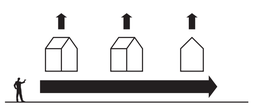
INFRASTRUCTURAL PHOTOSYNTHESIS

The trees at Fly Ranch

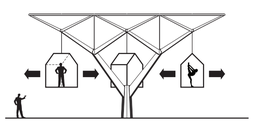
CONCEPT DEVELOPMENT - The Trees at Fly Ranch

Traditionally, urban or rural infrastructure is grounded on site, drastically disrupting the continuity of natural ecosystems and landscapes.

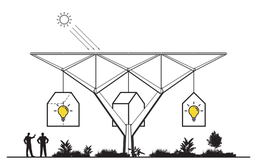


Now, what if we could 'unground' our infrastructure and lift it above the natural ecosystems on which they otherwise would stand?

This way, the landscape would flow uninterrupted by our presence. Now, at this point you must be thinking... but hey! buildings don't fly!



But maybe they can fly at Fly Ranch! And all we need is some low impact fractal structure to provide us with the lift we need to enjoy amazing views of the desert...



...and at the same time supply our infrastructure with sustainably generated power, some shade, and a venue for outdoor gatherings and celebrations.

The idea behind the tree is to minimize our footprint on the landscape while maximizing the surface used to harvest solar energy through the use of monocrystalline silicon photo-voltaic panels.

The fractal design of the structure means that the loads from the panels and the shelters that hang from the tree branches are gradually concentrated onto an increasingly smaller load bearing section as the structure approaches the ground. This, in turn, clears an exponential amount of ground surface compared to the total area occupied by the photo-voltaic grid-like array 10m above the structure's base.

The 324sqm photovoltaic array provides more than enough energy to power the eight shelters that can be hanged from the designated structural quadrants, but also produces a generous amount of additional power to supply a variety of additional activities taking place at Fly Ranch.
The idea is that the trees work as self-sufficient micro power plants that have the added capacity to power the infrastructure around them. The photovoltaic modules rest on a 18m x 18m structural grid on top of the structure, and thus can be arranged in a number of patterns depending on the energy needs of the shelters, or the nearby buildings.