

3 September - 30 September 2011

## JAPAN CREATIVE CENTRE

Solo Exhibition

# NAOKO TOSA

Cultural Bits: Empowering Art of the Future

### Symposium

at Auditorium Faculty of Engineering

National University of Singapore

2 September (Fri.) 6~8pm

Artist Talk and Panel

Panelist: **Wong Yunn Chii**

(Head of Architecture Department,  
National University of Singapore)

**Vibeke D Sorensen**

(Chair, School of Art, Design and Media,  
Nanyang Technological University)

**Oliver Grau**

(Head, Department for Image Science, Danube University)

**Jeffrey Ho**

(Executive Director, DesignSingapore Council,  
Ministry of Information, Communications and The Arts)

**Naoko Tosa**

(Artist and Professor, Kyoto University)

**Ryohei Nakatsu**

(Director, IDMI, National University of Singapore)

### Opening

at Japan Creative Center

3 September (Sat.) 2~4pm

Artist Talk and Discussion

(see panelists on 2 Sept.)

### Curator Talk and Artist Tour

at Japan Creative Center

10 September (Sat.) 2~4pm

Curator: **Atsuhiko Shima**

(Chief Curator, The National Museum of Art, Osaka)

For more details, please visit JCC Website.

Tuesday to Saturday, 10:00am - 6:00pm  
(Closed on Sunday, Monday)

Admission Free

Japan Creative Centre (JCC)  
4 Nassim Road, Singapore 258372  
Website: <http://www.sg.emb-japan.go.jp/JCC/>





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# Profile of Naoko Tosa

**Naoko Tosa is a Japanese Media Artist and an academic with many awards under her belt. Receiving a Ph.D. for Art and Technology research from the University of Tokyo, Naoko Tosa was a fellow at the Centre for Advanced Visual Studies at Massachusetts Institute of Technology from 2002 to 2004.**

**Currently she is a professor at Kyoto University and a visiting professor of the National University of Singapore.**

**Naoko Tosa as an artist believes in the artistic concept that "various cultures in the world are connected just as one culture from the ancient time of human history at unconsciousness level overcoming nationalism". Connecting this concept to a computer, she has created a new concept called "Cultural Bits", creating a new frontier of art products to lead society to a richer future. Covering a wide range of areas, Naoko Tosa's art includes digital painting, video arts, art documentary, augmented reality art just to name a few.**

**For more details go to URL <http://www.tosa.media.kyoto-u.ac.jp/index.j.html>**

**Naoko Tosa has exhibited her art works at the Museum of Modern Art, New York, the New York Metropolitan Art Museum and other locations internationally. In 2000, she received prizes from the Interactive Art section in ARS Electronica, as well as a 2nd Prize for Nabi Digital Storytelling Competition of Intangible Heritage, organized by UNESCO 2004.**

# MoMA Collection: Video Art

<http://moma.org/collection/>

HOME > EXPLORE > THE COLLECTION

CALENDAR BUY TICKETS JOIN ABOUT A- | A+

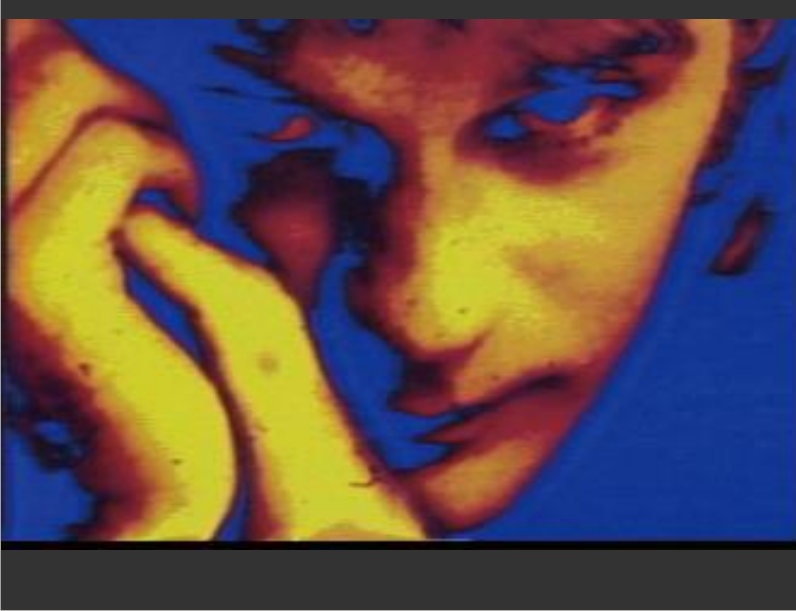
6,642 Artists and 36,606 Works Online

## THE COLLECTION

Open Search Filter Works: All Dept: All Decade: All

Search by Artist, Work, or Keyword ADVANCED SEARCH THUMBNAILS SLIDESHOW LIST SINGLE OBJECT

