Atsuhiro
TANOKUCHI

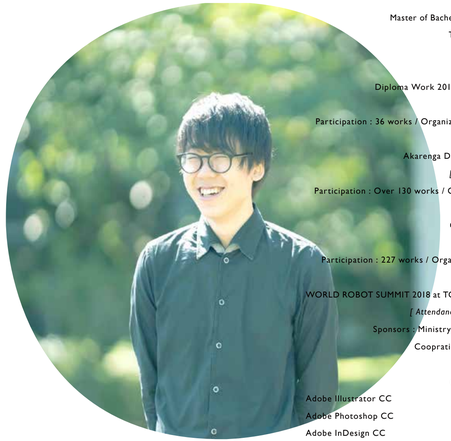
PORTFOLIO
2017 - 2018

Atsuhiro TANOKUCHI [JPN] | Live in Tokyo, Japan


My hometown

00

Atsuhiro TANOKUCHI



田野口貴成

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Native & current residence : Tokyo, Japan

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1-15-21, Nishi-machi, Kokubunji-shi, Tokyo, Japan

Education
2014 - 2018
Bachelor of Engineering (Architecture)
Tokyo University of Science, Japan

2018 - 2021 (expected)
Master of Bachelor of Engineering (Architecture)
Tokyo University of Science, Japan

Awards & Exhibitions
Diploma Work 2018 at Tokyo University of Science
[Excellence Award]
Participation : 36 works / Organizer : Tokyo University of Science

Akarenga Diploma Collection 2018 in Tokyo
[Highest Score at Initial Screening]
Participation : Over 130 works / Organizer : Akarenga Committee

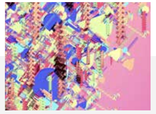
Ooi-city Public Space Competiton
[Excellence Award (2nd place)]
Participation : 227 works / Organizer : Shinagawa-ward in Tokyo

WORLD ROBOT SUMMIT 2018 at TOKYO BIG SIGHT convention hall
[Attendance : approximately 70,000 visitors]
Sponsors : Ministry of Economy, Trade and Industry
Coopration : SEVEN & i HLDGS. Co., Ltd

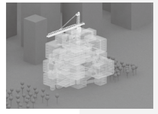
Computational Skills

Adobe Illustrator CC	●●●●●●●●○○
Adobe Photoshop CC	●●●●●●●●●○
Adobe InDesign CC	●●●●●●●○○○
Adobe AfterEffects CC	●●●●●●○○○○
Rhinoceros	●●●●●●●●○○
Grasshopper	●●●●●●●●●○
V-ray for Rhino	●●●●●●●○○○
Unreal Engine 4	●●●●●○○○○○
Python	●●●○○○○○○○
Microsoft Office	●●●●●●●○○○

Projects & Exhibitions



01 有形的夢 A Tectonic Dream



02 Self - Actualizing Building

03 ARCHITECTURE ~~for human~~

04 Do not Stall The Blood Circulation

05 都市の円弧 URBAN ARC

06 Triumph Pavilion "LIGHT"

07 コモンビニエンスストア Commonvenience Store

2017 - 2018

01

有形的夢 A Tectonic Dream

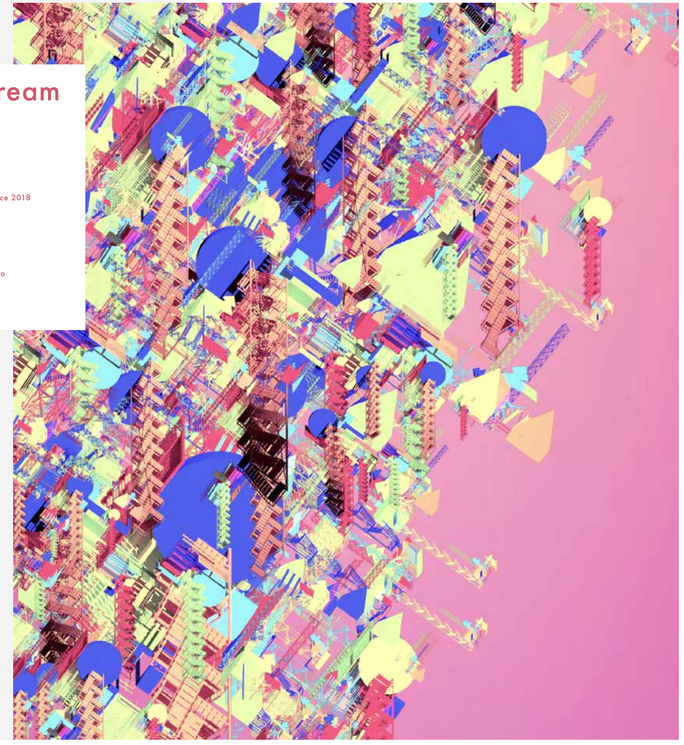
Diploma project
Individual work
Design period : 2 months

