**Conducting a Competing**

**Product Search**

**Case Example & Step-by-Step Guide**

A guide for grantees and inventors developing products and apps

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# Introduction

This guide describes a step-by-step process for searching for and documenting competing products. That is, those products that would be in competition with an invention that is being considered for development and commercialization. This critical activity, often referred to as scoping, helps to determine if a new product idea will be viable in the marketplace, by revealing important information that can be used to shape a product’s design or functions, before a prototype is ever created.

Completing this process early in a development project can save precious limited resources from being squandered on a concept or device that replicates something that is already available to consumers. It also helps to save resources for the more costly downstream activities, while helping to ensure that the final product will be usable, unique, and valuable to consumers.

Throughout this guide, readers will find examples from a real-life competing product search. Combined with the step-by-step “how to” information, readers should be able to conduct their own competing product searches. There are two end goals for this type of scoping work. First, the inventor is seeking to understand what products consumers are already buying and using. Second, the inventor will have an easy to read table that compares their invention with existing products by highlighting the different or superior functions and features of the new invention as compared to the competition. The table can be used when generating specifications for development work; to demonstrate knowledge of state of the art in grant proposals; or to entice potential partners or investors to become involved in a project.

# Jayne’s Story: A Case Example of Initial Market Research

As an occupational therapist, I address unmet needs and strategize with clients to help them overcome functional limitations so they can participate in their life roles without having to rely on others. One such life activity is toileting while in bed. In my experience, options for women in bed include indwelling catheters, bedpans and diapers. The “female” urinal in our hospital was too large and messy for use with women. Occasionally it was used for men who had medical complications or it remained in the supply room. My product idea was to create a female urinal for women who are unable to exit their bed for toileting purposes. But what if it was already on the market and I was unaware? Before I committed significant resources to creating a product, I wanted to make sure it was not already on the market. Now I would like to show you the steps I took to verify the uniqueness of a female urinal, named AquaEve.

You can follow these steps with your idea too.

# Key Points to Keep in Mind before Starting your Product Idea Research

***Take your time and use a variety of methods.*** Your goal is to have a novel, successful product, so your search must be exhaustive.

***Consider product lifecycles.*** Once the market is saturated, people will not buy additional products. In the urinal example, once everyone at home has purchased one, they are not likely to need another, due to the long shelf life of plastic. However, if used in a hospital, many will be thrown out upon patient discharge; in a hospital, there will be an unending need. As a second example, consider a jar opener. In this case, once those who need one have purchased, there will be few reorders.

Perhaps it can be expected that as your product is in the high technology sector, it may become outdated very quickly. See if you can estimate the lifecycle of your product by the end of this search. If a similar product is listed in one annual catalog edition only, then this could indicate a short product lifecycle. In that case it may not be worth further investment of time and money. In addition to reviewing enduring long-lifecycle products, also seek out information on products that did not last on the market, such as those that are shown in past catalog editions but not in more recent issues. This will indicate if a product was previously introduced and then removed from the market. The search then becomes a quest to learn if the product failed due to obsolescence, lack of consumer interest, or other business or market factors.

***Be open to changing your idea.*** As your search reveals new information, you may decide to change some of the functions, features, or aesthetics of your invention.

***Seek unbiased product reviews.*** When looking at sites and catalogs for comparable products, keep in mind that they are selling these products, not stating verified performance research results. Businesses have good reason to highlight their products’ strengths, while leaving out details of any shortcomings.

***Look for partners.*** Keep in mind that companies who sell a similar product could be an industry partner and/or could potentially sell your invention someday.

# Steps to Searching and Documenting the Competition



## Step 1. Define the topic of your search

You need to be able to describe the problem you are trying to solve and the type of device you are designing to solve this problem. You also need to look for all the other ways that this problem is solved. This is answering the “what” part of market research. Be on the lookout for products that perform functions close to what you are envisioning. These products are your competition. There are likely alternative solutions to the problem, which also are your competition. In the case of a female urinal, all other hand-held urinals marketed to women are the primary competition. However, a bedpan is an alternative product that is in widespread use, and should also be considered a competing product.

