INTRODUCTION TO THE VISUALIZATION
OF THE ARPAM PROJECT

The ARPAM project refers to the construction, inside a large verdant park, of 10 small buildings called follies in architectural terms. The choice of 10 refers to the famous Pythagorean number called the «Tetractys»$(1+2+3+4 = 10)$. An adminstrative building bearing the name «Bourbaki», in part devoted to various kinds of meetings, completes the set of buildings. The fundamental architectural data of the follies were given in http://arpam.free.fr/Fais.pdf [Fais] and in three other papers :

Fine Mathematical Art through the Arpam Project
The Poincaré Surprises
The Boy Surface as Architecture and Sculpture

The creation of the visualization of the Park is an absolute preliminary as a tool for decision-makers and donators who may contribute to the realization of the project. It is not an easy job to create that visualization since it needs a lot of various competencies. Given the peculiarities of each building, the mathematics behind its definition, the technical aspects of its realization, this visualization has to be done by an architectural group with capabilities in maths in visualization techniques in modern construction material.

We shall show here preliminary visualizations of only 4 follies. The plans of the two first where given in [Fais].

1) The Seventh Temple, a folly devoted to group theory : Its visualization was made by two students of Institut International du Multimédia, Christophe Delsart and Yvan Ngnodjom. The rough Maquette was made by myself. Illustrations (tessalations) are by Mike Field.

2) The Apollonius Headdress, a folly devoted to conics and quadrics : Its visualization was made by Dmitri Kozlov from the Academy of Architeture of Moscow.

3) The Euler Bridges, devoted to topology and graph theory : Visualization made by Dmitri Kozlov. He introduced a few bright sculptures.

4) The Boy surface, also named the Boy Brioche : Under the supervision of François Apéry, Christophe Delsart and Yvan Ngnodjom made an introductory film showing the structure of the folly. To look at the film, click on : http://christophe.delsart.free.fr/ARPAM/

