

**SynSemi Heuristic Evaluation**  
**Phillip Scarborough**  
**October 29, 2006**

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## What is a Heuristic Evaluation?

A heuristic evaluation of a Web site is a systematic inspection of the site design, measured against recognized usability principles. A heuristic evaluation is based on a standard set of "heuristics," or rules of thumb developed from years of usability research. Heuristic evaluations generally explore questions like:

- Is the look and feel appropriate for the application's purpose?
- Are the design elements well integrated and consistent throughout the application?
- How simple to use is the application?
- How clear are the meanings of graphical elements such as icons and toolbar buttons? Are they overused or underused?
- How well is the application organized? Are navigational aids adequate to support the organization? What feedback is provided to orient the user?
- Are instructions or explanations presented clearly, without unnecessary complication or ambiguity? Is the language direct, simple, and non-wordy, so that users can read as few words as possible?
- What information must users encounter that they do not need? What information might be missing?

## Heuristics Used In This Study

Some important heuristics considered in this study are:

1. Ease of Navigation  
How easy is it to navigate the Web site?
2. Usefulness  
How useful is the information on the Web site?
3. Consistency  
How consistent are the pages throughout the site so there are no surprises for users.
4. Page Elements  
Do the elements on the pages contribute effectively to the ease of use of the site?
5. Scalability  
Is the site designed to easily accept growth, as the site organization grows?
6. Current Standards of Business Web Design Usability  
Does the site conform to the current usability standards used by most organizations?

## Author Qualifications

The author has been a usability engineer for over 12 years and has written a large number of heuristic evaluations for large scale business Web sites, enterprise Web applications and installed business applications. These evaluations were usually followed by extensive usability testing, followed by the writing of detailed usability reports used to improve the sites or applications by developers and stakeholders.

An example of a heuristic evaluation written by the author was done for Cingular's modifications of the Amdocs CRM Web-based enterprise application. The evaluation can be seen at: <http://www.techwrite.net/CingularStudy.pdf>

# SynSemi Web Site Findings and Recommendations

## Introduction

The findings and recommendations in this evaluation are not based on the author's opinions, but on the heuristics noted above, and on many years of usability research by researchers and software engineers worldwide.

The new SynSemi Web site has a pleasant look and feel and is generally easy to use. The pages load quickly and are generally easy to navigate. However there are a number of usability problems on the site that contribute to an unsatisfying user experience. Some of these issues are minor, but a few of them are serious and should be addressed immediately.

Even the minor issues should be addressed soon, because having a number of minor usability issues on a site can have a cumulative effect with users, giving them the overall impression that the site is not as professional as it should be.

## Specific Findings and Recommendations

### Finding 1.

On every page on the site, the spelling of the word "Synsemi" in the header text, "Synsemi...a Global Semiconductor Company," is incorrect and inconsistent with other spellings (SynSemi) on the page. (Heuristic 3. Consistency)

The screenshot shows the top portion of the SynSemi website. At the top is a blue banner with a world map background and the text "Synsemi...a Global Semiconductor Company". Below this is a red navigation bar with white text for "HOME", "BRIDGES", "DIODES", "RECTIFIERS", "SCHOTTKYS", "TRANSIENT VOLTAGE SUPPRESSORS", "ZENERS", and "CONTACT".

Below the navigation bar, there are two search boxes on the left. The first is labeled "Quick Product Selection Guide" and the second is "Quick Contact Info Guide". Both have a "go" button. Red arrows point to the "go" buttons.

In the center, there is a logo for "SYNSEMI inc" in a blue oval. A red arrow points to the logo. Below the logo is a grey rounded rectangle containing the text "all SynSemi products are lead-free and RoHS-compliant". A red arrow points to this text.

On the right side, there is a main content area. The heading "SynSemi..." is at the top, with a red arrow pointing to it. Below it is a paragraph: "Established in 2001, with Corporate Headquarters in the Silicon Valley area of the USA, European headquarters in United Kingdom, and operations throughout Asia, SynSemi provides worldwide sales and support with the highest levels of experience and expertise." A red arrow points to the word "USA".