I wanted to know what features were offered by these other products, how effective they were, and what their deficits were. Finding the answerers to these questions helps you set up a comparison table to benchmark these products against your invention. The completed table can then be used to highlight what it is that makes your invention unique. Does it offer more functionality? Is it more comfortable to use? Will it be offered at a lower cost than other solutions? You need to identify and highlight what makes your invention a significant improvement on what is already on the market, or no one will buy it.

Of course using a urinal would be the desired choice of many women. It is hard to imagine preferring to be rolled onto a bedpan. But will the hospital or nursing home buy a urinal that is over three times the cost of a bedpan? Since women do not usually have experience with urinals, would they want to try something new when they are sick? What staff and patient training will be needed?

Introducing a new product proposes either replacing a current product and current method of completing the task, or adding a new product to the inventory. All change is a risk, so knowing what you are up against will give you information on what you need to do to compete with the status quo.

Creating an evaluation table of the important functions, features, and pricing of the products will help differentiate your device, and identify your product’s competitive advantage. The comparison tables will

look different for each product idea, so we have included some examples (Appendix A). Here is the unpopulated table I made to start off during this search for competing products.

#### Competing Products Table Framework:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Manufacturer and Product Name:** | **Ideal Product- AquaEve** | **Competitor #1** | **Competitor #2** | **Competitor #3…** |
| Price per Unit |  |  |  |  |
| Availability |  |  |  |  |
| Features |  |  |  |  |
| Size |  |  |  |  |
| Instructions Included |  |  |  |  |
| Weight |  |  |  |  |
| Volume |  |  |  |  |
| Volume graduation marking |  |  |  |  |
| Tactile hand holds |  |  |  |  |
| Handle |  |  |  |  |
| Cap |  |  |  |  |
| Body Interface |  |  |  |  |
| Functions |  |  |  |  |
| Useful in bed? |  |  |  |  |
| Designed for ease of Cleaning |  |  |  |  |

## Step 2. Explore the internet

### Develop keywords

Start by developing a list of keyword search terms. Use general terminology for your device searches – not your creative name for it. For example if you are looking for a device to reconnect an off-the-hook telephone, do not use the name you have given your device, such as “[Caller Connect](https://sphhp.buffalo.edu/cat/kt4tt/best-practices/need-to-knowledge-ntk-model/commercial-devices-and-services/phase-i/stage-2-project-scoping/caller-connect-example.html)” or “Line Butler.” In my case, I did not use “AquaEve.” Use generic terminology. I was looking for devices that would be used for women urinating while in bed or with limited mobility. The features I looked for were ones that would impact function and usability. So I included keywords related to the presence of hand holds, handles and caps. I wanted to find out how the urinal interfaces with the body to limit drips and capture urine. Is the product effective, comfortable and simple to use? The sample keyword list below represents words that may be used in many combinations, with or without quotation marks, in order to focus the search and generate useful hits.

*Female urinal keyword list:*

Female Women

Uncomfortable/comfortable urination Impaired mobility

Lying down Flat in bed

Toileting bedridden patients Managing incontinence Toileting devices

Urine collection

Hand-held urinal Female urinal handle Bedpan

Personal care Nursing home Hospital Quality care

Prevention of skin breakdown Prevention of urinary tract infections Urinal cap

### Conduct a search for competing products

The simplest way to start is to put your keywords into Google. Many times catalogs or companies selling related products will come up. You can further develop your keyword list as you search. We have listed here some resource sites relevant to assistive technology and medical products. Begin searching for the features and functions you had in mind, using your keyword listing, and expanding it as appropriate. You may find new features you would like to add to your design and include in your ideal product description on the comparison table. As you locate each product, include it in your table, detailing the functions and features as they relate to the categories of information you are gathering.

