Preserving, Reactivating, and Documenting Live Media Art and Multimedia Installations through the MDP-m App

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Abstract

Since 2014, the Centro di Sonologia Computazionale (CSC) of the University of Padua has been investigating strategies for the preservation and reactivation of live media art, including music- and video-based works. This research requires to preserve both the digital content of the artworks and their various instances and reactivations over time. As a result of this research, the Multilevel Dynamic Preservation (MDP) model was developed, introducing the concept of the Digital Preservation Object (DPO), which allows for the representation of each instance of an artwork, adapting it to different re-propositions or reinterpretations over time. The MDP model has been successfully applied in the development of the *MDP-m App*, a novel software designed to collect, manage, and access metadata related to a specific artistic installation. The MDP-m App allows tracking the relationships between different iterations of an artwork by partitioning each one of their content into three fundamental categories: *components* (physical and digital components forming the artwork), *score* (e.g, technical schemas, performance instructions, etc.), and *documentation* (contextual and historical materials). The MDP-m App has been adopted to create preservation copies of various multimedia art installations, including *Il tempo consuma* and *Autoritratto per 4 camere e 4 voci* by Michele Sambin, *La(m)pelle di Ahmad*, and *Dissonanze Circolari* by Roberto Taroni, and *Perseo e Andromeda* by Salvatore Sciarrino, the latter of which will be described in detail in this contribution.

Keywords

software design, live electronics, computer music, multimedia art installations, live media art, multimedia preservation,

1. Introduction

The term live media art refers to a type of art that combines real-time, interactive, or performative elements with various media devices and electronic technology. In this category, different forms of art (e.g., multimedia installations) pose new challenges to traditional conservation methods, as their complex nature forces a rethinking of preservation and restoration practices. Unlike traditional artwork, this form of art is heterogeneous with a huge variety of materials, technologies, processes, and experiences. Its technological components become obsolete over time, leading not only to the physical aging of the artwork but also to the fading of the associated experiences and knowledge. Furthermore, traditional conservation factors, such as physical integrity and authorship, do not apply in the same way to live media art. Although several projects led to the formulation of various theoretical approaches and new conservation strategies, leading to new documentation tools developed by institutions and museums, discussing standardization is still challenging. The application of these strategies, as well as the models and systems used for their implementation, remains closely related to the developing institution citevan2015documenting, making their adaptability in other contexts difficult and lacking

Workshop on Advanced Visual Interfaces for Cultural Heritage (AVICH 2026), June 08, 2026, co-located with the 18th International Conference on Advanced Visual Interfaces, Venice, Italy.

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flexibility. The need to propose a flexible preservation and documentation model led the Centro di Sonologia Computazionale (CSC)[1] of the Department of Information Engineering (DEI) of the University of Padua to develop the Multilevel Dynamic Preservation (MDP) model[2]. In particular, the model was applied for the preservation work carried out on artworks such as *Autoritratto per 4 camere e 4 voci*[3] and *Il tempo consuma*[4] by Michele Sambin, *La(m)pelle di Ahmad*[5], and *Dissonanze Circolari* by Roberto Taroni, and *Il Caos delle sfere*[6] by Carlo De Pirro. On the basis of this model, we developed the MDP-m App, a new web-based application to preserve, document, and reactivate multimedia artworks of various types, such as video art, expanded cinema, computer music, and interactive music installations, among others. In this paper, we will present in detail the developed App and a specific case study of its usage: *Perseo e Andromeda* by Salvatore Sciarrino.

2. Background

In the late 1980s, a specific interdisciplinary research field emerged from the issue of preserving multimedia installation art. Interest, and specifically the need to preserve this particular art form, began to grow during those years as a natural consequence of institutionalising these new forms of artistic creation[7]. Newly established institutions such as the Zentrum für Kunst und Medientechnologie (ZKM) and Stichting Behoud Moderne Kunst (SBMK) were among the first to launch initiatives focused specifically on new preservation strategies, and *Modern Art: Who Cares?* was one of the first and most important initiatives in this field[8]). These initiatives began to grow exponentially in the following years, eventually transforming the conservation of contemporary art into a field of research on its own [9]. To date, new conservation paradigms have been established, replacing the traditional idea of fixed original artwork with the concept of a *variable artwork*[10] that evolves to adapt to changes in its experimental ecosystem. In this framework, authenticity becomes dynamic [11, 12], and the identity of the artwork keeps developing continuously. Physical integrity is replaced by the *stratigraphy of documentation*[13], which includes informational sheets, interviews, scripts, and scores[14, 15, 16, 17, 18, 19, 20, 21, 22], introduces work-defined properties[16], allowing the artwork to be preserved and reactivated. Reactivation is carried out according to the artwork's *changeability*[23], which defines the possible interventions in its reconstruction, allowing for a philological approach but also for technological migrations, emulations, and reinterpretations. To summarize, when an artwork enters a collection, an archive, a museum, or a conservation institute, it does not remain static; it enters a *state of infancy*[22] where its identity is constantly being shaped through new conservation methods[24]. The artwork becomes an epistemic object, its meaning unfolding over time[25]. This approach to the conservation of multimedia installations is no longer about preserving a fixed state, but providing the conditions for the work to grow, evolve, and adapt within its changing context[26, 27].

