vector park

esmiralda
Transferium Utrecht
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The Dutch cities of Amsterdam, Den Haag, Rotterdam and Utrecht form the compact „metroloop“ popularly referred to as the Randstad, or „Rim City“, Europe’s densest conurbation. A number of government initiatives have investigated the potential for a high-speed magnetic levitation („maglev“) rail system to solve the growing mobility problem in this rapidly expanding urban cluster. The Transferium is a design proposal by Falk Schneemann for an interchange in Utrecht, located at the intersection of maglev, railway, highway and local traffic networks. The Transferium is sited on the border between the historic city, with 350,000 inhabitants, and a new quarter, with 75,000 inhabitants. Although the Transferium is designed for a specific site it can also be seen as an urban prototype, configurable to other locations and transfer modes. In the Transferium, excessive consumption of valuable realty is avoided by the spatial economics of the station’s vertical organisation. This results in a footprint 50% smaller than that of a traditional station with a similar number of platforms. To avoid the congestion typical around a railway station, the Transferium creates an „urban conveyor“, with the four transfer – maglev train, train, bus and car- over four stacked levels.

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With about 350 persons/sqkm The Netherlands have the highest average density in the world. In the south of the country the cities of Amsterdam, Den Haag, Rotterdam, Leiden and Utrecht form a conurbation with crowing mobility problems. The highways are jammed constantly and public transport seems not to be able to offer an acceptable alternative. The government and the “Consortium Transrapid Nederland” (joined venture of ABN Amro, Siemens, Ballast Nedam and others) have investigated studies that propose a high-speed magnetic levitation – the maglev- in the Randstad. With a top speed up to 400 km/h and running 24 hours a day in small intervals this “Rondje Randstad” could shrink travel times by 60%. As a smaller travelling resistance results in bigger distances travelled (law of...) the Rondje Randstad would have impact on economy, social and cultural live (“quantum leap”). This project is based on the studies of the Consortium Transrapid Nederland and a feasibility study by E. Segers.
Terminals are proposed not in the heart of the cities but with connection to the highway. The city of Utrecht was chosen as the projection plane for the case study Transferium. The position on the problematic joint between the historic city and the vinex quarter Leidsche Rijn give the transferium great potential to influence the whole urban cluster.

An interchange for the high-speed maglev on the joint between the historic city of Utrecht (350,000 inhabitants) and a new vinex quarter (75,000 inhabitants) a key position within the urban cluster.
Transferium is an academic case study projected on a concrete situation and developed far enough to proof that it could be built.

dream was to unite the almost diabolic but extremely fascinating characteristics of traffic infrastructure and
the potential of traffic architecture to host some of the most tasty and exciting public domains

it should not be another loos fitting hybrid of warehouse taste programmes but exploit and innovate the inherent potential of this design task with emphasis on the complex organisation
transferium is not simply another transfer facility
it’s innovation goes far beyond the configuration of the vertical station.
here architecture and infrastructure become one unity which works perfect as a machine, but is also a carrier of complex meanings, a host for unique and provoking spaces and places, and not to forget an urban catalyst.
a vain connecting the enclaves of the city
all city-buses hit the conveyor
no need to change them
old city, new city and Transferium
linked by a new hierarchy of transportation infrastructure
access from the highway on both sides of the city.
advanced park and ride
the maglev and the conveyor change the speed-topography of Utrecht evidently the highway looses it's dominating but deceitful role the radius in which public and manpowered transportation works convenient is enormously increased
urban conveyor
and transferium
The need to eliminate any visual obstruction between any two means of transport that are to be linked

The provision of at least one point of total visual orientation

The maximization of any such points

A veto on any indirect (or chained) link between any two means of transport

Volumetric compactness of the transfer space for the sake of urbanity

Reducing to a minimum the average detour-factor imposed on any desired transfer link etc.
no bottle necks
full length contact
volumetric compactness

the infrastructure itself becomes an architectonic element of space and meaning
CLIMB ①

MOVE ②
As investigated with the toolbox, every traffic mode has a characteristic capability to bend this with relation to its characteristic speed this footprint is used to give the bundle its first shape which can than be tweaked according to all other demands.

Maglev, bus (conveyor) and train are the canalized public traffic means involved in the Transferium each of them in two directions. therefore six platforms
As the bundle is lifted above city level it does not form a barrier for the cross flows of the city.

Because of it’s volumetric compactness it has only half the footprint of a comparable classic station valuable realty can be given back to the city.
Two observations on contemporary stations and architecture set the framework for programming the transferium.

First is the fact that the classic station hall is superfluous nowadays as tickets and information are available on the platform and there are no more hours of waiting.