FIGURE 1 – Apollonius Cone Visualization Front View Print

FIGURE 2 – Apollonius Cone Visualization Back View Print

FIGURE 3 – Apollonius Cone Visualization General View Print

Figure 4 – Apollonius Cone Visualization Right View Print

FIGURE 5 – Euler Bridges Bridge3 View Print

FIGURE 6 – Euler Bridges Bridge5 View Print

Figure 7 – Euler Bridges General View Print

FIGURE 8 – Euler Bridges Island View Print

Figure 9 – Euler Sculptures View Print

Figure 10 – Seventh temple P1010072

Figure 11 – Seventh temple P1010073
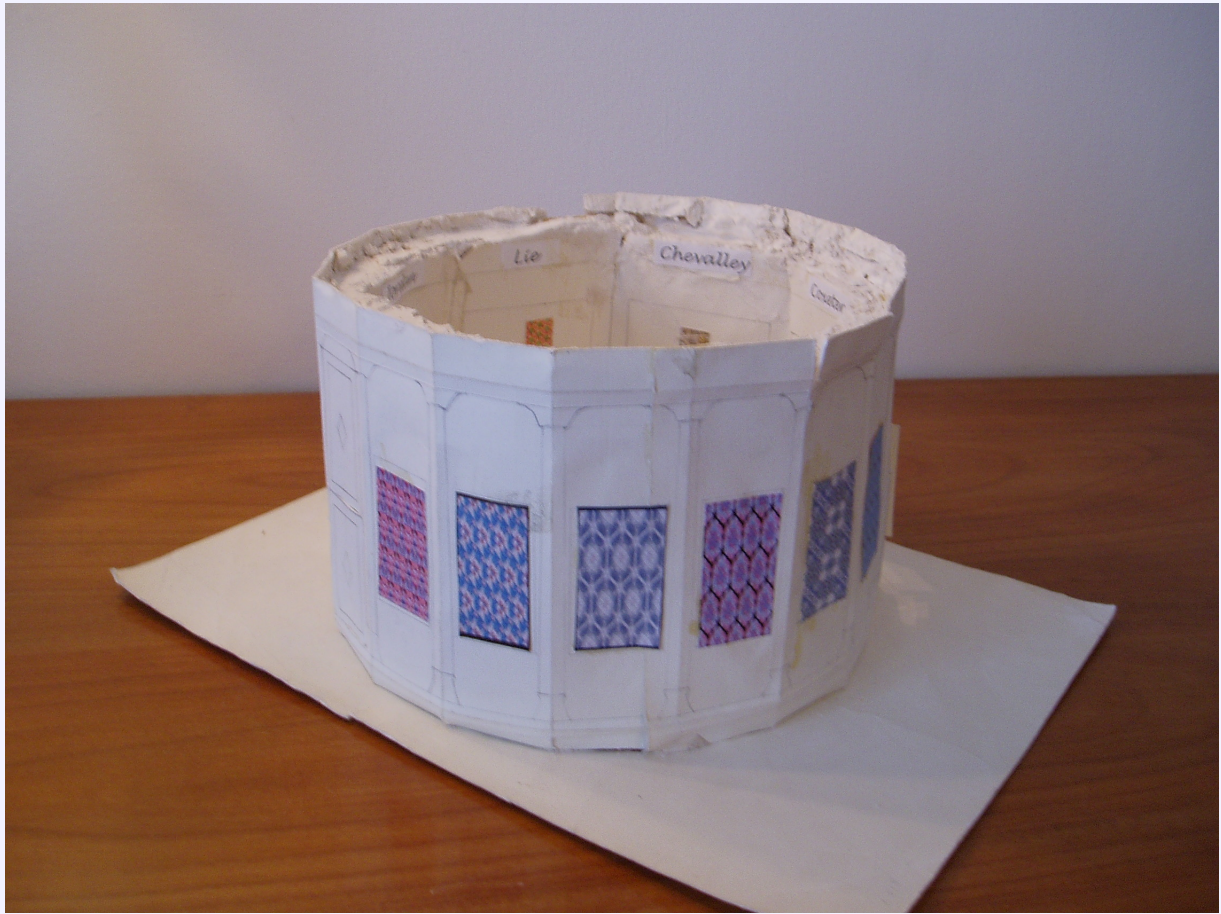
Figure 12 – Seventh temple P1010074
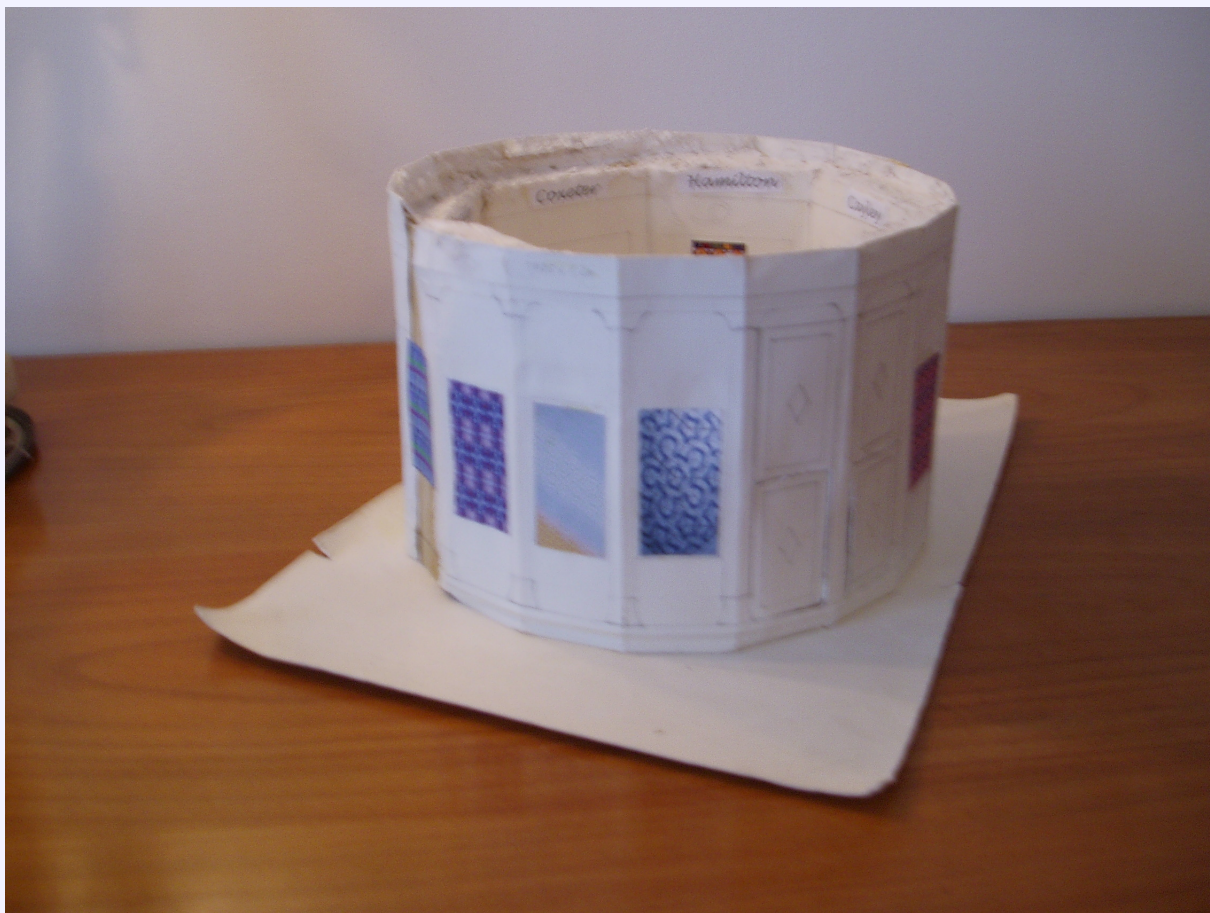
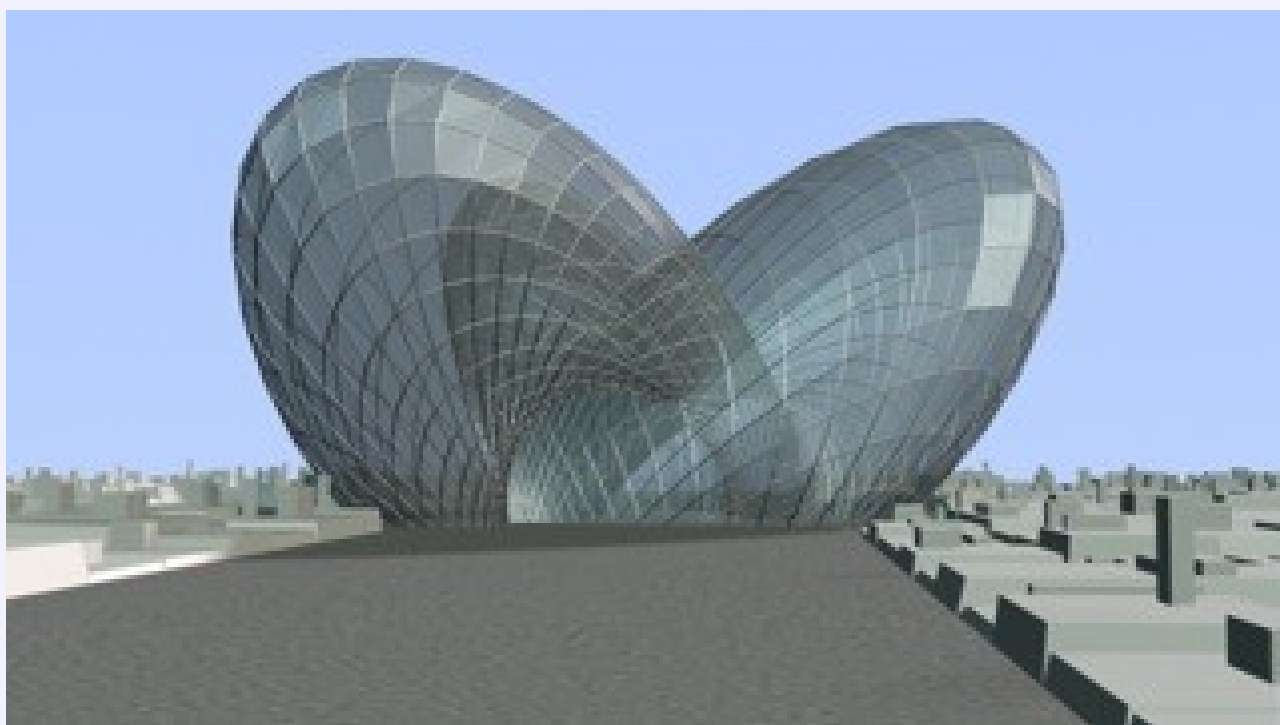FIGURE 13 – Seventh temple P1010075

