

# **DocBook, Part 2: DocBook Framework for OS/2**

A gentle introduction to an XML  
publishing framework

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# Motivation [1]

- Used by big companies and projects
- Most OSes have some support for DB
- Docs in portable and open format have higher value than proprietary ones
  - Other formats can be easily generated
  - You can easily change the platform
    - OS, editors, tools, ...
    - A similar concept like with OpenOffice and OpenDocument

# Motivation [2]

- In today's situation, we – OS/2 users – must try to get fully compatible with the rest of the world
  - Incoming data: OO.o, Mozilla, ...
  - Outgoing data: This could be (also) DocBook or its output
  - We can hardly impose a native OS/2 format (INF) to others. Forget about it...
- DocBook will be readable in the future

# Why Do We Need The Framework?

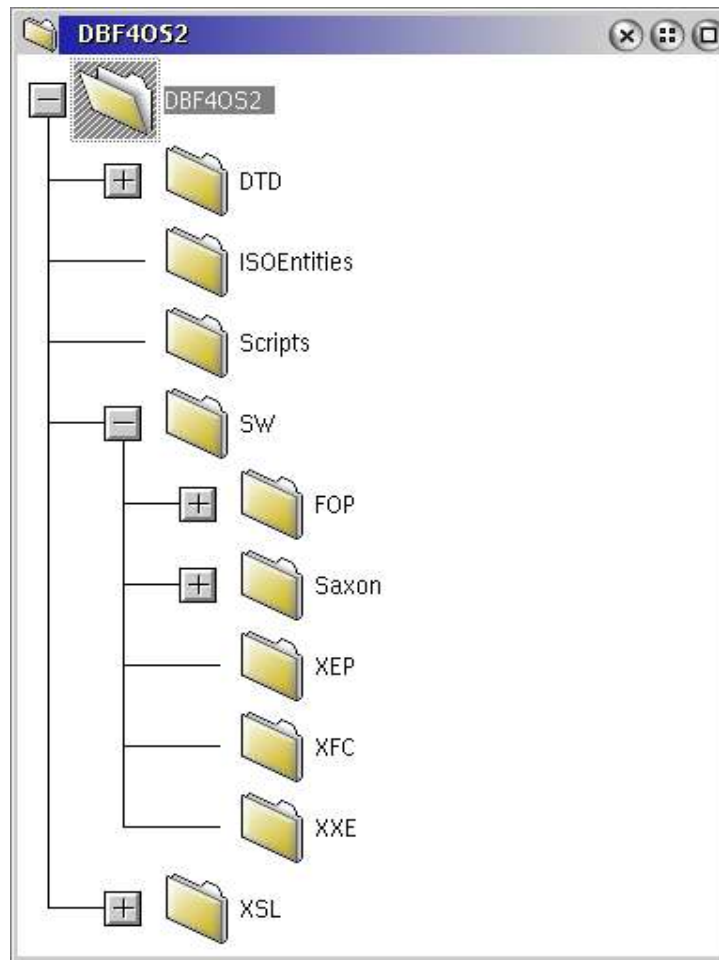
- There is (almost) no OS/2-specific SW in the framework. So why does it exist?
- You can put it all together on your own, but:
  - You cannot get it together – several vendors and web sites, more versions, ...
  - It is quite hard to configure it all. Two years ago, I spent a month on it and I failed.
  - This is a **working** solution. (I hope :-)

# Components Of The Framework [1]

- DocBook DTD: currently v. 4.3
- XSL styles
- Software (all Java-based):
  - Saxon
  - FOP, XEP, XFC
  - Editors: jEdit, XXE, ...
- Rexx scripts
- Fonts (Take them from WinXP)

Grey parts must be installed individually by the user due to their licenses.

# Components Of The Framework [2]



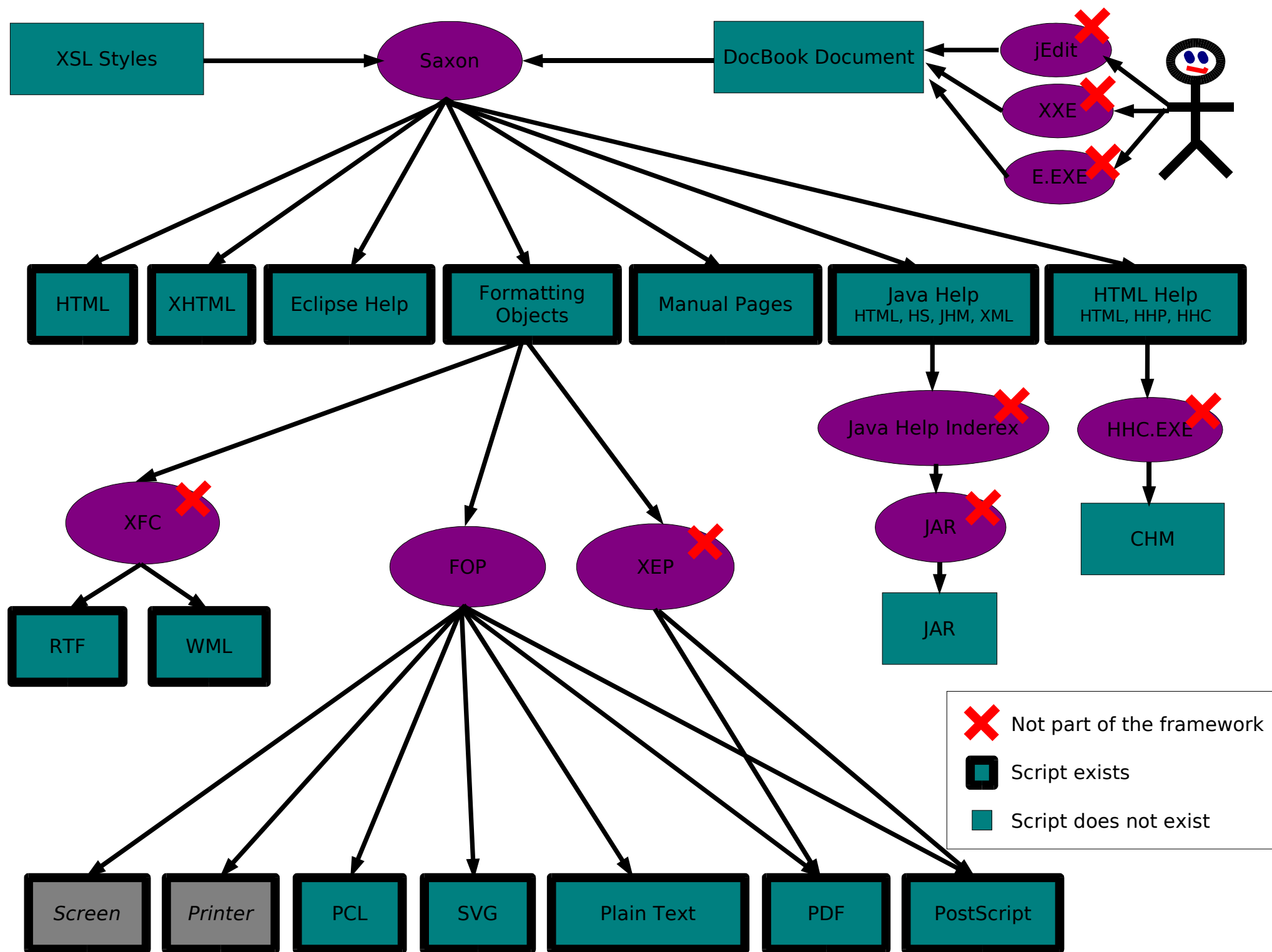
# Not Part Of The Framework (Yet)