3. The Multi-level Dynamic Preservation Model

The Multilevel Dynamic Preservation (MDP) model is based on frameworks proposed by various initiatives within new conservation paradigms, particularly on a first theoretical prototype suggested by Bressan[28]. It is based on two key perspectives: the non-standardization of models, which requires flexibility and adaptability, and the concept of the artwork as a multi-typological archive in constant transformation. To better embrace the heterogeneity of artwork, many concepts outlined in new conservation paradigms, especially the idea of the artwork as a "stratigraphy of documentation" [13] were involved. This idea has been proposed by Hanna Hölling, who suggests viewing the artwork as an archive being not just a collection of documents but also an "intangible, nonphysical realm of tacit knowledge and memory in an ever-enduring state of organization and expansion" [23], a dynamic entity from which artworks are actualised and to which they contribute [8]. The model is based on the *General International Standard of Archival Description* (ISAD(G))[29], a theoretical structure that uses a hierarchical approach to represent archives. Using this standard, the artwork can be defined through a multilevel hierarchical structure, moving from general information to specific details. At the highest

level is the *Creative Work*, which could be an artwork, an artistic project, or an artifact, which, similarly to a *fond* in ISAD(G), includes all related materials. The *Creative Work* is represented as an iteration series. In fact, it contains all the different versions or manifestations of the artwork. Each manifestation is defined by a *Digital Preservation Object* (DPO), a container, like a folder in the ISAD(G) model, holding all elements related to a particular version of the artwork. At the lowest level, within the DPO, we have the specific items associated with each iteration or version. These include all physical and digital elements that make up the artwork, such as components, instructions, scores, or documentation that capture the experience of each version. According to the model described in[28], these elements are divided into three categories: *components* (physical and digital components forming the artwork), *score* (instructions required to activate or reproduce the artwork), and *documentation* (documentation related to the artwork and how it was experienced). Although the information is collected separately, these categories should be seen as closely connected following a hierarchical information structure (Fig. 1).

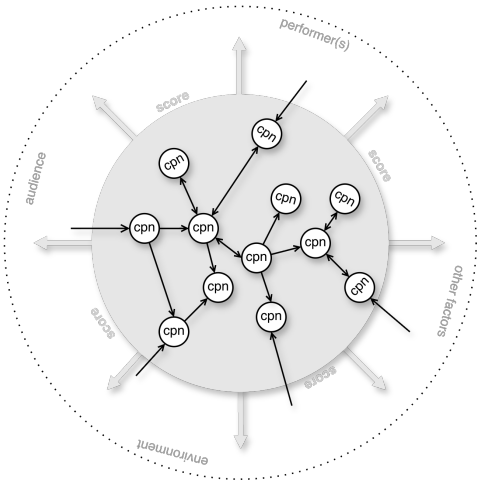

Figure 1: Graphical representation of the hierarchical relationship between *components*, *score*, and *documentation* according to the MDP model

Another important concept of the MDP model is the *multiple belongingness*, meaning that items classified as *component* or *score* can belong to various DPOs. If any element from a previous version is reused in a new one, it is included again as part of the new DPO. This characteristic differs from the ISAD(G) standard, where each item can belong to only one file.

