

**Georg Heeg eK**  
**Baroper Str. 337**  
**44227 Dortmund**  
**Germany**

**Tel: +49-231-97599-0**  
**Fax: +49-231-97599-20**

**Georg Heeg eK**  
**Wallstraße 22**  
**06366 Köthen**  
**Germany**

**Tel: +49-3496-214 328**  
**Fax: +49-3496-214 712**



**Georg Heeg AG**  
**Seestraße 131**  
**8027 Zürich**  
**Switzerland**

**Tel: +41(848) 43 34 24**

**Email: [georg@heeg.de](mailto:georg@heeg.de)**  
**<http://www.heeg.de>**



Georg Heeg  
Objektorientierte Systeme

# FROM PRINT DESIGN TO WEB DESIGN

"USING SMALLTALK TO CONNECT BOTH WORLDS"

**GEORG HEEG EK 2009**

[HTTP://WWW.HEEG.DE](http://www.heeg.de)

**AUTHOR: ROLAND WAGENER**

[ROLAND@HEEG.DE](mailto:ROLAND@HEEG.DE)

# FROM PRINT DESIGN TO WEB DESIGN



Georg Heeg  
Objektorientierte Systeme

- 1. WHAT'S THE PROBLEM?**
- 2. SO, LETS BUILD A BRIDGE!**
- 3. NOW, LETS BUILD A PRODUCT!**
- 4. IT CURRENTLY LOOKS LIKE THIS**

## WHAT'S THE PROBLEM?



Georg Heeg  
Objektorientierte Systeme

**DESIGNERS ARE ARTISTS WITH  
A SPECIAL LANGUAGE**

**THEY ARE THINKING IN  
*colors*, fonts AND *perfect images***

**ASTHETICS AND GOOD TASTE  
ARE KEY TO THEIR SUCCESS**

**LOOK AT THE RESULTS:**

- **BROCHURES, FLYERS, POSTERS, MAGAZINES**

**WE LOVE TO LOOK AT THEM!**



**Georg Heeg**  
Objektorientierte Systeme

**BUT WE LOOK AT PAPER, IF WE ADORE THOSE  
RESULTS ... MOST OF THE TIME**

**ON THE WEB, WE FIND THOSE GEMS TRANSFORMED  
INTO PDF DOCUMENTS OR FLASH BOOKLETS**

**SO WHY IS IT THAT WE DON'T LOOK AT  
SOME BEAUTIFUL NORMAL  
HTML-BASED WEB PAGES?**

# WHAT TOOLS DO THEY USE?



Georg Heeg  
Objektorientierte Systeme

**PHOTOSHOP, ILLUSTRATOR, FREEHAND  
PAGEMAKER, QUARK-EXPRESS, INDESIGN**

- **THEY ARE ALL MAINLY TARGETING AT PRINT ORIENTED OUTPUT**
- **NONE OF THEM CAN EXPORT A WEB PAGE**
  - **OK, PHOTOSHOP CAN EXPORT AN ALBUM SITE, BUT THAT'S SOMETHING DIFFERENT ...**

# ADOBE SUPPORTS YOU ...



Georg Heeg  
Objektorientierte Systeme

publishing software | Adobe InDesign CS4

http://www.adobe.com/products/indesign/

## ADOBE INDESIGN CS4

DESIGN PREMIUM    WEB PREMIUM    PRODUCTION PREMIUM    MASTER COLLECTION


Find and fix production errors twice as fast  
Live Preflight

2 errors

SEE TOP TIME-SAVERS >

Buy **US\$699**  
Upgrade from **US\$199**  
Get the trial

WHICH SUITE EDITION IS IT IN?

 Get InDesign as part of **Design Premium**  
Deliver innovative ideas in print, web, and mobile design

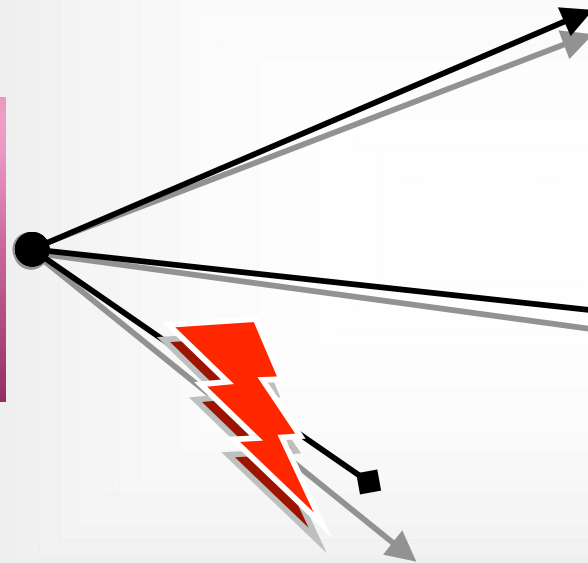
Design professional layouts for print and digital publishing

Adobe® InDesign® CS4 software breaks down the barriers between online and offline publishing. Create compelling print layouts, immersive content for playback in the Adobe Flash® Player runtime, and interactive PDF documents.

