SACRED GEOMETRY AND ARCHITECTURE

Written, edited and illustrated by
Carlos Arturo Alvarez Ponce De León

Illustrations and photos of projects and studies by
Carlos Arturo Alvarez Ponce De León
Ninón Fregoso Fregoso
Michael Rice
Jenniffer Hassey
John Stuart Reid
Dan Winter
Juan Schlosser

7

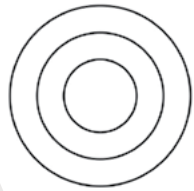
COMMUNITY MANDALAS: INTERNATIONAL FRACTAL ECOVILLAS

7.5- Geometric designs and what they mean

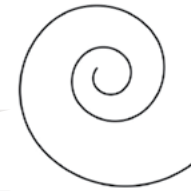
In the design of an agroforestry system we can use geometric patterns and each of them will have a different function. For example, a circular or spherical design uses concentric strokes that can generate radial surface exploitations. The spiral design indicates a growth pattern, with long paths without increasing the size.

We can use a golden spiral, argentum, root of 2, 3 or 5, phi or inverse of phi. The wave design indicates a pattern of fluid, movement, circulation and transport, as well as a uniform expenditure of energy. In addition, it involves increasing borders.

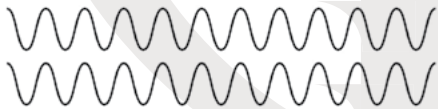
The pattern in dispersion is random and chaotic and allows decreasing the movement, it is an open system that can be used to filter or oxygenate. The branch design is useful for the collection and distribution of liquids. In irrigation and roads, it increases and exchanges resources. The network pattern indicates more communication; it is a web-like pattern that allows the distribution of the forces involved. The polygons as we find them in the geodesic domes are meeting places with higher index of productivity since they save space, material and energy. The design in the form of a tree implies a multiple design that contains in the cup the circle; in the branches and leaves the chaos; in the trunk the spiral; in the root the network and these elements are exchanged in a static and dynamic way. The fractal design would imply that the central pattern was found in each of the parts.



1 circular design

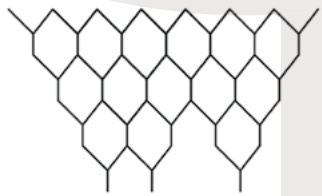


2 spiral design

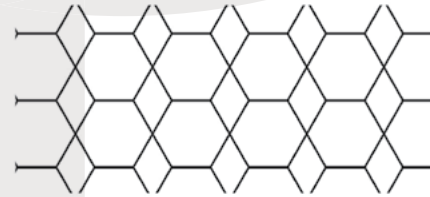


3waves design

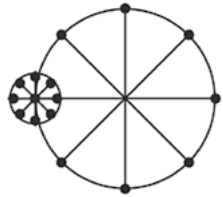
4 chaotic designcaótico



5 branch design



6 grid design



7 topographic fractal design