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EXECUTIVE SUMMARY

INSPIRATION

PROBLEM STATEMENT

HYPOTHESIS
This project is a new cooking prep system to enhance the cooking prep environment and experience for blind and visually impaired people, as well as sighted people. In other words, this design offers a barrier-free kitchen system of cooking prep for people who have visual limitations, as well as for sighted people who want to organize and use prep items in kitchens more easily and efficiently.

The number of blind and visually impaired people in the United States is growing not only because of disease, but also due to the growing aging population. The life span of kitchen items is also growing due to new technologies that are developed. Since the blind and visually impaired people will be using their kitchen items to help them live more independently, their kitchen items should be designed to fit their needs.

My inspiration for this project started with a visit to Opaque-dining in the dark, a restaurant in San Francisco CA. This restaurant provides a pitch black environment for all customers to experience a new way of dining. Much to my surprise, our waitress was a visually impaired person, but she was able to serve us as well as sighted person. However, as a sighted person, I had a great deal of difficulties dining in the dark.

This experience let me plunged into a world of sensitivity I have never experienced before. It just like taking me through a journey of taste, sound, smell, and touch all in the dark. As an Industrial Designer, I believed that this was an opportunity to create a new system related to cooking for blind and visually impaired people.
Blind and visually impaired people are face a number of challenges when interacting with their kitchen environment because so much information is encoded visually. Especially in cooking prep, there are so many different items and complex tasks involved, and it is the most time consuming part of the cooking process for low vision people.

Things easily become lost in surroundings that cannot be scanned quickly. A lot of blind people are discouraged because of their incapability of identifying daily kitchen items and inaccessibility of cooking prep tasks.

If there is a design which helps blind and visually impaired people to make less effort on cooking prep tasks, they also will easily and safely access the cooking prep tools.

Then it would simplify the cooking prep process and minimize the steps in the process, so that more people with sight limitation will be better acquainted with their kitchens and simply enjoy the home cooking.
RESEARCH

OBSERVATION AND INTERVIEW
CURRENT SITUATION
TARGET USER
BUSINESS PLAN
FOOD PREP
MARKET
More than 15 million North Americans are either blind or visually impaired. In my previous survey, my interviewees mentioned their need for kitchen products is not only reduce frustration in it, but more importantly, they want to be included in society rather than only getting products “specially designed” for them. In that case, the universal designed kitchen is even more important for this market.

From the annual Kitchen and Bath Industry Show (KBS) in Chicago, I found out some kitchen trends in the future that are being supported in the market. In which Universal Design is a strong trend and getting more popular. More and more homeowners requested adaptable and universal design features, making the spaces more efficient for all types of people, including blind people.

Kitchen products with universal features that allow sighted and blind people to access will increase blind people’s independence.

I have interviewed a lot of blind and visually impaired people and observed the way they cook, some of them are really passionate about cooking such as Christine Ha who was the winner of the competition “Master Chef” and Lauren Martinez who is the chef at one of the upscale restaurants in Chicago. From talking to those people, I found out that they are really easy going, fun and positive.
The average age of the blind and visually impaired is 62.

Most blind adults (78 percent) live in an urban area.

Nearly one in five lives in poverty.

Almost half of them are married or living with others.

 Personality is fun.

The survey indicates that there are 993,766 legally blind, non-institutionalized adults ages 18 and older in the United States.

- Almost half (49 percent) are married
- As blind men age, they are more likely to be living with a spouse
- Most blind adults (78 percent) live in an urban area
- Only 19 percent are currently employed

National Center for Policy Research, Demographic, Household, Health and Economic Characteristics

How many blind and visually impaired people are there in the world?

Every five seconds one person in the world goes blind

Every year, 75,000 more Americans become blind. According to the National Federation of the Blind.
Target User

- 27% Eating out
- 20% Cook with assistants
- 30% Cook alone
- 8% Family cook for them
- 15% Assistants cook for them

Data base: Interviewed 60 people

Target Market

1. Organizations who provide independent living program.

- Non-profit organizations
- Different locations across the U.S
- Blind people join training programs every year
- Special aid products are sold

2. Blind or visually impaired shoppers.

- 1.5 million blind or visually impaired online shoppers
- 35% do daily cooking

How many products can I sell?