- DSSSL styles and (Open)Jade
  - From old SGML times
  - Does anybody need it?
- Other native software: xmllint, xsltproc
- Other converters:
  - DB2LaTeX – problems with emTeX/TDS
  - JadeTeX (DSSSL)
  - PassiveTeX (XSL)

# How It Works

- You create: DocBook document, images
- Conversion to (X)HTML, FO, HTML Help, Java Help, LaTeX, ...
- Conversion from FO to paged-media documents: PDF, PS, WML, RTF, ...
- Every supported conversion has a Rexx script AAA2BBB.CMD:
  - DB2HTML, DB2FO, DB2EclipseHelp, ...
  - FO2PDF, FO2RTF, ...





# Problems [1]

- Saxon crashes at the end
  - ClassCastException
  - It does the job :-)
- Commands too long – SYS1065
  - Due to config parameters
  - Try to keep the path as short as possible, e.g. **C:\DB**
- Some manual configuration necessary after installation – PatchTheseFiles.TXT

# Problems [2]

- Non-western characters and their mapping to output files
  - By default, we get blank space (PDF, PS) or transformation errors (HTML Help)
  - Solution 1: Use native 8-bit encoding, e.g. Win-1250 for HTML Help
  - Solution 2: Use good Unicode fonts (for PDF), e.g. those from Windows XP
    - Arial (-/I/BI/BD), Courier (-/I/BI/BD), Palatino (-/I/B/BI), Tahoma (-/BD), Times (-/I/BI/BD), Verdana (-/I/B/Z)

# Installation [1]

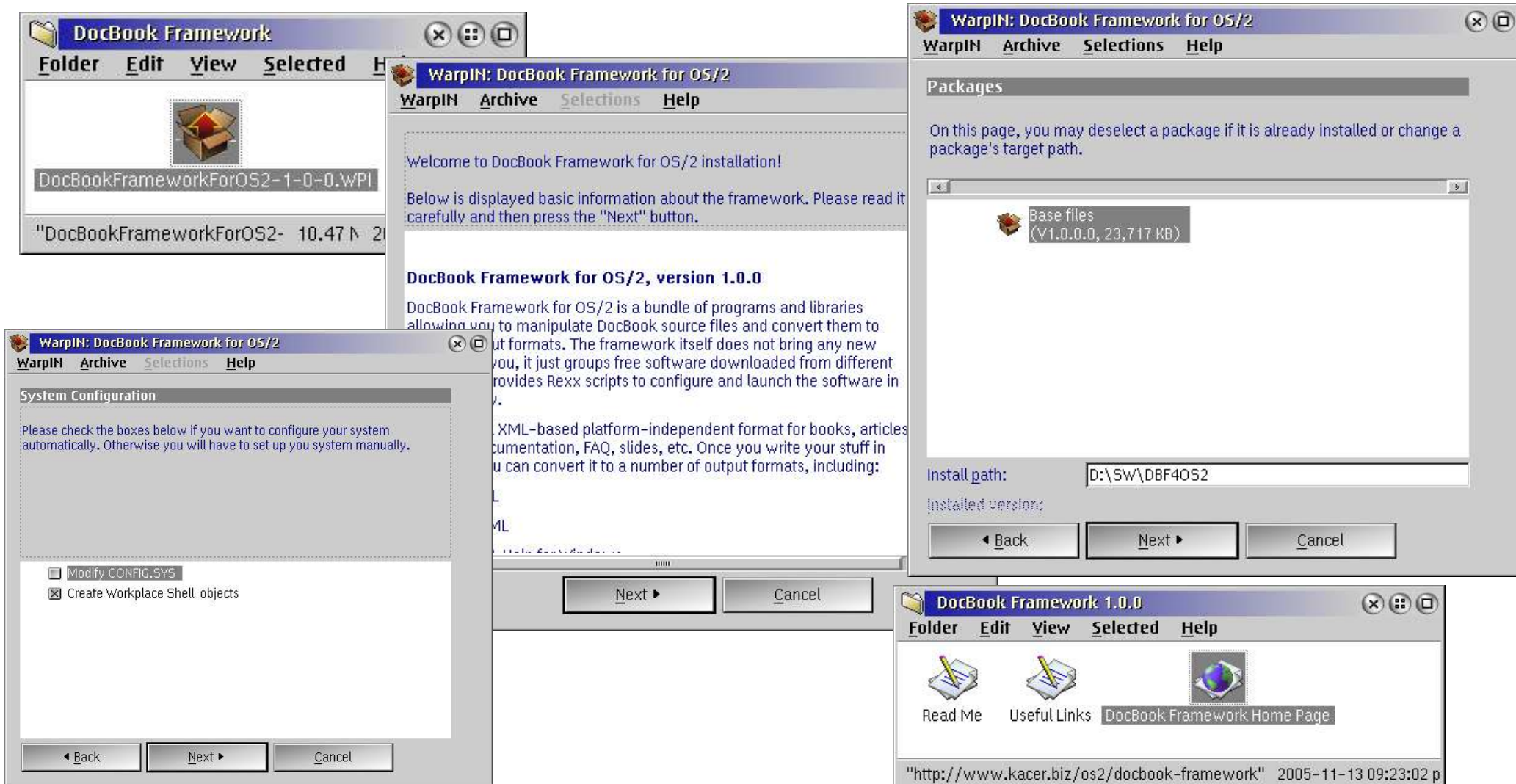
- Homepage at <http://www.kacer.biz/os2/docbook-framework>
- Download from <http://hobbes.nmsu.edu>
- WarpIN archive
- Some post-install settings necessary
  - Read PatchTheseFiles.TXT
  - catalog.xml, CatalogManager.properties, FOP config file, XEP config file

# Installation [2]

- Set PATH
  - Can be done during WarpIN installation but modifies CONFIG.SYS :-(
  - Better way: Manually from command line just before you use it
  - Not needed if you like typing
- CLASSPATH set by the scripts, as well as all other parameters

