



**Figure 1.5** An innovative product developed by IDEO: wireless cell phones for Telespree. The phones were designed to be inexpensive, playful, and very simple to use, employing voice recognition for driving the interaction and only one button, for turning them on and off

Source: IDEO, <http://www.ideo.com/>.

pioneering new user experiences (Sprenberg *et al*, 1995). They have developed thousands of products for numerous clients, each time following their particular brand of interaction design (see Figure 1.5). Some of their most famous designs include the first mouse used by Apple, the Palm V and mMode, the integrated service platform for AT&T cell phones. They were also involved in the design of the TiVo system. More recently, they have focused on designing solutions with climate change at the forefront. Their approach emphasizes design thinking and lies at the intersection of insight and inspiration, informed by business, technology, and culture.

## 1.4 The User Experience

The user experience (UX) is central to interaction design. By this it is meant how a product behaves and is used by people in the real world. Nielsen and Norman (2014) define it as encompassing “all aspects of the end-user’s interaction with the company, its services, and its products.” As stressed by Garrett (2010, p. 10), “every product that is used by someone has a user experience: newspapers, ketchup bottles, reclining armchairs, cardigan sweaters.” More specifically, it is about how people feel about a product and their pleasure and satisfaction when using it, looking at it, holding it, and opening or closing it. It includes their overall impression of how good it is to use, right down to the sensual effect small details have on them, such as how smoothly a switch rotates or the sound of a click and the touch of a button when pressing it. An important aspect is the quality of the experience someone has, be it a quick one, such as topping up a cell phone, a leisurely one, such as playing with an interactive toy, or an integrated one, such as visiting a museum (Law *et al*, 2009).

It is important to point out that one cannot design a user experience, only design for a user experience. In particular, one cannot design a sensual experience, but only create the design features that can evoke it. For example, the outside case of a cell phone can be designed to be smooth, silky, and fit in the palm of a hand; when held, touched, looked at, and interacted with, that can provoke a sensual and satisfying user experience. Conversely, if