

Bridging Dimensions: Conceptualising, Developing and Exploring 3D Scholarly Editions

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Panel presentation at DH Benelux 2025

1 Abstract

This panel explores the idea and creation of 3D Digital Scholarly Editions. We define 3D Scholarly Editions as knowledge sites (Apollon et al., 2014; Driscoll and Pierazzo, 2016; Pierazzo, 2015; Sutherland, 1997) with a 3D model at its centre which is contextualised and annotated multimodally (text, images, video as well as other models) allowing the apparatus to be displayed and read in the same information space as the model. The 3D model at the centre of the edition can be an individual object (e.g. a sculpture, scientific or cultural artefact, or even a toy), or a complex scene including archaeological sites or cityscapes. The panel will focus on 3D Scholarly Editions (Papadopoulos and Schreibman, 2019; Schreibman and Papadopoulos, 2019) created within PURE3D (<https://pure3d.eu/>), the national Dutch infrastructure for the publication and preservation of 3D scholarship.

The first presentation will explore the conceptual underpinnings and affordances of the PURE3D infrastructure. Subsequent presentations will focus on editions developed for different audiences (scholarly, educational, public), as well as the training involved in creating these knowledge sites. Panel members will reflect on how creating and communicating these editions bring insights into the object, event, or historical space, enabling, not only new approaches to 3D scholarship, but also fostering different ways of engaging diverse audiences. Ultimately, the presentations aim to demonstrate the transformative potential of 3D scholarship in bridging dimensions – connecting past and present, virtual and material, and scholarly and public domains. The panel includes 10-minute presentations per paper, so there is enough time for discussion among the panelists and the audience at the end. During the presentations, panellists will share examples of 3D scholarly editions via links or QR-codes to further stimulate audience engagement.

Keywords: 3D, 3D scholarly editions, digital storytelling, digital collections, PURE3D

2 Papers

PURE3D: A conceptual and methodological framework for 3D scholarly editions

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In 2016 Patrick Sahle advocated that Scholarly Digital Editions not be restricted to literary texts but rather ‘cover all cultural artefacts from the past that need critical examination in order to become useful sources for research in the humanities’ (Sahle, 2016, p. 22). Thus, the goal of these editions is to move beyond how we typically interact with 3D models (for example on Sketchfab or via museum databases) as ‘twirly objects’, albeit with metadata, to placing models at the centre of a knowledge site, e.g., a Digital Scholarly Edition. Here the textual and contextual are interwoven within the same viewing environment (Gabler, 2010, p. 46). Through PURE3D’s chosen viewing and editing environment, Voyager Explorer & Story, 3D models can be presented and studied within a framework that provides the same intellectual rigour as more traditional editions based on primary text-sources. This paper will explore issues surrounding the creation and the sustainability of 3D scholarly editions, and the inspiration to create an infrastructure to lessen the burden (economically and intellectually) for editors wishing to create and sustain such scholarship. It will also address issues around recognising and rewarding 3D scholarship through a publication and evaluation workflow.