NAOKO TOSA. (JAPANESE, BORN 1961)  
SHOWING 1 OF 1



ADD TO MY COLLECTION

*An Expression*  
Naoko Tosa (Japanese, born 1961)

1985. Video (color, sound), 9 min. Purchase. © 2011 Naoko Tosa  
542.1986

**Related Links**

Works: [Naoko Tosa \[1\]](#)  
Department: [Media and Performance Art \[1070\]](#)  
Classification: [Media \[944\]](#)  
Date: 1985

Resources: [DADABASE library search](#)  
Permalink: [Create a permanent link to this page](#)

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**MoMA PS1** VISIT EXPLORE LEARN SUPPORT SHOP

This is a work that measures the brightness of an image from a video camera and generates music from the brightness while sampling various facial expressions automatically.

The image is not constructed over time, and the structure of the whole image is exposed gradually with the associated music. High-pitched sound is generated when the brightness of the image falls, and when it rises, bass sound is generated.

Five kinds of sound sources are available, and these are controlled by an analog synthesizer. Because the rate of change in the image is so intense, the finished work looks/sounds like a wild beast.



# Digital Scroll: Asian Charms Series, 2011



# The Art of ZEN

**Naoko Tosa wanted to simulate an experience of Zenmeditation using a computer**

**There is no "hesitation" in a computer. The scheduled communications proceed as if the machine knows exactly what it is doing. However, human consciousness including language and judgment is constantly wavering and therefore human frequently hesitate.**

**Buddhism and Daoism hover at the base of Eastern philosophy and Japanese culture, where the rhythm of a Haiku and the design of a Kimono flutter freely. Within that setting, ideas indeterminate or ambiguous are not destroyed, but preserved - they bide their time on the bench until a more resonant feeling emerges. When this resolution is finally reached, they rise from the bench and rush to the playing field.**

**With the Art of ZEN, she focused on the "hesitation" lurking within human consciousness and unconsciousness, as the Zen ascetic explores the Zen Dialogues led by a Zen master. She projected this Eastern, Japanese sensibility onto a computer screen and built an interface so that the users could enter the world of a Japanese Sansui ink painting.**





# Sansui in Glass "Four Seasons," 2011





# Korea EXPO 2012 Digital Gallery work

## Under Water Sansui with Four Gods



These images will be shown on a huge LED display with the size of 250.6m x 23.04m at EXPO 2012 held in Korea. Dynamic movements of four Asian gods and quiet underwater Sansui images are combined and shown on the display.

From the ancient time both in Korea, China, and Japan, there has been a legend that four sacred beasts or four gods exist in four directions protecting people.





Sansui ink painting: A result of Cultural Computing which treat Japanese cultural spirits such as Wabi and Sabi, Downloadable Software for I-Phone, supervised by Media Artist Prof. Naoko Tosa



#### Description

Sansui is a style of Japanese ink painting that usually depicts landscapes, using the juxtaposition of black ink and white paper and empty space to create striking yet peaceful works.

The style dates back to 5th century China, later making its way to Japan. In Sansui Ink Painting, you can create Sansui paintings, or Sansuiga, with ease, simply by arranging items on the screen. The scene can then be animated, accompanied by soothing traditional music.

This game-meets-interactive art experience was informed and guided by Japanese media artist and Professor Naoko Tosa, helping users create appealing and accurate sansui paintings every time.

\$2.99

Category: [Entertainment](#)

Updated: Apr 06, 2010

Current Version: 1.0.1

1.0.1 (iPhone OS 3.0 Tested)

10.5 MB

Languages: English, Japanese

Seller: Necrosoft Games LLC

© 2010 Necrosoft Games LLC

[Rated 4+](#)

Requirements: Compatible with iPhone, iPod touch, and iPad.  
Requires iPhone OS 2.2.1 or later.

