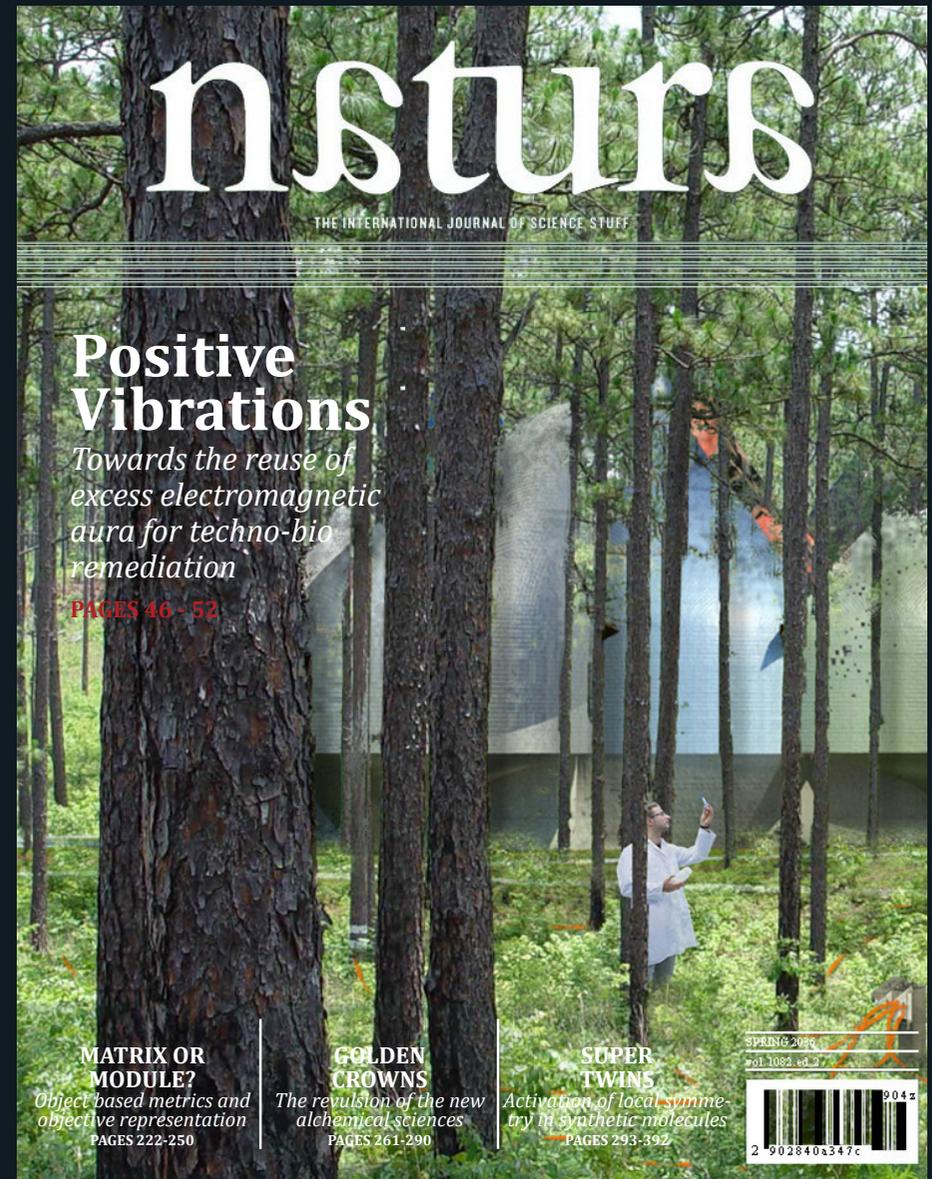


# MYTH



# The Transformer Grove Remediation

*Techno-bio remediation in TEAZ*

May 2037 Dessau, Germany

*Technical & Aesthetic Notes*

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**Abstract**

The hybridization of natural and artificial energy-forms has made great leaps in the last several decades as it became apparent that networked objects could include both animate and inanimate species.<sup>1</sup> These could share information in a manner that increasingly blurred the difference between digital information systems and natural eco-systems.<sup>2</sup> Rising energy demands and shrinking energy sources necessarily overlapped with the crises of climate change in the early 21st century, leading by the mid 2020's to a number of concurrent experiments attempting to tap plant life as a reservoir of energy that could be used to power a global network of energy and information exchange.<sup>3,4</sup> This was nothing short of a revolution in the relation between plant and animal life. There were substantial factors that suggested the longevity of such a project due to the rapidly rising levels of carbon dioxide.<sup>5</sup> The convergence of this planetary scale development with the ever increasing electromagnetic radiation from wireless interconnected devices led to several promising proposals for remediation of energy production and distribution. It was into this confluence that in 2031, Dr. Thomas X. Fassner and Dr. Bilpup Klay of the University of Macronesia first proposed that electromagnetic radiation could be used in bio-technology hybrids.<sup>6</sup> In the brief discussion that follows, a case study from the city of Dessau, Germany using Dr. Fassner & Dr. Klay's "Transformer Grove" will be presented.

**Background**

Completed in 2019, the Bauhaus Museum in Dessau was an example of the then emerging trend in Internet Integrated Buildings (IIB). The architects of the museum, Young & Ayata, L.L.C. of New York City, proposed that this networked fusion of building systems with data flow could be understood as an acceleration of the original Bauhaus ideas into the 21st century. The architects proposed that the Bauhaus pedagogy was among the first to develop an aesthetic aura for modernity. An aesthetic no longer tied to the signature of an author, the singularity of an original object, or the academic traditions of symbolic content, but instead an aesthetic based on the tension between craft,

2037 Production and hosting by Elene X.V. on behalf of University of Macronesia.



