## POLITECNICO DI TORINO SECOND SCHOOL OF ARCHITECTURE Master of Science in Architecture *Honors theses*

## Tsunami Memorial Design Competition, network as design tool.

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The thesis project is the synthesis of a two-year project.

The project began in December 2005 with the participation at the international Tsunami Memorial Design Competition, launched from the town of Khao-lak in Thailand.

The theme of the competition was a memorial park, composed of museum and pavilions, to remember the victims of the Tsunami of 27 December 2004 and to know the history and the scientific aspect of this disaster.

The main purpose of the project was not only the memory and knowledge of the Tsunami, but to create a kind of cluster information and regeneration of areas affected by the Tsunami. The park would become a point of a network evolution largest ever made of the relationship between research centres, cities and tourist resorts to the next project.

After the proclamation of the winners in the exhibition of all participants, the project is stopped and then be taken in December 2006. During this period I visited two faculties of Architecture most important in the world as regards the research for architectural design: Sci\_arc in Los Angeles and the Architectural Association in London.

These two faculties and the meeting with teachers and students have opened new possibilities for my vision of architecture design.

A 'fundamental approach that both schools follow is Bottom-up, already experienced by Frei Otto. The process consists to Reach the final shape through multidisciplinary and affiliated with each other through a real network, without knowing in advance what is the final shape of the project. The form must indeed come from a long process of aging and information gathering, which experiments are perfected and arrive in creating a complex geometry that responds to the programme. The unexpected result is the purpose of this design method.

Using new software and tools has accompanied the drafting of my thesis, as the innovative Generative Components and using diagrams and Rhinoscript being modelling of the project.

Thanks to the publication of Wip on the Internet, that is the state of progress of the project, through the platform of blogs I met several architects around the world to deal with this type of design.

The exchange of information and sharing of discoveries made in this field has been critical to the achievement of the final form.

The philosophy of Network applied to the architectural work becoming an essential tool for design architecture.

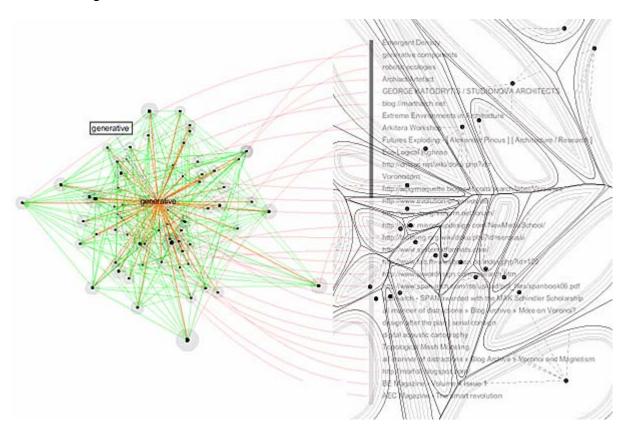
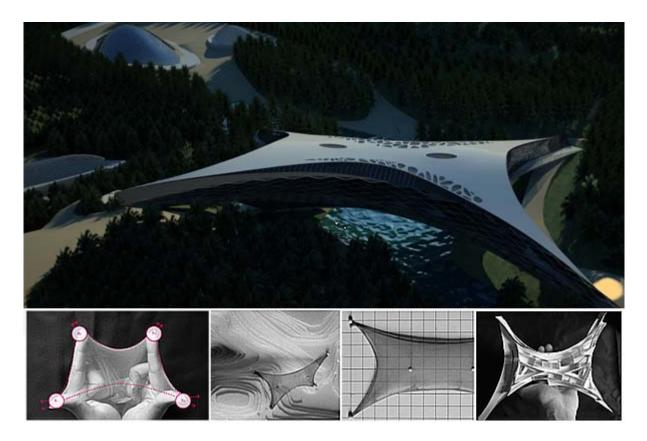


Diagram of network research and Voronoi

The planning process has led to a continuous growth in shape. Volumes and areas of the project purchased character design as three-dimensional analyses were performed. The museum is transformed responding to the problems that are posed. Problems functional, distribution, structural, spatial or simply aesthetic, not to mention the question of the site, the museum was to be built in a highly naturalistic. First choice was the best position following the pattern of winds and the presence of vegetation in the area. Noting that soil immediately was completely occupied by vegetation has chosen to build in the air, a structure that is a bridge that is to support four points on the ground. The shape of the museum also had to allow the passage of flows of people from one side to another of the stream to allow the visit of the remainder of the memorial park.



Process Form-Finding for the Tsunami museum

The project area was like a dense forest composed of rubber trees, palms, umbrella trees, bamboo and many other plant species.

The museum designed as a bridge became the optimal solution, a few meters of soil were occupied for support on the ground of avoiding delete wider areas of vegetation. After finding a form that adapts underlying soil has gone to analyse the interior spaces by means of model scale study. It was then decided to make the museum on three floors, providing the various plans and placing the exhibition area to the first floor.



Network Architecture masterplan and Generative created with Rhinoscript generative and Components

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