Figure 14 – Seventh temple P1010076
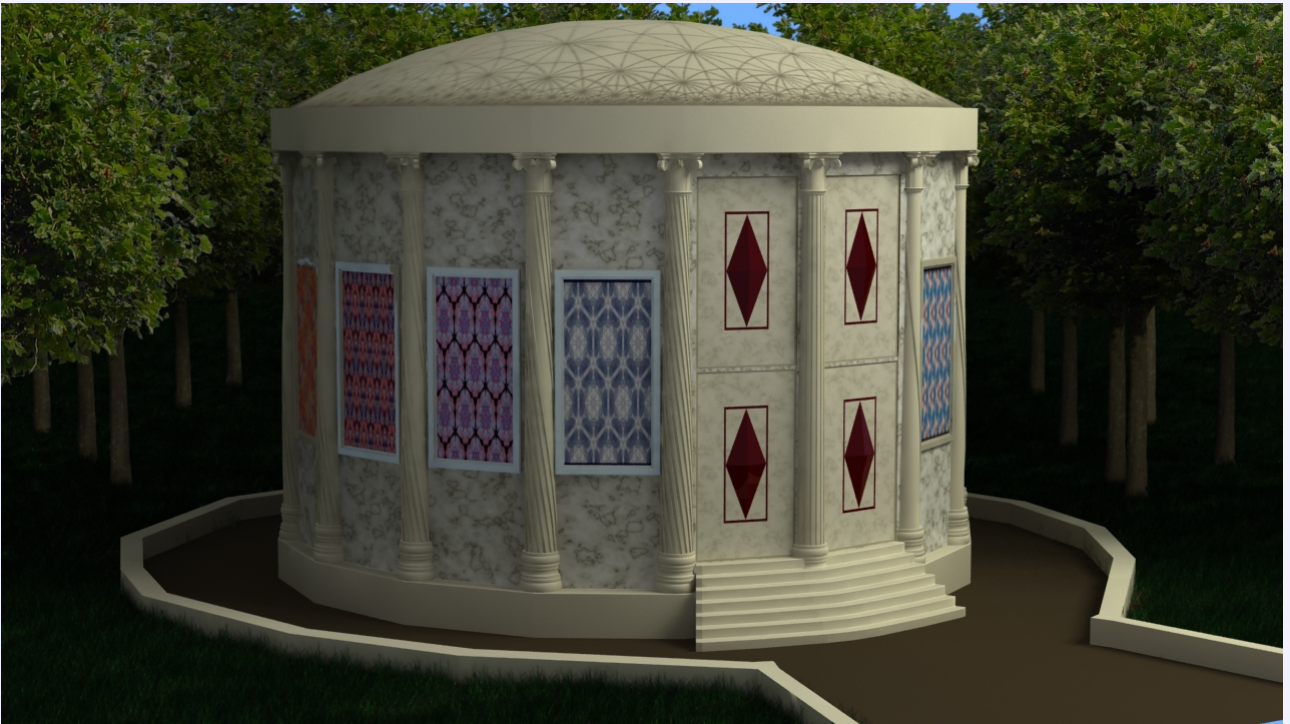
Figure 15 – Seventh temple 2
