

ΕΑΥΑ αϕΑΤΟΑΑ. ϕΕΙΙ'1ϕΕΕΕΑΝ; ΟΑ' ΔΑΤΣΑΔ; ΟΑΕΑΟΑΟ%1ΟΑ, ΑΑΑϕΙΣ; ΟΑ' ΑΘ
 μΟμϕΙΣΑΟμϕΣ (AN ALGORITHM FOR SIMULATION AND VISUALIZATION
 OF PLANT SHOOTS GROWTH) Ι. . ΣΑϕΕΟ : ΑΕ. ΕΟ' Ο ΕΑΝ, ϕ. . ΣΑϕΕΟΑϕΑ :
 Ε. Α. αϕ1; αΕΑΙΕΟ ΑΝΑ, 205 Ε' ΟΕΙΣΒΝ 974-346-469-7.

ι ΟΑ' ΑΘμΟμϕΙΣ%Σ αϕΑΟμϕΣα α' ΑΕΟΑαϕΑ. Δ«ΘϕΙΣ Lindenmayer systems
 ΕΑΚ L-systems μΑΟ%αΑΕ' αΕϕ. ΕϕΑΑΑΟ' ΑαΑΔμΙα' ΕΣ ϕΑΟ'1ϕ', ϕΕΙ' ΙϕϕΑ
 ΕΑΟΑ%αΑΕ' αΕϕϕΙΣ; ΟΑ' ΑΘμΟμϕΙΣ%ϕΑ L-systems ϕΑϕϕ Parametric functional
 symbols α%αΑΕ; ΟΑϕ' αϕϕΑΑΟϕ ϕ'10' αΑΔμΟαΕ'1ϕϕΙΣμΑΔΕϕ'»ΑΔ; Ι'ϕΙΣ%α' Α
 ; ΟΑ%Αϕ; α'Ν ΟΣα3 ϕΕΟΕμΑϕΕ»αϕ' αμΑΔΕΝΑΝΕ3. ϕ'1Εϕ'»ΑΔ; Ι'μϕΣα ϕΙΣ%Σ
 «ϕΔ. ΔαΕϕΑ' ΑΘμΟμϕΙΣ%α»Σα' ΙΑΘΣΑΟ' ΑαΑΔΑϕϕΟΑα»Σ, ΑΑΑ' αΟμΑ; ϕΘ α' Α. ϕΝ
 α' (prototype) 1' ΕΑΟΑ' ϕ'10α»ΕΑΟϕϕΑΕϕϕ' αα' ϕΑΕΑΝ' ΟΑϕΙΣ bracketed
 L-systems

ΑΟϕϕ α3 ϕΕΟΕμΑ.
 ΕΟϕϕ ϕΑΟ; ΟΑ' α3 10
 »; ΟΑΕϕΕΟ 2543

ΑΟΑΑ' α'1 ϕϕ
 ΑΟΑΑ' α'10' ΟΑΑ. ΣΑϕΕΟ
 ΑΟΑΑ' α'10' ΟΑΑ. ΣΑϕΕΟΑϕΑ

SOMPORN CHUAI-AREE : AN ALGORITHM FOR SIMULATION AND VISUALIZATION OF PLANT SHOOTS GROWTH. THESIS ADVISOR: ASSOC. PROF. SUCHADA SIRIPANT AND PROF. CHIDCHANOK LURSINSAP, Ph.D. 205 pp. ISBN 974-346-469-7.

The development of plant growth at each time step has been used the iteration of Lindenmayer systems (L-systems), but the animation was not smooth and continuous. This thesis proposed an animating plant growth in L-systems by mean of the parametric functional symbols to control the length, size and position of each component of the plant. As a consequence, the development of plant growth became smoother and more natural as well as realistic. The resulting prototype can be used to generate a realistic model of any plant based on bracketed L-systems.

Department Mathematics

Field of study Computational Science

Academic year 2000

Student's signature.....

Advisor's signature.....

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