

The Primitive Hut for the Twenty-First Century is a shack which combines the essential humanity of Gottfried Semper's *Die vier Elemente der Baukunst* (earth, the hearth, framework/roof structure and lightweight enclosing membrane) with the expediency of digital technology. It attempts to emulate the physical properties of human skin in the building's outer layer, enabling remote housing in areas with extreme conditions. Building technology exists as humanity's response to our alienation from nature, not its cause. But technology for its own sake can be alienating. Used unwittingly technology can be invasive and obtrusive; all of the promises of an easier life courtesy of the digital world count for nothing if connectivity equates to longer working hours, more stress and de-connection between body and soul. Indeed the core idea of Primitive Hut is to create a house that enables escape from a contemporary working life often brim full of technology and stress. The remoteness of the shack affords a re-connection of body and soul.

The design of the building is based on the idea that architecture's true potential lies not in the latest technology, but in the human spirit, and that great architecture frees the spirit, providing it a place to rest. A house enslaved by technology may be superficially exciting and even function better as a building, but we are quickly de-humanized without the comfort of the hearth and the feel offered by natural materials, gardens, and the like.

Remote housing raises specific design issues such as limitations in power and water supply, restricted access and communications, and exposure to harsh climatic conditions. When integrated with design ideas that respond to the remote conditions of the shack, digital technology can spawn an entirely new organic language for architecture, which can have direct applications to less extreme situations, indeed for architecture in general.

The Primitive Hut is a 6.6 meter by 6.6 meter single room shack on a desert site in southern Arizona. The site is uneven, with steep slopes in parts. A dry creek bed runs through part of the site and is subject to flash flooding. The site is sparsely vegetated. Each of the cabins is positioned alongside one of the small hills covering the site, so that each cabin feels autonomous in the landscape. The cabins provide a sense of remoteness for guests who have chosen a holiday to "get away from it all." A separate main building provides administration facilities as

well as meals and entertainment for guests. The main activities include hiking, bird watching, and nature walks

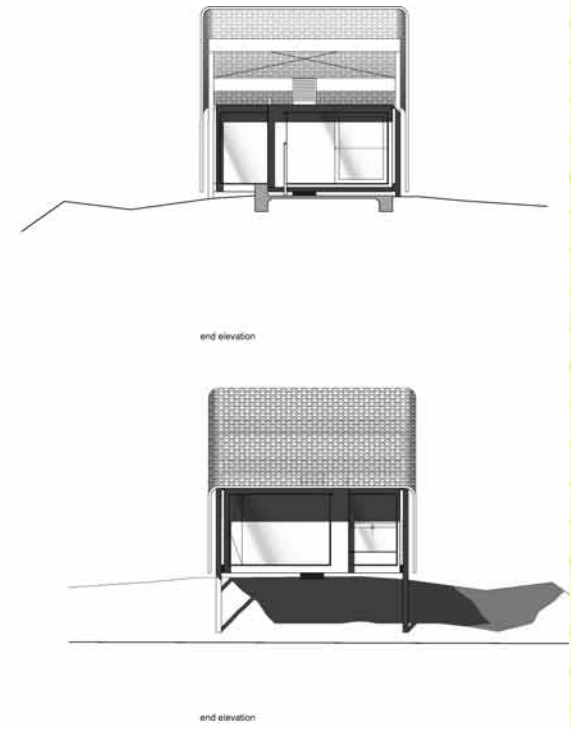
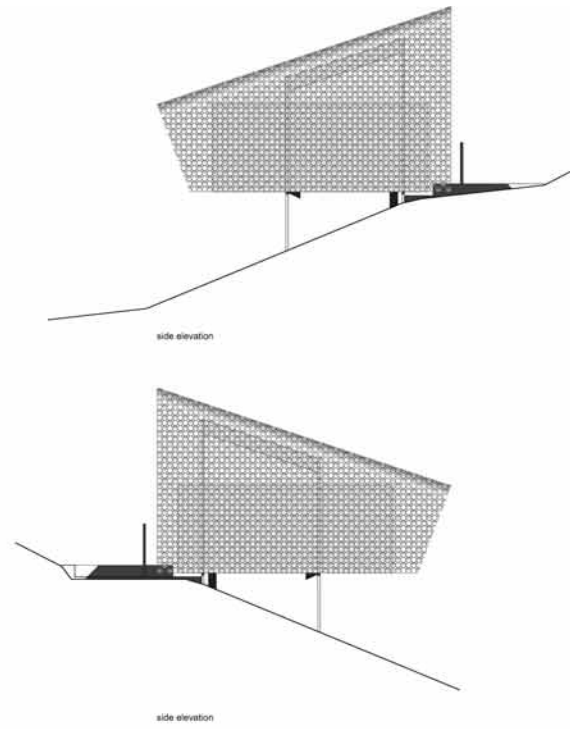
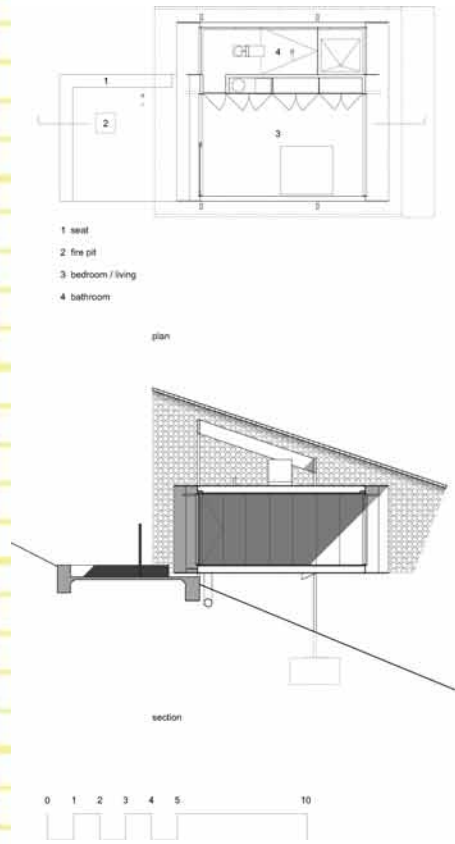
The building's skin emulates the physical properties of human skin in the 'lightweight enclosing membrane'. It consists of a protective outer layer made up of a series of tubular cells (60 mm diameter, 60 mm long) that perform the following functions:

