

Design Documentation

Learn how to export designs to HTML and PDF

The ALDEC logo is positioned in the bottom right corner. It features the word "ALDEC" in a bold, blue, sans-serif font. The text is superimposed on a circular graphic that resembles a globe or a sphere, with a blue gradient and a white highlight on the right side. The background of the slide is white with a faint, repeating pattern of binary code (0s and 1s) and a header bar at the top containing hexadecimal-like characters (A3, 08, 93, F2, 2D, A3, 08, 93, E8, 2D, 93, F2, A3, 08, E8, 93, F2, 2D).

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- Exporting Designs
 - ◆ HTML
 - ◆ PDF
- Exporting Workspaces
 - ◆ HTML
 - ◆ PDF
- Printing Files, Designs, and Workspaces

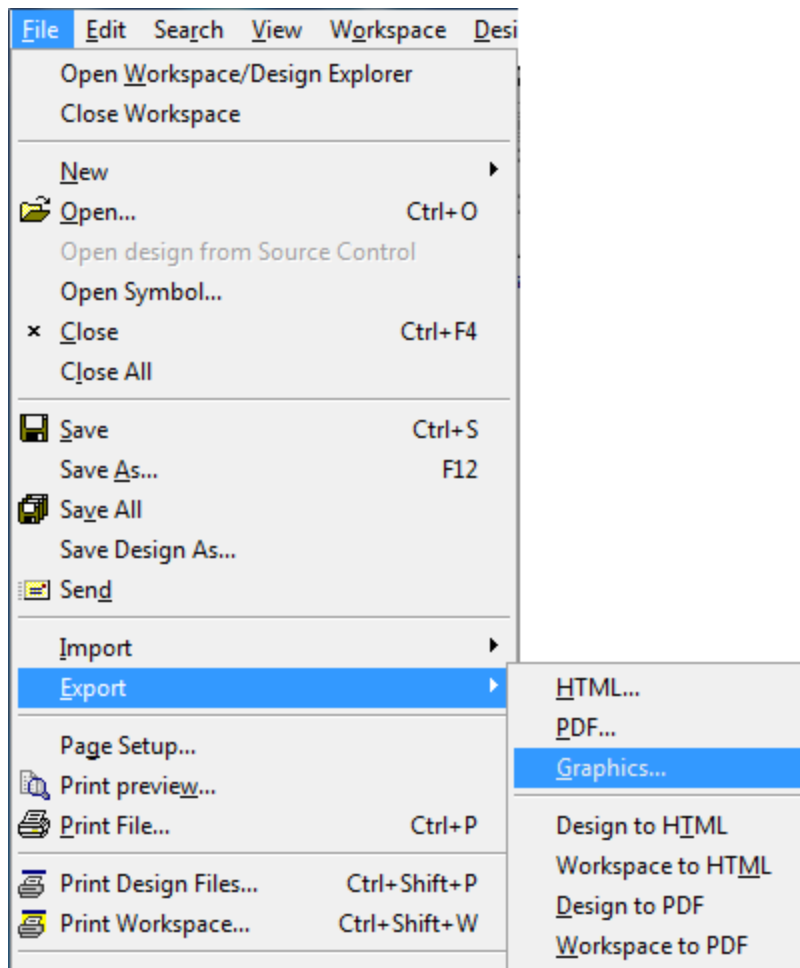
Overview

- Design documentation is often a time consuming and tedious task. Many engineers would rather spend their time and energy creating the design, than documenting every detail.
- Active-HDL provides the following functionality features that speeds-up and simplifies the process of design documentation:
 - ◆ Self documenting graphical design entry
 - ◆ Code2Graphics™ converters
 - ◆ Export to Graphics
 - ◆ Export to HTML
 - ◆ Export to PDF
 - ◆ Printing

Overview (cont.)

- Documentation features in the Active-HDL environment allows:
 - ♦ Automatic documentation generation
 - ♦ Sharing the documents on the Internet or Intranet
 - ♦ Creating a printable version of the documentation
 - ♦ Easy exchange of information about the designs within the company

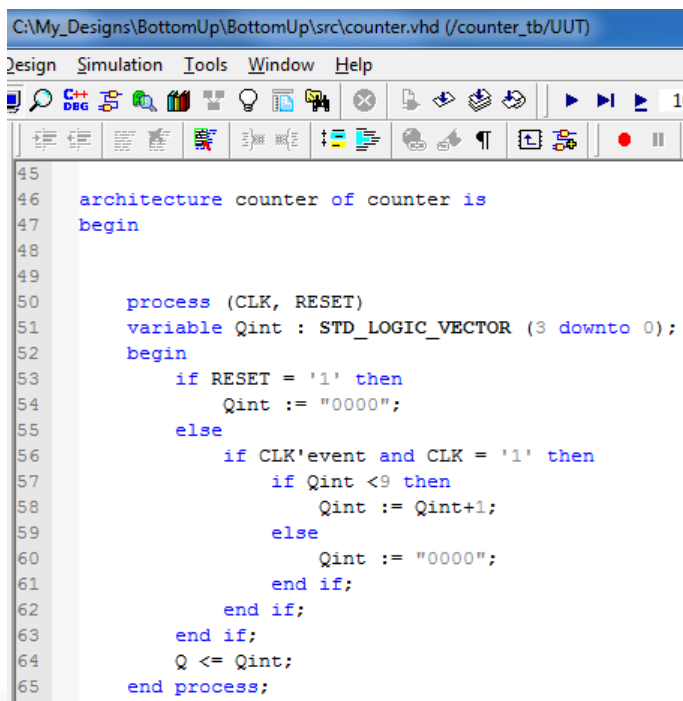
Exporting Documents



- Individual documents can be exported to HTML, PDF, or Graphics
- To export, use the **File | Export** menu option and select the option that best suits your needs.

