

My Memory Box

A new metaphor for a messaging system used for creating,
reading and searching your memories

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1. Project Framework

Every year the research department at Microsoft holds a conference (Design Expo), in which they present technology innovations, research developments and other researches concerning future technological, commercial and human products. The goal of the Microsoft Research Design Expo is to support open collaboration between the design and computer science academic communities, and Microsoft Research. The Design Expo is hosted by the Social Computing Group in Microsoft Research (Redmond, Washington), and is an event within the Microsoft Research Faculty Summit.

As part of this conference, students present new conceptual product ideas they have developed. The students, all studying for a master's degree in industrial design, are chosen from different schools around the world. The purpose of these conceptual prototypes is not to show a finished ready to use product, but instead to confront problems dealing with everyday lives and define creative solutions, offering a different perspective to technology and its uses.

In 2004, six universities (from India, Brazil, Holland, the United States, and Israel) were chosen for the project. The expo topic was *Communication through Technology: People to people, from close friends to strangers*. The suggested product had to involve technology and deal with communication between people. Each University held a semester long course which focused on a user centric prototyping design process. A liaison from Microsoft gave feedback to

each school over the course of the class. At the end of the semester, an internal competition was held between the groups participating in the course, and one student team per school was selected by the university to present their project at Microsoft.

2. The Product's Objective

Everybody has a shoebox... but in today's world, when almost everybody uses e-mail, some of the everyday experiences we used to have by using regular mail, are lost. Do you enjoy tearing up the envelope with a letter that was sent just for you as much as opening another e-mail?

The initiative problem the project dealt with had to do with a human experience, or more precisely – loss of experience. We chose to deal with the advantages and excitements of real mail that got lost when the world started using e-mail: the anticipation for the mail man; tearing up the envelope; the old shoe box we used to keep our letter collection in. This shoebox was actually a kind of treasure chest, a safe, parent-proof place for the strongest feelings -- love, friendship, occasionally lust, people had about the owner. Reopening the box years later is like looking back through time. Letters from old friends are so precious because they mean that someone took the time to sit down and write them. Nonetheless, one can not ignore the great advantages of e-mail (which, after all, lead to its 'victory' upon regular mail). Technology has made it so that we communicate more often than we ever did before; and still, many people feel that the personal side of communication somehow got lost.

How is it that people romanticize correspondence via the written word, when it is so slow, so inefficient? Today's communications should both get the benefits of the new technology and at the same time keep its roots as a powerful emotional experience.

What if we could combine these things? What if we put a hard drive in a shoebox? This project proposes a combination between the advantages of the physical world (real letters) with the advantages of the virtual world (e-mail).

The product actually combines the concept of the old shoe box, the mail box and our e-mail inbox; it maintains the pleasant experience of leafing through old long letters, but – with the ability to reply immediately to the sender, with the push of a button.

3. The Product

'My Memory Box' is a real wooden box that combines a personal shoebox with a physical mailbox and your computer's inbox.

In contrast to the wide variety of electronic products that offer endless possibilities, varied menus and diverse buttons; My Memory Box is indeed technological, but maintains a (purposely) non technological user interface. There are no menus, no buttons, and as a whole the product does not consist of many components. This strengthens the concept to offer a way for people to communicate with the speed, accessibility and ease of e-mail, without sacrificing the excitement of opening a real-world mailbox in hopes of finding a letter from a close friend. The product is designed as a wooden box, which is connected to the Internet (the way a telephone is connected, without the need for a computer in addition). The wooden Memory Box contained a set of removable postcard-sized electronic screens that simulate the use of the old shoe box and mail box combined into one product. The electronic screens receive new letters, and all letters are saved within the wooden box.



4. The technology: The electronic postcard

What if we had a bottomless shoebox? In our research, we were looking for something that would combine the advantages of paper with technology.

