

Samsung Electronics /LED Design group and Media Design Program of Keio University



KEIO MEDIA DESIGN

慶應義塾大学大学院メディアデザイン研究科

GRADUATE SCHOOL OF MEDIA DESIGN, KEIO UNIVERSITY

Joint research proposal / Internal use only

Noriyuki Fujimura IT Solution Business/Design Group/UX part Senior Designer

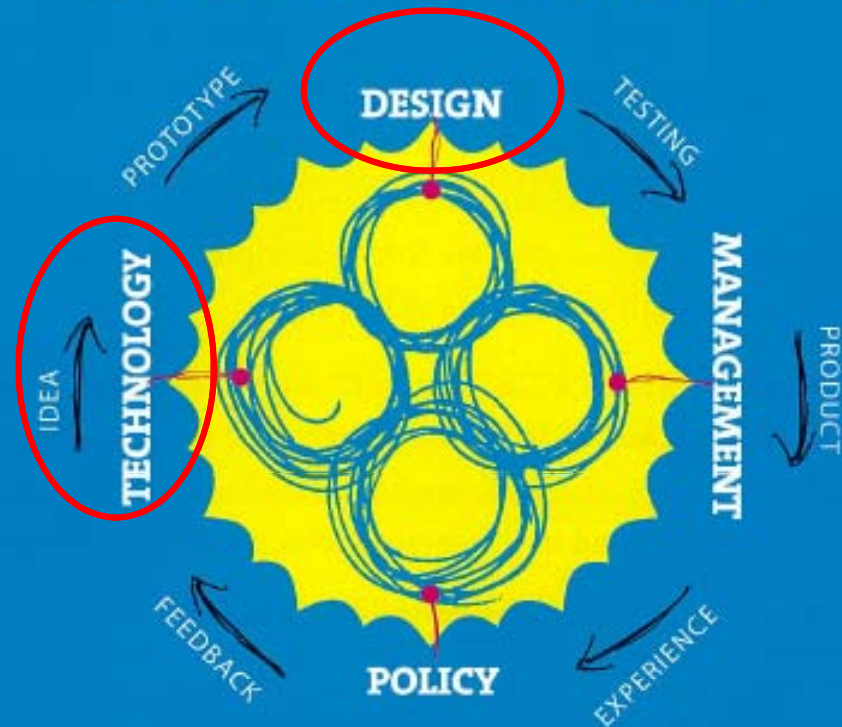
Keio Media Design Ph.D Student

September 2nd, 2010

Keio University Media Design Program:

4 Strengths

FEATURE OF GRADUATE SCHOOL OF MEDIA DESIGN



Graduate School of Media Design practices a new educational platform compared to traditional graduate school system we have here today by merging the field of researches, leading higher educational system open to the world and create five missions focusing on creative activities in integrated research and education for upcoming fields of digital media, contents and design.

Keio University Media Design Program:

Faculty

FACULTY

We challenge to prepare students for leadership as “Media Innovators” capable of producing effort and value by combining and harmonizing four creative powers “Design”, “Technology”, “Management” and “Policy” with new methods of knowledge and expressing activities

MASA INAKAGE
Entertainment Design,
Media Art, Digital Cinema,
Computer Graphics

MASAHIKO INAMI
Interactive Technique,
Mixed and Augmented
Reality, Robotics,
Physical Media

NAOHITO OKUDE
Interaction Design,
Media Environment Design,
Design Thinking

SUSUMU FURUKAWA
Media Business, Marketing,
Product Deployment,
Business Negotiation
& Collaboration

KEIKO OKAWA
Digital Communication and
Education Environment,
Asia Higher Education
Infrastructure

NAOHISA OHTA
Digital Media / Networking
Applications and Technologies,
Digital Cinema

ADRIAN D CHEOK
Interactive Embodied
Media, Entertainment and
Cultural computing,
Augmented Reality

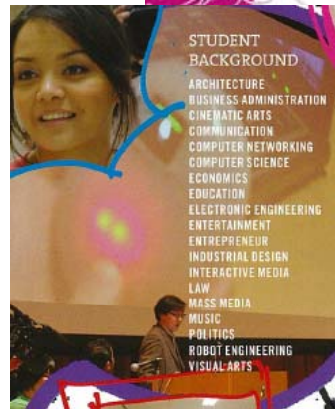
HIDEKI SUNAHARA
Mobile Communication,
Sensor Networks,
Networked Knowledge
Construction

