

FAX: +41 91 751 2207

To: *Rinaldo Bianda*  
*Video Art Locarno*

Re:

cc: *Vittorio Frangone*  
Date: *Artistic Director*

From: YOICHIRO KAWAGUCHI

RACE, The University of Tokyo  
Komaba 4-6-1, Meguro-ku, Tokyo 153 Japan  
Telephone: +81-3-5453-5881  
Fax: +81-3-3467-0648

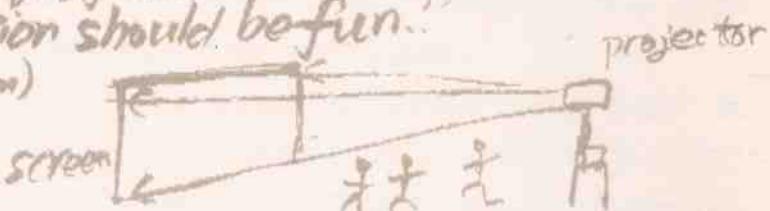


河 口 洋一郎

T 153-8904 東京都目黒区駒場4-6-1  
TEL: 03-5453-5881  
FAX: 03-3467-0648  
E-mail: yoichiro@race.u-tokyo.ac.jp

東京大学 人工物工学研究センター 様

Message: Dear Rinaldo,  
Thank you very much for your e-mail.  
It's my pleasure to join for the show.  
Safely, my pieces are on HDTV. (Six times quality of Normal TV)  
If possible, wide projection should be fun.  
(HDTV or 35mm film)



Best Regards

Major awards include the EUROGRAPHICS Best Artistic Award (Copenhagen) 1984, the Shibata Award (1984), France Nouvelle Image Exhibition Grand Prix (1987), PARISGRAPH First Prize [art] (1987), Montreal Future Image Exhibition First Prize [art] (1987), France IMAGINA Exhibition First Prize [art] (Monte Carlo) (1991), International Electronic Cinema Festival '91 First Prize [High-vision art] (Switzerland) (1991), ARS ELECTRONICA Distinction Award (Linz, Austria) (1991), EUROGRAPHICS '92 First Prize [art] (London) (1992), MMA Multimedia Grand Prix Chairman Award (1993), the First L'Oreal Award Grand Prize (1997), and the Tokyo Techno Forum Gold Medal (1997).

His major publications include "Morphogenesis" (JICC Publishers) and "COACERVATER" book and CD-ROM (NTT Publishers). A video work "LUMINOUS VISION" (Sony Music Entertainment) was recently released in the United States (1998). He is also a trustee of Japan Society of Image Arts and Science, The Virtual Reality Society of Japan and Japan Information-Culture Society.

## Yoichiro Kawaguchi

**Profile** = Born in Tanegashima Is., Kagoshima Prefecture in 1952. He graduated from Visual Communication Design at Kyushu Institute of Design in 1976. He received his Master degree from Tokyo University of Education in 1978. After teaching at Tsukuba University, he is now a professor at the Research into Artifacts, Center for Engineering at the University of Tokyo. Creating Computer Graphics since 1975, he is an internationally acclaimed CGI artist. He achieved a unique style using his "GROWTH Model," a model based on growth algorithm. Selforganizing artificial life media metropolises and highly dense creations of primal wildness represent salient characteristics of his work. Since SIGGRAPH '82, he consistently presents work in the United States.

**Main activities** include invited presentation at London Film Festival (1992), SICAF '92 (Seoul, 1992), invited exhibition at the UNESCO Japan Cultural Festival (Paris, 1993), the Venice Biennale (1995), ARS '95 Exhibition at the Finland National Contemporary Museum of Art (Helsinki), and Digitale '95 and '96 International Exhibition (Köln).

**Major awards** include the EUROGRAPHICS Best Artistic Award (Copenhagen) 1984, the Shibata Award (1984), France Nouvelle Image Exhibition Grand Prix (1987), PARISGRAPH First Prize [art] (1987), Montreal Future Image Exhibition First Prize [art] (1987), France IMAGINA Exhibition First Prize [art] (Monte Carlo) (1991), International Electronic Cinema Festival '91 First Prize [High-vision art] (Switzerland) (1991), ARS ELECTRONICA Distinction Award (Linz, Austria) (1991), EUROGRAPHICS '92 First Prize [art] (London) (1992), MMA Multimedia Grand Prix Chairman Award (1993), the First L'Oreal Award Grand Prize (1997), and the Tokyo Techno Forum Gold Medal (1997).

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New Book "Yoichiro Kawaguchi" (GGG, Ginza Graphic Gallery, TransArt Inc.) (1998)

## The GROWTH Model (グロースモデル)

潜在なイメージーションを形にしするための自己組織化の手法。あるいは、生の複雑な生命体の造形アルゴリズムを開発するための手法を「グロースモデル」という。「時間の藝術」の立場から、形の発生・成長・進化をプログラミングして、形のある一定の法則のもとに進化させ、表現の発想によってどうえた、数学した数理化・構造化を図る手法である。

一見複雑に見える生物の形の中に潜在的な形の繰り返し、外見ではなく形の内部にある数理を導き出すため、海、螺旋に注目し、巻貝などの奇妙な形式を原点に、アンモナイト、オウム貝、蛤等、單純の螺旋、環状などを材料にする。リカーシブ(循環)構造といふ。複雑さのなかに見る単純な法則の繰り返しか、グロースモデルの重要な概念で、これを組み込んだ遺伝子プログラムを走らせれば、コンピュータが次々と再生構造を持つた画像を生みだして、コンピュータの容量がきまるまで自動的に成長・発育を続ける。つまり、扇形・百分の方からスタートして、それが積み重なって全体がどうなるかは「混沌かけ」、状況次第という予測不可能な問題の造形をスケッチする。

現実の生き物や本物そっくりの画像を作るのではなく、また空想的には画面を描くのでもなく、数理に組み込まれた新しい生物学的想像空間を生み出しがねらいである。グロースモデルで誕生した自己増殖する形は、エロティックに興味、のたうちまわる進化の運び方にいたかもしれない生き物。あるいははあるかかなたの未来には存在するかもしれない生物を表している。「かもしれない生物」。

The "GROWTH Model" is a self-organizing method to give form to one's rich imagination or to develop one's own formative algorithm of complex life-form. As the effect of time progression, a program generates a form and this form is allowed to grow systematically according to a set formula. However, this "GROWTH Model" is not based on a static process, but a process that allows constructive mathematics to take its course.

Through observation of shells and spirals, repetitions of simple form or inner mathematical principles that are hidden behind the seemingly complex outlook of living creatures are deduced. Placing subtle forms like that of a conch shell as a starting point, shapes of ammonite, nautilus, tentacles, plant vines and coral become visual references for this model.

The most important concept of the "GROWTH Model" is the "recursive structure," which is a repetition of simple rules within complexity. By running a genetic program implemented with this structure, the computer continuously creates multiplying images until it maximizes its memory space. Beginning with an initial shape, the computer generates how the final image appears. Therefore, the "GROWTH Model" is a way to give an unforeseen form to the progress of time.

The model is not intended to create or recreate a living creature or a faithful representation of reality, but to produce a new biochemical pictorial space packed by an algorithm. A self-organizing form created by the "GROWTH Model" represents a creature that sensually means and fulfills and might have existed in the evolutionary past or that may appear in the distant future. It is a "the form of probability."