

**Seeing Friends:**  
*An Eye Tracking and Usability Study  
of Social Website "Friends Lists"*

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## Introduction

Many “Web 2.0” and Social Networking sites provide the ability to make new connections through your existing network to people you either already know or want to get to know. For example, on Facebook you might use this function to reconnect, on a personal level, with old friends or classmates. LinkedIn, a pioneer of online business networking, allows you to expand your business network by connecting with other potential clients, customers, vendors, or industry peers that your existing contacts can introduce you to.

As a result, the page that provides the list of friends or connections is a crucial step in the usage of these sites. From the user’s perspective, if I cannot easily use these lists to identify new connections, I will be less likely to find the service useful and appealing, and will use the site less regularly. From the site owner’s point of view, I will be interested in doing everything possible to facilitate the expansion of each user’s network, because the more connections my users have the more likely they are to rely on my site to communicate with their network. This means making sure that the list presentation and design is as usable as possible given the specific functions that this page needs to serve.

Despite the broad relevance and significance of the “friends list,” different sites offer very different versions of this design element. In other words, there does not yet seem to be complete agreement in the design community regarding the most effective display for this type of information. So we at Catalyst Group undertook an Eye Tracking and Usability study to compare two popular friends list layouts to determine if one was clearly more effective than the other. We were particularly interested in what insights the Eye Tracking data would provide in the focused context of this study.











## What we Tested

### *Testing Prototypes*

In order to isolate the specific function that we were most interested in, we created testing prototypes of two friends list layouts that did not contain any other navigation or design elements. These prototypes were inspired by the two leading social networking sites: Facebook and LinkedIn. The content of each prototype was identical in terms of the number of names and descriptions listed – with the one exception that the Facebook-inspired interface included pictures of the individuals and the LinkedIn-inspired design only listed name and title. For the remainder of this report, we’ll refer to the LinkedIn and Facebook designs as the 3-Column Layout and the 1-Column Layout, respectively.

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3-Column (LinkedIn-inspired) Layout

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1-Column (Facebook-inspired) Layout

## Tasks

In order to simulate “real world” use of the two tested interfaces we created tasks that would mimic the act of scanning a list for someone you recognize without knowing specifically who they are.

Name Recognition Task:	For this task, we told participants that the lists contained zero or more names of US presidents and asked them to scan the list and count the number of presidents they found.
Title / Description Recognition Task:	Here, we asked participants to find a “design professional” to assist them with a project.

## Methodology

We presented each participant with both tasks and both layouts. Participants were eye-tracked during their task completion attempts and this was followed by a qualitative “PEEP” discussion<sup>1</sup> to explore their experiences in greater depth. We rotated the presentation of each layout and task in order to prevent order bias. The participant pool consisted of:

- 13 participants
- 6 were existing LinkedIn users
- 7 had no previous experience with LinkedIn
- All were members of at least 1 social networking site (e.g. Facebook, MySpace, Twitter)

## Results Summary

### 1-Column Layout

Overall, the 1-Column layout was a much more effective and enjoyable way of presenting the tested information. This preference was clearly articulated by users during the PEEP sessions, and was also supported by the Eye Tracking data (heatmaps and gaze plots). The single column of names was easy to read straight down during the Name Recognition Task, and users were able to “ignore” the adjacent column which contained information that wasn’t relevant

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<sup>1</sup> Post Experience Eyetracking Protocol, or “PEEP” is a technique that involves playing back each participant’s eye tracking video for them and discussing their reactions / recollections regarding what the data reveal.

to the current task. Similarly, users scanned vertically down the title / description column when searching for a design professional to work with.

Eye Tracking data revealed that virtually all participants scanned the 1-Column layout the same way and there was very little hesitation or exploration at the start of the task – users were able to dive right into scanning without having to experiment with different scanning strategies (a phenomenon which was observed with the 3-Column layout).

### *3-Column Layout*

The 3-Column layout was thought by most participants to be more cumbersome and overwhelming in its design – more “tiring” according to one participant. Also, participants felt much less confident that they had successfully completed the tasks with the 3-Column layout. In other words, they did not feel sure that they had seen all the names.