4. MDP-m App

The MDP-m App is a software solution based on the MDP model developed by the CSC [1]. The core idea behind the development of the MDP-m App is the concept of the DPO introduced by the MDP model, which redefines the structure of the preservation copies, their related documentation, and management over time. In fact, unlike common databases, which often focus on static storage and metadata archiving, the MDP-m App (Fig. 2) is designed around the concept of *multiple belongingness* and the evolving nature of multimedia artworks. The MDP-m App was designed and refined around several case studies of reactivation carried out at CSC to make it suitable for different types of media artworks. Specifically, the app was used to collect and manage metadata during the reactivation of the case studies. The MDP-m App allowed for addressing and describing artworks of various typologies, media configurations, and degrees of complexity. The documentation process involves the detailed recording of the various DPOs associated with each installation, enabling the reconstruction of their relationships and keeping track of variations across their iterations.

[1]The repository containing the application code and the database schema is available at the following URL: https://github.com/ListenByLooking/MDPm-App

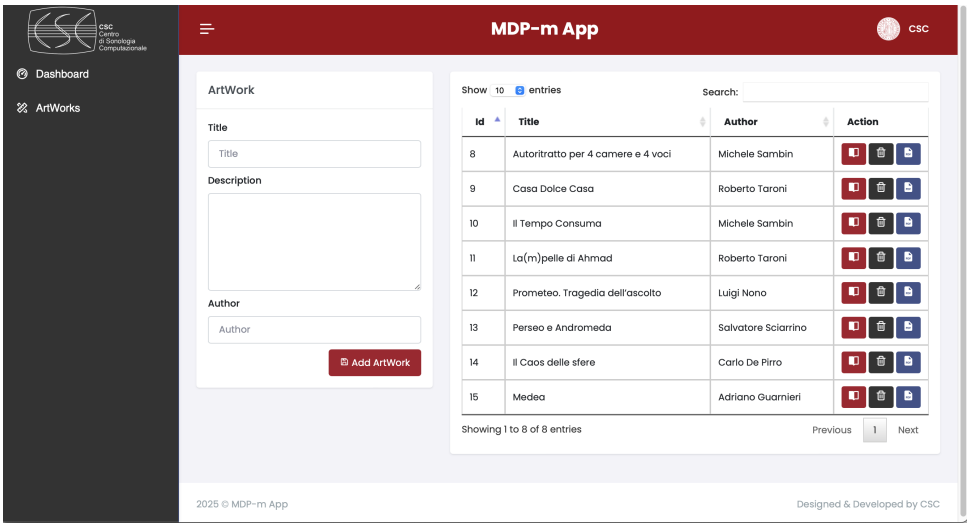

Figure 2: Main interface of the MDP-m App

Through the descriptive forms available in the *components* section, it is possible to describe both audiovisual materials, such as films, open-reel tapes, and digital audio files, and hardware and software components that play a constitutive role in the functioning of the installations. Moreover, the flexibility of the *score* module enables the creation of high-level descriptions of the artworks' operational workflows and technical schematics, which could be further enriched by the inclusion of drawings, diagrams, and sketches whenever necessary. This feature is particularly relevant for visualizing complex interdependencies between components and to facilitate knowledge transfer for future reactivations. The *documentation* section further expands this descriptive potential by allowing the integration of accessory materials, including photographs, interviews, and video recordings. Finally, one of the most significant outcomes of the software lies in the possibility of exporting a summary file in XML or PDF format, containing all relevant metadata, including detailed information on individual DPOs. Among the preserved artworks, a particularly interesting example used to assess the application and presented in this paper is *Perseo and Andromeda* by Salvatore Sciarrino. This work represents a case of notable complexity, as it integrates elements of computer music and live electronics, making it ideal for evaluating the system's capabilities and flexibility.

4.1. Software architecture

One of the application's main aspects was for it to be as portable and as inter-platform as possible, whilst also being lightweight and without the requirement for clients to install any additional software to run it. Thus, the software was designed using a Client-Server architecture to ensure scalability, maintainability, and efficient data processing[30]. On the client side, the system provides a web-based user interface built with HTML, CSS, and JavaScript, using AJAX requests to enable asynchronous interactions with the server. This solution makes the application compatible with most modern browsers found in clients, whether they are desktop or mobile. The server side was implemented in PHP using Laravel[2] as its main framework, jointly with other ones (Bootstrap, JQuery) and with additional external libraries (CKEditor), and a separate server using MYSql to provide a database for storing all the installation's data. Communication between the client and server is facilitated through APIs, allowing secure and optimized data exchange, while the database itself has an offline backup that is regularly updated.

