Preparing Accessible Documents at the DTBook Format Using Free Software

odt2dtbook: OpenOffice.org Save-as-Daisy extension

Dominique Archambault, Vincent Spiewak

Université Pierre et Marie Curie – Paris 6

http://chezdom.net/blog

CSUN Conference 2009

Session OTH-1015, March 18, 3.10pm,
Marriott - Chicago/Dallas PC Lab

Special thanks to...

- Lenka Kasparova, SUN Microsystems

- Dennis Leas, Gh, llc.

- Donal Fitzpatrick, DCU

- Klaus Miesenberger, JKU

- Arthur Karshmer, Computer Science Guru, USF

Brief summary of the session

- Accessible documents

- OpenOffice.org and odt2dtbook

- Practicle work today:

  - Prepare the document

  - Create the DTBook

  - Let's try with a Daisy player (gh PLAYER)

- Summary and conclusion

What is an accessible document?

An accessible document is a document which can be accessed by anyone, regardless the modality she/he needs to use.

- Especially, but not only, non visual modalities.

- So print disabled people can use it!

Main constraints (1)

Every piece of information that cannot be directly displayed in any modality, or automatically converted to be displayed in any modality, must have an alternate content.
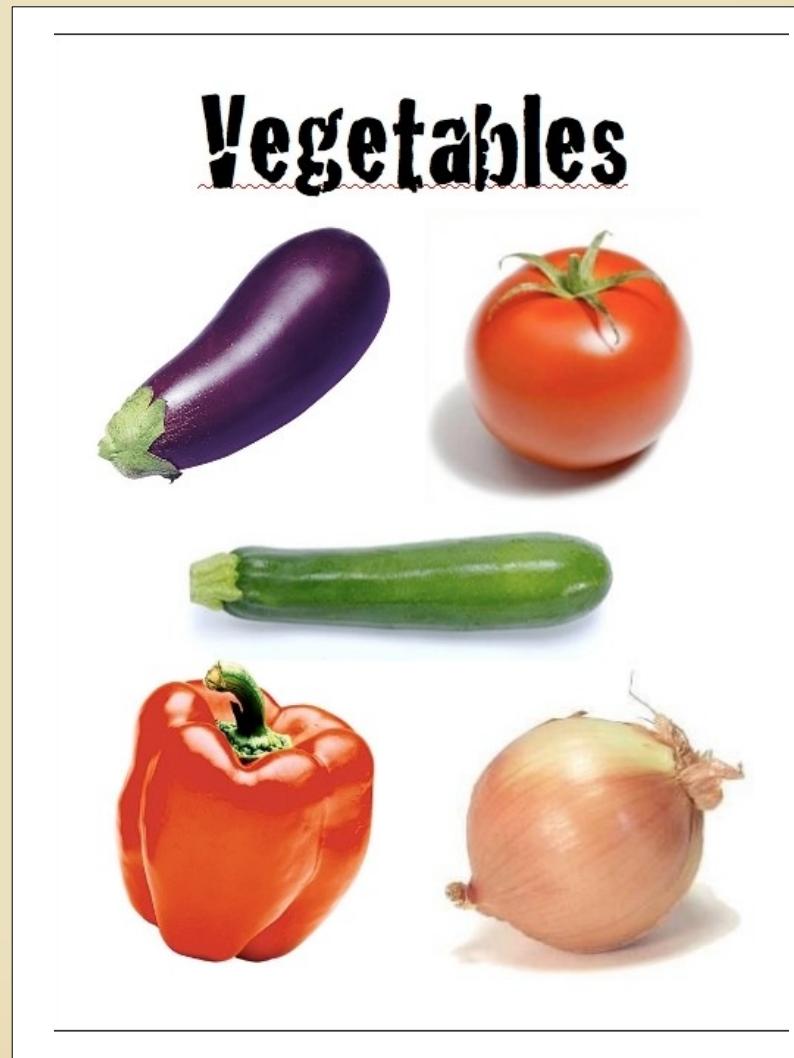
Main constraints (2)