Figure 1. Dr. Sinodoro Michdun at the New-Panama Climate Change Conference June, 2032. Presenting for the first time the "Transformer Grove" proposal to the leaders of the world.

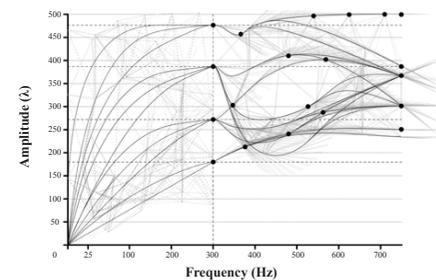
technology, and abstraction intended precisely to stimulate the flow of commodity reproduction. The original Bauhaus architecture may have been classified into a style that conformed to the developing International Style of the 1920's, but this stylistic modernism was never what was at stake in the Bauhaus idea.

These arguments put forward by Young & Ayata, L.L.C. were deemed controversial by the public during the open international competition of 2015 as the resulting building looked very different than the canonized style of Bauhaus architecture, but the architects were fortunate enough to have an enlightened jury select their scheme from 850 entries. The building appeared as a series of apparently unique and discrete objects (named vessels by the architects) from the exterior, but was actually formed by a single module organized on a grid fused into a series of flowing interlocked interiors. The construction system consisted of structurally framed timber ribs, in-filled with a thermal mass of compressed hemp, clad on the exterior with robotically



Figure 2. Scientist testing the "Transformer Grove" project at the Dessau-Roßlau park, (Bauhaus Museum built 2019 in the background). August 2035. Photo courtesy of August Muller photography.

Table 1 Analysis of variance for trees		
SOV	df	P-values
Replication	(r - 1) = 7	0.4
A (temperature T or fungicide F)	A - 1 = 7	<0.01
B (incubation period I or concentration C)	B - 1 = 3	<0.01
AB	(A - 1)(B - 1) = 21	<0.01
Error	(AB - 1)(r - 1) = 77	
Total	(ABr - 1) = 21	



laid sintered glass tiles made from recycled car windshields. The entire complex was wired into a network of sensors feeding back to a complex of servo motors which controlled the balance of ultra-violet daylight, temperature, humidity and airflow. Furthermore, these sensors were networked to a system of mobile devices located around the museum, out into the city of Dessau, and then further into the region of Saxony-Anhalt. The expanded field of data fed the building in real time to adjust all of its environmental systems concerning the preservation and display of the museum's collection. This idea of hacking networked mobile devices not for the communication/consumption/social patterns of human beings but instead for the automation of architectural performance was deemed a problematic yet provocative integration of internet and building technologies.