Out of the 1.5 million blind or visually impaired shoppers, only 35% do daily cooking. Therefore, considering my target markets, the estimated number of products sold annually could be around 110,000.

There are more than 20 different kinds of non-profits around the U.S for blind and visually impaired people. The Light House for the Blind, for example, has more than 200 people a year that participate in their daily independent living programs. At least 17,000 special aid products are sold each year at this non-profit organization.
From this pie chart we can see that 35% of the in-home accidents happen in the kitchen. Among the most common accidents are bumps and drops, trips and slips, cuts and pricks; they happen frequently during food prep tasks. This is only for the general population; imagine what it would be like for blind people. In addition, from the research I found out that food prep takes an average of 60 minutes; this is the most time consuming part of the whole cooking process.
The cooking process for blind and visually impaired users

4 senses

Food Preparation

- finding ingredients
- finding kitchenware
- washing
- cutting and chopping

Food Sensing

Food Serving

Cleaning

Cooking

Storage

Shopping

Food Preparation

baking
boiling
frying
putting spice and spreading

refrigerator
cabinet
sink
counter

measurement and pouring
peeling
blending
DIRECTIONS

DIRECTION 1: IN THE ZONE
DIRECTION 2: THE KITCHEN “GPS”
DIRECTION 3: THE MOVING PREP
DIRECTION CHOOSING
I started to try different ways to improve the cooking prep experience for them. At the beginning I designed a user-friendly kitchen which could reduce their workload, but what I learned from user testing is that it took a really long time for them to learn how to use it and they were also concerned about not being able to afford to remodel the whole kitchen. So, I changed my direction to a kitchen cabinet system which was intended to solve the main problem of organizing items in cooking prep, but still, the feedback was mostly about monetary concerns and also fixed furniture is not flexible. If they move or use other kitchens, they have to learn to use a different kind of food prep, and the most important thing for them is they want to use the same things as sighted people use, they don’t want to be seen as different.
The storage can be opened even at the corner and this type of storage can create a predictable space for user to looking for items in it.
DIRECTION 1: IN THE ZONE
DIRECTION 2: THE KITCHEN "GPS"
After user testings and many iterations, I realized they would like to prepare all the things they need before they actually start to cook; what they really want to have is a product that’s easy to learn, portable, convenient and easily accessible to save time and tasks.

From my testing I determined my final direction which is a cutting board system that can store the utensils they usually use and is combined with a scale and a trash container to add more functions to it. They showed more interest in this design because it provides multiple functions in one product and it can be used by all people.
After surveyed people in the blind and visually impaired program, it shows that half of my target users can afford $50-$80 per food preparation product. Annually, they spend $100-150 for food preparation product.

Non-profit organizations like the Light House for the Blind and the Lion Center, provide classes and door to door service to introduce products to visually impaired users. These products can also be purchased online. More than 1.5 million blind or visually impaired people have access to the Internet, according to the U.S. Census Bureau. Every year, 75,000 more Americans become blind, according to the National Federation of the Blind.
DESIGN CRITERA

MISE EN PLACE
PRD
Find ingredients
Wash them and feel the texture change to make sure they are clean
Cut ingredient with a c shape
Use different textures to distinguish different cutting board, and cut the other ingredient
After cut all ingredients, clean the counter top again
Take out the knife
Put away the knife to a temporary location
Find the trash can, throw away scraps and dropped ingredients
Find and collect scraps and ingredients that was dropped right after
Collect cut ingredient into bowl and plate by hands

MISE EN PLACE
Find spices that needed by different labels, and put it back right after use it.

Put one finger in the bowl and pour liquid into the bowl until the finger feels it.

Measure the spice with spoons, and slightly move the top part.

