.

Escape Scope

- ▶ Outside of a frame, then `escOn` and `escOff` will affect all frames from the `@line` until the end of the document. A later occurrence overrides values in an earlier occurrence.
- ▶ Within a frame, then their effect is only until the end of the frame. A later occurrence overrides an earlier occurrence inside or outside of the frame.
- ▶ Note that lines that begin with "`#`" are never escaped but passed directly to LaTeX.

Topic 9

Invocation

Invocation

Quickbeam is a primitive program:-

- ▶ It reads from standard input.
- ▶ It writes to standard output.
- ▶ It is invoked like this:-
`$ quickbeam < doc.qb > doc.tex`
- ▶ The above generates a file to be used as input to LaTeX beamer.
- ▶ More arguments may be discovered by:-
`$ quickbeam -help`

Topic 10

Obtaining and Compiling

Obtaining for Windows

- ▶ Ready compiled Windows executable at:-
 - ▶ <https://tau.usq.edu.au/staff/braithwaite/Quickbeam/quickbeam.exe>
- ▶ Check readme.txt in repository for SHA256 checksum.
 - ▶ <https://github.com/drbraithw8/quickbeam>
- ▶ Or you can build just as on linux using MSYS2.
<https://youtu.be/nbCB8bJU5eg>

Compiling for Linux

On Linux you need to build it yourself.

- ▶ Download from the repository:-
 - ▶ <https://github.com/drbraithw8/quickbeam.git>
- ▶ Requires CscNetlib library from:-
 - ▶ <https://github.com/drbraithw8/CscNetlib.git>
- ▶ Instructions on how to compile are here:-
 - ▶ <https://youtu.be/M19fTTAMGq4>