Awards :
Diploma Work at Tokyo University of Science 2018
[Excellence Award]
Participation : 36 works
Organizer : Tokyo University of Science

Akarenga Diploma Collection 2018 in Tokyo
[Highest Score at Initial Screening]
Participation : Over 130 works
Organizer : Akarenga Committee

Definition of a Dream

Simonides, one of the early Greek poets, proposed a Memory Palace, an imaginary location in your mind where mnemonic images are stored. You can recall a memory continuously when following the right route in the Memory Palace. I defined a dream as something to be recalled discontinuously, dispersed along the wrong route.

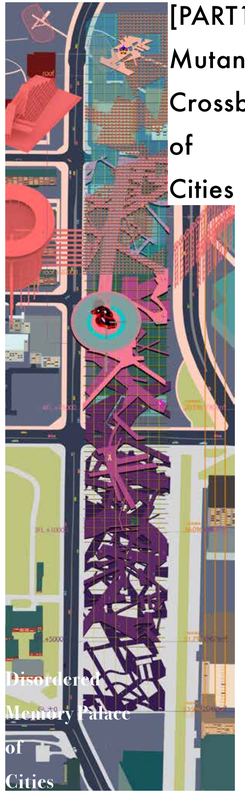


[PART 1]
Mutant Cross-breeding of Cities

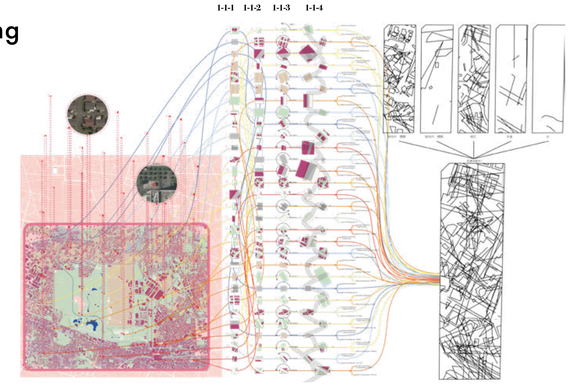
Dream City */ Paul Klee*
Close observation of Paul Klee's Dream City yields odd overlapped geometries, which I imagine have emerged from a dream, or fuzzy memories.

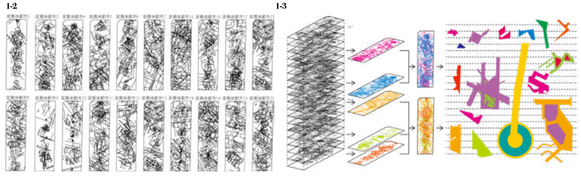
[PART 2]
Mutant Cross-breeding of Objects

African Sonata */ Vladimir Kush*
Parts of animals represented in this image are replaced by instruments associated with each character. I imagine that the interchangeability of scale and form of the objects are something that emerge from a dream-like state.

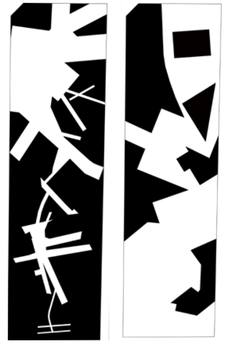


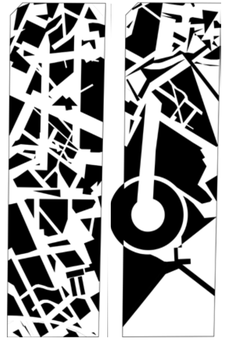
[PART1] Mutant Crossbreeding of Cities





Mutant Cross-breeding of Cities





[PART 1] Mutant Cross-breeding of Cities

1-1-1. Fragmentation < *deconstruct* > Selecting and displacing 30 pieces of trimmed "city-fragments" between the range of 30 - 50m.