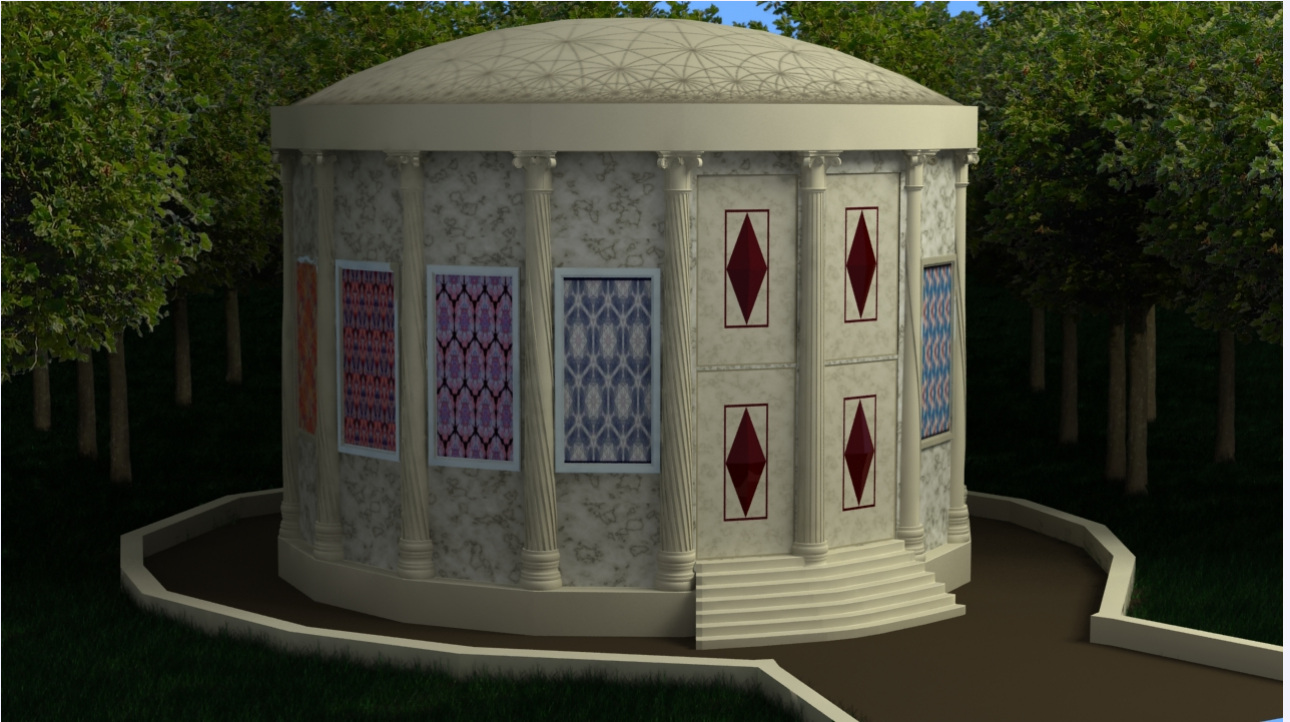
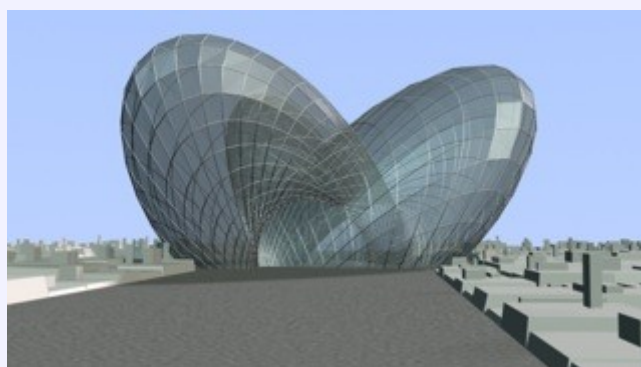FIGURE 16 – Seventh temple 2-1