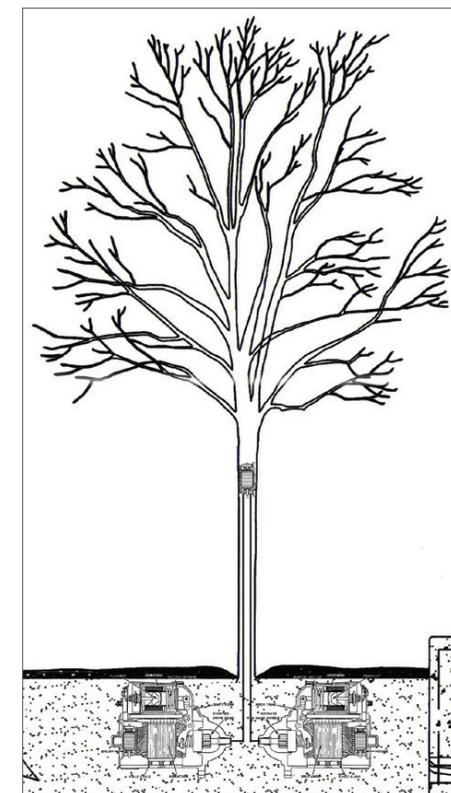


Figure 3. Electric tree section showing its root mechanics. Early prototype for the "Transformer Grove" project. Drawing courtesy of Super-Trees INC, dwg, Ai.

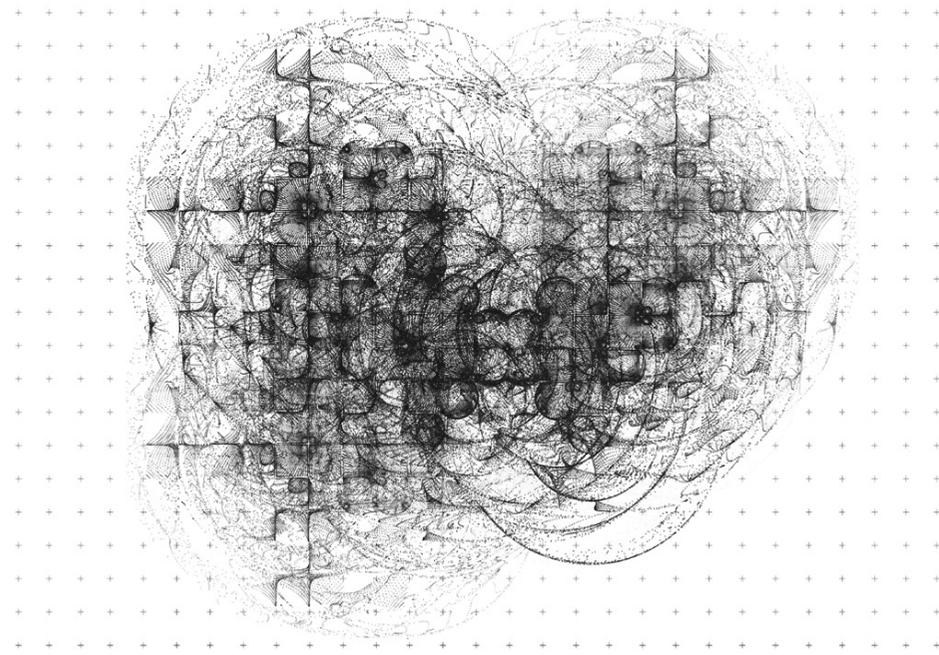


Figure 4. University of Macronesia Science Center. Electromagnetic patterns transmitted by the "Bauhaus Museum". Electro-indexical-imprint, Ai 2031

All of these attributes of the building combined in a unique way to unexpectedly produce a large and stable electromagnetic field. The combination of grid and circular object, stable thermal mass and reflective tile, networked sensors, servos and mobile devices, ended up having unforeseen consequences on the levels of radiation that the building produced. The building's aura exceeded the material form to become a zone of informational energy, a field that could be mapped as an echo of the formal architectural organization. These electromagnetic radiation levels were initially noticed only after the grafting of mobile internet devices into the human nervous system redistributed the human sensorium toward the electromagnetic spectrum. The Dessau-Roßlau park where the museum was located, became a regional hub attracting thousands of visitors a year solely for the purpose of communication fidelity, a "physical" social gathering space for digitally augmented social gathering. The park quickly transformed into an ad-hoc tent community of electromagnetic refugees from "digital dark zones" with an unofficial estimate of as many as 5,000 temporary residents. This loci of pure fidelity was one of the first instances of the now common Temporary Economic Acceleration Zones (TEAZ), places where the increased data speed offered a substantial gain in earnings for the management of online identity commerce. For a population that made their living through the constant flow