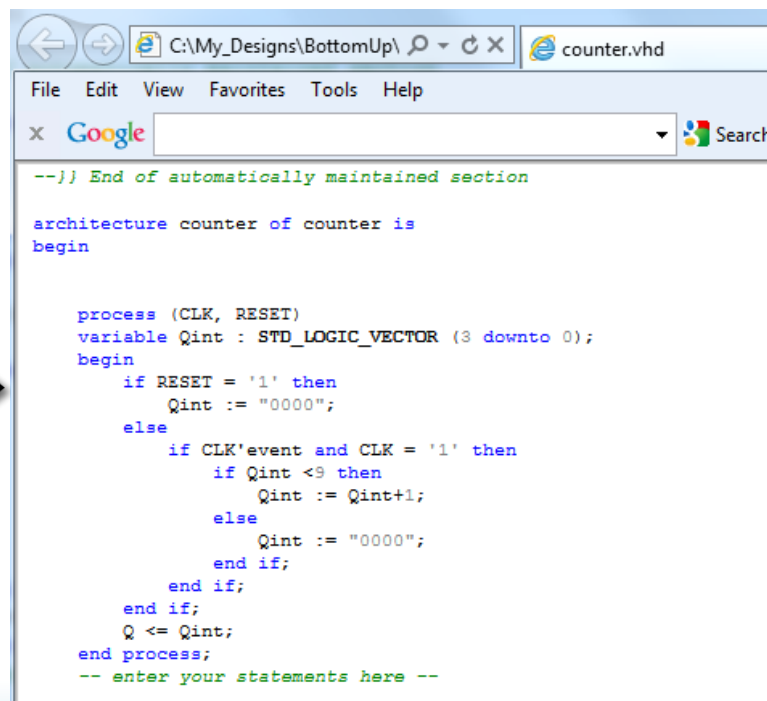
Export to HTML

- HDL Editor documents, Designs, and entire Workspaces can be exported to HTML and be opened in any web browser. The HTML document preserves the original formatting, font, and syntax highlighting.



```

45
46 architecture counter of counter is
47 begin
48
49     process (CLK, RESET)
50     variable Qint : STD_LOGIC_VECTOR (3 downto 0);
51     begin
52         if RESET = '1' then
53             Qint := "0000";
54         else
55             if CLK'event and CLK = '1' then
56                 if Qint < 9 then
57                     Qint := Qint+1;
58                 else
59                     Qint := "0000";
60                 end if;
61             end if;
62         end if;
63     end if;
64     Q <= Qint;
65 end process;
  
```

```

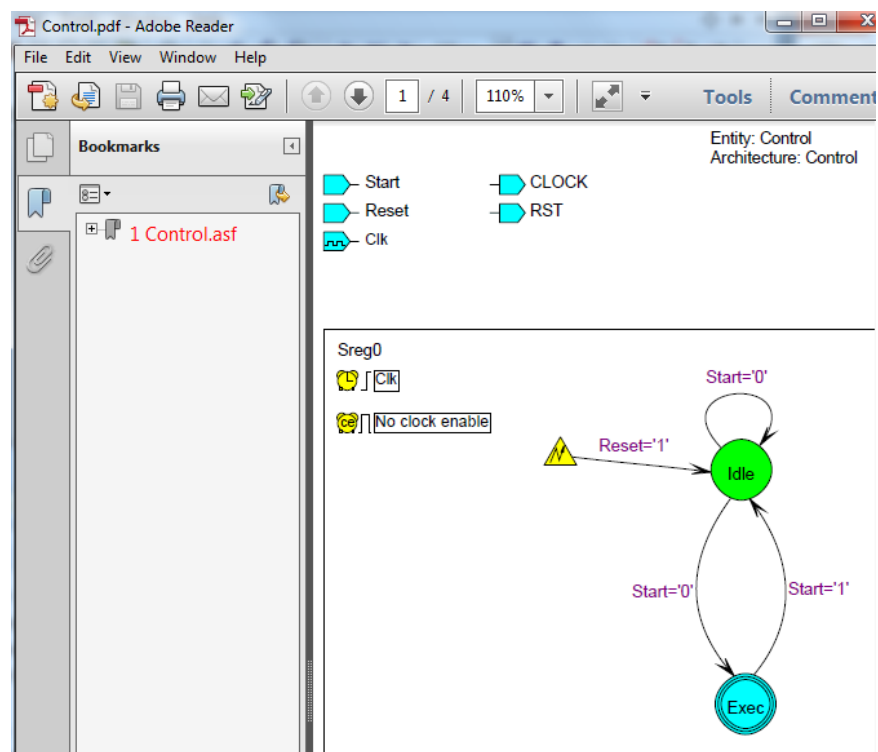
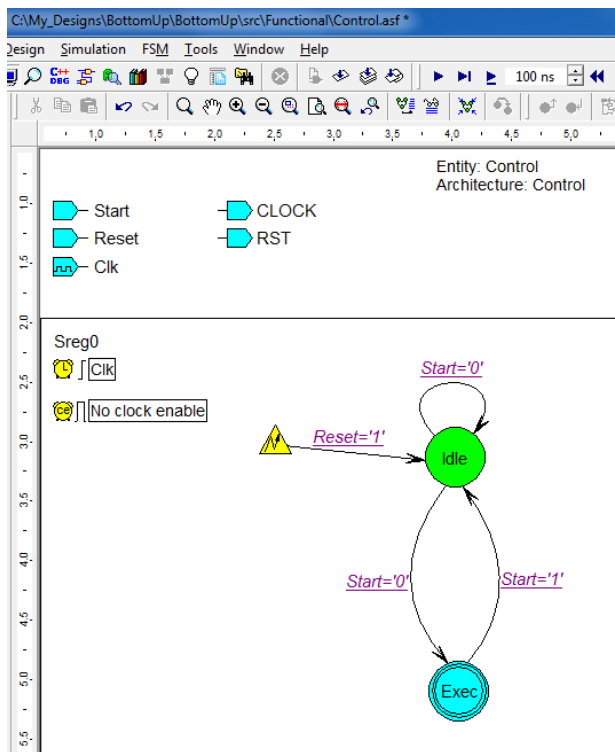
--)) End of automatically maintained section

architecture counter of counter is
begin

    process (CLK, RESET)
    variable Qint : STD_LOGIC_VECTOR (3 downto 0);
    begin
        if RESET = '1' then
            Qint := "0000";
        else
            if CLK'event and CLK = '1' then
                if Qint < 9 then
                    Qint := Qint+1;
                else
                    Qint := "0000";
                end if;
            end if;
        end if;
        Q <= Qint;
    end process;
    -- enter your statements here --
  
