algae drape

generating bio fuel & communitary recreation spaces on the edges of L.A. River
Because of fluctuations in sun angles throughout the year and the cyclical nature of the stages of algae growth, the algae cells are envisioned to be able to move along the vertical axis increasing or decreasing their exposure to the sun.

At first the project's sole aim would be to unite low-income communities around biodiesel production, benefiting these communities financially as well as socially, and the general public by providing affordable bio fuel. After the fluctuating spaces under the Algae Drape start to be used in different and unexpected ways by the residents, some space/use combinations will prove more successful than others. In the case of the less successful ones, the Algae Drape will keep its full mobility potential in order to yield the highest amounts of algae growth, and reconfiguring itself to keep testing different space/use relations. Conversely, if a space/use combination proves successful, mobility of the Algae Drape is reduced to promote consolidation of the space/use in favour of the community.

Thus, the community is not offered a recreational space free of charge, but instead it has to offer back a small amount of the bio fuel revenues (due to the loss of algae growth efficiency), in order to promote a sense of ownership of the spaces within the communities assuring these new space/uses will be valued and cared for by their users.

A third aim of the project would be the development of linear ‘space generators’ along the banks of the L.A. River. The main goal being to try to integrate at a personal/pedestrian level otherwise segregated neighbourhoods of Los Angeles by cutting diagonally through the highway and street networks with lively, inviting pedestrian environments.
LA: layers of segregating networks

project area [LA River banks]

highway network
[exclusively vehicular interaction]

street network
[segregated clusters]

river bank occupation
[possibility of diagonal intersection]
community adjacency to LA River bank
community adjacency to LA River bank
In order to maximize sun exposure of the whole surface area of the algae cells (top and sides), the units shift up and down in a wave fashion depending on monthly sun angles and stage of growth of each unit. While activities or uses are not consolidated underneath the algae drape, the system remains mobile in order to achieve ideal sun exposures. Once the community appropriates one of the fluctuating spaces underneath the drape, mobility is greatly reduced to accommodate the activities taking place and algae growth descends to average levels.
Mobility of Algae Drape vs. consolidation of use

integration of space under drape into community

highly consolidated

quotidian

contingent

urban integration

mobility / algae yield

Mobility of Algae Drape vs. consolidation of use
integration of space under drape into community
**high mobility:** extreme algae growth / contingent use

**medium mobility:** fast algae growth / quotidian use

**low mobility:** average algae growth / consolidated use