

User Interfaces That Appeared in SciFi Movies and Their Reality

Masaaki Kurosu

The Open University of Japan
masaakikurosu@spa.nifty.com

Abstract. In this paper, future image of the user interface (UI) that appeared in SciFi movies are critically reviewed, especially in terms of their reality. Some ideas of the UI in SciFi movies were actually manufactured as the product but most of them are not. Reasons for the validity in the real world are examined and it is proposed how we should deal with the ideas of the UI in SciFi movies. The concept of meaningfulness is examined as the criterion for validating ideas of the future UI.

Keywords: Science-fiction and DUXU, SCI-FI and DUXU: Film as the Future Information System.

1 Introduction

Early SciFi movies such as “Le Voyage dans la Lune” by Meliers, G. (1902) contained many futuristic but unrealistic ideas on artifacts including the rocket launched by a canon, the rocket with only the cabin inside it, the rocket without any shock absorber for landing, and so many other strange ideas.



Fig. 1. A scene from “Le Voyage dans la Lune” (1902) by Meliers, G.



Fig. 2. A scene from “Le Voyage dans la Lune” (1902) by Meliers, G.

The concepts of the rocket using the liquid fuel and the space suit were proposed by Tsiolkovskiy, K.E. (1857-1935) almost at the same time with the movie by Meliers. Considering this temporal relationship, Meliers might have created the movie just for the entertainment and he might have no intention for using the scientific information for the purpose of improving the reality of the movie.

The year 1902 was 7 years after the invention of first cinematograph by brothers Lumiere. Movies at the end of 19th century and very early years in 20th century were mostly for recording objects and facts. Hence it is not a mystery why Meliers was motivated for the direction of entertainment and not for the scientific validity.

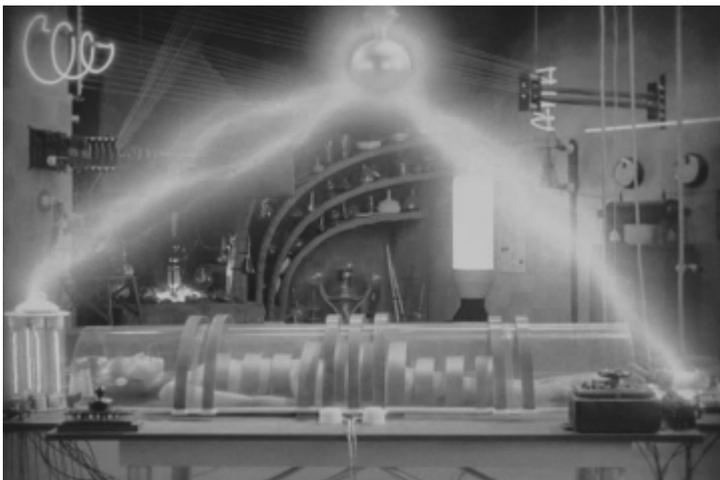


Fig. 3. A scene from “Metropolis” (1927) by Lang, F.

Later in 1927, Lang, F. directed “Metropolis” in which the famous robot and the laboratory to create it are shown. But the robot was described as something mysterious and no logical explanation was given to its creation. The laboratory also seemed to be “something” with many gadgets.

Even in 1950s, “The day the earth stood still” by Wise, R. described some magical and mysterious alien and its robot with no scientific validity.

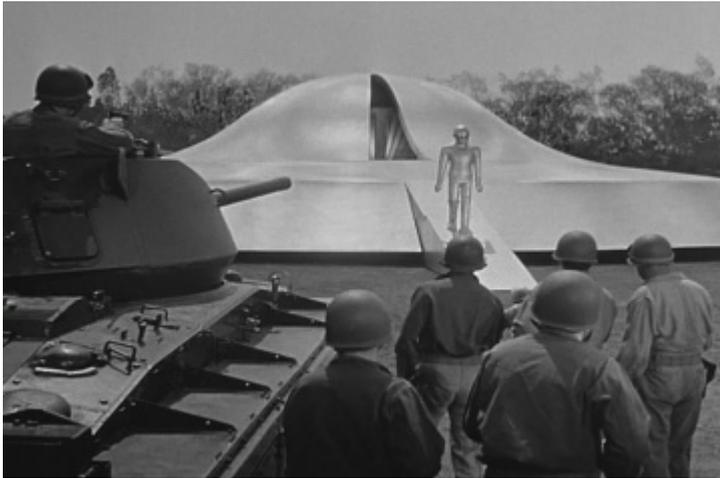


Fig. 4. A scene from “The Day the Earth Stood Still” (1951) by Wise, R.