Below this is another paragraph: "A growing network of Distributors and Sales Reps support the sales activities across countries and regions. Under the SynSemi brand, the company manages and markets the products of a limited number of joint venture, Asian-based factories. All manufacturing is done by ISO 14001 and QS 9001 certified factories ensuring the highest quality of process control and product assurance operations." A red arrow points to the word "Distributors".

Below that is a paragraph: "Our mission is to offer a complete product portfolio and the service and support to meet all of your Power and Discrete product requirements. The company will continue to expand its portfolio and will be introducing its line of MOSFETs, SCRs, Voltage Regulators, LDOs, PWMs, and PFCs." A red arrow points to the word "MOSFETs".

Below that is the heading "...a Global Semiconductor Company" in blue. A red arrow points to it. Below this heading is a paragraph: "Sales and service resources have been placed in Hyderabad, India and Taipei, Taiwan. These additions were made to increase worldwide support for SynSemi's multinational customers, as well as to increase SynSemi's local and regional presences." A red arrow points to the word "SynSemi's".

Below that is a final paragraph: "To this goal, SynSemi has updated its Web site with 5500 part numbers and has both English and Mandarin language Web sites. In addition, two new Product Catalogs are available from SynSemi." A red arrow points to the word "SynSemi" at the end of the paragraph.

## Finding 2.

The SynSemi logo does not appear in a place on the page that is consistent with business standards. On business sites, users expect to see the company logo in the upper left corner of all pages on the site, and they also expect the logo to be a link that will return them to the home page from any other page on the site in the same way that the HOME button does. On the home page shown in the image above, the logo appears part way down the page, and does not appear on any other pages in the site. (Heuristic 6. Current Standards of Business Web Design Usability)

## Recommendations for Findings 1 and 2.

Replace the misspelled "Synsemi" in the header text with the SynSemi logo, perhaps with a white border to easily distinguish it from the blue background. Resize the rest of the header text, "...a Global Semiconductor Company" with a smaller font size that will allow space for the logo and give the logo prominence in the header. In addition, make the logo a link, and add the new header to all pages in the site.

## Finding 3.

The new red navigation bar below the header has the product categories from left to right and could present a scalability problem in the future. If SynSemi concludes that product categories may be added in the future, there will not be enough room on the nav bar for them.

A perfect example is amazon.com. They used to have their product categories across the top, but as the company added more and more product categories, they had to redesign their entire site using a left pane vertical nav bar for the product categories. (Heuristic 5. Scalability)

## Recommendations for Findings 3.

If a significant number of product categories may be added in the future, Synsemi might consider changing the header now and redesigning the site before there are other product category pages. A number of new product category pages could cause an expensive and time consuming redesign effort. If no more product categories will be added to the Synsemi site in the future, then this is not an issue.

## Finding 4.

When using the BRIDGES dropdown, the menu appears behind the Quick Product Selector Guide field so that two products are virtually completely covered. When using the RECTIFIERS drop down, the menu appears behind the Quick Contact Info Guide field (but covers the "go" button), partially covering three products. (See the two images below). (Heuristic 4. Page Elements and Heuristic 2. Usefulness).

Synsemi...a Global Semiconductor Company

HOME BRIDGES DIODES RECTIFIERS SCHOTTKYS TRANSIENT VOLTAGE SUPPRESSORS ZENERS CONTACT

0.5 to 1.5 amps  
2.0 to 4.0 amps  
5.0 to 10.0 amps

Quick Product Selection Guide  
10.0 to 20.0 amps

go

Quick Contact Info Guide

go

**SynSemi...**  
Established in 2001, with Corporate Headquarters in the Silicon Valley area of the USA, European headquarters in United Kingdom, and operations throughout Asia, SynSemi provides worldwide sales and support with the highest levels of experience and expertise.

