HOTEL SEARCH

DESIGN & USABILITY

REPORT

Alex Bainbridge
Travel UCD

MARCH 2003

1 Copyright

Websites change over time. This report reflects the status during February 2003.

Published 4th March 2003 **Version** 1.00

2 About the author

This report has been written and researched by **Alex Bainbridge**. He is a senior consultant at Travel UCD and specialises in travel website user-interface design issues.

Alex produced his first website in 1994. He has since worked in a variety of software design, development, commercial and project management roles, lately in the travel industry.

Before forming Travel UCD he was the head of web design and development at Andbook Online (online hotel distribution). He has extensive experience in the independent, adventure, and cultural tour-operator sector, and was managing director of a UK-based tour operator.

Alex holds a BSc (Honours) in Applied Computing and is a member of the Usability Professionals Association.

3 Executive summary

Overview

This report analyses the primary hotel-search functionality in use on hotel-reservation websites in the B2B and B2C marketplaces.

It suggests ways of improving search functionality and offers guidelines that can be used as a checklist of best industry practice for hotel-reservation website search functionality.

Why is search important?

Search is a basic feature of a hotel-reservation website. It should allow users to locate hotels that match their requirements with clear yet powerful functionality.

In January 2003 Elizabeth Peaslee, VP for Customer Experience at Travelocity, made the economic case in an interview published by GoodExperience.com. She said that when Travelocity altered its search functionality from a system based on IATA city codes to a clearer method, online hotel bookings rose by 25% in one month.

Not only can search improve booking numbers, but clearer searches will reduce user errors. For example, in August 2002, two travellers who intended to visit Sydney, Australia, accidentally purchased flights to Sydney, Canada. (http://news.bbc.co.uk/1/hi/uk/2172858.stm)

Although this is an extreme and uncommon example, the method by which a website handles user errors does have an effect on users. If users can't achieve their goals efficiently, their subjective satisfaction of the quality of the website is reduced. It's one more factor governing the retention of customers in a competitive marketplace.

What is usability?

A user interface is the aspect of a website (or application) that users interact with and experience first-hand. Usability is a quantitative and qualitative measurement of the design of a user interface, grouped into five key factors:

- learnability
- efficiency
- memorability
- errors
- satisfaction

(Jakob Nielsen (1993) *Usability Engineering)*

In the competitive online hotel-reservation industry, user-interface design and usability is a key differentiator between websites offering similar products. A user who enters a website must be

able to understand the design immediately. There are no opportunities for training or user manuals.

If users can't immediately understand how to use a website, they will either transfer to another means of communicating (such as telephone or email) or click to a competitor.

The key difference between *usability research* and *market research* is that market research tells you whether a group of people *will* use a website, while usability research tells you whether they *can* use it.

What is in the report?

- An explanation of the key concepts with hotel search and error handling
- Results and analysis of usability testing conducted by Travel UCD
- 34 guidelines that define the best industry practice for hotel searches

Information sources

This report is based on an analysis of the following:

- A **functionality evaluation** of 52 hotel-booking websites (16 travel agencies, 36 hotel-booking agencies)
- The observations from a **12-user usability test**, conducted on five leading hotel-booking websites

The full list of websites and tasks used in the usability tests can be found in the Appendix.

Target audience

This report is written for designers and product managers of any hotel-reservation website that offers users a choice of hotels within the following market sectors:

- Leisure bookers (B2C bookers)
- Business travellers (B2B bookers)
- Independent business travellers (B2B bookers), who exhibit similar behaviour as leisure bookers

Definitions

The following website definitions are used throughout this report:

Travel agency website: A website that offers more products than simple hotel-booking functionality (e.g. car hire, flights) – for example Travelocity.com, Expedia.co.uk, Orbitz.com.

Hotel-booking agency website: A website that takes hotel bookings / reservations as its primary business – for example Hotels.com, Placestostay.com, Lodging.com

4 Introduction

4.1 Three primary search goals

There are three primary goals that a user may have when searching for a hotel on a hotel-reservation website. These are:

- Searching for *a particular hotel*
- Searching for a range of hotels *within a defined region* (such as an island, a state etc)
- Searching for a range of hotels *within a defined city*, town or destination

A user's search goal depends on the kind of traveller they are, and the stage of the reservation process they have reached.

Examples:

- A *business traveller* may be searching for a particular hotel (e.g. the same hotel as a colleague, a hotel suggested by the company they are visiting, a hotel that they have previously visited).
- A *holidaymaker* may be looking for a selection of hotels in a particular region of a country, but with no particular city or town in mind.
- A *leisure traveller* may be looking for a weekend break and a selection of hotels in a particular city or town.
- A *traveller* may want to find a specific hotel because they are comparison-shopping between travel websites and need to compare prices for the same hotels.
- A *traveller* may have specific hotel requirements such as a swimming pool

In this report we look at these three user goals and their corresponding functionality.

4.2 Link- and search-dominant users

In 1997 Jacob Nielsen, a leading usability researcher and author, defined three styles of user depending on how they search. He described them as link-dominant and search-dominant.

"Half of all users are search-dominant, about a fifth of the users are link-dominant, and the rest exhibit mixed behaviour."

The way that users start looking for a hotel that matches their requirements depends on which class they belong to.

"The search-dominant users will usually go straight for the search button when they enter a website: they are not interested in looking around the site; they are task-focused and want to find specific information as fast as possible. In contrast, the link-dominant users prefer to follow the links around a site: even when they want to find specific information, they will initially try to get to it by following promising links from the home page. Only when they get hopelessly lost will

link-dominant users admit defeat and use a search command. Mixed-behaviour users switch between search and link-following, depending on what seems most promising to them at any given time but do not have an inherent preference."

Reference: http://www.useit.com/alertbox/9707b.html

In this report we will see how various search and navigation functionality appeals to these three user classifications.

5 Three primary search goals

5.1 Specific city (destination)

Searching or browsing by city (destination) is the most common navigation method supported by hotel-reservation websites. The feature appears on nearly all websites.

5.1.1 Destination search-box

Figure 1: Opodo.co.uk – A destination search-box (labelled 'city')

Providing users with a destination search-box for free text entry (as above) is the most powerful mechanism for locating hotels on a hotel-reservation website. But allowing users to enter any text they wish introduces another level of complexity to ensure that the most appropriate response and results are given.

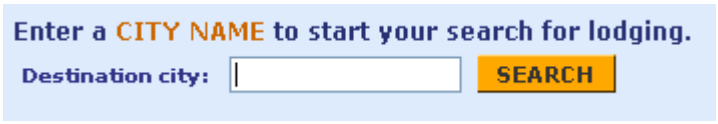
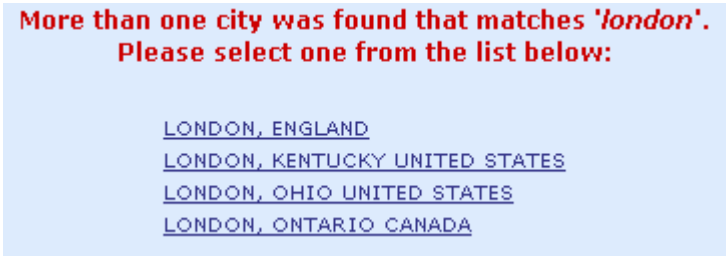
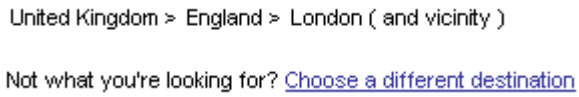
5.1.1.1 Non-unique destinations

City names are not unique. The same names recur throughout the world, often within the same country. It's a primary challenge to clear hotel-search functionality.
For example, travellers can visit a Paris in France, Canada, Idaho, Illinois, Kentucky, Missouri, Tennessee, or Texas.

If a user initiates a search for a hotel in Paris, the website needs to have a mechanism for returning results for the correct Paris. And it needs to communicate this mechanism clearly to the user.

There are three common designs that address this problem. They are listed in the table below:

TABLE 1: Three common designs to address non-unique destinations

Non-unique destinations	Example
OPTION #1 **Country selected at same time as city** (Does not help with non-unique destinations within the same country)	 **(Opodo.co.uk)**
OPTION #2 **Request, on subsequent page, that the user confirms the required city**	 **V**  **(TravelHero.com)**
OPTION #3 **Make an assumption about the city (in this example, London) – and invite the user to amend it if the assumption is incorrect**	 **(Expedia.co.uk)**

Source: Travel UCD Research, February 2003

In our analysis we found that 9 of the 31 websites with a destination search-box use a country selection dropdown on the same screen as the city / destination entry (option #1).

The design options above are not mutually exclusive. If you specify the city / destination and country (option #1), your website will still have to account for the scenario where multiple destinations with similar names occur within the same country.

Also, you could apply options #2 or #3 depending on the audience that your website is addressing. For example, it would be reasonable to assume that a search for 'London' on a website localised to the UK marketplace refers to London, UK (option #3). However, on a website localized to the USA marketplace, option #2 might be more appropriate. It would reflect a greater level of uncertainty between choices for the US and UK 'Londons'.

Notes from the usability testing:

We constructed tests within the usability testing to investigate the differences between these three options when searching for locations that are non-unique. (Further details can be found in the Appendix)

When we conducted the tests, we were pleasantly surprised to find no significant differences between the designs caused by how the non-unique destination was resolved. (#2 or #3)

There were minor issues on the implementation of option #2, in particular where dropdowns were used to display the potential options. Users didn't always understand that they had to choose between different destinations. This issue could be resolved by displaying the potential destinations on the screen rather than in a dropdown. This approach is demonstrated in the TravelHero.com example in the table above.

However, we did uncover significant differences between the handling of user errors. We highlight this issue later in the report.

Guidelines:

- Our preference is for option #1 with a country dropdown on the primary search
- If option #2 is implemented (for matching non-unique cities between and within countries) the possible results should be displayed on the screen rather than in a dropdown.
- If a list of possible results is displayed on the screen, it should be presented in decreasing order of probability based on city size, number of hotels in the city, previous reservations, market knowledge etc.

5.1.1.2 Text label

The wording on a website is almost as important as the functionality, especially when it tells users what they can expect from a piece of functionality – and how it will behave.

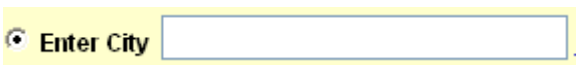


Figure 2: Text label using word 'city' on Hotels.com

TABLE 2: Text used to label a destination search

Text used for destination label	Travel agency	Hotel-booking agency	Total
City	12	20	32
Destination	3	6	9
Location	1	2	3
Region	-	1	1
City / Resort	-	1	1
Town / City	-	1	1
Town	-	1	1
Where?	-	1	1
Not stated	-	3	3

Source: Travel UCD Research, February 2003

Table 2 shows that the word label most used to indicate a destination is 'city'.

On a hotel reservation website many other types of location information could be entered in a search field such as:

- Airport code
- Region name
- Point of interest
- Town or small city

When users want to enter information that is not a city name, the label 'city' has the potential to cause confusion.