#### AT product information repositories

**Abledata:** <http://www.abledata.com/>

For rehabilitation products and assistive technology devices, a great source of items currently and previously on the market is Abledata. This site is self-described as the “premier database for unbiased, comprehensive information on products, solutions and resources to improve productivity and ease life’s tasks.” Manufacturers can request a listing and submit information about their products. The site has a neutral reviewer who verifies the information and creates an informative listing. The Abledata site is provided by the Department of Health & Human Services' (HHS) National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), so the site is not influenced by potentially- biased sales pitches from advertisers or manufacturers.

**Product Resource Directory:** [http://sphhp.buffalo.edu/cat/kt4tt/technical-assistance-and-](http://sphhp.buffalo.edu/cat/kt4tt/technical-assistance-and-resources/nidilrr-grantee-technical-assistance.html)  [resources/nidilrr-grantee-technical-assistance.html](http://sphhp.buffalo.edu/cat/kt4tt/technical-assistance-and-resources/nidilrr-grantee-technical-assistance.html)

This guide offers a sample of assistive technology products, which are categorized as devices for use in the bathroom, kitchen, for recreation, for the home in general, and accessories. This publication is provided by the Center on Knowledge Translation for Technology Transfer, and can be downloaded by clinking the link on the right hand column on the webpage of the link listed above for the Product Resource Directory.

**Association of Assistive Technology Act Programs (ATAP):** <https://www.ataporg.org/atdevices> According to the ATAP website “the Association of Assistive Technology Act Programs (ATAP) is a national, member-based non-profit organization. The Assistive Technology Act (AT Act) funds state Assistive Technology Act Programs. ATAP facilitates the coordination of state AT Programs nationally and provides technical assistance and support to its members.” The website has links to the state programs, which offer assistance with acquiring assistive technology, including AT exchange programs. It could be helpful to know if your category of product is supported by these programs. Funding promotes purchase and therefore sales.

#### AT distributors

The remaining links are to companies that sell products. Therefore, their listings should be approached with a grain of skepticism, with the usual precaution of not believing everything you read. You will also find more distributors listed in the catalog search step in this guide.

**Amazon:** <https://www.amazon.com/>

As one of the largest online markets, Amazon sells most categories of items. Although Amazon does sell items that qualify as assistive technology, on searching for AT, only book listings came up. Over 6,438 results were returned on querying healthcare devices. More AT items are listed in Health and Household. Although your product may be intended for people with disabilities, it may be useful to others in specific situations. For example, AquaEve sells on Amazon to campers. Searching Amazon may give you an idea for a secondary market.

**Community Medical Products:** <https://commedpro.com/>

Community Medical Products specializes in incontinence and hygiene products. This is an example of a niche store that offers related products and personal customer service. This is a store that specializes in products that are similar to the AquaEve female urinal and other competitive solutions.

**Providence Spillproof:** <http://www.kcup.com/>

Providence Spillproof is another example of a niche store, however their focus is on assistive food and liquid devices and containers. So this store has the unique combination of dinnerware and urinals.

Perhaps you can find the specialty stores for your category of product. Their attention to detail and quality can guide you to features and functions your product will need to surpass. Again, such stores can become partners and sell your product when you are ready to go to market.

### Conduct a search for R&D priorities

#### NARIC: http://www.naric.com/?q=en/home

Another very informative organization is the National Rehabilitation Information Center (NARIC), which offers a library of research, publications and projects funded by NIDILRR on technology, health and function, and independent living. You may find competitive product information here, but the amount of attention being given to the problem you are attempting to solve can be informative. This will help you determine the interest level in your problem scenario. In my case, no projects or articles were returned by searching for the keyword “urinal,” three were return for “toileting,” but none were relevant to toileting care in bed.

