Since their emergence, time-based media such as film, video, and digital media have been used by artists who experimented with the potential of these media. In the 1920s, visual artists like Marcel Duchamp and Fernand Léger tested the aesthetic possibilities of film – a practice that continues into the 21st century in the oeuvre of artists such as Tacita Dean and Stan Douglas. The introduction of the first portable video recording system in the 1960s inspired artists like Nam June Paik and Andy Warhol to explore its application in sculptures, projection-based works, and multimedia events, initiating a wave in video art that continues to the present day. At the same time at Bell Labs in New Jersey, artists and engineers collaborated on the first experiments with the artistic affordances of computer technology, providing a foundation for the new field of digital art. The resulting artworks, with their basis in rapidly developing technologies that cross over into other domains of culture such as broadcasting and social media, have greatly challenged the traditional infrastructures for exhibiting, describing, collecting, and preserving art.

In this book, we take up the challenges of preserving and exhibiting media art and provide perspectives on how to meet those challenges both in theory and institutional practice. Time-based artworks that rely on media technologies for their creation and exhibition such as slide-based installations, film-, video-, and computer-based artworks, and net art, are prone to rapid obsolescence and thus cause problems for long-term preservation and display. Besides, these works often explore, expose, and explode the conventional use of the medium in question (in mainstream cinema, broadcasting, Web browsing, or social media), complicating their interpretation once the social and cultural practices to which they refer have disappeared. At the same time, the artistic use of new or obsolete technologies and the social and cultural practices related to them can also show us the benefits and shortcom-
ings of time-based media and thus provides a critical perspective on the highly media-saturated world in which we live. Because of their position at the crossroads between art, technology, and popular culture, media artworks serve as barometers, or signs of the times, and as such they deserve to be collected, interpreted, and preserved in ways that do justice to their identity and ensure their long-term accessibility.

Over the past decade, a number of studies were published that focus on the consequences of the introduction of time-based media in the exhibition space, in particular discussing the ways in which these works challenge the existing practices and models of curating (including Bellour, 2000; Beil, 2001; Iles, 2001; Arrhenius, Malm, and Ricupero, 2003; Joselit, 2004; Païni, 2004; Krysta, 2006; Paul, 2008; Graham and Cook, 2010). Additionally, a number of practicing curators and preservationists have studied the challenges of collecting, documenting, preserving, and restoring media artworks – notable examples are heritage institution-based projects such as the International Network for the Conservation of Contemporary Art (INCCA), the Variable Media Network, and the project Documentation and Conservation of the Media Arts Heritage (DOCAM). Notwithstanding the various models for documenting media art and the various publications that discuss the preservation problems via case studies from practice (such as Laurenson 2001 and 2004; Depocas, Jones, and Ippolito, 2003; Altshuler, 2005; Scholte and Wharton, 2011), a more theoretically informed overview and analysis of this practice is still lacking. This book aims to provide such an overview of the state of the art in preserving and exhibiting media art. It does not aim to be exhaustive but focuses on the most important challenges of and possible solutions for preserving and exhibiting time-based arts and provides clear theoretical perspectives on that practice.

Regarding the substantial literature on exhibiting media art, this book focuses mostly on its collection, analysis, documentation, preservation, and restoration. At the same time, the institutional processing of media art cannot be discussed without reference to exhibition issues. The specific nature of media art – as based on experiments with new technologies, often resulting from collaborations with multiple partners, variable and process-based in nature – poses problems for locating the identity of a work. Often the inaugural exhibition is a key moment in defining the work and an important reference point for collection or preservation issues (see Noël de Tilly, 2011). In addition to this, many choices made in the description, documentation, and restoration of media artworks determine their possible later reuse in exhibitions or other access projects. For example, the multi-authored, long-term project *No Ghost Just a Shell* (1999-2002) by artists Pierre Huyghe and Philippe Parreno discussed in chapter 6 was acquired by the Van Abbemuseum in Eindhoven, the Netherlands, as an *exhibition*, rather than as a collection of individual works. The
inaugural exhibition of this project was the first time all contributions were shown together and also signaled the moment this project was identifiable as a work/exhibition that could be collected. It also is the most important reference point for future presentations of the project (see also Van Saaze 2009).

