`webgraphic.sty`: Graphics from the Web for XML Conversion from LaTeX*

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Abstract

This package supplies an infrastructure for including web graphics in LaTeX documents written for transformation to web formats.[1]

EdNote(1)

Contents

*Version v0.1 (last revised 2010/08/10)
[1] EdNote: extend

1 Introduction

The LaTeXML system [Mil] can be used to generate various web formats from LaTeX, most prominently XHTML+MathML that can directly be used for web pages. AS LaTeXML covers a wide range of LaTeX classes and packages, almost all LaTeX documents can be converted. But not all XHTML+MathML can be produced; the main problem is that XHTML allows the inclusion of images located by URLs and LaTeX only allows the inclusion of images from the local file system. The `webgraphic` package provides a simple markup structure to change this.

2 User Interface

`\webgraphic` The `webgraphic` package provides a single macro: `\webgraphic`. It works exactly like the `\incldegraphics` macro from the `graphicx` package [CR99], except that the image file may be a URL [DS05] and that `\webgraphic` has an additional key

`local` `local` that can be used to specify a local copy of the image file (LaTeX) cannot fetch files from the web. If the `local` attribute is not given LaTeX tries to interpret the second argument as a file path to an image file and to include it. The normal usage is as given in Figure?? which results in the picture given that a file `LWebComp.*` in a format that `graphicx` can handle (here `LWebComp.png`) is present.

```
\webgraphic[width=3cm,local=LWebComp.png]
           {http://www.tug.org/books/LWebComp.jpg}
```

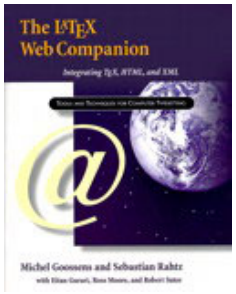

Figure 1: Normal usage of `\webgraphic`

If no local file is given, then LaTeX generates a box that contains the URL as a fallback, see Figure 2.

```
\webgraphic[width=3cm]
           {http://www.tug.org/books/LWebComp.jpg}
```

http://www.tug.org/books/LWebComp.jpg

Figure 2: `\webgraphic` Fallback Behavior

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In both cases, LaTeXML converts this into a suitable web representation, e.g.

```
<img src="http://www.tug.org/books/LWebComp.jpg" style="width:3cm"/>
```

3 Implementation

We first set up header information for the LaTeXML binding file.

```
1 ⟨*ltxml⟩
2 package LaTeXML::Package::Pool;
3 use strict;
4 use LaTeXML::Package;
5 ⟨/ltxml⟩
```

Then we need to include the `graphicx` package we build upon

```
6 ⟨package⟩\RequirePackage{graphicx}
7 ⟨ltxml⟩RequirePackage('graphicx');
```

`\webgraphic` We build the `\webgraphic` macro on `\includegraphics`: for the LaTeX implementation we first extend its keys by `local`, we fish out its value from `\webgraphic` and then supply it is the file to `\includegraphics`.[2]

EdNote(2)

```
8 ⟨*package⟩
9 \define@key{Gin}{local}{\def\Gin@local{#1}}
10 \newcommand{\webgraphic}[2][]{\def\Gin@local{}\setkeys{Gin}{#1}%
11 \ifx\Gin@local\@empty%
12 \IfFileExists{#2}{\includegraphics[#1]{#2}}{\fbox{#2}}%
13 \else\includegraphics[#1]{\Gin@local}\fi}
14 ⟨/package⟩
15 ⟨*ltxml⟩
16 DefConstructor('\webgraphic[]{}','');
17 ⟨/ltxml⟩
```

Finally, we need to terminate the file with a success mark for perl.

```
18 ⟨ltxml⟩1;
```

[2] EdNote: @Deyan, please add the binding and describe what you did.

References

[CR99] David Carlisle and Sebastian Rathz. *The* graphicxl *package*. Part of the TEX distribution. The Comprehensive TEX Archive Network. 1999. URL: `https://www.tug.org/texlive/devsrc/Master/texmf-dist/doc/latex/graphics/graphicx.pdf`.

[DS05] Martin Dürst and Michel Suignard. *Internationalized Resource Identifiers (IRIs)*. RFC 3987. Internet Engineering Task Force, 2005. URL: `http://www.ietf.org/rfc/rfc3987.txt`.

[Mil] Bruce Miller. *LaTeXML: A LATEX to XML Converter*. URL: `http://dlmf.nist.gov/LaTeXML/` (visited on 05/08/2010).