ICHIYA NAKAMURA
Digital Intellectual Property,
Media Policy, Pop Culture

HIROYUKI KISHI
Policy on Media and Content,
Content Business Strategy,
Convergence of Telecommu-
nication and Broadcasting

Keio University Media Design Program:

Media Innovator



WELCOME TO THE GRADUATE SCHOOL OF MEDIA DESIGN

A CREATIVE SOCIETY LED BY MEDIA INNOVATORS

Media Innovator

We are witnessing the emergence of
A “creative society”, a world in which
creativity, rather than productivity
or efficiency, is the driving force
of the global economy.

“Creativity” is the ability to produce
new ideas, expressions and processes.
Creative activities move and
inspire the human mind.



PROF. MASA INAKAGE
DEAN, GRADUATE SCHOOL
OF MEDIA DESIGN,
KEIO UNIVERSITY



Real Projects

Keio
University
Media Design
Program:

Real
Projects:

Innovation with
sponsors

Service Trial

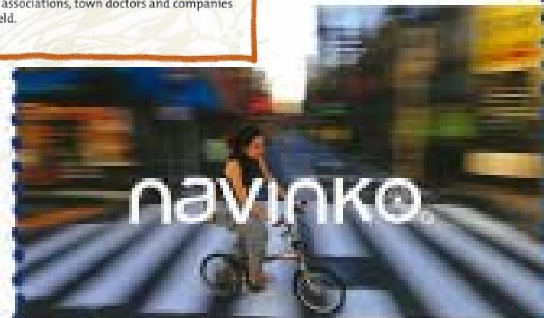


PETIMO TOY PROJECT



Working
Prototype

URBAN MEDIA PROJECT



Urban Media Project designs a new kind of urban experience, which offers users a greater connection and awareness of the city and people around them. Navinko is a navigation and social networking system which brings new bicycle experience to users. This enhanced interaction is facilitated using a unique audio communication and recognition system.

PANAVI CREATIVE HOME ECONOMICS PROJECT



Creative Home Economics is a project defining people's new lifestyles in the 21st century based on digital technologies. We are developing a cooking system "Panavi" which is a pan that allows users to cook delicious food with an innovative cooking navigation system.

DIGITAL LIFE PROJECT



Digital Life Project focuses new interaction technologies with consideration of the human embodiment and the performance of devices to make new creative lifestyles. We aim to create a new human experience by designing novel human interfaces and human interactions.