Put everything in different containers and put them on the tray. Mise en place.
**PRD: CUTTING**

- **Food types**: Have multiple boards to prevent cross contamination.
- **Sensory feedback**: Should apply more features which can stimulate users’ other senses to identify items.
- **Sanitation**: Make the layout of cuttingboard more clear and easy to clean will reduce frustrations.
- **Food movement**: Make it easy for user to transfer food during preparation.
- **Guide**: Should have more intuitive features to reduce the repeating tasks for blind and visually users.

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**PRD: MEASURING**

- **Accurate measurement**: Make the measurement easy for users to read.
- **Sensory feedback**: Provide features that users are able to aware of the location to prevent spill, and enhance the sense of safety for them.
- **Different liquid**: Should work for different liquid in kitchen including hot and cold liquid.
**PRD: MEASURING**

- **Sensory feedback**: Provide features that users are able to identify different items and measurement.
- **Less chaos**: Should simplify the process of measuring, and cut down the number of items which cause the confusion.

**PRD: LABELING**

- **Inexpensive**: Affordable to users
- **Flexible**: Can be used on various kitchen food packages and kitchenwares.
- **Simple**: Make it easy to learn and use during cooking.
- **Reusable**: Not disposable like most of current labels which are wasteful for users.
- **Affordable**: Simple and inexpensive.
DESIGN
IDEATION DEVELOPMENT ROUND 1 IDEATION
IDEATION DEVELOPMENT ROUND 2 CUTTING BOARD SYSTEM
IDEATION DEVELOPMENT ROUND 2 PREP BOWL SYSTEM
IDEATION DEVELOPMENT ROUND 3 CUTTING BOARD SYSTEM
IDEATION DEVELOPMENT ROUND 3 MEASURING SYSTEM
IDEATION DEVELOPMENT ROUND 3 LABEL SYSTEM
In the first round of ideation development, I learned that the location is very important. When a lot of items are at the counter top it will enhance the chance of people bumping into them or dislocating them, so I found the sink is a better place for prep, especially for low vision people. It will prevent the problem of cleaning the counter top and if scraps are dropped, people can simply wash them. Secondly, everything starts with the sink and ends with the sink, so if I can combine the sink and the prep, blind and visually impaired people won’t have to grope back and forth between the sink station and the prep station.

For measuring containers, I started by brainstorming about the use of the other four senses to measure spices and liquid and combine spices in containers or prep bowls.
ROUND | IDEATION

Cutting board system

Prep container
ROUND 1 IDEATION

- Cutting board combined with colander
- All in one cutting board with cut-outs
- Half cutting board on colander
- Cutting board mounted on the wall
- Liquid measuring syphon
- Liquid measuring cups
- Measuring powders and solids
- Different shapes to indicate different uses

User testing
In the second round of ideation development, I focused more on the combination and configuration of the cutting board system, and tested the flexibility of working on different sinks. Here I am going to talk about my cutting board, colander and collector revisions.

In the beginning of this round, I tried to combine a colander, cutting board and prep bowls so people can easily do the tasks in sequence. The colander is on the bottom as the stand and sits on the sink, one prep bowl is on the side close to the user, one scrap container is on the other side, and the cutting board sits above them. Here, I designed different cutting boards with different ways of sitting on the stand. The first one slides in, or you can add one piece around the colander side so the cutting board can directly sit on it, but I found out this kind of structure would stack small things, which were hard for them to clean. Then, I used a trapezoid shape for the colander, so without the extra structure, the cutting board can fit into the colander. However, during the testing, I found it was not stable: the cutting board was easily tipped over. So, I created raised edages around the cutting board, so it can not only sit on the colander, but also stop things from dropping off of the cutting board. Based on this idea, I thought about making the cutting board capable of being used on both sides to avoid cross contamination, and at the same time, people don’t have to find another cutting board. I tried different ideas and decided to have this kind of curved edge. While I was designing this edge I found I could create a little bit of an angle. In this case, during the user testing, I found that cut ingredients would go to one side of the cutting board and people like it this way, they think it will be easier for them to collect the ingredients, so I made different angles to test which angle is the most comfortable for people. It turns out that most people think 8 degrees is the most comfortable.