[View In iTunes](#)

<http://bit.ly/aTAuc8>



#### CONTACT :

**Necrosoft Games LLC**

Brandon Sheffield [brandon@insertcredit.com](mailto:brandon@insertcredit.com)

**NAOKO TOSA:Kyoto University Tosa Lab.**

Tel&Fax:075-753-9081 E-mail:tosa@media.kyoto-u.ac.jp

<http://www.tosa.media.kyoto-u.ac.jp/>

# KABUKI-MONO

The Art of Kumadori Facial expression for Manga and Cosplay



1

2



3



An idea in Cultural Computing is that any local culture can be accepted globally. The web connects the far reaches of the world. From the integration of these cultures, new pop culture emerges.

For example youth across earth enjoy Japanese Manga and Cosplay. These fulfill a human desire to be someone else. Japan has various other cultural activities: one is "Kabuki," born in the Edo era and has been enjoyed by many since. The term Kabuki is from "Kabuku," that means out of ordinary. Actors make up their faces specially, speak exaggeratedly, and over-act, appealing to an audience. The behaviors are similar to punk fashion. The makeup, called Kumadori, is like the makeup of native Africans and Native Americans. These come from a desire to appeal to others. It is important to display local culture and share it. With this system you can change your face into a face of Kabuki actor and will have a feeling of enjoying Cosplay.



# Japanese Design Software

## Extracting Color Shapes

### ① Extracting and labeling specified colors



fig.1

Fig.1 shows input image (left side) and output extracted shape image with selected color (right side). Then the user select the range from extracted shape in right image. The computer calculates Hu moments between the selected shape and motif images and get the similarity by substituting them.

## Searching the Similar Motifs

### ② The image of an extracted shape



fig.2

Fig.2 is a clipped image of selection range. The software searches the similar shape from its motif database. Five most-similar images will be returned.

### ③ Search results from the shape



fig.3

Fig.3 shows the results of a search. They are rearranged by the similarity from left (most similar) to right (less similar). The user selects a motif to use in next process.

## Applying the Design and Kasane

### ④ Coloring image with Kasane colors

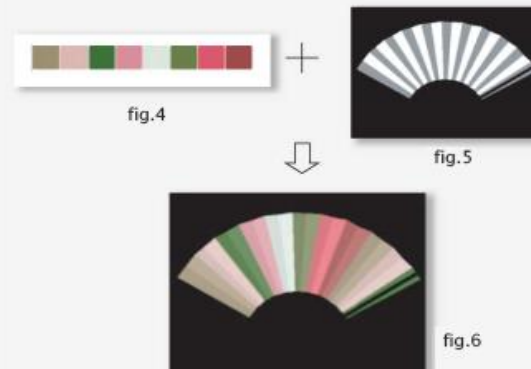


fig.4

fig.5

fig.6

The representative colors (8 in this example) are automatically extracted from source image, and then they are applied as Kasane colors (fig.4). The Japanese fan (fig.5) is colored in Kasane colors (fig. 6)

### ⑤ Synthesize selected shape into the colored image



fig.7

Then the selected motif (fig.7) is added with transparency, and the image will be finalized (fig.8). The motif image is automatically tiled.



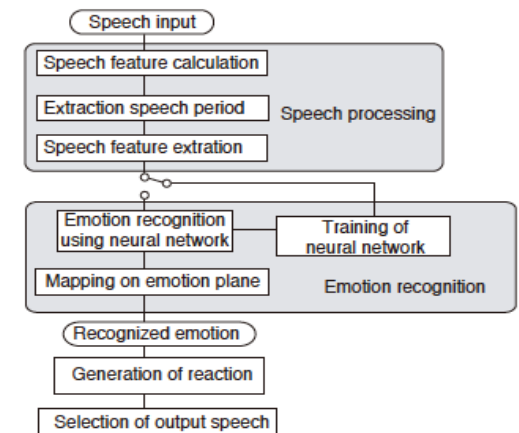
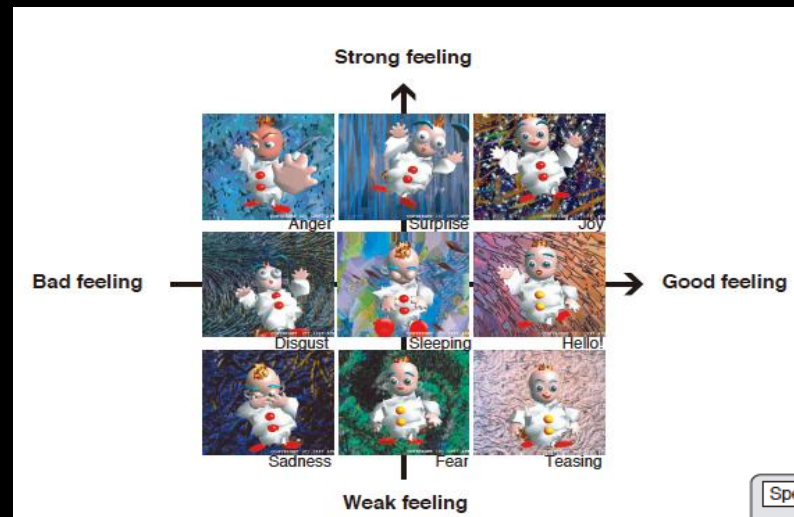
fig.8