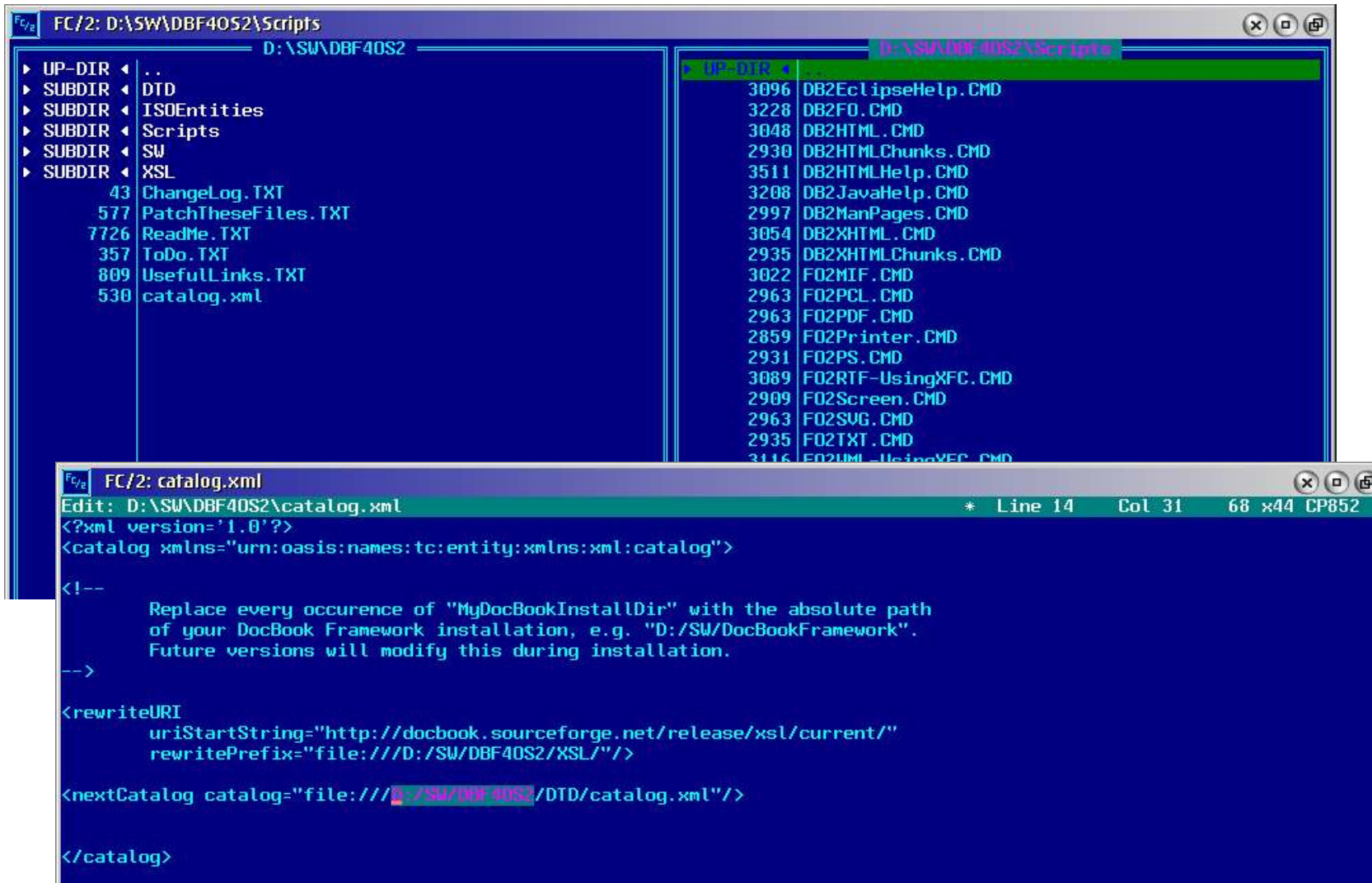
# Screenshots [1]

## Installation



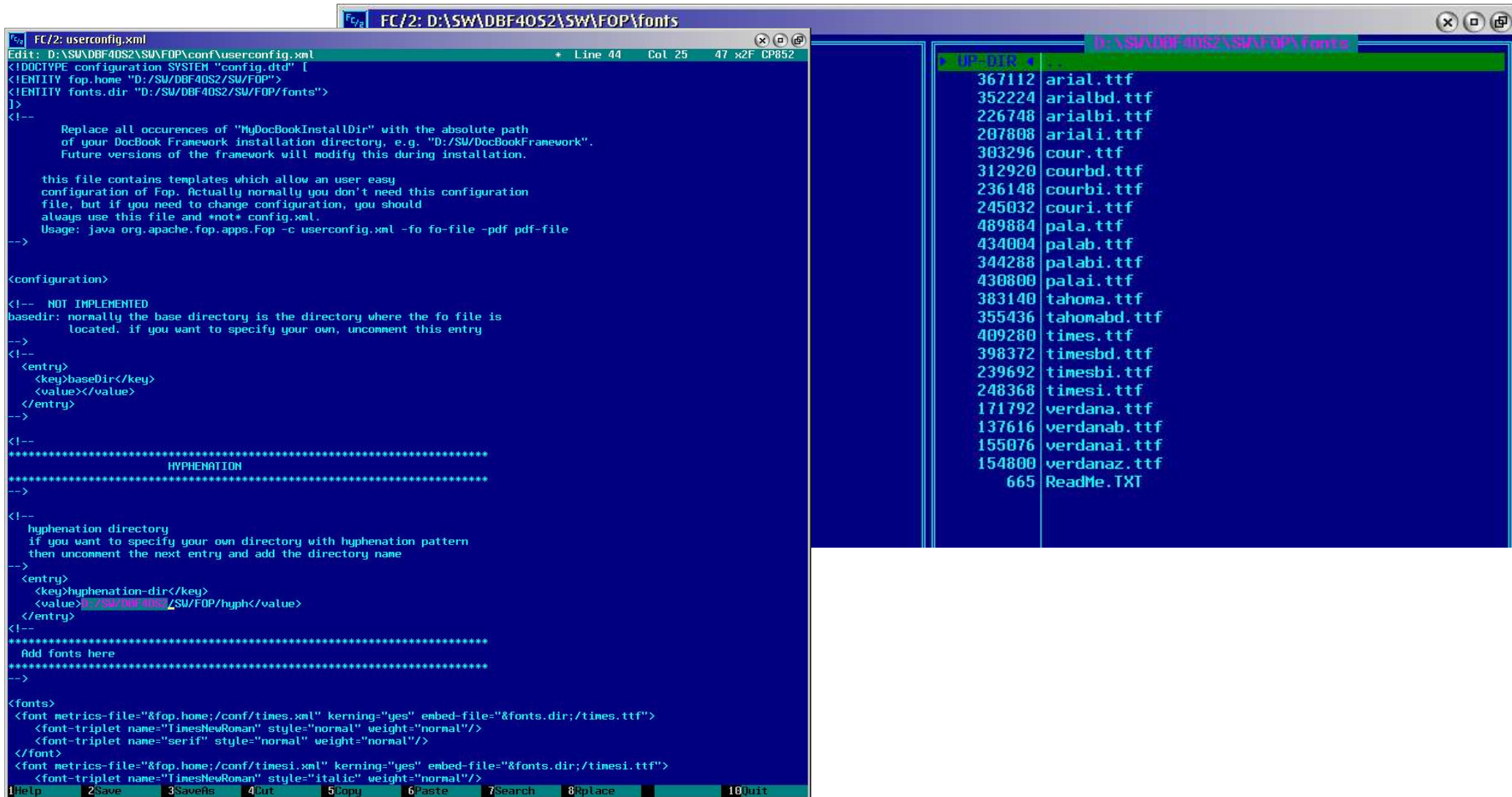
# Screenshots [2]