[2]https://laravel.com

4.2. Application flow

Multimedia art installations and computer music are not fixed entities; they often undergo modifications and adaptations when re-exhibited and often feature a performative element that adds complexity to the challenge of their preservation. The MDP-m App preserves not just the individual instances of an artwork but also the relationships between these instances, documenting changes, updates, and substitutions in hardware and software components due to the possibility of creating DPOs (Fig.**??**). This approach ensures that even after years, an artwork can be reactivated in a way that respects its original concept while incorporating necessary technological updates. Re-activation is a fundamental concept in preserving multimedia artworks, since unlike most traditional artworks that remain physically unchanged over time, digital and interactive art requires periodic re-installation and adaptation to new technological environments, especially due to multimedia and technological obsolescence. The MDP-m App unifies different instances of the same artwork under a single reference, allowing researchers and artists to document and trace its evolution while preserving its integrity over time. Furthermore, it was designed for documenting the creative and technical processes behind each reactivation. DPOs can be populated by adding entries for *components*, *score*, and *documentation*.

4.2.1. Components

When creating a new component entry, the user is required to specify its main typology by selecting from *Software*, *Hardware*, *Audiovisual*, and *General Object*. The Audiovisual category is further subdivided into four subcategories: *Film*, *Video*, *Photo*, and *Audio*, and allows for the description of an *Original Item* (e.g., analog document) or a *Digital Copy*. In particular, the Audio subcategory supports distinct descriptions for the most common analog and digital audio formats, including open-reel tapes, audiocassettes, phonographic discs, DATs, and native digital audio files. Entries may consist of different types of data, such as strings, numbers, dates, or URLs. For fields based on controlled vocabularies, the system is designed to prevent the use of free-text input, instead requiring users to select terms from predefined drop-down menus. This approach promotes the standardization of artwork descriptions and facilitates database queries, ensuring greater consistency across records. At the same time, administrators retain the ability to extend the controlled vocabularies by adding new terms as needed. In this way, the application can progressively evolve and adapt to different case studies, becoming increasingly aligned with the practices and requirements that emerge through its ongoing use.

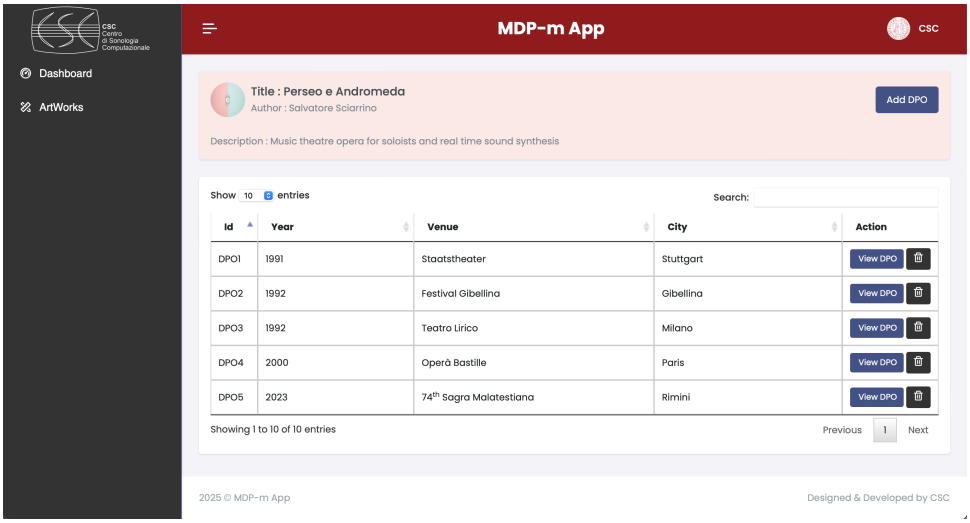

Figure 3: DPOs entries of *Perseo e Andromeda* within the MDP-m App.

4.2.2. Score

Score entries may include overviews of algorithms, detailed technical annotations, and guidelines describing how the various elements of the artwork function and interact. Given the significant variability in both the nature of the information associated with a *score* entry and the formats through which such information can be expressed — such as written descriptions, free-hand sketches, schematic diagrams, technical drawings, or procedural instructions — the system adopts a rich text editor for their creation and management. This solution ensures a high degree of flexibility, enabling users not only to compose and structure textual content but also to enhance entries with complementary media, including images, diagrams, and other visual elements that support or clarify the written material. Furthermore, the use of such a rich text editor facilitates the integration of externally produced content. For instance, when institutions or external collaborators adopt the MDP-m App, existing documentation can be readily imported from widely used formats (e.g., DOCX files), thereby ensuring continuity in established workflows. In this way, *score* entries function as highly adaptable containers, capable of accommodating a wide range of practices and requirements across different projects and institutional contexts. Score entries are described by the table *score* in the database.

