“The Glass Route 2011”

GLASS PAVILION FOR THE SUOMEN PANKKI PLAZA

INVITED COMPETITION, TAMPERE

GLASS PAVILION COMPETITION

THE ORGANIZERS, CHARACTER, AND PURPOSE OF THE COMPETITION

The assignment of this international invited competition was to design the first object of the architectural cultural route planned in the center of Tampere. In the coming years, new competitions will be arranged to hopefully create a series of glass pavilions, which will grow to become an urban string of glass pearls in the city center.

The pavilions give information (text and pictures) concerning the pavilion and its conception, local architecture objects, and could host for example coffee houses, souvenir shops, magazine and book stores, fast food shops, and ice cream and refreshment booths. In addition, the pavilions would function as architectural information stands, guiding citizens and visitors on routes introducing the architectural sights in the area.

The pavilion designed in the competition should unite the ice cream and fast food stands and bus stops already erected in the area, and make them a part of the stair hall of the parking garage currently being built under the area.

The competition is organized by the City of Tampere, Tampere University of Technology, Finnpark Oy, and GPD / Glaston Ltd.

COMPETITORS

The following four design offices were invited to take part in the competition:

- **ALA architects**
  Antti Nousjoki & team
  Tehtaankatu 40 B 17
  00150 Helsinki, Finland
  http://www.ala-a.com

- **James Carpenter**
  James Carpenter Design Associates Inc.
  145 Hudson St., 4th Floor, New York, 10013, USA
  http://www.jcdainc.com

- **Skidmore, Owings & Merrill**
  Keith Boswell
  One Front Street, Suite 2500
  94111 San Fransisco, CA, USA
  http//www.som.com

- **Werner Sobek**
  Werner Sobek Stuttgart GmbH & Co. KG
  Albstr. 14 70597 Stuttgart , Germany
  http://www.wernersobek.com

Studio Daniel Liebeskind promised to participate as well but was later forced not to skip.

JURY

The jury panel consists of the following members:

Jyrki Laiho, chairman of the jury, Director Urban and Economic Development, City of Tampere
Markku Hiltunen, Managing Director, Finnpark Oy
Sakari Leinonen, City Planning Architect, City of Tampere
Timo Meuronen, Managing Director, Aihio Arkkitehdit Oy
Hannu Tikka, professor, Tampere University of Technology
Jorma Vitkala, Chairman of the organizing committee, Glass Performance Days
Timothy Macfarlane, structural engineer,
Samuli Miettinen, architect SAFA, JKMM architects, selected by the SAFA competition committee

Antti Pirhonen, secretary of the jury, architect SAFA, Arkkitehtitoimisto Antti Pirhonen Oy

The experts and the secretary did not take part in the evaluation of the entries.

APPROVAL OF THE COMPETITION PROGRAM

The competition program and its appendices were approved by the organizers of the competition as well as the SAFA competition secretary. The SAFA Competition Rules by the Finnish Association of Architects SAFA were observed in the competition (www.safa.fi).

