

Chapter 22

Wearable Cameras

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ABSTRACT

Wearable Technologies represent an emerging theme. Probably the next emerging market where companies will focus. These devices are replacing entire categories of electronic objects in everyday life and affect the way we live, work and socialize. Among the many applications available, the author limits attention to the field of the smart video cameras. This chapter examines some of the most interesting applications of wearable cameras, with special reference to the Italian situation. In particular, the text traces a summary of the main applications in sports, spying, police, army, education, health, disabilities, and lifelogging. A part is devoted to “wearable extensions” and the concept of augmented reality.

INTRODUCTION

In this chapter, we talk about wearable camcorders, a segment of the broader world of wearable technologies. Among the many significant aspects, the focus is on several technological solutions and the wide range of applications. This will be done by examining six application areas. Because the technology is not neutral, we must consider the social aspects of the phenomenon. The part concerning issues, controversies and problems outline the main themes.

Wearable technologies are a significant part of the current technological frontier (O’Driscoll, 2014). The viewer’s perspective can be captured through glasses, watches, clothing, and other smart devices (Shum, Liao & Zhang, 2001). Those interested in an overview of all Wearable Technologies, with particular attention to the main products and companies of the sector may see the publication of K Toh Peng (Toh, 2013). Regarding Italy, a point of reference could be the project “We Are Able To” focus on the study and development of solutions, services and technologies; the results are published on an e-book constantly updated (Lalli & Prunesti, 2014).

A Reuter’s article titled “Research and Markets: Wearable Cameras Market Report 2015: Global Market Analysis and Forecasts 2014-2020” (Apr 22, 2015) summarizes some themes to be discussed in the text: “The wearable camera market is still in the early stages of development and is experiencing rapid growth as use cases for wearable cameras expand. The consumer segment continues to grow beyond

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its core base of sports and adventure enthusiasts and into lifelogging and capturing photos and videos from life moments and special events. At the same time, wearable cameras are beginning to proliferate more widely in the public safety and enterprise sectors. Body-worn cameras for police officers are used with increasing frequency, and enterprise users are experimenting with a wide variety of applications from retail to hospitality to user experience research”.

In Italy, a remarkable expansion of wearable technology has occurred in the field of cameras.

In this segment, we concentrate our attention on examining the areas of applications including sports, spying, police, army, education, health, disabilities, and lifelogging.

The Google Glass, and its competitors, can be placed between the wearable cameras, but in reality it is more correct to define it as a wearable computer because the features are different: photo / video shooting, Internet browsing, voice control, GPS navigation, etc. In other words, it is a miniaturized device usable for multiple purposes, a true extension of our physical and mental potential. The chapter's primary focus is on wearable cameras therefore will not discuss other possible uses.

In Italy, most wearable cameras refer to the use in sports. They have been on the market here for several years, with the light first “GoPro”, a brand that even today remains the industry leader. The most famous action camera was created by Nick Woodman, an American surfer who created their own version of the camera dedicated to underwater shooting. The name Go-Pro comes from the fact that surfers needed a camera operator for shooting. With the commercialization of the action camera it was no longer necessary, and its name is precisely the indication “go as a professional.”

The difference of diffusion with the other wearables can be interpreted in different ways: a) the costs of a wearable camera are comparable to that of a traditional, b) there is a fair number of people interested in sports activities, c) many users wish to document their experiences increasing visibility on social networks.

A particular market concerns “invisible” cameras / camcorders. The camcorder concealment is a solution for shooting hidden videos, used by private citizens and investigation agencies, widely used in the creation of popular television programs of investigation. In this case, the market is less extensive because, aside from personal situations, is intended for professionals.

An application generating some debate is the use of wearable cameras by police, because it broadens the scope of control of the activities of the population. A mobile and individual instrument combined with the enormous spread of fixed surveillance cameras. The dissemination of this tool in some countries is beginning to be significant, while in Italy it is at the experimental stage. A completely different speech is made for military use, here we can distinguish between simple tools for recording of wartime events and equipment intended to improve the technological level of resources available.

An environment beneficial to the development of these technologies is related to education and training at all levels. The use of equipment made of or containing a camera has been widely tested and documented in many areas of training. The Italian experience seems very partial; just think of how little is developed in the literature on the subject. Unfortunately, as often happens, economic and cultural reasons cause a brake.

One area of particular interest, especially for social implications, involves health and disabilities. The growth of social attention on the issue of disability develops the need for new instruments to promote integration. Using wearable tools can facilitate both operators in the sector of the disadvantaged. Some applications are proving to be very promising.

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