# DESIGNING FOR THE WEB?



Georg Heeg  
Objektorientierte Systeme





---

**DESIGNERS EXPORT GRAPHIC VERSIONS OF  
THEIR DOCUMENTS TO WEB PROGRAMMERS**

**THE IMAGES ARE DECOMPOSED AND  
ARRANGED ON A WEB PAGE**

**THE RESULTS DIFFER FROM THE ORIGINAL**

# DESIGNING FOR THE WEB III



Georg Heeg  
Objektorientierte Systeme

**HTML AND ITS LIMITATIONS ARE EXPOSED TO THE USER AND INFLUENCE THE DESIGN A LOT**

- CAN'T USE ALL FONTS
- SHOULDN'T USE ALL COLORS
- IMAGES SQUEEZED AND COMPRESSED
- POSITIONING CAN BE FUN ...
- LEARN CSS AND YOU WILL WIN

**A NIGHTMARE FOR A PROFESSIONAL DESIGNER**

# SO WHAT OPTIONS DO THEY HAVE?



Georg Heeg  
Objektorientierte Systeme

**INDESIGN<sup>®</sup> EXPORTS INTO TWO WEB COMPATIBLE FORMATS:  
PDF AND FLASH**

- THE WHOLE LAYOUT IS PRESERVED
- IT IS A ONE-CLICK OPERATION
- NO TUNING OF THE RESULT NECESSARY

**BUT END USERS ARE NOT ALWAYS FOND OF  
PDF AND FLASH**

# PDF/FLASH VERSUS HTML



Georg Heeg  
Objektorientierte Systeme

## PDF OR FLASH

- PROPRIETARY FILE FORMAT
- NEEDS A BROWSER PLUG-IN
  - PLUG-INS CONSUME ADDITIONAL PLATFORM PERFORMANCE
- LARGE FILES, ALL PAGES ARE FETCHED IN ONE GO
  - LONG DOWNLOAD TIMES
- MAY INCLUDE FONTS NOT AVAILABLE ON THE CLIENTS COMPUTER
- FLASH CANNOT EMBEDD FLASH

## HTML

- THE WEB FILE FORMAT
- ALL BROWSERS SUPPORT IT
  - THEY ARE OPTIMIZED FOR THIS
- EACH PAGE IS SEPARATE
  - SHORTER LOAD TIMES PER PAGE
- SIMPLE TO INTERFACE WITH OTHER WEB SITES AND WEB APPLICATIONS
- FLASH AND OTHER MEDIA CAN BE EMBEDDED

# SO, LETS BUILD A BRIDGE!



Georg Heeg  
Objektorientierte Systeme

## OBJECTIVES:

- DESIGNER CAN STAY WITH THE TOOLS HE KNOWS WELL
- NO NEED TO LEARN HTML OR CSS
- EXPORT OF DESIGNER DOCUMENTS TO HTML FORMAT

LIKE THIS!



# HOW DID VISUALWORKS HELP US?



Georg Heeg  
Objektorientierte Systeme

## BASED ON EXPORTS OF INDESIGN CS4

- WE USED THE XML FRAMEWORKS, AND BUILD DOMAIN OBJECTS FOR EACH INDESIGN-PAGE
- VARIOUS IMAGE OPERATIONS ARE DONE USING AN EXTERNAL LIBRARY TO CREATE PNG FILES
- WITH **seaBreeze** PROVIDING A COMPLETE HTML OBJECT MODEL, WE WERE ABLE TO BUILD A SEABREEZE PAGE FOR EACH INDESIGN PAGE
- THE FIRST PROTOTYPE WAS SHOWN TO A CUSTOMER AFTER ABOUT TWO WEEKS

## **WE STARTED USING INKSCAPE, AN SVG BASED VECTOR GRAPHICS APPLICATION**

- CALLED FROM THE COMMAND LINE
- AVAILABLE ON ALL PLATFORMS (WIN, MAC, LINUX)
- INKSCAPE CONVERTS SVG INTO PNG FILES
- <http://www.inkscape.org/>

