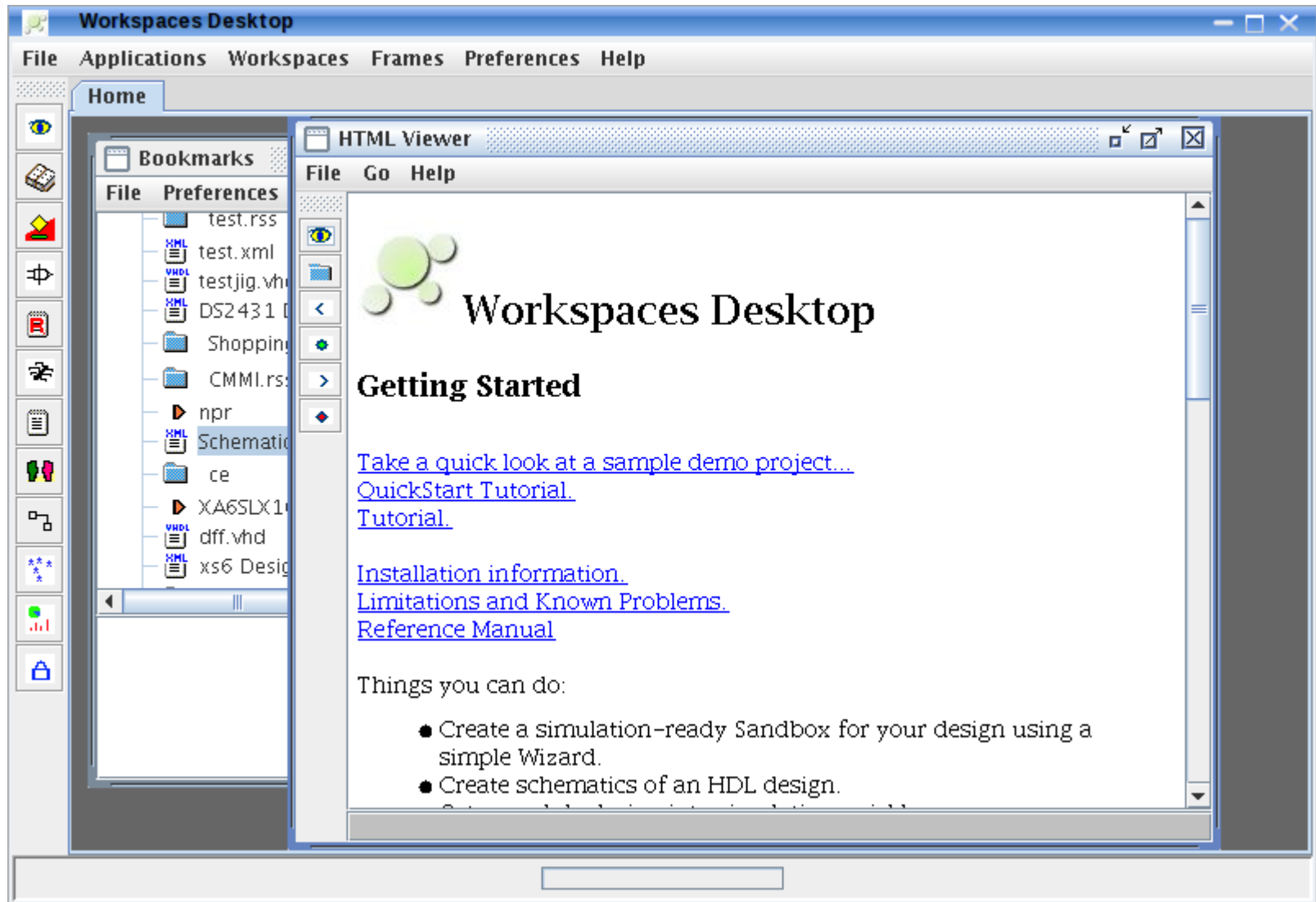


# Workspaces Desktop

## An Overview of the tool

eightolives.com



Workspaces Desktop is an integrated environment for creating and analyzing digital designs.

You can integrate requirements, design, analysis, verification, process and iteration using the several specially linked tools or use a tool stand-alone.

