



**McDonald Consulting**

# **Search Engine Usability Case Study**



# Background & Objectives

- Background
  - The Company was seeking to incorporate more dynamic elements into the online shopping search assistant product. This is partly in response to indicators that most online shoppers now have upgraded browser versions and can benefit from more advanced interactive technology. In order to ensure the new components are optimally usable to online shoppers, a usability testing initiative is being driven by the Company's product management team.
- Objectives
  - The purpose of conducting user testing was to explore and evaluate several conceptual components being considered for the next rev of the product. Specifically those components included:
    - **The recommendation engine** -- this core component allows users to set the level of importance of a set of product features;
    - **The search methods component** -- this includes different ways of searching including--by price, brand, features and importance and using advice. The question here was to understand not only which methods users prefer, but also to understand what users feel is the best way to navigate between methods;
    - **Results** -- a prototype of a set of search results was tested in tandem with the first page prototype in order to get a read on whether search results met users' expectations and to explore and evaluate the feature that allows users to change the way results are displayed.
    - **The compare component** -- this component is indicated by a button on the results page. The objective was to evaluate how visible the button is as well as how useful and desirable it is for users;
    - **Advice** -- this component allows users to refine their search via a set of usage-based questions in a pop-up. The idea here was to test whether users prefer a usage-based search method or a feature-based method.