# IMAGE PROCESSING II



Georg Heeg  
Objektorientierte Systeme

## **THIS APPROACH WAS VERY EXPENSIVE**

- **STARTING UP INKSCAPE 100 TO 1000 TIMES FOR A CONVERSION TOOK TOO LONG**
- **THE COMMAND LINE CALL DID NOT ALLOW US TO RE-USE A RUNNING INKSCAPE**

**AND INKSCAPE 0.46 CREATED WRONG IMAGES IN CERTAIN COMPLEX TRANSPARENCY SITUATIONS**



# IMAGE PROCESSING III



Georg Heeg  
Objektorientierte Systeme

## AN ALTERNATIVE WAS BATIK, A JAVA SVG TOOLKIT

- WE USED JNI PORT BY CHRIS UPPALL AND JOACHIM GEIDEL TO CALL IT FROM VISUALWORKS
- THE PERFORMANCE IMPROVED DRAMATICALLY
  - JAVA STARTS UP JUST ONCE,
  - SUBSEQUENT CALLS ARE JUST VERY FAST
- ALSO AVAILABLE ON ALL PLATFORMS
- <http://xmlgraphics.apache.org/batik/>

## TO HAVE OR NOT TO HAVE



Georg Heeg  
Objektorientierte Systeme

A DESIGNER USES FONTS TO ATTRACT ATTENTION

FONTS ARE KEY TO HIS WORK

HTML DOES NOT ALLOW TO MAKE USE OF FONTS

RELIABLY

- IF A FONT IS MISSING ON THE CLIENT MACHINE, THE TEXT WILL BE DISPLAYED A DEFAULT ONE, LIKE Times, Courier or Helvetica

HOW CAN WE HELP?

# DISPLAY OF TEXT



Georg Heeg  
Objektorientierte Systeme

## EXPORT TEXT AS VECTOR PATHS

- THIS WAY, THE FONT IS USED ON THE DESIGNERS COMPUTER
- THE CLIENT DOESN'T KNOW ABOUT THE FONT AT ALL

**HOWEVER, TEXT EXPORTED THIS WAY WILL  
BECOME A PNG IMAGE IN THE WEB**

- WE ARE ABLE TO ATTACH THE ORIGINAL TEXT TO THE PAGE, BUT IT IS NOT THE SAME
- THE USER HAS THE CHOICE HERE:
  - **CONTENT OR DESIGN**

# THE PROTOTYPE



Georg Heeg  
Objektorientierte Systeme

**A WEB APPLICATION WRITTEN IN SEABREEZE**

**OUR IDEA WAS TO DEPLOY THE CONVERTER AS A  
WEB BASED SERVICE**

- PAY-PER-CONVERSION**
- PAY-PER-CONVERTED PAGE**
- PAY-PER PROJECT**

**BUT USERS WANTED A 'REAL' APPLICATION, OR  
EVEN AN INDESIGN PLUG-IN**

# NOW, LETS BUILD A PRODUCT



Georg Heeg  
Objektorientierte Systeme

**FROM AN ENGINEERING POINT OF VIEW**

*'We are finished, we can do it!'*

**FROM A CUSTOMER POINT OF VIEW, THE SOLUTION OF THE CONVERTER AS A WEB SERVICE WAS NOT ACCEPTABLE!**

- NO PLATFORM INTEGRATION
- NO INTEGRATION INTO INDESIGN
- NO INTERNATIONALIZATION

**A STANDALONE MACOSX APPLICATION IS THE NEXT GOAL**

- DESIGNERS LOVE THE MAC
- AND THE SIMPLICITY OF USAGE

# AND SO, WE ARE IN THE PROCESS OF



Georg Heeg  
Objektorientierte Systeme

## PREPARING A MACOSX APPLICATION

- INTERFACE TO THE APPLICATION MENU
- SUPPORT THE PLATFORM HELP SYSTEM
- SUPPORT DRAG&DROP OF FILES
- OPEN THE BROWSER ON THE RESULTING HTML PAGES
- INVENTING ICONS AND HERALD SCREENS
- WRITING MARKETING MATERIAL
- FIND A PRICING MODEL
- ...