A simple HTML Viewer

Bookmark your designs and projects

Monitor your workflow process

DesignTool to browse and edit the design

Create requirements, plans and other design documents

Track bugs

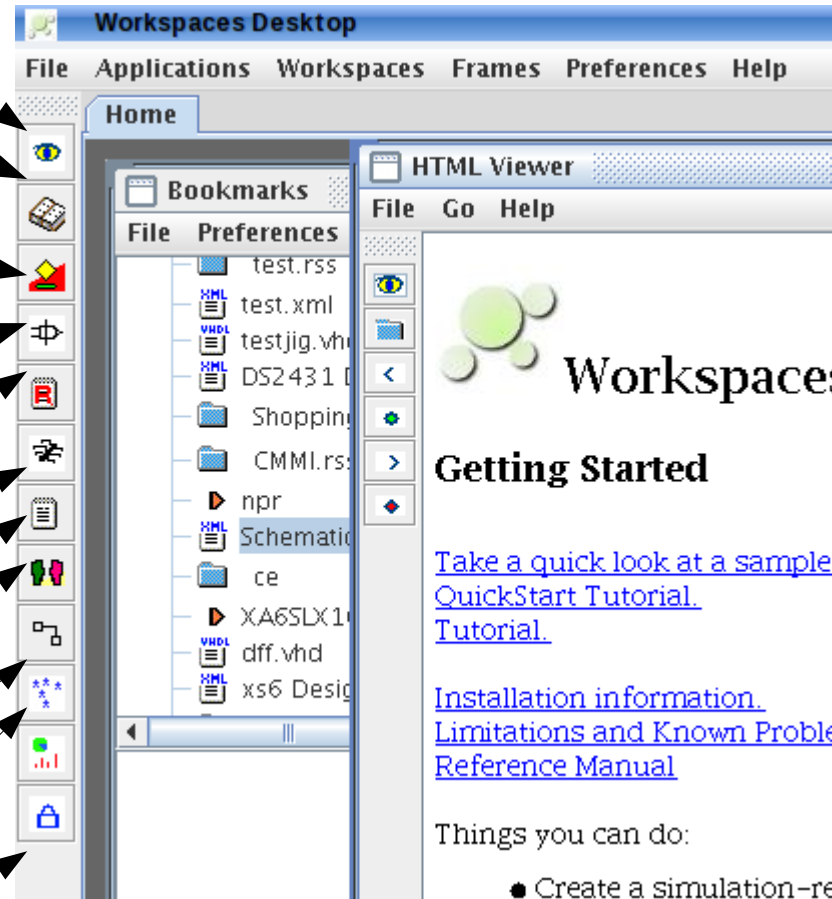
Edit your files

View graphics

View schematics

Manage the team

Encrypt/decrypt