The preservation and exhibition of media art requires an interdisciplinary approach, combining ideas from art history, museum studies, conservation theory, and media and cultural studies. There is increasing consensus on studying media art as part of art history in general, focusing on the similarities of media art with more established fields of art such as minimalism, conceptual art, installation art, and performance art and using the differences to rethink these more established art practices (see Grau, 2007; Shanken, 2009; Graham and Cook, 2010). Most publications discussing the challenges media art poses for existing practices of preservation and exhibition build upon ideas from museum studies and other heritage domains such as archiving or the performing arts (see Laurenson 2006). We build upon these insights with knowledge from the fields of media and cultural studies. As Beryl Graham and Sarah Cook recently argued, besides art history and museum studies, insights from media studies are crucial for understanding the specific nature of media-based artworks (2010: 111). Media artworks often play on the wider cultural role of media, such as the formats of television broadcasting or the sociocultural and economic uses of software and online social media. Understanding the role and function of media in art thus requires knowledge about the nature of time-based media (technical features, narrative, aesthetics, dispositifs, and specific sociocultural and economic contexts of production and distribution) and of the relationship between work and viewer (spectatorship, use, participation) as developed in media and cultural studies. By extension, we also generally prefer to use the term preservation rather than conservation to denote the activities of both keeping (passive preservation) and restoring media artworks; preservation is the accepted term in the field of audiovisual archiving and restoration (see Fossati, 2009), while the term conservation is used mainly in conservation theory (see Muñoz Viñas, 2005: 14-25).

This book focuses on the preservation and exhibition of all forms of time-based art, from film- and video-based works and slide-based installations to works based on computer technology and the Internet, such as software art and net art. While the characteristics and preservation challenges of film- and video-based art have been studied intensively, resulting in various models and protocols, capturing and (re-)exhibiting born-digital art has only recently become an object of concern (Dekker, 2010; Graham and Cook, 2010; Daniels and Reisinger, 2010; Bosma, 2011). Therefore, this book uses a detailed overview and analysis of established methods for preserving and documenting film- and video-based works as a basis for exploring new roads for capturing
the variable and fugitive forms of multi-authored, interactive, and event-oriented computer-based art.

The structure of the book roughly reflects the process of collecting, valuing, documenting, preserving, restoring, and exhibiting media art. Because of its multifaceted and interdisciplinary nature, capturing media artworks requires a theoretical framework that helps to describe the identity of the work and to contextualize it in a way that does justice to its concept, appearance, and experience. Part I provides various historical and theoretical pathways for approaching and contextualizing the book’s principal object: media art. It equips the reader with tools for approaching and defining media artworks – a first step when it comes to curating and preserving this type of art. Since media art is a multi-disciplinary field, we focus on those approaches and topics that are most relevant for the preservation and exhibition of these works. The contributions to part I provide the historical, conceptual, and contextual framework needed to describe and capture works of media art.

In the opening chapter, Chris Wahl sketches the history of media art, providing readers with the means to contextualize individual artworks in the history of the field. It combines a discussion of the history of actual works with a reflection on their interrelation with the history of media technologies and practices. In line with contemporary approaches to media art, the chapter focuses on the relation of media art with, on the one hand, art history in general and, on the other, the history of media outside the field of art.

Chapter 2 builds upon chapter 1 in that it extends the chronological history of media art to an archaeological one. Author Wanda Strauven discusses various forms of historiography, from chronological to genealogical and archaeological, and shows how an archaeological approach can include those dimensions of media history – technological fantasies or science fictions, failed inventions, the similarity of certain media features to earlier examples – that are lost in a more technologically determinist history. The chapter builds upon Michel Foucault’s conception of genealogy and archaeology and discusses the various contemporary approaches or “schools” of media archaeology. It also includes examples of how media artists engage a media archaeological perspective, demonstrating how this type of historiography may be particularly relevant for studying the history of media art as situated between art, technology, and popular culture.