Will you make your own design based on traditional Japanese color coordination?

# Neuro-Baby



**Neuro-Baby is an autonomous computer agent with automatically generated facial expressions and behaviors. Neuro-Baby can respond to human voice by recognizing emotions and feelings.**

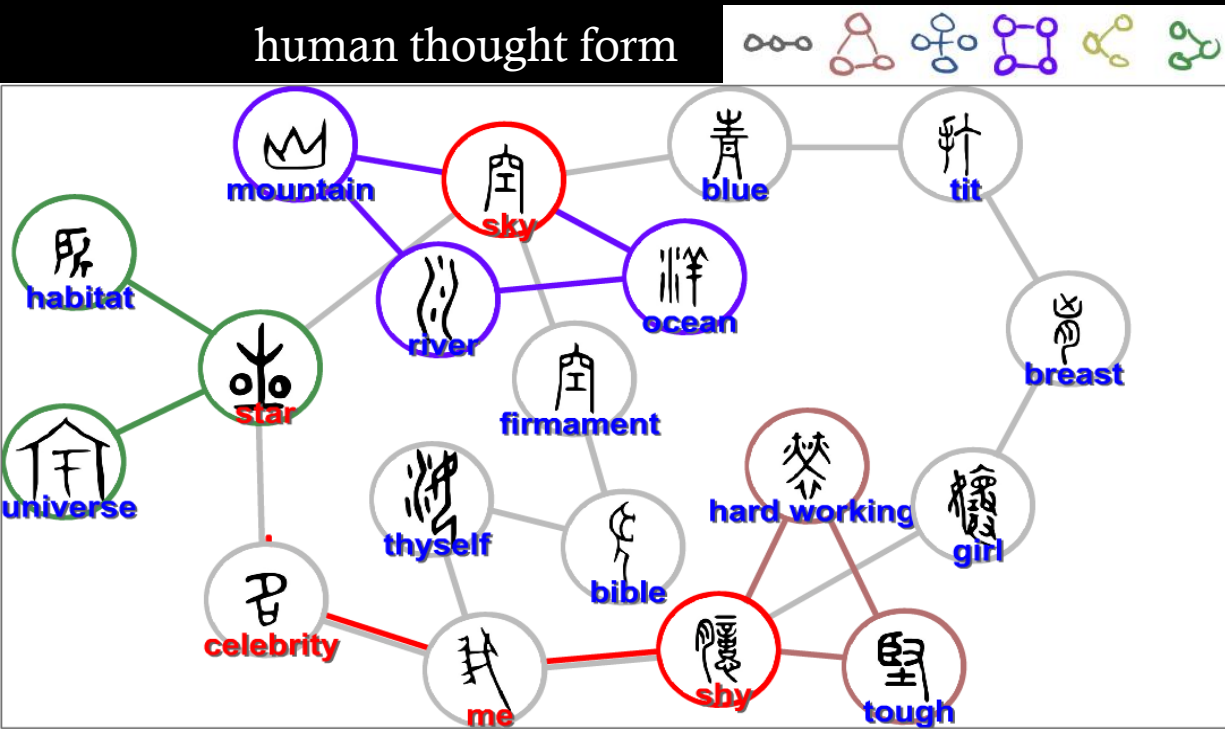




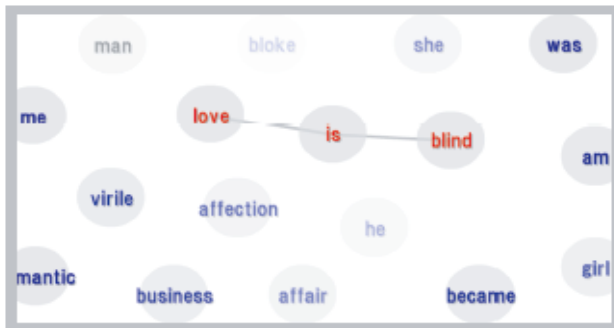
# i.plot: Software Reading Between the Lines

## Generation of association using human thought form

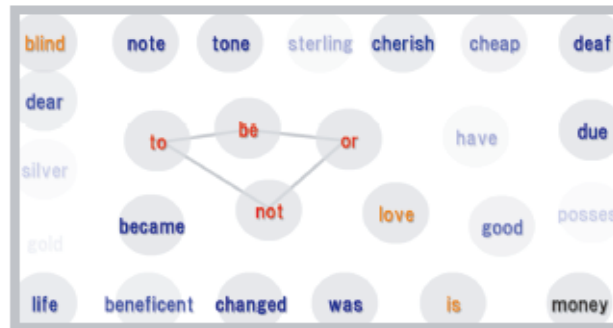
human thought form



She designed a software that shows various relationships among words through “inspirational” computing. When a user inputs a sentence, the system could connect between the words based on association using a human thought form. The user feels the imagination and the extent of the sentence. By repeating this he/she would be able to “pick up the subtext” of the sentences or, in other words, able to “read between lines.”



1



2



3

# Media Art Video/Demo

## ZENetic Computer (1992-1994)

Tosa Naoko wanted to develop a system with people can experience Zen dialogue and Zen meditation.



## Interactive Poem (1996-1998)

Computer system that can read poem together with a user.