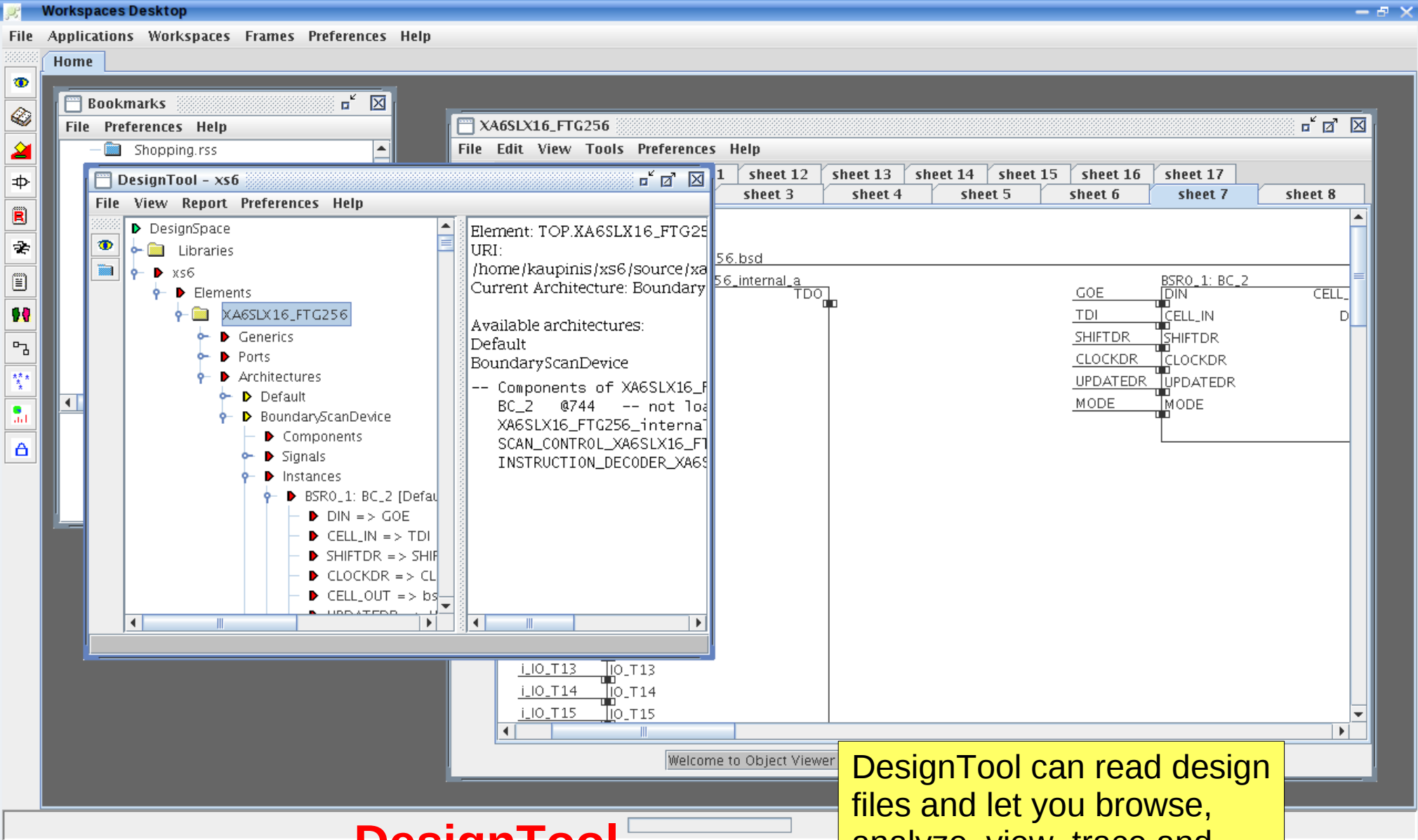


Create timing diagrams

Simulate

Execute script files or interactively Javascript

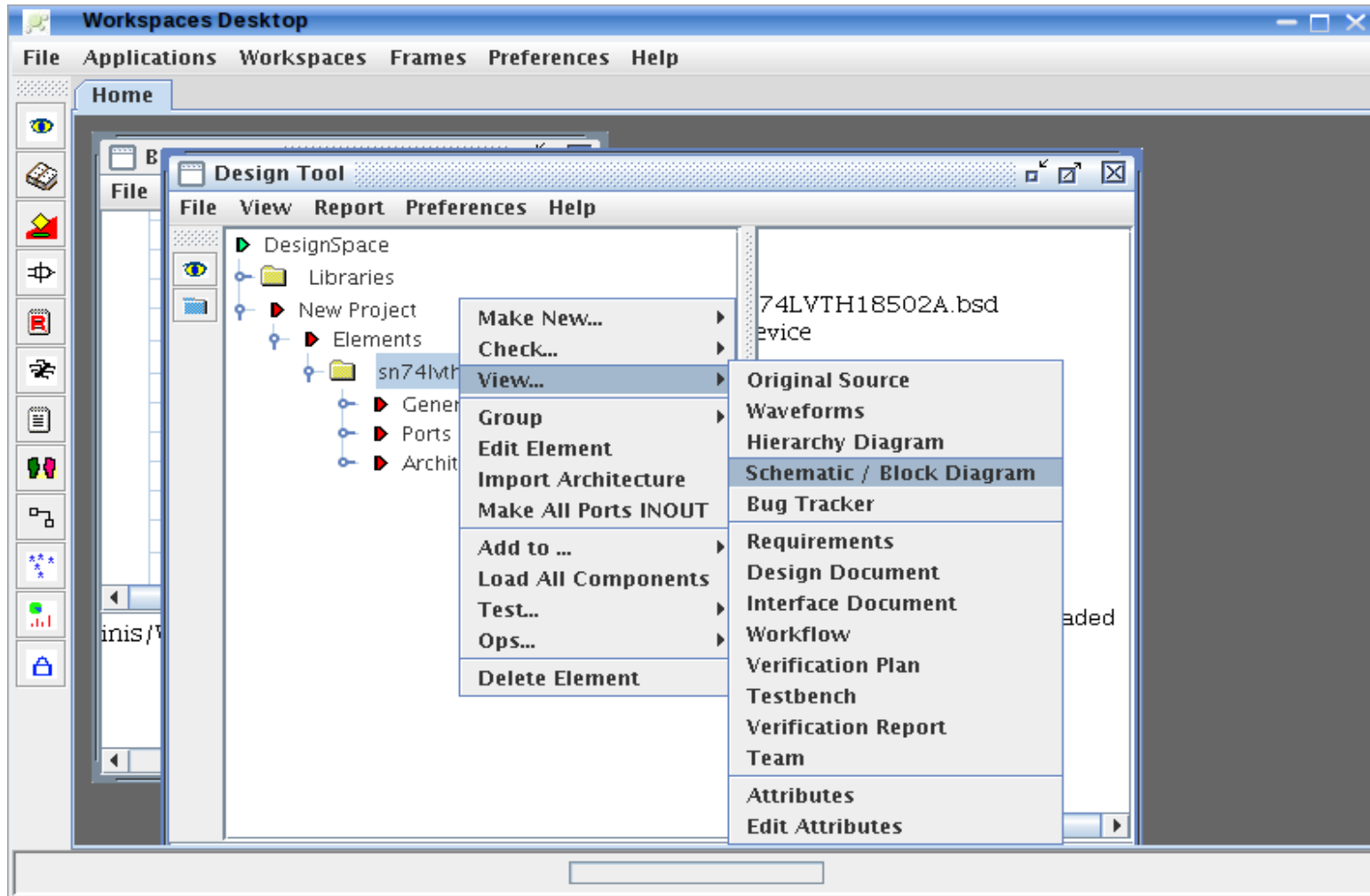
## Different tools for different tasks



# DesignTool

DesignTool can read design files and let you browse, analyze, view, trace and edit the design.