A growing network of Distributors and Sales Reps support the sales activities across countries and regions. Under the SynSemi brand, the company manages and markets the products of a limited number of joint venture, Asian-based factories. All manufacturing is done by ISO 14001 and QS 9001 certified factories ensuring the highest quality of process control and product assurance operations.

# Synsemi...a Global Semiconductor Company

HOME BRIDGES DIODES RECTIFIERS SCHOTTKYS TRANSIENT VOLTAGE SUPPRESSORS ZENERS CONTACT

Quick Product Selection Guide	High Efficiency Super Fast Recovery Fast Recovery Glass Passivated Fast Recovery General Purpose Plastic Glass Passivated Junction	Corporate Headquarters in the Silicon Valley area of the USA, United Kingdom, and operations throughout Asia, SynSemi provides support with the highest levels of experience and expertise.  A growing network of Distributors and Sales Reps support the sales activities across countries and regions. Under the SynSemi brand, the company manages and markets the products of a limited number of joint venture, Asian-based factories. All manufacturing is done by ISO 14001 and QS 9001 certified factories ensuring the highest quality of process control and product assurance operations.
Quick Contact Info Guide	Avalanche Fast Recovery	

## Recommendations for Finding 4.

This is a fairly serious usability issue that can cause user frustration. Redesign the nav bar so that all menu dropdowns appear over the two Guides. A second option is to move the Guides lower on the page so they do not conflict with the menu items.

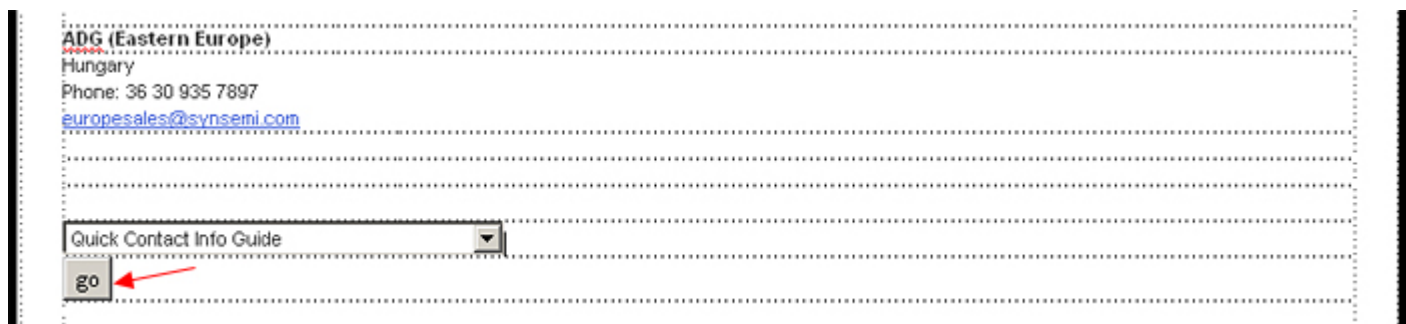
## Finding 5.

The “go” buttons on the Quick Product Selector Guide and the Quick Contact Info Guide are in the wrong position. Current best usability practices note that the “go” buttons should be immediately to the right of the dropdowns. The reason the buttons are in the wrong place is because the table containing the text on the right side of the page is too wide. See the image below which shows the table placement in an HTML editor. One can see that the text table is too wide and “scrunches” the “go” buttons, so there is not enough room to place them to the immediate right of the Guides. (Heuristic 4. Page Elements)



## Finding 6.

Furthermore, on the CONTACT page at the very bottom is the Quick Contact Info Guide with the “go” button underneath the Guide and justified left. The following image shows how it looks in an HTML editor. (Heuristic 3. Consistency).



## Recommendations for Findings 5 and 6.

Reduce the width of the text table shown in Finding 5 so that the “go” buttons appear immediately to the right of the Guides. In Finding 6, move the “go” button to the immediate right of the Guide.

