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Storytelling and Narrative Marketing in the Era of Social Media 1
Sonia Ferrari, University of Calabria, Italy

This chapter is focused on the elements that, in post modern era, have greatly changed our society, both in terms of buying and consumption habits and, more generally, in terms of lifestyles. This is mainly due to the Internet, which provides low cost, faster and interactive information and communication. As described in detail in the chapter, companies have been forced to adopt new marketing strategies and, thanks to the spread of social media and viral marketing, tools such as word of mouth and storytelling have become even more effective than in the past. But today companies need to use them in a different way, actively involving the consumers, because they attribute a greater value to a product if they participate in the process of creation of its image and elements of differentiation. If managed in an innovative way, focusing on sensory and transmedia aspects, storytelling becomes a very powerful Customer Relationship Marketing and image building medium and, above all, a source of enduring competitive advantage.

Chapter 2
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Eleanor Dare, University of Derby, UK
Elena Papadaki, University of Greenwich, UK

This chapter examines the current state of digital artworks, arguing that they have not yet made a groundbreaking impact on the cultural landscape of the early 21st century and suggesting that a reason for this lack of notoriety is the obsolete model of agency deployed by many digital artists. As an alternative to what is framed as out-of-date forms of interactivity, the chapter highlights evolving research into interactive systems, artists' tools, applications, and techniques that will provide readers with an insightful and up-to-date examination of emerging multimedia technology trends. In particular, the chapter looks at situated computing and embodied systems, in which context-aware models of human subjects can be combined with sensor technology to expand the agencies at play in interactive works. The chapter connects these technologies to Big Data, Crowdsourcing and other techniques from artificial intelligence that expand our understanding of interaction and participation.

Chapter 3

Panagiota Stellaki, Independent Researcher, Greece

The purpose of the current article is to present the results of a survey conducted in 2010 in an exhibition at "Hellenic Cosmos", the Cultural Centre of the Foundation of the Hellenic World in Athens, Greece. The title of the exhibition was "Is There an Answer to Everything? A journey to the world of Greek mathematics". The survey was a part of the writer's dissertation at Panteion University at the MA Program "Cultural Management", Department of Communication, Media and Culture. The survey focuses only in families and it gives insight about important aspects regarding exhibition spaces such as the use of multimedia before entering the exhibition space, the relation of visitors towards multimedia exhibits and the role of the museum as an alternative place for learning, especially with the use of innovative interactive multimedia.

Chapter 4

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Dalila Honorato, Interactive Arts Research Lab, Greece

In this chapter, we present the main interaction design issues that arise during the development of edutainment scenarios through the use of branded augmented reality (AR) authoring environments. Most proprietary AR systems offer limited interaction features within their entry-level version, while licensing unlocks the desired advanced features. In order to overcome this problem we employ experimental multimedia development methods for the design of content for those platforms, enabling the development of fully featured case studies where interaction is implemented both physically and virtually. The introduction and literature research sections are complemented by selected experimental case studies that explore the interaction capabilities. It is shown how these may be implemented using limited AR resources. The chapter concludes with the presentation of the social software perspective of the communication process, as the application areas and the content domain presented in this work feature clear collaborative potential that needs to be addressed by system design.

Chapter 5

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Music information seeking incorporates the human activities that are carried out for the search and retrieval of music information. In recent years, the evolution of music technology holds a central role affecting the nature of music information seeking behavior. The research area that deals with the accessibility and the retrievability process of music information is known as Music Information Retrieval (MIR). This chapter focuses on the presentation of MIR technologies which has a direct impact in the way that individuals, as well as different music communities such as composers, performers, listeners, musicologists, etc., handle and utilize music information. The aim of this chapter is to investigate the way different music communities interact with MIR systems. Our approach is based on a selected literature review regarding the MIR systems and the information seeking behavior of the musicians.

Chapter 6

Konstantinos Drossos, Ionian University, Greece
Maximos Kaliakatsos-Papakostas, Aristotle University of Thessaloniki, Greece
Andreas Floros, Ionian University, Greece

With the advances of technology, multimedia tend to be a recurring and prominent component in almost all forms of communication. Although their content spans in various categories, there are two protuberant channels that are used for information conveyance, i.e. audio and visual. The former can transfer numerous content, ranging from low-level characteristics (e.g. spatial location of source and type of sound producing mechanism) to high and contextual (e.g. emotion). Additionally, recent results of published works depict the possibility for automated synthesis of sounds, e.g. music and sound events. Based on the above, in this chapter the authors propose the integration of emotion recognition from sound with automated synthesis techniques. Such a task will enhance, on one hand, the process of computer driven creation of sound content by adding an anthropocentric factor (i.e. emotion) and, on the other, the experience of the multimedia user by offering an extra constituent that will intensify the immersion and the overall user experience level.