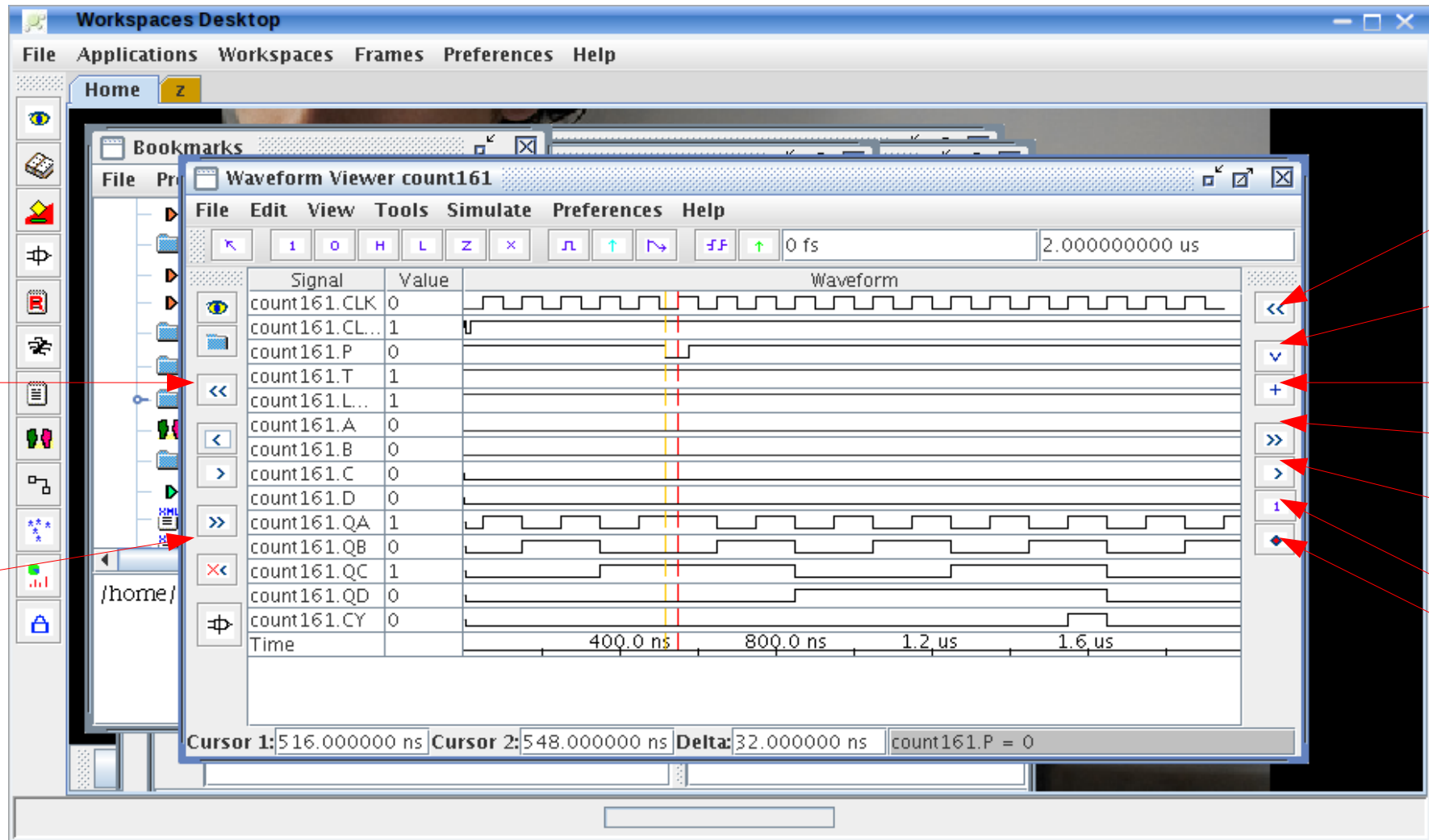
# Menu-driven functionality



# With DesignTool You Can...

- Create a simulation-ready Sandbox for your design using a simple Wizard.
- Analyze files of type vhd, bsd, edf, sdf, vcd, mdl.
- Navigate and edit the designs
- Create schematics of an HDL design.
- Get a module design into simulation quickly.
- Create a testbench with timing stimulus and assertion checkers.
- Define State Machines and Memory Maps.
- Create timing diagrams
- Perform simulations
- Perform Design Checks, Clock Domain Crossing Analysis, Power Domain Analysis and loading stress chart
- Create a simulatable boundary scan model of your FPGA design.
- Insert internal test scan to a design.
- Scale sdf timing values for min, typ, max conditions.
- Optimize VCD test vector files for factory test.
- Execute your own JavaScript scripts using the Workspaces and Hardware APIs.
- Access useful libraries
- Output the design as VHDL

# View > Waveform Viewer to Simulate

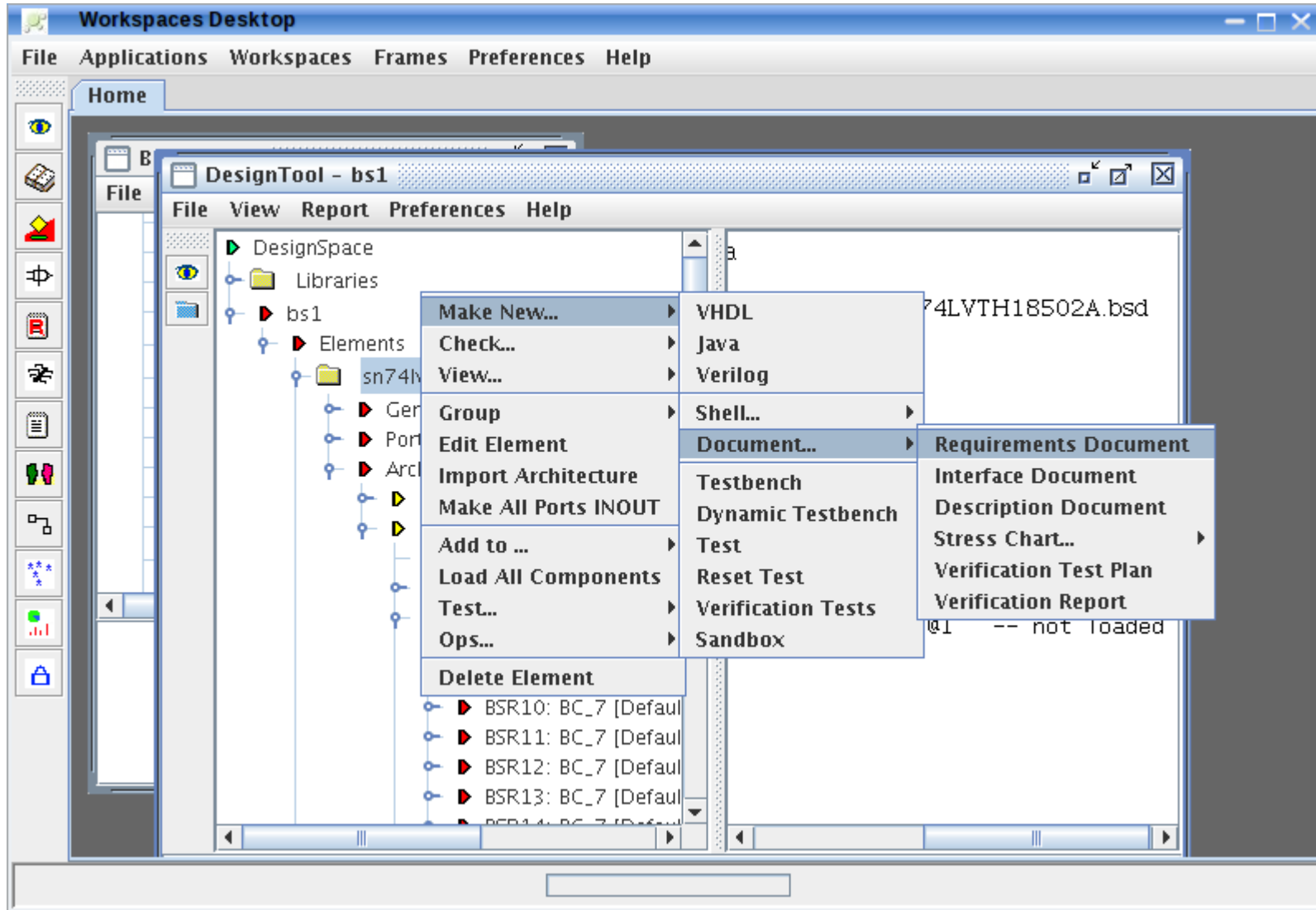


# What's a Sandbox?

- A Sandbox is a directory structure organized to facilitate and organize design creation, analysis, simulation and synthesis.
- You can create a new Sandbox using the Sandbox Wizard in DesignTool
- The wizard
  - Makes the directory structure
  - Puts important files in place
  - Creates a design Project and Project Home Page
- project\_top
  - doc
  - source
  - sim
  - testbench
  - synthesis
  - schematic
  - process



# Create Design Documents with a Click



Documents are created by the Requirements Tracker tool using a template combined with information from the actual design.

# RequirementsTracker Document View

The screenshot shows the RequirementsTracker application window titled "Workspaces Desktop". The main window displays a document titled "Critical Item Development Specification for the SN74LVTH18502A". The document content includes:

- Section 1.0 Scope
- Section 1.1 Next Higher Assembly
- Text: "eightolives demonstration"
- Text: "This specification establishes the performance, design and verification requirements for the sn74lvth18502a critical item."

Annotations with red arrows point to various elements:

- Edit View**: Points to the pencil icon in the toolbar.
- Document View**: Points to the document icon in the toolbar.
- Matrix View**: Points to the grid icon in the toolbar.
- TBD Count**: Points to the "TBDs: 17" field in the status bar.
- Shall Count**: Points to the "Shalls: 68" field in the status bar.