### Finding 7.

The text in the following image on the home page is inconsistent with the rest of the text on the page. It does not follow the standard sentence structure used in the text on the right side of the home page. (Heuristic 3. Consistency)



all SynSemi products are  
lead-free and RoHS-compliant

### Recommendations for Finding 7.

Use standard sentence structure by capitalizing the first letter of the first word and adding a period at the end of the sentence so the image looks like the one below.



All SynSemi products are  
lead-free and RoHS-compliant.

### Finding 8.

The text on the right side of the page is not “chunked” and the information under the titles do not suggest the text below them. Chunking means breaking up the text so readers do not see a solid block of text. Chunked text Improves screen reading by giving the eyes a rest because people do not like to “read” online. Instead they scan the material. By dividing up the text with appropriate titles, it helps readers retrieve and process information more quickly and retain it longer. (Heuristic 2. Usefulness).

### Recommendations for Finding 8.

Chunk the text on the home page with appropriate titles for easier readability and retention. The image below is an example of how the material might be chunked.

#### SynSemi...a Global Semiconductor Company

Established in 2001, with Corporate Headquarters in the Silicon Valley area of the USA, European headquarters in United Kingdom, and operations throughout Asia, SynSemi provides worldwide sales and support with the highest levels of experience and expertise.

#### A Growing Network

A growing network of Distributors and Sales Reps support the sales activities across countries and regions. Under the SynSemi brand, the company manages and markets the products of a limited number of joint venture, Asian-based factories. All manufacturing is done by ISO 14001 and QS 9001 certified factories ensuring the highest quality of process control and product assurance operations.

#### A Complete Portfolio

Our mission is to offer a complete product portfolio and the service and support to meet all of your Power and Discrete product requirements. The company will continue to expand its portfolio and will be introducing its line of MOSFETs, SCRs, Voltage Regulators, LDOs, PWMs, and PFCs.

#### Multinational Support

Sales and service resources have been placed in Hyderabad, India and Taipei, Taiwan. These additions were made to increase worldwide support for SynSemi's multinational customers, as well as to increase SynSemi's local and regional presences.

#### Updated English and Mandarin Web Sites

To this goal, SynSemi has updated its Web site with 5500 part numbers and has both English and Mandarin language Web sites. In addition, two new Product Catalogs are available from SynSemi.

