Proposal

My proposal goes beyond the current trend toward touch-screen cell phones. It replaces the handset altogether with a headset that is worn like a pair of glasses:

The device does not have the standard keypad that normally appears on cell phones. Instead, the user interacts with the device via a virtual keypad that is projected onto the “eye side” of the lenses, and appears out in the space in front of the user, almost as if the keypad were just another object in the user’s field of view. For example, the user might want to have the keypad appear in the palm of their hand, as if they were using one of the cell phones available today. Perhaps the user is driving and would rather have the keypad appear on the dashboard or the center of the steering wheel so he or she can keep one hand on the wheel. The user could make the keypad appear on any surface simply by tapping that surface in the same way that you tap a laptop’s touchpad to “click” the mouse.
Figure 1: The user taps a finger on his or her palm to project the menu onto his or her hand.

Figure 2: The user taps the steering wheel once, and then taps the image of the Keypad button to view the numeric keypad. Pressing buttons here is easier than holding a handset up and pressing buttons with your thumb. It allows the user to keep both hands on the wheel, and is less likely to cause a traffic accident.
An extension of this virtual keypad idea is the virtual screen onto which it is projected. While the keypad is actually projected onto the lenses, it appears to the user to be in space. This implies that we have a very large area onto which we can project all kinds of information that would normally be displayed on a cell phone screen.

**Motivation**

A number of states have adopted so-called “Hand’s Free” to prevent drivers from using a handset while driving, hopefully leading to a reduction in traffic accidents involving distracted drivers. This trend is likely to continue, so some time in the future we can reasonably expect most if not all states to prohibit use of the handset while driving. A device like the one I propose encourages compliance with these laws since the only way it can be used is in a hand’s free manner.

The cell phone industry currently has two competing trends: touch screens and smaller devices. People want smaller devices that are easy to fit into pockets in their clothing. At the same time, touch screens are becoming more and more popular, and user’s typically want large displays to interact with. The device I propose is as easy to carry around as a pair of glasses, and it provides all the benefits of a touch screen without the limited screen size of current touch screen phones.

**Audience**

This device would be best suited for personal use (rather than business use) by an audience aged above the mid twenties. One of the limitations of the headset design is that unlike a cell phone screen, you have to wear the device to see the information being presented. Modern cell phones have Bluetooth technology that allows multiple devices to communicate. Perhaps something like this would allow multiple headset phones display the same information to multiple users. However, this is still a different experience from being able to present information to multiple people with a single cell phone screen. It is for this reason that the headset style cell phone may not be popular in a younger demographic; younger people commonly use their cell phones to share pictures and videos with their friends, so they may prefer a handset device with a large screen.

The headset phone may not be practical for business use, since it may be considered unprofessional to wear such a device in certain situations. For example, if the user is wearing the phone in a meeting with his or her superiors, the boss may wonder if he or she is paying attention to the meeting or reading email. Current cell phone designs can be easily stored in a pocket, but a phone that looks like a pair of glasses may appear too fragile to store in a similar fashion.