The status bar at the bottom shows: Shalls: 68, TBDs: 17, Verified: 0, and the URL: ie/kaupinis/www/workspaces/RequirementsTracker/templates/ci\_fpga.rml.

# Edit View

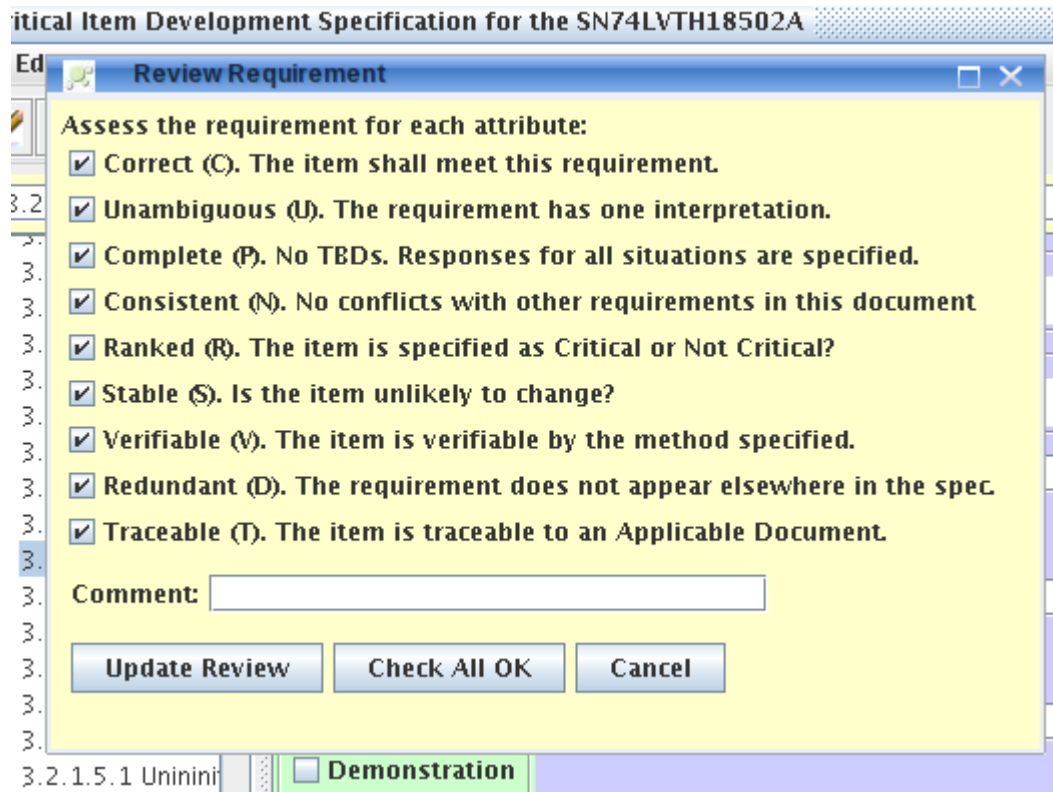
The screenshot shows the 'Workspaces Desktop' application window. The main window title is 'Critical Item Development Specification for the SN74LVTH18502A'. The menu bar includes 'File', 'Applications', 'Workspaces', 'Frames', 'Preferences', and 'Help'. The toolbar contains icons for editing and navigation. The left sidebar shows a tree view of requirements, with '3.2.1.3 Pin Assignments' selected. The main editing area has a 'Text' field containing 'The unit shall have the pin assignments as specified in 3.2.1.2.', a 'Comment' field, and a 'Verification Method' section with checkboxes for 'None', 'Inspection' (checked), 'Analysis', 'Simulation', 'Test', 'Demonstration', 'Similarity', and 'Certification'. There are also fields for 'Traced From', 'Allocated To', and 'Evidence', along with buttons for 'Review', 'Update Local', 'Insert Item', and 'Delete Item'. The status bar at the bottom shows 'Shalls: 68', 'TBDs: 17', and 'Verified 0'.

Annotations with red arrows:

- Click on paragraph (points to the text field)
- Fields show the data (points to the 'Text' and 'Comment' fields)
- Specify the Verification methods (points to the 'Verification Method' section)
- Add traceability (points to the 'Traced From' field)
- Perform a review (points to the 'Review' button)
- Color coded status (points to the 'Inspection' checkbox)