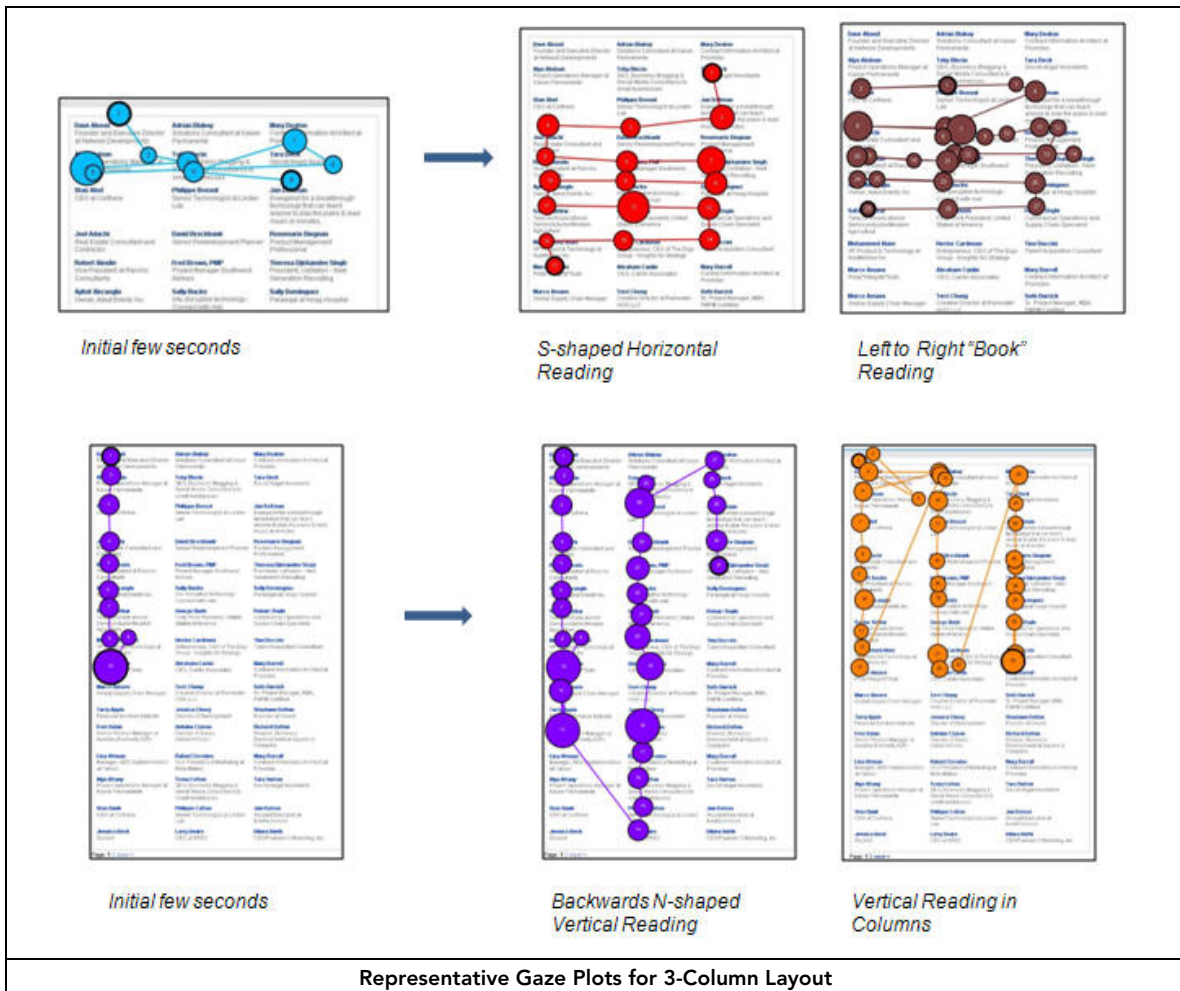
The Eye Tracking of the 3-Column layout revealed that the participants did not adopt a consistent scanning strategy for this design. Moreover, most participants had to begin by experimenting with different scanning strategies before “deciding” which one to use. This uncertainty was exacerbated by the need to scroll the page in order to see the full 3-column list. Many participants found that they had lost their place on the page after scrolling and had to backtrack up the page.

