**Introduction**

About 42 percent of all U.S. adults reported traveling by air for leisure trips taken between August 2008 and July 2009. The percentage of air travelers increases to 48 percent among U.S. adults who traveled for business purposes in 2008. (US Travel Association, 2012). The Internet has become the dominant means by which air travel is planned and purchased. According to the National Laboratory for Tourism and eCommerce (2009), the Internet was used by 90 million American adults to plan travel during 2008. This accounts for 76 percent of Americans' travel planning. Most online travel planners are satisfied with their experiences in using the Internet to plan their trips and most see the Internet as an essential tool for planning most aspects of a trip.

Air travel is an extremely large and competitive market. As the Internet has become the primary way through which air travel is purchased, it is important for airlines to have a strong, reliable, and user friendly web presence. This document analyzes the web presence of American Airlines (AA), a major international airline. Specifically, the authors of this document focused on the home page of American Airlines, [www.aa.com](http://www.aa.com). For this analysis, we first make assumptions about the potential users of the site, then evaluate the current structure, navigation, and labeling of the home page. Finally, we offer some suggestions for improvement to the information architecture of the home page and provide examples of these suggestions in the form of before and after home page screenshots.

**Analysis of AA.com**

***Users of AA.com***

As any adult from the general public is a potential user of an airline-booking site, it is hard to determine many specifics about the user group. Some assumptions, however, can be made. First, in terms of technical ability, the probable user will have at least some Internet browsing experience and feel confident with purchasing items online. They may be either first-time or return users. Even if they have not been to the AA site, they will be familiar with the purpose and basic functions if they have ordered airline tickets online in the past, as most airline sites are similar in this nature.

Users accessing an airline website are most likely doing so to buy flight, check in to a flight, manage existing reservations or check the status of a flight. If they are not going to the site with a specific intention they are likely going there to compare prices of tickets. If just browsing prices, the user will want quick access without having to log in or go through multiple procedures. If they have a specific intention they will want to go directly to the part of the website that meets that goal or they may enter a specific area of the site directly from a search engine. The other primary purposes for accessing the American Airlines Website, would be to check frequent flyer balances, or look for broader information about traveling with American Airlines such as additional services, travel restrictions, contact information, etc.

***Structure***

Users visiting the American Airlines website are primarily there to purchase flights, check into flights, and alter existing reservations. However, the site structure does not prioritize these most frequent uses. Instead, the structure of AA.com is maximalist and redundant. Users tend to scan a site left to right, top to bottom, so key functions should be located in the top left corners, extending out in order of use. AA.com does make some attempt to organize information in this fashion, with mixed results. "Book Travel" and "Reservations" are centrally located, but "Flight check-in" is located on the fourth tab on the third navigation menu down from the top.

Spatially, over 50% of the central area is dedicated to internal advertisement and with some forms of contextual navigation presenting flight specials from the users location. While these deals, promotions and credit card offers may be useful to the business, their location impedes the effective navigation of the site. For example there is no direct check-in section on the main page and flight cancellations/delays are relegated to a single line of text above a scrolling image bar. Canceled and delayed flights are a serious concern for AA.com's customer base, however this essential function is not given the important position it deserves.

In addition to the poor organizational structure, there are several flaws in the design structure that limit its navigation and accessibility. Good web design practice, in general, demands a reasonable amount of contrast between foreground and background. When you have a color blind or low-vision visitor, this becomes critical. While the site does use strong contrast of font against background color of individual navigation bars, the overall color scheme employs gradients of blues and grays. These close tones may render navigation difficult for the colorblind visitor.

The AA.com main page also makes inefficient use of negative space. Text and imagery are packed very closely together with almost no negative space between headings. Successive label bars are also packed very closely together which could impede the ability of those with low-vision to navigate the site.