## After-install Configuration





# After-install Configuration





# Screenshots [4]

## Conversion to XHTML

```
Yet Another OS/2 Shell v1.8.1

[ D:\TEMP\TestDB ] set PATH=.;D:\SW\Java\bin;D:\SW\DBF40S2\Scripts

[ D:\TEMP\TestDB ] _
```

```
Yet Another OS/2 Shell v1.8.1

[ D:\TEMP\TestDB ] set PATH=.;D:\SW\Java\bin;D:\SW\DBF40S2\Scripts

[ D:\TEMP\TestDB ] DB2XHTML Pokus.XML

[ D:\TEMP\TestDB ] java.exe -Xmx100M -cp D:\SW\DBF40S2\SW\Saxon;D:\SW\DBF40S2\SW\Saxon\resolver.jar;D:\SW\DBF40S2\SW\Saxon\saxon.jar;D:\SW\DBF40S2\SW\Saxon\xercesImpl.jar;D:\SW\DBF40S2\SW\Saxon\xmlParserAPIs.jar;D:\SW\DBF40S2\SW\Saxon\saxon-jdom.jar;D:\SW\DBF40S2\SW\Saxon\saxon-xml-apis.jar;D:\SW\DBF40S2\SW\Saxon\saxon643.jar; -Dorg.apache.xerces.xni.parser.XMLParserConfiguration=org.apache.xerces.parsers.XIncludeParserConfiguration -Djavax.xml.parsers.DocumentBuilderFactory=org.apache.xerces.jaxp.DocumentBuilderFactoryImpl -Djavax.xml.parsers.SAXParserFactory=org.apache.xerces.jaxp.SAXParserFactoryImpl com.icl.saxon.StyleSheet -x com.sun.resolver.tools.ResolvingXMLReader -y com.sun.resolver.tools.ResolvingXMLReader -r com.sun.resolver.tools.CatalogResolver -o Pokus.XHTML Pokus.XML D:\SW\DBF40S2\XSL\html\docbook.xsl use.extensions=1
java.lang.ClassCastException
    at sun.awt.os2.OS2Toolkit$3.run(OS2Toolkit.java:311)
    at java.lang.Thread.run(Thread.java:536)

[ D:\TEMP\TestDB ]
```



# Screenshots [5]

## Conversion to Formatting Objects

```
Yet Another OS/2 Shell v1.8.1

[D:\TEMP\TestDB]DB2FO Pokus.XML

[D:\TEMP\TestDB]java.exe -Xmx100M -cp D:\SW\DBF40S2\SW\Saxon;D:\SW\DBF40S2\SW\Saxon\resolver.jar;D:\SW\DBF40S2\SW\Saxon\saxon.jar;D:\SW\DBF40S2\SW\Saxon\xercesImpl.jar;D:\SW\DBF40S2\SW\Saxon\xmlParserAPIs.jar;D:\SW\DBF40S2\SW\Saxon\saxon-jdom.jar;D:\SW\DBF40S2\SW\Saxon\saxon-xml-apis.jar;D:\SW\DBF40S2\SW\Saxon\saxon643.jar; -Dorg.apache.xerces.xni.parser.XMLParserConfiguration=org.apache.xerces.parsers.XIncludeParserConfiguration -Djavax.xml.parsers.DocumentBuilderFactory=org.apache.xerces.jaxp.DocumentBuilderFactoryImpl -Djavax.xml.parsers.SAXParserFactory=org.apache.xerces.jaxp.SAXParserFactoryImpl com.icl.saxon.StyleSheet -x com.sun.resolver.tools.ResolvingXMLReader -y com.sun.resolver.tools.ResolvingXMLReader -r com.sun.resolver.tools.CatalogResolver -o Pokus.FO Pokus.XML D:\SW\DBF40S2\XSL\fo\docbook.xsl use.extensions=1
Making portrait pages on USletter paper (8.5inx11in)

[D:\TEMP\TestDB]_
```

```
FC/2: Pokus.FO
View: D:\Temp\TestDB\Pokus.FO
CP852 59.70%
<?xml version="1.0" encoding="utf-8"?><fo:root xmlns:fo="http://www.w3.org/1999/XSL/Format" font-family="serif,Symbol,Z">
V tomto -žl|ínku bych cht-íl v|íem p|ů|špadn|žm z|íjemc|»m stru-žn-ř p|ůedstavit komer-žn|š distribuci OpenOffice 1.1.1»
zam-ř|žm na vlastnosti a probl-emy specifick|e pro tuto distribuci pro OS/2, nebo-ř p|ůedpokl|íd|ím, řže ka-žd|emu je»
v|íeobecn-ř zn|ím|ž. Po p|ůe-žten|š -žl|ínku byste m-řli b|žt schopni ud-řlat si obr-řzek o sou-řasn|e situaci OpenOffi»
se, zda se po|ů|šen|š OpenOffice vyplat|š anebo ne.
</fo:block><fo:block><fo:block id="d0e31"><fo:block><fo:block keep-together.within-column="always" margin-le»
Hned po|ů|šen|š softwaru p|ůedstavuje zna-žn|ž rozd|sl oproti ostatn|šm platform|ím, na kter|žch se OpenOffice b-ř|žn-»
Linuxu. Za OS/2 port se toti-ž mus|š zaplatit firm-ř <fo:basic-link external-destination="url(http://www.innotek.de)">I»
Software si ale nekoup|šte p|ů|šmo od InnoTeku, n|žbr-ž od n-řjak|eho resellera. V m|em p|ů|špad-ř to byla firma <fo:ba»
</fo:block><fo:block space-before.optimum="1em" space-before.minimum="0.8em" space-before.maximum="1.2em">
P|ůi pohledu do nab|šdky blue.pointu zjist|šte, řže si OpenOffice m-řžete objednat ve dvou proveden|sch: krabicov|em a»
stoj|š t|em-ř|ž 1700 K-ž, digit|íln|š verze stoj|š n-řco m|řlo p|řes 1300 K-ž. Nejprve jsem objednal verzi krabicovou, »
n-řjak|e instala-žn|š m|edium pro p|ů|špad hav-řrie nebo nedostupnosti Internetu. O-žek-řval jsem tak|e n-řjakou (z|řej»
jsem ale byl z|řejm-ř jedin|ž z|řikazn|šk, kter|ž cht-íl od holandsk|eho Mensysu n-řco do -řR p|řepravit, pořžadovala fi»
pořitovn|e. To jsem odm|řtl a p|řeobjednal na digit|íln|š verzi. T|šm se rozum|š zp-řsob prodeje, kdy z|řikazn|šk dostan»
str-řnky, ze kter|žch si m-řžete instalaci st|řhnout. P|ůi rychlosti a kvalit-ř nař|š univerzitn|š s|řt-ř ide-řln|š, b-ř»
nev-řhal vydat celkem 2100 K-ž za c|ed|e-řkovou verzi.
</fo:block><fo:block space-before.optimum="1em" space-before.minimum="0.8em" space-before.maximum="1.2em">
De kore-řn-ř chyb-řl-řle jsem elektronicky obdržel p|ředfakturu. Tu jsem uhradil a po p-ř-ř t|řech dnech jsem obdržel »
```