## Eye Tracking Data – Gaze Plots

The Eye Tracking gaze plots showed some interesting comparative scan patterns for the two layouts.

**Note:** Gaze plots indicate the progression of each user’s attention on the page. The circles show places where users paused, or “fixated,” on a particular spot. Since gaze plots only provide data for a single participant, the images below represent illustrative examples of the patterns described.

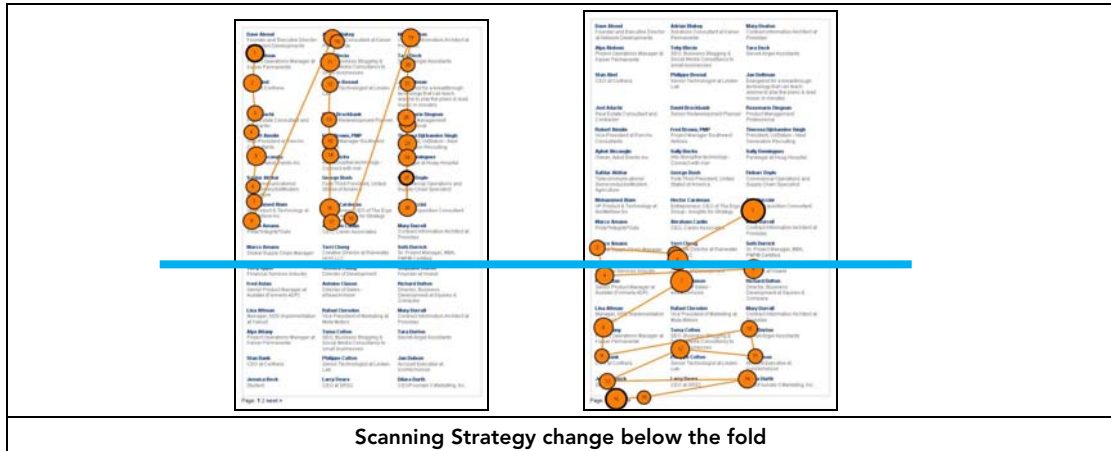
### 3-Column Layout



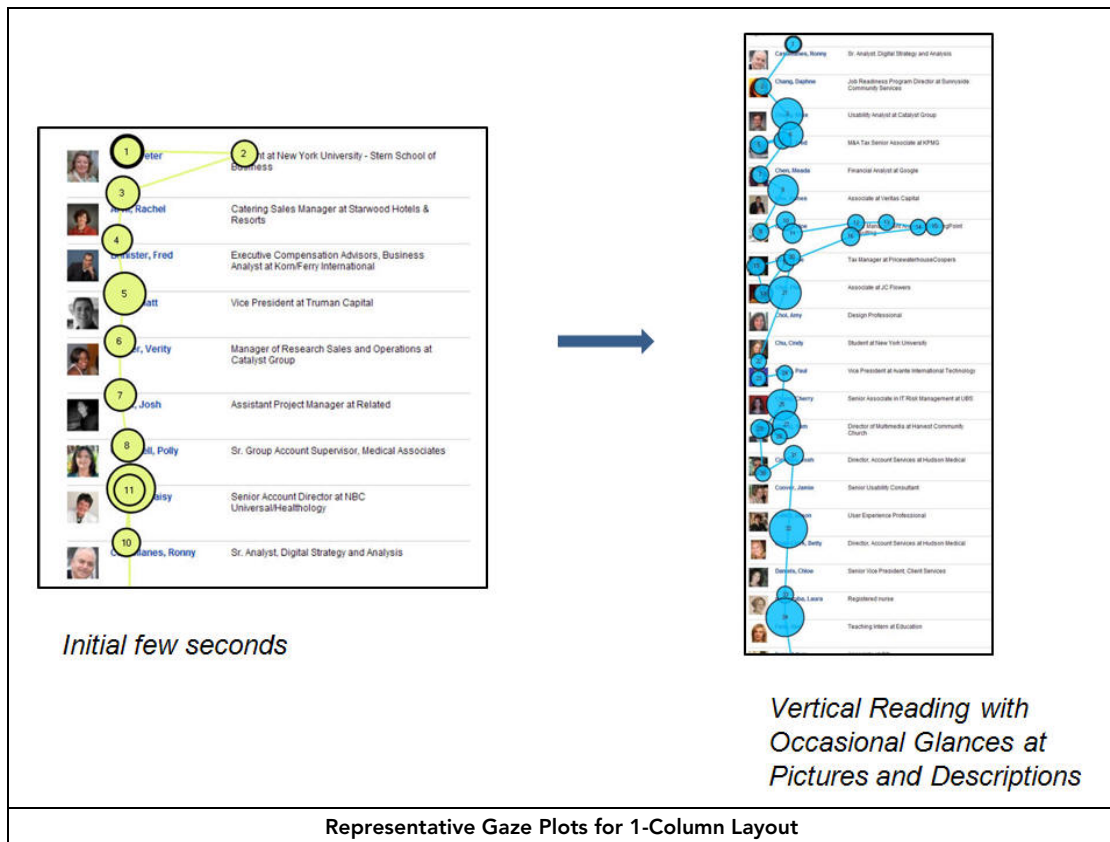
- Overall, the test participants did not agree on a consistent strategy for scanning the names on the list in the 3-Column layout. In fact, several users had to orient themselves for a few seconds (often zigzagging around the screen somewhat randomly) before settling on a particular strategy.
- In general, users read the information in one of two ways: either horizontally in rows or vertically up and down the page. The gaze plots