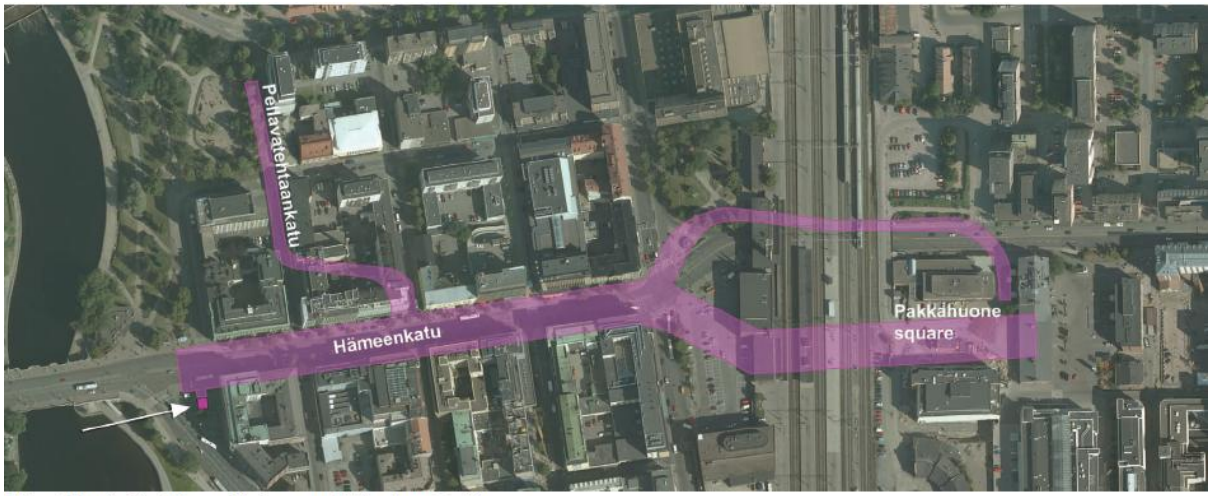
COMPETITION PERIOD

The competition started on 17th January and ended 5th April 2011.

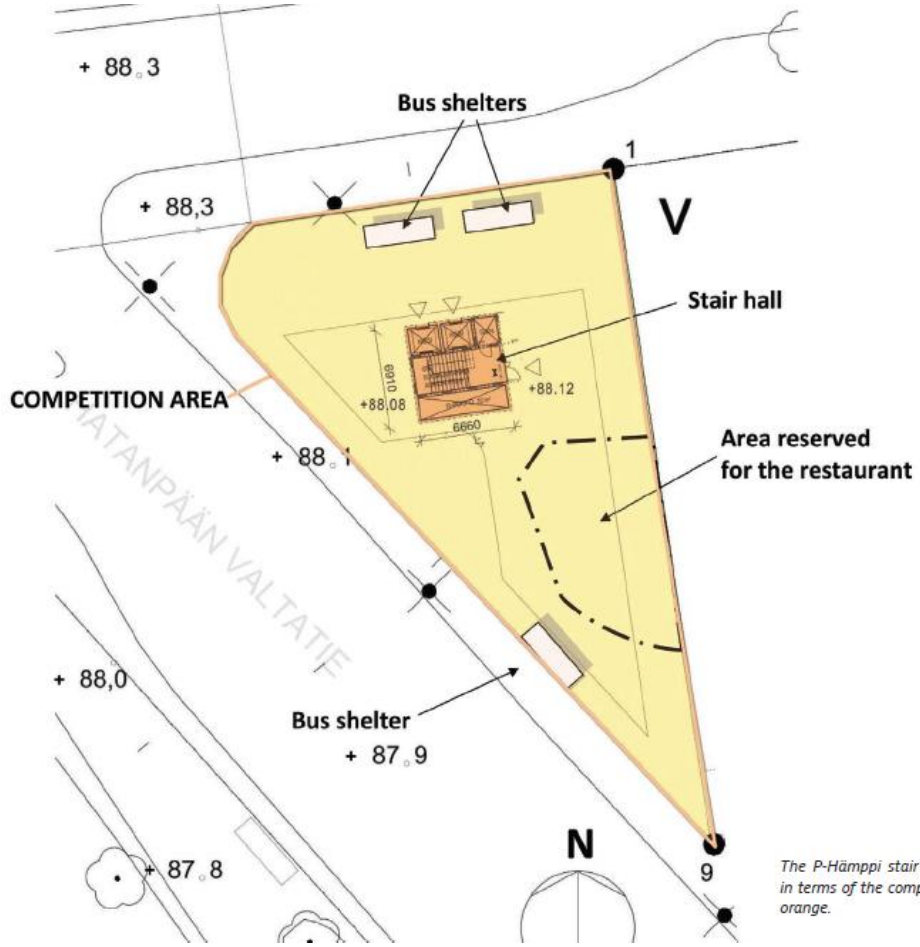
COMPETITION AREA AND ASSIGMENT

In terms of the cityscape, the competition area is centrally located on the banks of the river, in the vicinity of the river bank park area. The competition area is the northern part of the triangular plaza framed by the main street of Tampere, Hämeenkatu, the Hatanpään valtatie road, and the Suomen Pankki building. The area becomes all the more pronounced when approached from the direction of the Hämeensilta bridge. The crossing between Hämeenkatu and Hatanpään valtatie is one of the busiest in the city.