In the usability testing users were unwilling to enter names of smaller cities or towns in a search entry-box labelled 'city'. The confusion was strongest when users were asked to search for a region or area that has no 'cities' – only towns – making statements like "There are no cities on the Isle of Wight so what can I put in this box?" (See the Appendix for further details)

Guideline:

- Use the word 'Destination' in preference to 'City' as the label to a destination search-box (if the functionality supports a destination search)

5.1.2 Top-destination shortcut

A 'top-destination' shortcut provides a means for users to enter a destination without completing the destination search-box.

In our analysis we found that 11 of the 52 websites we looked at use a top-destination shortcut.

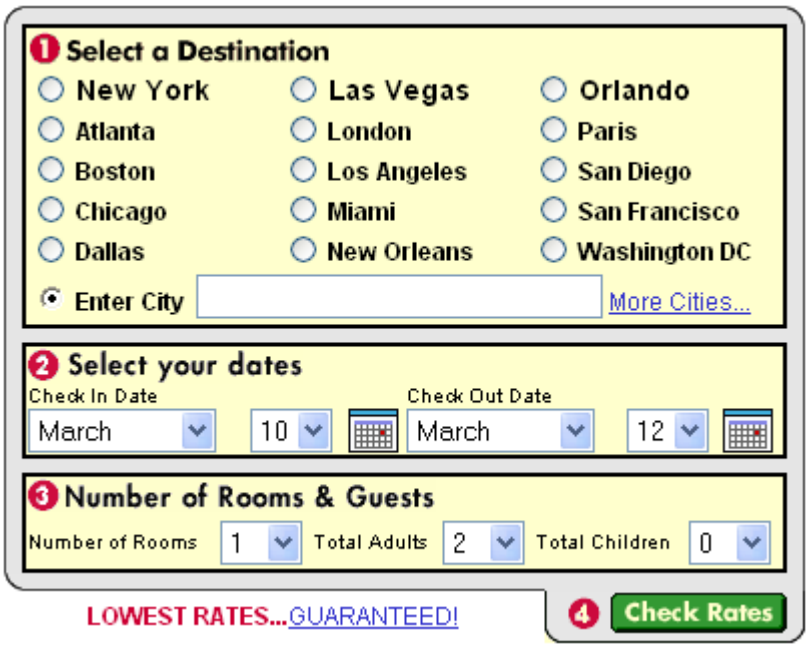


Figure 3: Hotel search from Hotels.com, showing 15 top destinations for the US market

Offering a layout of top destinations on the screen (rather than in a dropdown) may appeal to users who are more 'link-dominant' rather than 'search-dominant' because the keywords (the destination) do not have to be entered into a search box.

Notes from the usability testing:

Testing did not reveal any obvious confusion between the top-destinations lists and the destination search-boxes at OnlineTravel.com and Expedia.co.uk. Both sites feature a list similar to that used on Hotels.com, above.

Guidelines:

- Provide a 'top-destination' shortcut for popular destinations.
- Update the top-destinations list regularly. Choose destinations that reflect the marketplace and the season.

5.1.3 Restricted destination list

A restricted destination list presents users with a specific set of destinations to choose from. They cannot directly enter their destination in a destination search-box.

We found that 11 out of 52 websites restrict destinations in this way.

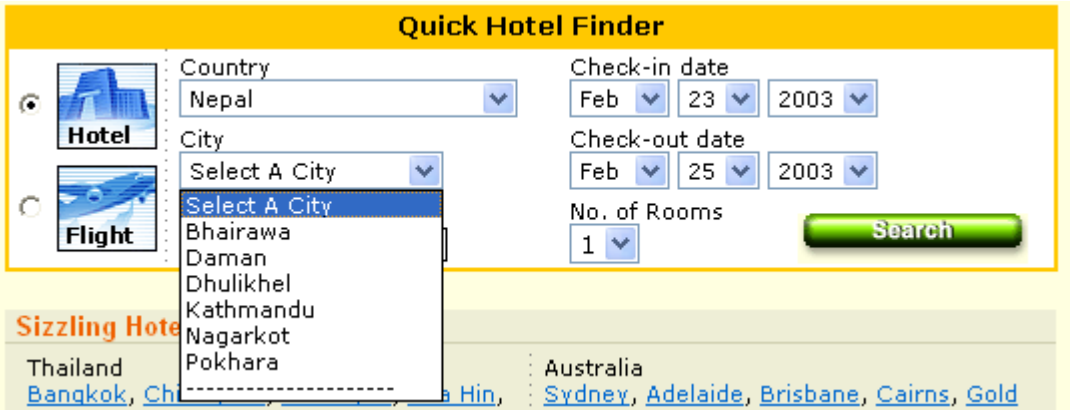


Figure 4: Restricted city list from AsiaTravelMart.com showing cities in Nepal

In Figure 4, above, the list of available cities in the city dropdown changes to reflect the chosen country.

Implementation of this style of functionality is not difficult. It's simply a matter of matching known destinations with the countries in which they lie.

Providing a restricted list of cities is another way of appealing to users who are 'link-dominant' without excluding those who are 'search-dominant'.

Note: we did not conduct any usability testing on a website that uses this style of hotel-search functionality.

Although not based on evidence from usability testing or other analysis, we believe that a well-implemented restricted-destination search will be easier to use than an averagely implemented search – and with much less development overhead.

5.1.4 IATA city codes

Once a destination has been entered into a destination search-box, a website may use IATA (International Air Transport Association) city names and codes to locate a corresponding location within a hotel database.

For example if a user searches for 'London' on an IATA-code powered site, the following follow-up question could be asked:

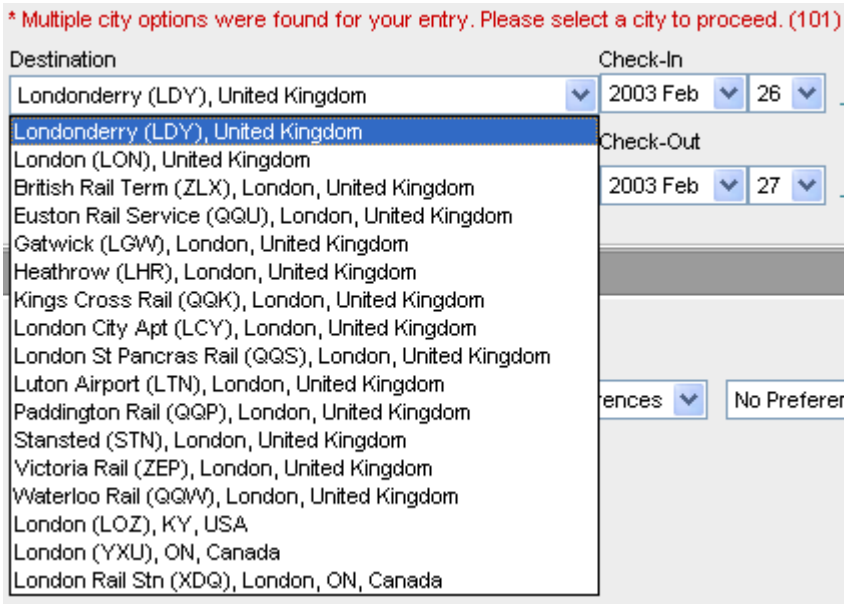


Figure 5: Results from searching for London on Travellink.com

Elizabeth Peaslee, VP for Customer Experience at Travelocity, said that when Travelocity replaced its IATA city code search in 1998 with an alternative method of handling search requests (Option #2, see Table 1), online hotel reservations went up by 25% in one month. Her comments were made during a January 2003 interview with Mark Hurst of GoodExperience.com.

We cannot be certain that this gain in reservations was wholly due to the removal of IATA city codes, but we do know that using this kind of city matching has the following issues:

Potential hotel supply and system issues:

- On some systems, a hotel may only be aligned to a single IATA city code. The system may have to choose between, for instance, an airport and a major town or city.
- Some hotels may choose to align themselves to the IATA city code that brings most reservations rather than the code that is most geographically relevant. (For example, a hotel may align itself with a large crowd-pulling destination such as London rather than a nearby town or smaller city)

- Some IATA city codes are not linked to any hotels. There are, for example, many hotels near London's Waterloo Railway Station – but all of them have chosen to align themselves with the primary London IATA city code ‘LON’ rather than the 'QQW' of Waterloo.

User issues:

- The order in which IATA city code lists are returned should be optimised to make the most likely destination the default destination. For example, ‘London’ rather than ‘Londonderry’. (See figure 5)
- Not all towns and cities have an IATA code.

In practice it is predominantly reservation systems powered by GDS (Global Distribution System) that use IATA city codes.

Guideline:

- Ensure that internal implementation strategies such as IATA city and airport codes do not restrict a user's ability to conduct searches or conflict with other guidelines in this report.

5.1.4.1 Other notes

Destination search entry formats

The destination search-box should be able to accept all of the following:

1. City / town names
2. Regions (counties, states, etc.)
3. Island names
4. Airport names
5. IATA airport codes
6. IATA city codes
7. Suburb / district names (within cities)
8. Office locations of large businesses
9. Points of interest (tourist attractions etc)
10. ZIP / Post codes

The order of priority will depend upon the requirements of a specific hotel-reservation website and its target users. The above list is ordered for a B2C leisure-travel hotel-reservation site.

Guideline:

- Support as many from the above list as technically possible, through a single search box.

Refer to section 7 for further information about handling errors from this style of search box.

Reducing user errors with country selection

Figure 6: LuxRes.com – showing city and country search-box

When the user types in 'London' on LuxRes.com (shown above), the country search-box automatically updates with the correct country. The feature has not been implemented on all cities. It is, however, an effective way of reducing the possibility that the country field is left blank or that the user mistypes the country.

Guideline:

- The user must be in control of the user interface at all times (i.e. no unexpected changes). But, if an opportunity for user assistance exists, it should be taken

5.2 Specific region

Region searches are poorly supported within hotel-reservation websites. They are, however, popular with users who have no specific destination in mind and who simply want to browse potential locations. (This is particularly true for leisure travel rather than business travel where journeys may be more flexible and not based on urban locations)

We found that 18 of the 52 websites we analysed allowed users to search for a hotel within a region, rather than within a specific town or city.

The following forms of functionality enable a region search:

- Map or link directory
- Destination search with user configurable radius selection
- Region search-box

Further functionality can be supported from the results pages to let users select towns and cities near the original search request.

5.2.1 Map or link directory

Figure 7: Opodo.co.uk showing a succession of pages on a map directory (left to right)

The user navigates the map directory by clicking on the appropriate region of the map. Each subsequent page presents a closer view with additional detail and sub-regions. (As shown above in figure 7)

There are three key issues with a map directory such as this:

- Some users may just want to see which towns and cities within a region have hotels before viewing the hotels in one particular town or city (i.e. use the map to choose a town or city)

- Some users may wish to see all hotels in a particular region
- It does require a certain level of geographical knowledge from the users

Therefore there is a cut-off point between a regional list of hotels and a list of hotels in a particular town or city. The position of this point will differ depending upon the user's goal.

Map directories may appeal to users who are more 'link-dominant' rather than 'search-dominant' as the keywords do not have to be entered into a search box.

Notes from the usability testing:

When users actually used the map to search for hotels in a region they achieved 100% success. But users were not always aware that a map search would assist with a search by region and in some cases the map was not visible to users due to its position (below the screen fold on Opodo.co.uk)

Guidelines:

- Provide a map directory to enable users to search by region or locate towns and cities in a region.
- Ensure that the user is informed – and persuaded using functionality – that the map directory is the most appropriate method to locate hotels in a region.
- Let users control the point in the 'drilling down' navigation at which the list of hotels is displayed – either at regional or at town / city level.