- shade the building from radiant heat
- control the extent of the ingress of sunlight
- insulate the building from heat loss
- convert solar radiation into electricity and hot water
- filter out dust and pollutants
- harvest rainwater (to be stored in underground tanks), incorporate moisture content - meters and saturation sprinklers to wet the outer layer of the building, allowing air to move over the surface of the building to assist in natural cooling ("sweating")
- incorporate climate and intruder sensors
- be integral to the aesthetic of the building

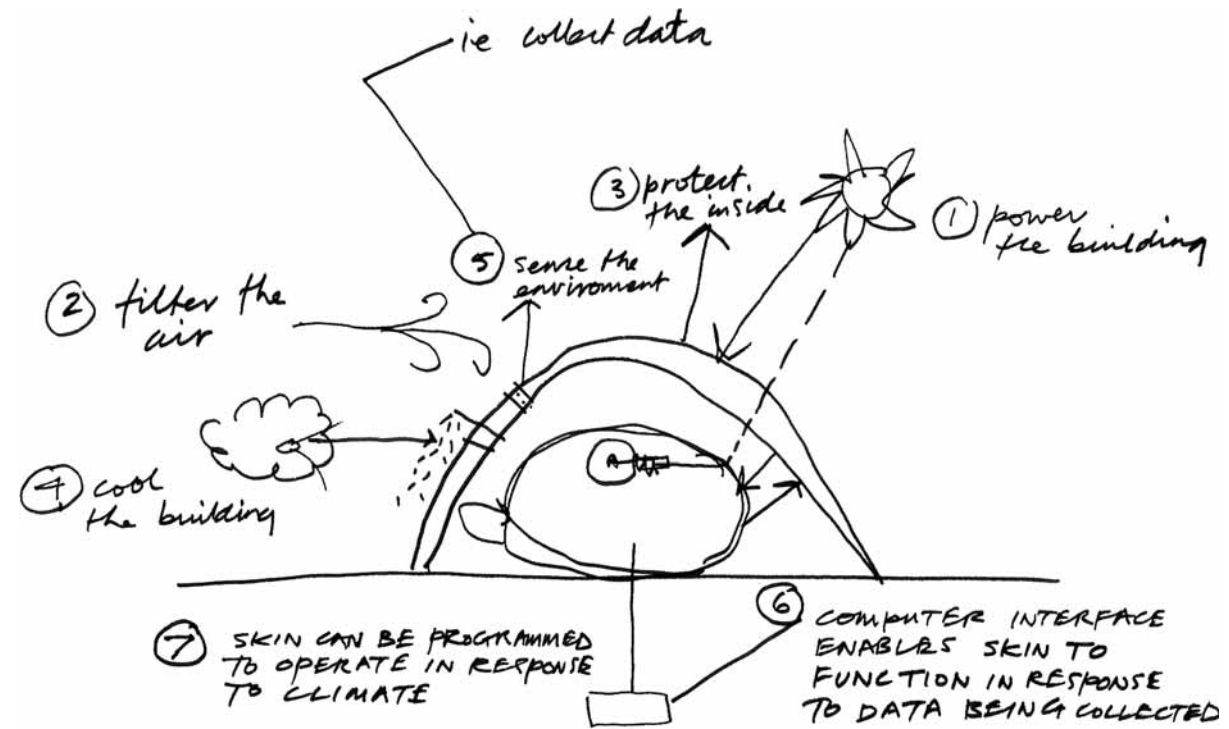
With the exception of the actual appearance of the skin, each of these functions will have a digital interface, enabling the building to respond automatically to climate changes as well as allowing occupants to program the skin as they wish, allowing the internal environment of the building to perform in an optimal fashion. With its internal environment controlled in such a sophisticated way the shack can rely on conventional materials, glass, steel, concrete, timber, to create a warm and nurturing space for its occupants.