1-1-2. Unconsciousness < *stir* > Shuffling the "city-fragments", they are placed into "memory palace" haphazardly.

1-1-3. Multiple interpretation < *rotate* > Rotating the "city-fragments" randamly, the preference of views differs from person to person.

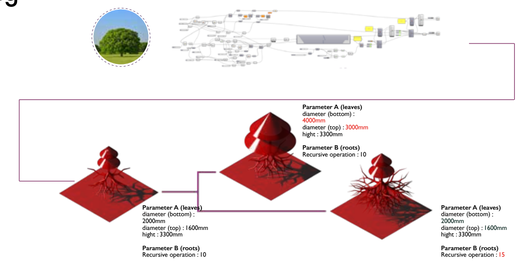
1-1-4. Impression < *extend and intend* > The size of the each memory palace's room depends on the individual, and is not always the same.

1-2. Reconstruction < *array* > 21 patterns of "mutant city" are created through repetition of the steps above.

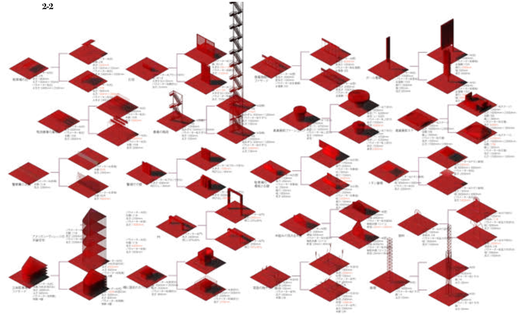
1-3. Crossbreed < *overlap* > Overlapping few patterns of "mutant city" selected at random, several strange geometries emerge.

[PART2] Mutant Crossbreeding of Objects

2-1



2-2



[PART 2] Mutant Cross-breeding of Objects

2-1. Fragmentation < *deconstruct* > Selecting 20 objects from the same range as Part 1.

2-2. Unconsciousness < *deform* > The "mutant objects" are results of changing the parameters through Grasshopper, which are partially emphasized.

2-3. Crossbreed < *overlap* > By overlapping the patterns of "mutant objects", the "mutant cross-breeding of objects" is generated.