```

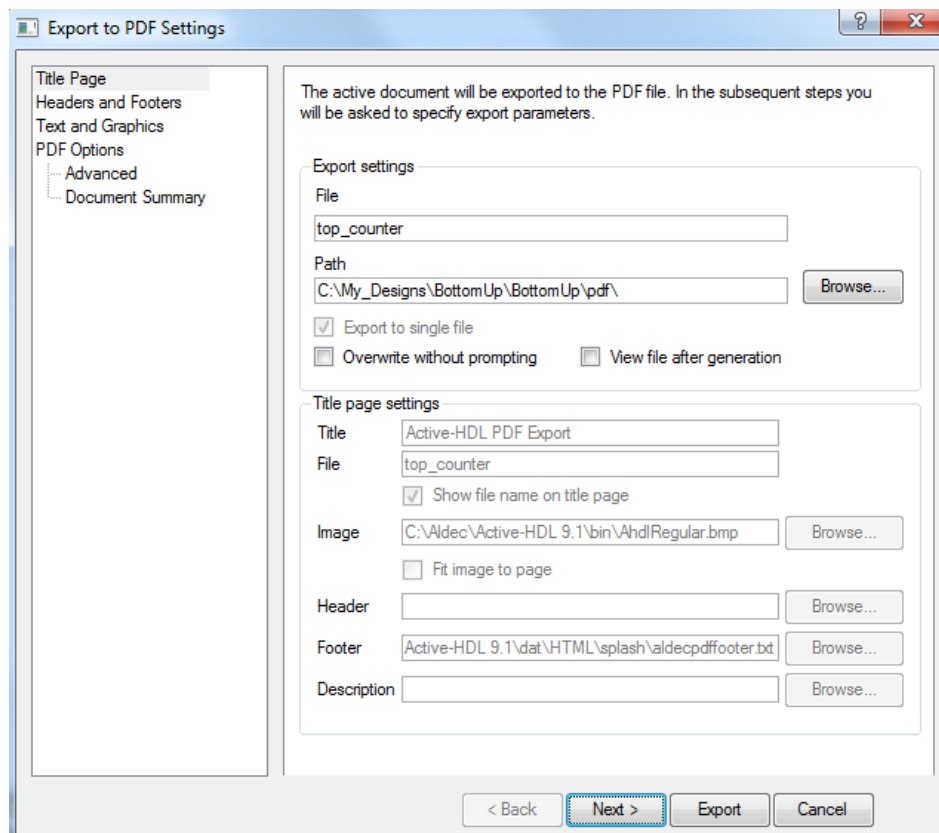
Export to PDF

- HDL Editor documents, Block Diagrams, State Diagrams, **Waveforms**, and **List window** contents can be exported to a Portable Document Format (PDF) file.



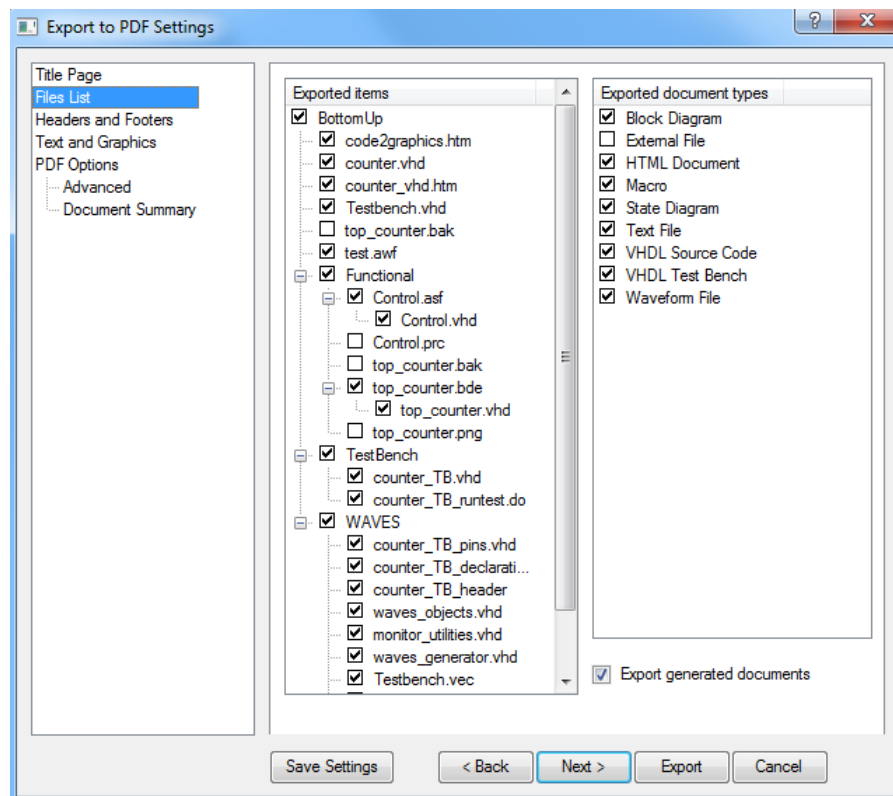
Export to PDF Settings

- When exporting documents, there is an export wizard that guides the user through the process.
- Under the Title Page, the user can specify:
- The PDF file name
- Path location of the PDF file
- Overwriting preferences
- Viewing options