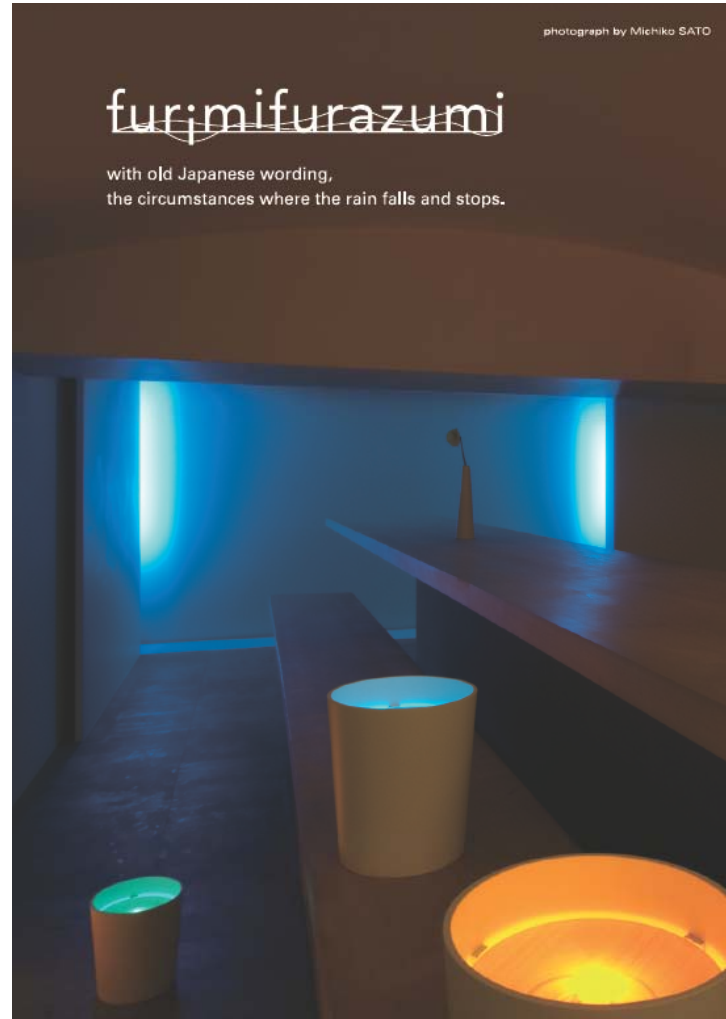
Real
Products

Clients: Japan railways, Adobe, Tokyo FM,
Samsung(SDJ),etc

Keio University Media Design Program:

Sample:
'Furimifurazumi'

For Mirano Salone
2010



overview

"furimifurazumi" is the lighting and sound device. It lets the user intuitively know about the signs of rain. It is music which the rain performs.

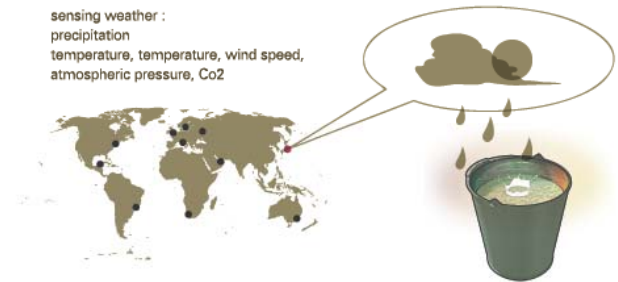
concept and context

The concept is portraying the scene of leaking rain. Our purpose is intuitively to inform the users of the scenery in which it is raining. Feel changes of the weathers. This device can make relationship with the human and the nature sensuously at the daily life. We focus on empirical knowledge about the rainfall, which all the people get through daily life. Then, this device expresses the sound like raindrop and the blink of lighting like rainfall.

system and installation

"furimifurazumi" is working by getting the various weather data from sensor node system, Live E!. The expression of blinking and sound are changed according as the sensor data in various locations. Each expression of the devices harmonizes and then they create one music.

sensing weather :
precipitation
temperature, temperature, wind speed,
atmospheric pressure, Co2



Joint research proposal



X



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Changing world market...What Keio Can do?

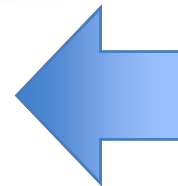


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Construction
General Contractor
Urban Area Development
Smart Grid
Regional Service + Mobile
+
Lighting Products!