Dario Marchiori provides a reflection on media aesthetics in chapter 3, equipping readers with the theoretical context needed for describing media artworks in a way that does justice to their concept, formal aesthetic appearance, and the viewer’s experience. The chapter discusses the history of aesthetics as a philosophical discipline and explains how the emergence of media art has complicated the debates in this field. Attention is paid to the
double meaning of the term *media*, as the plural of *medium* – indicating the tools for transmission and expression – and as a new signifying whole – such as journalism, radio and television broadcasting, social media, etc. As outlined above, the double nature of this term is a key feature for understanding many media artworks. The chapter ends with a reflection on how media seem to reconcile the opposition between sensation and thought characteristic of traditional aesthetics in a new whole.

In the final chapter of part I, chapter 4, Cosetta Saba discusses the impact of digitization, particularly focusing on the role of the digital archive in the preservation and re-exhibition of media artworks. Many artists rework archival material (such as Fiona Tan’s reuse of colonial footage, or Péter Forgács’ reuse of amateur film), or use the archive as a metaphor in their work (for instance by creating new archives, like Douglas Gordon of his own work in his video installation *Pretty much every film and video work from about 1992 until now. To be seen on monitors, some with headphones, others run silently, and all simultaneously, 1992-present*). Additionally, the chapter introduces the crucial notion of documentation, both of the artwork’s concept and material-technical components as well as the cultural context in which it was conceived and first experienced. Digital archives might provide a solution for capturing the complexity and variability of media artworks as well as their cultural preservation. Yet, as Saba argues, the specific nature of the digital archive, which turns complex objects into a collection of source codes and where the boundaries between objects, metadata, and archival infrastructure become blurred, poses specific challenges to its future reuse: certain aspects of the original appearance and functionality of the work are lost in the process. Therefore, this chapter investigates the epistemological implications of the digital archiving of media art.

The second part of the book focuses on various strategies and practices of actually analyzing, describing, collecting, documenting, and archiving media artworks. In this and subsequent parts of the book, specific approaches, strategies and models are discussed, analyzed, and elucidated with the help of specific case studies. In part II, the focus lies on the analysis, documentation and archiving of media art.

The second part opens with a reflection on methodologies for describing and analyzing media art, aiming to provide the reader with tools for capturing the identity of time-based artworks. Because of their dependency on technologies that face rapid obsolescence, preserving, exhibiting, and re-exhibiting media artworks raises the fundamental question of where exactly to locate a work’s identity. In chapter 5, Dario Marchiori provides a critical reflection on the nature of describing and analyzing media art. In addition, he provides readers with a specific, four-step method for describing, analyzing, interpreting, and evaluating media artworks. The application of this method is demon-

After that, chapter 6 focuses on one of the key strategies for preserving and re-exhibiting media artworks: documentation. Without thorough documentation of their creation, exhibition history, and experience, time-based artworks cannot be collected, archived, or re-exhibited. Annet Dekker describes and compares the main documentation models developed for media artworks, analyzing their values and their limits, and, finally, shows how crucial documentation is to capture the ephemeral and variable nature of media artworks. A discussion of a case study, Blast Theory’s mixed reality game *Uncle Roy All Around You* (2003), serves to show how the definition and implementation of documentation strategies needs to be adapted to do justice to the works at hand. A discussion of four other cases, the complex project *No Ghost Just a Shell* (Pierre Huyghe, Philippe Parreno, and many others, 1999/2002) by Vivian van Saaze, the audio installation *Mbube* (Roberto Cuoghi, 2005) by Iolanda Ratti, Alfredo Jaar’s installation *Infinite Cell* (2004), and the degradable, site-specific installation *e così sia...* (Bruna Esposito, 2000) by Alessandra Barbuto and Laura Barecca, serve to further illustrate and complicate the documentation issues outlined in the first part of the chapter.

Part III focuses on the theory and practice of the preservation and restoration of media art. Chapter 7 discusses the history and specific nature of the technologies used by media artists and outlines the problems these technologies cause for preservation and later reuse. The chapter provides an overview of the artistic use of film (in particular the small gauges mostly used by artists, such as 8mm, 9.5mm and 16mm, discussed by Simone Venturini and Milco Santi), video (½ -inch and ¾ -inch tape, discussed by Alessandro Bordina), and computer technology (discussed by Tabea Lurk and Jürgen Enge). Attention is paid to the history of these technologies, their diffusion and use in artistic production, and the underlying system characteristics such as signal supports, playback and recording equipment, hardware and software components and exhibition requirements. In her contribution to this chapter, Gaby Wijers pays specific attention to the obsolescence of playback equipment, a problem that severely complicates the preservation and re-exhibition of media-based art.

