AcroTEX.Net

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. Alternate package name: aeb-mobile

This package is listed on CTAN as aeb-mobile (ctan.org/pkg/aeb-mobile), even though there is no such package. Now, there is a 'dummy' package aeb-mobile that loads aeb_mobile and passes all options to it.

3. 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

<div align="center">

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</div>

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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.

4. 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.

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[1] This feature was suggested to me by Mathias M.

5. 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

```
\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 \ifsmart-phone 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.

6. 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
```

---

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

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,

```
\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. DS

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[3]\RequirePackage is used here because \usepackage cannnot be used until after a class document is input, where as there is no such restriction on \RequirePackage.