

## Cooper Interaction Software Design Test

### Part Two

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#### Problem

*"Your job is to create a believable design for the MessagePhone, one that will be compelling to users because it makes them effective by being immediately useful. Your solution will include: Who will use the product and why? What will they use it for most often? What does the product do? How do users interact with the product? "*

#### My Design Approach

After reading the problem, I begin by considering the fact that our team has complete creative control over the product. This means we can have a unified message (so to speak) throughout this product. The software, hardware and industrial design can be made to convey what the Marketing group wants to get across to the target customer. No aspect should be out-of-place with this type of situation, but then again, this is only a hypothetical product development process. There's lots of room for the implementation to go astray.

Based on the high level product description, I would want one of these MessagePhones for myself. So, for better or worse, my design approach is heavily influenced by my perception of what's really needed and also own experience with similar products. I'm doing this design quickly, so there won't be enough influence from a domain expert, such as an administrative assistant or incredibly sought after executive.

The marketing group of VisiBell wants to sell boatloads of these, so I interpret that to mean business employees as the target customer. I think they would be more likely to actually justify the cost of a personal voicemail message center than someone who just wants to replace their broken cordless telephone at home. Plus, the cost of the color LCD touchscreen makes this item a little more expensive than your typical phone. So, now I have a rough idea of the target customer, and I start to conjure up images of what it would look like sitting on someone's desk.

As much as I like to think I know good industrial design, I first decide to not spend too much time on that aspect. We're going to hire the best ID firm we can find within the budget, so we'll give them the marketing message, proposed feature set and rough size, and then let them do their magic.

I sketch out on paper a rough industrial design based on a what has to go into it – a 4" x 5" color touchscreen, a numeric phone keypad, built-in microphone, built-in stereo speakers, some function buttons and a wireless handset. These are what I consider the essentials for a useful and compelling product of this type.

The next step is to run through a set of usage scenarios with the sketch. The important aspects of the software interaction surface, and the detail of the software interaction begins to emerge.

## My Solution

Here are the major points of my design:

### 1. Keep the focus on being a message phone

Listing the essence of the requirements help to crystalize what's really important, and remind me to keep things as simple as possible.

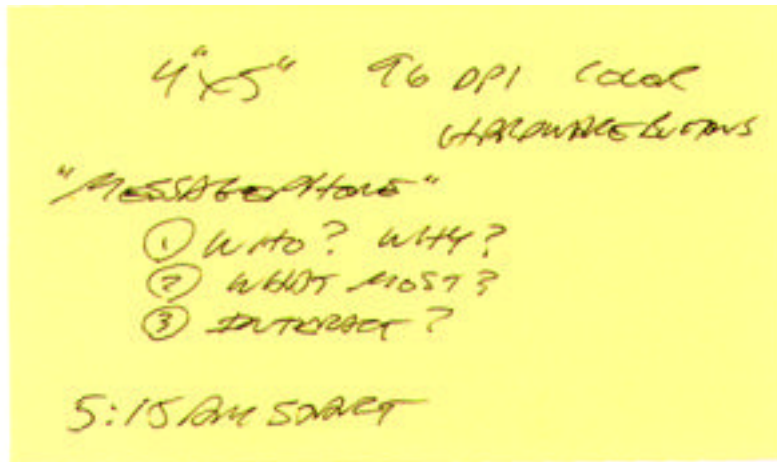


Figure 1. notes on the design parameters to consider carefully

### 2. Present it as a sleek information appliance

Make the overall package exude focus, clean design and with the visual appearance of next generation consumer electronics device. We decided to let the industrial designers handle the details, but the technology used and functions offered have to lead in that direction.