5.2.2 Destination search with wide, user configurable, radius

Another search strategy for displaying hotels in a region is to search for a known town or city that is central to the region and widen the results.

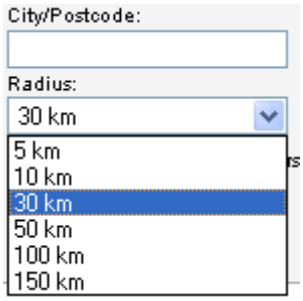


Figure 8: Lastminute.com showing destination search-box with capability to widen

In our usability testing we observed that this is not a natural search strategy for users unaccustomed to hotel-reservation websites.

Nor is it effective when there is no obvious destination for a user to place at the centre of the region to be searched.

5.2.3 Region search-box

Regions may also be directly entered into a specific region search-box:

Figure 9: Country (state) entry on Lastminute.com

The above example allows a user to enter a county (such as Hampshire) in the middle search box. In cases where a user-nominated city does not match any of those on its system, Lastminute.com can display a list of hotels that match a county or country.

Guideline:

- Usability is not enhanced by introducing a field that some users cannot complete (for example, may not know within which county or region a city lies)

5.2.4 Widening the search from the results page

Once the search results have been displayed, users have the option to widen the search results to towns and cities that are local to the original search request.

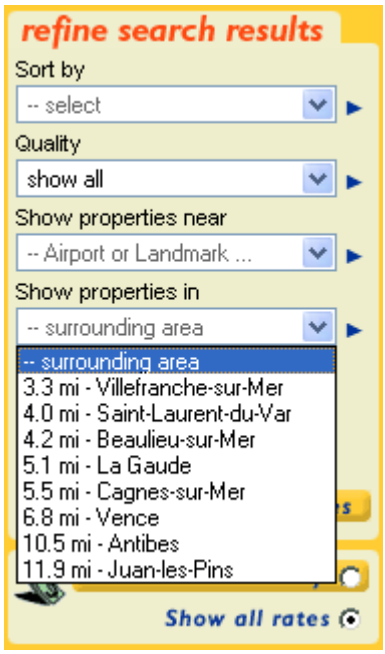


Figure 10: Placestostay.com (US) showing how a user can widen the search to locations near the destination they have previously selected (Nice, France)

We did not test search-widening in our usability testing. We expect that this functionality may be a helpful supplement to other region searching functionality (such as a map directory search) but not as a full replacement.

5.3 Specific hotel

The key difference between a search for a specific hotel and the other search goals evaluated in this report is that users are only looking for one result. In all other searches they are looking for a selection of results.

TABLE 3: Hotel-search by name

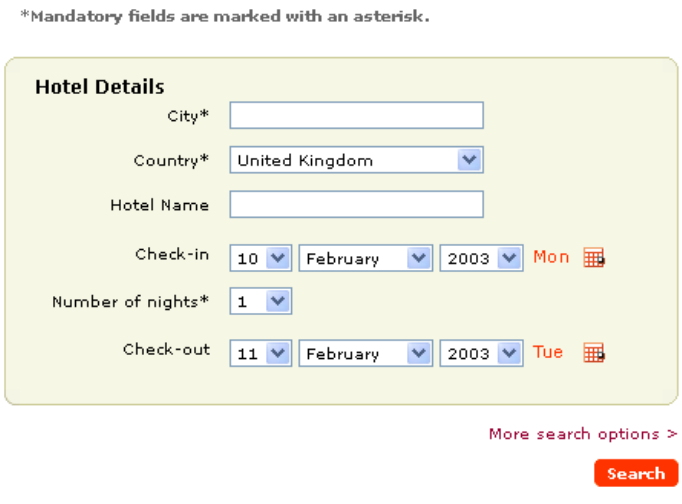
Hotel-search by name	Travel agency	Hotel-booking agency	Total
Primary (main search)	7	13	20
Functionality not present	3	16	19
Secondary / Advanced search	3	3	6
Opaque (no specific hotels listed on results)	1	-	1
Results page only	1	2	3
Secondary / Advanced search and on results pages	1	2	3

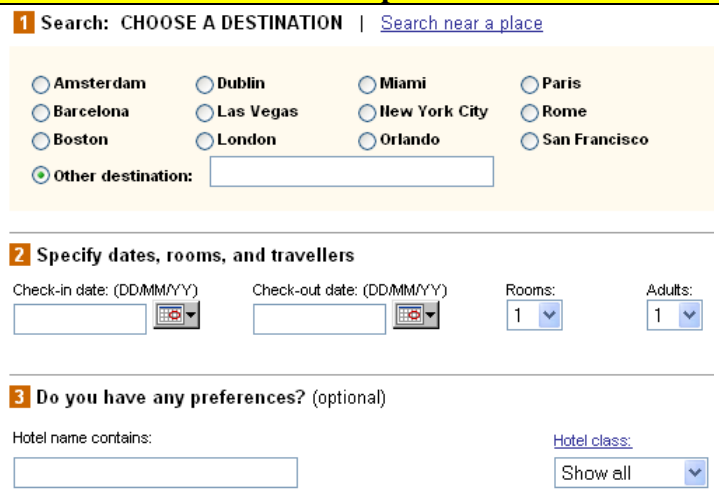
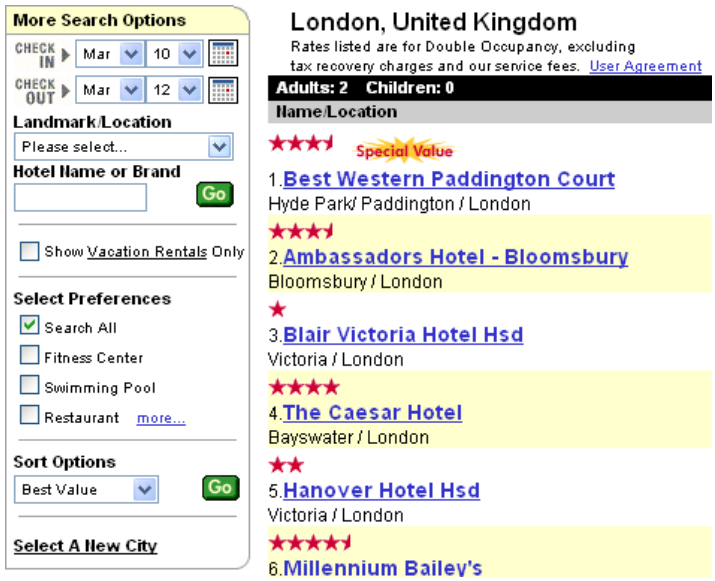
Source: Travel UCD Research, February 2003

Table 3 shows that 33 out of the 52 websites (63%) evaluated support functionality to enable a user to search by hotel name.

The table, below, gives examples of these designs:

TABLE 4: Example of 'hotel search by name' functionality

Hotel-search by name	Example
Primary (main search) **(Opodo.co.uk)**	

Hotel-search by name	Example
Secondary / Advanced search **(Expedia.co.uk)**	
Results page **(Hotels.com)**	

Source: Travel UCD Research, February 2003

Notes from the usability testing:

In our usability testing we observed that only 1 of the 12 users on Travelocity.com located and used the hotel-name search when it was positioned on an advanced or secondary search page.

This compares with 11 of the 12 users who were successful in using the hotel-name search on the Opodo.co.uk website, where the hotel name search is on the primary search screen.

Guidelines:

- Allow users to conduct a 'hotel-search by name'.
- Place the 'hotel-search by name' functionality within the primary search *or* if the functionality is provided elsewhere, explain on the primary search page how to search for a particular hotel.

6 Search scope

A scoped search is a search that has been restricted in some way – either to define a more precise request or to restrict the search to a particular range.

6.1 Where to scope?

Searches can be scoped in three locations:

- On the primary search
- On an advanced or secondary search
- From a 'refine the results' search from the results list

The goal of a scoped search is to provide results that match the users requirements more closely than a non-scoped search would. The risk with a scoped search is that insufficient hotels may be returned to the user because the scope was over defined.

Users also need to prioritise different scope factors – for example, one user will only stay in a hotel with a business centre; another user may simply prefer a hotel with a business centre, but will compromise if necessary.

The logical conclusion to this argument is that the option for a scope search should be limited to those users who have already understood the choice of available hotels within a destination and who now require additional functionality to refine the results.

TABLE 5: Search position

Text used for label	Travel agency	Hotel-booking agency	Total
Advanced / secondary search	6	16	22
Refine the results	3	4	7

Source: Travel UCD Research, February 2003

- 25 of the 52 websites evaluated provided no other search apart from the primary search.
- 2 of the 52 websites evaluated provided both an advanced (secondary) search as well as a facility to refine the results.

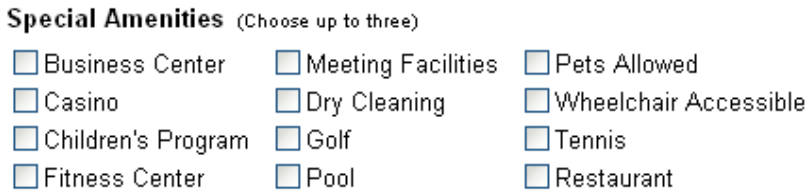
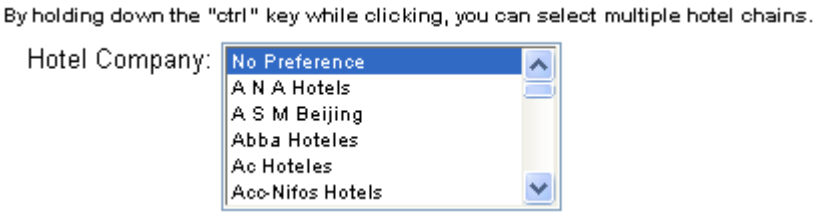
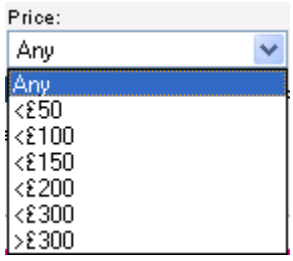
Guidelines:

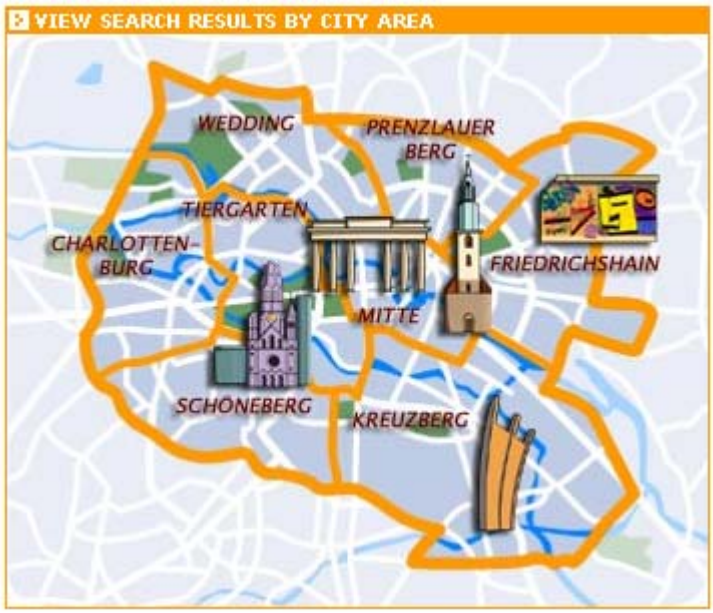
- Provide a non-scoped search as the primary hotel search (limited to destination, dates of stay and specific hotel name).
- Provide a secondary scoped search that supports refinements for experienced or regular users.
- Provide 'refine the results' scoped searches from the results pages.

