s: flow perspective view noon

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site 2: Abu Dhabi area between Yas and Saadiyat Islands

The project is an active land art installation which creates a flow of visible interactions between the environment, technology and the phenomena of the sunlight reflections. At the same time the installation questions the visual dimension of the distance and the length perception.

's' means here: continuous interaction between sun, sunlight, solar, sunshade, see, sky and sand. While moving along the installation, the sun reflections on the glass continuously change and create the flow of sunlight motion. In this way, the viewer becomes an integral part of the installation. Each time of the day the installation takes a whole new appearance. s: flow creates a permanent dialogue between light and shadow, between nature and technology, and especially between man and his environment. Such a flow creates a permanent dialogue of sun motion.

This artwork can be only completed by the viewer(s) in such an environment that heightens our sensorial experience and combines the natural world with the man-made without resolving the tension between the two. Essential to the experience of the project is the time when it is visited. Combining structure, shape, form and light explorations of human perception s: flow creates a dialogue using the atmospheric effects, wind, water, light, colour and shadow. During a day s: flow is also an uninterrupted stream of solar energy production.

JWQX 10

The shape of the installation is a simple deformation of a straight line into a spline. The spline follows the natural shape of the area's edge: the borderline between sea and land.

s: flow composes a harmony with the environment and provides a path to be followed like an invitation to the silent walk in this environment almost empty and mostly devoid of vegetation. To respect the natural existing condition, the boundaries between public and restricted areas will be indicated by the invisible sound alarm system placed on the ground.

The only platform to visit the installation is made by the footprints of the visitors and by the consideration of their sensibility to surroundings protection.

464.5572

172°

1172.0073

N

area visible on perception view

95°

s: flow view A

s: flow view B

s: flow master plan of Abu Dhabi area between Yas and Saadiyat Islands

s: flow form /partial view from the North

s: flow perspective view sundown

site 2: Abu Dhabi area between Yas and Saadiyat Islands

It was very important during the design period to consider the environment as a part of the structure, form and shape of the installation. That's why s: flow enhances the perception of surroundings by its form which follows the sunlight brightness. The volume of the installation is modified by the sun movement and becomes more or less visible and imposing. The perceptual discharge of the environment is accentuated by the perceptual contrast between the blueness of the sky and the reflective sand. We can say that s: flow comes out from the sandy soil to create the stream of energy and sunlight reflections.

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The form of s: flow is composed of a reflective glass which provides a vast surface for solar energy. The material and visual properties of glass like transparency and opacity have the effect of reflecting and transmitting the spectrum of sunlight, creating constantly changing fields of glossy aspect as well as energy production. To keep a good transparent effect of glass the structure of installation is made of a light supporting metal load-bearing structure as a reliable system. This construction material adopts recycle and environment protection materials. Energy captured from sunlight and its reflections on the sand is transformed inT electrical power by Spherical Micro Solar Cells: Sphelar.

Actuating cables placed in the metal structure transmit the energy to be transformed into electrical power through the grid connection cables placed in the ground. It is possible to build the s: flow by a small section and to continue progressively to cover the entire area. Or, just a party of it, like it is represented on the perspective views.

s: flow design concept

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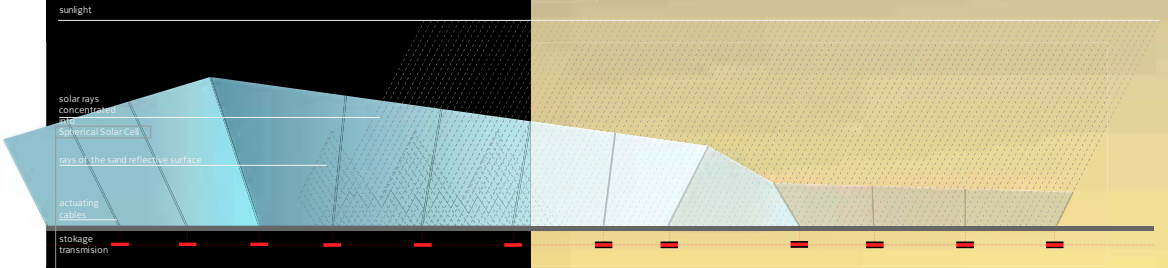
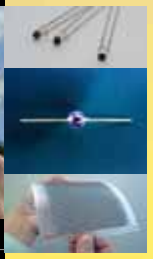
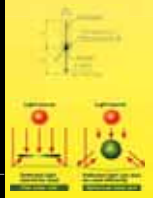
sun
nature
sand
reflection
shadow
opacity
perception
sky
distance
glass
transparency
solar
technology
energy







TECHNOLOGY APPLICATION

The site area is full of the sunlight all over the year. So, it becomes evident to use the solar technology to create our s: flow Conventional photovoltaic technology is based on harnessing the sun's rays within a flat substrate, typically comprised by single or poly-crystalline silicon material. This arrangement is easy to design and manufacture; the only problem is that the efficacy of this technology relies on its position relative to the sun. Traditional but expensive solutions to this challenge involve motorized frames that follow the sun's path throughout the day, requiring energy and maintenance in order to work properly.
The Kyoto-based company Kyosemi's has brought to the market a brilliant solution which is based on an entirely different geometry. Their innovative new Sphelar® (Spherical Micro Solar Cells) is a matrix of tiny, spherical-shaped solar cells. The spheres are designed to absorb sunlight at any angle, and therefore do not require motorization for tracking the sun. Based on their geometry, Sphelar cells even optimize the use of reflected and indirect light, and have been shown to convert energy with close to 20% efficiency – beyond most flat photovoltaic technologies. Its flexible disposition also makes Sphelar appropriate for applications at a variety of scales, even including mobile electronic devices.
It's an excellent solar technology for custom design. There is no hidden side : both sides generate electricity wherever located is the light source. Sphelar gives a high transparency possibility: from 20% to 80%. It can also be applied to varied shapes, from curved surface to pliable sheet. Energy captured from sunlight and its reflections is stoked, transformed in electrical power transmitted by a grid system placed in the ground.

<See more on: http://www.kyosemi.co.jp/product/pro_ene_sun_e.html>