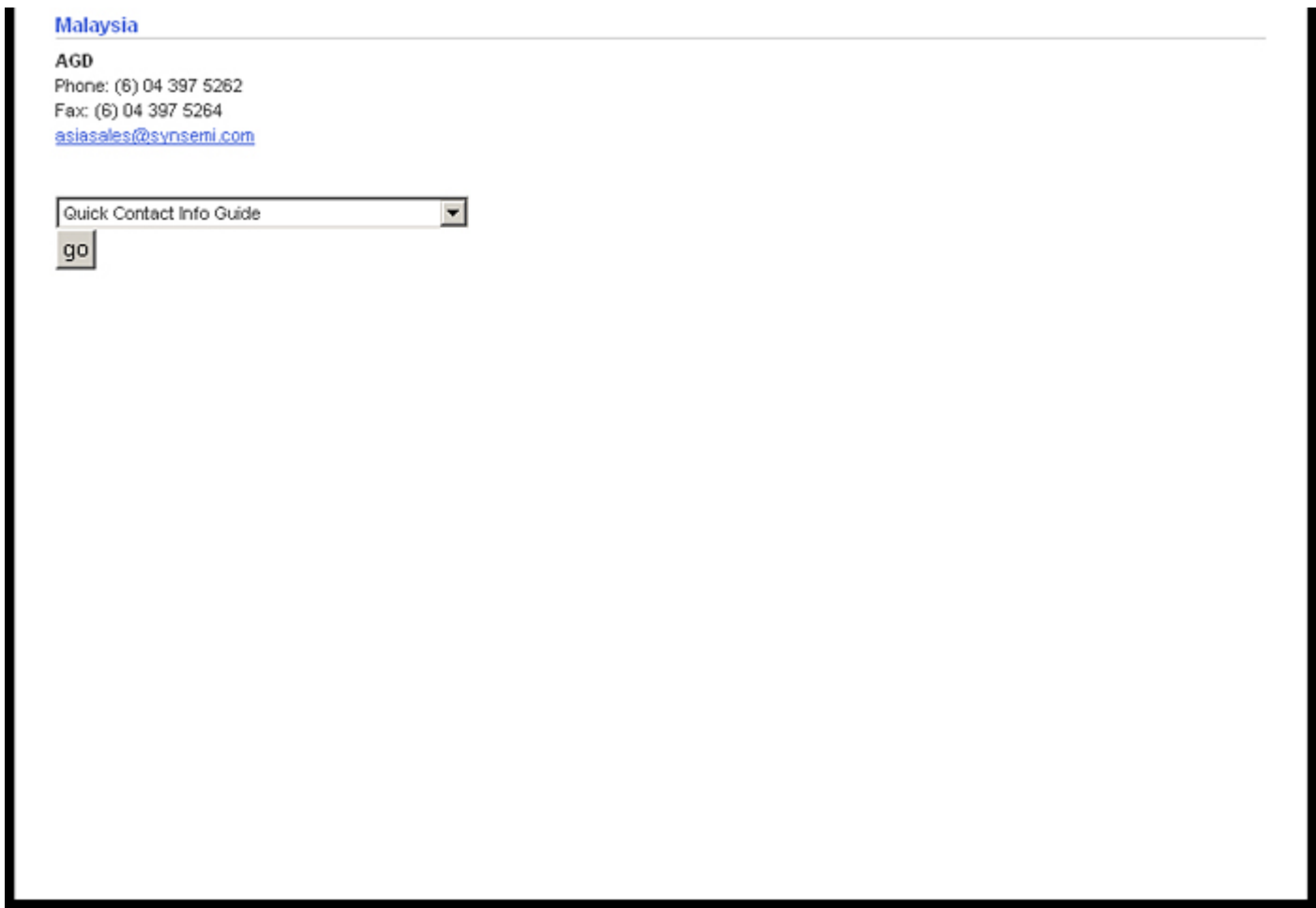
## Finding 9.

There are no footers on any of the pages in the site. Best practices of usability note that every page in a site, particularly a corporate site, should have both a header and a footer on every page. The footer provides several functions. First, it lets users know that you have reached the very bottom of a page. When there is no footer, it can suggest to users that there is an error, and perhaps there is information missing on the page. This potential user concern is further emphasized because there are large, unused amounts of white space at the bottom of several pages on the SynSemi site. This causes user to scroll down for no reason and they may wonder why they must scroll to see blank white space. Having no footer compounds the problem.

Second, the footer provides copyright information. Best practices of usability note that copyright information should be at the bottom of every significant page in a corporate Web site.

Third, particularly for long pages, corporate sites may either repeat the buttons in the header as text links in the footer, or add more links that are less significant, and often they do both. This makes it easier for users to move to a different page in the site, without having to scroll all the back to the top of a long page, or to reach pages that are not in the header, such as "Policies".

The large block of unused white space can be seen on the home page and most of the individual contact pages such as the Malaysia contact page in the image below. As noted above, this causes users to scroll to see only blank space. (Heuristic 2 Usefulness, Heuristic 3. Consistency, Heuristic 6. Current Standards of Business Web Design Usability).



## Recommendations for Finding 9.

Add footers to all pages. Reduce the amount of white space at the bottom of the appropriate pages at least to the point where users need not use the scroll bar to see blank space.

An additional element that would add to the ease of use of long pages is a "Back to Top" link at the bottom of long pages such as the Zener product pages.