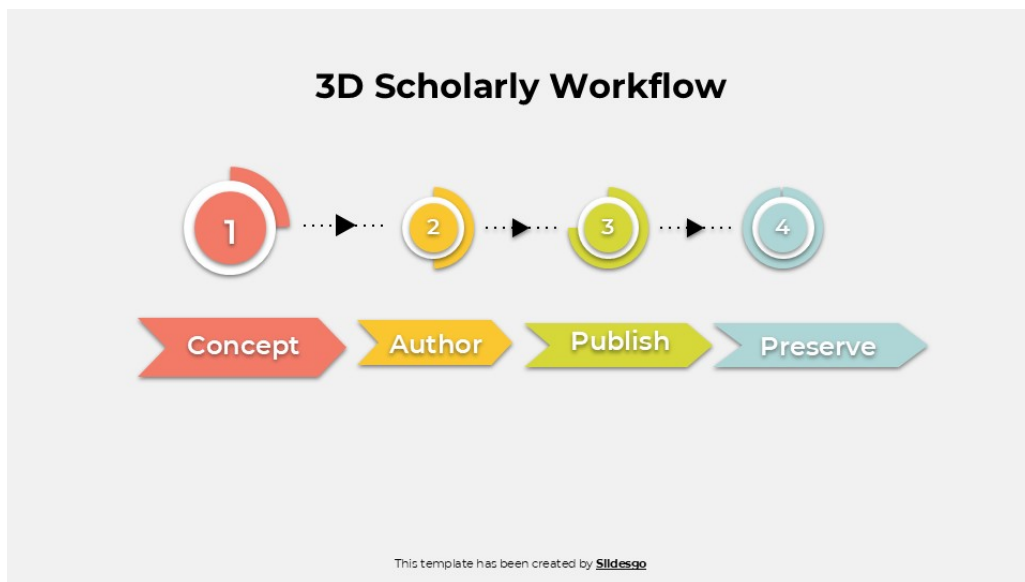


Figure 1: The 3D Scholarly Workflow in PURE3D.

Creating 3D narratives: From conceptualisation to implementation

*Kelly Gillikin Schoueri, Susan Schreibman & Costas Papadopoulos,
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Alongside the development of the publishing infrastructure, PURE3D has made the training of technical and conceptual competencies for 3D scholarly editions a core focus, with over 90 colleagues and students trained in the past three years. Through a combination of technical training materials, design-thinking activities and digital workflows, edition creators are equipped and empowered to conceptualise and execute a 3D scholarly edition within the Voyager Story platform. When adopting this approach to a classroom situation in the course *Creating Digital Collections* (part of the MA Media Studies: Digital Cultures at Maastricht University), in addition to training students in the skills and methods needed to create the edition on a technical level, the course specifically focused on developing digital competencies (Russell and Hensley, 2017). By integrating critical, technical, and reflective practices in the creation of 3D scholarly editions and embedding situated and praxis-based teaching within an authentic learning environment (McArthur, 2022), students were able to develop transferable skills that extend well beyond discipline specific knowledge.

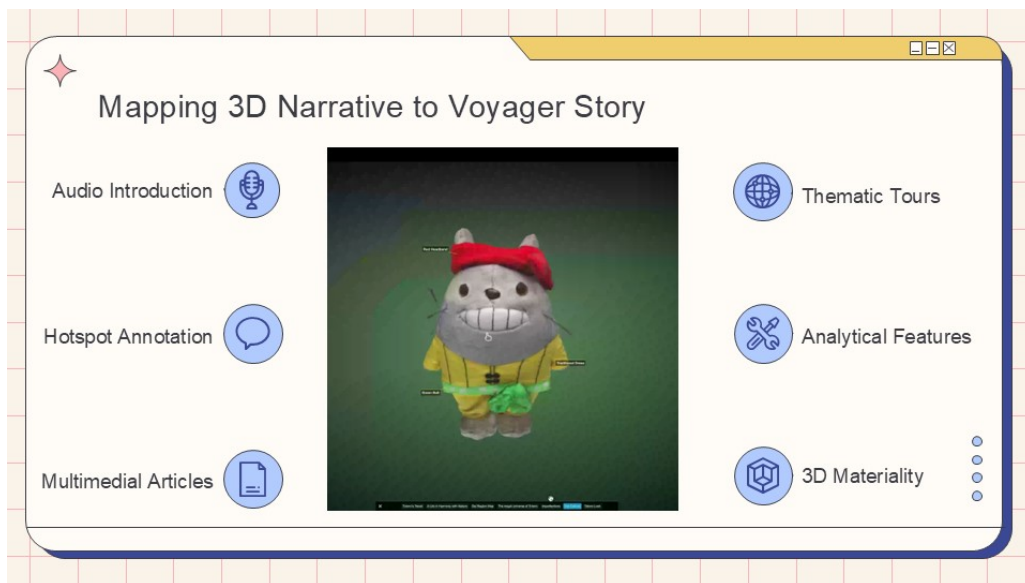


Figure 2: Creating 3D Narratives in Voyager Story in the project *Toys with Voice*. <https://editions.pure3d.eu/project/13/index.html>

Digital storytelling in (PURE)3D: Exploring affordances for media historical imagination