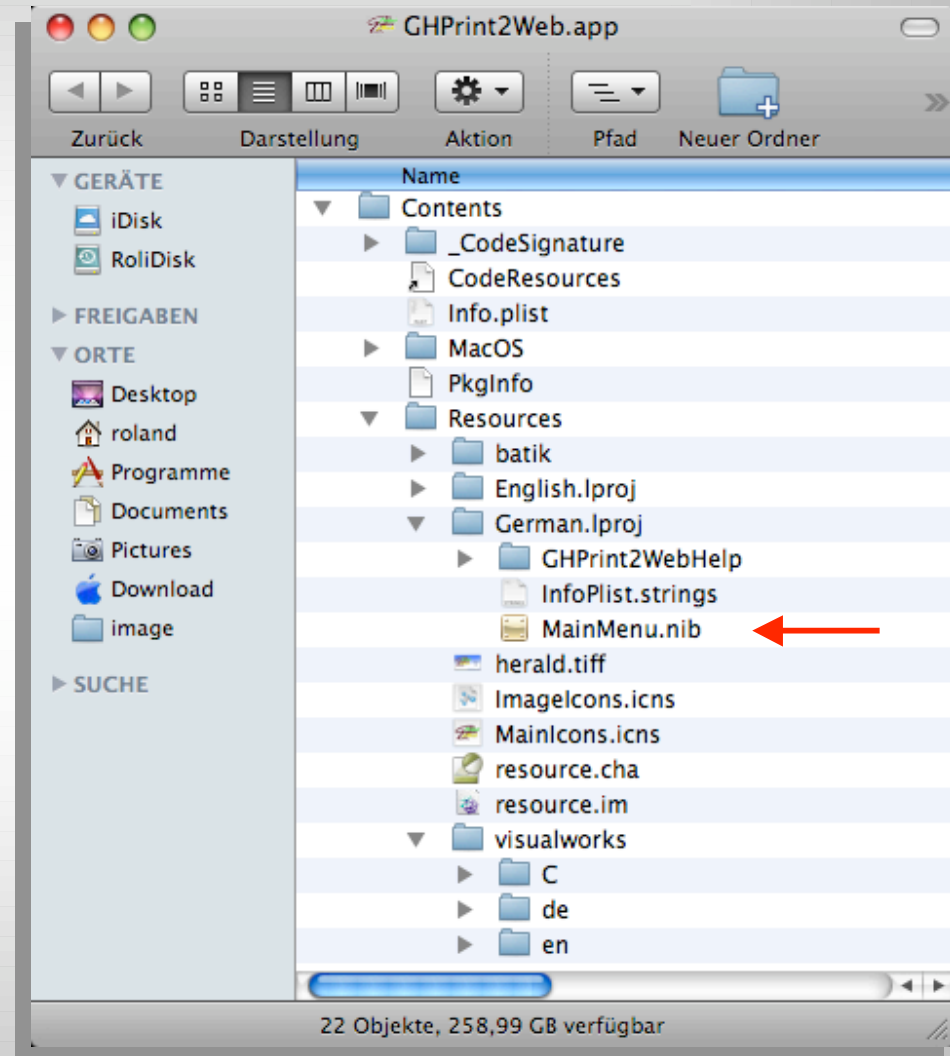
# INTERFACE TO THE MAC-MENU



Georg Heeg  
Objektorientierte Systeme

**USE THE INTERFACEBUILDER  
AND MODIFY THE ORIGINAL  
MainMenu.nib INSIDE THE  
visual.app/Contents/Resources  
FOLDER, AND PUT  
TRANSLATED VERSIONS INTO  
THE LANGUAGE PROJECT  
FOLDERS**