2-3 *Mutant Cross-breeding of Objects*

02

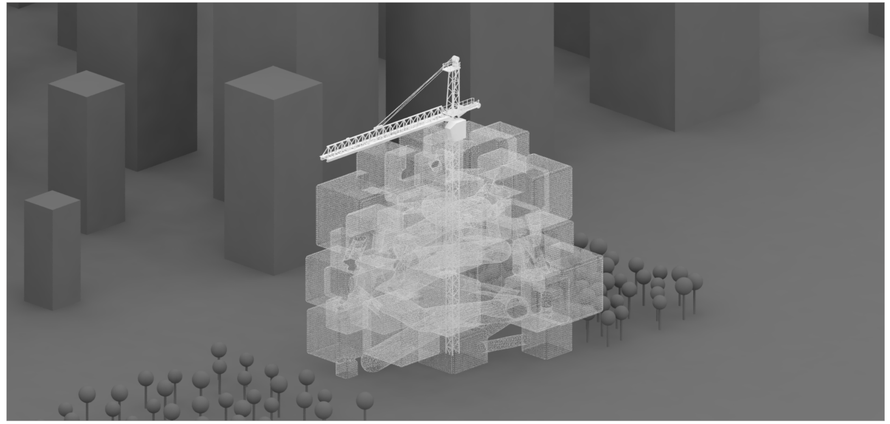
Self-Actualizing Building

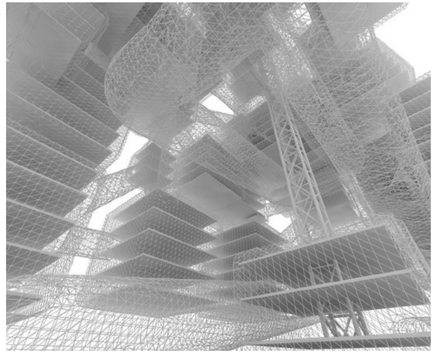
TUS international WS

Individual work

Design period : 2 weeks

Instructor : Jin Taira





Proposal

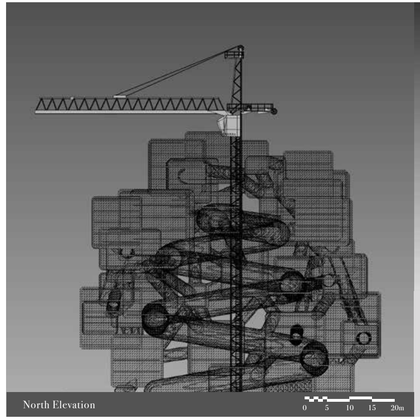
Self-Actualizing Building is based on the analysis of Space Syntax in order to create a methodology for automatically generated design according to spatial functions and necessary volumes, while neuron-like network system links the various spaces together.

Concept

New technologies such as lasercutting, 3D printing, and robotics, have been incorporated into new experimental methods of construction. However, for the most part, both theory and practice of designing and constructing buildings remain a manual process today.The aim of this project is to propose an "automated" design method using the analysis of space syntax.

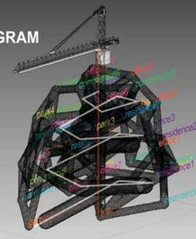
Vertical neuron-like network system

With the increase of population density in urban areas, buildings are increasingly becoming higher. However contemporary architecture consists of spaces sorted by functions, which are not mutually related to one another. The proposed architecture is based on a vertical and neuron-like network system for more seamless connections between various functions and volumes.



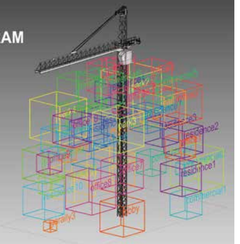
CIRCULARTION DIAGRAM

There are three types of circulation: 1. Elevator (red line), 2. CORE SPIRAL (white line), and 3. Functional connections (the rest). These lines are interwined throughout, resulting in a condition resembling urban circulation.



FUNCTION DIAGRAM

The volumes are created along the flow lines. Each volume is assigned a function: Residential, office, commercial, etc. While the volumes are independent, the functions are not divided and are mutually related, like complex urban conditions.



AUTOMATICALLY GENERATING NEURON-LIKE NETWORK SYSTEM USING SPACE SYNTAX

The following programming code was used to design architecture semi-automatically. First, three parameters - functions, areas, and connections - were input; then, preserving the parameters, the volumes are optimized. The resulting architectural system resembles a neuron-like network system based on space syntax theory.

PHASE 0 : INPUT PARAMETERS

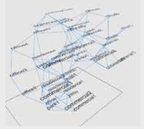
Input parameters:

1. Functions of each space / 2. Footprint of each function / 3. Connections between the functions

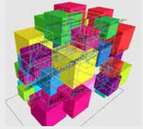
PHASE 1 : COLOR DIAGRAM

The plan diagram is automatically generated according to the parameters of Phase 0. Size of the rectangle corresponds to the footprint of each of the functions, while the blue lines indicate the connections between functions.

PHASE 3: VOLUMES AND NEURON-LIKE NETWORK SYSTEM

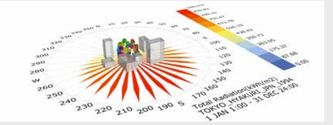


1. Floor plan (result of Phase 2)



2. 3D volumes are created

PHASE 4: VOLUMES AND NEURON-LIKE NETWORK SYSTEM



The orientation of each volume was rotated and adjusted in order to maximize solar gain, taking into account the conditions of surrounding buildings. The diagram was generated using the plug-in Ladybug for environmental simulation.

PHASE 2: OPTIMIZING FORM

Keeping the connections and each footprint, the 3D diagram is automatically created using the plug-in Kangaroo for physical simulation.