But “2001 a space odyssey” by Kubrick, S. (1968) described seemingly scientific spaceship and computer robot “HAL”. But the lamps, buttons and levers on the operation console only seemed to be scientific and do not seem to be valid.



Fig. 5. A scene from “2001: A Space Odyssey” (1968) by Kubrick, S.

In this century, SciFi movies such as “Minority report” (2002) by Spielberg, S. described a detailed interactive operation of the system that might have been influenced by the development of non-verbal interface and other research trends in HCI. Although the interface of the system does not seem to be the one that could be realized by the current technology and the usability of the system seemed to be not good, the scientific description has advanced so much compared to previous SciFi movies.



Fig. 6. A Scene from “Minority Report” (2002) by Spielberg, S.

HCI researchers may be able to get some hints from these movies in terms of the future user interface. But the author thinks it is time now to consider about the triad relationships among SciFi movie directors, HCI engineers and usability professionals (or the quadruple relationship by adding industrial designers). SciFi movie directors describe the dreamlike interface while the usability professionals focus on the real usability and the feasibility in the real world. The HCI engineers stand in between these two. You can find many gadgets invented by such engineers at such HCI conferences as ACM SIGCHI where the purpose of the invention is not clear and it is ambiguous whether it is targeted to be used in the real world by real users for any practical goal achievement.

The future of SciFi movies makes us think the direction of HCI research if they are going in the right path. The author thinks it necessary to let the face of HCI researchers be directed toward the real life meaningfulness and the face of SciFi directors in the opposite direction, i.e. full of imagination that should be based on the current technology but should not be confined by the real future development of the current technology. SciFi is the fiction and should be full of dreams.

2 Realistic Prediction

There are some descriptions of the future UI that could successfully predict the future of products and systems. One example is the image of sweeping robots described in Luc Besson's "Fifth Element" (1997). When a glass fell on the floor and is broken, two types of round robot appeared and started sweeping the glass on the floor.



Fig. 7. A Scene from "Fifth Element" (1997) by Besson, L.

The image and the movement of the sweeping robot are quite similar to those of "Roomba" of which "Roomba 500 series" first appeared in the market in 2007. The difference of the robot sweeper in the movie and "Roomba" are 1). The robot sweeper detects the location of the clashed glass and goes directly to the target, and 2) "Roomba" does not include the broom-type and cannot collect large fragments of the glass. It is not clear if "Roomba" was developed by being inspired by the movie. But the movie made a correct prediction regarding the idea of automatic sweeping robot.



Fig. 8. A view of Roomba working on the floor

Another example is the gesture manipulation of visual images in “Minority Report”. Although the necessity of the bodily manipulation is not clear in the movie and one can think of the mouse or hand operation on the wide screen as an alternative, the application of “Kinect” by Microsoft at the scene of surgery in the hospital is quite reasonable. During the operation, doctors have a need of viewing the relevant X-ray and other visual images when necessary. But, for the purpose of controlling the possible contamination, physical operations by using the pointing device is not desirable. In this situation, the gesture manipulation of visual image is quite meaningful.



Fig. 9. A scene from “Minority Report” (2002) by Spielberg, S.



Fig. 10. A scene of operation at the hospital using Kinect

In these two examples, it is not clear if SciFi movies gave the suggestion to the developer of the product and the system. But, at least, there is a close coincident between the SciFi movie and the real development of the product and the system.

3 Unrealistic Prediction

On the other hand, there are so many unrealistic predictive images on the future UI in SciFi movies. One example is the image of the future traffic system.