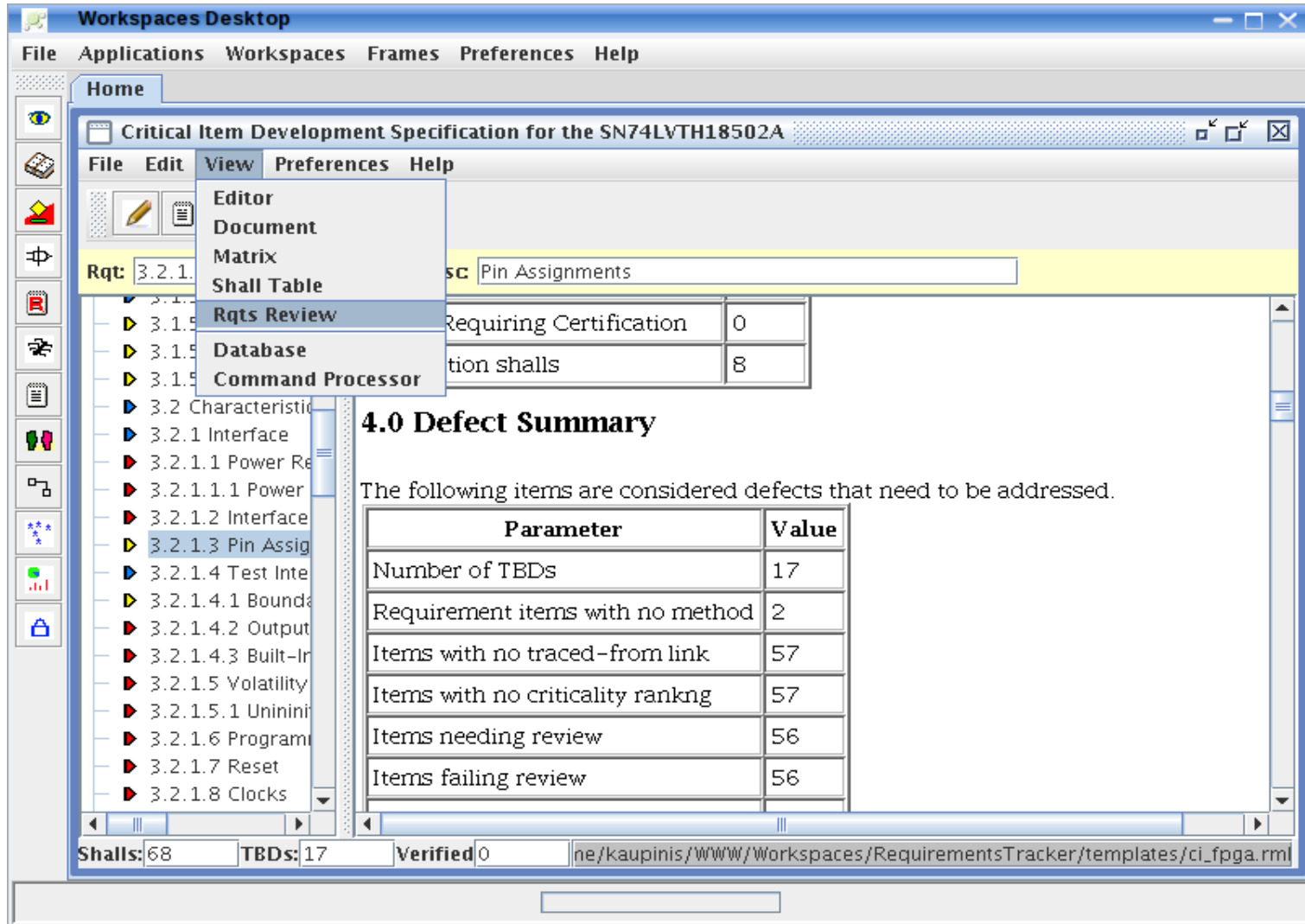
Copyright © 2010 William Kaupinis All Rights Reserved

# The Review Button Pop-Up



Requirements should be assessed for each of the items listed in order to be considered “good”.

# View > Requirements Review

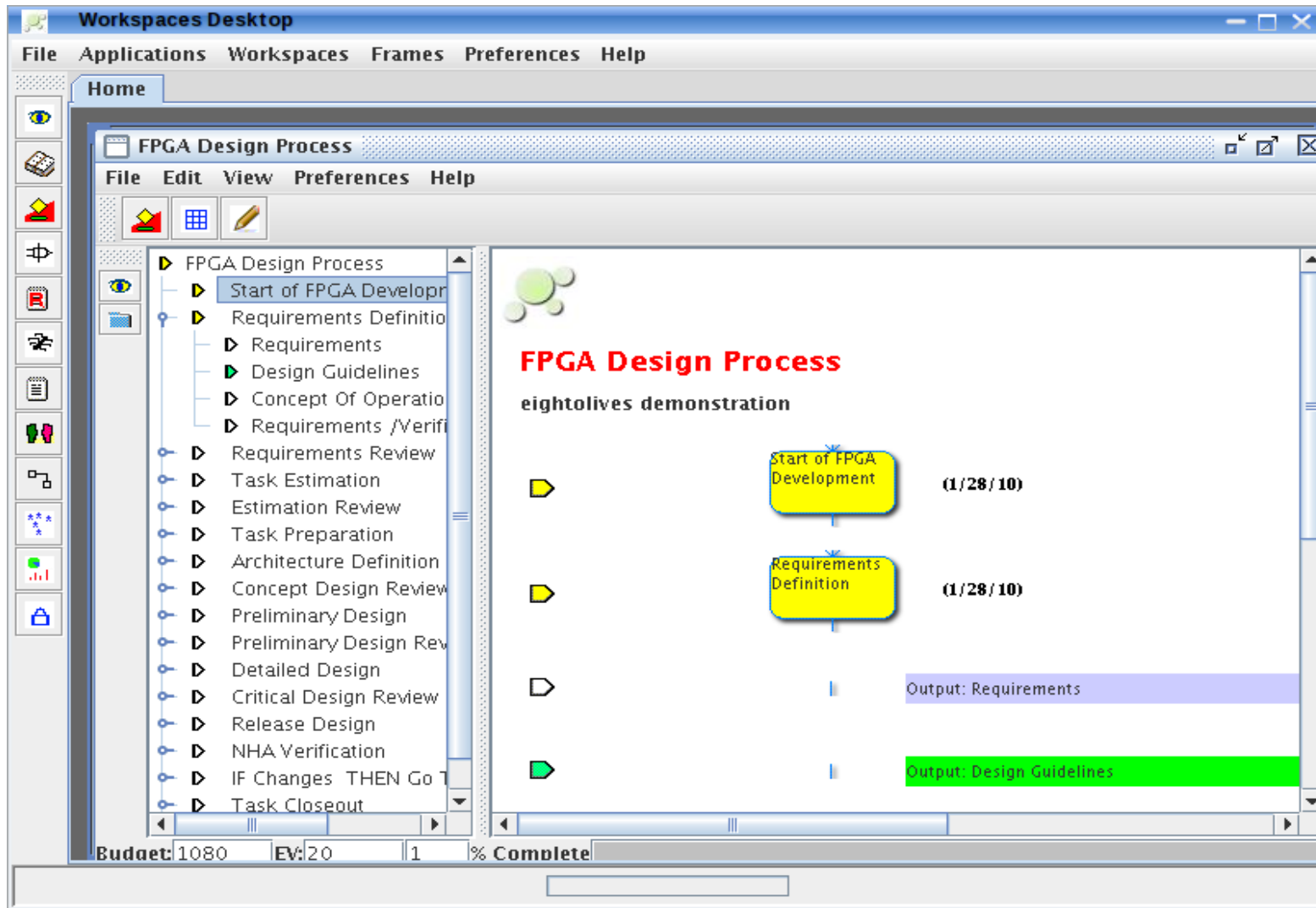


Provides a report summarizing metrics, defects and then detailing the defects.