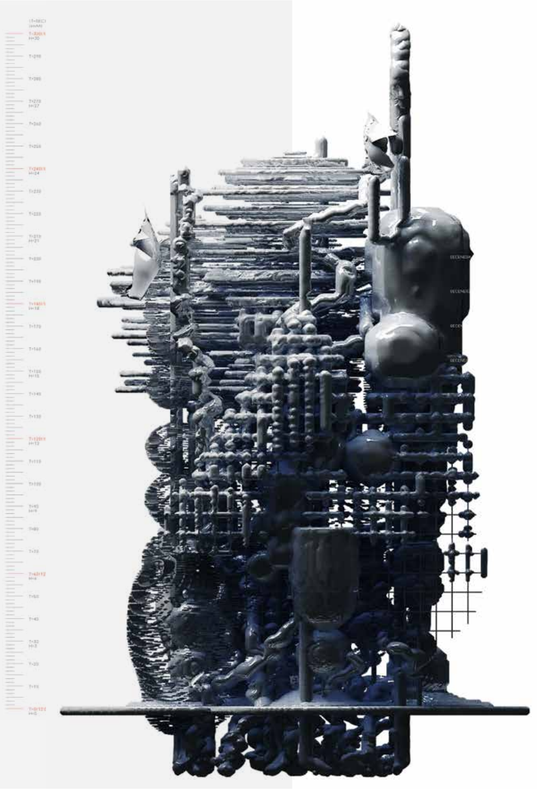
COLOR DIAGRAM created in Phase 1

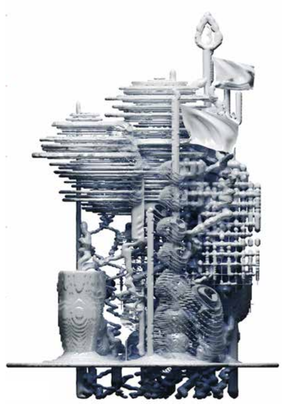
Physical simulation is complete when the allocation of all volumes are optimized.

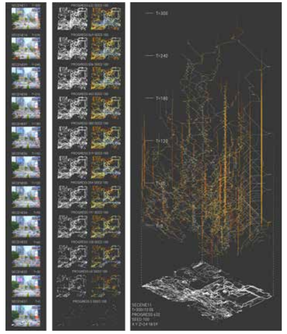
03

Architecture ~~for life~~

Visual study
Individual work
Design period : one week







Proposal

What might a design for the living and the not-living, between expected and unexpected, look like? My attempt here was to explore a design that is unforeseeable from a rational human perspective. Fixed-point video at Scramble Intersection in central Shibuya, Tokyo, was analyzed using Grasshopper to generate a machine-driven design proposal, what the imagination of an artificial intelligent machine might come up with.

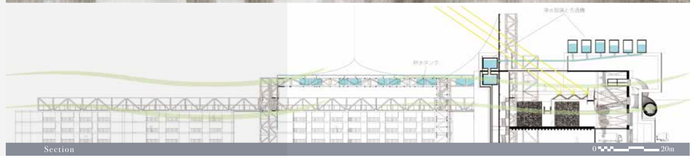
04

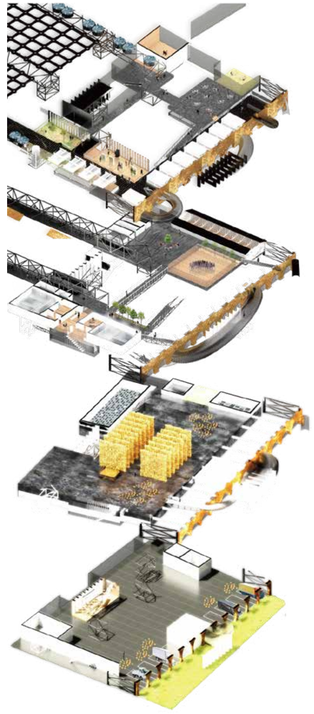
血ヲ、滞ラスナ Do not Stall The Blood Circulation

Design studio
Individual work
Design period : 4 months
Instructor : Mutsue HAYAKUSA - Cell Space Architects -

Proposal

"Logitics is the blood circulation of the city," were the words of Chiaki MUKAI, an ex-astronaut. Although logitics is essential to the city, it has various problems, such as long-distance truck drivers' severe labor conditons. Currently, logitics warehouses that are indispensable in disaster situatons are mostly situated along the Tokyo-Bay. I propose a logitics warehouse near Ikebukuro station, which boasts the second largest number of passengers in Tokyo, by converting a postwar housing complex. The addition of seismic reinforcement, water filtering system and storage tanks, and passageways directly linked to the station alter not only the function of the building but also its appearance as a new symbol of the city. The vacant units are renovated into hotel rooms for truck drivers, while the new addition houses a gallery, public bath, gym, and other functions that serve the public day-to-day.