After that, I thought if I could add magnets on the cutting board edges, when they collected the cut ingredients, they wouldn’t have to put away the knife. Instead, they could temporarily put the knife against the wall, and it could satisfy both left handed and right handed users.
ROUND 2 CUTTING BOARD SYSTEM

- Extendable stand
- Double side
- Power sucker
- Be fore and after
- Lables colander
- Silicon feet
- Cutout
- Flip
- Slide in
- Trapezoid
- Sliding angle
ROUND 2 CUTTING BOARD SYSTEM

- Cutting board with walls on edges
- Edges guided user to cut accurately
- 3 degree angle helped user to collect cut ingredient easily
- 8 degree angle is too big for user to cut ingredient
- Cutting on front side of cutting board
- Magnet mounted on the walls
- Magnetic knife can be put against the wall
- User testing
- Cutting on back side of cutting board
- User testing
For the prep bowl, I first wanted to just hang it on the stand, so after the user cut the ingredients, they could push them into the bowl through the cutout on the cutting board, but when I tested it, people would accidently drop something into the bowl and when they wanted to take the bowl out, the space was too small to take it out, so I made two hangers on the prep bowl and adjusted the size of the stand poles. Then, the cutting board was sitting on the hanger and stand pole, and people could push the cutting board forward and collect the cut ingredients. However, it was too deep which made it hard to take those ingredients out especially when it was something like garlic. Then, I thought why not make this container a collector instead of a prep bowl, so it can be like a scoop to scoop up the ingredients and pour them into the prep bowl. But when I used this shape as the scoop, it was too big for the user to hold and hard to pour it into the bowl correctly. Then I thought that if I could use silicone as the material, it would solve those problems.
ROUND 2 PERP BOWL SYSTEM

- Silicon and pp
- Collector
- Hangers
- Soft and easy to grab
- Scoop
- Water level indicator
ROUND 2 PREP BOWL SYSTEM

- The flexibility of the prep bowl can help users to easily pour things out.
- Silicone as the material of prep bowl.
- Scooping prep bowl is too big for users to hold.
- Prep bowl is too big which made it hard to take those ingredients out.
- The space is too small to take the prep bowl out.
- Adding tactile label on the prep bowl to distinguish different ingredients.
- The wall on the edge of prep bowl can prevent water from spilling.
- Try to add a ball on the spoon, so users can feel the level of water.
According to my user's feedback on second round ideation, I realized that my cooking preparation collection design includes too many parts, which can help my users to avoid difficulties they have in prep very effectively. However, the design prolongs their learning curves as well. It took a long time for users to actually learn how to use this collection correctly, and while cutting the ingredients, the cutting board is not very stable when it is seated on large sinks.

So in the third round of ideation, I wanted to simplify the design and was trying to combine different parts together to make it easier for users to use, and reduce the learning curves at the same time.

So here are my 3 systems for Cooking Without Looking collection: cutting board system, measuring system and labeling system.
For the cutting board system, I was inspired by the dish drainer, which has a draining mat under the dish rack. With the draining mat, the cutting board doesn’t have to be seated on the sink. Instead, seating it on the counter with a mat underneath the cutting board can make the process of cutting safer and stable. Also, the juice and scrap could be left on the mat and pushed into the sink.

With this idea, I combined the scrap container and cutting board, and created a rising edge around the cutting board in order to prevent drops. Moreover, it also can guide the user to cut ingredients safely. Instead of a flat surface, this cutting board has a concave and a convex surfaces on two corners catty corner) using silicone. Both concave and convex surfaces have draining holes and a cross cutout. The concave part can collect juice and scrap, and after cutting, the user can easily put all the scrap into the sink or trash can through the cut-out. The convex part can guide the user to collect cut ingredients into the bowl accurately by giving a subtle sensory feedback.
ROUND 3 CUTTING BOARD SYSTEM