Second observation is that the state of contemporary architecture is one, which promotes programmatic hybridization and ambiguity. This often results in loosefit of different programs, a leak of identity and a “ware house taste”. In contrast to this the railway stations of our days are some of the most characteristic and tasty public spaces of the cities. They offer a big number of obscured and exciting programs and situations, which only need to be fine-tuned to maximize public security and urge people to perceive those very special places. Nightclubs, mega cinemas, and shopping malls will only decrease the security and uniqueness of those places.
tweaking the inherent

1500 m² of on-the-rush-shopping guarantee the convenience of the traveler

bars, sun decks and other places to hang out invited to enjoy the uniqueness of place and space

program composition and spatial configuration result in the feeling of public security
modal split, platform split and total split indicate the quantity of all intermodal movements within the Transferium per 24 hours and for the peak hour
timetable vehicles per hour

percentage type of users

everage duration of stay and number of people present

about 70,000 people passing the Transferium a day
9,000 of them in the peak hour

peak hour = \( \frac{1}{8} \times 24 \text{ h} \)
In Esmeralda, city of water, a network of canals and a network of streets span and intersect each other. To go from one place to another you have always the choice between land and boat: and since the shortest distance between two points in Esmeralda is not a straight line but a zigzag that ramifies in tortuous optional routes, the ways that to each passer-by are never two, but many, and they increase further for those who alternate a stretch by boat with one on dry land.

And so Esmeralda’s inhabitants are spared the boredom of following the same streets every day. And that is not all: the network of routes is not arranged on one level, but follows instead an up-and-down course of steps, landings, cambered bridges, hanging streets. Combining segments of the various routs, elevated or on ground level, each inhabitant can enjoy every day the pleasure of a new itinerary to reach the same places. The most fixed and calm lives in Esmeralda are spent without any repetition.

Secret and adventurous lives, here as elsewhere, are subject to greater restrictions. Esmeralda’s cats, thieves, illicit lovers move along higher, discontinuous ways, dropping from rooftop to a balcony, following guttering with acrobat’s steps. Below, the rats run in darkness of the sewers, one behind the other’s trail, along with conspirators and smugglers: they peep out of manholes and drainpipes, they slip through double bottoms and ditches, from one hiding place to another they drag crusts of cheese, contraband goods, kegs of gunpowder, crossing the city’s compactness pierced by the spokes of underground.

A map of Esmeralda should include, marked in different coloured inks, all these routes, solid and liquid, evident and hidden. It is more difficult to fix on the map swallows, who cut the air over the roofs, dropping long invisible parabolas with their still wings, darting to gulp a mosquito, spiralling upward, grazing a pinnacle, dominating from every point of their airy paths all the points of the city.

from Italo Calvino: trading cities
two three-dimensional pedestrian systems intersecting and spanning each other
the short circuit system:
platforms and five hubs with elevators and escalators
guarantee for optimal flow and self speaking orientation
esmiralda:
the unfolded transformation of the former station hall
cascading in between the platforms part of it are all programmatic events:
central plaza with shopping (+1), bar(+2), lounge(+2), sun deck(+3)
the number of five hubs fits demands of stations with high occupation. The system could be adopted to other situations by changing the number of hubs.
flows-plans
interchange level 1 + 2
flows-plans
interchange level 3
plaza, bars, sundecks, spiral stairs, ramps... places to recognize and remember, places which provoke human interaction surprises and confrontation. They will develop their meaning and taste through time and make the transferium everything than an non place.
the hubs are points of total interchange and information. they are indicated to the visitor by the rythem of the portals, the material of the skin and the dominat presence of the lifts which act as big information boards. orientation becomes selfspeaking.
a box, which encloses the bundle
the volume of this box minimized by
cuts following the geometry of the curves
this casing is broken open
to create different local conditions
for the interior
and to enable the city to interfere
with the vivid interior of human scale
no dead monster lying there
but an interactive piece
of architecture
the closed areas of the envelop are first clad with a glas layer second is a layer of perforated aluminium a filter which makes the building look very different depending on light conditions.
the joints of the aluminium panels result in lines which put emphasis on the dynamic of the shape.

different nuances of perforation indicate the hubs, which could be seen as the entrances of this building.
concrete parking pit
concrete tracks on concrete columns- the infrastructure
curved and crude

city floating through under the building

light steel construction
jagged in plan-
the pedestrian circuits

steel portals
sharp and precise joints and edges
playing with scale, light and the effects of filtering
every traffic mode has its own span and rhythm of columns they are calibrated along the longitudinal axis to avoid conflicts. than the columns are turned to fit into the grid of the parking pit.
the vector park spans the actual crack between old and new city: highway, office quarter and the river

this urban park will develop it’s very special meaning for Utrecht and the Randstad and it will help to urbanize suburbia
infrastructure becomes architecture
architecture becomes an urban generator
which encourages unpredictable programmatic
factors and new urban events that will appear the
coming decades