

**Tatsuo Unemi****Live Performance: SBArt4 breeding on site****Topic: Audio visual art****Authors:****Tatsuo Unemi**

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**References:**

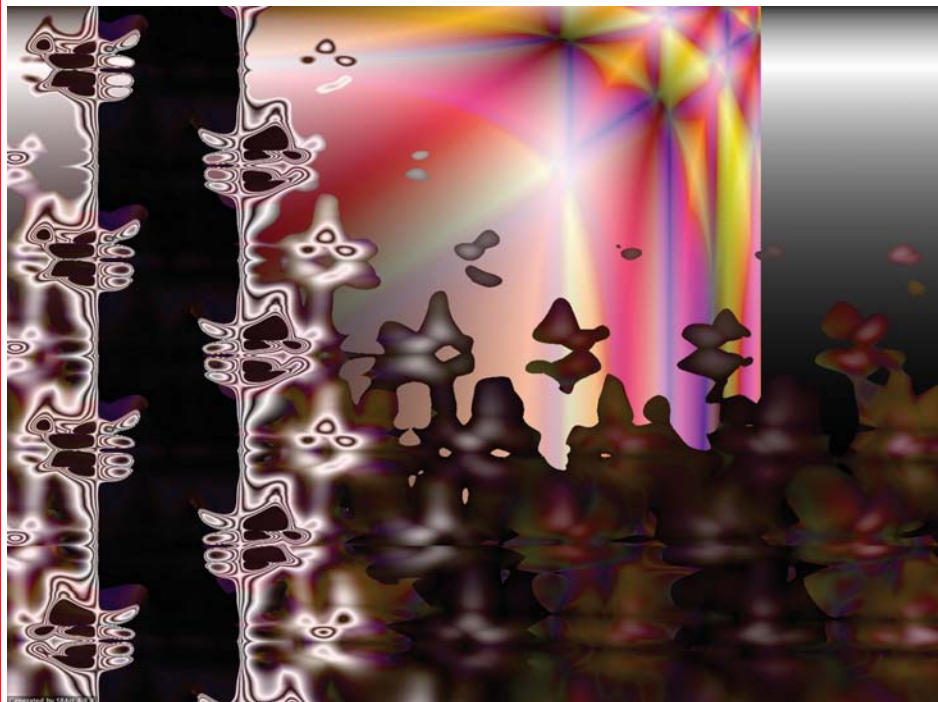
[1] Tatsuo Unemi, "A  
Breeding Tool for  
Abstract Animations and  
Its Applications", 13<sup>th</sup>  
Generative Art  
Conference, 451-458,  
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[2]  
[www.intlab.soka.ac.jp/  
~unemi/sbart/4/](http://www.intlab.soka.ac.jp/~unemi/sbart/4/)

**Abstract:**

SBArt4 is a breeding tool to produce abstract images and animations [1]. Newly developed accompanying software, SBArt4Player, realized seamless sequence of bred animations displayed on a remote machine. The performer breeds a variety of individual animations using SBArt4 on a machine at his front, and sends his favorite individual to SBArt4Player through a network connection. Each individual animation that reached to the remote machine is played back repeatedly with the synchronized sound effect until another one arrives.

Assisted by a mechanism of automated evolution based on computational aesthetic measures as the fitness function, it is relatively easy to produce interesting animations and sound effects efficiently on site. The performance will start from a simple pattern selected from the initial population randomly generated, and then gradually shifts to complex patterns.

Because the breeding process includes spontaneous transformation by mutation and combination, the animations shown in a performance are always different from those in another occasion. This means each performance is just one time. The duration is flexible in a range from three minutes to half an hour as requested on site.



*A sample shot of bred animation.*

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Evolutionary art, real-time breeding, abstract animation