***Navigation***

The navigation systems on the American Airlines home page include global navigation, utility navigation, local navigation, contextual navigation, and faceted navigation. There are many redundancies in the labeling of navigation items between the global and secondary navigation sections leading to confusion on which navigation a user should pick to reach their goal. There are also redundancies within the navigation systems, such as the "Login" and "My Account" links in the utility navigation bar both leading to the same page. Another source of confusion and duplication is the presence of two levels of local navigation below the global navigation bar; clicking on some of these tertiary navigation options takes you to new websites with similar looking, but not the same, global navigation buttons. The most prominent navigation visible on the home page is the faceted navigation for buying tickets. It is logical that this is the most obvious navigation on the site, but the faceted options are crowded and there are so many other navigation directions around it that its impact is lost. The contextual navigation consists of the "Travel Deals" and "AA News and Offers" that take up close to 50 percent of the home page but are most likely not a main reason any client would go to the home page. These contextual navigation links distract and take up space that could be used to decongest the local navigation and the faceted navigation.

***Labeling***

The American Airlines home page includes four separate menu/navigation bars, the largest of which consists of seven dropdown menus with up to 17 options each. The sheer number of choices, along with label redundancy, unclear wording, and misguided placement of labels implying priority are some of the main problems with the labeling and navigation scheme of this site.

The largest of the four menu bars, which could be considered the global navigation bar, is host to many examples of these problems . Given the large number of choices included in some of these dropdowns--17 in the case of "Reservations"--it seems there was little consideration of what the user might really need from the global navigation of an airline's website and what could be moved to a lower level of navigation to make it easier for users to find the most commonly sought links or functions. For instance, "Reservations" represents a significant use of the site (vague word choice notwithstanding), but "Business Programs" and "Products & Gifts" aren't central enough to warrant the prominent placement they have in this main menu.

While the user is sifting through each overloaded dropdown menu, he is also being hindered in his search by a number of redundant and vaguely worded labels. For instance, "FAQs" appears in four of the seven dropdowns, in addition to being in the top utility navigation bar. These lead to the exact same page. "Timetables & Downloads," under "Travel Information," leads to a page of downloadable PDFs of timetables, but this isn't at all clear from the label--timetables for flights? What do downloads have to do with timetables? Looking at the page as a whole, "Reservations" appears directly above "Book Travel" and "My Reservations/Flight Check-In," which all seem very similar. "Login" appears in two different places, which might seem confusingly similar to "My Reservation/Flight Check-In" and "AAdvantage."

In general, the process a user must go through to scan the many labels on the page, search through long dropdown menus, and interpret the meaning of vague and/or redundant labels is odious, particularly for users with screen readers, and represents a hefty cognitive load that could understandably drive the user elsewhere for his travel needs.

**Recommendations**

American Airlines should reconsider the goals it is trying to accomplish with its home page and substantially redesign the information architecture of the page. AA.com should clearly present the handful of most-common goals users have when they come to the website, reduce the multiple levels of navigation, remove the redundant links, and disambiguate the labeling on navigation throughout the home page. Perhaps most importantly the site needs to be "cleaner." By removing much of the secondary functions of the site from the home page and focusing on the goals of its users, this goal can be achieved. An example of what this redesign might look like is attached and includes eight numbered parts where the home page has been improved from its current state, also attached (or viewable at www.aa.com).

One: This utility navigation area is kept at the top right of the page, but the number of options in this section have been reduced to just four that are truly about the functioning of the site. Language / Country selector is represented by flag icons to make it accessible for those who do not read English. A "contact" option is also represented with an icon of a telephone to both make it accessible for non-English readers but also to reinforce that clicking on this will give you phone numbers. "Help" replaces what was labeled FAQ in the old site, which was too vague of a label for someone looking for a solution to their problems with the site. The search window remains on the top far right of the site, ending the utility navigation, but an icon is added and the word "Search" is used in place of "Search AA.com." Also important, "Login" and "My Account" have been removed from this place and given a more prominent position (numbered five on the new layout and discussed in more detail later). Currently both links go to the same place and they are not branded with the AA mileage program, which is an obvious connection to make.