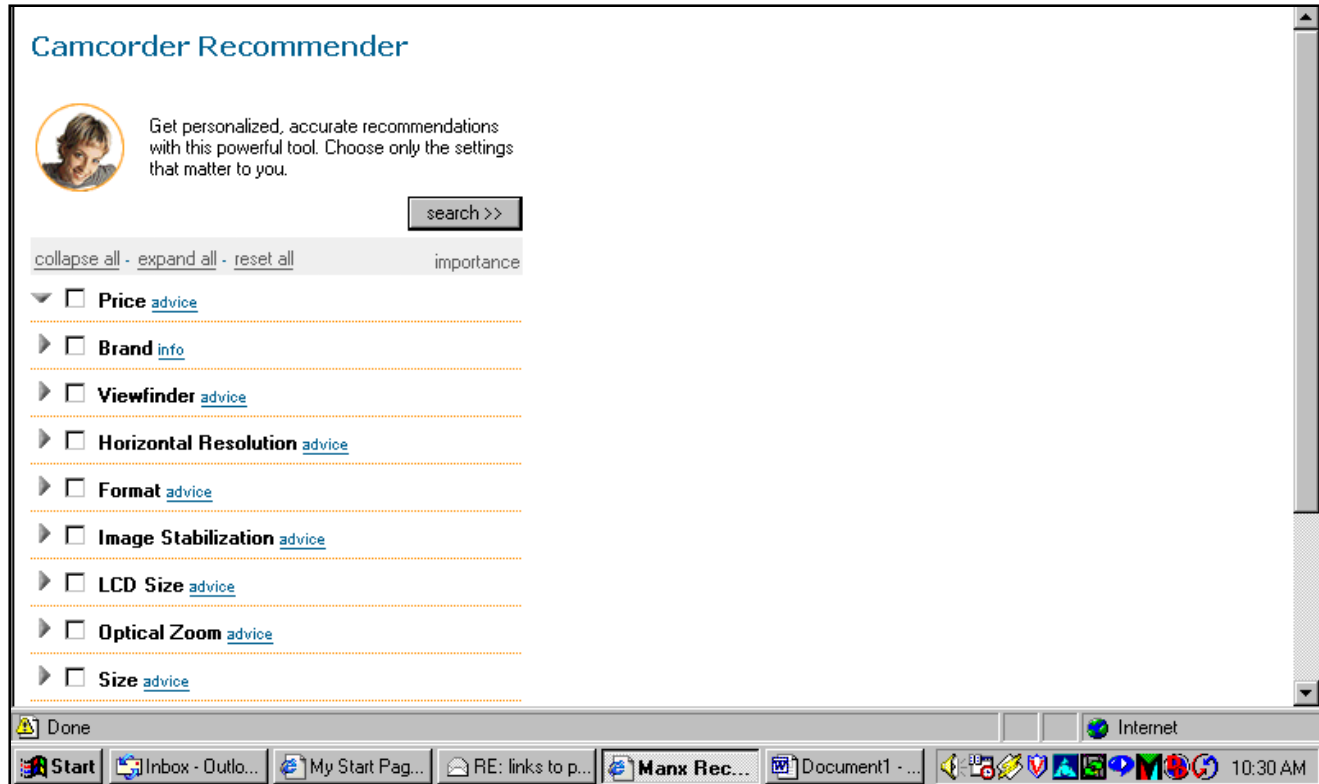


# Methodology

- One-on-one interviews were conducted with 13 respondents who fit the following specifications:
  - **Gender** -- 7 respondents were men and 6 were women;
  - **Age** -- 2 respondents were 18-24; 4 were 25-34 and 7 were 35-44;
  - **Intent to shop online** -- all intended to buy something online in the electronics category within the next 30 days (to the extent possible, respondents were recruited who intended to buy digital cameras so that prototypes would be optimally relevant to them.)
  - **Expertise** -- 2 of the 13 respondents were usability experts who were specially recruited for their expert point of view; the rest of the respondents were a mix of beginner, intermediate and expert users.
- Respondents were recruited from Craig's list by posting an invitation with a link to a screening survey built using Zoomerang. Fifty prospects were identified and those who qualified were contacted for scheduling. The interviews lasted 45 minutes to an hour and respondents were given a \$50.00 incentive for their participation.
- During the interviews, respondents will be shown a series of prototype HTML pages and given specific scenarios for shopping online. The moderator probed for a range of things including whether users find the interface intuitive, appealing, easy to use and in line with their expectations. The moderator also explored experiential aspects of using the prototype interfaces.
- The interviews were viewable via a closed circuit TV set-up in a room adjacent to the interview room. Interviews were also videotaped.