6.2 What to scope?

Search scope functionality depends on the market within which the hotel-reservation website is competing. The following table gives a flavour of the range of functionality that is possible:

TABLE 6: What to scope?

What to scope?	Examples
Amenities	 **(Travelocity.com)**
Hotel chain / hotel brand	 **(Travelocity.com)**
Hotel class	 **(Lastminute.com)**
Price (Should indicate whether this is per *person* or per *room*)	 **(Lastminute.com)**

What to scope?	Examples
Property type	 **(Opodo.co.uk)**
Suburbs / districts within a city	 **(Venere.com - Berlin)**

Source: Travel UCD Research, February 2003

Guidelines:

- Display on the results pages the search used (destination and dates) and the scope that has been applied to generate the specific set of results.
- Only scope on fields where correct data is available for the majority of hotels

6.3 New search

Scoping a search refers to refining the set of results that are returned to users for a particular search. An alternative is for users to change their basic search once the range of available hotels for their original request has been displayed. This is in effect a new search, but it should be supported from the results pages as it facilitates browsing and comparison behaviour.

Guidelines:

- Allow users to change the dates of stay from the results page and re-search.
- Allow users to widen their results (geographically) from the results page and re-search.

7 Error handling

Users will make errors even on the best web designs. These errors can be split into three groups:

- Errors caused through unclear design
- Errors caused by users mistyping a destination name or other text entry
- System errors (not covered in this report)

Three primary goals relate to the handling of errors:

- Reduce the number of errors made by users
- Reduce the severity of errors when they do occur
- Enable users to correct themselves and continue without hindrance

7.1 Understanding user requests

With a destination search-box, users enter search requests in a free text box. This will produce search requests that seem logical to the user but may not be understood by the website.

Notes from the usability testing:

During the usability test we observed 4 of the 12 users mistype a hotel name within a hotel-name search-box, even when the hotel name was handed to the user on a piece of paper.

We also watched 3 of the 12 users fail to find a hotel in York, UK on the OnlineTravel.com website because they entered 'York, UK' in the destination search-box. These users had previously succeeded with a similar search on Expedia.co.uk. When the same approach failed at OnlineTravel.com, they could not understand how to complete the task. (Please refer to the Appendix for further details).

Guidelines:

- Accept translations (e.g. Londres (French) means London (English)) even on single language websites. (Including the local language of the hotel and the website's primary language)
- Accept common misspellings
- Accept spellings with and without accents if the destination / hotel name has an accent in its official name
- Accept common names for destinations (e.g. Stratford for Stratford-upon-Avon)
- Match user requests that contain a country name appropriately (e.g. match 'York, UK' to 'York'
- Disregard commas in the user request

- Understand all destination names in the area covered by the hotel reservation website, even if the website has no hotels in those destinations.

7.2 Error messages and display

Once an error has occurred, however it was caused, an error message should be displayed. Error messages help users understand what is going wrong. Attention should be paid to them to ensure they are clear and appropriate, and that they tell users how to resolve the issue.

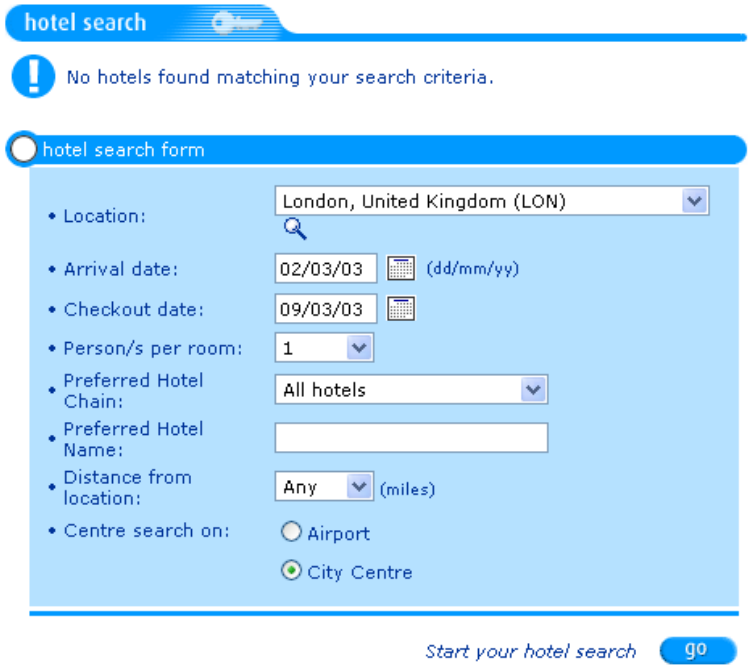


Figure 11: Travelstore.com error message after searching for London

An example above shows an unhelpful message on the TravelStore.com website. The user has entered dates of stay and 'London'. The error message states 'No hotels found matching your search criteria'. In this case the website should be asking the user to select a different 'London' from the location dropdown (refer to option #2 non-unique destination design in Table 1)

Guidelines:

- Error messages should tell users what steps are required to resolve the problem in the websites language.
- Error messages should match the request. i.e. if the user has searched for a specific hotel, the error message should relate to issues that can occur with searches for specific hotels.
- The error message for 'destination not known' should be different to 'destination known, but no hotels in that destination'.
- Offer a fresh search on the error page highlighting where the problem is, rather than expecting the user to go back to the previous page (using the browser back button).
- If the website has created a match for country but none on the destination, consider displaying a map directory (see section 5.2.1) for the known country on the error page. This offers users a fresh approach that stops them becoming stuck in a loop of similar errors.

8 Conclusion

This report has highlighted many key areas in hotel searches that can be improved on hotel-reservation websites.

As Elizabeth Peaslee, VP for Customer Experience at Travelocity, says in her interview with GoodExperience.com, small improvements in hotel searches can create a major impact on booking numbers.

We hope that many of the improvements proposed in this report will be implemented by hotel-reservation websites throughout the world. We are confident that the changes will generate higher customer conversion ratios!

Good luck!

Alex Bainbridge
Travel UCD

February 2003

9 Appendix

9.1 Usability testing

A usability test involves asking representative users to conduct tasks on the websites under evaluation. For this report we conducted one test with 12 users. Four of these users had previously booked travel online, the others were regular web users (but not web designers or people who work in the travel industry)

A usability test with 12 users is not statistically significant, but it does provide sufficient information for experienced usability test co-ordinators to understand the design issues.

You can run similar tests on your own websites, using the same tasks listed below, to compare the usability of your sites with those covered by our research.

9.1.1 Tasks and sites used

The tasks that we set were based on locating a particular hotel, or a selection of hotels, in a city or region. The user was told that the dates of stay could be any date within the next two months.

TABLE 7: Tasks and sites used in the usability testing

Number	Task	Website
Specific hotel		
1	"Le Méridien Piccadilly", 21 Piccadilly, London, UK	www.opodo.co.uk
2	"The Waldorf Astoria", New York, USA	www.travelocity.com
Scoped searches		
3	4 or 5 hotels in the Covent Garden / Strand area, London, UK	www.expedia.co.uk
4	4 or 5 hotels that allow pets to stay and children to stay free in Nice, France	www.us.placestostay.com
Region search		
5	4 or 5 hotels on the Isle of Wight, UK	www.opodo.co.uk
6	3 hotels in the New Forest, Hampshire, UK	www.lastminute.com
Multiple choice destinations		
7	4 or 5 hotels in Paris, Texas, USA	www.expedia.co.uk
8	4 or 5 hotels in York, UK	www.onlinetravel.com
9	4 or 5 hotels in York, UK	www.opodo.co.uk

Source: Travel UCD Research, February 2003

Note: For tasks 5 and 6, the Isle of Wight and the New Forest are both regions within 20 miles of Southampton, where the usability testing took place (South coast, UK). This ensured that the users had a good knowledge of the geography of the region – probably more knowledge than could be expected from a user travelling to a foreign country for leisure or business.

9.1.2 Observations

9.1.2.1 Task #1 – Specific hotel, Opodo.co.uk

Figure 12: Opodo.co.uk showing field for hotel-name entry

TABLE 8: Task #1 Observations

Users	Observation
7 PASS	Completed the task (2 of these 7 users had originally mistyped the hotel name, see below, but corrected themselves to go on to complete the task)
4 FAIL	4 users mistyped the hotel name – and arrived at the following error page Sorry, no matches were found for London, United Kingdom. Please see our search tips below, then go back to search. Search tips: • If you entered a destination or hotel name - Check spelling. - Type the full name of a city or hotel, not just the first few letters. - Do not use initials (e.g., type "New York," not "NY"). - Do not use abbreviations (e.g., type "Saint," not "St.") - If "hotel," "inn," "B&B," or "resort" is part of a property's name, be sure to include it. This page misleads the user with the sentence 'No matches were found for London, United Kingdom' when actually the issue was that the user had mistyped the hotel name. This error message does state that it could be the hotel name that is incorrect – but these 4 users did not comprehend the message. Each user visited this error page multiple times prior to us noting this as a task failure. It suggests that these users may not be reading beyond the first sentence of the error message.
1 FAIL	One user never saw the hotel name search on the main search page. They continued to the hotel results page – and never did find the particular hotel due to the large quantity of hotels returned (all hotels in London)

Source: Travel UCD Research, February 2003

9.1.2.2 Task #2 – Specific hotel, Travelocity.com

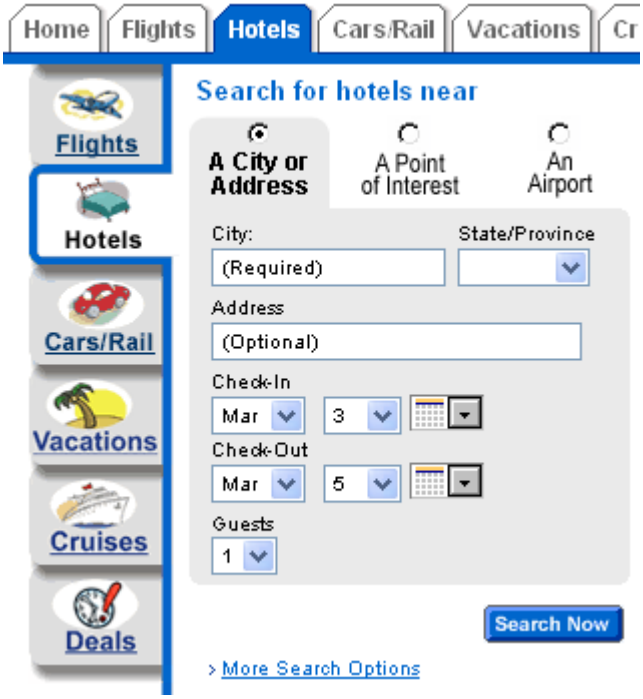


Figure 13: Travelocity.com showing address field and link to more search options

Figure 14: Travelocity.com showing new hotel search button, displayed at the base of all results pages (goes to the advanced search page)

