Jennifer Honeycutt
TCC 6110 Information Architecture
Homework 4

Garrett's Planes Applied to SmartThings.com

In this paper, I will examine the SmartThings.com website using the five planes that Garrett documents in *The Elements of User Experience*. SmartThings is a company that creates home automation hardware and a smartphone app to control the hardware. The app runs on iOS, Android, and Windows Phone devices. My initial, pre-Garrett assessment of the SmartThings.com website is that it allows users to successfully find product information, buy products, and get support on those products.

Strategy Plane

As Garrett (2010) notes, we must ask two basic questions in the Strategy Plane: What does the business want to get out of the website? What do users want to get out of it? Table 1 documents high-level answers to these questions.

Website Objectives	User Objectives
Make money	Learn about home automation
Communicate the company's brand	Buy hardware
Educate users on home automation	Download app
Sell hardware	Get support for hardware and app
Get users to download app	Develop software or hardware that interfaces with the SmartThings app
Provide support to users	Communicate with other SmartThings developers

Table 1: Strategy Plane Objectives

User Segmentation

When we examine the user objectives, we immediately see that there are multiple user audiences. In order to determine whether users are able to successfully accomplish their goals, we must segment users into "smaller groups…with key characteristics in common" (Garrett, 2010 p.). Based on the high-level objectives for our users, we can divide the users into three groups: Beginning users with no knowledge of home automation, intermediate users with some knowledge of home automation, and advanced users with technical knowledge of home automation.

Personas

Using these three user groups, we can develop three personas to use as we proceed through the four remaining planes (Table 2).

Beginner	Intermediate	Advanced
Sally is 49 and married with two teenage kids. She has shopped online, but she does not spend much time on her computer. She knows very little about home automation, but she is ready to learn. Specifically, she wants to know when her kids leave and get home from school.	Robert is 23, single, and lives with a roommate. He wants to automate things such as doors locking and lights turning off when everyone leaves. He is comfortable using his iPhone for everyday tasks. He thinks it would be cool to control his house when he is away.	Joan is 30 married with no children. She is a programmer and is not afraid to try new technologies. She is a computer expert and has experience developing apps for iOS and Android. She regularly uses both an iPhone and an Android phone.

Table 2: Personas

Scope Plane

Functional Requirements

The question we need to examine in the Scope Plane is, according to Garrett (2010), "What are we going to make?" The company wants to sell hardware, so the website should allow users to buy hardware. Sally is a beginner to home automation, so the website should allow her to educate herself. Robert wants to know how reliable the platform is, so one functional specification could be: "The website will allow users to view the SmartThings platform uptime over the last day, week, month, and year." Joan wants to develop for the platform, so a functional specification could be: "The website will allow third-party developers to access the SmartThings integrated development environment (IDE)."

Content Requirements

Because SmartThings.com is trying to educate, sell, and enable development, the majority of the content is text. However, video is also an important content type because it allows all user types to extend their knowledge. Most of the videos reside in the "Support" section. Large, interactive photos help illustrate concepts such as "home security" and "peace of mind." Also, because the app is a central part of the SmartThings platform, large photos of the app help users know what to expect when they download and use it.

Structure Plane

Interaction Design

The SmartThings website follows major conventions such as consistent global navigation, a logo that links to the homepage and is always located in the same spot, and consistent error handling (Figure 1).

Our three personas help us examine the website based on user behavior. Sally wants to know what her first step should be to set up home automation. There is no obvious "Get Started" section in the navigation (Figure 2), so she is frustrated. The interaction design is a failure in her eyes.

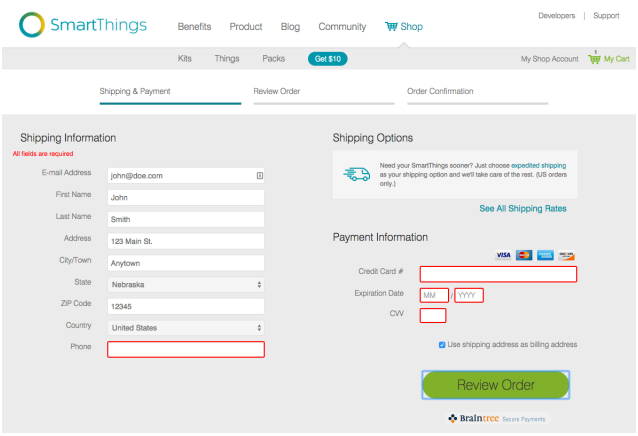

Figure 1: Error Handling

Figure 2: Global Navigation

Robert wants to see what others think about SmartThings. From the homepage, he clicks on "Community," located in the top navigation, and is taken to a forum where other SmartThings users post comments. He is successful at finding the information for which he is looking. Advanced user Joan wants to take a look at the SmartThings IDE. She immediately sees a separate section labeled "Developers," so she clicks on it and then finds the link to the IDE. She successfully interacts with the website.

Information Architecture

SmartThings.com uses a parent/child hierarchical structure (Figure 3). The top-level

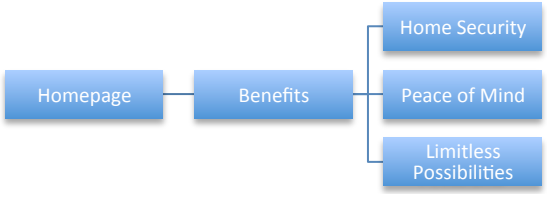

Figure 3: SmartThings.com Basic Hierarchy

parent categories form the global navigation; each parent contains one or more child pages. Unfortunately, the hybrid organization scheme makes it difficult for users to form a mental model because like categories are not grouped together. Some categories deal with topics, such as “Benefits,” “Product,” “Blog,” and “Support.” Others are functional (“Shop”) or metaphorical (“Community”). But the most obvious departure from a standard categorization scheme is the section labeled “Developers.” This category speaks directly to a single audience type, but the other categories apply to all audiences.