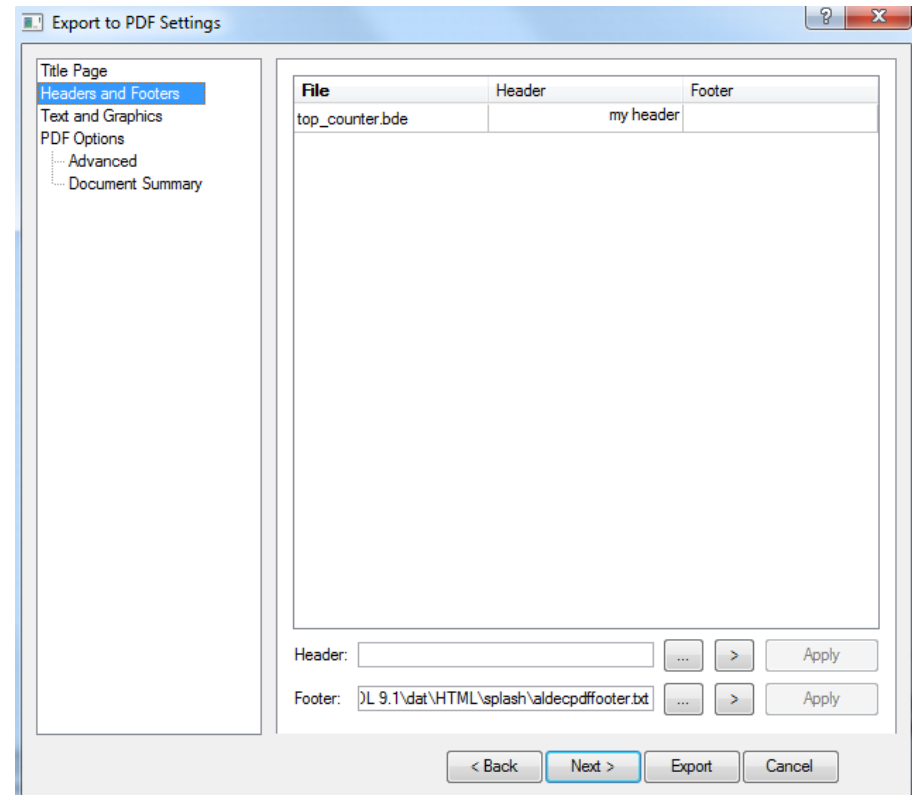
Export to PDF Settings

- Under the **Files List** option, the user can select which files to export.
- **Note:** This option is only available when Exporting a Design or Workspace



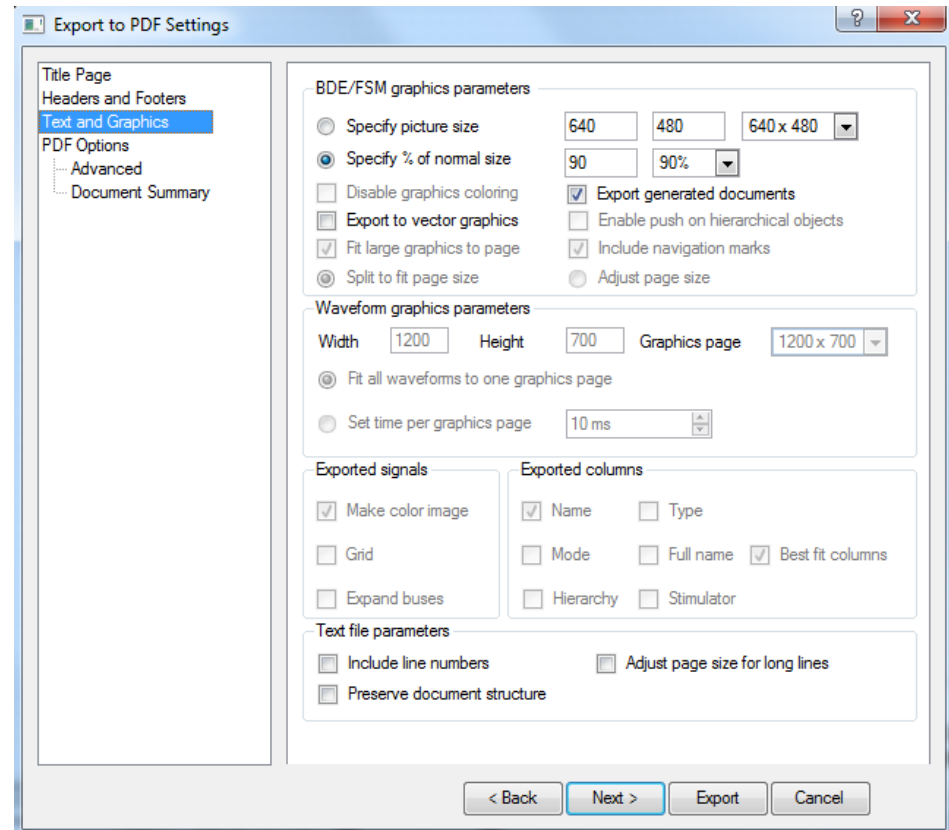
Export to PDF Settings (cont.)

- The user can specify a Header (project name, project team members, etc.) and/or Footer (company logo, copyright, etc.)
- By default, the footer is the Aldec copyright statement and a link to the Aldec website.



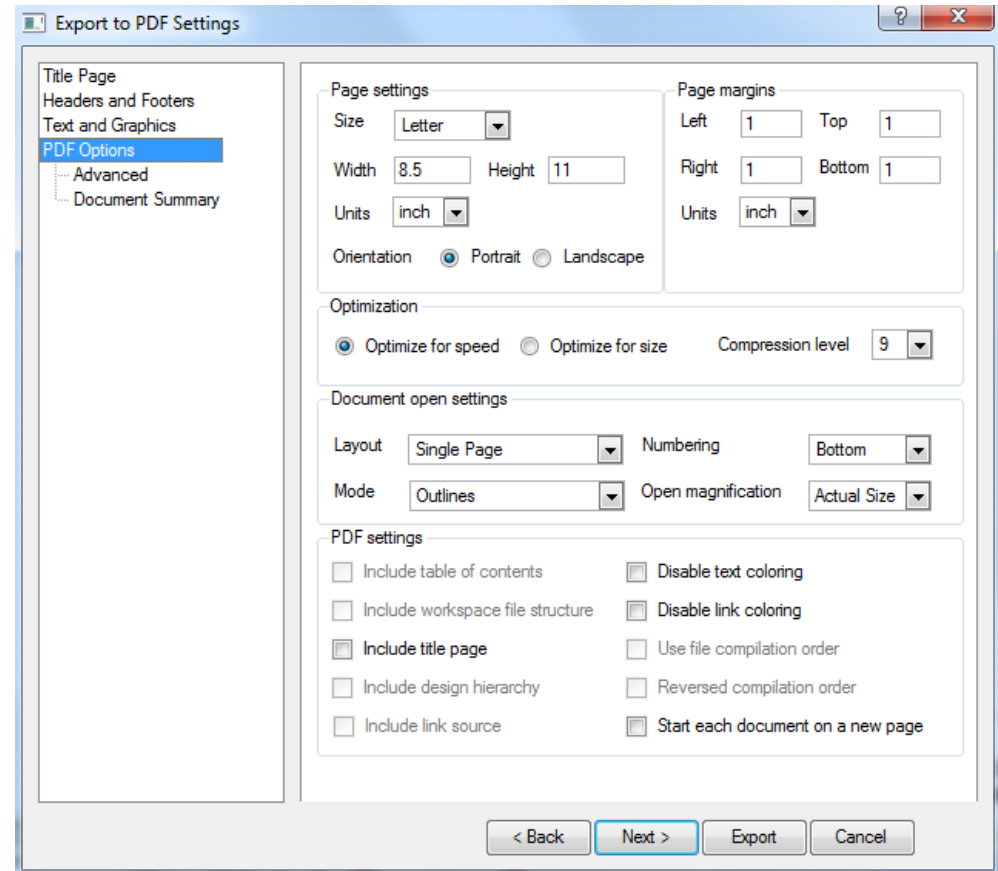
Export to PDF Settings (cont.)