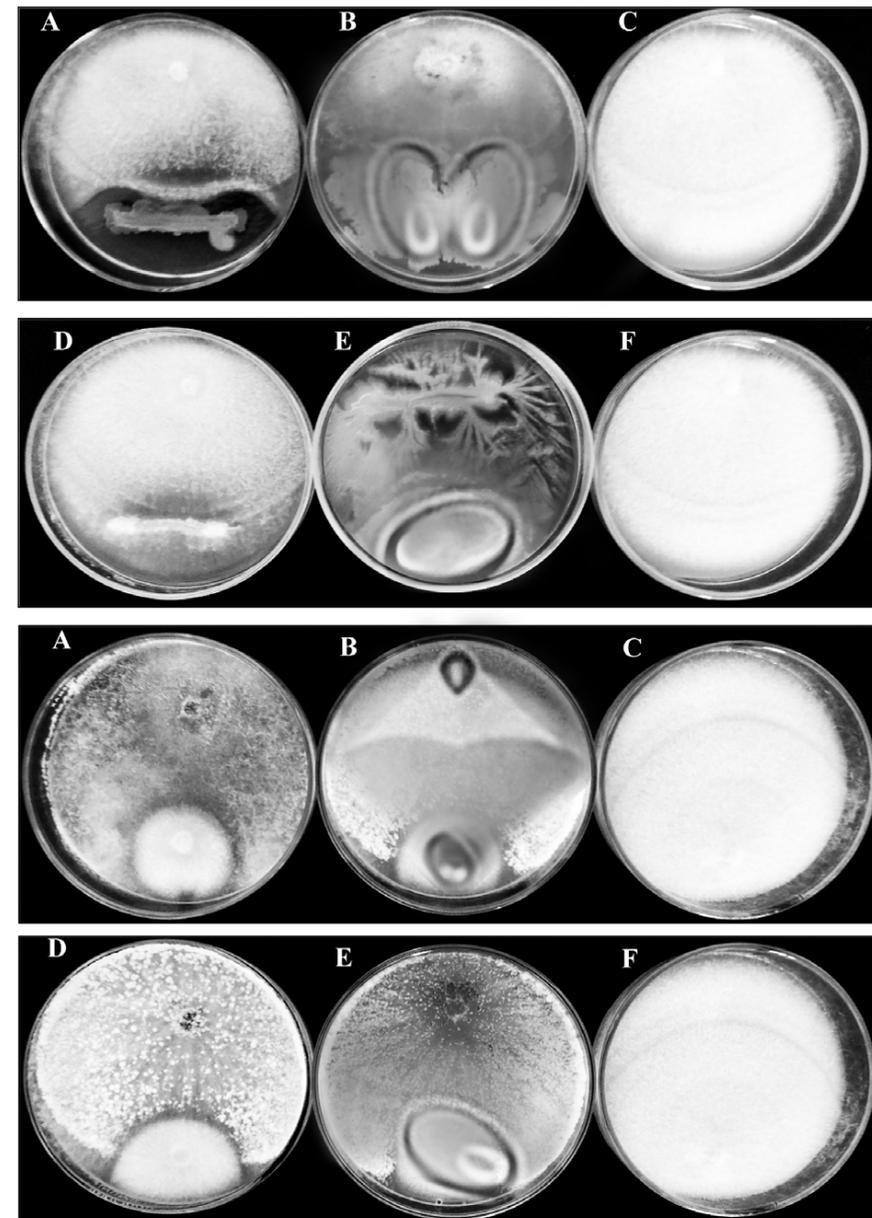


Figure 5. University of Macronesia Science Center. Analysis of the radiation decay emitted from the existing building roofs. Satellite Electron Photo, psd, 2035

commerce of internet economy data, it became more important to set up residency within a powerful, stable, and free 24/7 information hub than to pursue more traditional "brick & mortar" residency.