4.2.3. Documentation

The Documentation tab provides access to repositories intended for storing additional materials related to the artwork, such as photographic documentation, artist interviews, and other associated files. When creating a *documentation* entry, users are required to specify the type of material to be included by selecting one of four categories: *photos*, *audio/video*, *interviews*, and *documents*. Each category requires the insertion of a URL linking to the corresponding storage resource. This design choice enhances the flexibility of the application, making it adaptable to a variety of institutional and organizational contexts. Additionally, in cases where documentation is already available online, for example, videos hosted on streaming platforms or interviews published on external websites, the system enables users to link directly to the original sources, thereby improving interoperability and facilitating integration. Users may associate multiple URLs within a single entry, allowing different types and sources of documentation to be connected as needed. Documentation entries are described by the table *documentation* in the database.

5. Case Study: *Perseo e Andromeda* by Salvatore Sciarrino

5.1. Description of the artwork

The MDP-m app can be used to preserve artworks of various genres and levels of complexity. A particular example is *Perseo e Andromeda* by Salvatore Sciarrino. *Perseo e Andromeda* is a one-act opera for soprano, mezzo-soprano, baritone, bass, and real-time synthesized sounds, composed in 1990 by Salvatore Sciarrino. The libretto of this work, written by Sciarrino himself, is based on Mortalités légendaires by Jules Laforgue. The real-time sound synthesis system was developed by Alvise Vidolin and Paolo Zavagna at the CSC. Perseo e Andromeda is considered one of the most important musical theater works of the late 20th century. Although Sciarrino is not primarily known as an electronic music composer, this opera is notable as the first work to completely replace the orchestra with digitally generated electronic sounds. The real-time synthesis system relies on subtractive synthesis and basic audio processing techniques (e.g., granulation and reverberation) and spatialisation. Using only these techniques, Sciarrino and the live electronics performers created the entire work's sound world, including both concrete sounds (e.g., seagulls, birds, pebbles, and dripping water) and abstract sounds (such as the sound of the horizon). The original system was developed on a PDP11/34 computer and a 4i real-time processor at CSC, the same setup previously used in Luigi Nono's Prometeo six years earlier, using the Music5 programming language. Other computers and controllers were also involved in the performance, as shown in Figure 4.

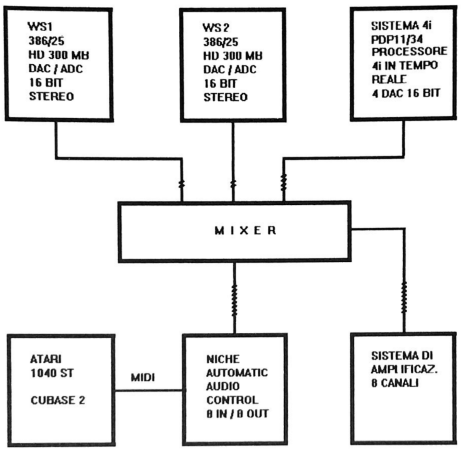

Figure 4: Technical schema showing computer and controllers system used in the first representation of *Perseo e Andromeda*.

The score of this work includes both the vocal and electronic parts. Sciarrino transcribed the electronic parts using traditional notation, carefully detailing every aspect of sound generation, processing, and spatialization. The opera has been performed only four times: the premiere in 1991 (Staatstheater Stuttgart), twice in 1992 (Festival Orestiadi in Gibellina and Teatro Lirico in Milan), and once in a nonstaged concert version in 2000 (Festival d'Automne, Paris). In addition, an audio recording session was held in 2000 for a CD release. After 23 years, the city of Rimini organized a new performance of Perseo e Andromeda as part of the 74th Sagra Musicale Malatestiana (2023). The production was directed by Daniele Spanò and Luca Brinchi, two artists known for their experimental theatre and multimedia art, who reimagined Sciarrino's work as a complete multimedia installation. The musical performance featured Eleonora Benetti (Andromeda), Arianna Lanci (Dragon), Giacomo Pieracci and Paolo Leonardi (Perseus), Mattia Dattolo (Conductor), and Alessandro Fiordelmondo (Live Electronics).