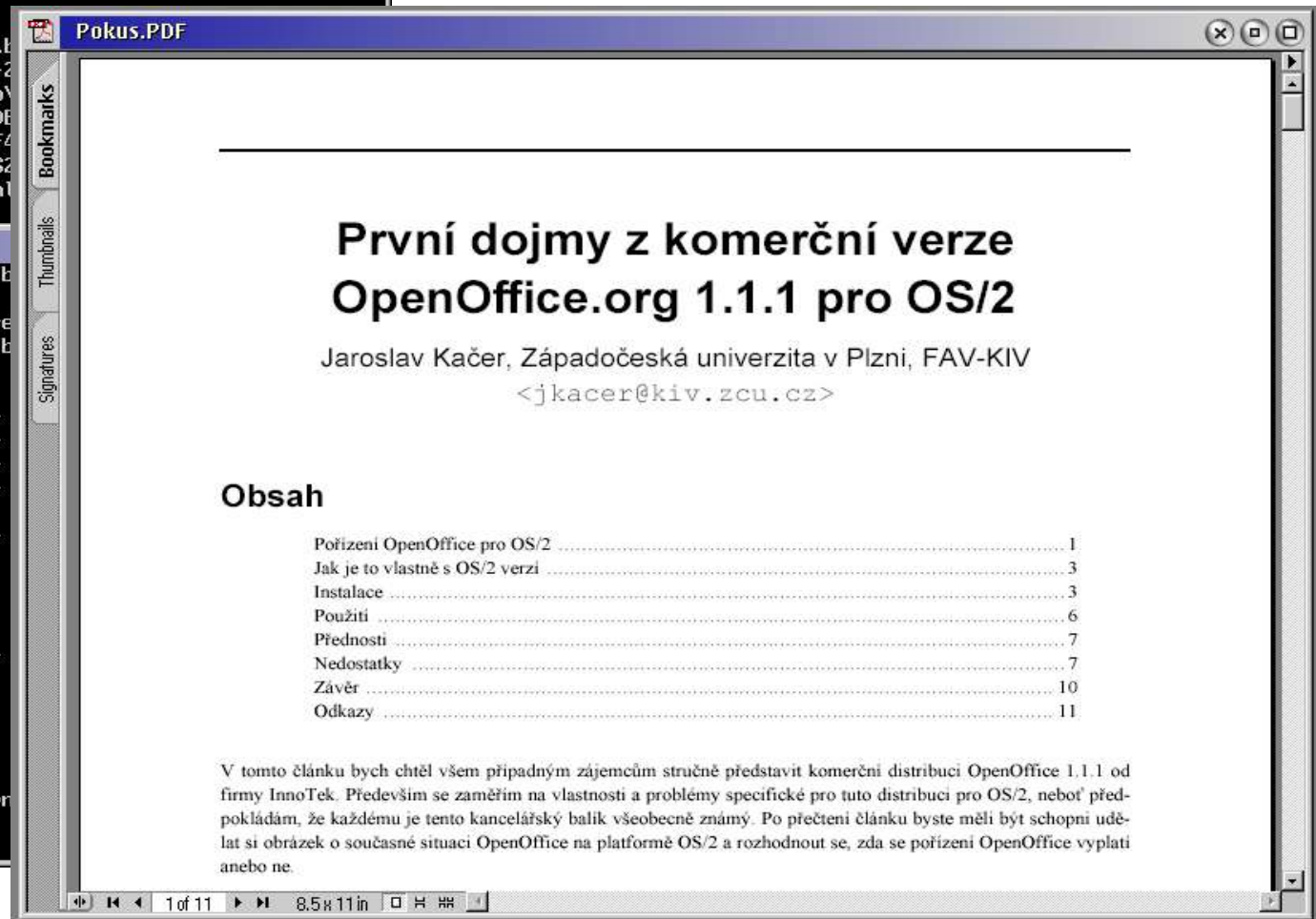
# Screenshots [6]

