

PRODUCT NAME	CLASS	YEAR
SmallTalk: Child Cellphone	HCI 1: Communication Devices	Fall 2003

PROBLEM SPACE

Overview of problem space includes the facts that there has been a rise in 2 income families who outsource their childcare. At the same time, however, there may be an unreliable daycare and school system that could deliver immediate communication with their children in the event of an accident or for general communication needs.

THE PRODUCT

SmallTalk was designed for primarily young children from the ages of 4-8. The secondary market would include parents, grandparents, and caregivers.

NEEDS ASSESSMENT / REQUIREMENTS

The design team assessed the need for an easy to use child interface that could also prevent accidental dialing, while allowing adult programming with a rear interface. SmallTalk would have a standard cell phone technology, with a durable case that fits a child's hand, four specialized buttons for automatic dialing, a screw-down panel on back covering parental controls, a side button (push prior to calling), and a recharge cradle. SmallTalk would provide two-way communication between parent and small child, with a simplified cell phone, be easily programmed and used, clips on to clothes or backpack, and has preset numbers to dial in the event of an emergency.

GOALS

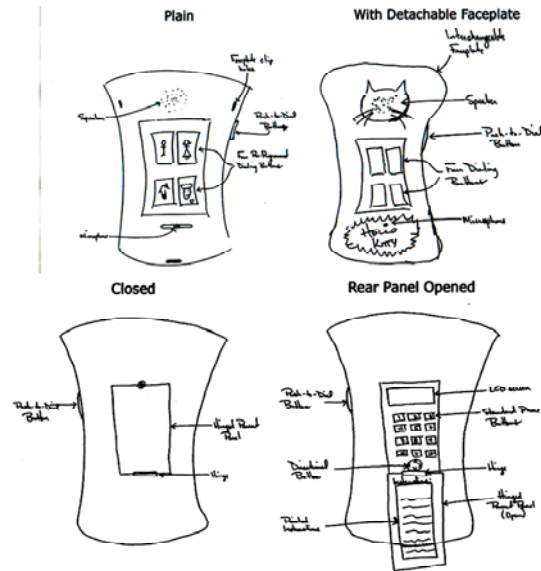
- Effectiveness – Child presses large buttons to initiate call
- Efficiency – Simple two-step process for all calls
- Safety – Physically safe “lock out” options for incoming calls 911 & GPS capabilities
- Utility – Simple pressing of button for child, easy to program interface for parent
- Learnability – easy to learn, simple to initiate call easy to program, hold target button and key in number
- Memorability – combines words and icons for easy memorization icons focus on learned societal conventions simple programming process with instructions on inside cover of unit.
- User Experience –
 - For Child: Fun & Entertaining physical design, Supportive of creativity – child can customize interface, Emotionally fulfilling – child is reassured they can contact parent in emergency
 - For Parent: Emotionally fulfilling – child has means to contact them in emergency, Helpful to the parent in communicating with their child, Satisfying that the device is able to prevent unwelcome call.

TASK ANALYSIS / PRODUCT ASSESSMENT

Cognitive walkthroughs were performed, followed with a usability questionnaire. Product scenarios included: Adults programming numbers, Child calls adult, and Adults calls child.

PROTOTYPES

Paper Prototypes



Digital Prototypes Front Interface



Digital Prototypes Front Interface with rear programmable interface for adults