# RequirementsTracker Features

- Templates from eightolives or use your custom templates
- Requirements can be input from a text file or HTML file
- Can output HTML
- XML Database file is viewable in regular browser
- Applicable Documents table provides links for traceability
- Requirements Review provides instant feedback
- “Shall” Table itemizes each “shall”

# The ProcessTracker Tool



Monitor and status your process workflow.

Using a template process, you first tailor out the tasks and outputs not applicable to this project.

Then you can track the steps to be done, adding color status, comments and links to the outputs.

# Edit Window for a Process Step

ProcessTracker - Edit Process Item

Operations

Process  Description  Level  1  2 UniqueID

Link  Start of FPGA Development

Notes

Notes

Tailor

In  Modify  Out

Status

Not Started  Started  Completed  Complete ++  Highlight Orange  Highlight Red

Type

Task  Input  Output  Review  Link  Decision

History

(1/28/10)

Cost and Schedule

Budget

10

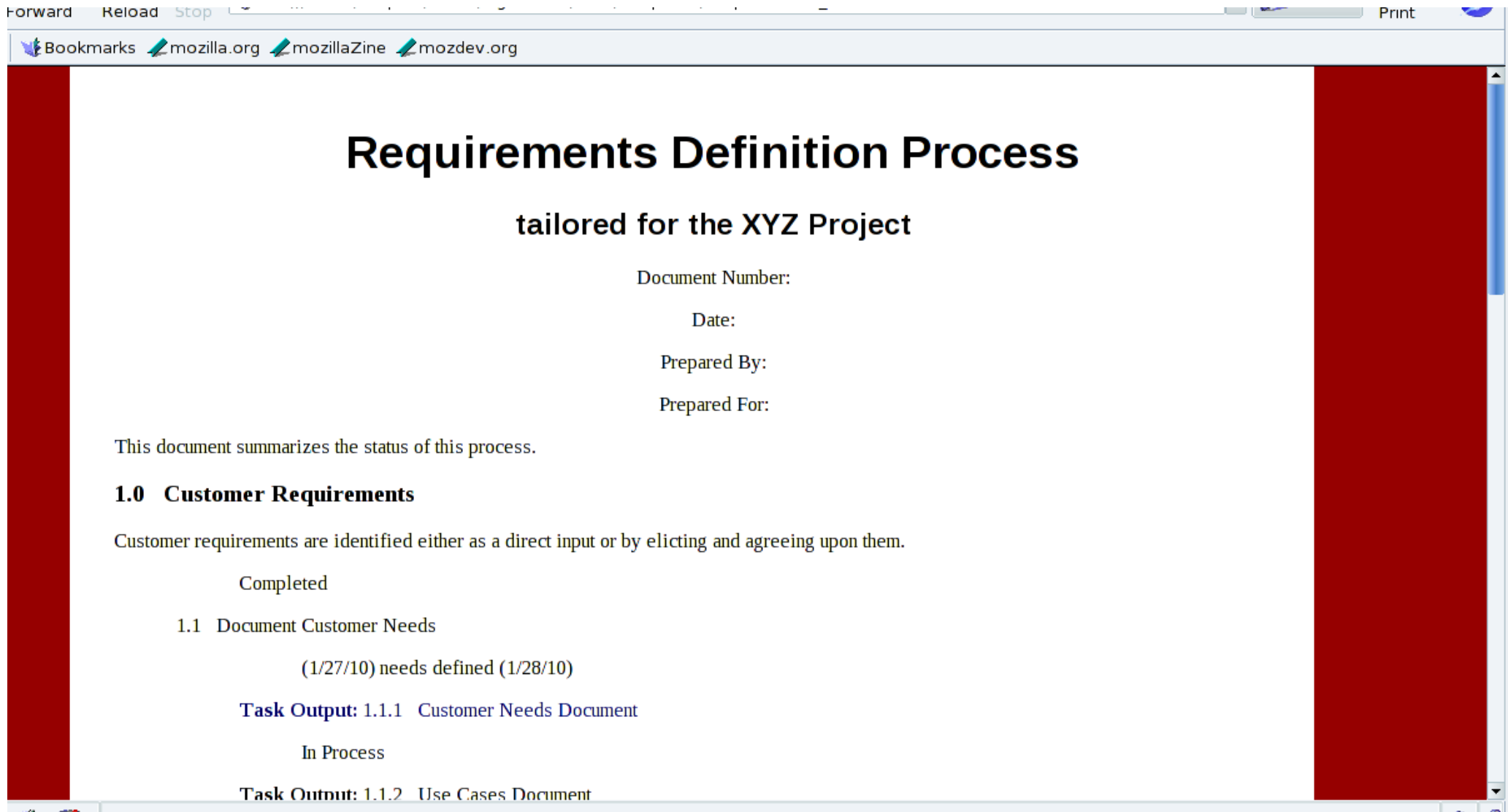
Add Comment



# ProcessTracker Features

- Templates from eightolives or use your custom templates
- Can output .xls
- Can output HTML
- XML Database file is viewable in regular browser
- Tools to aid tailoring
- Can assign budget to each item and track Earned Value, and percent complete
- Generate a customizable status report table

# Browser View of ProcessTracker xml file



## Requirements Definition Process

tailored for the XYZ Project

Document Number:

Date:

Prepared By:

Prepared For:

This document summarizes the status of this process.

### 1.0 Customer Requirements

Customer requirements are identified either as a direct input or by eliciting and agreeing upon them.