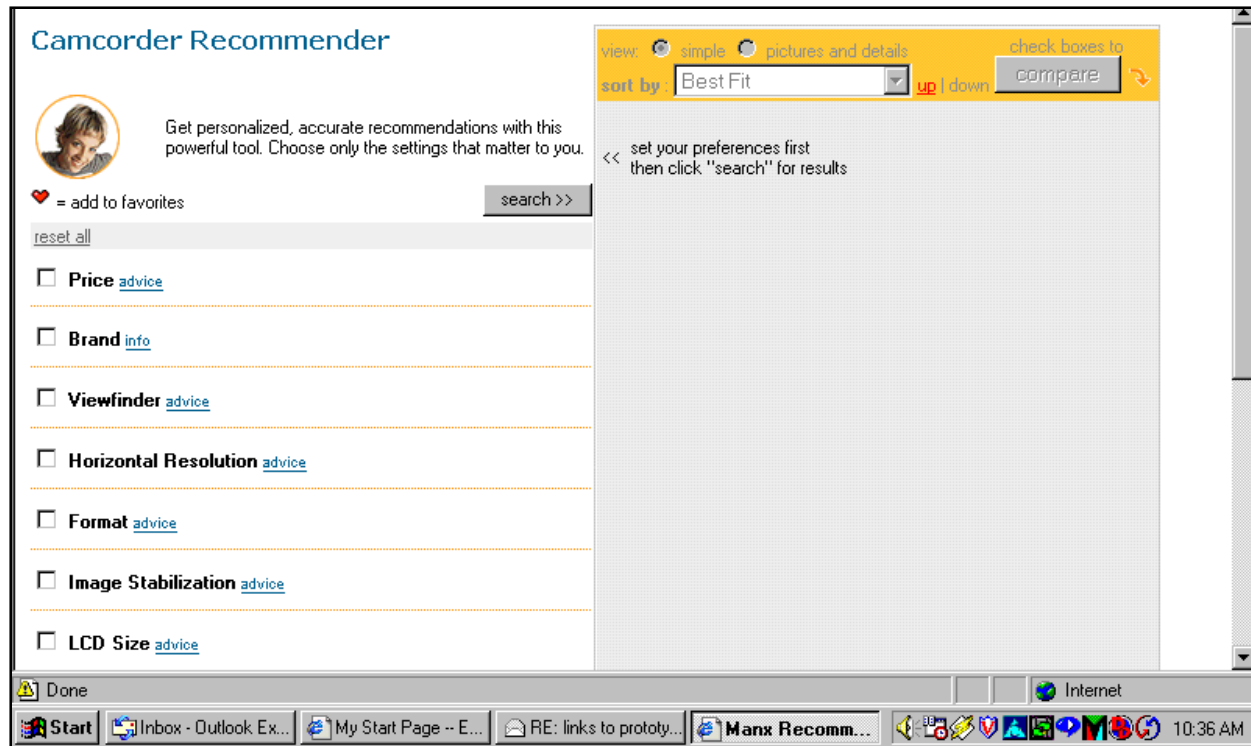
# Prototypes Shown

Day 1



# Prototypes Shown

## Day 2



# Prototypes Shown

Day 4 – Prototype 1

The screenshot displays the Best Buy website interface. At the top left is the Best Buy logo. To its right, a message asks "Would you like to sign in?" and shows "Items in shopping cart: 0" and "Current Total: \$0.00". Below this, it says "Items in ThinkAbout™ Folder: 0". A navigation bar contains links for HOME, INFORMATION CENTER, ABOUT US, STORE LOCATOR, SHOPPING ASSISTANT, and MY ACCOUNT. A search bar is labeled "SEARCH BestBuy.com". A central navigation menu is open, listing categories such as Home Theater Systems, Audio Components, Compact Systems, Speakers, Televisions, VCRs, DVD Players, Camcorders, and Furniture. To the right of the menu, there are search filters for Price, Brand, Viewfinder, Format, and Image Stabilization, each with a "get advice" link. The bottom of the screen shows a Windows taskbar with the time 5:15 PM and several open applications.

# Prototypes Shown

## Day 4 – Prototype 2

The screenshot displays the BestBuy.com website interface. At the top left is the BestBuy.com logo. To its right, a navigation bar includes links for 'HOME', 'INFORMATION CENTER', 'ABOUT US', 'STORE LOCATOR', 'SHOPPING ASSISTANT', and 'MY ACCOUNT'. Below the logo, a search bar is present with a 'SEARCH BestBuy.com' button. A sidebar on the left lists various product categories under 'HOME AUDIO & VIDEO', including Home Theater Systems, Audio Components, Compact Systems, Speakers, Televisions, VCRs, DVD Players, and Camcorders (with sub-options for Digital, 8mm & Hi8, and VHS-C & SVHS-C). The main content area features a 'Camcorder Recommender' section with the text 'Answer a few of my questions and I will recommend the best camcorders for you!'. Below this is a 'clear all' link and a 'search >>' button. The form contains two questions: 'How much are you looking to spend on this Camcorder?' with four radio button options, and 'Format indicates the method used to record images, whether it's on VHS tape or digital for example. Which best describes you?' with one radio button option. The bottom of the screenshot shows a Windows taskbar with several open applications: Start, Active Decisions, RE: final schedule, Manx Recomm..., and Microsoft Word. The system tray on the right shows the Internet icon and the time 5:17 PM.



