
Modelling Design Fiction: What's The Story?

Joseph Lindley

HighWire CDT
Lancaster University
LA1 4YW
United Kingdom
j.lindley@lancaster.ac.uk

Paul Coulton

Imagination
Lancaster University
LA1 4YW
United Kingdom
p.coulton@lancaster.ac.uk

Abstract

This paper is intended to be read alongside the design fiction film *Heating Britain's Homes*¹. It uses the film to explore questions relating to the methods employed when creating a design fiction. Design fictions are "deliberate use of diegetic prototypes to suspend disbelief about change" [1] by employing a "conflation of design, science fact, and science fiction" [2]. Design fictions do not aim to present or develop 'finished' designs, but rather they use design methods to "create a discursive space within which new forms of cultural

artefact might emerge" [3]. As a design fiction piece, the 'discursive space' that this film addresses relates to disruptive possibilities associated with cryptographic currencies such as Bitcoin [4][5]. However, for the purposes of this paper the film and its concern with cryptographic currency are secondary and subservient to a discussion of design fiction practice *itself*. A three-layered model of design fiction is proposed as a communication device to help contextualise the various ideas used in the film, and as a tool to be applied in the creation, and analysis, of design fiction more generically. The paper concludes by posing questions with a view to taking steps towards formal design fiction methods.

Author Keywords

Design fiction; story telling; cryptographic currency.

Introduction

Design fiction's is in its infancy as design approach, hence even providing a concise definition of the field is not simple [3] and indeed is beyond the purpose of this paper. Instead the aim is to respond to calls to develop methods and contribute to the design fiction discourse [6]. The model introduced is suggested as a tool both for those wanting to create design fictions, but also as a mechanism to facilitate discussion about design fictions. *Heating Britain's Homes* is used as an

Copyright is held by the author/owner(s). Workshop on StoryStorm: A Collaborative Exchange of Methods for Storytelling at DIS 2014

¹ Heating Britain's Homes is available to watch online at <http://youtu.be/TmXo0-vIu-k>

Notes on diegesis

Often referred to in film studies (see [9] for a fuller discussion) diegesis is an ancient concept. Here described in relation to mimesis:

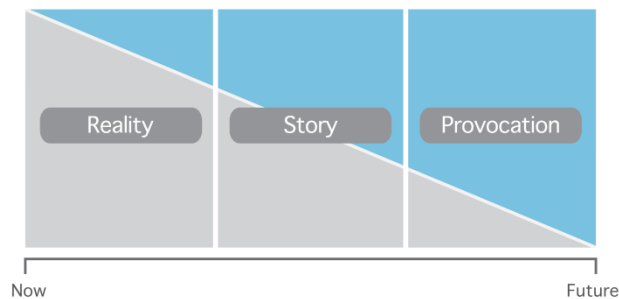
"And narration may be either simple narration, or imitation, or a union of the two."
Plato's Republic (360 B.C.)

Filmic application of diegesis was explored by Kirby in relation to technological development [8] and is central to the Bleecker's design fiction discourse [2]. Diegesis is a particular philosophy of narrative which aims to provide a textured world within which fictional prototypes come into relief.

exemplar for the model. Through the explanation of the model various other questions emerge, which are revisited in conclusion as suggested areas that will need to be considered as design fiction matures.

Introducing and Applying the Model

Dunne & Raby's *PPPP* [7] place speculative design practices on a spectrum where 'preferable' outcomes sit in between futures that probable, plausible, or possible - and while their work doesn't relate exclusively to design fiction it is certainly applicable to it. This model has some synergy with *PPPP*, however this model is specific to describing design fictions. It provides a set of principles from which the stories making up design fictions can be constructed, dismantled, and discussed.



The model is constructed from three layers, here illustrated left to right. The extreme left edge represents the factual reality of the now. The extreme right edge represents the diegetically prototyped fictional future worlds that design fiction explores. The blue areas on the diagram hints at the proportion of each layer's content that should be fictional, with the grey areas inversely corresponding in terms of factual content.

The **reality layer** describes the world today as particular sets of users may know it. It refers phenomena, technologies, and knowledge that exist now. It is from the reality layer's foundation that the other layers are contextualised and can construct a believable view of the fictional world being developed.

In our example film *Heating Britain's Homes*, the reality layer weaves contemporary truths into a narrative: climate change causes extreme weather; diplomatic relations between Europe and Russia are tense; crypto currencies are becoming part of the zeitgeist. Finally the film's reality layer depends on an awareness of the 'mining' mechanism that is integral to crypto currency networks like Bitcoin (see side note).

Narrative and plot devices make up the **story layer**. The story layer builds upon the reality layer, extrapolating the facts, and extending them into a plausible fiction. By carefully building the fiction atop a grounded reality the story layer creates a believable context for, and adds texture to, the diegesis of the film. The reality and story layers together create a blank canvas upon which a design provocation can be painted.

In *Heating Britain's Homes* the story layer adds complexity and plot to the assumptions of the reality layer. The nuance of the diplomatic story thread is teased out with stories that do not relate *directly* to either provocation or fiction layers. Examples of extreme weather events are included. Plausible extrapolation directly from real news to fictitious futures is intentional and aims to add tangibility to the texture of the fictional world's interior contours.

Crypto currency mining

Crypto currency networks depend on a process called 'mining'. Mining is a way of distributing the processing power required to make a virtual money system work. It secures the network and processes transactions. As a reward, individuals contributing their computing power to the network are rewarded with newly 'minted' crypto coins (which have a monetary value).

