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## Building a Better Computer for the Aging Generation

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**Presenter Information**

Gretchen Baird, Boryeon Kwon, Dylan Lasner, Parker Swensen, Zane Ross, and Adrik Gurganus

# Building a Better Computer for the Aging Generation

Peaceful Penguins / Metropolitan Learning Center

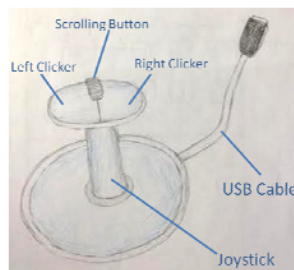
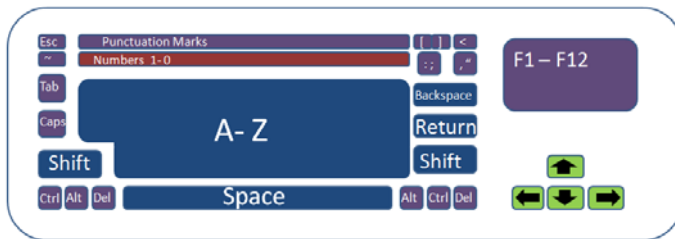
Gretchen Baird, Boryeon Kwon, Dylan Lasner, Parker Swensen, Zane Ross, Adrik Gurganus

## PROBLEM/OPPORTUNITY

The problem which we have ventured out to solve is that the aging community does not have easily accessible computers and technologies.

The challenge was to create three items; a proposal, a form of documentation showing our progress and a presentation at the end. The presentation includes a poster, slides and an oral presentation to the judges. The main focus of our work is to create the stated items based around creating easily accessible technology for the elderly community. With the deadline for the proposal being March 14th and the final presentation on May 3rd 2014

Figure 1: Keyboard and Joystick



## Peaceful Penguins Members



## HUMAN IMPACT

Our product has been designed to help the physically challenged, especially in the aging community, to more easily use personal computers. We saw that the elderly had difficulty using personal computers, for several reasons, however, a large factor were the clunky interfaces. We wanted to create computers that had more accessible interfaces so the elderly had access to invaluable tool. We understand that everyone needs to be able to communicate with their loved ones with email and programs like Skype, that they need to have access to food and supplies via online shopping, and that they want to use the internet for getting information faster and easier.

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## SOLUTION

Our browser is simple and to the point. The screen is relatively clear of clutter. It's buttons are clearly marked and are organized in a simple pattern that is easy to understand. Saved sites as well as basic functions such as E-mail and news are convenient and quick to get to. It would not be overly complicated and all of it's components would be clearly marked and explained. It's graphics would be visually appealing and it would run quickly. We would also add a firewall to protect against viruses.

The operating system would be small and condensed so that it would run fast. We have eliminated any unnecessary memory or storage space to allow it to be more lightweight and run faster. It's screen is big enough to be spacious and uncluttered, but small enough that it's not in the way and the computer is portable within the home. We also eliminated unnecessary things like a DVD drive, a webcam, and really anything except 1 USB port, 1 headphone jack, and the charging cord. The machine would be inexpensive. It would not be extremely powerful to allow it to be lightweight and therefore portable within the home. The battery would be lower power and the screen would be dimmer to allow battery life to last slightly longer. We have added a physical switch to the charging cord to turn on or off the flow of energy to the battery so that the user doesn't need to reach behind their desk and unplug the computer.

The keyboard has been slightly re-organized to make it simpler and easier to understand and use. We have separated the numbers from the secondary symbols that normally share a key with them. We have taken all of the function keys and put them where the second set of number keys usually resides, and we have gotten rid of the secondary set of number keys. Each type of key is mildly a different color, i.e. the letter keys are dark green, the number keys are dark blue, etc., and all of the keys have white markings. We have also added background lights to the keys. We have replaced the mouse or trackpad with a joystick. The joystick is connected to the computer by a wire so that the user cannot lose it.

For the desktop we eliminated the "toolbar" that is normally seen at the bottom or on the side of a desktop screen. Instead we are organizing each component in a box - internet browser, direct link to news, etc. in one section - and we have an open "window" directly on the desktop for other things like E-mail inbox, grocery list, and a local map.

Figure 3: Desktop and browser