also indicate that many of the names on the list escaped the users' attention (i.e. not all the names show a fixation circle).

- Of those users who read the information horizontally, some followed an S-shaped pattern, while others read from left to right as if reading a book. Those who read the information vertically either started from the top of each column or read down one column only to "snake" back up to the top of the second column.
- It's also interesting to note the effect of the "page fold" line. Some users opted to scan everything in view first, before scrolling to view the rest of the page. Others attempted to scan all the way to the bottom of the page and then scroll back to the top. A few used their mouse as a guide as they read from one "block" of text to the next. Notably, some users were observed to change their reading strategy once they started to scroll.



## 1-Column Layout

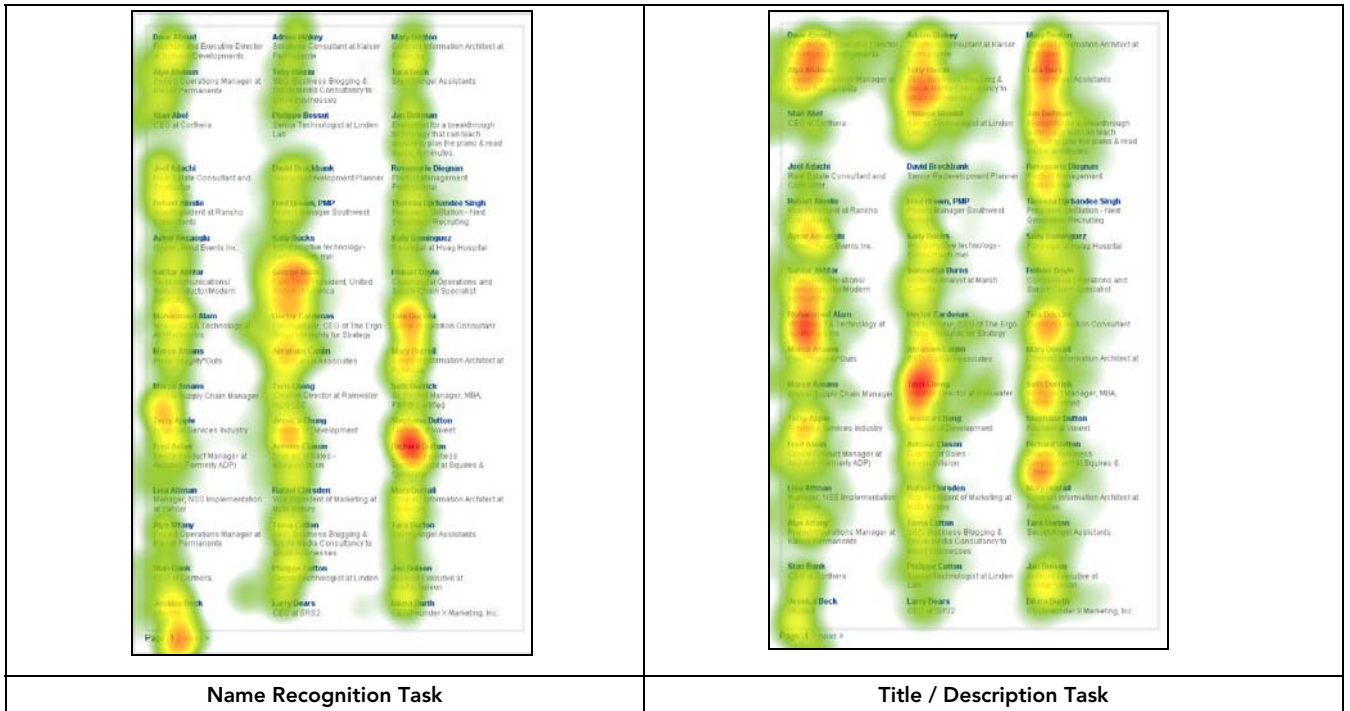


