

Curve Designing Using an Approximating 4-Point C^2 Ternary Non-Stationary Subdivision Scheme

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Abstract : A ternary 4-point approximating non-stationary subdivision scheme has been introduced that generates the family of C^2 limiting curves. The theory of asymptotic equivalence is being used to analyze the convergence and smoothness of the scheme. The comparison of the proposed scheme has been demonstrated using different examples with the existing 4-point ternary approximating schemes, which shows that the limit curves of the proposed scheme behave more pleasantly and can generate conic sections as well.

Keywords : ternary, non-stationary, approximation subdivision scheme, convergence and smoothness

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