## Conversion to PDF

```
Yet Another OS/2 Shell v1.8.1
[D:\TEMP\TestDB]F02PDF Pokus.F0
```

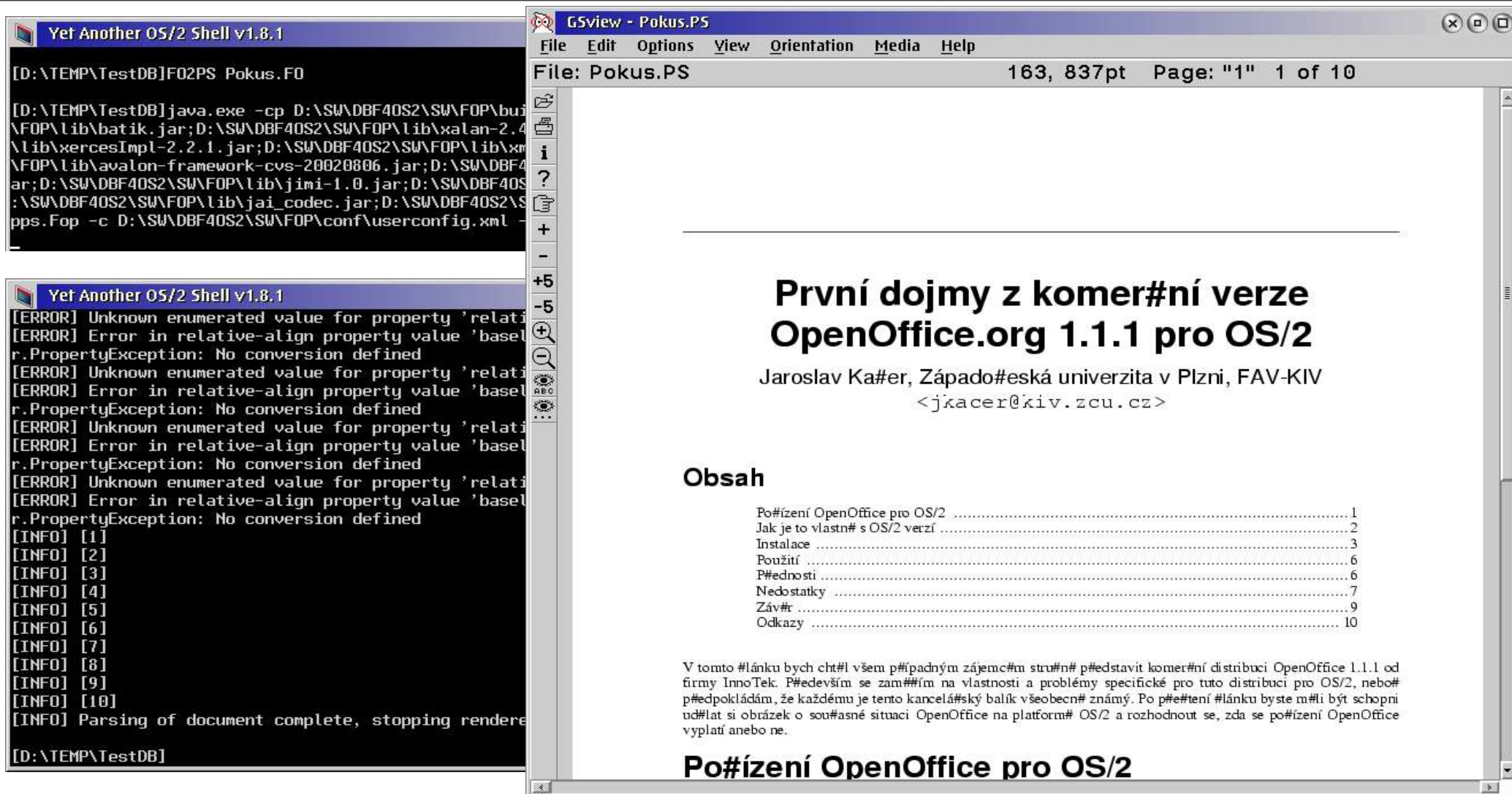
```
[D:\TEMP\TestDB]java.exe -cp D:\SW\DBF40S2\SW\FOP\lib\batik.jar;D:\SW\DBF40S2\SW\FOP\lib\xalan-2.2.1.jar;D:\SW\DBF40S2\SW\FOP\lib\xercesImpl-2.2.1.jar;D:\SW\DBF40S2\SW\FOP\lib\avalon-framework-cvs-20020806.jar;D:\SW\DBF40S2\SW\FOP\lib\jimi-1.0.jar;D:\SW\DBF40S2\SW\FOP\lib\jai_codec.jar;D:\SW\DBF40S2\SW\FOP\lib\jai.jar;D:\SW\DBF40S2\SW\FOP\conf\userconfig.xml
```

```
Yet Another OS/2 Shell v1.8.1
[ERROR] Error in relative-align property value 'b
r.PropertyException: No conversion defined
[ERROR] Unknown enumerated value for property 're
[ERROR] Error in relative-align property value 'b
r.PropertyException: No conversion defined
[INFO] [1]
[INFO] Using org.apache.xerces.parsers.SAXParser
[INFO] Using org.apache.xerces.parsers.SAXParser
[INFO] Using org.apache.xerces.parsers.SAXParser
[INFO] Using org.apache.xerces.parsers.SAXParser
[INFO] [2]
[INFO] Using org.apache.xerces.parsers.SAXParser
[INFO] [3]
[INFO] [4]
[INFO] [5]
[INFO] [6]
[INFO] Using org.apache.xerces.parsers.SAXParser
[INFO] [7]
[INFO] [8]
[INFO] [9]
[INFO] [10]
[INFO] [11]
[INFO] Parsing of document complete, stopping ren
[D:\TEMP\TestDB]
```



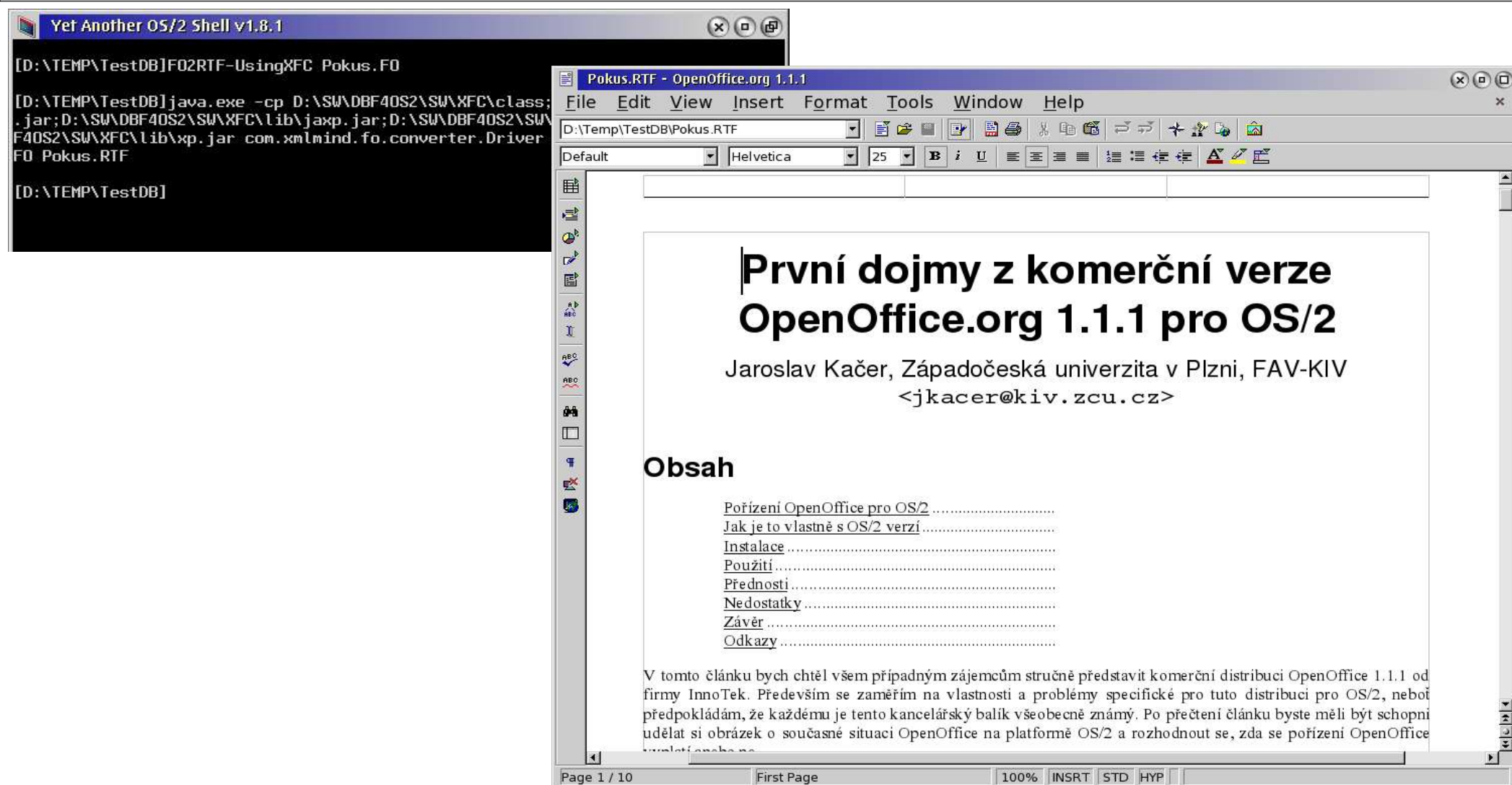
# Screenshots [7]