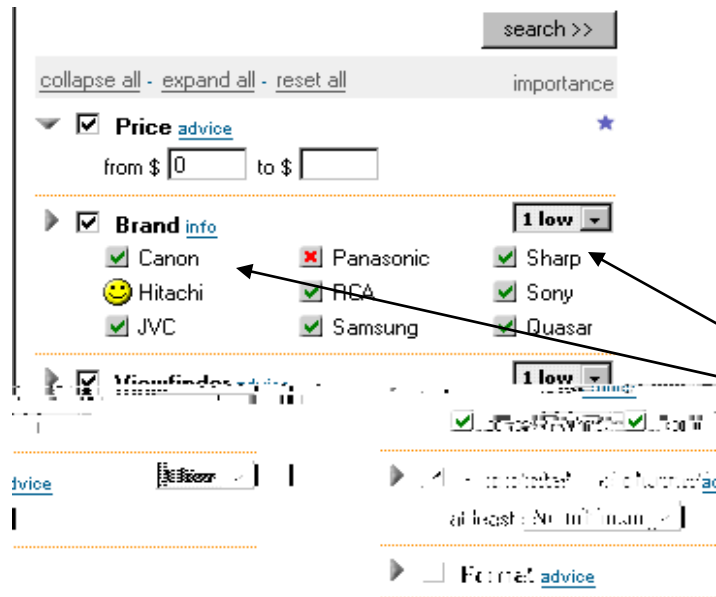
# Summary Findings

## The Recommendation Engine

- The extent to which users grasped how the Recommendation Engine worked varied by their level of expertise with search engines and shopping online. The more experienced users got it more quickly than the less experienced users. Often the less experienced users ignored it altogether. However, even some of the more experienced users didn't fully understand its function. Below are some examples of users' comments:
  - *"I wish there were more explanation visible to help understand why it's [the importance scale] here."*  
--Jennifer P., Intermediate Level User
  - *"The importance scale is an obstacle. Either you want it or you don't want the feature. Is this necessary? I've seen them before and I hate them."*  
--Dominic L., Basic Level User
  - *"I think that 3 would be better than 7 [for the granularity of the importance scale] because it's too fine of a scale. And the features shown in the importance scale makes it too broad a filter. For example, if I cared about a feature like auto shutter, I might miss some cameras because the importance scale doesn't include that feature."*  
--Bryn C., Advanced Level User

# Search Methods

- Probably the most important finding related to the search methods was that most users did not use the importance scale to refine their search (even if they liked it). Instead, they said they would *manually* refine their search by jumping back and forth between results and the left nav area.
  - "I would use this [left nav] to narrow and would refine my search manually."*  
--Sandi J., Basic Level User