### Search for provisional and full patents

It is worth mentioning here that the United State Patent and Trademark Office (USPTO) is a vast source of information related to potential competing products. It is a good idea to do a cursory review at this

time. If you’re using the Center on KT4TT’s Chronological Guide for Inventors, you’ll see that on Day 30 you will go into a deeper, more extensive search when a patent is being considered. For now you are primarily looking for products on the market, discontinued products, as well as products that were patented but never made a marketplace debut. Though an extensive search will occur later on, once your invention’s specifications are better defined, you can also keep an eye out for any patents that may be very similar to your product concept. This is important to ensuring you are not infringing on any existing provisional or full patents. You can use the information gathered in this search to add to your competing products table, or just print out the patents you find for later reference when you are creating your design specifications, talking with a patent attorney, or identifying potential collaborators.

#### USPTO Patent Search Guidance

On this USPTO page <https://www.uspto.gov/patents-application-process/search-patents>there are links to a tutorial and details on the seven-step patent search process. Here is an overview:

* 1. *Brainstorm Terms Describing Your Invention*- the site will guide you on the terminology favored in patents. Broad terms like “device” will not help you. Terms have changed over the years so it is important to pay attention to this step.
	2. *Access and Review Cooperative Patent Classification Schema Using USPTO’s Website Site Search Feature*- In this step, the guide teaches the classification system of the USPTO. It is comparable to knowing how to use the Dewey decimal system to find a publication in a library. Without this knowledge you may be just fishing!
	3. *Review Classification Definition Linked to the CPC Classification You Selected*- This step helps you refine your scope.
	4. *Retrieve and Review Issued Patents Using the CPC Classification You Selected*- This section of the USPTO guide shows screen shots and describes how to retrieve information on patents and what each hot button indicates.
	5. *Conduct In-Depth Review of Patents You Selected Based on Their Front-Page Information*- Now that you have narrowed down patents of interest, you look at the front page summary information. This can further narrow your search.
	6. *Retrieve and Review Published Patent Applications Using the CPC Classifications You Identified*- In this step you can download and print entire patents.
	7. *Options for Broadening Your Search*- this step gives some resources beyond the above CPC classification system search. This is necessary since patent disclosure can occur in other mediums, such as book and journal articles.

## Step 3. Search print and online catalogs

Printed catalogs are still offered by many stores and can offer a valuable record of product availability and pricing. Online catalogs are easy to access, but cannot provide insights into discontinued products, unless pages are specifically printed out or downloaded, and retained for later review. In any case, in the medical catalogs you may find a range of the products that are purchased by institutions at high volumes. The focus of these distributors is typically on individuals with higher medical needs, as their customers are hospitals, nursing homes and therapy centers. The consumer-oriented mass-market catalogs are catering to the more independent, community-dwelling individuals who will not have as much professional support and assistance for completing life activities.

### Rehabilitation product supply companies

These companies are primarily business-to-business manufacturers and distributors. They typically work with physical therapy and occupational therapy clinics, hospitals, nursing homes and other medical facilities. More recently they have websites with sales of select products that can be purchased by individuals. Some long-standing companies are:

* AliMed: <http://www.alimed.com/>
* Maddack SP Ablewear: <http://www.maddak.com/index.php>
* NorthCoast Medical: <https://www.ncmedical.com/>
* Performance Health (Paterson Medical, Sammons Preston): <https://www.performancehealth.com/>
* The Wright Stuff: <http://www.thewrightstuff.com/>

### Mass-market suppliers

Now the internet and catalog search expands out of the disability and medical community and toward those that market to a greater audience- *anyone* who wants an easier and better way to get something done. The standards of product quality and overall business practices are on a different plane than medical suppliers. Some aspects are better for consumers, and others are not. Keep in mind that direct sales companies can be more open to partnering with new companies than the more medically based

and category focused rehabilitation product supply companies listed above. Below are some companies that sell directly to individuals (Direct to Consumer companies). Many started their businesses with mail order catalogs and expanded to websites as the internet gained popularity.