Completed

#### 1.1 Document Customer Needs

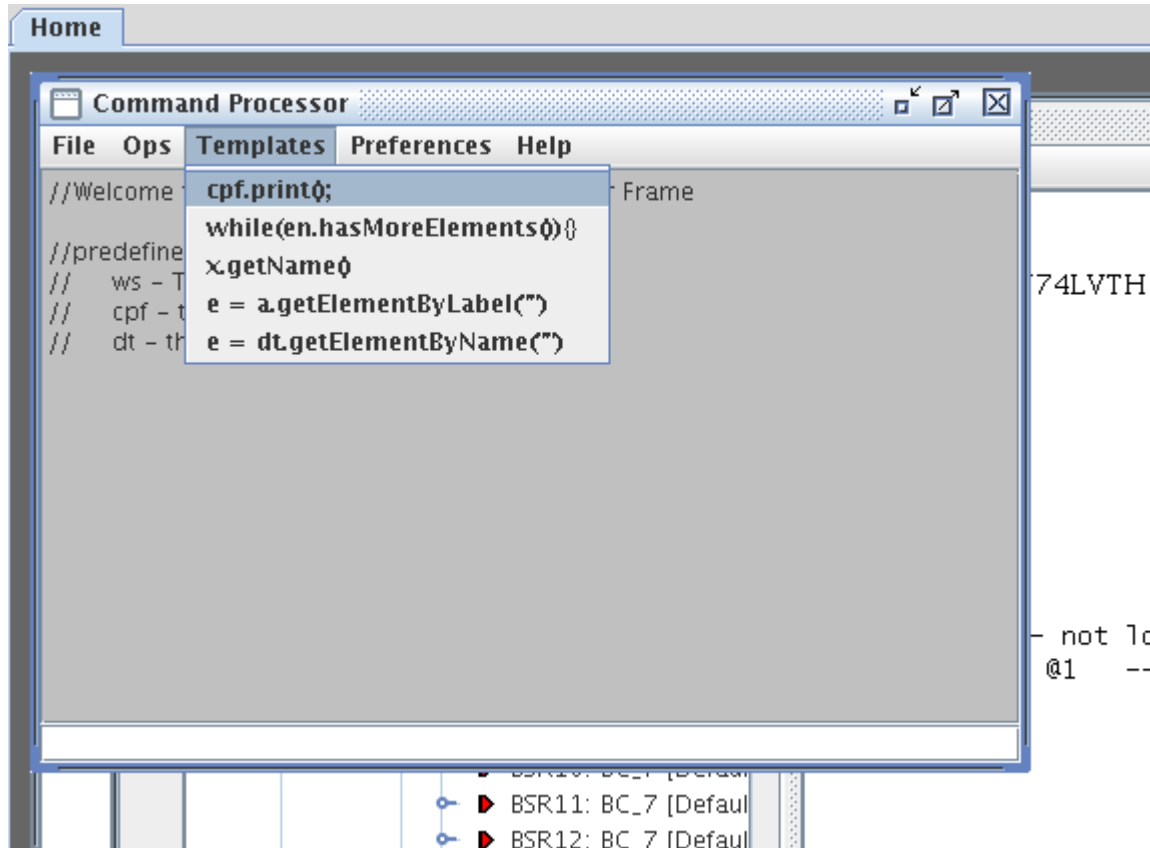
(1/27/10) needs defined (1/28/10)

**Task Output:** 1.1.1 Customer Needs Document

In Process

**Task Output:** 1.1.2 Use Cases Document

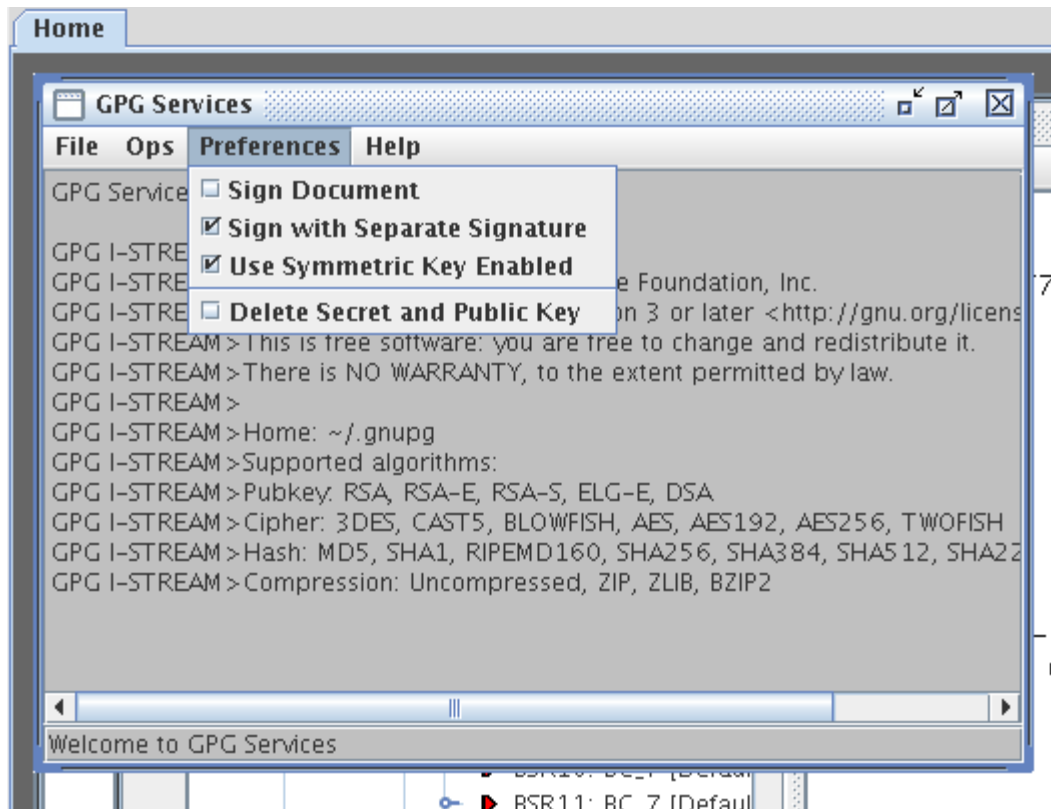
# Scripting with Javascript



The Command Processor tool gives you the ability to access the design and the tools using ECMA Javascript.

You can execute pre-defined script files (.js) or interrogate the environment directly from the command line.

# Encrypt and Decrypt Files



GPG Services tool is a GUI interface to Gnu Privacy Guard (gpg) tool which you must install separately.

The tool works in conjunction with the DesignTool and Editor for files of suffix .gpg

You can encrypt and decrypt files, sign files, create and export keys and verify signatures.

The tool is useful in protecting company proprietary files or sending data via email.

# Version 1

- Version 1 is considered an alpha version
- Known Limitations
  - The Version 1 VHDL reader is currently compliant to a subset of the language. Best with structural VHDL.
  - Check the web site for other issues