In 1970, David Tudor, who had recently made a transition from the most prominent pianist of post-war avant-garde to a composer of electronic music, conceived and constructed a "musical instrument" out of an entire pavilion at the Osaka Expo. His vision entailed a radical shift in scale between the human and the instrument: the performer, along with the audience, was now placed inside the instrument. Immediately after the Pepsi Pavilion, Tudor began searching for the location of his next project, which would further extend his idea of “giant instruments” out of man-made architecture into the expanse of natural landscape: a desert island. Collaborating with engineer Billy Klüver from E.A.T., sculptor Fujiko Nakaya, and visual artist Jackie Monnier, Tudor worked extensively on the Island Eye Island Ear project over the next decade. The size of the island was precisely dictated by what he considered as "the maximum scale for feedback to occur.” The landscape also had specific requirements, as Tudor planned to use parabolic antenna loudspeakers to create sound beams in various spots of the island. The group shared a seemingly paradoxical objective for the project: to reveal the nature of the island through technology. Based on interviews with Tudor's collaborators and documentation of the project found among the David Tudor Papers at the Getty Research Institute, this paper offers a comprehensive view on the trajectory of the ambitious project to make, quite possibly, the largest musical instrument in the world. Tudor's idiosyncratic vision in which the relationship between technology and nature blended with the natures of technology, is discussed, along with how the very distinctiveness of this approach led to the eventual abandonment of the endeavor.