Software

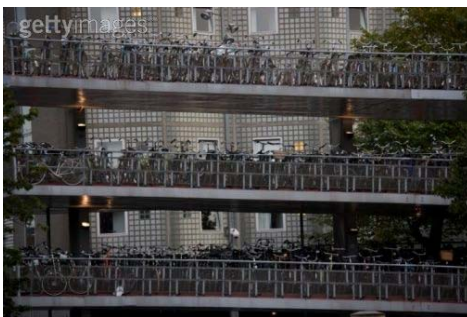
+

Hardware

+

Service

Design and
Strategy



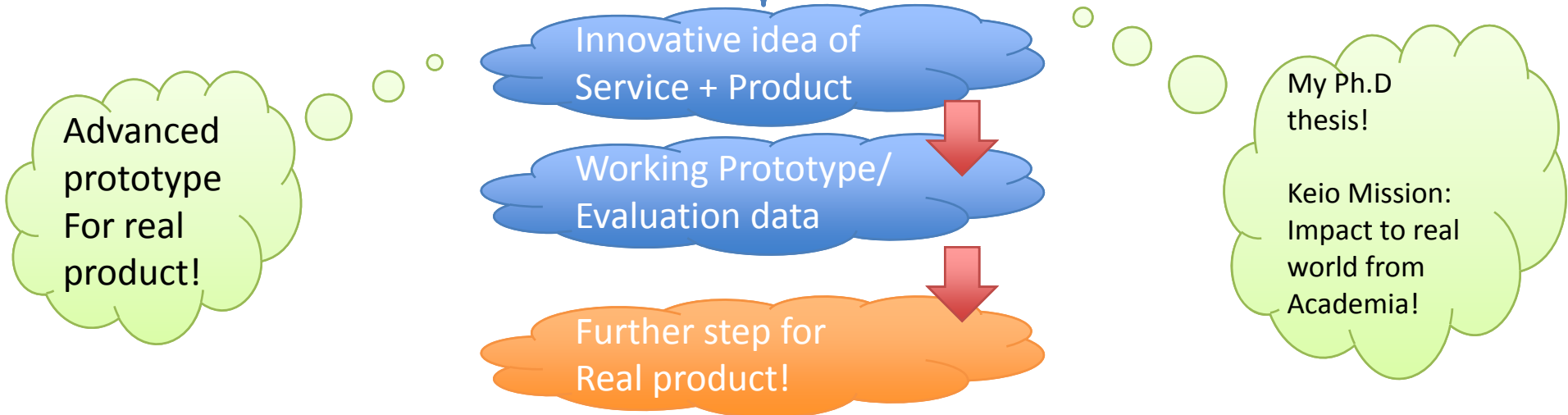


- Technology
- Marketing
- Product Design



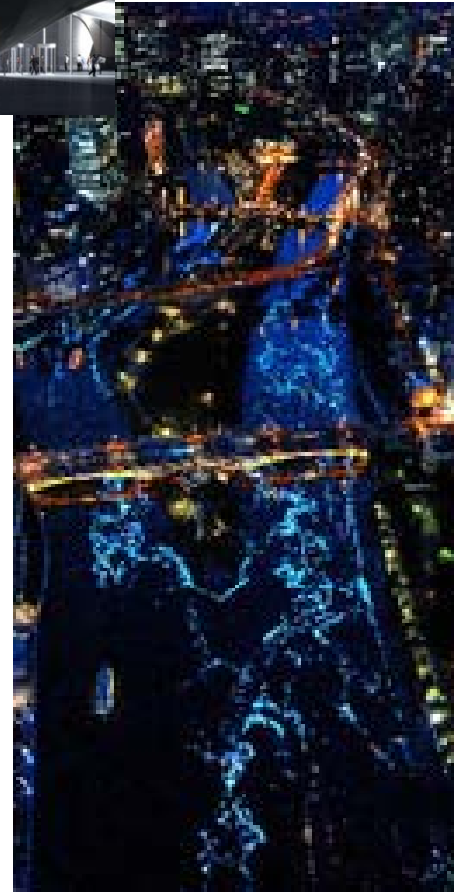
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- Technology(Research)
- User Centered Approach
- Interaction Design



Possibilities for exterior LED lighting

- Intelligent
- Flexible
- Motion
- Networked
- Interactive
- Opened!

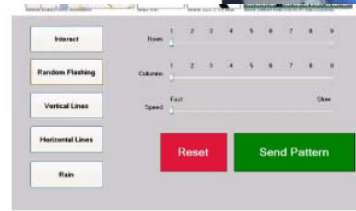


- RGB ColorBlast 6 LED board by Philips Colorkinetics (above)
- Arduino Duemilanove
- Sharp IR range-finder
- two RC servos in custom lamp fixture to enable motion
- cardboard construction



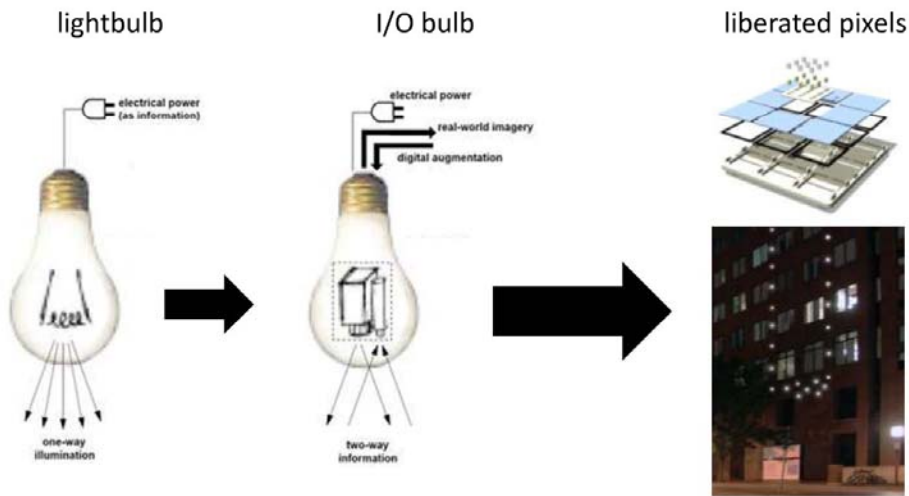
Pattern Types:

1. interactive
2. random flashing
3. vertical lines
4. horizontal lines
5. "rain"



US/EU Leads research now. It is time for Asia to take over! With real Business and Design!

How much meaning per pixel?

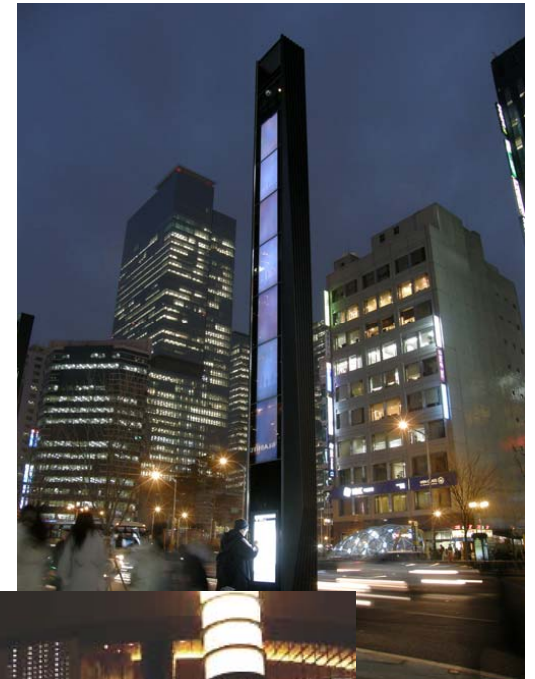


Adapted from I/O Bulb and Luminous Room
(Underkoffler & Ishii 1999)

Susane Sitinger, MIT Meida Lab 2009

Proposing Joint Research 'Interactive Illumination for Urban Spaces'

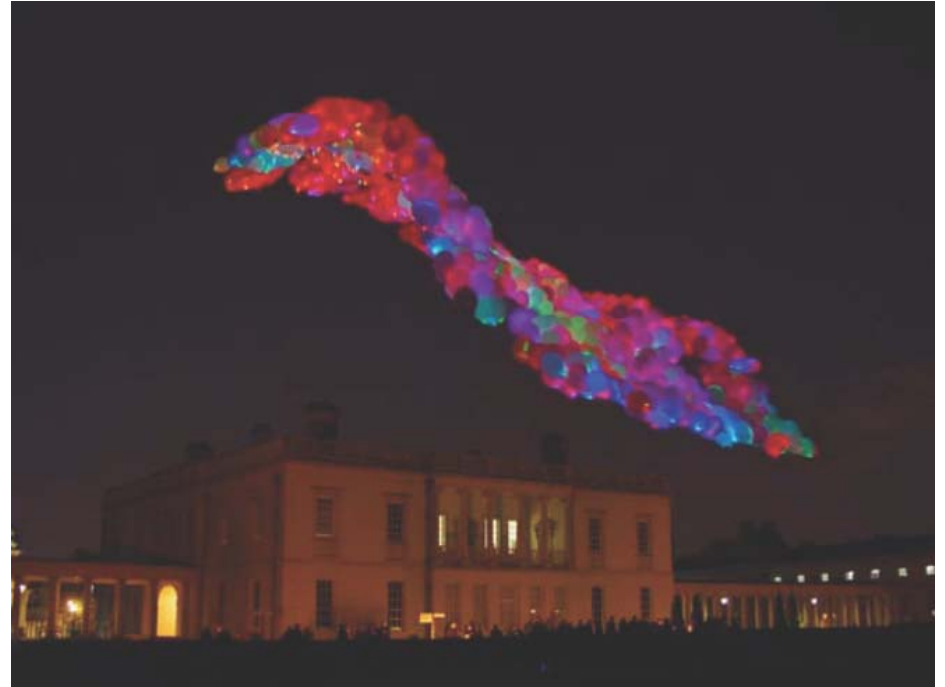
- **Aim of the research**
 - Together with Samsung LED design group, team of researchers of Keio University will explore new and competitive design field of LED illumination.
 - The research will focus on usage of LED in urban settings and possible applications of networked illumination.
 - Main outcome of the research is working prototype design (in terms of experience design) and its evaluation.
 - Ultimate goal of the joint research is to bring ideas to real Line-up product!