The assignment in the competition was to combine the various functions in the competition area into a coherent design. The assignment was to design the pavilion around the staircase of the underground parking garage, P-Hämppi. The stair hall includes a stairway that is usable as an exit, two lifts, a technical shaft, and an IV exhaust air duct (10 m2), for a total of approximately 45 m2). Two bus shelters along Hämeenkatu, a restaurant terrace with its shelter/shelters, and lighting systems should have been taken into account. The location of the stair hall of the underground-parking garage and the size of the layout were binding, and cannot be changed. The competitors must have created their competition proposals based on the dimensions of the suggested plan.



P-Hämppi floor plan. The stair room of the Suomen pankki plaza is marked with an arrow.



The P-Hämppi stair room arrangements that are binding in terms of the competition design have been marked with orange.

CRITIQUES

GENERAL CRITIQUE OF THE COMPETITION

The jury received according the competition program four entries. All entries were accepted for judging.

The four entries submitted in the competition have all been skilfully accomplished representing high standard of design. Competitors have performed their design with committed creativity and skilful knowhow for the challenging task. Entries represent diverse spectrum of both technical and conceptual solutions for the pavilion within the environmental context. High ambition of the competition to examine newest potential and technical solutions of glass architecture has inspired fresh inspirations and visionary forerunners of glass technology of our time. The competition entries show that target of the organizers to create a chain of significant architectural street sculptures - the glass route - gets the starting point worth realising.

The Jury panel has weighted the following factors in their evaluation:

- The quality of the work in terms of the cityscape, innovativeness, and uniqueness
- The functionality of the design as a whole and its relation to its cultural and historical environment
- How the design takes sustainable development into consideration
- The advanced utilization of the newest glass technology
- Technical and economical feasibility of the construction

The quality of the work in terms of the cityscape - relation to environment

The competition site is demanding in terms of design task. Historical city centre with old factory buildings along the river defines the spirit of Tampere. The place requires dignified solution that is able to even improve the qualities of the cultural milieu. The glass pavilion sets out the open space in front of Suomen Pankki building, triangular plaza within the active crossing of Hämeenkatu and Hatanpään Valtatie. High quality landmark for the place as objective of the competition is demanding and requires empathy for the environments qualities. In the townscape the nature of the new landmark have to balance the present situation. Need for open space around the new structure is to be considered according to proposals own qualities.

The main criteria in assessment of the townscape have been pavilions appearance and uniqueness, relation to the surroundings and placement on the plaza. All entries have their own individual characters. In terms of integration to the site entries "657123" and "Luminous Grove" spread to cover wider area of the site while entries "GPT03" and "Magnolia" seek the focus point of the plaza.

The scale of the proposals is well considered in relation to the city. Transparent entries "657123" and "Magnolia" adapt successfully to the city while opaque structures "Luminous Grove" and "GPT03" are considered more as buildings or structures that use other features of the glass than transparency.

All entries have merits in cityscape. The entry Magnolia is considered as the best townscape and overall solution. It is well positioned on site and uplifts the spirit of the whole area. It succeeds to create positive relationship with existing environment using unique morphology and treatment of glass as material.

The functionality of the design as a whole - innovativeness, and uniqueness

The competition has generated varying typology of solutions to solve the problems of functionality. Usability, facility, easiness and clarity of the proposed ideas relating to functionality were considered as positive attributes. In the best entries functionality of the design was really solved comprehensively as part of a whole. Details are in holistic relationship with the design concept.

The main criteria in assessment of the functionality have been the general quality of the solution, execution of the overall idea and develop ability of the entry for realization.

The qualities of glass have been utilized in entries in versatile and innovative ways. In details even best entries need to be developed further witch is natural according to phase of the design process.

Entries present both integrative concepts as well as sculptural objects. Both ways offer means to solve the problems of functionality. In terms of functionality of the design entries "657123" and "Luminous Grove" spread wide over the site integrating at the same time functions to new structures. Entries "GPT03" and "Magnolia" seek more coherent solution within sculptural overall form.

Both approaches have developed skilful applications that utilize modern glass technology.

Object-like entries are able to highlight the individual technical solutions with greater attention than integrative proposals. Latter ones on the other hand emphasize glass as material with versatile possibilities.

Consideration of sustainable development

Proposals utilize given sustainable possibilities. Technological applications are thoroughly described in the entry reports from re-use of the materials till technical applications that ensure ecological functions of the structures. The usage of recovered heat from parking garage has been adapted on each proposal to heat either interiors or surfaces of the pavement, walls or roofs. Best proposals capitalize also social potential of the plaza creating successfully active relation between shelter and open space.