It must contain explicitly the structure.
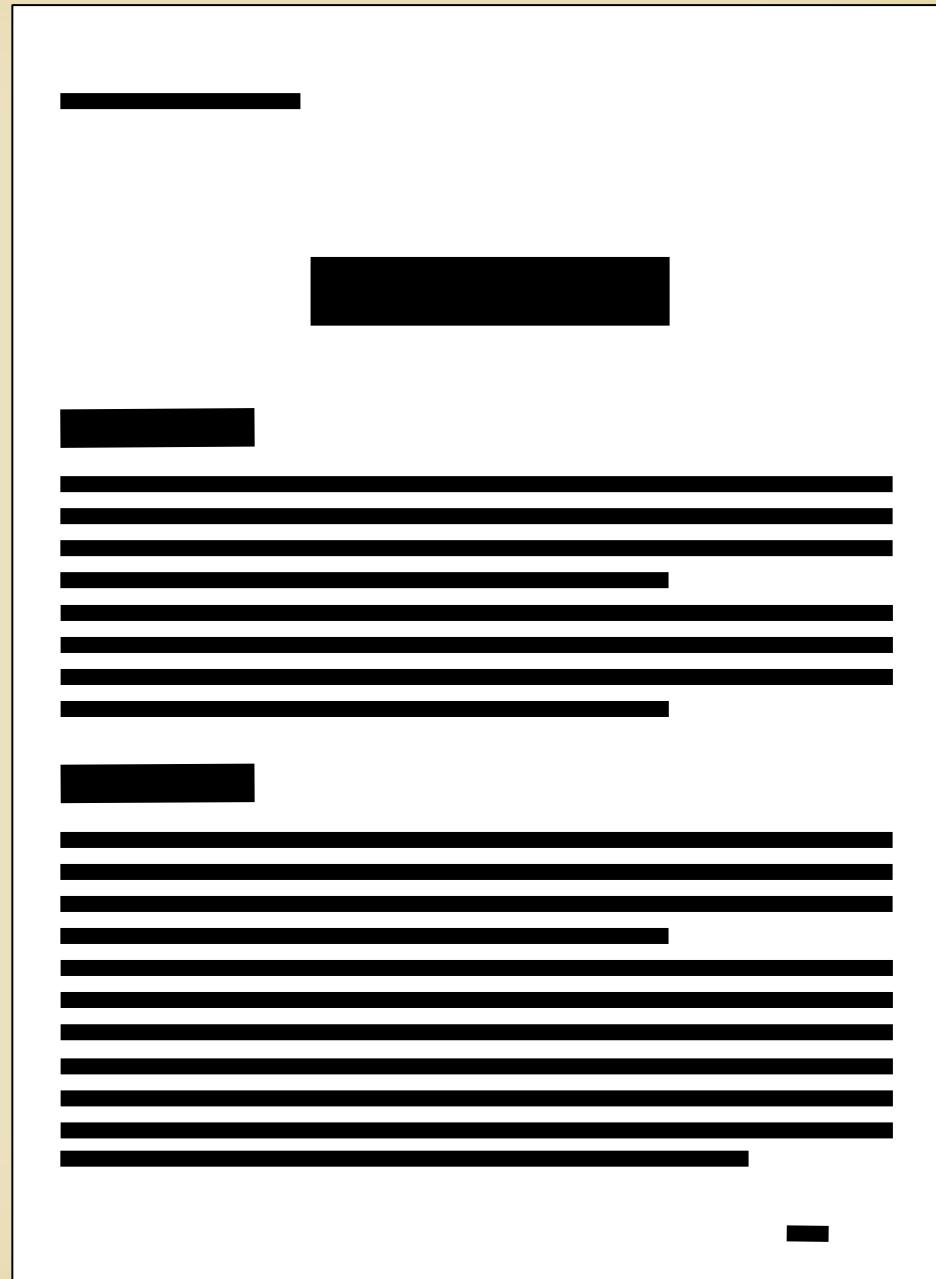
What for ?

- Exchange documents with people having or not a print disability

- Deliver documents to pupils, according to the US IDEA for instance

- Store documents on a digital library for print disabled people

- and probably more...

The DTBook format

- **DTBook** is an accessible format adopted as an **ANSI/NISO** standard (**Z39.86**), and widely used all over the world:

  - Lots of digital libraries for the blind (TPB, US Library of Congress, BrailleNet, etc)

  - NIMAS format (in the framework of IDEA)

- It is maintained by the **DAISY consortium** as part of the DAISY format.

How to create DTBooks

- Typing manually in XML! . . . NOT! ;-)

- Daisy Authoring Software

  - See **http://daisy.org**
    section Tools: Authoring/Production Tools

- Using a word processor with Save-as-Daisy function

  - One commercial Office suite as one

  - Odt2dtbook enables OOo to create DTBooks

OpenOffice.org and odt2dtbook

- A completely free solution to author DTBook documents!

- Both are Open Source software

- Both are cross platform

    http://openoffice.org

    http://odt2dtbook.sf.net

Why OOo is relevant for creating accessible contents?