## Conversion to PostScript



# Screenshots [8]

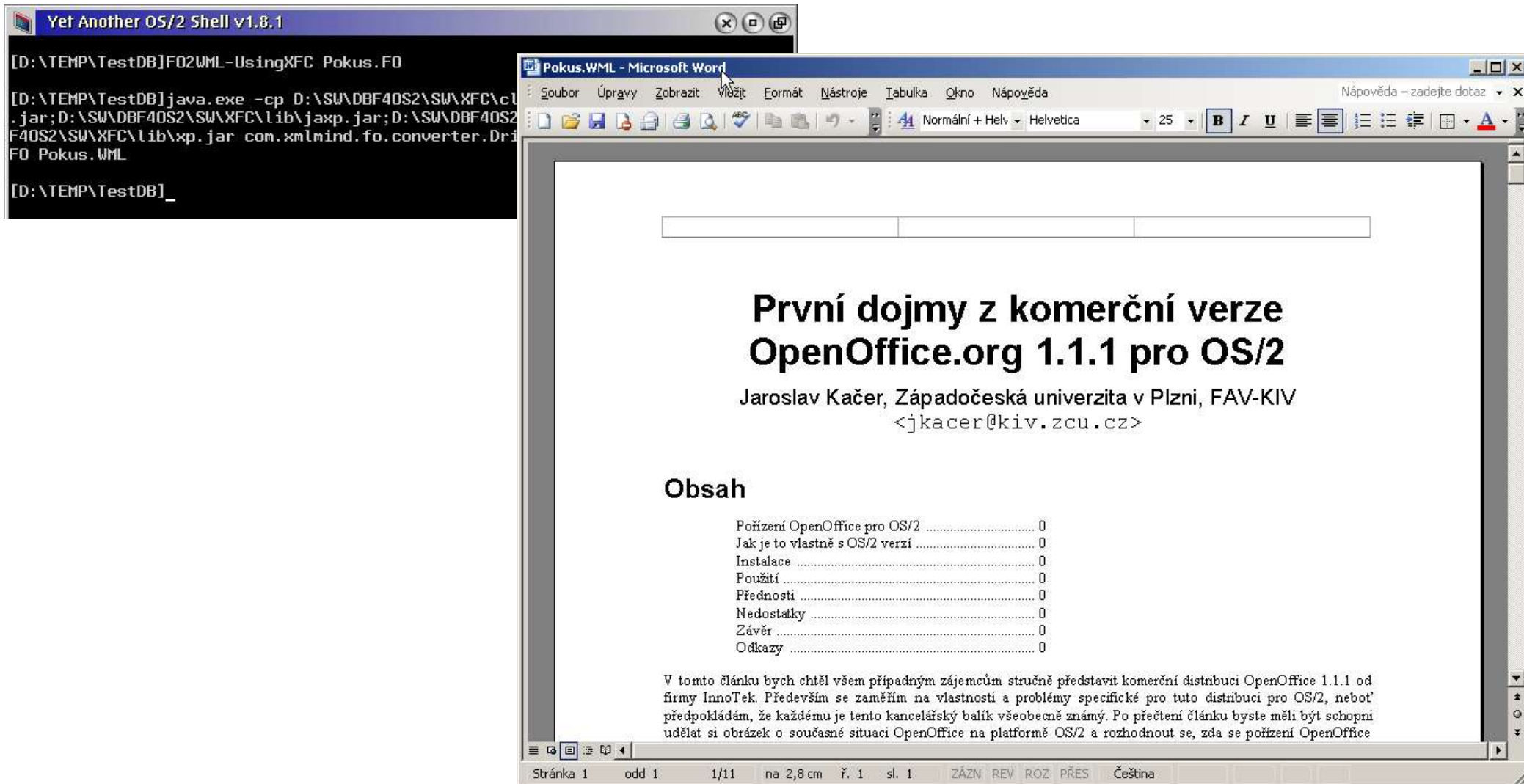
## Conversion to RTF





# Screenshots [9]

## Conversion to WML



# Screenshots [10]

## Conversion to HTML Help

**Yet Another OS/2 Shell v1.8.1**

```
[D:\TEMP\TestDB]DB2HTMLHelp Pokus.XML

[D:\TEMP\TestDB]java.exe -Xmx100M -cp D:\SW\DBF40S2\SW\Saxon;D:\SW\DBF40S2\SW\Saxon\resolver.jar;D:\SW\DBF40S2\SW\Saxon\saxon.jar;D:\SW\DBF40S2\SW\Saxon\resolver.jar;D:\SW\DBF40S2\SW\Saxon\XMLParserAPIs.jar;D:\SW\DBF40S2\SW\Saxon\saxon.jar;D:\SW\DBF40S2\SW\Saxon\saxon-xml-apis.jar;D:\SW\DBF40S2\SW\Saxon\saxon.jar; -Dorg.apache.xerces.xni.parser.XMLParserConfiguration=org.apache.xerces.parsers.XIncludeParserConfiguration -Djavax.xml.parsers.DocumentBuilderFactory=org.apache.xerces.jaxp.DocumentBuilderFactoryImpl -Djavax.xml.parsers.SAXParserFactory=org.apache.xerces.jaxp.SAXParserFactoryImpl com.icl.saxon.StyleSheet -x com.sun.resolver.tools.ResolvingXMLReader -y com.sun.resolver.tools.ResolvingXMLReader -r com.sun.resolver.tools.CatalogResolver Pokus.XML D:\SW\DBF40S2\XSL\htmlhelp\htmlhelp.xsl use.extensions=1

Writing ar01s02.html for section
Writing ar01s03.html for section
Writing ar01s04.html for section
Writing ar01s05.html for section
Writing ar01s06.html for section
Writing ar01s07.html for section
Writing ar01s08.html for section
Writing index.html for article
Writing htmlhelp.hhp
Error at xsl:copy-of on line 338 of file:/D:/SW/DBF40S2/XSL/html/chunker.xsl
Output character not available in this encoding (decimal 269)
Transformation failed: Run-time errors were reported
java.lang.ClassCastException
    at sun.awt.os2.OS2Toolkit$3.run(OS2Toolkit.java:311)
    at java.lang.Thread.run(Thread.java:536)

[D:\TEMP\TestDB]
```

**Total Commander 6.51 - NOT REGISTERED**

Soubory Označení Příkazy Síť Zobrazení Konfigurace Start

FTP Režim přenosu Binární (archívy, doc atd.) Odpojení Čekáme na server... 226 Transfer complete.

