



Figure 1: Interface Interactivity used in an eLearning application by Harbinger

Figure 2 below shows an example of how Harbinger used multi-touch functionality to build a mini-game where multiple numbers can be touched in quick succession to arrive at the answer.

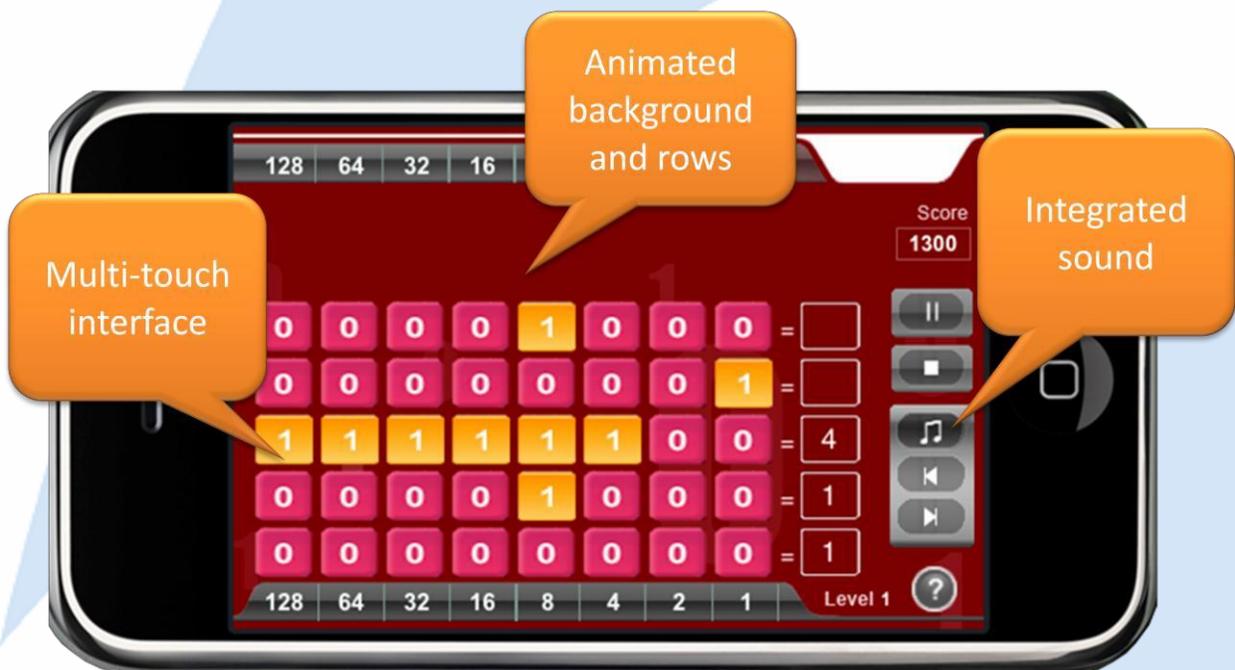


Figure 2: A mini-game developed by Harbinger that uses multi-touch and other interface interactivities

SENSOR INTERACTIVITY

Devices like the iPhone and iPad come with sensors that are used extensively by applications to interact with the user. While even the phone camera is a sensor interactivity that has been around for many years, there is a whole new set of interactivities in this category that have been immensely popularized by the iPhone. These include the use of accelerometer and proximity sensor to identify orientation and nearness of the device to an external object respectively. The accelerometer is a very useful sensor that is used in various user input activities such as identifying device orientation (landscape or portrait), ability to shuffle, and many other interactions that make these devices feel like an extension of the human body.

Many interesting applications are being built in the consumer internet, gaming and entertainment industries that utilize this category of interactivities. Figure 3 shows an example where Harbinger used the accelerometer to rotate the wheel in the Wheel of Fortune trivia game.



Figure 3: A trivia game built by Harbinger, which is based on Wheel of Fortune that rotates with a shake of the device

LOCATION INTERACTIVITY

Location awareness has been around for mobile and portable devices for some time. There are many devices that are location aware and many applications that use GPS (Global Positioning System). However, the real power of location is realized only when applications combine location awareness with interface and sensor interactivities described above. For example, the combination of device orientation (specifically, the direction it is pointing) and its current location can be used in providing visual turn-by-turn navigation from the viewpoint of a user on the road. It is not difficult to see how this greatly enhances car navigation over traditional look at a map from the top.

Figure 4 shows an example of location interactivity. In this application, Harbinger uses location interactivity to track an athlete's training route, and integrates it with his or her workout routine.