Two: This is the global navigation bar which, like the logo and the utility navigation above it, will be present on every page of the website. The redesign reduces the number of links here from seven on the current site to three in the proposal. As has been discussed the current global navigation is vaguely labeled, there are too many options, and some options serve relatively minor functions, such as "Products & Gifts." The redesign reduced these to the essential functions of the site, all clearly labeled as "Plan a Trip," "Manage Trips," and "Travel Info." All the other lesser navigation options are moved into sections six and seven of the redesign and will be discussed there. Another important improvement from the current version is that each button on the redesign has a dropdown menu with fewer items and they do not overlap from section to section as in the current version.

Three: This section represents the most important section of the home page and as such is given most space. This is a secondary navigation section but it contains the navigation for the main features for which a user would come to AA.com. There are four items in this navigation, as there are in the current version, however the navigation would run vertically along the left of the screen instead of horizontally under the global navigation as it does now. This follows the standard F shape most visitors eyes follow as they first enter a web page. The F shape in the redesign is made by the global and utility navigations on the top and the secondary navigation (the primary reason for visiting the site) running top to bottom on the left. This makes it easier for the viewers to navigate the main functions of the site and clarifies the difference between the two sections, which is very confusing in the current state of the page. The labeling of the four sections in the redesign are the four main functions that users will want when arriving on the home page: "Book a Flight," "Check In," "Manage Trips," and "Flight Status." When a user selects any one of these options the central section of the home page will change to a faceted navigation with relevant options to meet the users goals. Also at the bottom of this section there is a distinct bar that announces important news or advisories, making this important information clearly visible as opposed to its current placement in the middle right of the page in a font that gets lost amongst all the competing labels.

Four: In the redesign this section presents a contextual promotion that will change according to where the user is located. In the current site this information takes up close to half the home page but it is poorly designed and congested with information. The redesign makes this section both smaller yet more prominent because the design is cleaner. Moving horizontally to the right of the contextual promotion will be tabs for hotels, cars, or vacation packages. On the current site these options are given position that is almost in the center of the site, yet they are not a primary reason a user would go to an airline's website, and if a user clicks on one of these options now they are taken to a totally different site. The redesign puts them in a more logical position below the airline functions yet keeps them as an easily visible option by using large icons.

Five: As was mentioned in section one, this is where the redesign puts the option to log into the preferred travelers club as well as links to promotional information about the mileage program and special business travelers clubs. On the current site these options that logically belong together are spread throughout the site with many links leading to the same pages. It is totally confusing to have "Log In," "Join," "Admiral's Club," and "AAdvantage" in three places at different levels of the navigation system, all labeled inconsistently. By bringing them all together in this position in the redesign this confusion is rectified.

Six: Here is where the redesigned version places many of the links that clutter and confuse the current home page. All the information is important and should be reachable from the home page, but it is generally information that most visitors to an airline's website would not need or want to access, such as shipping cargo or investing in the company. The redesign would present this information in clearly labeled boxes that would be on the home page but "below the fold," that is to say a user would have to scroll down the screen to access this deeper level of information. This sample redesign lists possible topics to go here but it could be expanded or reduced as necessary.

Seven: This is another version of a global navigation that would be present on every page, but at the bottom and in a discrete text. It contains the standard options of "About Us," "Site Map," "Careers," "Legal," etc. These are important to have on every page but they should remain at the bottom of the page to both link to the information and also to visually end the page.

Eight: At the current pace of sales and developments it is clear that mobile devices are how many users will now be accessing websites. This section prominently shows where mobile apps for American Airlines can be downloaded and is also used for internal advertisement of new features. Currently on the site mobile application information and mobile boarding passes are buried with other promotions or vaguely indicated with a small icon at the bottom right of the site. The redesign makes the presence of mobile options clear but keeps it below the primary functions of the site.

By following the recommendations outlined in the eight sections of this proposed redesign, American Airlines can better serve their core users and still easily provide the whole range of information currently present on the home page of their site. The redesign cleans up the overall structure of the site, arranges the navigation in a logical way that is more intuitive to users, and disambiguates the labeling. Looking at the home page as it is now we see a crowded jumble of tabs, links, and icons all competing for attention. There is a stark visual difference when looking at the redesign that logically organizes and labels the information and designs it in a way that leads to clarity for a user, not confusion.

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