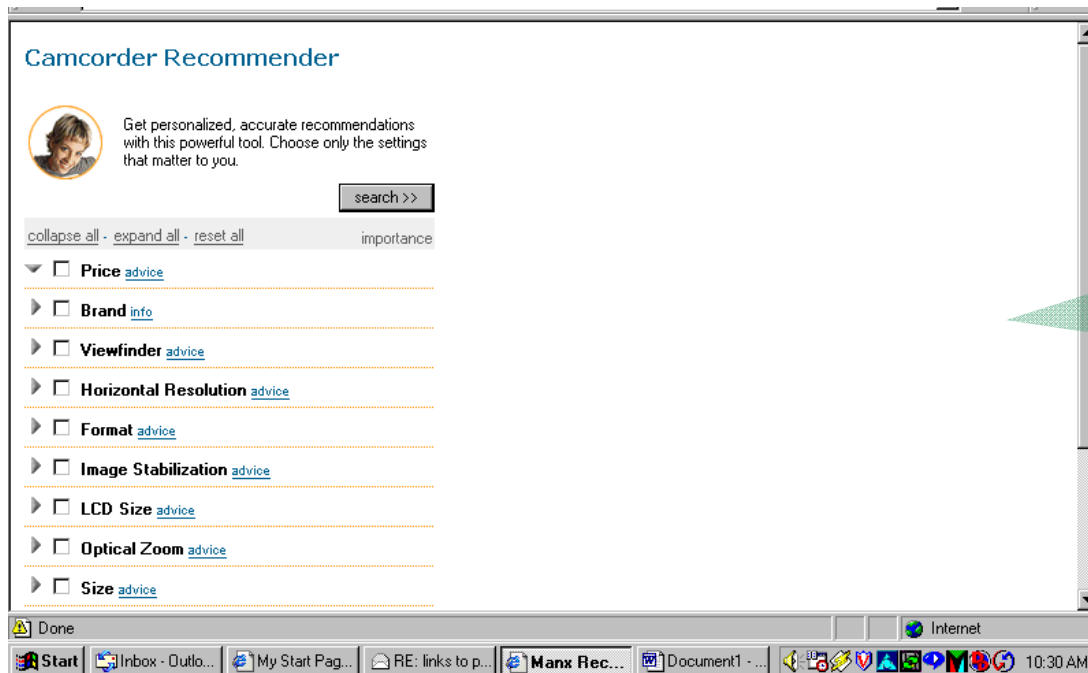


*"These two things, to me they're conflicting with one another. The only thing this [importance scale] would do is put the Sony one's first and that's silly, I can do that myself."*

--Tracy G., Basic Level User

# Pre-selected features can be problematic

- The majority of the users did not like that the individual features were pre-selected. Some users even felt that "features" was either too technical or belonged at a second level of search rather than its current placement on the primary left navigation area.
  - *"I would assume that these would all be unchecked. I would be ticked off that I had to uncheck everything." --Tracy G., Basic Level User*



*"Features is too technical, I only care about price and brand." -- Tracy G., Basic Level User*  
*"Consider more copy explaining how it works." -- Karen W., Advanced Level User & Usability Expert*

# Two versions of the Importance Scale

- Users generally preferred the drop down version of the importance scale because it had more clear anchor points on the scale. For example, "1 low" and "5 hi" were clearer indicators than "-" and "+" on the thermometer version. But some users liked the cleaner simplicity of the graphic on the thermometer version and suggested that if the "-" & "+" labels were changed to more clearly reflect the anchor points of the scale they would like the thermometer version better.



- It may even be possible to reduce the scales further. One usability expert, Stephan S. suggested that by checking a box on the left nav area, users were indicating some level of interest in that feature. If as a result of checking a box they were then presented with simply two choices--"nice to have" and "must have," it may be possible to simplify the importance scale even further. More user testing would need to be conducted to validate this hypothesis.



# ‘Add to Favorites’ & ‘Advice’

## Add to Favorites

- This was generally either misunderstood or it was just confusing. Several users thought it meant you could store preferences or bookmark like AOL's "favorites". It was dropped from the Day 3 & 4 testing altogether.

## Advice

- Several users felt the copy in the pop-ups was ambiguous. One user felt the look and feel of the pop-ups made it seem "fluffy" and watered down so that the information contained in the pop-ups was not to be taken very seriously.
  - *"Show me the best is too subjective."*  
--Bryn C., Advanced Level User
  - *"The text is too subjective -- 'cream of the crop' can mean different things to different people."*  
--Stephan S., Advanced User & Usability Expert
- Secondly, several users mentioned that maybe "advice" was the wrong word since it wasn't really advice you got.
  - *"Is advice really the right word? -- Yes & no -- it's masked in the little quiz. 'Info' would be fine and would work for all these."*  
--Karen W., Advanced User & Usability Expert
  - *"Advice seemed a strange word."*  
--Dominic L., Basic Level User

# Results Display Options

- The most important finding about the Results Display options was that the box to check to compare should not be next to the "buy" button.