* Carol Wright Gifts: <http://www.carolwrightgifts.com/>
* Compete Medical Supplies: <https://www.completemedical.com/>
* FullofLife.com: <http://www.fulloflife.com/>
* Granny Jo Products: <https://grannyjoproducts.com/>
* HandsomeRewards: <http://www.handsomerewards.com/home.do>
* Make Life Easier: <http://makelifeeasier.com/>
* Silver Star Brands (Kimball’s): <https://silverstarbrands.com/about-silver-star-brands/>
* StarCrest of California: <http://www.starcrest.com/home.do>
* Vitality Medical: <https://silverstarbrands.com/about-silver-star-brands/>

## Step 4. Visit local stores and ask for catalogs and product brochures

Try going to a medical supply store or durable medical equipment (DME) retailer to see how the products are arranged. Positioning of items indicate what the store has found sells frequently or will make a good return on their investment. Urinals are on a side wall next to bedpan and other small carry out items. I found it interesting that much of the packaging looked similar between brands. Prices can be higher in stores than on the internet, so this should be considered when deciding pricing for your product. Current market pricing can help you determine if it is feasible to sell your product at a profitable price. I have found store owners and managers very open to discussing what products sell and why. You are a potential customer as well as potential supplier and so are valuable to them. I did not take any of their product brochures so they would be available to others, but I did take lots of pictures- with permission, of course. Store employees can be a treasure trove of information on what customers find lacking in current product offerings. After all, they are in direct line to hear the complaints!

## Step 5. Talk to potential users

### What are you trying to learn from potential users?

In this step you want to find out what people with the problem you are trying to solve are currently doing. Are they really unhappy with their current method? For example, if you are designing a new jar opener, how are people with weak grip currently getting lids off of jars? Perhaps they have someone

else in the house to assist and so it is not a big problem. However, those living alone may have to limit their food choices if they can’t get a jar open.

### What to say/not to say

An important point here is that you do not want to give away too much information about your solution. You may be giving away information that could enable someone else to create a similar product first.

Another point to keep in mind is that you do not want to prematurely give away the solution and miss an opportunity to really understand the problem. People may say “oh, that’s a great idea,” but do they really need it? Would they really buy it? And, at what price? If you solve the problem easily, then it may look like an easy solution that is not very valuable. Question your potential customers to avoid this trap. You may get new ideas from this step that you can plug into the prior steps in this search.

### Where to find potential users

In the early stages of product development, user input can be gathered through informal processes, such as talking with friends and family. However, as you begin to invest more resources into a project, it makes good economic sense to formalize the process used to acquire input, and seek opinions that are outside of your personal network. For example, when designing a product for older Americans, you might reach out to nursing home residents or staff, or work with consumer advocacy organizations to locate individuals with specific demographic characteristics or functional limitations. Alternatively, some market research companies are well-versed in locating people who meet specific requirements.

Generally speaking, you will want to look for other groups who serve the same target population for which your product is intended.

This is a challenging one for a female urinal. I could not ask anyone I knew that was a patient or health care worker in the hospital where I worked in due to conflict of interest. During my normal work tasks, I did gain some insights into the problem for women who need to urinate while still in bed. I did not know anyone at other hospitals to ask. Many hospitals and other facility that care for clients have tight rules on how new products or procedures are introduced. Often there is a safety review process in place to reduce the risk of harm from something new. I corralled my female friends and family to get some perspective from potential users. As my product became more developed, I was able to network with nurses where I worked and designed and planned a pilot study with acutely hospitalized patients.

After many conversations and trials of mock-ups with users, I tweaked the design. I decided I needed to add a cap on the urinal, due to popular demand. The user desire for a reliable effective cap has been verified with initial sales. I have added this update and others to the Female Urinal Comparison Table.

The “final” AquaEve (name changed from SUFFIE, but that is another story!) is also pictured so you can see the evolution that took place. Having a product that is superior to the products on the market will help position your product to attract potential industry partners, as well as customers.

