

T Mobile I.R. Watch

The I.R. Watch was the result of a sponsored project with T Mobile's creation center. We were tasked with designing mobile devices for children powered by T Mobile's network. The watch was primarily a tag game where friends could zap each other with the watch and keep score. The watch has a radar function for locating enemies and a two way communicator as well, which were accessed by rotating the dial. Our design was driven by the challenging anthropometrics and safety concerns unique to young children. My contributions to the design were the appearance, user interface, CAD, and physical modeling.

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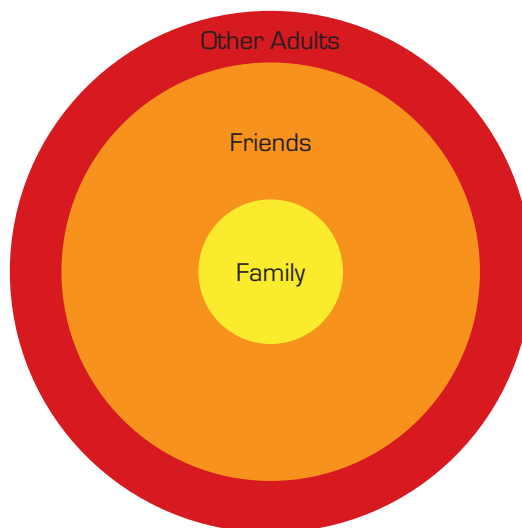
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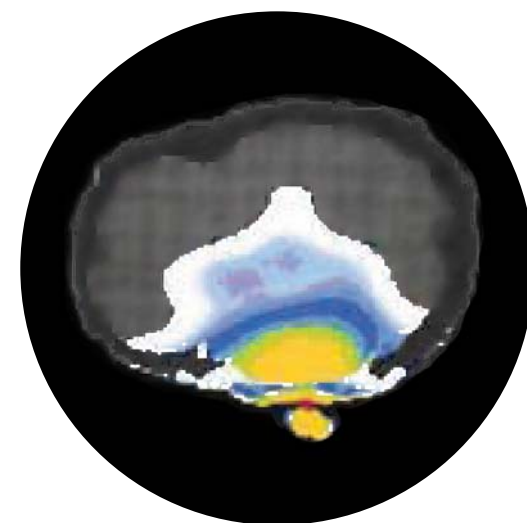
Children's bodies develop rapidly, especially their hands. This makes the design of input devices like keypads a challenge. Parents we spoke to were also concerned that younger children might lose an expensive phone, and previous phones targeted at younger children were not very successful. This computer X-ray of a child's developing hand from the Biology Reference Encyclopedia.



Children begin making close friends who replace their parents as the focus of their social circle. More complex relationships begin to form with adults outside the home such as teachers. This changing focus of children's social lives made us think that a device that was a game first and a phone second would be more compelling for children.

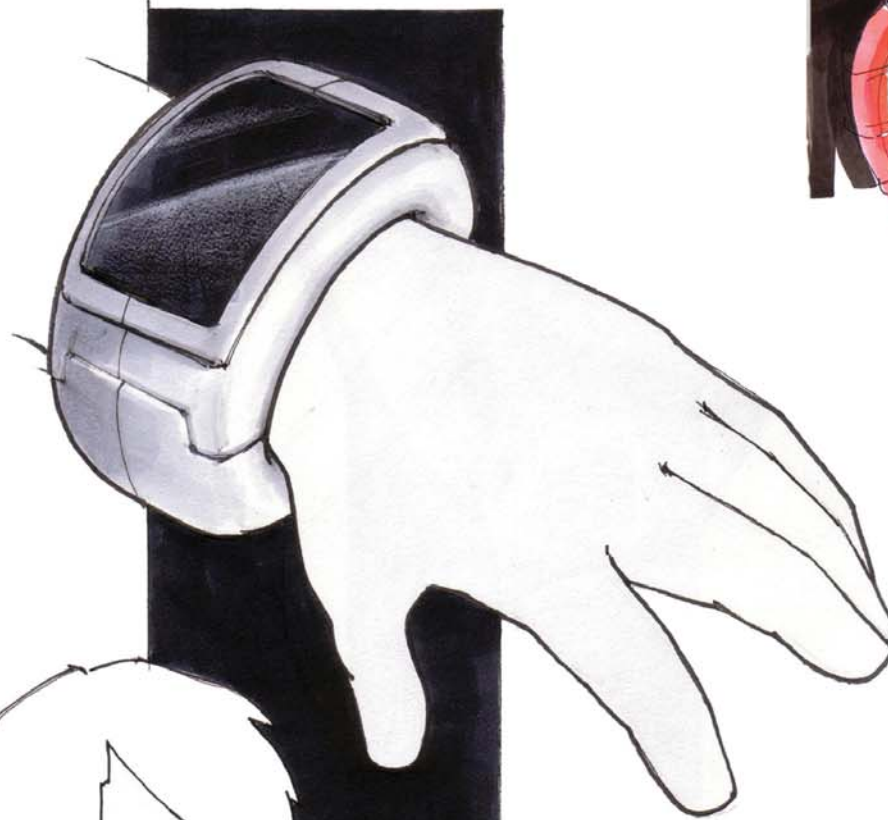
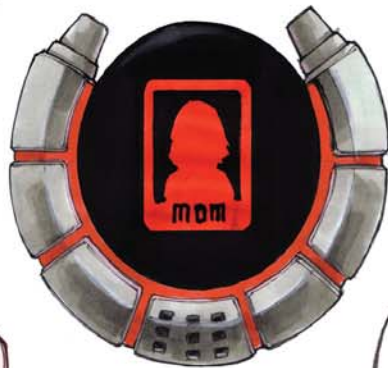


Children have thinner, less dense skulls which do not shield them as well from electro magnetic radiation. While not conclusively proven to be dangerous, the effects are not well known. There is potential for concern from parents about their child's mobile phone usage. Because of these safety concerns we decided on a wearable device. The image below is the EM absorption of a 10 year old's skull by Dr. Om Gandhi.



Ideation

Our device was going to be wearable to address safety concerns and to prevent loss. I generated some non conventional phone forms that could attach in different ways. We decided that a watch made the most sense and proceeded from there.



CAD Model

Our final form reflected the the game function of the watch, high tech and stealthy.



Talk/Fire Button

Charging Base

I.R. Emitter Projects
Invisible Beam

Prismatic IR Receivers
Registers 360° Hits



'2nd-Person Latch' requires
Two Hands to Open

User Interface

The user interface is divided into 3 different modes. The first is a simple phone that sends and receives calls, and can be used to send messages to teammates during a game. Next is the “fire” mode, where opponents can be tagged with an I.R. beam. Last is the radar, which pinpoints other players using by G.P.S. but cannot be used while in fire mode in the interest of fairness. The watches different modes are accessed by rotating the dial rather than complex menus.



Receiving a call in phone mode



Tracking opponents in radar mode



Registering a hit from an opponent