Chapter 7

May Kokkidou, University of Western Macedonia, Greece
Zoe Dionyssiou, Ionian University, Greece

This work focuses on the application of experimental multimedia in the field of music education. The end-system produced is a multimedia service designed to support music teachers who wish to generate and implement teaching scenarios, during their singing teaching session, as this progresses and evolves dynamically. The system allows them to adjust on the fly their educational content, in order to cover their classroom needs that evolve continuously during practice. The end-system combines a fully searchable multimedia database complemented by an access process designed to serve constantly changing content requirements. Most importantly, the system is designed to provide meaningful teaching-learning scenarios with the appropriate content on demand, through the implementation of a task-specific system-as-a-service access method. This chapter provides a walk through the most important characteristics of the process from the content expert perspective. This information was actively employed by developers enabling the system parameterization to cover the functional requirements of the teaching-learning process.

Chapter 8

Stelios Zimeras, University of the Aegean, Greece
Petros Kostagiolas, Ionian University, Greece
Charilaos Lavranos, Ionian University, Greece

The meaning of customer satisfaction has introduced many research analyses in many scientific fields during the recent years. Customer satisfaction represents a modern approach for evaluating quality in any kind of organizations. Customer satisfaction provides a useful and objective feedback about preferences

and expectations. This can be particularly important for the design of services based on multimedia and interactive technologies, which are novel to most users. During the evaluation process, surveys analysis must be applied with main task to understand customer satisfaction. For that reason questionnaires have been proposed to reflect the previous analysis. Many times in that process, individuals that participate in the interviewing process misunderstand the pose questions leading to false answers and error results, without evaluating all recourses during the interview. The aim of this chapter is to analyze a statistical modeling of that false answers considering categorical data analysis through a digital music library case study. This chapter focuses on a proposed method which is based on the probabilities of the positive or negative TRUE and FALSE answers, with main task to reduce the variability of the errors during the survey.

Chapter 9

    Christina Banou, Ionian University, Greece

The chapter focuses on the aesthetic-artistic identity of the book nowadays with the aim to discuss patterns of publishing, and more specifically of the aesthetics in publishing. The chapter takes as key elements that A. the values and strategies of our age are in use for centuries, and B. the aesthetic identity of the book is still essential in its production, promotion and marketing. After a short overview of the publishing industry nowadays, the past of the publishing activity since Renaissance is studied so as to provide, through common features and values, a theoretical background and explanation of publishing strategies. Thereafter, patterns of illustration of the printed book and of gamification / use of multimedia in publishing are provided; the illustration chain is proposed as part of the publishing one. Conclusions regarding the proposed methodological framework and the opportunities of the publishing industry may enlighten issues and challenges of our era and offer to the publishing studies a specific point of view.

Chapter 10

    Roxana Theodorou, Hellenic American University, Greece

For quite a while now there is an ongoing and fueled debate about the future of the book, the implications of the eBook, the act of reading and reading habits and so on and so forth. An eBook is primarily a piece of software, an application. And with that said, a huge world of possibilities opens up. The question that we should try to answer then, is, what exactly is the purpose of an eBook, what should it do, how should it be designed, used or consumed. Integration of multimedia, in a meaningful and practical way, gamefication, non-linearity, design and usability are a few of the concepts that are explored in relation to the eBook and how they can add value to a medium that has been significantly underexploited.

Chapter 11

    Vasilis Zafeiropoulos, Hellenic Open University, Greece
    Dimitris Kalles, Hellenic Open University, Greece
    Argyro Sgourou, Hellenic Open University, Greece

The practical training of students and employees in laboratories containing scientific instruments constitutes an educational challenge. Laboratory equipment is by definition sensitive, costly and requires specific safety rules for its use. Therefore, students do not have the opportunity to make improper use of the equipment and get trained by "trial-and-error". The educational process becomes even trickier when students are many and training takes place simultaneously within the same laboratory; damages to instrumentation and accidents are possible and as a consequence, the effectiveness of learning is greatly limited. For such purposes, an adventure-style computer game -Onlabs- has been developed to provide an interactive simulation environment of a biology laboratory where students may experiment and make several harmless mistakes and where no time or space restrictions are imposed on them. This chapter describes how Onlabs was developed to serve a real need for a remote tool for familiarization and safe experimentation within the laboratory space.

Chapter 12

Antonia Plerou, Ionian University, Greece
Elena Vlamou, Democritus University of Thrace, Greece
Basil Papadopoulos, Democritus University of Thrace, Greece

The fusion of Artificial Neural Networks and Fuzzy Logic Systems allows researchers to model real world problems through the development of intelligent and adaptive systems. Artificial Neural networks are able to adapt and learn by adjusting the interconnections between layers while fuzzy logic inference systems provide a computing framework based on the concept of fuzzy set theory, fuzzy if-then rules, and fuzzy reasoning. The combined use of those adaptive structures is known as "Neuro-Fuzzy" systems. In this chapter, the basic elements of both approaches are analyzed while neuro-fuzzy networks learning algorithms are presented. Here, we combine the use of neuro-fuzzy algorithms with multimedia-based signals for training. Ultimately this process may be employed for automatic identification of patterns introduced in medical applications and more specifically for analysis of content produced by brain imaging processes.

