

Hexa-Twistor Triangular Section

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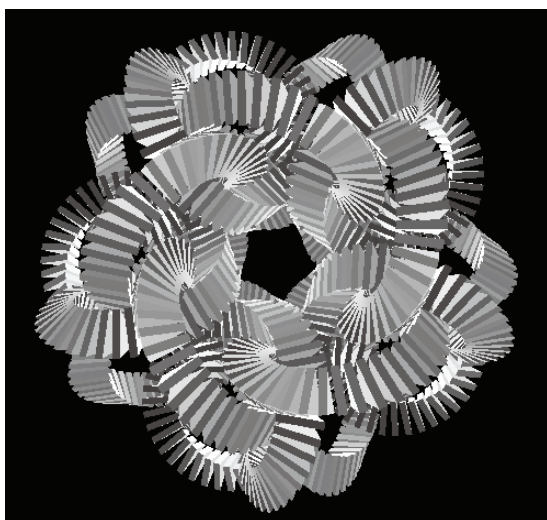


Figure 1: VRML image

The Hexa-Twistor [1] is one category of the Poly-Twistor [2]. Fig. 1 is an example of the Hexa-Twistor produced by VRML. It consists of six helical-tori whose sections are constant regular triangle [3]. Therefore it consists of developable surfaces.

I actually made a model of the Hexa-Twistor using paper [4]. The unit is made of three developments but the shapes are only two kinds as shown in Fig. 2. Five units make one helical-torus. Six helical-tori make one Hexa-Twistor (Fig.3, 4).

It was ultrasophisticated work. It does not allow any error. The whipcord surface produces many shades and shadows.

I can make actual models of any type of Poly-Twistor in the same way. I would like to build a big one as a public sculpture or play sculpture.

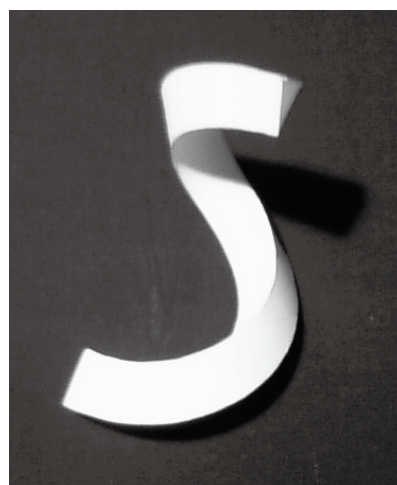
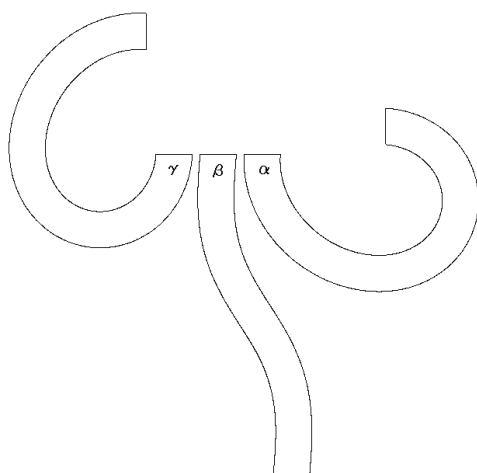


Figure 2: Developments and an assembled unit.

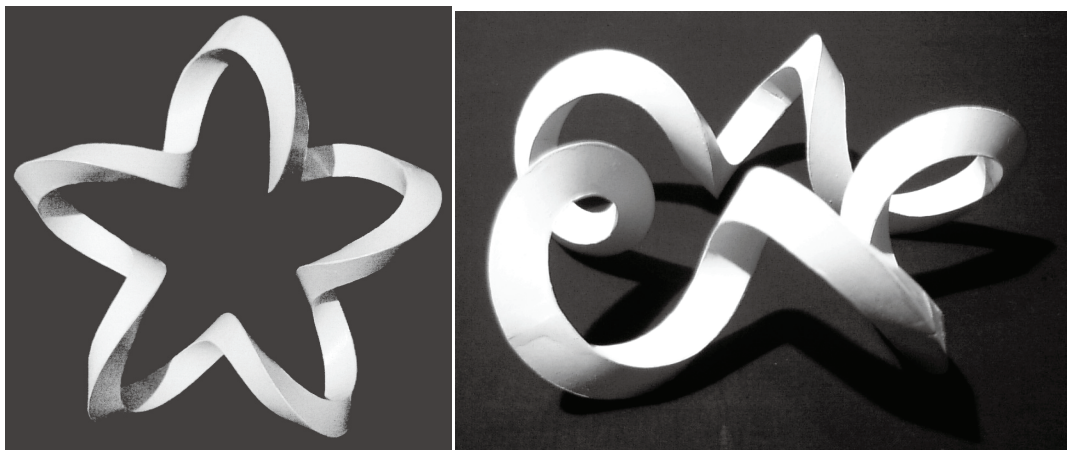


Figure 3: *An assembled helical-torus.*

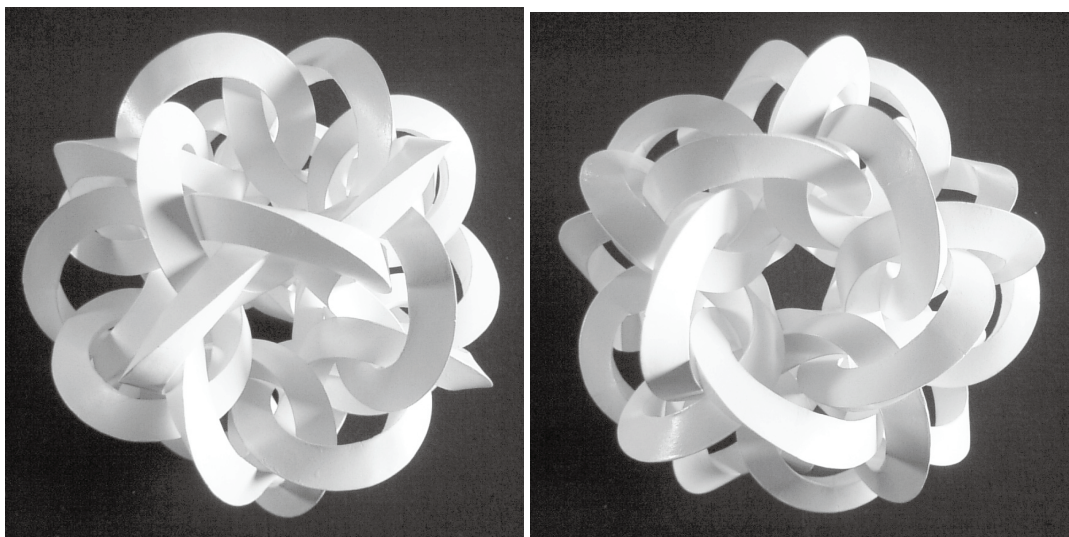


Figure 4: *An assembled Hexa-Twistor.*

References

- [1] Akio Hizume *Hexa-Twistor*, MANIFOLD #01, pp. 10-12, 2000. (Japanese paper)
- [2] Akio Hizume *Poly-Twistor*, Japanese thesis were published on MANIFOLD #04, pp. 8-9, 2002. The English thesis was published at the ISAMA, 2002 Freiburg.
- [3] Akio Hizume *Hexa-Twistor Triangular Section*, MANIFOLD, #05, pp. 10, 2002.
- [4] This paper is brief translation of Japanese paper, that is, Akio Hizume, *An actual model of Hexa-Twistor Triangular Section*, MANIFOLD, #06, pp. 7-8 2003.