The advanced utilization of the newest glass technology

Fundamental qualities of glass, transparency as well as appearance of reflection and refraction have been treated with personal emphasis in all entries. The newest glass technology is well represented among entries. Best entries combine it with delicate treatment of materials natural features.

Innovations like ionoplast-laminated panels, glass as supporting structural elements, selective and switchable coatings and LED lighting in laminated glass are proposed to be used in most of the entries. Best applications benefit high level of technology naturally, with facility and easiness.

The main criteria in assessment of the advanced utilization of the newest glass technology have been used to support the consistent elaboration of the main theme of proposal.

The techno-economic feasibility of the construction

The competition's assessment principles regarding technical and economical feasibility of the construction is related to the viability of solutions, benefits gained in realization, cost efficiency and the architectural capacity of the proposal.

Best proposals present cutting-edge glass technology to strengthen the uniqueness and associative features of the composition. On the other hand limitations of the material doesn’t constrain the impressiveness of the best creative innovations. Uniqueness of solution is the quality of work of art.

INDIVIDUAL CRITIQUES

Entry motto: “6 5 7 1 2 3”

Urban context

Wing shaped roof- covering part of the plaza and weaving wall along the main road formulate the main components of the experimental structure. Glass walls and roof with steel beams and columns are well located on the side of the plaza. Though the structure reserves a lot of space it doesn't cut the passageway through the place either visually or functionally.

Tree-dimensional free-formed composition is made out of two-dimensional components. Transparent elements work in open relation with environment. Undulating wall and curved roof take up a contextual position on the site respecting the environment with scale of right nature.

Fuctionality of the design

Transparency of the design and changing reflections with sharp edges create luminous and light character for the pavilion. Open, modern and delicate structure integrates all functions of the area. Structural parts are intently defined and distinguishingly articulated. Carefully composed details show skills of the author.

Light structures, combination of low iron glass units and sleek polished stainless steel is natural solution that crystalize the pavilion image. Functionality of the design is solved comprehensively. Components that constitute the whole have still features of distinct nature.

Sustainability

Recovery air is utilized on heating of the pavement. Special attention is put on material durability.

Heatable glazing minimizes the snow loads and the icicle at the roof edges. Re-use of materials after lifespan has been taken into consideration.

Technology

Used structural glass technology consists among other things sharp wrought steel fittings, clamped point and linear fixing as well as adhesive joints.

Technological glass applications use heatable coating of flat roof, LED lighting incorporated roofs structural frames and low-iron glass. Digital printing figures are pleasant preventing collisions. For the design as a whole they are still additive elements as well as interactive glass display panels.

Feasibility

Construction is feasible but demands careful design and implementation. Realization requires also high quality design and construction of grounds and pavements.

Entry motto: “GPT03”

Urban context

Entry introduces mighty sculptural element in the centre of the competition area. Strong gesture reminds of spaceship or augmented utensil formulating new focus point of the area and redefining the nature of the place. Unidentified object awakes curiosity but it is unlike that the temptation last for years, or even months. More likely the identification undress the attraction. Confident and self-absorbed iconic form keeps main views unobstructed. Orientation of the object is parallel to background building wall. Centralized shape would have adapted the dynamics of the place more successfully.

Functionality of the design

Timelessness of the design depends much on the form itself. Plastic form is a confident multi-curved glass shell supported by two curved glass funnels. Expressive form is functionally justifiable offering shelter, spaces, facade cladding, information, benches and necessary openings.

Sustainability

Warming of the pavilion is realized by radiant heating of recovery energy from below parking garage.

Natural ventilation and passive cooling are provided via air circulation through the openings.

Technology

Competition entry is using cutting-edge glass technology that consist 3-dimensional curved laminated and toughened glass, ionoplast-laminated panels with chemically bonded glass flanges and structural silicone installation.

Feasibility

Entry is feasible but demanding and costly structure. Consideration of added value gained with the structure should be made carefully.

Entry motto: “Luminous Grove”

Urban context

Clearly articulated glass construction locates in the northern part of the competition site. Entry creates curved corner beside the crossing area. Horizontal eave-line form relaxed atmosphere.