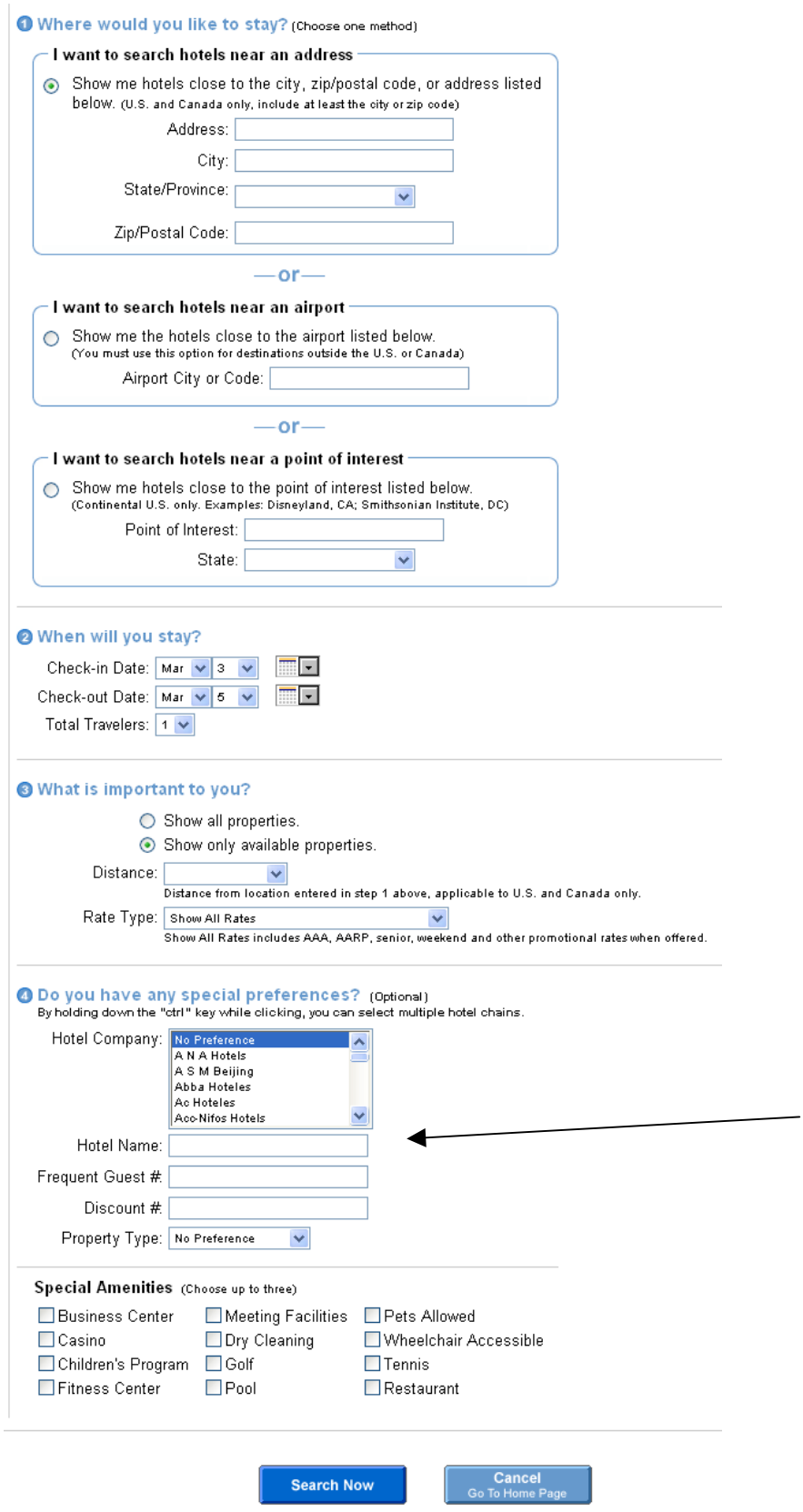
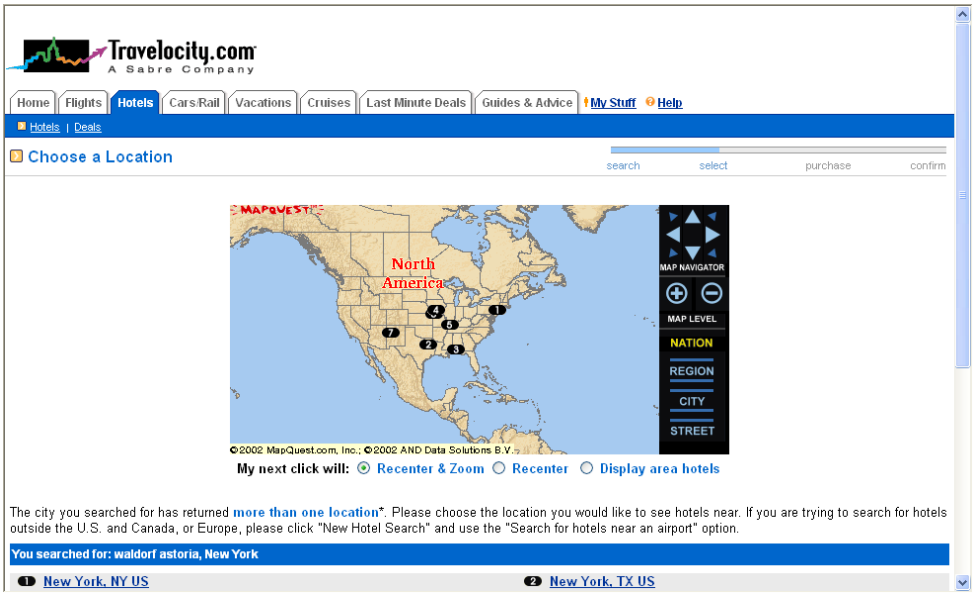


Figure 15: Travelocity.com advanced search page, highlighting hotel-name entry

TABLE 9: Task #2 Observations

Users	Observation
3 FAIL	3 users entered the correct city name (New York) and entered the hotel name in the address field. The following screen is displayed (1024 x 768) when, as in this case, a city has multiple matches:  Users should be selecting which New York they require. In this situation (with this screen size) the users clicked on the New York on the East coast of the USA (the correct New York) – but were confused because on each click the map would re-centre and zoom in closer. This unexpected result is explained below the map 'My next click will:' but these 3 users failed to comprehend how this map worked and could not understand how to select New York results (often zooming in several levels to street level before becoming confused as to how to progress) Another key point is that the large size map reduced the visibility of the text links (shown at the base of the screen) – some were even 'below the screen fold'. If the users scroll down a little further they can see that they are required to choose between different New Yorks. (2 other users visited this map screen during the usability testing and were able to use it, see below)
1 FAIL	1 user entered the correct city name and entered the hotel name in the address field. They arrived on the map screen, as above, and correctly selected the appropriate New York (from the text links). The user then reviewed a page of results (none of which included the correct hotel) – and then selected 'New Hotel Search' from the base of the results. Once there, the user continued to think that the address entry field would enable a search by hotel name (not seeing the actual hotel search by name that was on that screen). This did not work and after a number of tries the user became confused and gave up.

Users	Observation
3 PASS	3 users located the hotel correctly – but none of them located the hotel using the hotel-name search functionality. All users found the hotel after paging through 3 screens of results. (At the time we undertook the test, the hotel we were looking for was on the 3rd screen of results)
3 FAIL	3 users used a similar strategy as that above, paging through the screens of results. They gave up prior to finding the hotel on the 3rd screen so failed the task.
1 PASS	1 user located the hotel correctly – but originally started to page through the results pages. They clicked on the 'New hotel search' button from the base of the results pages – taking them to the advanced search page. On this page the user correctly found the hotel name search, entered the name of the hotel, and subsequently located the hotel.
1 FAIL	1 user entered the hotel name correctly and entered the hotel name in the address field. After successfully navigating through the New York selection map (see above) using the text link at the base of the screen, the user eventually arrived at the advanced search page. The user reviewed all options for search and stated that it was not possible to do a hotel search by name (it is possible from that screen)

Source: Travel UCD Research, February 2003

Summary:

- 0 of the 12 users used the 'more search options' link from the hotel search page
- 1 of the 12 users located the correct hotel through what we would consider a successful use of existing functionality
- 3 of the 4 users who located the hotel were fortunate that the hotel was on the 3rd page of results. On websites that have many pages of results, the hotel would not have been found.
- 5 of the 12 users entered the hotel name in the address field
- 2 of the 3 users who did locate the advanced search page did not spot the hotel name search that is on that page.

9.1.2.3 Task #3 – Scoped search, Expedia.co.uk

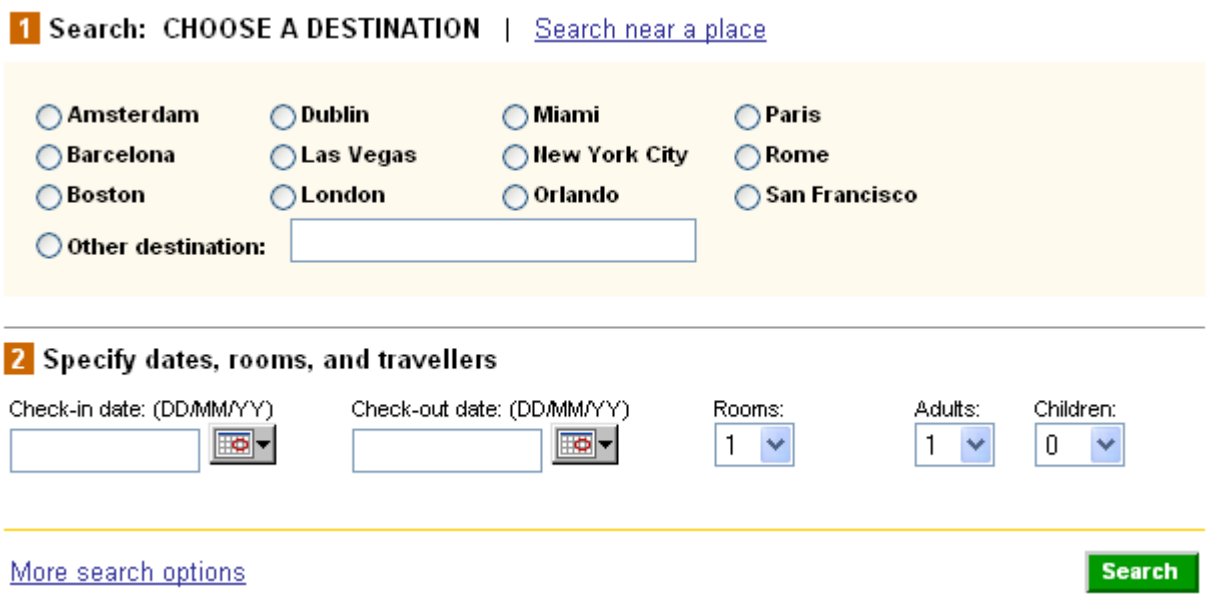


Figure 16: Expedia.co.uk showing primary hotel search, including top destinations