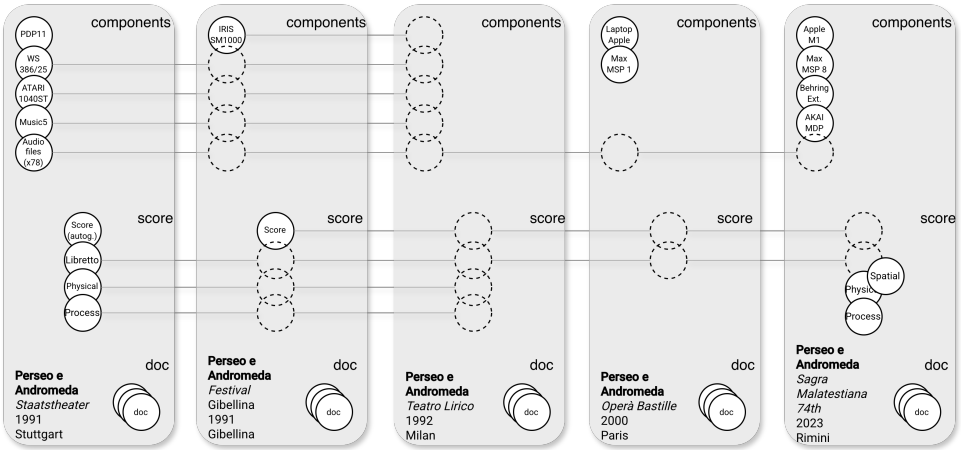

Figure 5: Approximate chronological representation of *Perseo e Andromeda*. According to the MDP model, each reactivation corresponds to a new DPO entry.

As suggested in [31], the reconstruction of the artwork followed a reactivation process consisting of five steps: *collection*, *assessment*, *transcription*, *transmission*, and *archiving*. During the *collection* and *assessment* phases, we noticed that *Perseo e Andromeda* has undergone several technological migrations since its first performance. Initially, the opera was developed with the PDP11/34 computer, which was restored and reactivated in 2023[32]. Perseo e Andromeda was then reactivated for its second version

using an IRIS SM1000 system (a system developed by Giuseppe Di Giugno) and later migrated to a Max/MSP environment on an Apple computer (model unknown) in 2000. Apart from some compatibility issues, the Max/MSP patch created in 2000 is still functional. The 2023 reconstruction used this patch as a reference, developing a new live set in Max/MSP 8 on a 2021 MacBook Pro M1 with a Dante platform. *Perseo e Andromeda* took place on October 20, 2023, at the Teatro degli Atti in Rimini.

5.2. Preserving *Perseo e Andromeda* with the MDP-m App

Perseo e Andromeda presented several challenges from a preservation point of view, which required a comprehensive documentation and metadata gathering phase. For this reason, the MDP-m app proved to be really effective in managing the metadata entries and structuring the information related to the artwork. According to the MDP model, the application operates based on a multilevel architecture: it begins with the input of general information about the artwork (such as *title*, *author*, and *general description*) and then populates the entry through the creation of one or more DPOs. Each DPO features a variable number of elements, including *components*, *score*, and *documentation*.

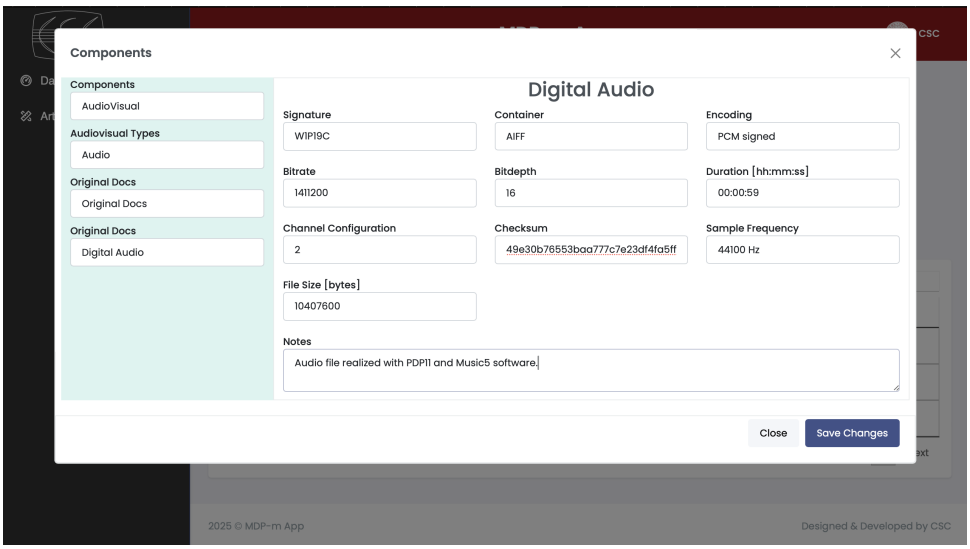

Figure 6: Example of a metadata entry dialogue for describing a digital audio files used in *Perseo e Andromeda* within the MDP-m App.