- In this layout, all users scanned the information vertically. While there were occasional glances at pictures or names (depending on the task given) users followed the same general pattern of reading down the page as they scrolled.
- It was not necessary for users to spend time “figuring out” how to scan the information so they immediately went about finding names or descriptions.
- Since the page required users to scroll multiple times, users frequently “backtracked” up the page with their eyes as they scrolled.
- Users commented that they enjoyed looking at pictures occasionally out of curiosity or to gain a bit more information about the person. While they admitted pictures were not always necessary to complete a task, they preferred to see them because it bolstered the overall appeal of the page.

## Eye Tracking Data – Aggregate Heatmaps

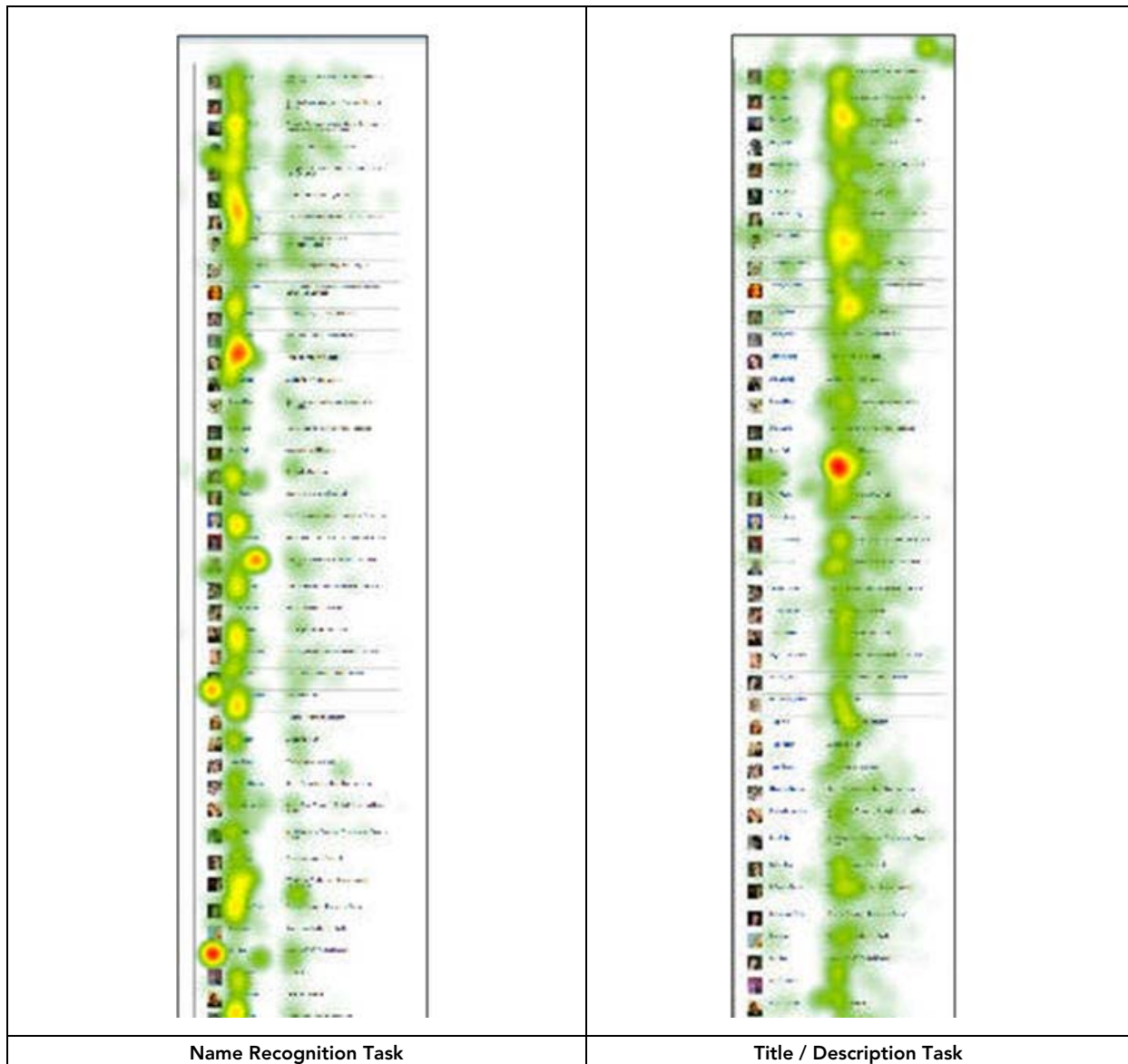
Eye Tracking Heatmaps show the attention “hotspots” on a page for all the tested participants combined. Areas of the greatest relative attention are shown in red, medium attention in yellow and low attention in green.