The computation that performs the mining process requires large amounts of electrical energy. A byproduct of the computation is a significant amount of heat. Miners convert energy, into wealth and heat.

Comprehension of this tripartite relationship between wealth creation, energy consumption, and heat is essential to the reality layer of *Heating Britain's Homes*.

In this model the **provocation layer** represents the *thing being designed* (which may be a product, a service, or anything else). It is the provocative nature of this layer that opens the 'discursive space' that design fictions flirt with. The provocation layer is where the diegesis created by the other layers is completed and utilised. It is from this layered diegetic landscape that designers conjure fictional prototypes, prototypes that define the provocation layer. Kirby argues that these diegetic prototypes have an advantage because "these technologies exist as 'real' objects that function properly and which people actually use" [8] – albeit within a fictional world.

Heating Britain's Homes is a work in progress and in its current form is yet to incorporate a provocation layer into the film itself. Instead the final words in the film's narrative pose a question, any appropriate answer to that question could be chosen to complete the model and fill the provocation layer. One possible answer or provocation is described below.

A Crypto Heating System

The reality and story layers of *Heating Britain's Homes* describe a world where being able to heat one's home becomes a foreground issue. The story also charts the rise in popularity of cryptographic currency. The proposed provocation supposes that the incumbent government connects the excess heat generated as a by-product of crypto currency mining with the newly prominent issue of domestic heating. In order to make heating affordable for the electorate while also helping to secure the UK's position as a centre for financial services, so-called 'Crypto Heaters' are introduced. By producing heat while mining crypto currency, the cost of the electricity used for heating can be offset against

the value of the mined crypto currency. The result of this is subsidised, or free, heating for citizens.

Conclusion

Design fiction is in its formative stages and there is a growing canon work addressing *why* design fictions work (e.g. [3][2]). However the field is in need of formal methods, grounded in research, and that address the practicalities of *how* to make it work. Speaking in 2013 Bleecker said "I don't think we've figured it out" and that "studying it, understanding it and trying to devise some of the principles - of what we're calling design fiction - is what we're trying to do" [6]. The model proposed here, and its exemplar application to *Heating Britain's Homes*, is one such contribution to design fiction discourse. The model is a prototypical tool for describing design fictions and is presented to be critiqued, built upon, and developed.

Further Discussion

Resultant from the production of *Heating Britain's Homes*, and this paper, numerous queries and quandaries arose about design fiction. In sympathy to the juvenile state of the field, some of these are presented here as potential starting points from which further contributions to discourse may emerge. As with the model, these questions are in general addressing the practical questions of *how* to operationalise design fiction. Why use particular techniques, how do you put them into practice, what affordances do design fictions have?

The model appears to be helpful as a tool for describing *this particular* design fiction. Is it worthy to test how it can be applied to *other* design fictions, how could that experiment be designed with sufficient rigor?

Design fiction doesn't *directly* address design problems; rather it uses design techniques to open a discussion space. The purpose of this discussion space is something that is generally open to debate, but the consensus is that insight emerges from it, which in turn can be applied directly to design challenges. In our example film the provocation layer is in fact omitted from the film itself, however this opens an interesting proposition to use the diegesis emerging from the reality and story layers, as a canvas on which *any number* of provocations could be painted. As such can design fiction be applied as a pure ideation method?

Raby and Dunne's A/B is a "sort of manifesto" [7] that succinctly compares design as it is usually understood with a range of speculative design practices (such as critical design, counterfactuals, thought experiments, concept design, et cetera). Design fiction is one of these practices, which focusses on film and diegesis. Critical design, for example, is more interested with physical material as the medium to provoke thought. How can design fiction utilise the space between these related but distinct fields? For instance could materialized critical design objects augment and enrich the diegesis that design fiction relies on so heavily?

Each of these possible lines of inquiry lean towards a 'meta' question; *how can storytelling be used best to serve design's needs?*

Acknowledgements

This work was produced at the HighWire Centre for Doctoral Training, funded under the RCUK Digital Economy programme (Grant Reference EP/G037582/1).

References

- [1] B. Sterling, "Bruce Sterling NEXT13 - Fantasy prototypes and real disruption," 2013. [Online]. Available: <http://www.youtube.com/watch?v=2VIoRYPzk68>. [Accessed: 13-May-2014].
- [2] J. Bleecker, "Design Fiction: A short essay on design, science, fact and fiction," *Near Futur. Lab.*, no. March, 2009.
- [3] D. Hales, "Design fictions an introduction and provisional taxonomy," *Digit. Creat.*, vol. 24, no. 1, pp. 1-10, Mar. 2013.
- [4] S. Nakamoto, "Bitcoin: A peer-to-peer electronic cash system," 2008.
- [5] "Bitcoin Price Could Reach \$98,500, Say Wall Street Analysts." [Online]. Available: <http://www.coindesk.com/bitcoin-price-reach-98500-say-wall-street-analysts/>. [Accessed: 19-Apr-2014].
- [6] J. Bleecker, "A Design Fiction Evening with the Near Future Laboratory (1:01:30)," 2013. [Online]. Available: <http://vimeo.com/84826827>. [Accessed: 13-May-2014]
- [7] A. Dunne and F. Raby, "Speculative Everything," The MIT Press, 2014.
- [8] D. Kirby, "The Future is Now: Diegetic Prototypes and the Role of Popular Films in Generating Real-world Technological Development," *Soc. Stud. Sci.*, vol. 40, no. 1, pp. 41-70, Sep. 2009.
- [9] N. Burch, "Narrative/Diegesis- Thresholds, Limits," *Screen*, vol. 23, no. 2, pp. 16-33, Jul. 1982.