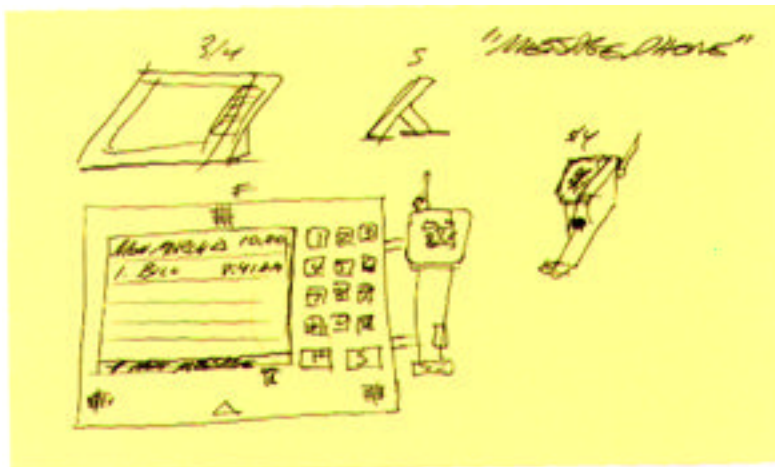
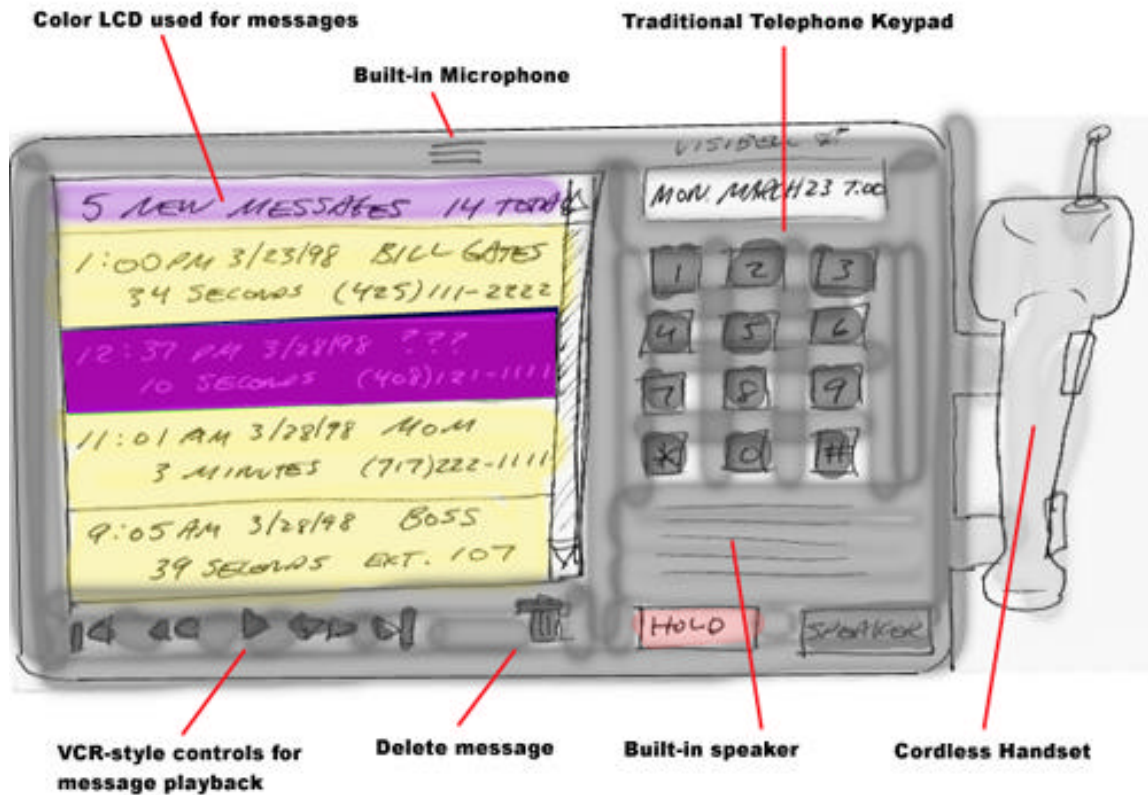


Figure 2. first sketch of the MessagePhone

### 3. Hardware Component Detail

The device is a free-standing relatively flat slate. It's propped up on a desk like a picture frame with a diagonal support, or can be hung on a wall. It uses as much screen real estate as possible to display the list of messages. The advantage to using software for the list only is it allows more room to display the names clearly. All the rest of the device is based on existing telephone and VCR-style buttons. The Hold, Speakerphone and Volume functions are all manual buttons and dials. The handset is cordless and has a disconnect button on the underside.



#### 4. Software Interaction Detail

The list of messages is a simple scrolling list. In addition to selecting a message and using the VCR-style controls at the bottom of the LCD to manage playback, a message can be played by "double-tapping" on the list item. To stop a message being played, tap once. To erase, select the list item and touch the trash can button. Scrolling the list can be accomplished by dragging a finger over the list and holding on either the top or bottom edge of the LCD.

#### Time and Tools Used

It took approximately six hours to complete this test, which included considering the problem, sketching out some designs on paper, rethinking the solution, write-up of this document in Microsoft Word, and producing the figures in Adobe Photoshop.