The electronic postcard is based on the *digital ink* technology, which utilizes a chemical compound (in the form of a cell) able to change its color. By placing thousands of cells one by another, it is possible to create an image, similar to images comprised by pixels that we see on the computer. The great advantage of this technology is that it doesn't require electricity on a regular basis (but only to change the picture); which makes it possible to take out one screen from the box, without the need to load it with electricity, and save the data on it for years and years. The screen is two sided: one side for the text while the other presents a picture, simulating a real postcard. Each electronic screen can contain hundreds of letters that the user can leaf through. Each postcard is addressed to a person or defines a category, and contains all letters under this subject. Touching the screen will enable leafing through the letters. There is no limitation as to the number of postcards in each Memory Box.



5. Design Guidelines

From talking to people, and after looking at their shoeboxes, we learned that e-mail's are closer in character to post-it-notes, even between friends, while letters are more like small and personal journals people write to each other.

In contrast to other things people own, the shoe box is kept unorganized. While looking for a certain letter, they like to find others accidentally.

Three main guiding lines escorted the logic behind the design:

1. **Emotional:** Returning the lost excitement and experience of letters into e-mail: Creating a personal identity to e-mail (as the handwriting and paper create a personal identity to letters); enabling a collection of letters; and returning the coincidental and surprise elements attributed in the shoebox, to the inbox.
2. **Permanent:** Creating a timeless product. Technology changes every once in a while. Our memories DON'T! Today, as technology moves forward, the device on which data is saved changes every few years. It is still possible to read text written on paper or parchment from thousands of years ago; yet, presenting digital data written only ten years ago, saved on big floppy disks that no longer have available drives on the market, is hardly possible. In addition to that, an e-mail collection can be very inconstant. Changing an e-mail account or ignoring an e-mail account for some time will lead to a deletion of the collection. In this project we chose to combine the data (which today is encoded) and the output. In the same way as handwriting is not encoded and therefore can be read even after thousands of years; the electronic screens save the e-mail and pictures as they are and not as a file. The connection between the data and the way it is presented (the output) ensures the maintenance of letters for a long time. There is no need to purchase an external device in order to read the data (unlike the CD for example, which needs a computer in order to perform). The wooden box can escort a person in fifty (or more) years of correspondence.
3. **Accessible:** Simple use of the product. E-mail should not be locked to some of us. In order to use e-mail, you need a computer and basic knowledge of how to use it, characteristics that don't apply to a large portion of the population. I want my grandmother as well as my next door neighbor to use e-mails to. After all, it's just about getting mail. Therefore,

this product has more common characteristics with a telephone (which is very easy to use) than it does with a computer.

6. Main Functions

Using My Memory Box will make sure that you enjoy your e-mails in the same way you've enjoyed receiving regular letters just a few years ago. It combines a personal letter box with the advantages of technology.

As mentioned, the box is a wooden box, connected to the Internet, and does not have any buttons. The box is divided into two sections: the mail box, where the postcards are arranged standing, attached to the loader; and the 'shoe-box', a closed space where screens are placed unorganized and not being loaded.



6.1 Creating a Unique Identity in e-mail

One important feature of the product dealt with returning unique elements of real mail to e-mail: the handwriting, the paper, the envelope, the stamp and so on. The e-mail is abundant with information coded into text: the time and date in which it was sent; the number of times it was read; the place from which it has been sent and so on. The Memory Box uses this information in a different way, to create uniqueness:

- The time of day in which the letter was sent defines the background color of the postcard. A letter written in the middle of the night will receive a dark background and a different personality than a letter sent in the morning. This change in background color (every hour has a

different color) will assist the user to differ between the diverse letters; and also create the feeling that the letter was sent from far away: a letter sent from Japan, for instance, just moments ago, will have a different background color than the time of day in which the recipient receives the letter (considering he is on a different side of the world!).



- The more times the user reads a letter, or the older it gets – its color will fade with yellowness. In this way it is possible to recognize immediately the older and more read letters, without having to actually read the text.
- The place (country) from which the letter was sent will be translated into a pictured stamp from an internet site belonging to that country.

6.2 Visual Memory

A memory of a particular letter in the shoebox will almost always be visual, and when looking for a letter we use this feature. We remember the blue envelope, the stained letter paper, or the post card with the Eiffel tower on it. In contradiction to that, cataloguing of e-mails is based on logic: date, sender, subject and so on. Therefore, the letters in My Memory box use this logical information set in e-mails to give them visual uniqueness.

