6.2. Digital design eco-system

Secondly, the digital eco-system hosts a variety of design software in application. ... The functions are design, documentation, exploration and visualisation. Expanded functions from the conventional design process are coding, narrating, gamifying and experiencing. Each software can have multiple functions, and the key factor which links the proposed eco-system is design creativity. In addition to interactivity between design software.. Designers tend to start with software which is familiar to them, the more time they spent on the project, the more diverse techniques were deployed. Case study #6 is in accordance with the idea that designers start with a familiar technique or software [14]. They also argue that with the vast development of tools, creative flow is moving away from the linear process

 $(exploration \rightarrow design \rightarrow visualisation \rightarrow documentation).$

In case study #5, it was argued that the selection of each design tool is an essential ingredient within the ecosystem [13]. They also argue that the constant move from physical and virtual technique is the essence of this eco-system. ... Each selection entails strengths and weaknesses regarding capabilities of both: the designer and the tool...

... Interoperability is an important element in this eco-system... However, problems might arise within the eco-system if designers are not willing to go beyond their familiar software. Being reluctant to learn or limited proficiency with a new technique might lead to design fixation. It is "a blind adherence to a set of ideas or concepts limiting the output of conceptual design" [22]. As a result, design outcome may be compromised. ...

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