**USE UNIQUE MENUITEM-IDS  
BUT DO NOT CHANGE THE  
EXISTING ONES!**



# TWO FACETS OF INTERNATIONALIZATION



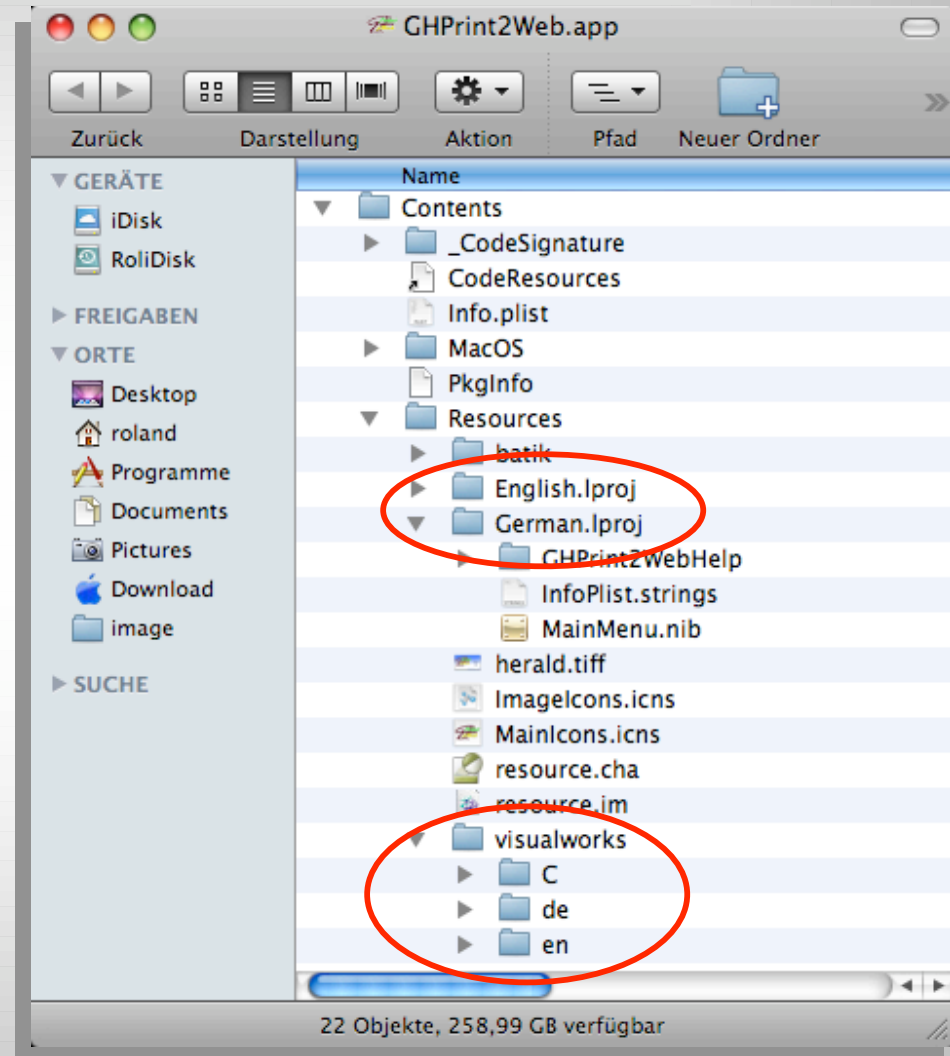
Georg Heeg  
Objektorientierte Systeme

## THE MAC HAS ONE FOR RESOURCES

- APPLE-HELP IS ORGANIZED THIS WAY

## AND VISUALWORKS HAS ANOTHER ONE FOR MessageCatalogs

- UIS BASED ON UserMessages CAN USE THEM, THE INTERFACE TO THE LOCATION INSIDE THE .APP-FOLDER IS VIA MANUAL MODIFICATIONS





# IT CURRENTLY LOOKS LIKE THIS



Georg Heeg  
Objektorientierte Systeme

The screenshot displays a Mac OS X desktop environment. The main application window, titled "GHPrint2Web - project", features a yellow header with the "Print (2) web" logo. Below the header, there are tabs for "Basic", "Advanced", and "Page renaming". The "Basic" tab is active, showing a "Name" field with "TestForESUG" and a "Start conversion" button. Under "file paths", there are two rows for ".xfl file" and ".idml file", both with the path "/Dokumente/VisualWorks/vw7.6mar8.1/image/D\_MM\_BW" and "Choose file..." buttons. A progress bar at the bottom of the window shows 52% completion.

In the background, a file browser window shows a folder named "image" with a preview of the "Print (2) web" logo. The desktop has icons for "vw7.6" and "vw7.7beta".

An "About GHPrint2Web" dialog box is open in the foreground, featuring the "Print (2) web" logo and the text "Convert from InDesign® to HTML" and "© Georg Heeg e.K. 2009".

The file browser's sidebar shows a list of files and folders:

- GHFractalExplorer.0.99.pst
- GHPrint2Web.76.zip
- GHPrint2Web.app
- GHPrint2Web.app 2.zip
- GHPrint2Web.app.zip
- http-temp-files
- idml
- Kraft der Natur
- mandel
- PDFPrinter
- resource.cha
- seaside-temp-files
- visual.cha
- visual.im
- visual.im.zip
- visual.sou
- xfl

The file browser's main pane shows a preview of the "Print (2) web" logo and the following metadata:

Name	GHPrint2Web.app
Kind	Application
Size	66.4 MB on disk
Created	19/08/2009 14:26
Modified	19/08/2009 14:26
Last opened	Today at 16:59
Version	GHPrint2Web Alpha

A "More info..." button is located below the metadata.

# WE ARE STILL NOT FINISHED



Georg Heeg  
Objektorientierte Systeme

**BUT WE HAVE HIGH HOPES!**

**THE PREPARATION OF THE PRODUCT TOOK LONGER  
THAN THE SOLUTION OF THE PROBLEM**

**AND THE NAME WILL BE:           GHPrint2Web**



# DESIGNING FOR THE WEB!



Georg Heeg  
Objektorientierte Systeme

