

Case Study: In the Wild Study of Skiers

This case study was presented in the fourth edition of *Interaction Design: Beyond HCI* in chapter 13. It is no longer included in the 5th edition but we have included it on the website in case some readers find it useful.

Jambon and Meillon (2009) carried out an in the wild study to evaluate whether and how skiers might use a mobile device the authors designed to help skiers improve their performance. Each skier wore a helmet that had an accelerometer and a mini-camera on top of it (Figure 13.4a). These were used to gather data that could be used to provide feedback of the skiers' performance, which were displayed on a smartphone (Figure 13.4b). The skiers had access to the smartphones while on the slopes – which they kept in their pockets.

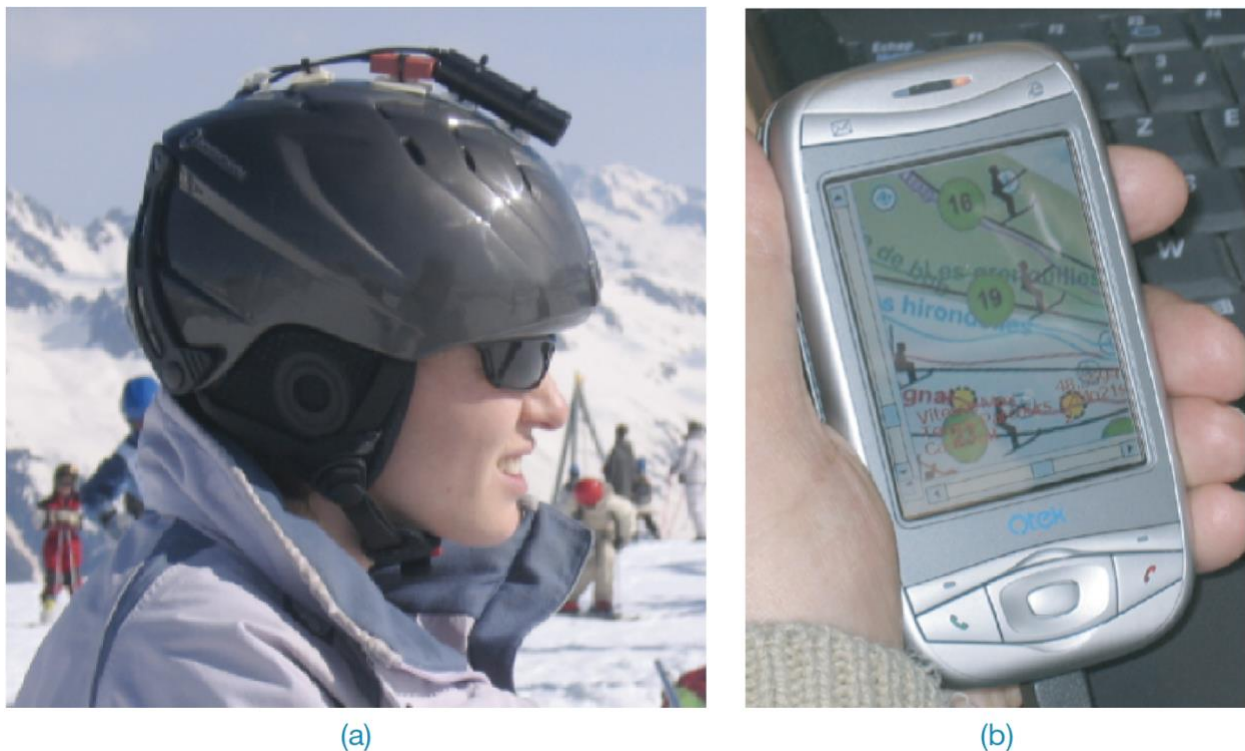


Figure 13.4 (a) A skier wearing a helmet with an accelerometer (dark red box) and a mini-camera (black cylinder) placed on it for assessing the skier's performance and (b) the smartphone that provides feedback to the skier in the form of visualizations

Source: Jambon and Meillon (2009) User experience in the wild. In: *Proceedings of CHI '09, ACM Press*, New York, p. 4070.

The study examined how the mobile system was used by the participants while skiing. A series of trials were run in which skiers descended the mountain. Video clips from the mini-camera and data from the accelerometers were collected for each skier's descent. The skiers were then asked to enter a chalet where the research team downloaded this data. The skiers then received SMS messages telling them that their data could be viewed on their smartphones. This included: maps of their ski runs, distance covered, duration of descent, maximum speed, and the video recorded. Figure 13.5 shows how the different components were linked together.