- The Open Document format (ODF) now includes all necessary features for accessibility

- OOo 3.0 is accessible, see:

http://wiki.services.openoffice.org/wiki/Accessibility

- OOo allows to open a large variety of formats

- OOo is Open Source so it's easy to develop an import filter for another format

- OOo is cross platform (Linux, Mac, Win, Solaris)

What accessible contents?

- Accessible odt files

- Accessible Web pages

  → Save as HTML document

- Accessible PDFs

  → Export to PDF

- **DTBooks!**

  → Export to DAISY (odt2dtbook)

odt2dtbook

- odt2dtbook is an OpenOffice.org writer extension, enabling OOo to export to DTBook XML 3.

- OpenSource software (GNU LGPL 3)

- Developed in 2008 in UPMC – Paris 6

- Received a Gold Award from the OOo Community Innovation Program sponsored by SUN Microsystems

odt2dtbook's features (1)

- Completely cross platform, it can be installed in any OpenOffice.org, version > 3.0

- odt2dtbook supports:

  - most of the DTBook elements (mapping from OOo styles).

  - page numbering (including advanced page numbering)

  - notes (end notes, rear notes), table of contents, multilingual documents.

odt2dtbook's features (2)

- odt2dtbook supports:

  - Maths contents conforming to the MathML Modular extension of DTBook.

  - Alternative contents, production notes

  - Advanced DAISY elements (Front Matter, rear matter etc)

  - Metadata

  - etc.

Integration with Daisy

Odt2dtbook allows to create fully functional DAISY books :

- compatibility has been ensured with the DAISY pipeline.

Let's start practical work!

- Quick overview: let's create a new document from scratch:

  → **File/New/Text document**

- Write a couple of "blah blah" lines

- Generate a DAISY file:

  → **File/Export as Daisy**

What's happening now?

A mean warning!

odt2dtbook – Avertissement

⚠ Le document courant ne contient aucun style Titre.
Il est FORTEMENT recommandé d'utiliser les styles Titre.
Voulez vous vraiment exporter le fichier dans un unique level ?

[Oui]   [Non]
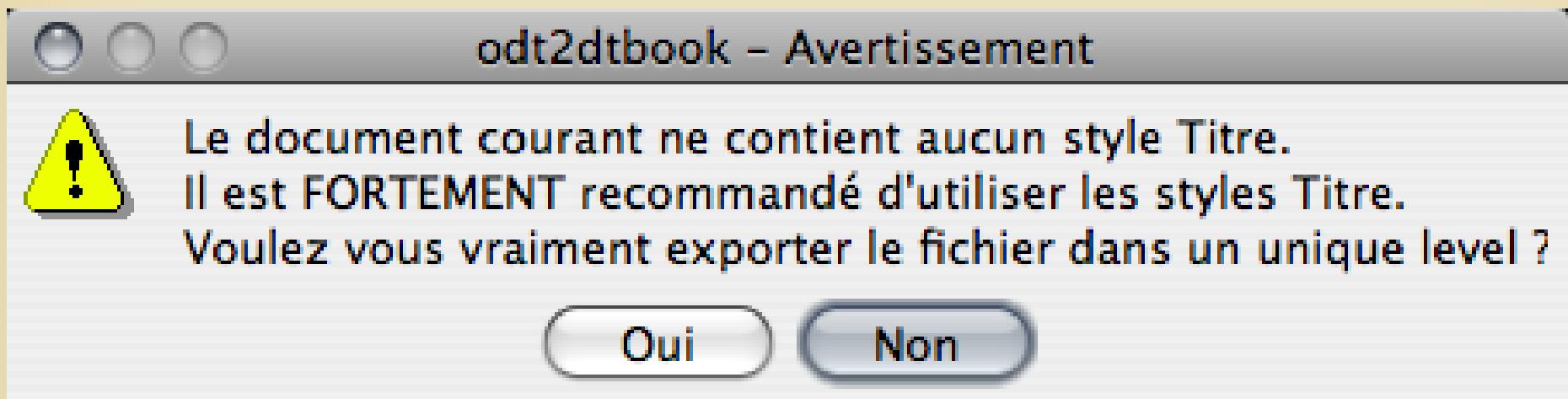
Odt2dtbook - Warning

Current document has no Heading Style.
It's STRONGLY recommended to use Headings Styles.
Do you really want exporting in one unique level?

OK, Cancel
but why do I have this warning?

Let's improve this!