Combining digital technology with sound, sustainable design and integrating it into the building facade results in an environmentally intelligent building—but one that looks good.

SIDE ELEVATION, FRONTAL VIEW AND LAYOUT OF THE
PRIMITIVE HUT FORT HE TWENTY-FIRST CENTURY
THE FACADE IS MADE OF TUBULAR ELEMENTS INTEGRATING
PHOTO VOLTAIC CELLS AND SPRAYING NOZZLES FOR
COOLING WATER.



CONCEPTUAL DRAWING FOR THE PRIMITIVE HUT FOR THE TWENTY-FIRST CENTURY
 THE BUILDING SKIN IMITATES THE CAPACITIES OF HUMAN SKIN, REACTING TO THE EXTERIOR CLIMATE AND ADJUSTING THE CLIMATE INSIDE THE HOUSE ACCORDINGLY.



what the cellular skin components will do (concept)



MODEL, SCALE 1:100

**Sean Godsell Architects (SGA)
Primitive Hut for the Twenty-First
Century**

Team
**Sean Godsell Architects (Sean Godsell,
Hayley Franklin)**

“We believe that the future house lies somewhere between the primitive hut and digital technology.”

SGA’s evolving research into the skin of buildings seeks to emulate the physical properties of human skin in the light-weight membranes enclosing their buildings. In projects both built and unbuilt, SGA has investigated the potential of the outer skin of buildings, initially as a shading device (Kew House, Carter/Tucker House and the parasol of Future Shack), then as both a shading and filtering device (Peninsula House, CIPEA and McNair houses) and finally as a combined shading /filtering device and energy source (Westwood House, an unbuilt project). Within the context of Australia as part of Southeast Asia, SGA has coupled these investigations with an analysis of the veranda (fluid perimeter space) as an iconic architectural element common to both Eastern and Western cultures. In Peninsula House, SGA used re-cycled timber to make the coarse outer hide of that building. For the CIPEA project, SGA kept all of the bamboo cleared from the site and use it to make the protective outer skin of a house for Chinese artists and their families.

Future Shack was exhibited at the Smithsonian Institute’s Cooper Hewitt Design Museum in New York in 2004.

In 1994 Sean Godsell formed Godsell Associates Pty Ltd Architects (SGA) in his hometown of Melbourne, Australia. He has lectured and taught in the US and Britain, and his work has been published in the world’s leading architectural journals. He has also been honored with several international awards for his designs. Hayley Franklin studied Architecture at RMIT University, Melbourne where she graduated with Honours in 1999. She has worked for nine years at Sean Godsell Architects and has been directly involved in the delivery of four award winning projects.

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