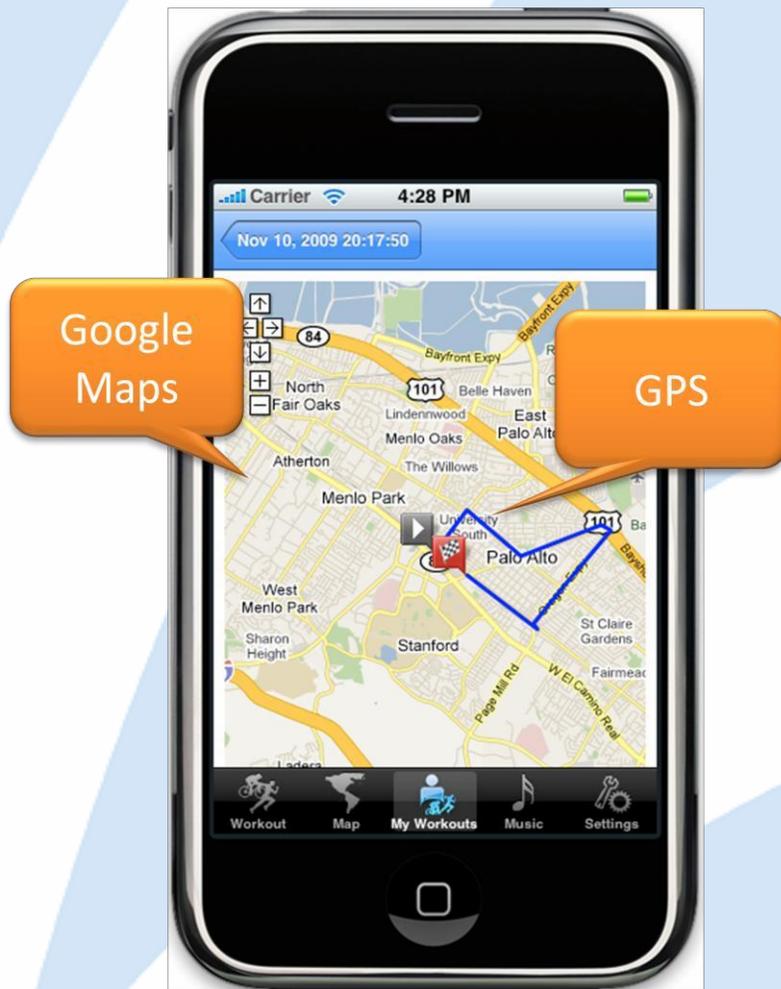
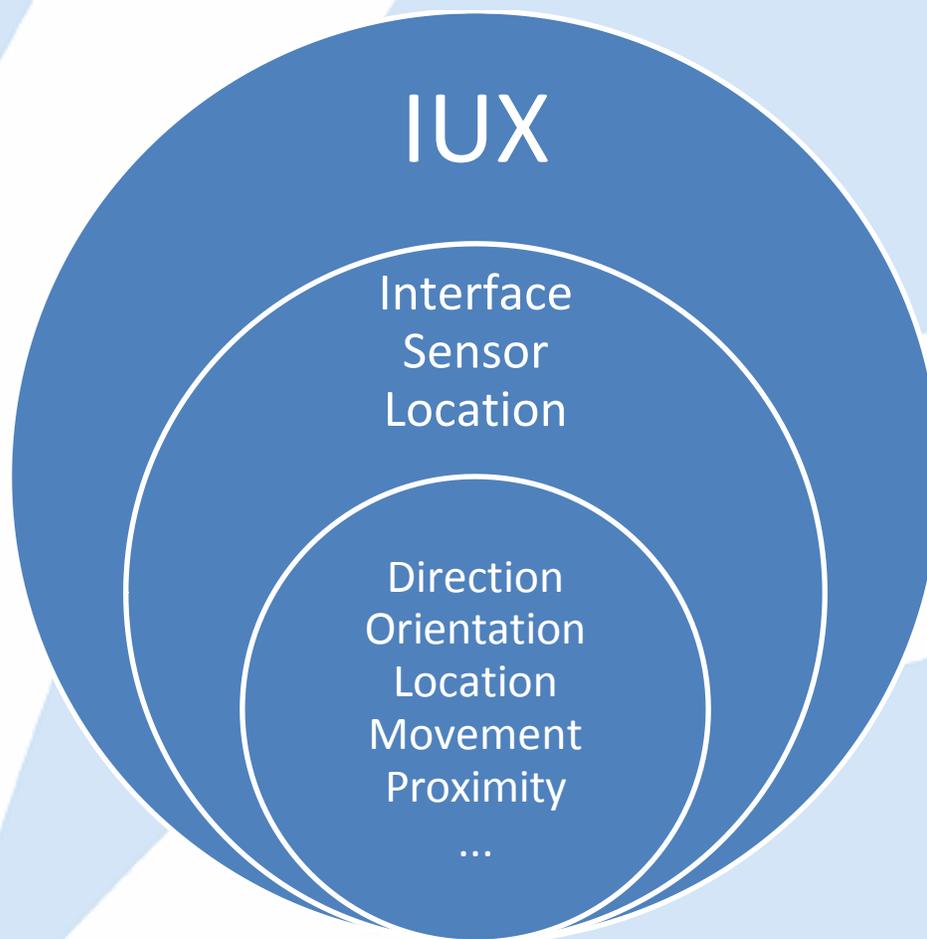


Figure 4: GPS being used to track an athlete's training route (developed by Harbinger for a sports training portal)

It is worth mentioning here that location identification is also enabled by means other than GPS, like Wi-Fi hotspots and cellular towers. Identifying two users in proximity with each other through these means holds great potential for application vendors in gaming and consumer internet space.

Conclusion: Combining Interactivities for Creating IUX

Some of the most interesting user experiences in mobile and personal computing are going to be where these three forms of interactivities intersect. In the near future, IUX will come in the form of wearable devices (or close-to-wearable devices like the iPad and iPhone), which will provide users with a very immersive experience. Just like the advent of the PC went hand-in-hand with GUI, the advent of next generation computing devices that are physically closer to humans will be spearheaded by IUX. Application vendors need to think out of the box, and think of interactivities from the perspective of combining these categories to create Interactive User Experience. Harbinger Systems helps companies build IUX through in-depth understanding of these interactivities and their interplay.



Sources

1

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2

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3

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