If we take a look through the eyes of our beginner persona, Sally, we can quickly tell that there is nothing to guide her into the website. Nowhere in these categories is it obvious where she should look for beginner content. She decides to read the “Benefits” page to see if it answers her questions, but all she sees is marketing-oriented content. She clicks on a few other pages, but she only sees more marketing content, some nice photos, and a community forum where more advanced users are posting questions. As a last resort, she clicks on “Support,” even though she thinks that “Support” must be related to “Developers,” due to the placement in the navigation. There, she finally finds a section labeled “Welcome to SmartThings.” Her frustration is caused by the confusing information architecture.

Skeleton Plane

Interface design

In the “Shop” category, SmartThings.com uses standard buttons and fields, such as buttons that change color when a user hovers over them and text fields for address information, so users can purchase products easily. The shopping cart metaphor works because it is a standard, and users can quickly increase or decrease quantities of items within the cart or remove items from their cart. Because the website follows standard conventions, users who are already familiar with online shopping will be able to successfully buy products.

Interestingly, search functionality is only provided in the “Blog” and “Support” categories. Users are not able to search for specific products or content throughout the rest of the website. This is a detriment to users who want to perform a known-item search.

Navigation Design

SmartThings.com uses consistent global navigation tabs across the top of most pages. When users click on a tab, it changes color to indicate which category users are in. Each global tab also houses child tabs; these too change color when a user clicks on them. This navigation system makes it easy for users to locate themselves within the website. However, the “Developers” section is once again an outlier. On first click, users will see the same consistent navigation, but if they continue to go deeper into the “Developers” section, they will see a completely different navigation scheme, as is the case with the “Developer Documentation” (Figure 4). Joan, our advanced user, is okay with this; she is used to reading and working with wikis when it comes to learning a programming language. However, there is no way for her to return to SmartThings.com without using her back button.

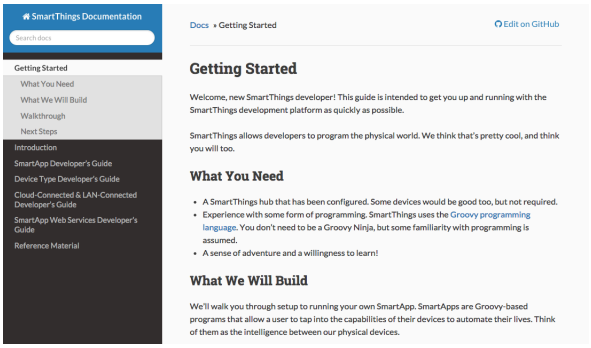

Figure 4: Developer Documentation

There is supplementary navigation on several of the pages, which allows users to pick their way through the content. For example, intermediate user Robert finds a story in the “Blog” section that is similar to

his own situation and needs. The story provides a direct link to the appropriate products in the "Shop" category, so Robert clicks the link and buys the products he needs to get started.

Courtesy navigation exists at the bottom of most pages; it includes contact information and links to company and media information, jobs, and an email subscription.

Information Design

When we examine the website through our users' perspectives, we can see that the information design is not entirely successful. For example, educational content is located in the "Support" category, but Sally has no idea that she is supposed to look there to learn about home automation and how to use SmartThings. There is no content that guides her to that location.

Content is not necessarily grouped in the most logical location. An example of this is the "Product" category. Most users probably think that this category includes the hardware products that SmartThings sells, but instead, the SmartThings app is the only product in this category. Nomenclature changes could help improve the organization.

When it comes to wayfinding, one nice thing that SmartThings.com does is condense the global navigation, so it takes up less room when scrolling on a long page. The collapsed navigation still clearly indicates the category the user is located in (Figure 5).

Figure 5: Collapsed Navigation

Surface Plane

SmartThings.com's visual look does "clarify the options available to users" (Garrett, 2010). It communicates a consistent brand identity through the careful use of color, typography, and images. Contrast is good; in the case of the "Shop" category, SmartThings calls attention to it by making it a different color than the rest of the navigation. Error messages are in red to make them stand out. The only deviation from the SmartThings brand is, once again, in the "Developer Documentation" section. The link between the "Developer Documentation" website and the main SmartThings website could be stronger if the same branding components were used across the board.

Conclusion

I started this analysis thinking that SmartThings.com is architected to provide a successful user experience. In the case of more advanced users, I still think it is, especially because one of the specific audience types is called out in the global navigation ("Developers"). But for our less advanced users, SmartThings.com does not necessarily make it easy for them to find the information they need. Some of the categorization and grouping is confusing, the nomenclature is not always clear, and the interaction and information design does not always make sense. At some point during the user design process, the needs of less-advanced users became a lower priority, and advanced users were elevated to the primary audience type. This shift in focus could very well be causing SmartThings to turn off potential customers.

References

Garrett. J., (2010). *The Elements of User Experience: User-Centered Design for the Web and Beyond (2nd Edition) (Voices That Matter)*. [Kindle version]. Retrieved from Amazon.com.