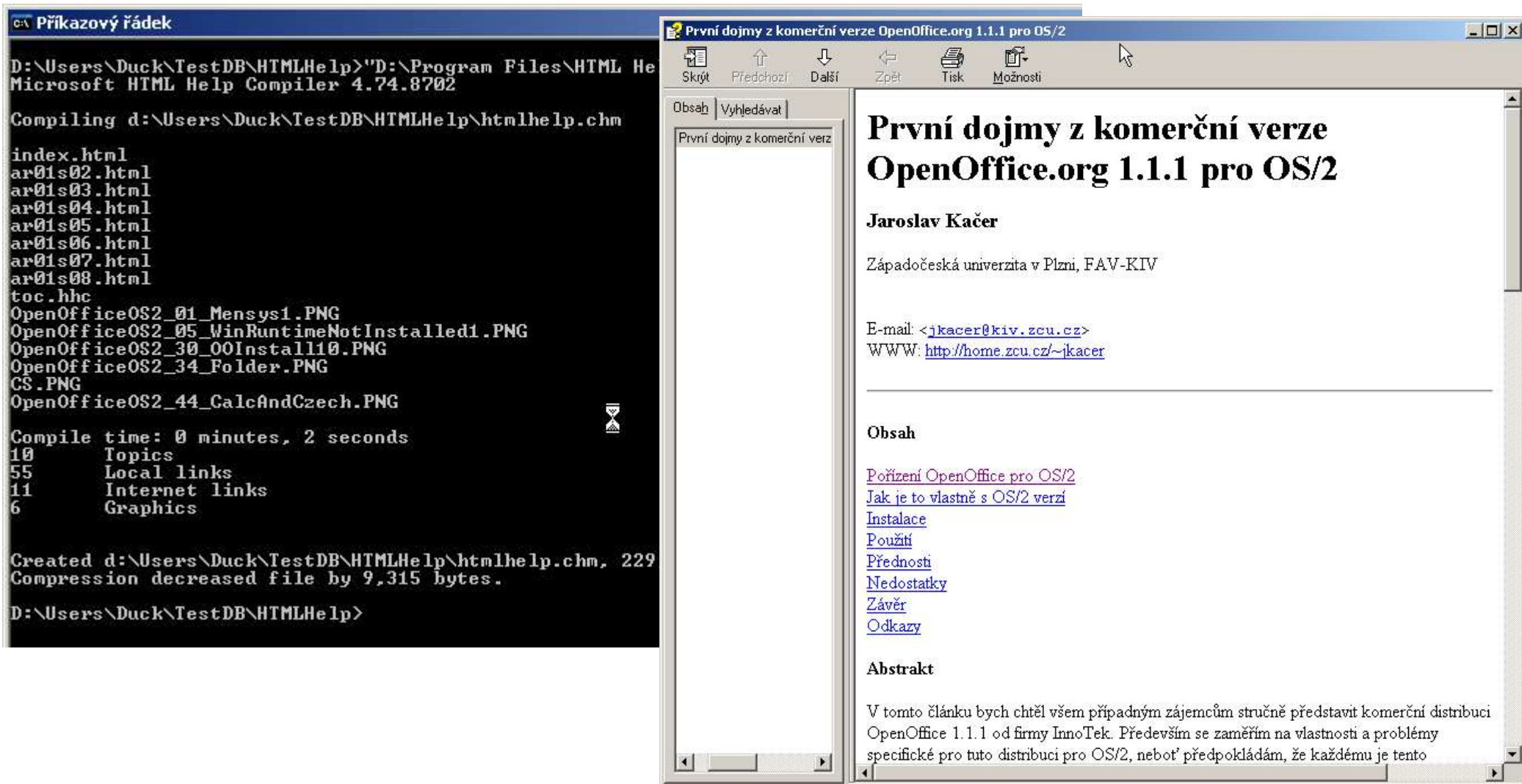
[-d-] [softwareandusers] 5 729 920 k z 8 193 116 k volných

d:\Users\Duck\TestDB\HTMLHelp\\*

Jméno	Přípona	Velikost	Datum	Atributy
<DIR>			13.11.2005 22:14	----
toc.hhc		1 488	21.09.2005 19:10	-a--
htmlhelp.hhp		565	21.09.2005 19:10	-a--
ar01s02.html		3 672	21.09.2005 19:10	-a--
ar01s03.html		5 050	21.09.2005 19:10	-a--
ar01s04.html		4 553	21.09.2005 19:10	-a--
ar01s05.html		3 601	21.09.2005 19:10	-a--
ar01s06.html		5 780	21.09.2005 19:10	-a--
ar01s07.html		1 965	21.09.2005 19:10	-a--
ar01s08.html		1 450	21.09.2005 19:10	-a--
index.html		5 173	21.09.2005 19:10	-a--
CS.PNG		19 353	21.09.2005 19:01	-a--
OpenOfficeOS2_01_Mensys1.PNG		101 131	21.09.2005 19:01	-a--
OpenOfficeOS2_05_WinRuntimeNotInstalled1.PNG		10 318	21.09.2005 19:01	-a--
OpenOfficeOS2_30_00Install10.PNG		23 508	21.09.2005 19:01	-a--
OpenOfficeOS2_34_Folder.PNG		13 482	21.09.2005 19:01	-a--
OpenOfficeOS2_44_CalcAndCzech.PNG		36 521	21.09.2005 19:01	-a--

# Screenshots [11]

## Conversion to HTML Help





# Useful Links – DocBook

- <http://nwalsh.com/docbook/index.html>
- <http://sourceforge.net/projects/docbook>
- <http://www.docbook.org>
- <http://www.docbook.cz>
- <http://www.kosek.cz>
- <http://www.kacer.biz/os2/docbook-framework>
- <http://www.oasis-open.org/docbook/>
- <http://www.sagehill.net/docbooksx1/>

# Useful Links – Tools

- Saxon: <http://saxon.sourceforge.net/>
- Saxon: <http://sourceforge.net/projects/saxon>
- Saxon: <http://www.saxonica.com/>
- FOP: <http://xmlgraphics.apache.org/fop/>
- XEP: <http://www.renderx.com/tools/xep.html>
- XFC: <http://www.xmlmind.com/foconverter/>
- XXE: <http://www.xmlmind.com/xmleditor/>
- jEdit: <http://www.jedit.org>

# Future Plans

- Working configuration for Central Europe users for all transformations
- Conversion to IPF, then to INF
  - We could then create native OS/2 documentation from DocBook
  - I can't write IPF and XSL yet :-(
- Some basic documentation
- After-install configurator

# By The Way...

Out Of Topic

- Do you know that Mustang (Java 6) source code is freely available?
- <https://mustang.dev.java.net/>
- Last Java support is of **great importance** for OS/2 & eCS due to lack of native software
- We should keep track with the latest releases, IBM will not certainly do that