Produce External Links Instead of Internal Ones*

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2012/03/22, v1.1

Abstract

A package to change automatic internal links in a document into external ones in the form `http://issue.com/action/page=PAGENUMBER` as required by http://issuu.com.

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†This work was partially supported by The Food and Agriculture Organization of the United Nations

1 Introduction

PDF visualizer ISSUU (http://issuu.com) is a popular service allowing to show PDF documents "one page a time". Due to the way it is implemented, internal links in these documents are not allowed. Instead, they must be converted to external ones in the form `http://issuu.com/action/page?page=PAGENUMBER`.

This package patches hyperref to produce external links in the required form instead of internal links created by `\ref`, `\cite` and other commands.

Since the package redefines the internals of hyperref, you need to call it *after* hyperref.

The author is grateful to FAO UN which partially funded this work and to Matthieu Stigler, Adam Prakash & Filippo Gheri for suggesting and testing this package.

2 Usage

To use this package just add `\usepackage{issuulinks}` *after* calling hyperref. By default all links will be converted into the form required by ISSUU.

`\issuusetup` The command `\issuusetup{`⟨*setup commands*⟩`}` might be used to customize the behavior of the package. At present the only customizable command is `prefix`, that sets the part of the link before `PAGENUMBER`by default `http://issuu.com/action/page?page=`. You can change it, for example,

```
\issuusetup{prefix={http://www.issuu.com/action/page?page=}}
```

Otherwise the work of the package should be transparent for the user.

3 Implementation

3.1 Algorithm

The idea is following. Whenever hyperref creates an internal anchor `{`⟨*name*⟩`}`, we write to the aux file the command `\newISSUUlink{`⟨*name*⟩`}{`⟨*abspage*⟩`}`, where `{`⟨*abspage*⟩`}` is the absolute page number (as different from the displayed page number). Then when hyperref creates an internal link to `{`⟨*name*⟩`}`, we substitute this to a call to http://issuu.com with the corresponding page number.

3.2 Declarations

We start with declaration, who we are:

```
⟨style⟩\NeedsTeXFormat{LaTeX2e}
⟨*gobble⟩
\ProvidesFile{issuulinks.dtx}
⟨/gobble⟩
⟨style⟩\ProvidesPackage{issuulinks}
[2012/03/22 v1.1 Links in ISSUU style]
⟨*gobble⟩
\documentclass{ltxdoc}
\usepackage{hypdoc}
\usepackage{url}
\CodelineIndex
\RecordChanges
\EnableCrossrefs
\begin{document}
  \DocInput{issuulinks.dtx}
\end{document}
⟨/gobble⟩
⟨*style⟩
```

3.3 Parameters

We use keyval to process options:

```
\RequirePackage{xkeyval}
```

`\issuusetup` The shorthand for setting options:

```
\def\issuusetup#1{\setkeys{ISL}{#1}}
```

`\ISL@prefix` The `prefix` macro:

```
\define@key{ISL}{prefix}{\def\ISL@prefix{#1}}
\issuusetup{prefix={http://issuu.com/action/page?page=}}
```

3.4 Working with Aux File

\newISSUUlink The page numbers in \Hy@abspage start from zero, so we need to increment them:

```
\def\newISSUUlink#1#2{\@tempcnta=#2\relax\advance\@tempcnta by1\relax
  \expandafter\xdef\csname ISL@link#1\endcsname{\the\@tempcnta}}
```

Someone can use an aux file from the previous run, so we provide a safety valve:

```
\AtBeginDocument{%
  \if@filesw
  \immediate\write\@mainaux{\string\providecommand\string\newISSUUlink[2]{}}%
  \fi}
```

At the end of document LaTeX checks whether references might been changed or undefined. Here we plug in into this mechanism:

```
\AtEndDocument{\let\newISSUUlink\@testISSUUlink}
```

\@testISSUUlink Test whether this link is defined. If not, set \@tempswa to true—this will cause LaTeX to issue a warning:

```
\def\@testISSUUlink#1#2{\@tempcnta=#2\relax\advance\@tempcnta by1\relax
  \edef\reserved@a{\the\@tempcnta}%
  \expandafter\ifx\csname ISL@link#1\endcsname\reserved@a\else
     \@tempswatrue
  \fi}
```

3.5 Writing the Internal Link Information

\new@pdflink We patch \new@pdflink to write its argument into the aux file. Note that the counter \Hy@abspage stores the absolute page position in *hyperref*. We do not prevent writing the internal anchor in the catalog—probably a waste of time and bits, but somebody might rely on this for some other purpose[1].

```
\let\new@pdflink@ISLorig=\new@pdflink
\def\new@pdflink#1{%
  \@bsphack
  \protected@write\@mainaux{}%
         {\string\newISSUUlink{#1}{\the\Hy@abspage}}%
  \@esphack
  \new@pdflink@ISLorig{#1}}
```

3.6 Patching Internal Links

\Hy@StartlinkName The standard \Hy@StartlinkName is defined like this:

```
\def\Hy@StartlinkName#1#2{%
  \pdfstartlink attr{#1}goto name{#2}\relax
}
```

[1] Actually I am too lazy to do otherwise...

Here we are patching it. Note that we can have bad links if we use 'old' aux file

```
\def\Hy@StartlinkName#1#2{%
  \expandafter\ifx\csname ISL@link#2\endcsname\relax
    \PackageWarning{issuulinks}{The page number for an external link
      is not defined.  Setting it to 1.  You need to rerun LaTeX to
      get the page numbers right.}%
    \expandafter\def\csname ISL@link#2\endcsname{1}\fi
  \edef\Hy@pstringURI{\ISL@prefix\csname ISL@link#2\endcsname}%
  \pdfstartlink attr{#1}%
  user{%
       /Subtype/Link%
       \ifHy@pdfa /F 4\fi
       /A<<%
         /Type/Action%
         /S/URI%
         /URI(\Hy@pstringURI)%
         \ifHy@href@ismap
           /IsMap true%
         \fi
         \Hy@href@nextactionraw
       >>%
      }%
      \relax
}
```

⟨/style⟩

Change History

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Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.