- Add a few lines like this →

- Set the styles of headings to the relevant OOo styles

- Now let's do the **Export as Daisy** again

Heading of level 1
blah blah blah blah

Other heading of level 1
Heading of level 2
bluh bluh bluh
Second heading of level 2
bloh bloh bloh

Next heading of level 1
blih blih blih blih

odt2dtbook Export Dialog

Identification of the document

Title of the DTBook

Creator of the DTBook

The CSS allows the user to view the DTBook within a simple browser
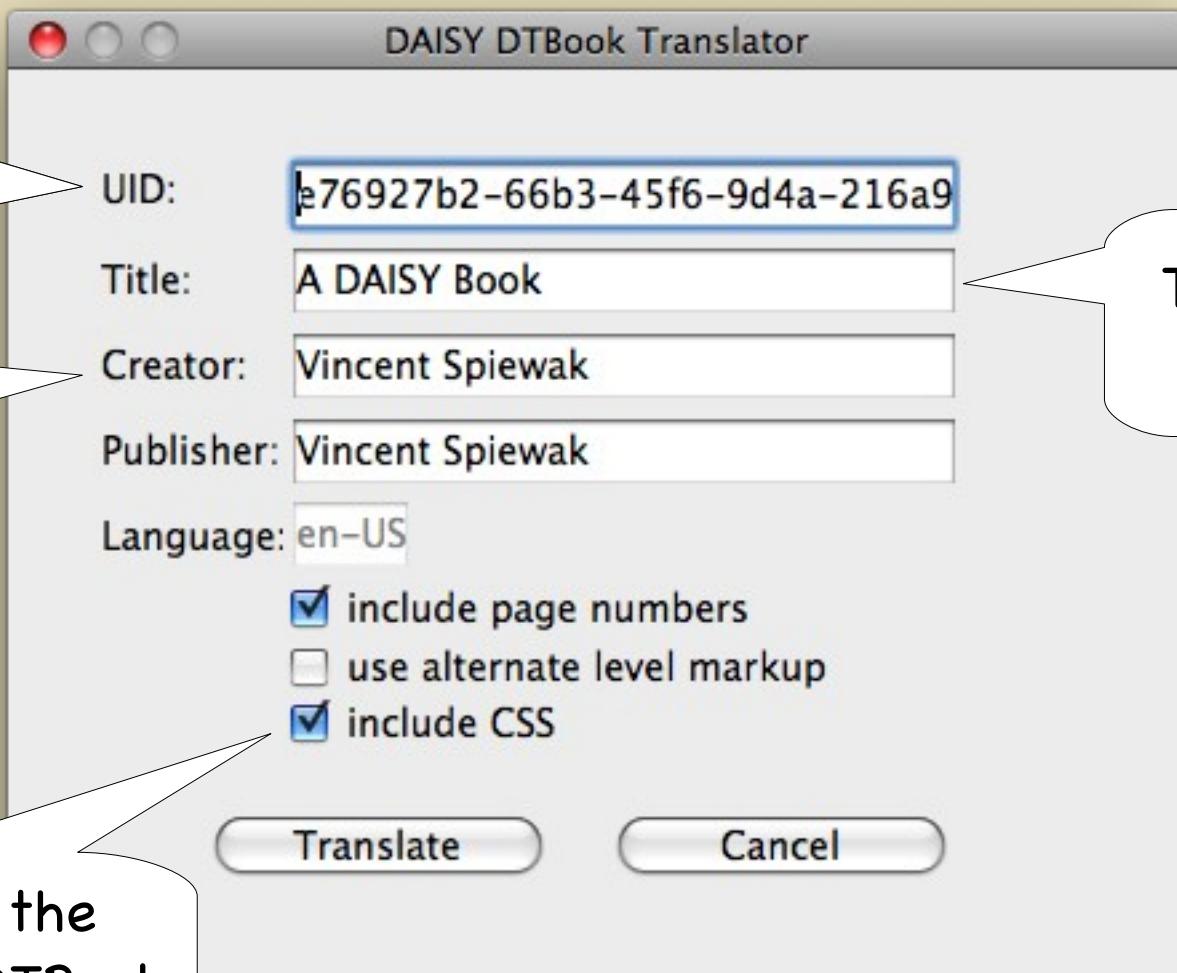
**Tools > Options
> OpenOffice.org > User Data
> First Name (and Last Name)**

Identificati[on of]
the document

UID: e76927b2-66b3-45f6-9d4a-216a9

Title: A DAISY Book

Creator: Vincent Spiewak

Publisher: Vincent Spiewak

Language: en–US

☑ include page numbers
☐ use alternate leve[l]
☑ in

Title of the DTBook

Creator of the DTBook

**File > Properties
> Description > Title**

The CSS allows the user to view the DTBook within a simple browser

Now let's access this document

- We will propose use a software Daisy reader:

  - gh PLAYER™ (developed by gh, llc.)

  http://www.gh-accessibility.com

gh PLAYER™

gh PLAYER™ is a software reading system designed for reading NIMAS, DAISY Digital Talking Books, and plain text files while providing multiple sensory output.