For *Perseo e Andromeda*, five DPOs have been identified, each corresponding to a different instance of the artwork. The first DPO documents the original creation of the opera, which took place in 1991 at the Stuttgart Staatstheater. The second and third DPOs relate to the two versions staged in 1992: one presented at the Gibellina Festival and the other at the Teatro Lirico in Milan. The fourth DPO refers to the 2000 staging at the Opéra Bastille in Paris, while the fifth documents the performance at the Teatro degli Atti in Rimini. Figure 6 shows an example of an entry in the MDP-m app related to one of the audio files used in *Perseo e Andromeda*. One of the key features of the software design is that each component can belong to various DPOs (Fig. 5). For example, digital audio files (Fig.6) were maintained in each reactivation of the artwork, while other components were replaced (for example, the PDP11, later replaced with the IRIS SM1000 system, and the Max/MSP on the Apple device). This allows us to keep track of the changes that the artwork faced over time while preserving its related metadata under the same preservation copy.

6. Conclusions

The MDP model was developed to be an effective and versatile framework for preserving a wide range of artworks, from interactive art installations to multimedia performances and computer music. The MDP-m App, a software implementation of this model, focuses on the preservation process, as it enables

the mapping and maintenance of the relationships among the various DPOs while gathering and feeding metadata. This approach ensures the preservation of the history and integrity of the artwork that could have been presented and reinterpreted in multiple versions or contexts. *Perseo e Andromeda* by Salvatore Sciarrino is a relevant example of the challenges and complexities inherent in the preservation and conservation of live media art and, in particular, live electronics artworks. Due to their ephemeral nature and obsolescence-related issues, such artworks demand preservation strategies that go beyond traditional museum practices. In this specific case, the MDP-m App has been used for preserving documentation related to the 5 reactivations of the artwork. This documentation not only supports the potential for future reactivations but also constitutes a valuable resource for all the professionals engaged in the task of preserving time-based media art. In this regard, reactivation practices emerge not only as technical operations but also as fundamental steps to ensure the preservation of the artworks. *Perseo e Andromeda* demonstrates how the integration of theoretical frameworks, digital tools, and curatorship can open new avenues for the preservation of contemporary cultural heritage. Future developments will focus on improving the implemented functionalities to increase its versatility and adaptability to different types of artwork.

Declaration on Generative AI

During the preparation of this work, the authors used Grammarly and ChatGPT in order to: Grammar and spelling check, Paraphrase and reword. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the publication's content.

References

[1] S. Canazza, G. De Poli, A. Vidolin, When the Computer Entered the Music Scene: The Collaboration between the Centro di Sonologia Computazionale and La Biennale di Venezia, Leonardo 57 (2024) 89–94. URL: https://doi.org/10.1162/leon_a_02427. doi:10.1162/leon_a_02427. arXiv:https://direct.mit.edu/leon/article-pdf/57/1/89/2337293/leon_a_02427.pdf.

[2] A. Russo, A. Fiordelmondo, A. Franceschini, S. Canazza, Restoration and reactivation approaches in computer music and time-based media art, Multimedia Tools and Applications (2025) 1–23. doi:10.1007/s11042-025-20609-4, in: Heritage Preservation in the Digital Age: Advances in machine learning, monomodal and multimodal processing, and human machine interaction.

[3] A. Russo, A. Franceschini, A. Rodà, S. Canazza, et al., Virtual recreation of an interactive multimedia art installation from 1977, in: AVI'24: Proceedings of the 2024 International Conference on Advanced Visual Interfaces, 2024.

[4] A. Fiordelmondo, S. Canazza, N. Pretto, Reactivating and preserving interactive multimedia artworks: An analog performance from the seventies, J. Comput. Cult. Herit. 17 (2024). doi:10.1145/3647995.