### 3-Column Layout



- Users felt overwhelmed by the amount of information displayed, making it difficult for them to focus on the information necessary to complete a task.
- While the number and location of “hot spots” differ, the heatmaps of task 1 and 2 are near identical. Many users said it was difficult to parse out the names from the descriptions (and vice versa) since they were arranged in such close proximity to each other.
- This effect was compounded by the fact that the individual “blocks” of name/descriptions were densely packed across the page.
- Though most users were able to correctly identify the Presidential names, many said they weren’t 100% sure they had seen all possible names.

## 1-Column Layout



- Users found it easier to focus only on the information relevant to each task.
- Since they were able to segregate the names, pictures, and job titles from each other, users were able to easily find the information they needed to look at given the particular task.
- On average, users spent more time in the 1-Column layout to complete each task, but said they more confident they had seen all possible names and relevant descriptions.

## **Non-scrolling Variations**

In addition to the layouts discussed above, users were shown paginated versions of the 1-column and 3-column layouts, designed so that no scrolling was required.

Participants expressed a strong preference for the 1-Column paginated view because it showed less information on a single page and gave them a clear idea of how many more pages of names to expect. Users commented that this view felt more manageable and liked that it eliminated the necessity to scroll.

Seeing this layout also prompted several to say they would like to have the option to choose the number of names they would want to see on a single page (e.g. 10, 20, etc).

## **Conclusions and Recommendations**

Although the 1-Column layout is a simpler design that requires more scrolling, and in general took more time to review, our Eye Tracking study indicates that this is a much more effective layout for accurately accomplishing the key networking goals of scanning a list for people you know or want to meet.

Follow-up discussions reinforced this finding. Participants unanimously preferred the 1-column format. They told us they were more confident in their success after using this layout as compared to the 3-Column version, and also reported feeling more at ease while performing the tasks. When presented with minor variations of the 1-Column layout, participants indicated they would prefer the display of names was paginated, eliminating the need to scroll.

As a result of our research, we would highly recommend that all sites that rely on networking functionality consider using a version of the 1-Column layout in order to better facilitate scanning, and create a more fluid and comfortable user experience.