Nevertheless overall picture is still somehow undefined. New form fills main part of the lot and blocks views. Stair hall in the centre confines connections through the area. Space underneath the canopy seems to be shady. The way light is brought underneath emphasizes this impression though it is supposed to work just conversely. Gold image works on hot summer day but during the winter it strengthens the harshness of the climate.

Functionality of the design

Design presents static frozen Forrest image consisting overhead canopy that is supported by clustered light columns. Opaque roof turns space underneath dark and dependent on artificial light. Green roof is sympathetic motif but passersby below can’t experience it. Proposal consist more building-like features than other entries lacking sense of pavilion at the same time. Association to Forrest could have been abstracted even more.

Entry integrates all functions within the same structure. Innovations are realistic. Amount of design effort is transmitted thru the presentation.

Sustainability

Recovery air is utilized on heating of the pavement with air floor system and columns via conductive coating.

Green roof cools the roof.

Technology

Light columns are beautiful idea. Sense of lightness doesn't come true. Optically patterned glass gives columns exquisite surface though articulation isn't transmitted thru presentation. From the distance it is too weak motif to create distinctive character for the construction. Electro-conductive coating installed on inner glasses of the columns warm up waiters.

Feasibility

Construction is feasible, column idea unforeseen though lack uniqueness.

Structure is simple but at the same time a bit conventional.

Detailing is carefully executed.

Entry motto: “MAGNOLIA”

Urban context

Competition entry "Magnolia" presents sensitive sculptural structure that uses the best qualities of glass to create nearly magical light illusions. Entry succeeds to bring out positive image for the pavilion though it is contrasting the environment of different nature. Cupola form contains real surprise. "We propose to plant a Magnolia tree for Tampere", author writes. Glass bowl wrapping magnolia tree, is not only creating additional value but absolute value.

Functionality of the design

Sympathetic and modern design creates delicate identity. Architectural theme developed creates totally new atmosphere in the plaza. According to time of day the image of the cupola is transforming from reflective via translucent to transparent and finally into colourful glowing light ball.

As only one of the entries "Magnolia" attains the illusion of lightness and fragility that is characteristic of glass.

Competition entry uses the fundamental and authentic qualities of glass - transparency for sunlight, reflections dissolving dome into foliage and refractions to magnify the pink blossom of the tree. This piece of work could become internationally recognizable work of art, the calling card, as is the objective of the competition.

Moreover the entry fulfils the main criteria in assessment of the functionality that is consistent execution of the theme for realization. Functionality of the design is solved comprehensively as part of a whole. Details are constructing the design concept. Cliché is true with this entry: "less is more".

Sustainability

Use of the exhaust air of the parking garage is providing heating for glasshouse to create the climate a Magnolia tree needs. Microclimate of the dome is fine-tuned using the technical abilities by glazed surface.

Recycling the materials has been taken into consideration.

Technology

Entry is using cutting-edge glass technology in poetic way. Glass elements are melted into shape and laminated. Simple inner supporting steel construction is braced with wires to emphasize structural delicacy.

Envelope consists openable elements for ventilation, integrated LED lights and electrochromic switchable coating for additional shading. Sprinkler system is for watering the tree with appropriate fog. Recovery heat supports the green house climate needed.

100% glass bus shelters are composed out of three perpendicular surfaces composed in the simplest possible way. Integrated led lights and photovoltaic’s supplement the design. Paving is cast of cemented glass.

Feasibility

Nature is more than construction. Structure is feasible but demanding. While the size of the structure is reasonable, this piece of work offers best possible basis for realization of the first glass pearl in a string.

RESULT OF THE COMPETITION

THE DECISION OF THE JURY

The jury unanimously decided that the winner entry is alias “Magnolia”.

AFFIRMATION OF THE COMPETITION RESULT

Tampere 1st June 2011

Jyrki Laiho, chairman of the jury
Director Urban and Economic Development

Markku Hiltunen
Managing Director

Sakari Leinonen
City Planning Architect

Timo Meuronen
Managing Director

Hannu Tikka
professor

Jorma Vitkala
Chairman of the organizing committee

Timothy Macfarlane
structural engineer

Samuli Miettinen
architect SAFA

Antti Pirhonen, secretary of the jury
architect SAFA

OPENING OF THE ENVELOPES

Entry alias: “6 5 7 1 2 3”

Author: Prof Dr. Dr. E.h. Werner Sobek

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