- For exporting graphical design entry documents, the user can specify the graphics quality settings:
- User can specify:
- Picture size
- Percentage of normal size
- Disable graphic coloring



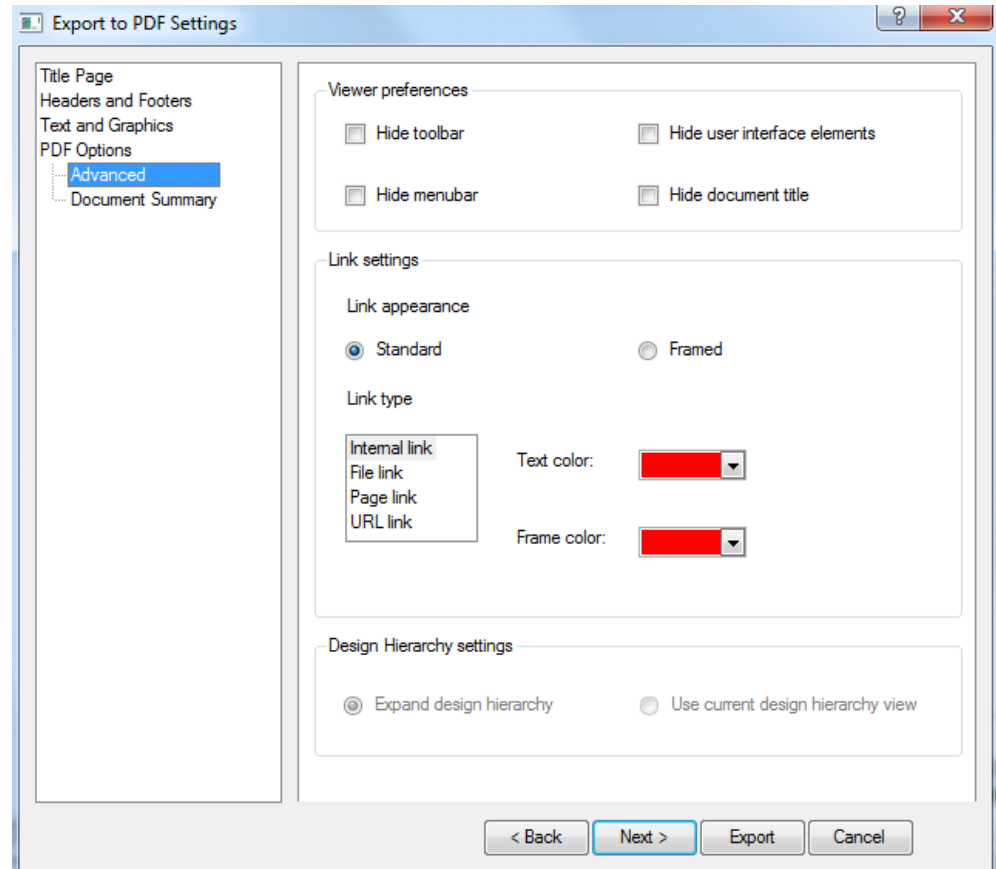
Export to PDF Settings (cont.)

- The export wizard allows the user to define:
- Page settings
- Page margins
- Optimizations
- Compression Level
- PDF Settings
 - ◆ Disable link coloring
 - ◆ Disable text coloring



Export to PDF Settings (cont.)

- Under advanced settings the user can specify:
- Viewer preferences
 - ◆ Hide toolbar
 - ◆ Hide menubar
- Link settings
 - ◆ Appearance
 - ◆ Type
 - ◆ Color
- Design Hierarchy settings



Export to PDF Settings (cont.)

- The final page of the export wizard allows the user to specify project information:
- Title
- Author
- Subject
- Keywords
- Application

Export to PDF Settings

Title Page
Headers and Footers
Text and Graphics
PDF Options
Advanced
Document Summary

Project information

Title: Active-HDL PDF Export

Author: Microsoft

Subject: Active-HDL PDF Export

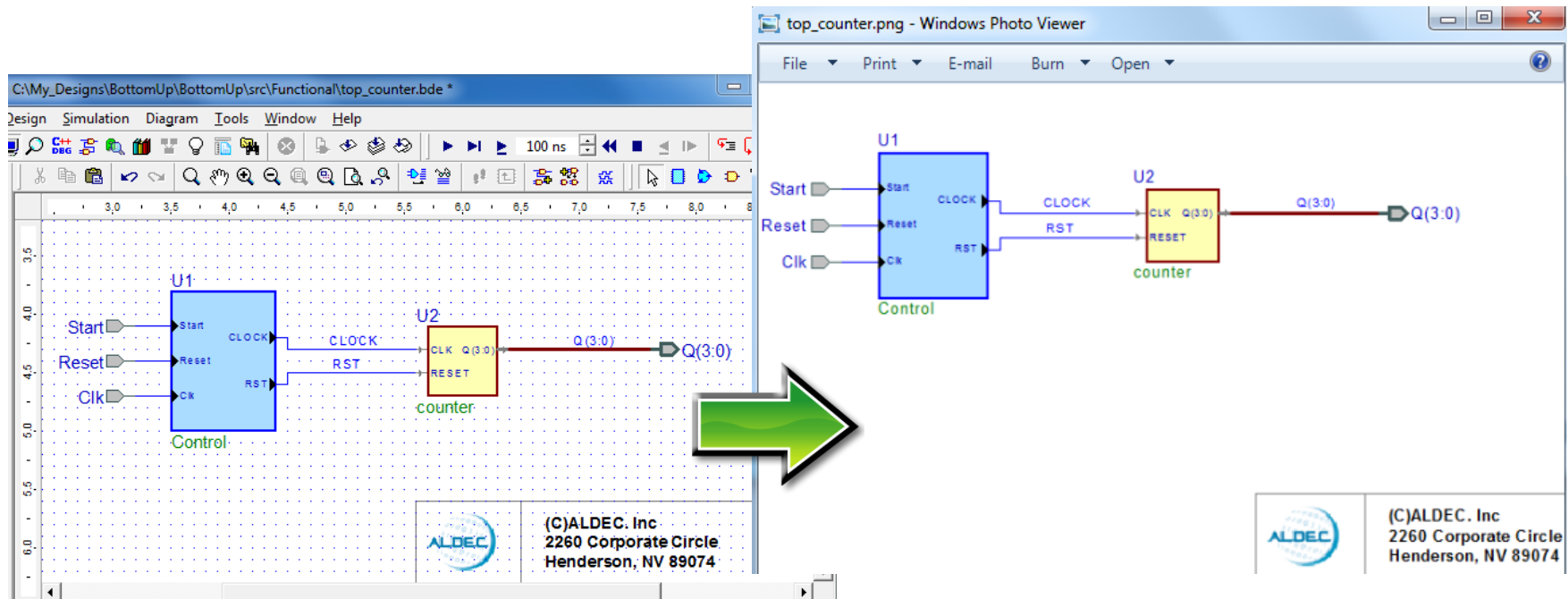
Keywords:

Application: Active-HDL Version 9.1 (Build 2353.4205)

< Back Next > Export Cancel

Export to Graphics

- Block Diagrams, State Diagrams, **Waveforms**, and **Advanced Dataflow** contents can be exported to a graphic file.



Export to Graphics Settings

- The export graphics wizard allows the user to specify:
- File name
- Path location
- Format
 - ◆ PNG
 - ◆ BMP
 - ◆ JPG
 - ◆ GIF
- Picture size
- Overwrite option

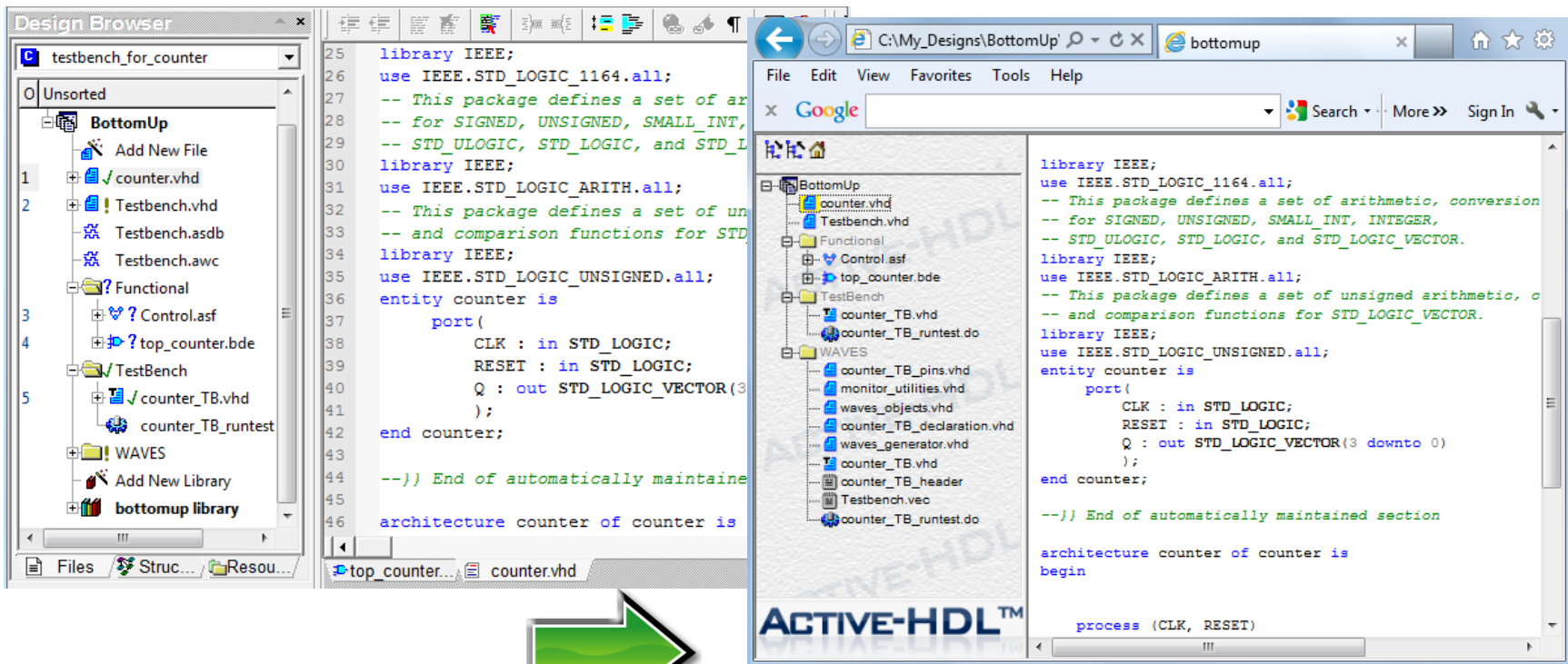
The screenshot shows the 'Export Block Diagram to Graphics' dialog box. It has a title bar with a question mark and a close button. The dialog is divided into several sections: 'File', 'Graphics', and 'Size'. In the 'File' section, the 'Name' field contains 'top_counter.png' and the 'Path' field contains 'C:\My_Designs\BottomUp\BottomUp\src\Functional\'. There is a 'Browse...' button next to the path field. In the 'Graphics' section, the 'Format' dropdown menu is set to 'png'. In the 'Size' section, there are three radio buttons: 'Specify picture size', 'Specify % of normal size' (which is selected), and 'Current size'. The 'Specify % of normal size' option has input fields for 'Width' (50) and 'Height' (50%), and a 'Custom' dropdown menu. Below these, there are two boxes: 'Current page' showing '2200x1700' and 'Produced picture' showing '1100x850'. At the bottom, there are two checkboxes: 'Export multi-page diagrams' and 'Overwrite without prompting', both of which are unchecked. Finally, there are 'OK' and 'Cancel' buttons at the bottom right.

Exporting Designs

- All Design files can be exported to HTML or PDF documents by selecting **Export Design to HTML** or **Export Design to PDF** under the **File | Export** menu.
- HTML documents are beneficial for sharing information on the local network or the internet.
- PDF documents are compact and eligible for preparing a printed version of the design.
- The generated HTML document resembles the Active-HDL environment so there is no need to have Active-HDL open in order to view or navigate through the files of the project.
- The user can customize the export to hide the HDL implementation and only show the graphical representation.