1. Cut the ingredient on the angled surface, so the juice will go into the trash container, and small ingredient can lean on the wall.
2. Push the scapes into the trash container after cut ingredient.
3. The magnet on the wall of cutting board allowed user to put knife on it.
4. Collect the cut ingredient guided by the convex part.
5. Flip the cutting board to cut meat.
**ROUND 3 CUTTING BOARD SYSTEM**

- Divided into three parts
- Drawers underneath
- Scrap container
- Scrap cover
- The cutting board stand
ROUND 3 CUTTING BOARD SYSTEM
For the measuring system, I designed a measuring cup and a measuring spoon for the purpose of improving the liquids, powders and solids measuring process for blind and visually impaired. I took advantage of liquid buoyancy, so I designed a floating level indicator which part of it is in the cup and will float when liquid goes into it. The other part is connecting to the outside of cup and the user can tell the level of the liquid by touching it.

To test this idea I made different mock-ups which have the floating liquid level indicator on different places of the cup, some of them even have hinges for the indicator so the user can measure using one hand. After the testing, users gave me more positive feedback with the idea of combining the handle and indicator, because they can actually feel the level going up, and they liked the idea of being able to use one hand to hold it, and feel the level rise at the same time. My users also suggested to make the handle separate from the cup, so it could be easy to clean, moreover, the handle can expand to accommodate different components of the system.

\[ \text{F} = \rho g V \]

Buoyant force= density \times gravity \times volume

<table>
<thead>
<tr>
<th>Material</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark Karo syrup or maple syrup</td>
<td>1.37</td>
</tr>
<tr>
<td>Light Corn syrup</td>
<td>1.22</td>
</tr>
<tr>
<td>Water with food coloring</td>
<td>1.00</td>
</tr>
<tr>
<td>Syrup (sorghum)</td>
<td>1.10</td>
</tr>
<tr>
<td>Vegetable Oil (yellow)</td>
<td>0.81</td>
</tr>
<tr>
<td>Beer (pale lager)</td>
<td>1.05</td>
</tr>
<tr>
<td>Olive oil</td>
<td>0.87</td>
</tr>
<tr>
<td>Lamp oil</td>
<td>0.86</td>
</tr>
<tr>
<td>Honey</td>
<td>0.86</td>
</tr>
<tr>
<td>Glycerol</td>
<td>1.29</td>
</tr>
</tbody>
</table>

\( \Rightarrow 1 = \text{Water} \)
1. Slide in the handle from the bottom part of the measuring cup.
2. The floating level indicator connects to the handle, so user can identify the level of liquid by touching the indicating button.
3. Inner layer will help user to pour liquid accurately.
ROUND 3 MEASURING SYSTEM

- Detachable handle
- The water level indicator
- Inner layer
- Outer layer
- Silicone
- Silicone
The floating liquid level indicator on the side of the cups, but user had to use one hand to hold it and another hand to touch the indicating button.

Use hinges to connect the indicator, but user had less sensitivity to the indicating button.

Combined the handle and the indicator button, user can measure with one hand.
ROUND 3 MEASURING SYSTEM

User testing
The measuring spoon is designed to decrease the number of spoons and the user can have different volumes of measuring spoons by adjusting one spoon. This eliminates confusion when having to use many spoons, and also will make cleaning easier.

So this design has two layers of spoons, the outer one is connected to the handle, and inner part is divided into 4 equal parts, so it can create different volumes when users take the inner part up to 4 different levels.

I found that adding silicone can be really useful for the adjustment part of the measuring spoon. Because of it’s flexibility silicone can be pushed inside and the inner part of the spoon could fit into the outer spoon. Silicone provides strength so when the user pulls the inner part out, it can hold the inner part so that the spoon has increased volumes.
ROUND 3 LABEL SYSTEM

- Braille buttons to push in
- Magnet for making braille balls
- Braille label
- "Abacus" label
- Adjustable band
- Bubbles to push in and out
- Bubble DIY label
- Glass for making braille balls
I found the labels that blind and visually impaired users use now are all disposable and the label printers are very expensive. Some of the users are even using different shapes of tactile dots in kitchenware to help them distinguish different items, but there are limited shapes for them, and sometimes they still forget what items are related to the shapes of the dots.