It supports:

- high contrast large text

- recorded or synthesized speech

- Braille output to a refreshable display

gh PLAYER™ keyboard commands

- Start the PLAYER or Return
  to PLAYER's Starting Screen...........Ctrl+Alt+G

- Exit the PLAYER...........................Ctrl+Q or Alt+F4

- Open Book.....................................Ctrl+O

- Close Book....................................Ctrl+W

- Stop PLAYER Voice ....Ctrl

- Stop/Start Narrator Voice ....Spacebar

gh PLAYER™ keyboard commands

Navigation

- Next Part..Right Arrow

- Previous Part..Left Arrow

- Change Navigation Mode in TTS
  (Word, Segment, Section, Page).......Up/Down Arrows

- Change Navigation Mode in RA
  (Time, Segment, Section, Page)........Up/Down Arrows

- Go to Beginning of Book ....Ctrl+Home

- Go to End of Book ....Ctrl+End

A more complex document

- Let's create a document using a template

  → **File/New/Templates and Documents**

  > DaisyDTBook

  Choose "Empty DTBook"

- Now you will have a set of specific DAISY styles

Let's get some contents

- For instance let's use some online content from wikipedia:

`http://en.wikipedia.org/wiki/Eggplant`

- Use any other content if you don't like eggplants (I think they are delicious!)

- Or: use your own contents

  Select contents with headings, lists, images, etc...

Levels

- Levels are mapped with Heading1, Heading2,... HeadingX Styles.

- Headings markup MUST be consistent:

  you cannot have a Heading 3 just after an Heading 1.

- Use alternate level markup (in the export dialog box) if more than 7 levels are used.

<levelX> vs <level depth="X">

Images

- Images are supported natively, insert an image with:

  Insert > Picture > from File...

- They will be outputed in an "images/" directory (if the "link" box remains unchecked)

- Insert the alternate text using

  Picture ... > Options > Alternate (text only)

  (right-click on the picture)

Tables

- Use simple tables ! Avoid nested tables.

- Use Heading lines (there is a "Heading" box in the "Options" when a table is created)

- Use the style "Table heading" for the content of the heading line

Lists

This is a list:

- Linux
  - Debian
  - Ubuntu
- Solaris
- Mac OS X
- Windows

This is not[1]:

* Linux
  - Debian
  - Ubuntu
* Solaris
* Mac OS X
* Windows

1: starts and dashes were inserted manually here

Lists

This is a list:

- Linux
  - Debian
  - Ubuntu
- Solaris
- Mac OS X
- Windows

This is not[1]:

* Linux
  - Debian
  - Ubuntu
* Solaris
* Mac OS X
* Windows

Ordereded lists are fine too!

D Archambault, UPMC-Paris 6, CSUN 2009, session OTH-1015

Tasks

- Copy a few sections, with titles and paragraphs

  - Insert one of the images

- In the paragraphs "History"

  - Insert the 2 first notes of 'History'

- In the paragraph "Synonyms"

  - Make a bullet list from the various synonyms

- In the paragraph "Statistics"

  - Include the table (don't forget the headings)

To finish

- Now I'll show how to generate a Full Daisy book, using our generated DTBook and the Daisy pipeline

http://www.daisy.org/projects/pipeline

Summary and Conclusion

- We have seen how to easily create a DTBook file with Ooo+odt2dtbook

- The method can be generalised to create an accessible ODT file for any purpose

- This can be done exactly the same on other platforms, and the resulting files can be used on any platforms (as well the odt and the DTBook)

OOo + odt2dtbook

The only rich, cross-platform, accessible, free and open source environment for authoring DAISY books, which is a tremendous addition to the disability community

http://odt2dtbook.sf.net

Ooo + odt2dtbook can be used:

- by libraries for the blind to convert documents to DTBook

- by teachers to create NIMAS documents

- by resource centres who produce accessible documents for the print impaired in schools and universities

- By any print disabled user to create a DTBook

- By anybody to create a full Daisy book (together with the Daisy pipeline)

If you are interested in Daisy and OpenSource

You could attend the session OTH-2045:

Open Source Software for DAISY – Today and in the Future

by Markus Gylling, George Kerscher, Dominque Archambault

Friday, March 20 – 10.40am

Marriott – Meridian One DAISY/EASY

有り難う
(arigato)

gracias

merci

chokrane

你们
(shie-shie)

tak

thank you

bayarlalaa

kiittos

obrigado

danke shön

dziekuje

dankon