Export to HTML

- The design structure and environment in Active-HDL is resembled in the HTML document.



Export to HTML Settings

- Similar to the individual file exports, there is an export wizard to allow the user to set the parameters:
- Project name
- Folder to be exported
- Overwriting preferences
- Starting HTML page settings

Export to HTML (step 1 of 4)

The active design will be exported to the HTML project. Only files added to the design can be exported to HTML. In the subsequent steps you will be asked to select files and specify their export parameters.

Export settings

Project name
bottomup

Folder to export
C:\My_Designs\BottomUp\BottomUp\bottomup Browse...

☐ Overwrite without prompting

Starting HTML page settings

The selected document will be used as the main page of the HTML project.

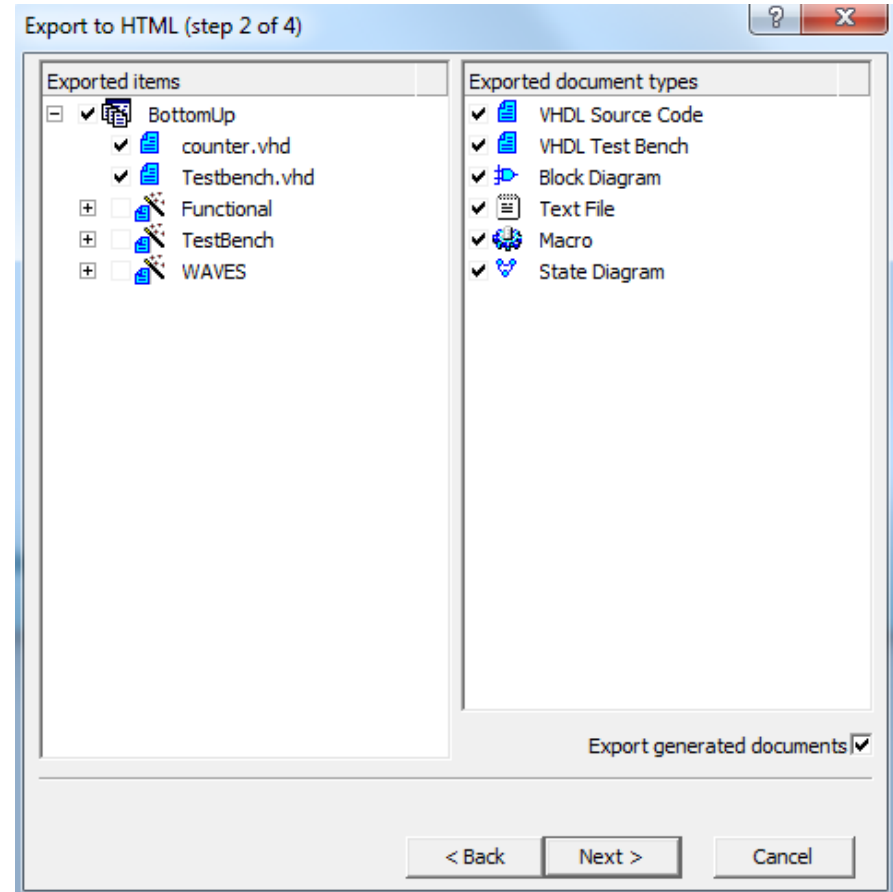
Select the type of the link
Make local copy Restore

Select the file or type the link to be displayed on the first page.
C:\Aldec\Active-HDL 9.1\dat\HTML\splash\info.htm Browse...

< Back Next > Cancel

Export to HTML Settings (cont.)

- The second window of the wizard allows the user to specify:
- Files to export
- Document types
- Option to select HDL files that were generated from the graphical entry documents



Export to HTML Settings (cont.)

- Step 3 of the export wizard allows the user to specify settings for the selected graphic files:
- BDE/FSM
- Text/Graphic format
 - ◆ PNG
 - ◆ JPG
 - ◆ GIF
 - ◆ BMP

Export to HTML (step 3 of 4)

BDE/FSM Graphics parameters

Width: 640 Height: 480 Custom

☐ Specify picture size

☒ Specify % of normal size 60 60%

Text and graphics options

Format: png

☐ Include line numbers

Waveform Graphics parameters

Width: 775 Height: 585 Graphics page: 775 x 585

☒ Fit all waveforms to one graphics page

☐ Set time per graphics page 10 ms

Exported signals

☒ Make color image

☐ Grid

☐ Expand buses

Exported columns

☒ Name ☐ Type

☐ Mode ☐ Full name ☒ Best fit columns

☐ Hierarchy ☐ Stimulator

< Back Next > Cancel

Export to HTML Settings (cont.)

- The final window of the export wizard allows the user to specify project information:
- Design name
- Company
- Email
- Description
- Comments

Export to HTML (step 4 of 4)

Project information

Workspace name: BottomUp

Design name: bottomup

Author: Microsoft

Company: Microsoft

E-mail:

