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The aeb_mobile Package Formatting PDFs for the Smartphone

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1. Introduction

This package, `aeb_mobile`, is a simple application of the `Web` and `eforms` packages to format a PDF for the **smartphone**, such as my **Windows Phone**.

I've attempted to maximize the viewing and printing experience when the PDF is viewed on the desktop/laptop and in a smart phone.

2. The Preamble and Package Options

In the preamble, place the `aeb_mobile` package like so

```
\usepackage[<options>]{aeb_mobile}
```

At this writing, there are four options,

- `smartphone`: This option sets up a page size of 4×8 inches. Further options of this same type may appear in the future to support other devices.
- `nomaketitle`: The package makes a redefinition of `\makeinlinetitle` (originally defined in the `Web` package). Using this option, the redefinition is skipped.

The following is an example of the redefinition of `\makeinlinetitle`

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The horizontal rule is part of the redefinition, it separates the title from the content on the **smartphone**. The information presented is obtain from the various commands defined by `Web`: `\university`, `\title`, `\email`, `\talksite`, etc.

- `useforms`: By default, links are created to **Print** the file and **Toggle Cols**, if this option is used, form buttons are used instead. The form button will be set so that it is visible but does not print. (An advantage it has over links.)

The **Print** link/button prints the document in two column format, remember, a page is only 4 inches wide, so two columns fit nicely on standard paper (letter size, for example).

The **Toggle Cols** link/button toggles the page between two column format and single column format.

The **Print** and **Toggle Cols** links/buttons work only when viewing the document with **Adobe Reader** on a computer; links and form fields are not supported by the **Adobe Reader app** on a smartphone.

- `scalefigures` and `!scalefigures`:¹ When `scalefigures` is taken, an image included using `\includegraphics` (from `graphicx` package) is rescaled according to an algorithm: The width (as specified by the `width` key of `\includegraphics`) is doubled up to a maximum width of `\textwidth`. The rescaling feature can be turned off conveniently by specifying the option `!scalefigures`. The rescaling of figures can be also turned off and on locally using `\scalefiguresOn` and `\scalefiguresOff`. If either of these two commands are executed within a group, their effects will be undone when the group is exited.

3. Customizing Commands

The package does not have many user commands, here, we present those associated with the **Print** and **Toggle Cols**. (See the `useforms` option above.)

- `\mobPrint` sets the text of the **Print** link and the **Print** button caption if its a push button. The default is `\mobPrint{Print}`.
- `\mobPrintTip` is the tool tip when there's a button for **Print**. The default is a command,


```
\newcommand{\mobPrintTip}{Click to print this document
in two-column format, recommended.}
```
- `\mobToggleCols` sets the text for the toggle link and the toggle button caption if its a push button. The default is `\mobToggleCols{Toggle Cols}`.
- `\mobToggleColsTip` is the tool tip for the toggle button. The default is a command,


```
\newcommand{\mobToggleColsTip}{Click to toggle between
single-column and two-column page layouts.}
```
- `\mobFormPresets` is used to set the appearance of the form buttons for print and toggle. The default is


```
\mobFormPresets{\S{S}\BC{}}\textSize{8}\autoCenter{n}}
```

 The argument are key-values as defined by the `eforms` package.

4. Early Exit

The following

```
\@ifundefined{ifsmartphone}{\newif\ifsmartphone\smartphonetrue}{}}
```

is inserted early in the code of `aeb_mobile`. If `\ifsmartphone` is not already defined, we define it and set it to true.

Later, just after `\ProcessOptions`, we have this code

¹This feature was suggested to me by Mathias M.

```
\ifsmartphone\else\expandafter\endinput\fi
```

That is, if `\ifsmartphone` is false, the package input is ended. The `\ifsmartphone` switch is defined in the companion package `spdef`, described in the next section, and is used to prepare documents, both for the smartphone *and* for paper.

With these bits of code in place, the package need not be surrounded by the `\ifsmartphone` switch,

```
\ifsmartphone
\usepackage[smartphone,useforms]{aeb_mobile}
\fi
```

Now, you need only say,

```
\usepackage[smartphone,useforms]{aeb_mobile}
```

If `\ifsmartphone` is true, the full package is input, if false, the package is ended early.

This is useful in conjunction with the `spdef` package, see the next section.

5. Final comments, the `spdef` package

I have begun to use the `aeb_mobile` package in my current class.² For most publications (in PDF), I offer a standard paper sized document, and a **smartphone** version. At the top of each document, I have

```
\RequirePackage[ph]{spdef}

\documentclass[\ifsmartphone11pt\else10pt\fi]{article}
..
\usepackage[%
  web={tight,pro},eforms
]{aeb_pro}
\ifsmartphone
\usepackage[smartphone,useforms]{aeb_mobile}
\fi
```

The package `spdef` (smartphone definition) is a short package that defines the switch `\ifsmartphone`.³ The package has two options `pa` (compile for paper, i.e. not for smartphone) and `ph` (compile for smartphone, where `\ifsmartphone` has a value of true). The `spdef` accompanies this distribution; see [spdef.pdf](#) for documentation.

The newest version of `aeb_mobile` does not require the `\ifsmartphone` switch. Now you can say,

²See <http://faculty.nwfsc.edu/web/math/storyd/class/spr12/STA2023/> for examples of **smartphone** documents; also see <http://www.acrotex.net/blog/?p=766>

³`\RequirePackage` is used here because `\usepackage` cannot be used until after a class document is input, where as there is no such restriction on `\RequirePackage`.

```
\RequirePackage[ph]{spdef}

\documentclass[\ifsmartphone11pt\else10pt\fi]{article}
..
\usepackage[%
  web={tight,pro},eforms
]{aeb_pro}
\usepackage[smartphone,useforms]{aeb_mobile}
```

If the `ph` option in `spdef` is changed to `pa`, the file will be compiled for paper (early exit for `aeb_mobile`).

Using the above scheme, I use the same source file for both documents (paper and smartphone versions). Most recently, I've been using the `eqexam` package to create dual purpose documents; see my [Statistics class website](#).

Now, I simply must get back to my retirement. 