Fractal Geometry of a Dendrogram

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The fractal structure shown by the poligonal created by unions of middle points of vertices, nodes or peaks of dendrograms terminal classes is presented. Its generating fractal, the details of its construction, and the way to measure its segments are defined; its property of inverted scale, the type of meshing, its property of axial symmetry and a theorem on transformation of linear affinity are considered. The generator must not be composed exclusively or necessarily by three segments, but it must be composed, at least, by two segments. In the cases presented, the generator or generating curve is composed by three line segments. This is exemplified by means of two applications with real data.

Key Words: dendrogram, fractal, fractal propagation, axial symmetry