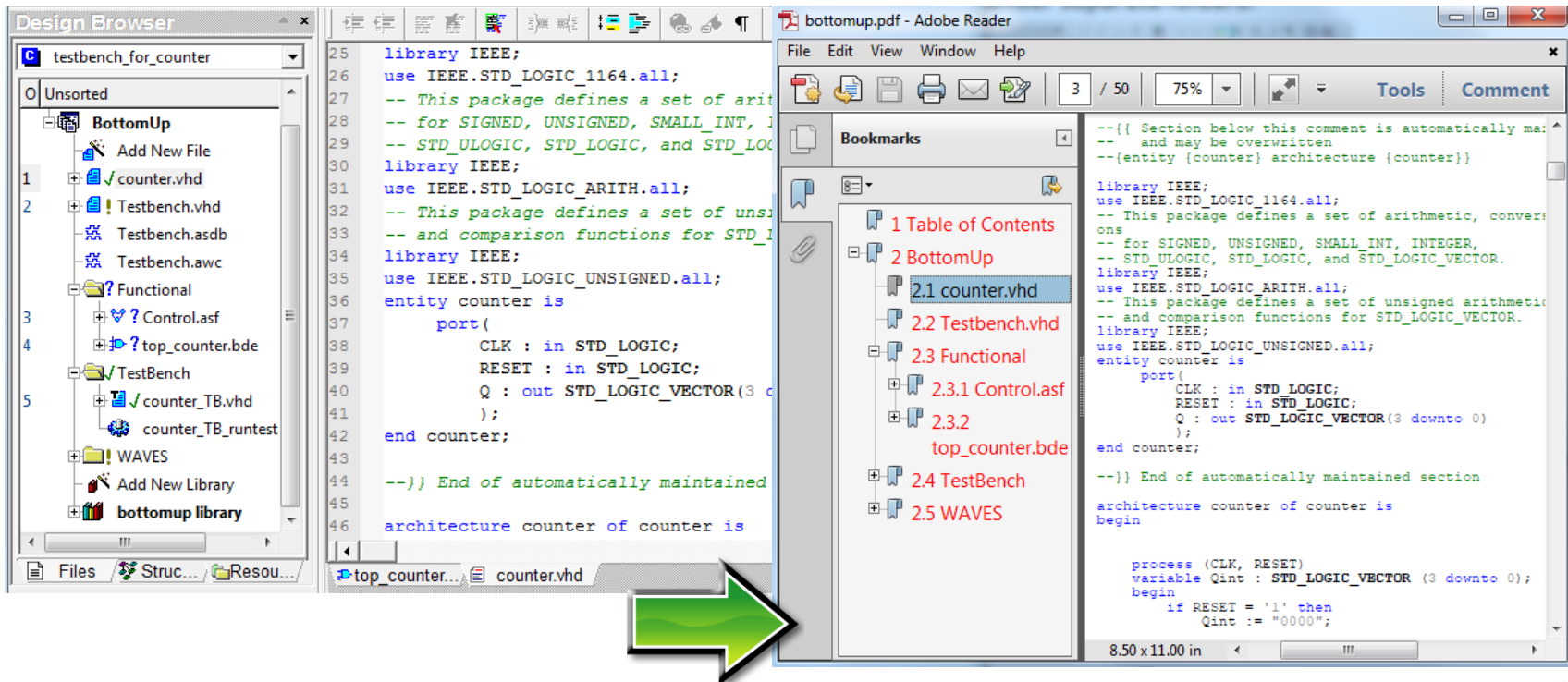
Description:

Comments:

Save Settings < Back Finish Cancel

Export to PDF

- The benefit of exporting a design to a PDF file is being able to retain the entire design within a single file rather than each component listed under separate folders.

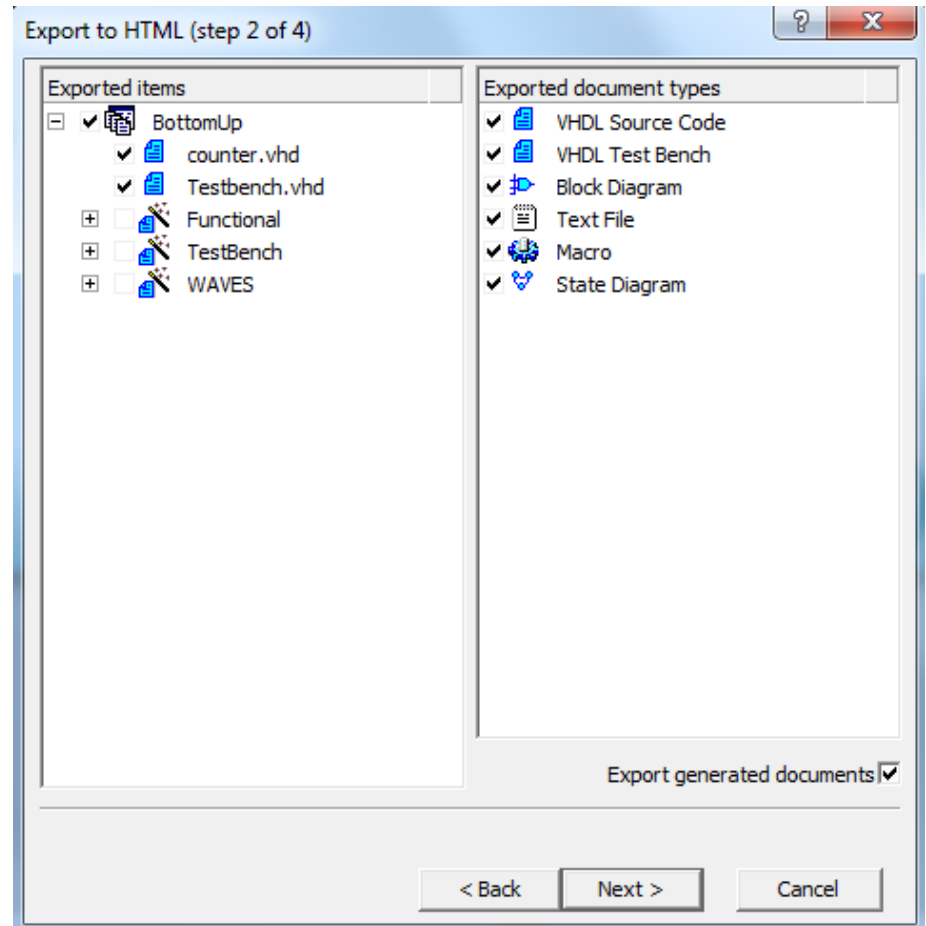


Export to PDF Settings

- The Design export wizard is the same as it is for individual PDF files. The wizard allows the user to specify:
- Export settings, Title page settings
- Select the list of files to be exported
- Headers/Footers
- BDE/FSM graphic parameters
- Page settings, Optimization options, PDF settings
- Viewer preferences, Link settings, Design Hierarchy settings
- Project information

Exporting Workspaces

- A Workspace can contain multiple designs that make up the entire project. The **Export Workspace to HTML** and **Export Workspace to PDF** wizards guide the user through the export process similar to the **Export Design** processes and allows the user to select:
- Entire designs
- Document types
- Individual files



Command line export

- For operation in batch mode, Active-HDL provides two commands that perform export:
- exp2html
 - ♦ exp2html [-f <settings_file>] – workspace | design | (- file <source_file>) [<output_file>]
- exp2pdf
 - ♦ exp2pdf [-f <settings_file>] – workspace | design | (-file <source_file>) [<output_file>]
- For more details on the command usage, please refer to the Active-HDL online documentation.

Printing

- Every document type supported by Active-HDL can be easily printed.
- Editors and viewers provide the **Print Preview** capability
- Entire designs and workspaces can be printed in one step.
The print setup process is similar to the export setup for HTML and PDF