The negative effect on the program of the museum was well documented in the local news media as the radiation excess began to damage the fragile artwork of the Bauhaus collection forcing the relocation of the collection into a black box storage facility near Barcelona, Spain.<sup>7</sup> The building remained in operation not for housing the artwork collection or for human habitation, but for the economic windfall that benefited the city of Dessau due to the visitors who traveled for the TEAZ.

**Experiment Description**

It was in 2031 that Dr. Thomas X. Fassner and Dr. Bilpup Klay of the University of Macronesia first proposed that radiation could be exploited in the bio-technology of what was named "Transformer Grove" hybrids.<sup>8</sup> These communities of trees were developed to accelerate and transform their natural energy processes with an electronically networked nourishment of electromagnetic radiation. The prototype consisted of grafting electrical/chemical sap exchangers within the core of the tree.

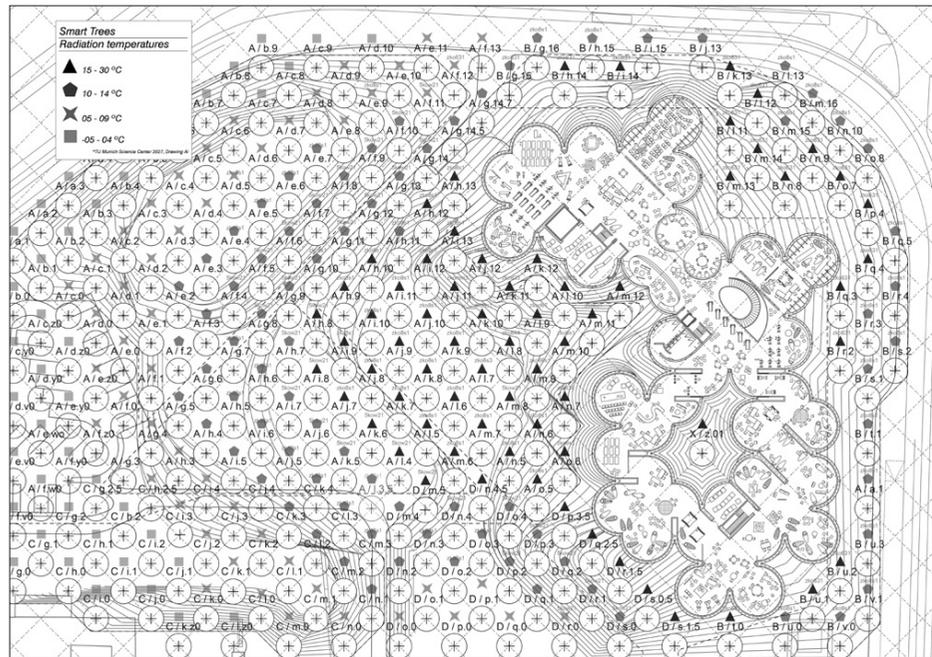


Figure 6. University of Macronesia Science Center. Dessau-Roßlau park tree layout plan & radiation temperatures. Drawing, Ai 2032.

The exchangers convert electromagnetic radiation down the spectrum towards solar radiation which is then used to drive the nutrient process for tree growth. As the tree grows, the reverse process of converting chemical energy to electrical energy out of the sap is engaged to help charge the generators planted at the base of each tree. This hybridization is not specifically species dependent, but works on trees of a certain maturity, for the inner core of the tree must be of sufficient dimension to be replaced with the prosthetic core. Below the root structure, a generator, receiver and transmitter are planted/installed. These systems are networked to the other trees in the grove system allowing the collective to operate as a singular organism. These innovations of the “Transformer Grove” are a true hybrid of natural and artificial technologies. Oxygen, Carbon Dioxide, Electromagnetic Radiation, Bio-energy, Wi-Fi Information and Wireless power are transferred, transformed and broadcast. The entire system can be likened to an infrastructure project where Carbon Dioxide and electromagnetic energy are the source materials and Oxygen and data are the utilities produced.

Since the trees require constant monitoring and maintenance, an urban park, such as the Dessau-Roßlau, was an ideal test case for their implementation. Furthermore, it was found that the 7.7 M grid of the abandoned Bauhaus Museum building’s repeated

modules provided a calculable stable gradient of radiation levels. This grid of the building was used for the grove layout system and for potential expansion of tree units. The initial architectural design argued that these elevated vessel modules would touch the park lightly allowing an integration with the existing trees. As the “Transformer Grove” extended the building grid, the concept of the original architectural design became strangely inverted. The new grove of hybrid trees were now integrated with the existing building’s energy field grid. In this new incarnation, the natural integrated with the culturally technological. The grove thus materially literalized the expanded electromagnetic field that the building produced.