So I designed this modular label system, which includes one band, and several DIY labels. The band is made of silicone, therefore it can be adjustable to accommodate different containers and the silicone can add friction to the containers so that it will stay on them.

The DIY labels include three parts: the plastic case, the silicone bubble part and silicone bottom part.

The silicone sample has a braille display that the user can create a label with by pushing in any of the buttons. More labels can be added if necessary, the silicone label is designed with a bottom piece that inserts into the band, and placed around a jar, container, etc. The band is adjustable to fit around most kitchenware.
FINAL DESIGN

FINAL DESIGN CUTTING BOARD SYSTEM
FINAL DESIGN MEASURING SYSTEM
MEASURING CUP
MEASURING SPOON
FINAL DESIGN LABEL SYSTEM
I did research about colors which have an effect on visually impaired. I found black and white are colors that have the most contrast with food, and red is the most sensitive color to visually impair.
Back side:
The back side of cutting board is for

Front side:
The front side of cutting board is for

The knife rest+holder

The holder with stripe pattern:
To distinguish different uses of each side of cutting board

The holder with circle pattern:
The back side of cutting board is for
Detachable handle:
To easily clean the measuring cup and adapt different cups

200 ml
Tactile braille
Tactile number
Floating liquid level indicator

Silicone inner layer

Expand the touch of object - easy for pour liquid in and out

Inner side level marks for sighted users to read
MEASURING SYSTEM

MEASURING SPOON

1. Inner stopper: Silicone/Co-molding
2. Inner layer: PP/Injection molding
3. Spoon: PP/Injection molding
4. Anti-slippery pad: Silicone/Co-molding
5. Handle grip: Silicone/Co-molding
Users can have 4 different volumes of measuring spoons by adjusting one spoon.

Braille labels
Tactile braille labels for users to identify different measurement.

Hand grip
User can easily find the hole when hanging the spoon on hanger, and provides a better sense of touch.
Bubble Braille
It has a braille display that the user can create a label with by pushing in any of the buttons. More labels can be added if necessary.

Silicone band
It can be adjustable to accommodate different containers and the silicone can add friction to the containers so that it will stay on them.

Silicone back
Push the back of the plastic case, the bubble braille returns to its original shape.
MATERIAL AND PROCESS

MATERIAL
PROCESS
BILL OF MATERIAL
MATERIAL: PLASTIC

HDPE

HDPE, or High Density Polyethylene, is a very light and extremely tough, chemically resistant plastic and is one of the most commonly used plastics in the United States. It does not absorb water and has good sliding abrasion resistance in addition to being self-lubricating. HDPE cutting board is engineered for durability, low maintenance and safety. Its textured, matte surface safely holds food in place without slipping, in that case, blind and visually impaired users are able to identify items by touching the textures and cut safely.

For visually impaired users, the HDPE provides different color choices. So with black and white color HDPE cutting board, users can see the ingredient by the color contrast.

PP

Polypropylene is commonly used for injection molding. Its resistance to high heat generally makes it microwave and dishwasher safe, as well as a good option for food.

Therefore, the liquid level indicator in the measuring cup even can measures hot liquid.

MATERIAL: SILICONE

SILICONE

Silicone is a synthetic rubber which contains bonded silicon - a natural element, abundant in sand and rock - and oxygen. The advantages of silicone include heat resistance, flexibility, the fact that it can go directly from the oven or microwave into the refrigerator or freezer and that it is generally easy to clean. Silicone containers are also environmentally friendly.

For blind and visually impaired users, using silicone in the prep products can enhance the experience of working in the kitchen. The soft and warm touch of silicone changes cold tools into their guiding friends.
Co-injection molding process produces a plastic part with a skin and core laminated structure. The skin material is firstly injected into the mold, followed by the core material, and the machine injects skin material again to encapsulate the core.