Chapter 13

Anna Sołtysik-Piorunkiewicz, University of Economics in Katowice, Poland
Małgorzata Furmankiewicz, University of Economics in Katowice, Poland
Piotr Ziuziański, University of Economics in Katowice, Poland

This publication consists three main areas of interest: management of patient information in Polish health care system, novel ideas and recent trends on healthcare Web-based applications in Poland and healthcare information behavior of users of self-diagnosis and self-treatment systems in Poland. The methodology adopted includes a literature review for the utilization of Web-based healthcare applications in Poland as well as the trends of medical information systems and healthcare system in Poland. Furthermore the results of a survey research for the management of patient information in Poland are provided. Respondents have been asked about their interested and experiences on the new Polish information electronic health record system or others information systems dedicated to the management of the healthcare processes in Poland. Also another survey researches are presented. Respondents have been asked which internet tools they use for self-treatment and self-diagnosis and are also asked to rate their credibility.

Chapter 14

Antonia Plerou, Ionian University, Greece
Panayiotis Vlamos, Ionian University, Greece

During the last decades, the interest displayed in neurocognitive and brain science research is relatively high. In this chapter, the cognitive neuroscience field approach focuses in the aspect of the way that cognitive functions are produced by neural circuits in the brain. Within this frame, the effects of impairment to the brain and subsequent changes in the thought processes due to changes in neural circuitry resulting from the ensued damage are analyzed and evaluated. All cognitive functions result from the integration of many simple processing mechanisms, distributed throughout the brain. Brain cortex structures, linked with cognitive disorders, are located in several parts like the frontal, the parietal, the temporal, the occipital lobe and more are analyzed and specified. A critical topic of this chapter in the evaluation of brain operations is mapping regions that control cognitive and mathematical concepts functions. Dyscalculia, in this chapter, is described as a specific disorder of managing and conceiving mathematical concepts. Dyscalculia could be identified by difficulties in visual perception, in spatial number organization, in basic mathematical operations and in mathematical induction logic. Moreover, people who deal with dyscalculia present problems, in Euclidean and Non-Euclidean Geometry concepts perception, in Calculus aspects as well as in solving algorithmic problems where the design, the description and the application of algorithmic steps are required. In order to enhance cognitive brain functions perception, the use of EEG brain imaging is proposed measuring cerebral activity and event-related potentials. The procedure described in this chapter is about the comparison and contrasts EEG brain imaging patterns of healthy volunteers to EEG samples taken of adults considered being at risk of mathematics learning disabilities such as Dyscalculia and algorithmic thinking difficulties. EEG interpretation analysis is to follow where the deviation of a normal and an abnormal range of wave's frequency are defined. Several visualized EEG patterns in relevance with specific abnormalities are presented while several neurocognitive generated disorders could be identified with the use of EEG Brain-imaging technique. The electroencephalogram EEG brain imaging procedure, in order to evaluate problems associated with brain function, is to be further analyzed in this chapter as well. The EEG is the depiction of the electrical activity occurring at the surface of the brain. The recorded waveforms reflect the cortical electrical activity and they are generally classified according to their frequency (Delta, Theta, Beta, Alpha, Beta, and Gamma) amplitude, and shape. EEG Implementation with the use of 10/20 system of the standardized position of scalp electrodes placement for a classical EEG recording is described as well. The EEG implementation objective is to identify, classify and evaluate those frequencies and regions in the brain that best characterize brain activity associated with mathematical learning disabilities. Mapping the brain with non-invasive techniques based on trigger and sensing/evaluation experimental multimedia methods similar to those used in computer games and applications are expected to provide relevant results in order to enhance and confirm theoretical cognitive aspects. At that point, a cognitive and mathematical perception evaluation is to follow and specifically the assessment of the relation of difficulties in mathematics with particular parts of the human brain. EEG wave data visualization is contacted with the use of Acknowledge an interactive, intuitive program which provides data analysis instantly. At the end of this chapter EEG computational evaluation with the use of pattern recognition methods as well as the intuition of author's future work in relevance with the use of experimental multimedia technologies to enhance the dynamic recognition and evaluation of user cognitive responses during EEG implementation are noted.

Chapter 15
Augmented Reality Edutainment Systems for Open-Space Archaeological Environments: The
Case of the Old Fortress, Corfu, Greece 307

Ioannis Deliyannis, Ionian University, Greece
Georgios Papaioannou, Ionian University, Greece

In this chapter we discuss the development of edutainment systems supported by augmented reality applications, in order to enable augmented reality technologies for archaeology within the so-called communication engine for museums and cultural tourism. The task in hand is interdisciplinary and its successful implementation relies heavily on information technology as a detailed analysis of content-user needs and sound interaction design capable to support edutainment scenario is needed. This work identifies the role of each building component, describes their interrelationship within the wider context and adopts a suitably designed framework in order to develop multiple guided-tour types. Real-life case study scenario on a specific case, that of the Old Fortress in the UNESCO-listed Old Town of Corfu, Greece, are used to demonstrate the adaptive nature of content and how the system and developers handle different uses. The proposed approach offers new narration tools for content experts while it may be used to support personalised visitor experiences.