FIGURE 17 – Boy Surface 001

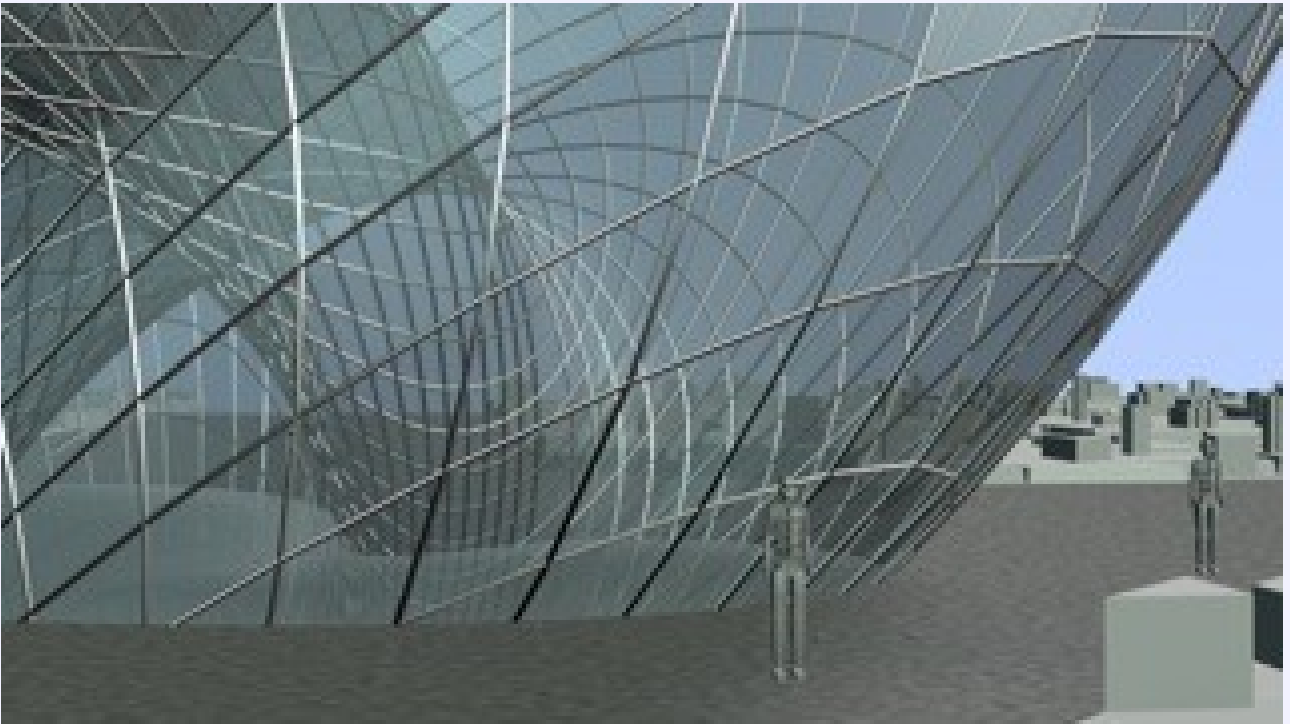FIGURE 18 – Animation Boy Surface Présentation Juin v01-Demi