Proposing Joint Research 'Interactive Illumination for Urban Spaces'

- Expected Result
 - Ideation of new field of LED Usage
 - UX Scenarios
 - Working Prototypes(Keio covers UX/Interaction design and Technical part)
 - User test/evaluation

 - Samsung and Keio Univ will share IP(Intellectual Property)>Negotiable
 - Keio will keep rights to use data/idea for academic activities (includes Ph.D Thesis)



Example: "Sky ears"
By Usman Haque(UK)
2004

Proposing Joint Research 'Interactive Illumination for Urban Spaces'

- Team of Keio Side(TBD)

- Prof. Masa Inakage
- Noriyuki Fujimura (Samsung Design/Keio Ph.D Student)
- Some Ph.D/Master's students

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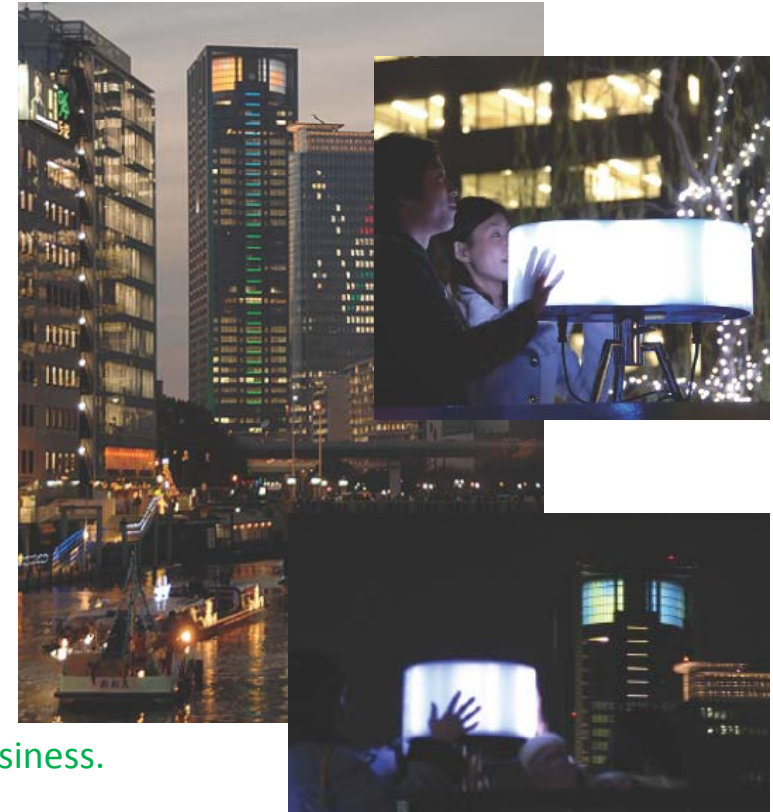


- Rough estimation

- Start from 36,000,000won (3,000,000 JPY): Lowest budget
- Templates are:
 - 60,000,000 Won/Year Basic Prototypes
 - 180,000,000 Won/Year More "Practical" prototypes
 - 360,000,000 Won/Year Includes strategy of joint venture business.

- Period of research

- Iterative process: Run 0.5 year loop for several times is ideal.
- 2 to 3 year max



Example: "Touch the light"
By Living World(JP)
2006

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FACILITY
PERSONAL FABRICATION STUDIO
MOTION CAPTURE
DIGITAL CINEMA
NETWORK HUB
SOUND & VISUAL STUDIO

We can send some Professors to visit Samsung ASAP to discuss.

If everything goes OK, we can start the research in a few months or less!

Thank You!