

## Chapter 21

# The Impact of Social Media in Web-Based Information Management and Digital Media

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### ABSTRACT

*The availability of Social Media has changed the way we handle requested resources in interactive media contexts and how we operate with each other on the Web. New challenges in the area of information management, Digital Media processing, and knowledge engineering have arisen such as, how to query or effectively embed Social Media into information and knowledge management concerns effectively. In addition, interactivity and the focus on interaction between users and resources in Social Media contexts create new ways of enriching and annotating content collectively following the wisdom of crowds and helpful intelligent automatic analysis. In this chapter the impact of Social Media concepts and distributed resources in web-based information management, knowledge engineering, and Digital Media applications is introduced. The relation between traditional web application design, distributed resource utilization, changes, and challenges in current interactive Digital Media systems will be regarded.*

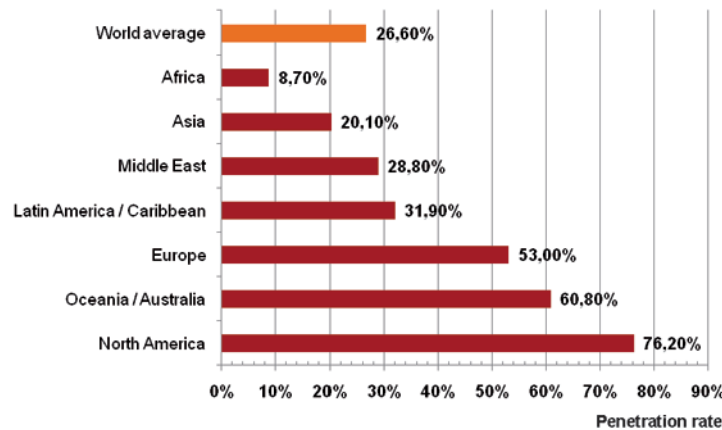
### INTRODUCTION

During the last decade, the quantity and quality of information has changed drastically. We now talk about Information Society instead of Industrial Society. Today, the Web offers the biggest and

fastest growing information space, which is accessible to almost everyone on demand, anytime and anywhere (24/7 paradigm). Figure 1 shows world Internet penetration rates by geographic region in 2009 (Internet World Stats, 2010). According to statistics, today more than 50% of Europeans use

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*Figure 1. World Internet penetration rates by geographic regions in 2009 (Internet World Stats, 2010)*



the Internet. In comparison, only North America and Australia showed a higher penetration rate than Europe in 2009. In Europe, Germany ranks third after Great Britain and France regarding current Internet penetration. Germans aged 60 and older accounted for 30% of total internet penetration in 2009. The development of online usage in Germany from 1997 until 2009 is shown in percent in Table 1 (ARD/ZDF-Online study). The number of internet users increased enormously in the past and will very likely continue to do so in the future. Especially remarkable is the online usage of younger people between the ages of 14 and 29, which will probably reach 100% very soon in Germany.

### **Motivation and Scope of Problem**

The Web is omnipresent and used as a source of information and knowledge worldwide. This practice is growing continuously and is here to stay. Web 2.0 (also called Social Media) and online communities are being used more and more by the Digital Native generation.

Some of the questions arising as a result of Social Media are:

- How can the Web as a rapidly growing and distributed knowledge base remain sustainable in higher-layered web applications?
- How can more motivation, incentive, fun and participation be brought into web-based applications and communities?
- How can the wide range of available content be transformed into enhanced knowledge representations and distributed knowledge bases on demand?
- Which concepts and techniques are most suitable to address these challenges in current web applications?

Of course, we can read a Wikipedia article sentence by sentence, or we can click through Flickr image collections, but are there methods of user interaction that are better suited to transfer the knowledge and information contained in resources?

If we found a web resource that seems to be suitable because the content matches our topic of interest, the next question we would probably ask ourselves would be about the quality and source of the content, e.g. who wrote it, how current the information is, and whether it is correct. Some of

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