### What to do with the information you’ve gathered

Once you’ve obtained user feedback, you may wish to add new features or functions to your invention. You’ll also want to update your competing products table by adding in any newly uncovered alternative solutions that you had not found in your internet or catalog searches. You will also want to add new features and functions to your comparison table, which might require digging up more information for each of the included products. Additional advice related to these points can be found in the [Chronological Guide to Inventors](https://sphhp.buffalo.edu/content/dam/sphhp/cat/kt4tt/pdf/ipm-inventors-guide.pdf).

## Step 6. Putting it all together

Now that all the above steps are completed, and you have condensed this information into a table format, you have a way to view how your ideal product measures up to the competition. Refer to the completed Competing Products Table on the following page to review the way that a sample of AquaEve’s competitors were documented. While completing each the steps in this guide you had the opportunity to find products that perform a similar function to your idea. Perhaps while going through this module, your idea changed or gained clarity. AquaEve changed quite a bit during the course of the market research on female urinals, which led to a better position in the marketplace and improved performance. Therefore, you should consider this research to be an iterative process, which may be completed multiple times as market conditions, and the invention itself, continue to evolve.

#### Female Urinals Competing Products Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Aqua Eve** | **Millie** | **Feminal** | **Comfort Female** |
| **Manufacturer** | EVE-n-SOL | Viscot Medical, LLC. | A+ Medical Company, Inc. | Advantage Urinal Systems |
| **Average Price per Unit** | $19.95 | $9.90 | $14.14 | $33.99 |
| Availability |
| Websites | X | X | X | X |
| Catalogs | X |  |  |  |
| In Facilities |  | X |  | X |
| Features |  |  |  |  |
| **Size** | 8” x 3” |  | 11.5” x 4” |  |
| **Instructions Included** | Yes | Yes | Unsure | No |
| **Weight** | 0.5 lbs |  |  |  |
| **Volume** | 16 oz. | 34 oz. | 32 oz. | 67 oz. |
| **Volume Graduation Marking** | Yes | Yes | No | Yes |
| **Tactile Hand Holds** | Yes | No | Yes | No |
| **Handle** | No | Yes, but only for storage. | Yes, but requires extreme radial deviation/ulnar deviations to grasp. | Yes, but requires extreme radial deviation/ulnar deviations to grasp. |
| **Cap** | Yes | Yes—Available as add on to item. Cap not utilized in hospitals. | Yes—Optional cap, but is not secure. | No, but does have a reservoir bag. |
| **Body Interface** | Conforming, non-absorptive ring. Large opening. | Thin plastic | Wide, hard opening | Polyethylene, includes a unique Comfort Ring that feels like foam but does not absorb liquid. |
| Functions |  |  |  |  |
| **Useful in bed** | Yes | No | Yes, under some conditions. Would need to be tilted to fully interface with body. | Yes |
| **Designed for ease of cleaning** | Yes—Features a removable inlet ring | Yes | Yes | Yes |

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# Additional Resources

This guide offers a primer on searching for and documenting competing products. This is one of many important steps in the new product development process. To learn more about the other details involved in developing a new products, consider the following resources:

* + [Chronological Guide for Inventors](https://sphhp.buffalo.edu/content/dam/sphhp/cat/kt4tt/pdf/ipm-inventors-guide.pdf)- A day by day guide for inventors, detailing what to do and when.
	+ [Fundamentals of Inventing](https://archive.org/stream/ERIC_ED449592/ERIC_ED449592_djvu.txt)- This paper describes the basics steps an inventor should take when embarking on the development and commercialization of an invention.
	+ [Industry Profiles](https://sphhp.buffalo.edu/cat/kt4tt/projects/research-projects/industry-profile.html)- These informational resources offer demographic information, listings of companies and descriptions of products, as well as insights from assistive technology manufacturers.
	+ [Center on KT4TT Resources page](https://sphhp.buffalo.edu/cat/kt4tt/projects/development-projects/participatory-observer-project/resources-on-commercialization-and-technology-transfer.html)- This webpage includes links to presentations and documents related to transferring and commercializing assistive technology devices.