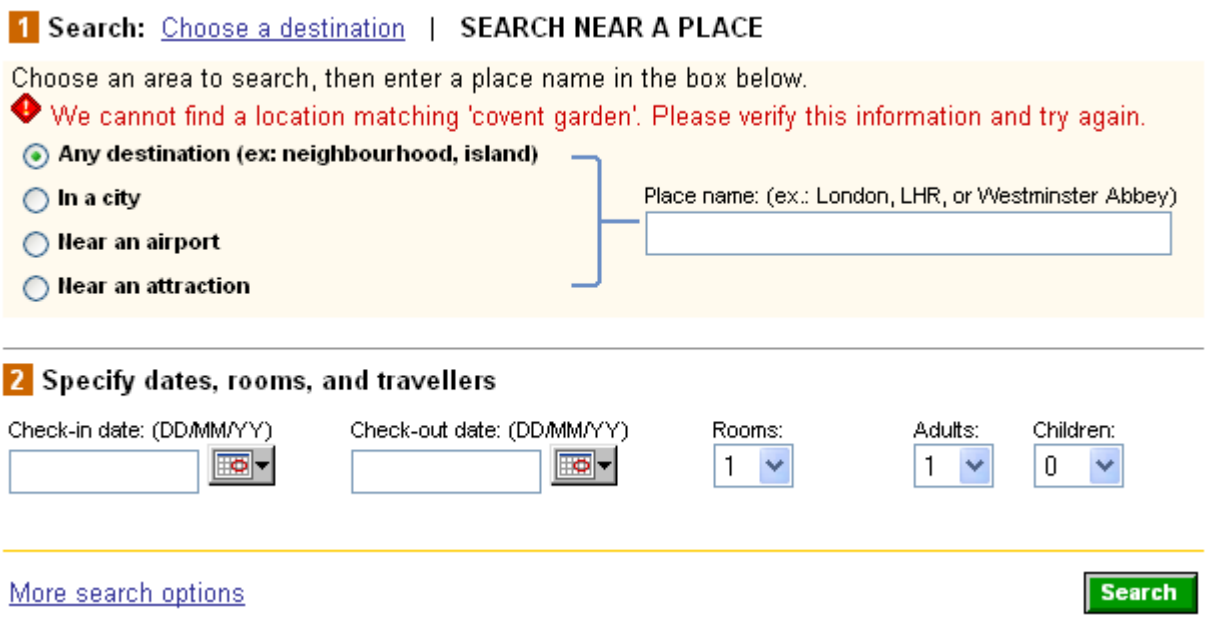


Figure 17: Expedia.co.uk showing 'search near a place'

Figure 18: Expedia.co.uk showing primary hotel search, including top destinations. Functionality supporting area scoping within London is marked

Figure 19: Expedia.co.uk map for scoping search within London

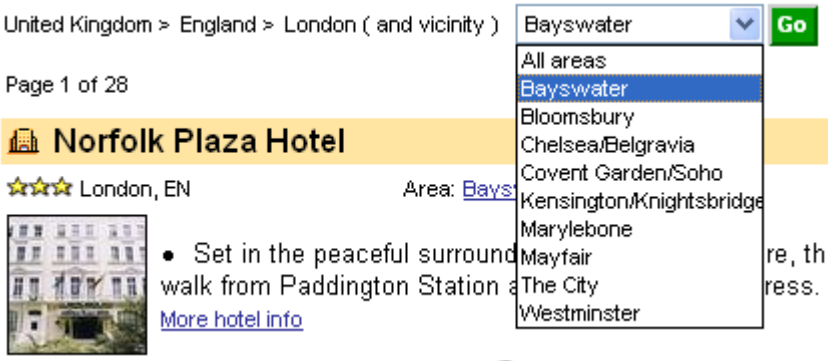


Figure 20: Expedia.co.uk area selection dropdown on the results page

TABLE 10: Task #3 Observations

Users	Observation
11 PASS	11 users were able to find hotels in the Covent Garden / Strand area. Of these 11 users: • 5 went straight to the area selection dropdown as their first action • 2 displayed the area map (through clicking 'area info'), reviewed the map, closed the popup, and then used the area selection dropdown • 1 displayed the area map (through clicking 'area info'), clicked on the map, and displayed properties for that area • 1 used the area selection dropdown that can be found on the 'Show on a map' page (a page that maps the hotels currently displayed on the results page) • 1 used the 'Search near a place' option – and searched for 'Covent Garden' as an 'Any destination' search • 1 scrolled down until they found 1 hotel that matched their requirements (reading the area tag that is stated next to each hotel listing). They clicked on that area, displayed the area map, and clicked on the map to display other properties in that area.
1 FAIL	1 user went to the 'search near a place' screen – and tried searching for 'Covent Garden' as a city. This did not work. If the user had tried the same text with the 'Any destination' selected (see figure XXX) then the search for 'Covent Garden' would have worked The user tried a few other combinations of Strand / Covent Garden – none worked – and gave up.

Source: Travel UCD Research, February 2003

9.1.2.4 Task #4 – Scoped search, US.Placestostay.com

Figure 21: US.Placestostay.com – showing two search styles side by side

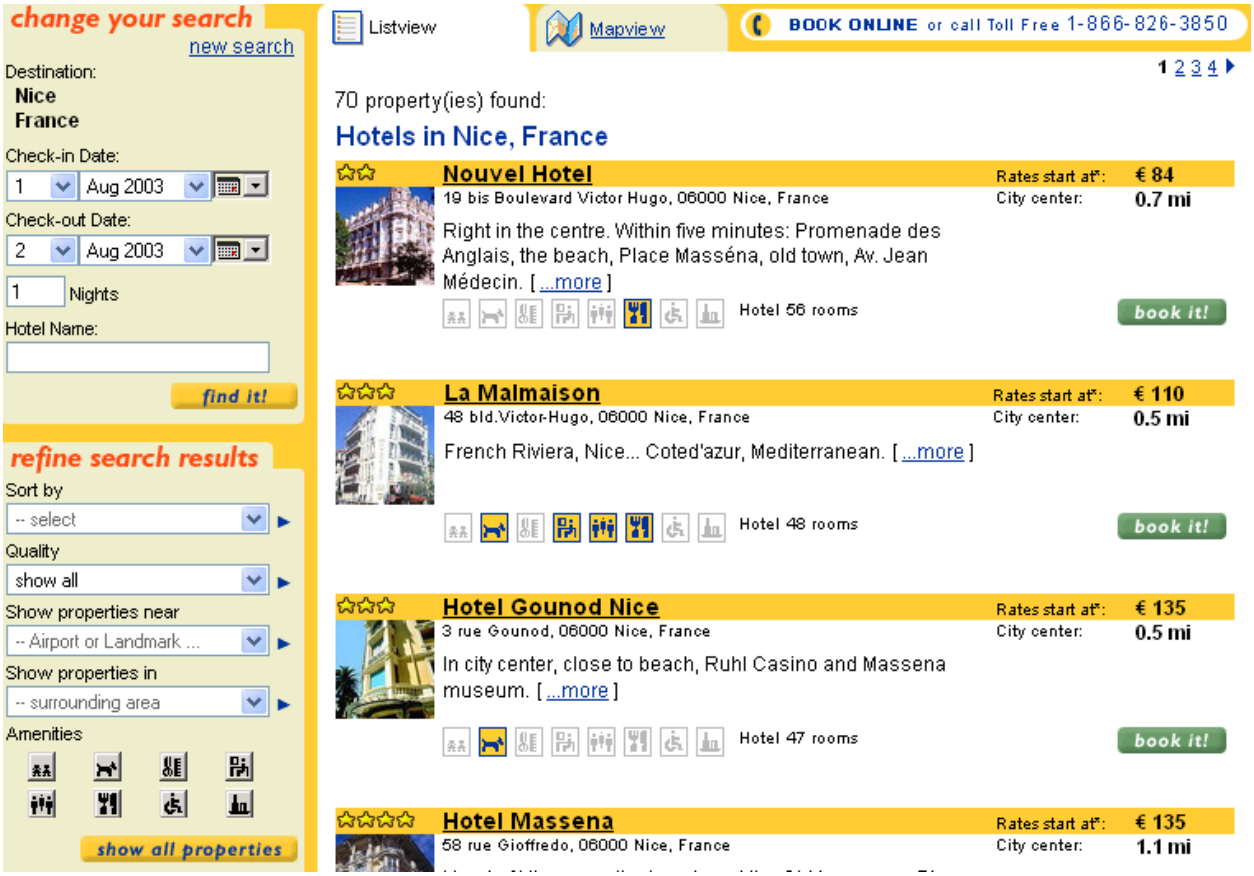


Figure 22: US.Placestostay.com – Results – showing amenity selection on left – and amenity display within the hotel listing

TABLE 11: Task #4 Observations

Users	Observation
9 PASS	9 users located hotels where children could stay free and pets were permitted. Of these 9 users: • 5 understood the amenity icons – but did not see the functionality on the left of the results screen, enabling selection of hotels with specific amenities. (These users located the hotels by scrolling down the page and recording which hotels had appropriate amenities). In a city with multiple pages of results, these users would not have selected a matching set of hotels)
3 FAIL	3 users failed the task for the following reasons: • 2 users mistook the 'meeting / banquet facilities' amenity icon with the 'children stay free' icon  - Children stay free  - Meeting / banquet facilities These 2 users, when questioned, stated that the 'meeting / banquet facilities' icon looks like a family. • 1 user mistook the 'children stay free' icon with 'children permitted' – and therefore became confused when trying to locate a matching set of hotels

Source: Travel UCD Research, February 2003

Other note:

- 4 of the 12 users used the map search, rather than the destination search-box

9.1.2.5 Task #5 – Region search, Opodo.co.uk

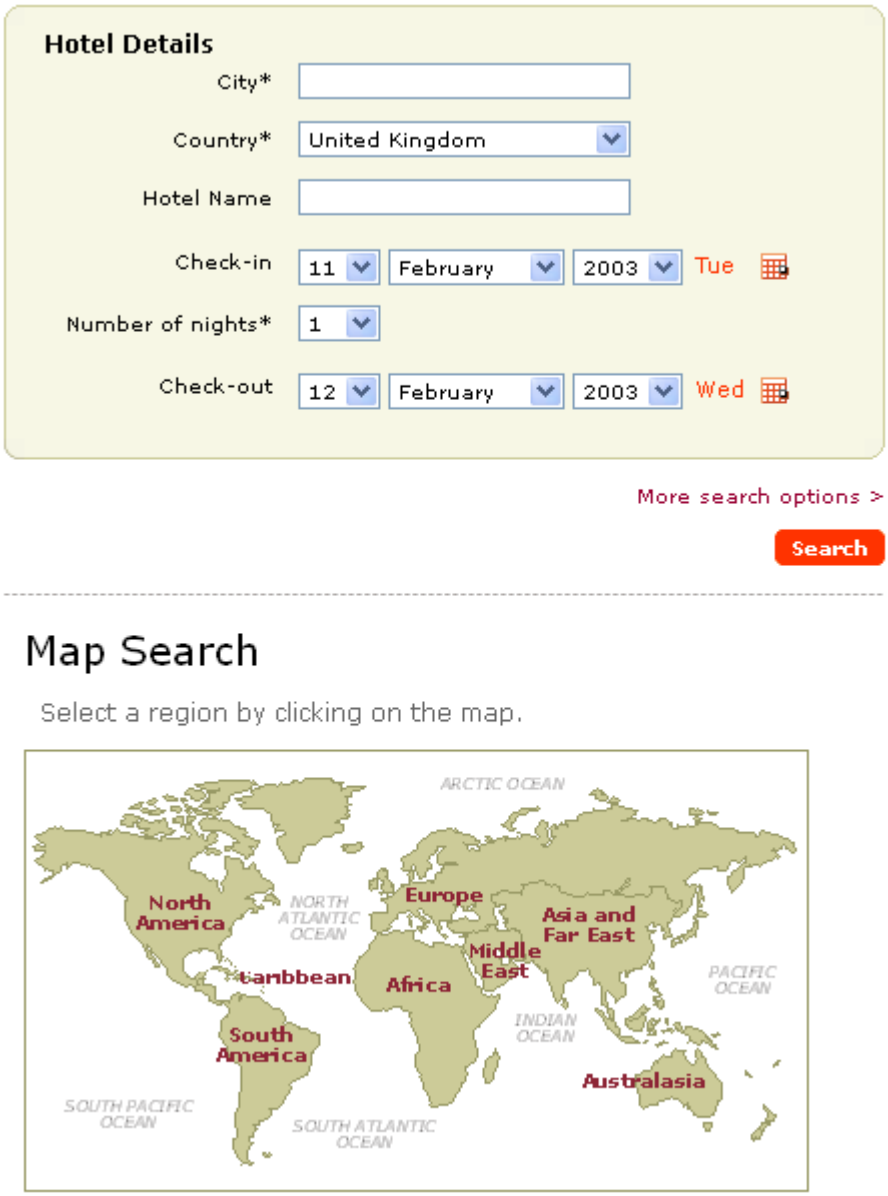


Figure 23: Opodo.co.uk – showing destination search-box at top of the screen and map search below

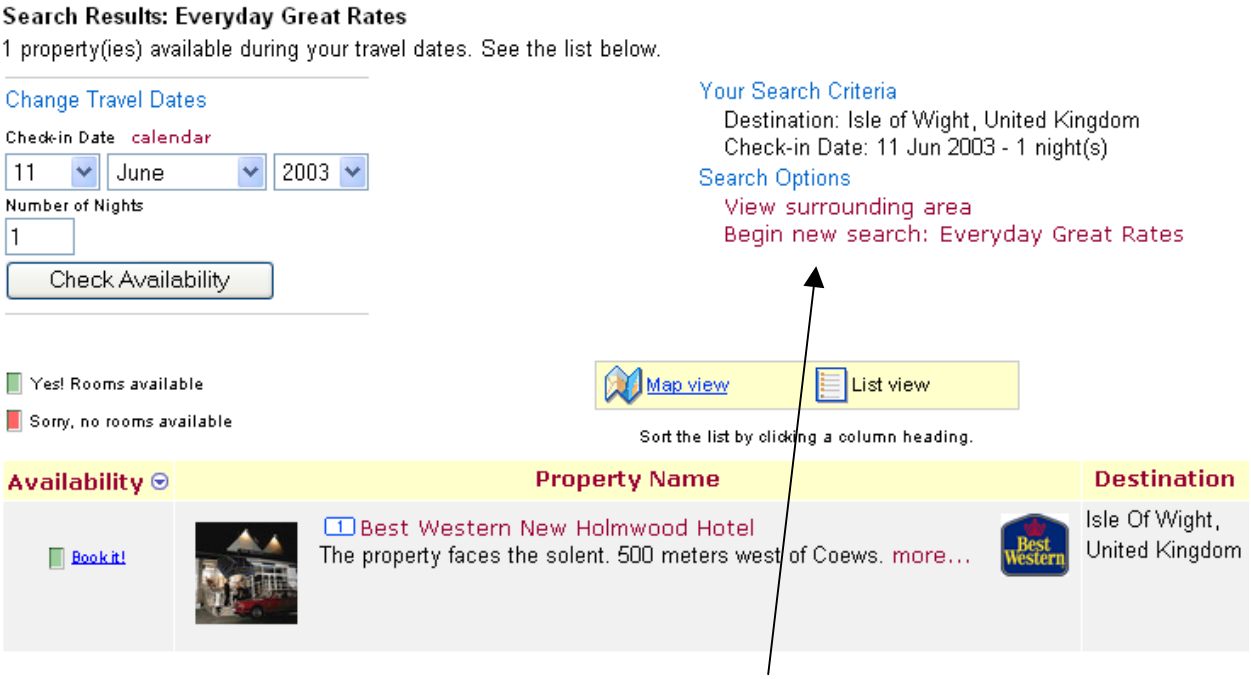


Figure 24: Opodo.co.uk – Results page, showing 'View surrounding area' and the single hotel on the Isle of Wight.

Note: At the time of testing there were 14 hotels on the Isle of Wight on the Opodo.co.uk website.

TABLE 12: Task #5 Observations

Users	Observation
3 FAIL	3 users entered 'Isle of Wight' as the city, reviewed the single hotel on the results (as per figure 24 above) and stated that that was all the hotels on the Isle of Wight. The evaluator suggested to the user that further hotels were available, but the user was unable to find any more.
3 FAIL	3 users entered 'Isle of Wight' as the city and reviewed the single hotel on the results. The evaluator suggested to the user that further hotels were available. These users then went back to the main hotel search page and tried several other dates of stay. None of these strategies provided further results on the results page.
2 FAIL	2 users had a strategy of entering a known city or town on the Isle of Wight – such as Cowes or Newport. The following message was displayed: Sorry, no matches were found for Cowes, United Kingdom. The problem with this message is that actually the destination was entered correctly –and does exist – but the website did not have any hotels in these areas – so the users were mislead by this message and were unable to continue.
3 PASS	3 users entered 'Isle of Wight' as the city, reviewed the single hotel on the results, and continued to select 'View surrounding area'. This displayed all hotels on the Isle of Wight correctly.
1 PASS	1 user used the map search, zooming into a page displaying all hotels on the Isle of Wight without further problems.

Source: Travel UCD Research, February 2003

Summary:

- Only 1 of the 12 users used the functionality specifically designed for searching regions – the map search
- 2 of the 11 other users used a search strategy that matched the functionality they were using – entering either Cowes or Newport in the destination search-box
- 9 of the 12 users entered 'Isle of Wight' in the destination search-box even though it is labelled as 'city'.

9.1.2.6 Task #6 – Region search, Lastminute.com

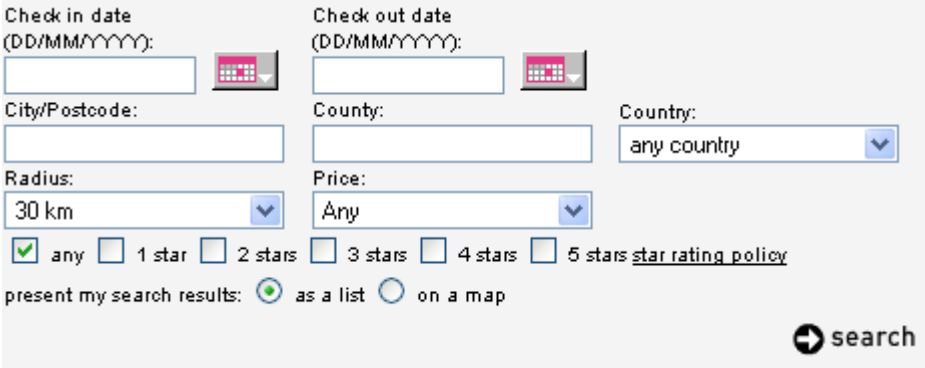


Figure 25: Lastminute.com – showing main hotel search

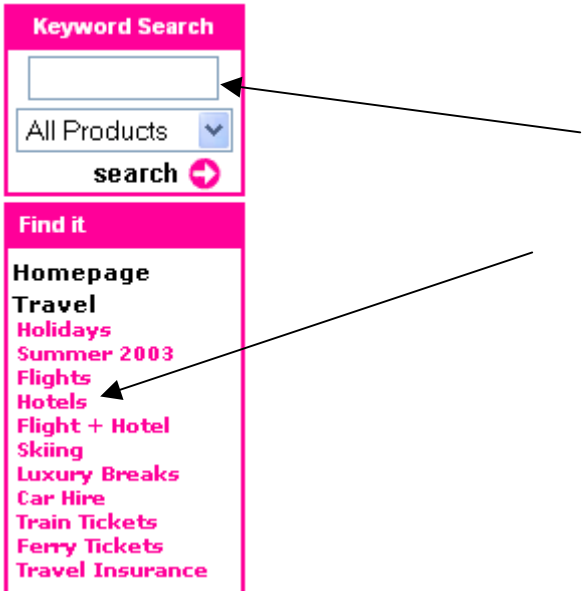


Figure 26: Lastminute.com – showing left travel menu and all product search

Note: At the time of testing there were 3-4 hotels in the New Forest on the Lastminute.com website.

TABLE 13: Task #6 Observations

Users	Observation
6 PASS	6 users entered New Forest as the city, Hampshire as the county, UK as the country This produces results – although the results are not exclusively for the New Forest. (The results are for Hampshire, United Kingdom rather than the New Forest) 3 of these 6 users originally chose 'Any country', the default country dropdown setting. The website clearly stated that the city was not recognised and requested that the user enter a country in the country dropdown. These users continued to complete the task successfully.
1 FAIL	1 user entered New Forest as the county, and was unable to work out how to continue or provide an alternative search input
1 PASS	1 user entered the New Forest as the city, Hampshire as the county and 'Any country' as the country. When the site said that the city was not recognised, the user entered 'New Forest' into the 'Any product search' box in the top left of the screen – locating some hotels in the New Forest.
1 PASS	1 user entered a city that is in the centre of the New Forest, and expanded the range of the results to 50 km – locating some hotels in the New Forest.
2 PASS	2 users used the hotels link on the left menu taking them to a directory of regions in the UK. They selected Southern England, producing a list of over one hundred hotels. When these users realised that there were too many results, they used the 'All product search' in the top left of the page. This search, using the keyword 'New Forest' did provide matching hotels.
1 FAIL	1 user, as above, located the directory of all hotels in Southern England. They were then unable to comprehend how to reduce this list to hotels in the New Forest. They also did not notice the 'All product search'

Source: Travel UCD Research, February 2003

Summary:

- Only 1 of the 12 users applied a strategy that is compatible with the existing functionality (entering a city or town that is central to a region, and expanding the search range)
- 8 of the 12 users entered 'New Forest' as the city – a city name that is not recognised by Lastminute.com