The screenshot shows a search results interface with a yellow header. In the header, there are radio buttons for 'simple' and 'pictures and details', a 'check boxes to compare' button, and a 'Sort by: Rank' dropdown. Below the header is a table of four camera products. Each product row includes a small image, the product name, price, and specifications. To the right of each product is a 'BUY' button and a checkbox. A red circle highlights the radio buttons in the header. A green arrow points from the 'pictures and details' radio button to the 'BUY' button of the first product. A green box with an arrow points to the 'compare' button. Another green box with an arrow points to the checkbox of the first product. A larger green box with an arrow points to the 'BUY' button of the second product.

Rank	Product Name	Price	BUY	Compare
1.	<b>Canon Elura</b> Color Viewfinder: Yes Format: 8mm Horizontal Resolution: 500 lines Image Stabilization: No	\$699 LCD Size: 2 in. Optical Zoom: 14x Size: Palm	BUY	<input type="checkbox"/>
2.	<b>Sony MRV2</b> Color Viewfinder: Yes Format: MiniDV Horizontal Resolution: 500 lines Image Stabilization: No	\$500 LCD Size: 2 in. Optical Zoom: 14x Size: Palm	BUY	<input type="checkbox"/>
3.	<b>Hitachi TT4R</b> Color Viewfinder: No Format: M43 Horizontal Resolution: 600 lines Image Stabilization: Yes	\$750 LCD Size: 1 in. Optical Zoom: 20x Size: Mini-Palm	BUY	<input type="checkbox"/>
4.	<b>Canon Elura 2</b> Color Viewfinder: No Format: 8mm	\$600 LCD Size: 2.5 in. Optical Zoom: 10x	BUY	<input type="checkbox"/>

"The arrow should be more prominent." -- Dominic L., Basic Level User

"I hesitated because I wasn't sure whether I should check the box or click compare." -- Tim P.

Users also reported some confusion about what the radio buttons for changing display results from 'simple' to 'pictures and details' meant. And several users never even saw the radio buttons. Most users preferred the detailed view to the simple view. The users that did like the simple view tended to be advanced users who like a lot of control when they search.



# Timing Test

## Timing Test

- The range of times reported was 2 to 13 seconds with the mode being 4 seconds.

### User's Overall Perceptions About the Interface

- Interestingly, although most users didn't fully understand the function of the importance scales, they would describe the end-result of its functionality. For example:
  - *"It's an agent that helps you figure out what's important to you. It's value is that it saves steps."*  
--Mike B., Advanced Level User
  - *"It's a way to help you narrow your search; it helps you make decisions."*  
--Tim P., Intermediate Level User
  - *"It combines advice, search and buy and it can go deep."*  
--Elizabeth G., Intermediate Level User
  - *"It helps me understand my shopping preferences and filter."*  
--Yan B., Intermediate Level User
  - *"It helps you decide what's important so you know what your priorities are."*  
--Sandi J., Basic Level User



# Recommendations

- Add explanatory copy on the first page explaining how to use the importance scale to optimize your search. Use the value proposition concepts articulated by users -- i.e. "It helps you decide what you want." Conduct copy tests with a few users to ensure the copy communicates what you intend it to communicate.
- Consider collapsing all "features" under a super category heading called "product features" and allow users to set search parameters on features as a second level filter (i.e., once "product features" is selected the current list of features appears and they can drill down from there.)
  - After launch, conduct path analysis to determine usage of the features in users' searches. Use the findings of the path analysis to support the decision about whether or not to collapse "features" under a super category.
- Consider changing the graphic display of the pop-ups for "get advice" to look more like the Day 4 Prototype #2. Although this prototype was only shown to 4 people, they all had positive reactions to it even if they preferred the feature-based version. And while users on days 1-3 may have liked the functionality of the pop-ups, there were some negative perceptions of the content within the pop-ups that I believe were related to their graphic look and feel.
- Move the buy button away from the box used to select items for comparison in the search results.
- Make the "view" feature that enables users to change the way results are displayed more prominent and less ambiguous. The word "view" should be set apart from the radio buttons.
- Consider putting a photo or two of products on the first page in lieu of the woman's face.
- Continue iterative user testing!