05

都市の円弧

URBAN ARC

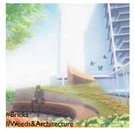
Competition
Group work : Ryota TORAO / Hiroki KONDO / Atsuhiro TANOKUCHI
Design period : 2 months

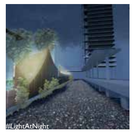
Award :
Ooi-city Public Space Competition
[Excellence Award (2nd place)]
Participation : 227 works / Organizer : Shinagawa-ward in Tokyo

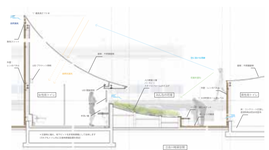
Proposal

The aim was to create an open public space that allows us to enjoy the environment beyond the boundary of the site, as opposed to the idea of a closed architecture / park. The thought of responding to various existing curves around the site and shaping the architecture and the park accordingly, creates an affordance to draw attractiveness of the town by making more of the city visible. This proposal consists of small architecture and carefully planned niches in a public space.

Visitors and passengers are encouraged to stay and are tempted to take some photos to post on SNS.







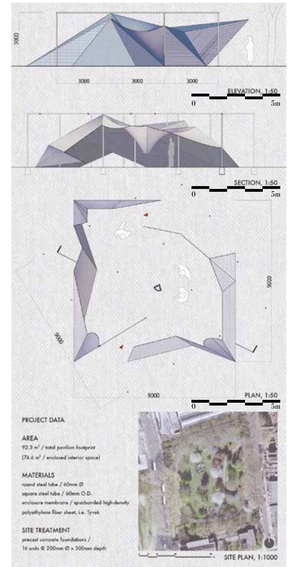
06

TRIUMPH PAVILION "LIGHT"

Competition
Group work : Kaon KO / Hikoki KONDO / Yuki MATSUBARA / Satoshi HOTSUMI / Atsuhiro TANOUCHI
Design period : 3 months

Proposal

Light is discerned relative to shadow. The interior environment of a pavilion deliberately reduces the quantity of light to amplify it in limited locality via the form of a reversed arch. At the bottom of the arch is an opening that funnels light on to ground, as opposed to from the top, as if light possess weight. The airy, geometrically folded tent-like envelope is suspended by 9m x 9m steel tube frame, composed of 3m cube grids and interesting the tent at 31.36 degrees. The gridded rigid frame and the faceted soft envelope with thin, flexible reinforcement create a construct of silhouette and material, openness and enclosure; the space between them is one that marginal, providing a break visually as well as physically. Two entry points are provided at north and south sides of the pavilion, encouraging foot traffic and visual link between V&A Museum of Childhood and St John's Church.



07

Commonvenience Store

Exhibition / Movie creation & Design
Group work : Yuki MATSUBARA / Atsuhiro TANOKUCHI
Production period : 3 months
[Attendance : approximately 70,000 visitors]

You can watch the movie on YOUTUBE

https://www.youtube.com/watch?v=5qOW6kCDzEs&t=8s&list=LLEmTEcCpOBiB4NMWwAGAOow&index=2

Proposal

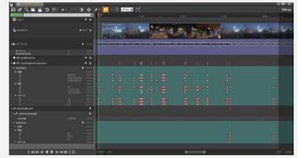
In Tokyo, parks that are located in the city center are crowded with visitors. Meanwhile the number and the quality of parks are insufficient to prevent crime. In order to enhance the common dining area within the convenience stores, we propose one that is open in a park-like setting, open 24 hours everyday. Through observations in Kinka Park, we have extracted 31 patterns of activities associated with five spatial compositions. Using this data, we designed the 7-Eleven Masumoto building for brunch at Iidabashi in Chiyoda Ward.

"World Robot Summit 2018"

The CG movie was exhibited at the World Robot Summit 2018, which is a "Challenge and Expo" that brings together Robot Excellence from around the world, to promote a world where robots and humans successfully live and work together.

Computational softwares used to create CG movie

1. 3D-modeling : Rhinoceros / Grasshopper
2. Rendering and exporting to the movie : Unreal Engine 4
3. Editing the movie : AfterEffects CC



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