9.1.2.7 Task #7 – Multiple choice destinations, Expedia.co.uk

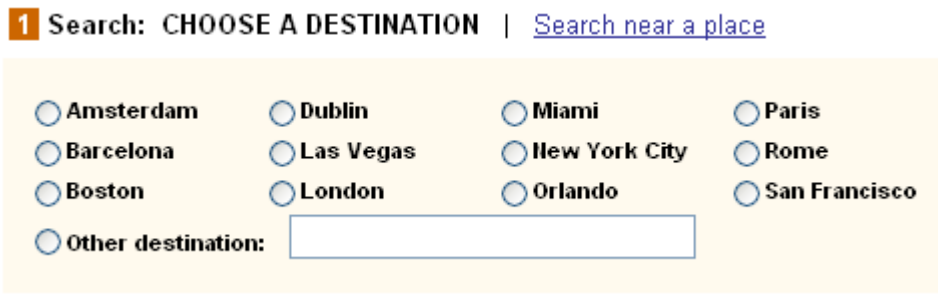


Figure 27: Expedia.co.uk – showing 'other destination' search-box

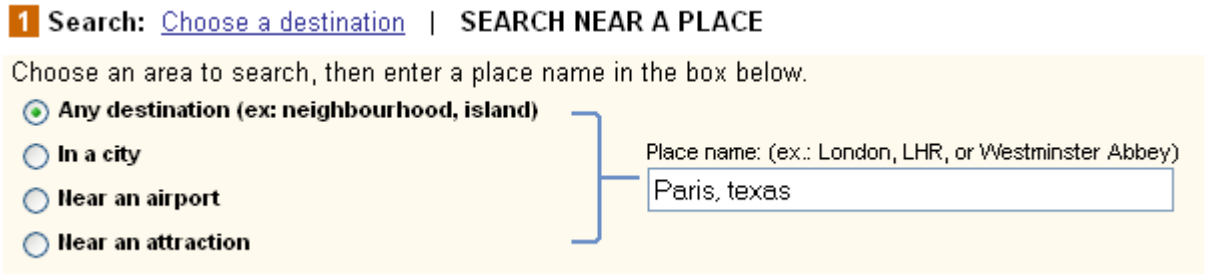


Figure 28: Expedia.co.uk – showing 'search near a place' search-box

TABLE 14: Task #7 Observations

Users	Observation
8 PASS	8 users used the 'other destination' search-box, above and entered the following: • 2 – "Paris Texas USA" • 2 – "Paris, Texas, USA" • 2 – "Paris Texas" • 2 – "Paris, Texas" (Note that there are commas in some of the examples above) 1 of the 8 users was not clear that they had arrived on a results page with Paris, Texas, rather than Paris, France.
1 PASS	1 user selected 'Paris' from the top destinations, reviewed the results and realised that it was the incorrect city. They returned to the search page and searched for "Paris, Texas, USA", arriving at the correct results page.
1 PASS	1 user used 'search near a place' – and correctly searched for "Paris, Texas"

Users	Observation
1 PASS	1 user used 'search near a place' – and entered "Texas, Paris". This user was, following confirmation that it was "Texas, United States" rather than "Texas City, Texas", offered a list of all cities in Texas. The user successfully found Paris, Texas from the list – and completed the task. 
1 FAIL	1 user used the 'other destination' search-box and entered the following: • "Texas" – giving incorrect results • "Paris" – that goes to Paris, France • "Paris Texas" – which was OK – but by that time the user was becoming less confident in being able to find anything that matched – and although the results displayed correctly – the user stated that hotels could not be found in Paris, Texas.

Source: Travel UCD Research, February 2003

9.1.2.8 Task #8 – Multiple choice destinations, Onlinetravel.com

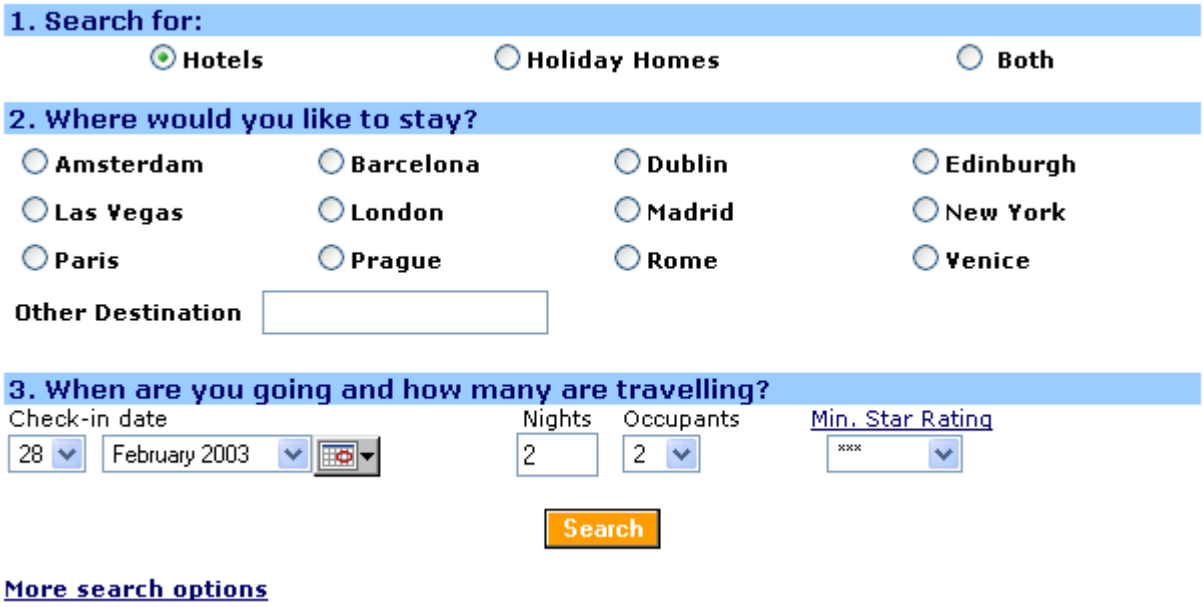


Figure 29: Onlinetravel.com – showing main hotel search

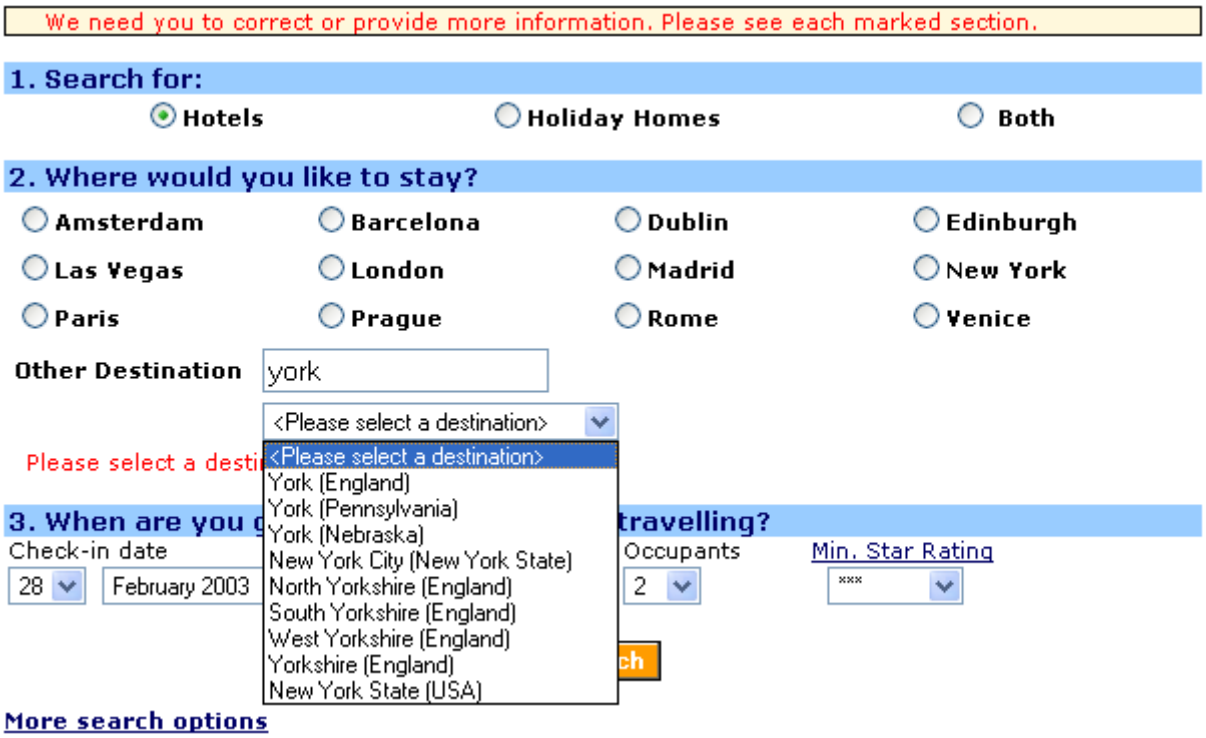


Figure 30: Onlinetravel.com – showing results from searching for "York"

TABLE 15: Task #8 Observations

Users	Observation
8 PASS	8 users entered "York" in the 'other destination' search-box on the first page. On the subsequent page they correctly selected the correct York from the dropdown.
1 PASS	1 user entered "York, UK" in the 'other destination' search-box on the first page The following message was displayed:  The user then corrected their search, changing the text to "York" – and continued successfully.
3 FAIL	3 users entered the following on the 'other destination' search-box on the first page: *User 1* • "York, UK" • "York, United Kingdom" • "United Kingdom, York" *User 2* • "York Britain" (no comma) *User 3* • "York, UK" • "York, England" • "York, United Kingdom" These 3 users were unable to comprehend how to progress as they kept on getting the error message (shown above) stating that the location was not matched.

Source: Travel UCD Research, February 2003

Summary:

- 3 of the 12 users failed to complete this task because they were expecting the 'other destination' search to work in the same way as on the Expedia.co.uk website. A search for "York, UK" on the Expedia.co.uk website would work without problem.

9.1.2.9 Task #9 – Multiple choice destinations, Opodo.co.uk

Figure 31: Opodo.co.uk – showing the country dropdown on the hotel search page

TABLE 16: Task #8 Observations

Users	Observation
12 PASS	All users successfully completed the task of locating hotels in York, UK without any problems or questions.

Source: Travel UCD Research, February 2003

9.2 Sites used in the statistical analysis

TABLE 17: Sites used in the statistical analysis

Travel agency (16)	Hotel only (36)	
Asiatravelmart.com	1800usahotels.com	Hotelscentral.com
Ebookers.com	Activehotels.com	Hrs.de (English)
Expedia.co.uk	All-hotels.com	Inntopia.com
Itn.net	Betterhotelrates.com	Leisurehunt.com
Lastminute.com	Bookings.org	Lodging.com
OnlineTravel.com	Eurhotels.com	Luxres.com
Opodo.co.uk	ehotel.de	Medhotelsdirect.com
Orbitz.com	Fastbooking-hotels.com	octopustravel.com
Priceline.com	Holidayhotels.com	Otedis.com
Travelhero.com	Hotelbook.com	Placestostay.com (US)
Travelnow.com	Hotelclub.net	Quickbook.com
Travelocity.com	Hotelconnect.co.uk	Superbreak.com
Travelstore.com	Hotelguide.com	Tablethotels.com
Travelworm.com	Hotelhub.com	Travelweb.com
Trip.com	Hotellocators.com	Turbotrip.com
Zuji.com	Hotelquest.com	Usahotelguide.com
	Hotels.com	Usarooms.co.uk
	Hotelsabroad.co.uk	Venere.com

Source: Travel UCD Research, March 2003

[END OF REPORT]