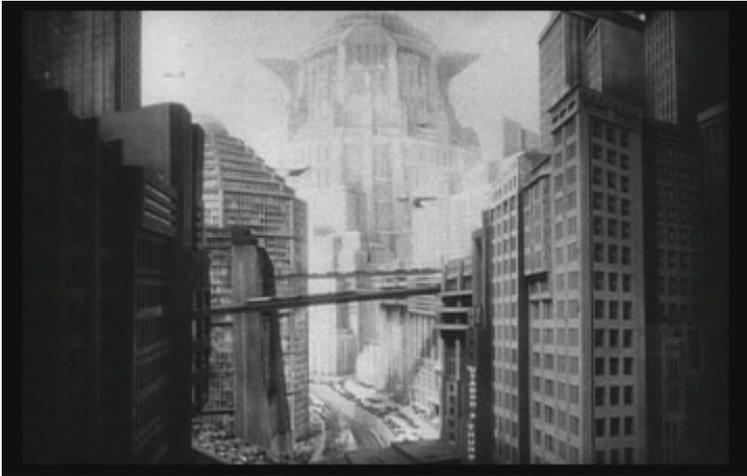


Fig. 11. A scene from “Metropolis” (1927) by Lang, F.



Fig. 12. A scene from the futuristic image of Tokyo (<http://military38.Comarchives 28071211.html>)

The image of future traffic system in Figure 11 and 12 includes highways running through buildings with almost no bridge girders. It is impossible from the viewpoint of structural mechanics and, furthermore, meaninglessly running high up.

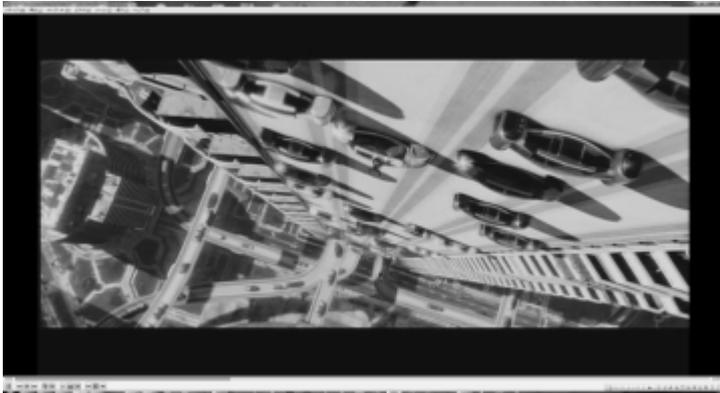


Fig. 13. A scene from “Minority Report” (2002) by Spielberg, S.

Figure 13 is the famous scene of vertical moving traffics on the outer surface of the building in *Minority Report*. It is amazing but, at the same time, let us ask the question “why will traffics have to run on the outer surface of the building?”.

These images are just for the entertainment and tickles our imagination. In other words, futuristic images in SciFi movies are in most cases just for fun and are not aiming at the prediction of the real future.

4 Meaningfulness

SciFi movies are full of new ideas that attracts people’s attention. But in the real life, the novelty alone will not work if the new artifact has nothing meaningful that previous artifacts have not had. This is true not only to the SciFi movies but to all the products and systems in the market. Real products should have to be purchased and used and the situation is severer than just the movies. Customers and users may be attracted by the novelty, but, in the end, what matters is the meaningfulness. Artifacts with less meaningfulness will be wasted.

In this sense, what we find in SciFi movies will attract our attention but it is not because of its meaningfulness but of its novelty. Hence, there may be cases where SciFi movies will make a good prediction but it is just a rare thing and we can’t expect SciFi movies as predicting our future life.

References

1. ASCII, Roomba 780 Review (2011)
2. <http://www.youtube.com/watch?v=telYgVqvaiA>
3. Besson, L.: *Fifth Element* (1997)

4. Kubrick, S.: 2001: A Space Odyssey (1968)
5. Lang, F.: Metropolis (1927)
6. Meliers, G.: Le Voyage dans la Lune (1902)
7. Microsoft, OPECT Surgery Driven by KINECT Japanese Version (2013)
8. Spielberg, S.: Minority Report (2002)
9. Tsiolkovskiy, K.E. (based on Wikipedia)
10. Wise, R.: The Day the Earth Stood Still (1951)
11. Unknown (?) Tokyo in (2011),
<http://military38.comarchives28071211.html>