[5] A. Russo, A. Franceschini, A. Rodà, S. Canazza, Revitalizing multimedia art: restoration and re-activation of an audiovisual installation in virtual reality, in: Proceedings of the sound and music computing conference 2024 (SMC2024), Porto, Portugal, 2024.

[6] A. Fiordelmondo, A. Russo, M. Pizzato, L. Zecchinato, S. Canazza, A multilevel dynamic model for documenting, reactivating and preserving interactive multimedia art, Frontiers in Signal Processing (2023).

[7] D. Quaranta, Beyond new media art, Link Editions Brescia, 2013.

[8] R. van de Vall, V. van Saaze, Conservation of Contemporary Art: Bridging the Gap Between Theory and Practice, Springer Nature, 2024.

[9] P. Laurenson, V. van Saaze, R. van de Vall, Bridging the gaps between theory and practice through cross-institutional collaboration in the conservation of contemporary art, Engaged humanities: rethinking art, culture, and public life. Amsterdam University Press, Amsterdam (2022) 271–304.

[10] A. Depocas, J. Ippolito, C. Jones, The variable media approach: permanence through change, Guggenheim museum publications, 2003.
[11] P. Innocenti, Bridging the gap in digital art preservation: interdisciplinary reflections on authenticity, longevity and potential collaborations, The Preservation of Complex Objects 2 (2012) 71–83.
[12] P. Innocenti, Rethinking authenticity in digital art preservation, in: Proceedings of the 9th International Conference on Preservation of Digital Objects, University of Toronto Faculty of Information, 2012, pp. 63–67.
[13] H. Hölling, The aesthetics of change: on the relative durations of the impermanent and critical thinking in conservation, Authenticity in Transition: Changing Practices in Art Making and Conservation (2016) 13–24.
[14] B. Viola, Permanent impermanence, Mortality/immortality? The legacy of 20th-century art (1999) 85–94.
[15] D. Van Wegen, Between fetish and score: the position of the curator of contemporary art, Modern art: who cares (1999) 201–209.
[16] P. Laurenson, Authenticity, change and loss in the conservation of time-based media installations, Tate papers 6 (2006).
[17] R. Rinehart, The media art notation system: documenting and preserving digital/media art, Leonardo 40 (2007) 181–187.
[18] C. MacDonald, Scoring the work: documenting practice and performance in variable media art, Leonardo 42 (2009) 59–63.
[19] T. Caianiello, Materializing the ephemeral: the preservation and presentation of media art installations, Media Art Installations: Presentation and Preservation; Materializing the Ephemeral (2013) 207–29.
[20] R. Rinehart, J. Ippolito, Re-collection: Art, new media, and social memory, MIT Press, 2014.
[21] R. Van de Vall, Documenting dilemmas. on the relevance of ethically ambiguous cases, Sin Objeto. Revista de Arte, Investigació, Políticas 1 (2017) 83–100.
[22] J. Phillips, Reporting iterations: a documentation model for time-based media art, Revista de historia da arte 4 (2015) 168–179.
[23] H. Hölling, Paik's Virtual Archive: Time, Change, and Materiality in Media Art, Univ of California Press, 2017.
[24] A. Dekker, G. Giannachi, Documentation as Art: Expanded Digital Practices, Taylor & Francis, 2022.
[25] P. Laurenson, Practice as research: Unfolding the objects of contemporary art conservation. inaugural lecture delivered at maastricht university, 2016.
[26] J. Butler, My life, your life: equality and the philosophy of non-violence, The Gifford Lectures, University of Glasgow 1 (2018).
[27] B. Castriota, ICOFOM, 2019, pp. 39–48.
[28] F. Bressan, S. Canazza, The challenge of preserving interactive sound art: A multi-level approach, International Journal of Arts and Technology 7 (2014) 294–315.
[29] I. ICA, General international standard archival description, 1999.
[30] D. Lu, Y. Pan, Digital preservation for heritages: Technologies and applications, Springer Science & Business Media, 2011.
[31] A. Fiordelmondo, G. Zuccolo, S. Canazza, R. Masu, Longevity in nime research: a case study using time-based media art preservation models (2024) 292–301. doi:10.5281/zenodo.13904858.
[32] A. Russo, A. Liberalato, S. Canazza, Reactivation/virtualization of the CSC system at the university of padua, in: 2023 8th IEEE History of Electrotechnology Conference (HISTELCON), 2023, pp. 106–109. doi:10.1109/HISTELCON56357.2023.10365824.