**Evaluation**

The first trees were installed in the spring of 2033 in closest proximity to the existing building. Since this date the field has been expanded to encompass the entirety of the park with the number currently at 730 units. The results have thus far have been primarily positive. The growth of the trees has been stable, the Oxygen output has been comparable to historically produced specimens from nature, and the maintenance glitches that plagued the first generation of trees have been largely resolved.



Figure 7. Young & Ayata, L.L.C. Electromagnetic cancellation waves. Dessau Electromagnetic Remediation Center interior.

One unforeseen stumbling block has been attributed to the over amplification of the electromagnetic energy that occurs as the individual tree objects come on-line and aggregate into larger energetic groves. As the trees grow and output more energy, they have a tendency to overdrive the older units requiring a constant monitoring of the earlier specimens to maintain the balance of the system. When a tree overloads, it can spontaneously combust, threatening the entire grove and the original energy source itself (museum building). To combat this, a system of Halon 2212 dry fire retardant nozzles have been installed inside the tree trunks, allowing each tree to self-extinguish in the case of self-combustion.

As the grove grows, the energy levels have been amplified from 12.4 keV to 124 keV largely through constructive interference. While this amplification has been ideal for higher Oxygen and energy output, the increase in electromagnetic energy became harmful for the inhabitants of the TEAZ. The effect of the grove was first noticed in the behavior of pet hermit crabs as they began to move in unexpected manners similar to dancing. (Interestingly, this effect was first identified by cultural anthropologist Lester Bangs as he observed his hermit crab during the playback of Lou Reed’s *Metal Machine Music*).<sup>9</sup>

This increase in damaging electromagnetic pollution has led to demands by the TEAZ population for a Electromagnetic Radiation Reduction Zone (ERRZ) to be developed. The original architects of the Bauhaus Museum building, Young & Ayata L.L.C., were contacted to make a proposal for the reuse of their original museum building. The architects have proposed an adaptive reuse of the abandoned interior where the building vessel modules (which amplified radiation outward) could be inverted on the interior through a dampening interference provided by the glass tile and thick hemp wall mass, significantly reducing the levels of radiation on the interior of the building while still providing a stable enough signal to encourage the TEAZ effect that initiated the scenario. In addition, the ceiling hemispheres at the top of each of the vessel modules originally designed to diffuse light, could be coated in ultraviolet rose gold tiles reflecting any excess radiation back out into the atmosphere of the park. Because the programmatic circulation was initially designed to be a combination of enfilade galleries with free-plan flexibility, the use of the plan could be altered to accommodate inhabitation as a sequence of lounge like rehabilitation rooms. As people/patients move through the intestinal plan sequence, each lounge develops a specific aesthetic aura of electromagnetic buffering.



Figure 8. Young & Ayata, L.L.C.  
The waves of mutilation remediated through cymatic noise conversion  
Jenny Cymatic Plate Resonance 2033

#### Conclusion

The implementation of the “Transformer Grove” at the Dessau-Roßlau park has been an unqualified success in both energy and Oxygen production. It remains to be seen if the negative side effects of this intervention can be mitigated through the dampening interference proposed by Young & Ayata, L.L.C. If successful, there will be an interesting cultural aspect developed through the reuse of the building, one that may prove prototypical for other similar situations developing globally. The renovated building interior would produce an area of refuge from excess energy. This remediation might even become the impetus to return the Bauhaus artworks to Dessau. The return of aesthetic contemplation to a building designed originally for this purpose would present a strange calm in the storm of contemporary media production and consumption that dominates TEAZs. The interconnected objects of our present have become auras without originals, unique mediation performances flowing through our data systems.<sup>10</sup> To conjoin these mediated flows with a physical space for viewing the material artifacts of mechanical reproduction is in many ways a problem regarding what constitutes “the real”. If reality is always mediated, a culturally constructed myth, the crucial questions become those which explore these abstract fictions for the production of alternate aesthetics.<sup>11</sup>

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- (11) This article is a fiction of pure speculation. Any similarity to real science or architecture is intentionally coincidental.

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