



zendome
EXCLUSIVE MOBILE SPACE

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BACKGROUND GEODESIC DOMES

For centuries human kind has been searching for the perfect form. The Pythagoreans dissected a sphere in various steps into smaller and smaller pieces as early as 600 BC. The so-called Tetrahedrons, cubes and Dodecahedrons were studied and further reduced by the Greek Philosopher Plato in his Academy. Named after him today as the Platonic polyhedra such as Tetrahedron, Icosahedron, Octahedron and the cube these were defined and expressed in mathematical formulas by Euclid (around 300 BC) in his XIII. book of elements.

Therefore it is no surprise that the first structural ideas based on these geometric forms were expressed by a physicist. As early as 1919 the Berlin based Walther Wilhelm Johannes Bauersfeld started the construction of an unsupported dome (geodesic dome) for use as a projection space.

Bauersfeld developed the first idea of a geodesic dome but Buckminster "Bucky" Fuller (*1895; †1983) continued these experiments from the 1940s on and succeeded in making the invisible mystery visible as well as assessable. He also for the first time used the term "Geodesic" as well as "Geodesic Dome". Fuller undertook many tests in order to prove the stability and strength of his Geodesic Domes.

In 1912 Fuller started his studies in Harvard, however he was thrown out again and after many different jobs worked mainly as an architect. In 1927 he decided to view the rest of his life as a constant experiment: He wanted to find out what a single person could achieve to make the world a better place for all mankind.

He defined his purpose working as an architect, a designer, a poet and philosopher as well as agitator, coining the terms "Comprehensive Design" and "Total Design" by combining art, technology, economy and strategy. He dealt with basic needs of human existence such as living and mobility. Fullers work always was very nature orientated and his designs tried to save energy. Also, he always tried to find solutions for the problems of global ecology.

Fuller also was the man who more or less invented the term "Synergetic Effect" – a philosophy that is as much his as that of ZENDOME. The term remained victorious in every business from architecture to management theories of the 90s. Just as the triangular elements of the Geodesic Domes strengthen each other, the whole is always more than the sum of its parts.

Examples for Geodesic Domes today:

Geodesic Dome in the Botanical Gardens at the University of Düsseldorf as a plant showroom.
<http://www.botanischergarten.uni-duesseldorf.de>

South pole-Station:
<http://www.southpolestation.com/trivia/history/dome/dome1.html>

Climatron, in the Botanical Gardens Missouri:
<http://www.pbs.org/wgbh/buildingbig/wonder/structure/climatron.html>

Project Eden in UK:
<http://www.edenproject.com>