With co-injection molding, the whole Cooking Without Looking system are able to has multi-materials on one part, the blind user friendly material like silicone can be easily utilized in all products.
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BLOGS
BLOGS

Blind Access Tools and Services (BATS)
http://www.blindaccess.htm.com "Welcome to Blind Access Tools and Services, otherwise known as BATS. This website is created by visually impaired people for visually impaired people. Are you always searching for resources or services? Are you just entering the realm of visual impairments? We hope this site can help you."

Eye Cancer
http://eye cancer.eye cancer.blogspot.com "I was diagnosed with Stargardt's disease when I was 12. I knew little about my disease and even fewer people who were severely visually impaired like me. It wasn't until this year (I am in my 30's) that I met another individual with Stargardt's. It is my hope that this blog can further the cause of educating, empowering, encouraging, and enabling people with visual impairments." My Dear Angel
http://1o-my-dear-angel.blogspot.com "I want to do a kind of a diary for my daughter Angelina to read when she is older. You see, her mother, me, is deaf and is now legally blind. Angelina has only known me as deaf and legally blind person, but years before I was able to see better and have had many adventures. The blog is to share with others also, so that they can too see that there is more to me, much, much more. One day soon I will be the "blind lady with the dog" and I will live to for people to see beyond the disabilities. This blog, I hope, will achieve that."

learn about this insidious condition. I've had up days, down days and inside-out days. Eighteen years later I've come to realize each day is a gift and I can treasure what it do have. Now it's time to tell my story so that other folks with this condition can take heart and live fine and productive lives."

people and descriptions about a number of eye conditions, including research into treatments, coping methods, and support groups."

BLOGS

IT for the Blind
http://www.1tfortheblind.blogspot.com "IT for the Blind is a technology blog, aimed at the blind community of the world. Reviewing technology, programming, and doing anything else tech-related, we are a relaxed community of blind/VI people."

Macular Degeneration and Me: Low Vision and High Hope
http://maculardegenerationandme.com "My name is Pepi Noble and my eye condition is known as Age-related Macular Degeneration, a deteriorating disease of the center of the vision field called the macula. Diagnosed when I was 50 years old, I’ve had many years to earn about this insidious condition. I’ve had up days, down days and inside-out days. Eighteen years later I’ve come to realize each day is a gift and I can treasure what I do have. Now it’s time to tell my story so that other folks with this condition can take heart and live fine and productive lives."

Vision Dynamics
http://lowvisionmaculardegeneration.blogspot.com "Our mission is to empower and inspire people with low vision, blindness, and learning difficulties with the hope, desire, and ability to lead happy and independent lives."

Blinddogtor’s Weblog
http://blindedator.wordpress.com "The daily adventures of a blind comedian and his guide dog Nash. The one and only legally blind comic brings his act! The Blindman Cometh! New York City. Brian can be seen performing regularly at comedy clubs all over New York City. Only problem is, he will not see you. Brian recently launched his own foundation. Comedians Unite For Sight. The foundation produces the Laugh For Sight benefits to fund retinal research as it hits the critical stage of human testing."
PORTFOLIO

LITTLE CHEF
SENSE OF SPACE
ZEPP
SOLO FRIDGE
FLIP FLY
LITTLE CHEF

- Easy to carry around
- Easy to store tools inside
- Playful and educational
- Detachable pieces can be shared with friends and families.
SENSE OF SPACE
Lunar Design sponsor project

Central display for group meeting

Personal meeting or changing gears
The Zepp Sensor and golf glove mount were designed to stay out of your way so that you can swing like you normally do. You won't even feel it.
This Mini refrigerator is designed for storing drinks like beer and milk and fruits. This shape is chosen for various reasons; it is space efficient, helps organisation, and makes scanning function possible.
FLIP FLY
THE NEW GENERATIONAL CAMCORDER PROJECTOR
For all sports purpose also as functional as other compact camcorder that you can carry it wherever you go. Combine with projector helps you to share.