# Appendix A

This appendix provides two examples of competing products tables that were previously developed by staff of the Center on KT4TT. The first depicts an accessible thermostat, and the second refers to an accessible glucometer, which was designed for people with vision and hearing impairments.

## Example 1: Accessible Thermostat

The following information was excerpted from a commercialization package, developed by the Technology Transfer RERC, which was used to successfully license an Accessible Thermostat to a manufacturing company.

The “typical" thermostat and its environment: With thermostats that are currently available on the market, the user might control the furnace, fan or air conditioner, temperature set points, and programmable features. An analog (dial or thermometer) or digital (numbers) readout provides the user with temperature information. The Accessible Thermostat has a very “friendly” control interface and temperature readout, and offers several features not available in competing products. The following table lists major features and the impact of these features on thermostat function, while the competing products table details the Accessible Thermostat’s superior functionality as opposed to other thermostats.

#### Thermostat features with potential impact for consumers who use it

|  |  |
| --- | --- |
| **Feature** | **Impact** |
| Large button size | Large buttons reduce the requirements for precise motor control. This is especially important for persons with diminished fine motor control. |
| Buttons have unique shapes, colors, and labels | Shapes, colors, icons and labels distinguish buttons from each other and suggest their function. In addition, the combination of shape, size, color and icons provides information redundancy. High contrast colors improve button visibility. |
| Button placement | Buttons with similar functions are grouped close together. Buttons with dissimilar functions are separated. Buttons most frequently used are located along the right edge so as to be most easily accessed by the majority of people. Buttons less frequently used are in less accessible locations. Buttons projecting beyond the edge of the thermostat can be easily accessed using a closed fist. |
| Contour and Texture | Buttons can be located and identified by touch in low light or no light environments or by persons with visual impairments or blindness. |
| Back- Lighting | Backlighting makes most buttons visible in the dark and semi-dark. |
| LEDs | Most controls have an LED that lights up when the button is activated and is off otherwise. LEDs are located near the button that it provides feedback for. |
| Large, High Contrast Digital Temperature Display | Display has large, high contrast numbers easily visible under any light condition. Digital readout is strongly preferred by customers over analog displays. |
| Volume Control Dial | The volume control dial has a small paddle, which makes this dial easier to manipulate and also provides information as to volume level. |

Example 1: Accessible Thermostat Competing Products Table

|  |  |
| --- | --- |
|  | Features Desired by Consumers |
|  | Control Interface |  |  |  |  |
| Thermostat/ Model Number and Manufacturer | Large, distinct shaped buttons on thermostat | Raised buttons on thermostat as well as on remote | Intuitive placement of control buttons | Separation of Control Buttons | Control Back- lighting | Status Control LEDs | Large, Bright Digital Display | Voice Feedback | Remote Control | Cost |
| Heat |  |  |  |  |  |
| The Round/CT87A- Honeywell |  |  |  |  |  |  |  |  |  | $22.87 |
| T10-1141- Lux |  |  |  |  |  |  |  |  |  | $9.97 |
| CM80- Robert Shaw |  |  |  |  |  |  |  |  |  | $17.94 |
| Heating- 2 and 3 Zone/CT1800A1004- Honeywell |  |  |  |  |  |  |  |  |  | $76.00 |
| Heat/Cool |  |  |  |  |  |
| LHS-25 Talking Heat/Cool Thermostat- LS&S Group, Inc. |  |  |  |  |  |  |  |  |  | $160.00 |
| CT 87B 4008- Honeywell |  |  |  |  |  |  |  |  |  | $38.86 |
| DMH 100- Lux |  |  |  |  |  |  |  |  |  | $18.97 |
| TL 650- Lux |  |  |  |  |  |  |  |  |  | $19.97 |
| T 101143- Lux |  |  |  |  |  |  |  |  |  | $16.97 |
| Heat/Cool/Programmable |  |  |  |  |  |
| Accessible Thermostat |  |  |  |  |  |  |  |  |  | $51-$99 |
| Magic Stat 32Program/CT3200A 1001- Honeywell |  |  |  |  |  |  |  |  |  | $59.00 |
| Programmable Round/CT2700A 1019- Honeywell |  |  |  |  |  |  |  |  |  | $49.00 |
| 7 Day Programmable/CT3600A1002- Honeywell |  |  |  |  |  |  |  |  |  | $89.00 |
| Chronotherm Programmable/CT8602C 1001- Honeywell |  |  |  |  |  |  |  |  |  | $119.00 |
| TX 500- Lux |  |  |  |  |  |  |  |  |  | $29.97 |
| TX 1500- Lux |  |  |  |  |  |  |  |  |  | $39.00 |
| TX 9000- Lux |  |  |  |  |  |  |  |  |  | $54.87 |