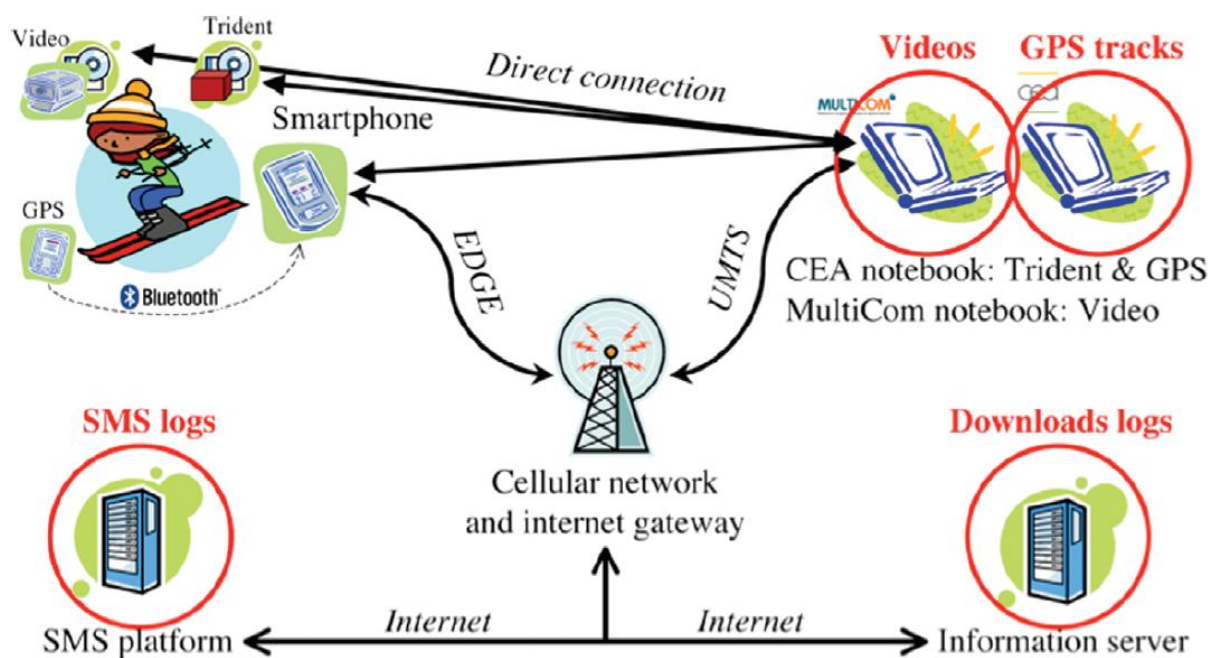


Figure 13.5 Components of the e-skiing system. Back arrows indicate the data transfers between devices, servers, and linking systems. Arrow shapes indicate different types of communications and the red circles indicate the data collection points

Source: Jambon et al (2009) *User experience in the wild*. In: *Proceedings of CHI '09*, ACM Press, New York, p. 4070.

When and how often the skiers consulted their smartphones for feedback was logged. To the great surprise of the evaluators, the skiers did not check their performance on the slopes. Instead they preferred to wait and review it in the bar during breaks. This shows how in the wild studies can reveal unexpected findings.

Approximately a week after the ski trials, the evaluators ran a focus group with the skiers in order to learn how they felt about the system. This was organized as an informal dinner at which the skiers confirmed that they preferred to get their feedback after skiing on the slopes, so that their time on the slopes was not interrupted. The skiers also discussed the problems associated with using the equipment on the slopes. For example, the Bluetooth links between the GPS system and the smartphones were not reliable and there were other technical problems too.

ACTIVITY

1. What kind of setting was used in this evaluation?
2. How much control did the evaluators exert?
3. Which types of data were collected?

COMMENT

1. The evaluation took place in a natural setting.
2. The evaluators imposed less control on the participants than in the previous case study. The skiers were free to go where they wished on the mountain. However, the participants did have to agree to have cameras, GPS, and other tracking devices strapped to them.
3. The skiers' movements when going down the slopes were collected using video and accelerometers. In addition, a focus group was run in order to learn more about what the skiers thought about the system: what they liked or did not like, and what problems they experienced with the system.