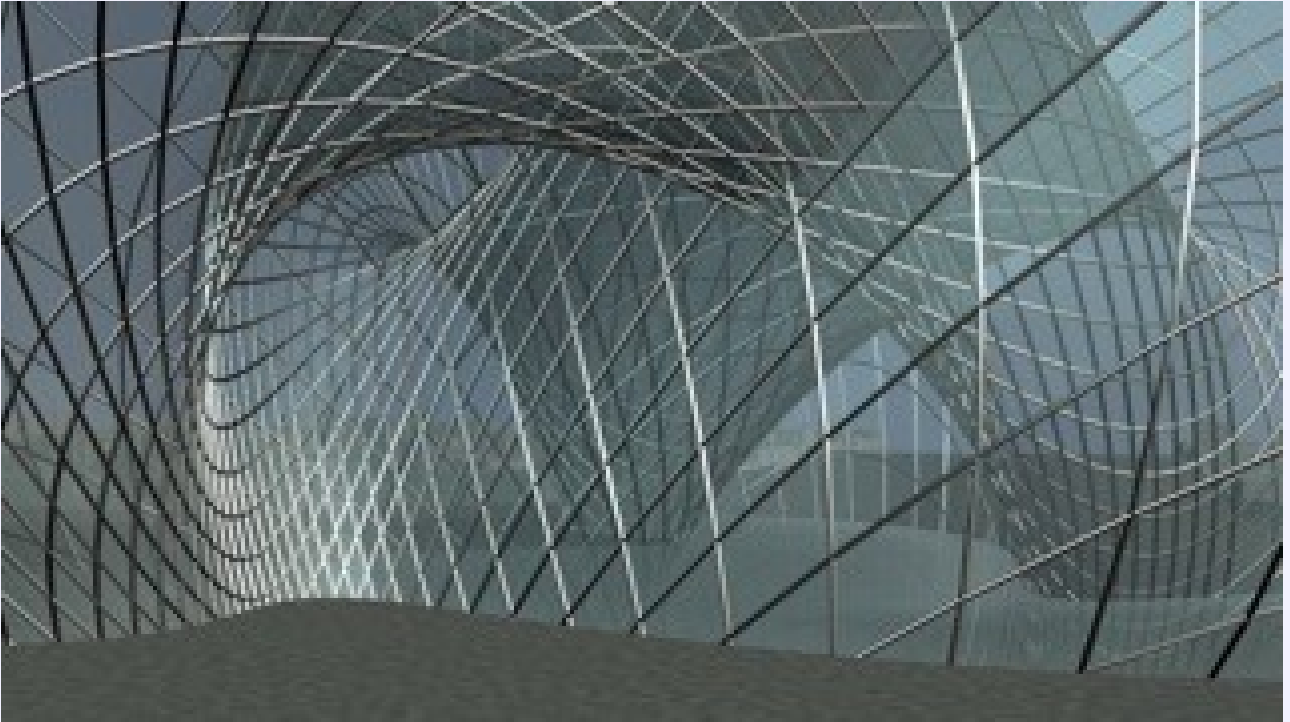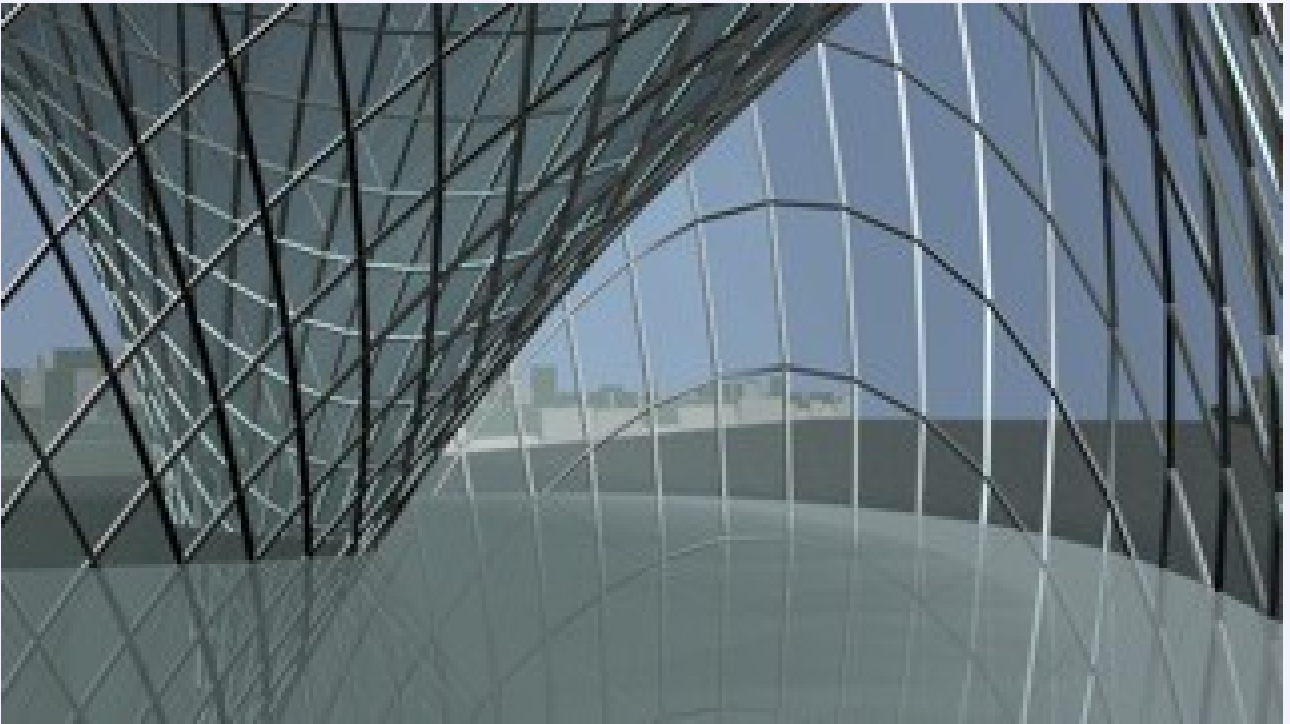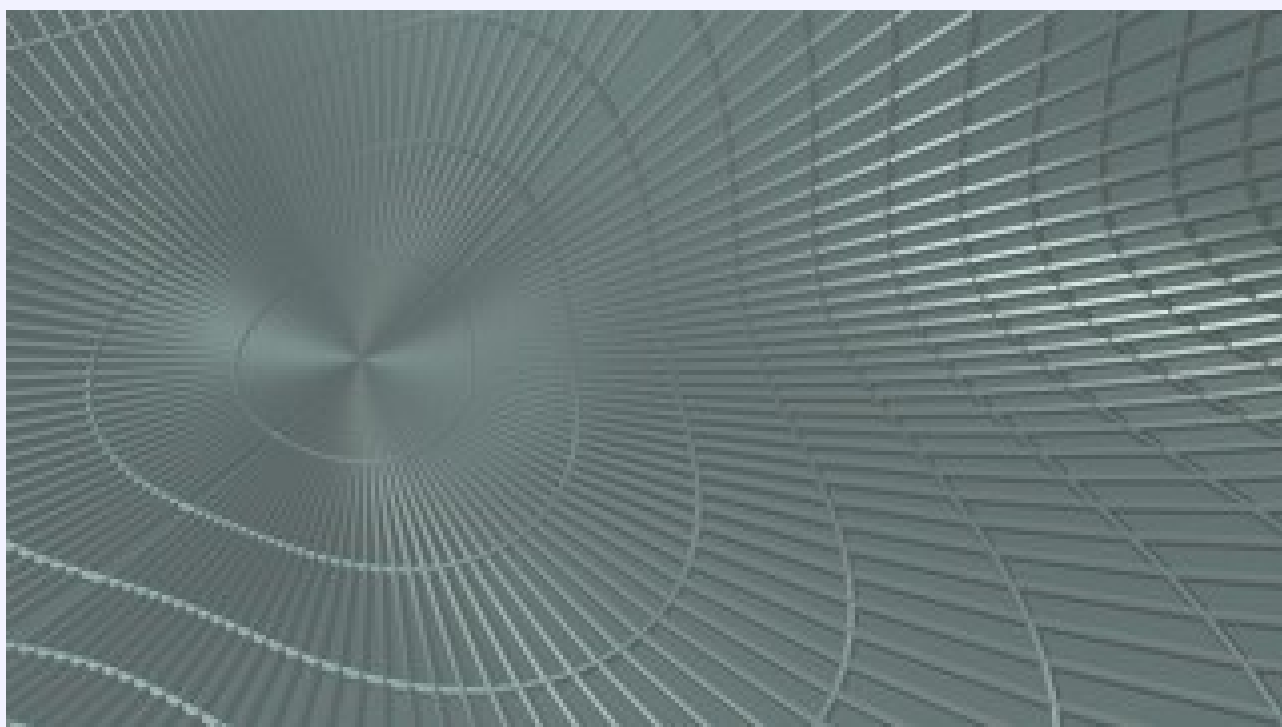
Figure 19 – Boy Surface 002

FIGURE 20 – Boy Surface 003

Figure 21 – Boy Surface 004

Figure 22 – Boy Surface 005