Tim van der Heijden, Open University of the Netherlands

This presentation highlights the 3D scholarly project *A Genealogy of Home Cinema*, focusing on the affordances of the PURE3D framework and infrastructure for communicating media historical narratives, and on how the platform's storytelling functionalities stimulate audiences' historical imagination (Harkema and Rosendaal, 2020, p. 73; Collingwood, 1964). The project includes two 3D scholarly editions that reconstruct the history of home cinema through two early-twentieth-century media historical devices: the Kinora (1896-1914) and the Pathé Baby 9.5mm film projector (1922-1932) (cf. Georgiakakis and van der Heijden, 2024). Creating these editions in PURE3D introduced innovative ways to present, annotate, and contextualize the materiality and functionality of these devices, offering deeper insights into their historical use and stimulating one's imagination of how these media historical devices were used in the past (Fickers and van den Oever, 2022). Reflecting on the process of developing these editions, and presenting them to students in an online classroom as part of a module on digital storytelling, this presentation highlights how engaging with 3D objects not only enabled new modes of presentation but also added a tacit dimension to 3D scholarship, fostering new approaches to digital media historical inquiry and dissemination.



Figure 3: The Kinora 3D scholarly edition.

<https://editions.pure3d.eu/project/20/edition/1/index.html>

Interactive, transparent, layered narratives: Creating a 3D scholarly edition of an early modern private library

Chiara Piccoli, *University of Amsterdam*

This presentation delves into the 3D scholarly edition *The Private Library of Pieter de Graeff (1638-1707)*, showcasing the capabilities of the PURE3D infrastructure in crafting a layered narrative of a complex 3D scene. This edition employs a multi-scale approach: the early modern private library and its exploration take centre stage, enriched by contextual information about the house where it was located, the family who lived there, and detailed insights into the 3D reconstruction process. These elements are organized into tours that guide the viewer through an interactive narration, developed through the interwoven display of 3D models, texts, images, and links to external resources. This edition serves as both a stand-alone entry point to explore the library and as supplementary material for the author's monograph on this subject (Piccoli, 2025). This paper will therefore discuss the challenges of creating a 3D scholarly environment that caters to both aims. Reflecting on the development process in PURE3D, the presentation will also cover how the infrastructure supports multi-layered storytelling, how this type of digital publication can act as a hub to connect and make available various data sources (cf. Huurdeman and Piccoli, 2021), and how it can enhance the transparency of the 3D reconstruction process (cf. Bentkowska-Kafel and Denard, 2012).



Figure 4: 3D scholarly edition of The Private Library of Pieter De Graeff (1638-1707) at Herengracht 573, Amsterdam.

<https://editions.pure3d.eu/project/18/edition/1/index.html>

Visualizing archaeological structures over time: Reconstructions of the Düwelsteene megalithic tomb

Louise Tharandt, Humboldt-Universität zu Berlin

The Düwelsteene megalithic tomb, a Funnel Beaker culture passage grave, was excavated and restored in 1932 (Schierhold and Stapel, 2018). In 2017, the tomb was digitally documented through image-based modelling, producing a detailed 3D model for ongoing research. A 2020 citizen science initiative invited residents to share photographs from before 1932, enabling the reconstructions of the tomb before its restoration in 1932 and its likely appearance in 3000 BCE. This 3D scholarly edition combines archaeological research with community engagement and shows the history of the tomb and scientific results through guided tours, annotations and references. The integration of the general public into archaeological research in the form of citizen science projects resulting in 3D editions can be beneficial to everyone involved. The data that is received with such projects can lead to new results, which in return can give back valuable information and new findings to the participating people as well as the general public (Klinke and Jüngerich, 2022). Published projects using 3D reconstruction modelling can help spread awareness and information on cultural heritage sites to the general public. This approach bridges the gap between complex scientific outputs and accessible public engagement, demonstrating the potential for broader applications across disciplines. The presentation will provide an overview of the workflow and challenges encountered during the creation and publication of the Düwelsteene scholarly edition.



Figure 5: 3D scholarly edition of the megalithic grave "Düwelsteene".
<https://editions.pure3d.eu/project/18/edition/2/index.html>

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