

# Classifying and Describing Authoring Tools

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**Abstract.** In our paper for this conference, we present our first step towards a meta-analysis of authoring tools: a framework for categorisation and description comprising 9 categories and 38 descriptors for tool analysis and comparison. The overall aim of this framework is to comparatively study the defining qualities and characteristics of IDN authoring tools and their effects on the artefacts produced with them. We created an online resource in which we surveyed and classified over 300 tools, including academic and commercial tools, tools specifically designed with IDN in mind as well as more general tools that are or have been used to create IDN. In this position paper, we discuss our definition of authoring tools and some conclusions and recommendation we draw from the study for the future of IDN authoring tools.

**Keywords:** Authoring tools, comparison, analysis,

## 1 Introduction

In this workshop, we offer to use our recently developed classification and description framework, which we will also present as a short paper (co-authored with Hartmut Koenitz), titled “A Framework for Classifying and Describing Authoring Tools for Interactive Digital Narrative”. We would like to open up for discussion some aspects of our framework, which is designed as a first effort, awaiting the ICIDS community’s input. Our meta-analysis of the field is still at an interim phase, and we would very much appreciate feedback and potential collaboration. We intend to highlight some questions and assertions raised by our work, which seem particularly relevant for an academic forum about the need for and usefulness of authoring tools.

### 1.1 Definition of an IDN authoring tool

In our paper we assert that we are not aware of a commonly-accepted definition of precisely what an authoring tool is, and believe that this is a crucial aspects for productive reflection on the extent to which we need them. In our paper, we thus suggest defining authoring tools for interactive digital narrative (IDN) pragmatically, as “digital software which:

1. is capable of functioning as an independent and comprehensive workspace,
2. simplifies the authoring process,
3. is, or has been actively used in the past, to create IDN products”

This definition is intentionally broad, and is not limited to tools that were explicitly designed for IDN, but rather expands to include tools that are actually used, or have the potential to be used by prospective cyberbards. This allows for a bottom-up examination of whether a given software qualifies as an authoring tool, based on affordances and use. Following this definition, our taxonomical meta-analysis of tools implements a broader perspective on the field than most academic discourse on the subject – for example, taking an integrated look at tools developed in the academic context alongside commercial tools.

## 2 Observations on the state of the art and future suggestions

We suggest three interim conclusions of our work as discussion points:

**Theory and methodology.** Academic work on authoring tools is most often focused on designing an entirely new tool. More study is needed on how tools are actually used by authors - on the author’s experience of the creative process. We assert that there is a need for a theory of the IDN authoring process itself, especially with regards to the psychology and phenomenology of the authoring process, supported by user studies and other qualitative and quantitative empirical methods. Furthermore, while there is some research on the artefacts produced using a particular tool (e.g. [1]), there’s ample room for more research on the connection between a tool’s design, its affordances and UI and the end-products authors actively create with it.

**Co-ordinating efforts.** Currently, the vast majority of IDN artefacts are created using a small number of highly popular tools, such as Unity and Twine. These typically offer comfortable and modular work environment and UI, and (often via plugins in an open-source model) powerful yet adaptable central design affordances that the author can appropriate gradually, with a low barrier to entry. Scholars may benefit from careful study of the structures, advantages and drawbacks of these tools’ architectures, as well as the discourse surrounding them and the works they produce. Since the vast majority of academic tools are seldom used, designing narrative-centred plugins for existing successful tools may be a worthwhile venture. Alternatively, more collaborative and long-term academic projects are needed to create tools capable of providing a worthwhile alternative to existing staples in specific domains of IDN design. A common, standard ontology that would allow for interoperability between different tools would be useful.

**Authoring interactive experience, not just interactive narrative.** Currently, IDN authoring tools tend to focus either on the (narrative) structure of the storyworld, or the (discursive) structure of its telling. Few, if any, focus on IDN-specific experience design and none combine both interactive narrative design and interaction or experience design, let alone emphasise their interconnectedness. We believe that while in IDN’s

unique phenomenology, the interaction model and storyworld are experienced as an inseparable whole, these two aspects are distinct components of the (userly) text [2], and both require distinct attention during authoring. General authoring tools that can be, and are, used for IDN creation, especially Unity, may be very good for user experience design, but then again they do not offer particular and specific support for IDN authoring, lacking an explicit narratological or dramatic ontology. Future tools should therefore pay specific and distinct attention to storyworld and interactive narrative structure, as well as to interaction model design, for example by creating distinct but interconnected design spaces for each of these aspects<sup>1</sup>. In this scope, we are particularly interested in the potentialities for narrative authoring through more highly embodied (e.g. gestural) interaction models, with their specific affective affordances. We would also like to see a design process that allows authors to manipulate higher order parameters of IDN: not just storyworld or interface, but also other narratologically salient constructs as well as UX parameters. Model-based programming (e.g. Bret Victor's work [3, 4]), which allows programmers to directly manipulate higher-order objects and design algorithms rather than write code, could serve as an inspiration in this context.

## References

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<sup>1</sup> Some “descriptors” in our own framework are meant to allow for basic analysis and comparison of the ways in which different tools fashion or facilitate both these aspects and their respective design spaces.