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## Example 2: Accessible Glucometer

The following information is excerpted from a winning Phase II SBIR proposal, written by AZtech, Inc.

The following table outlines a sample of competing products including glucometers, associated voice boxes, and health monitoring systems that are currently available on the market, in comparison with the ideal accessible glucometer, as defined by potential end users. CO XYZ’s accessible glucometer is the only system that offers verbal feedback based on that glucometer’s readings; uploads data to a central server via phone line; collects an unlimited number of readings on the central server for later analysis; offers immediate notification of emergency situations triggered by high or low glucose readings; provides graphical data analysis of glucose readings over time; and offers verbal and textual output to accommodate various disabilities.

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Example 2: Accessible Glucometer Competing Products Table

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Manufacturer and Product Names** | **Ideal Product** | **LifeScan: One Touch II** | **LifeScan: One Touch Profile** | **Home Diagnostics, Inc: Diascan Partner Talking Glucometer** | **Roche Diagnostics: Accu-Chek Voicemate** | **Health Hero: Health Buddy** |
| **Type of Product** | Accessible Glucometer | Adaptable Glucometer | Adaptable Glucometer | Talking Glucometer | Talking Glucometer | Non-Talking Health Monitoring System |
| **Price** | $400 | $120- $150 | $150 | $399 | $475 - $500 | Not available |
| **Availability** | Scheduled to begin manufacturing in Q4 2008, or Q1 2009 | No longer manufactured, still available in stores | Presently manufactured | No longer manufactured, still available in stores | Via Mail Order, online store, and online and brick and mortar drug stores | Available through health care clinics and systems, no direct sales |
| **Voice** | Integrated recorded speech | Separate synthesizer modules | Separate synthesizer modules | Integrated synthesizer | Separate synthesizer | none |
| **Display Screen** | Yes | Yes | Yes | No | No | Yes |
| **Memory Capacity** | Unlimited storage, including time and date markers | 250 records including time and date markers | 250 records including date and time markers | n/a | 100 records including time and date markers | 64 MB memory, 32 MC storage |
| **Power Source** | Phone line or 12 Volt DC | Duracell alkaline battery size J | two AAA batteries | Two AA batteries | 9 volt or AC adapter | n/a |
|  **Weight**  | 6 oz | 4.76 oz | 4.5 oz | 8 oz | 11.4 oz | 20 oz |
| **Size** | 6'' x 4'' x 2'' | 4 3/4" x 2 3/8" x 11/16" | 4.3"x2.6"x3.2" | n/a | 6.5" x 3.0" x 2.5" | 4.72" x 8.98" |
| **Tactile Markings** | Yes | No | No | n/a | Yes | n/a |
| **Accessible Instructions** | Audio cassette/CD and video with sign language | Audio cassette or video guide available | None | Audio cassette | Audio cassette | none specified |

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