This reflection on technological platforms is followed by a chapter that outlines possible solutions to the aforementioned problems. Summarizing and analyzing the various decision-making models, strategies, and protocols developed by European and North American laboratories and institutions devoted to the preservation and exhibition of media art, chapter 8 describes techniques and methodological steps related to the preservation and restoration of film-, video-, and computer-based artworks. In the first section, Alessandro Bordina and Simone Venturini focus on the preservation and
restoration of film- and video-based artworks. They provide a description of the phases and the practices related to the physical, chemical and mechanical treatments of these types of carriers. A technical perspective on these problems is complemented by a reflection on the ethical implications of the strategies, models, and methods discussed here. In the second section of this chapter, Jürgen Enge and Tabea Lurk focus on preservation and restoration procedures for digital components of media artworks. Emulation and virtualization strategies are discussed and analyzed as possible solutions for the preservation of this type of art. Chapter 8 ends with a case study: Julia Noordegraaf interviews Pip Laurenson about the methods and protocols used for preserving and restoring time-based artworks at Tate, one of the world’s leading institutes researching, collecting, preserving, and exhibiting time-based arts.

The last part of the book focuses on accessing and reusing media artworks; in it, two chapters discuss various exhibition strategies ranging from exhibitions in museum galleries to festivals and online events. The contributors to chapter 9 discuss different exhibition formats for time-based media and the specific modes of spectatorship related to them. As indicated above, the exhibition of media art has been widely discussed in a number of different publications and exhibitions. Therefore, rather than presenting an overview of the literature, this chapter starts from one particular problem – what remains of cinema and its “black box” model of spectatorship when it enters the “white cube” of the museum (Philippe Dubois, Stéphanie-Emmanuelle Louis, Barbara Le Maître) – and enriches this debate by adding various “lines of flight” that extend these concerns into the realms of video art (Ariane Noël de Tilly, Térésa Faucon), installation art (Teresa Castro, Elena Biserna), new media art (Claudia d’Alonzo, Arie Altena), popular culture (Senta Siewert), and the Internet (Renate Buschmann).

In chapter 10, Sarah Cook zooms in on the challenges posed by curating computer- and Internet-based media artworks, also known as “new media art.” These works are often created by multiple authors, are highly interactive, and are variable in space and time. Besides, their Web-based and interactive nature often makes them unfit for display in traditional exhibition spaces. Cook points out that the debate on how to curate new media art has largely taken place in the field of museology, with a focus on the problems these works cause for traditional museum practice. She asks why extra-institutional freelance curators of contemporary art – who generally have more flexibility and thus could possibly be better suited for exhibiting new media art – have so far largely ignored this newest art form. In line with the often collaborative and participatory nature of these works, and the fact that their production space often coincides with their means of distribution, this chapter takes the form of an edited discussion on curating new media art from the CRUMB web-
site. Therewith it also functions as a platform for showcasing the ideas from various leading curators of new media art.

The book ends with an epilogue in which Julia Noordegraaf and Ariane Noël de Tilly discuss the exhibition *Andy Warhol. Other Voices, Other Rooms*, held at the Stedelijk Museum CS in Amsterdam (2007-2008). The discussion of this exhibition serves to summarize the preservation and exhibition challenges outlined in this book and analyzes these challenges from the various theoretical perspectives also provided here. The Warhol exhibition is a relevant case because it brings together many of the different problems and strategies outlined before, demonstrating how these challenges are met in practice.

In the end, the fact that media artworks challenge existing theories and practices also presents new opportunities: it calls for a fresh perspective on institutionally grown ideas and practices, and invites creative solutions and extra-institutional and cross-disciplinary collaborations. The contributions to this book aim to provide current and future theorists, preservationists, and curators of media art with the baggage to embark on this journey and seize the opportunities that come along.
NOTES

1. CRUMB stands for “curatorial resource for upstart media bliss” and is an online platform founded by Beryl Graham and Sarah Cook in 2000. CRUMB’s activities cover a range of practices, but are predominantly based around research, networking, and professional development for curators of new media art. Http://www.crumbweb.org. Last access: 23 July 2012.

REFERENCES