## Neuro-Baby (1992-1994)

## Neuro-Baby Internet (2000-2001)

Why do people, regardless of age or gender, have an affinity for objects manifested in the human form? From the earthen figures of ancient times to mechanical dolls, teddy bears and robots, is it not true that man has conceived such objects in his imagination, then formed attachments and transferred emotions to them?

Naoko Tosa has been studying the issues of communication and esthetics of artificial life that possess this "human form" in modern society, both from artistic and engineering standpoints. An example is presented in which emotions are interpreted from human voices and emotional responses are triggered within the interactive setting of "Neuro-Baby"

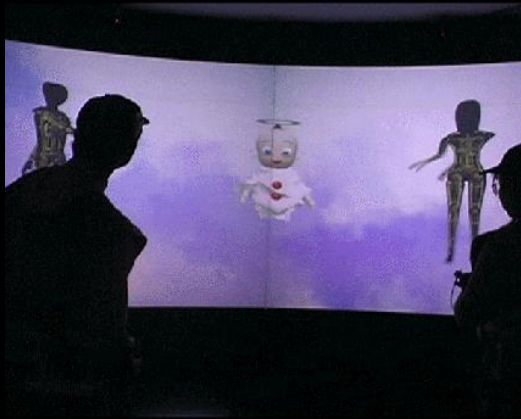




# Media Art Video/Demo

## Romeo & Juliet in Hades(1998-1999)

**You can become a hero/heroin in an interactive movie**



## Interactive Comedy (2001)

**You can exchange comical dialogues with a computer**



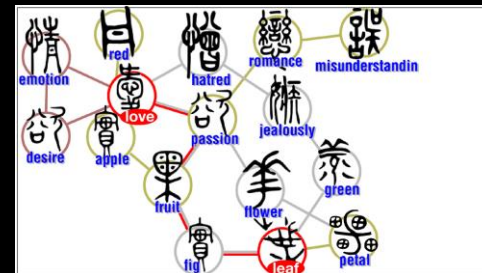
## Unconscious Flow (1999-2000)

**Two computer-generated mermaids function as individual agents for two viewers. Each mermaid agent moves in sync with the heart rate detected by an electrode attached to the collarbone of its viewer. Then, using a synchronization interaction model that calculates the mutual heart rate on a personal computer, the two mermaids express hidden non-verbal communication.**



## I.plot (2004-2009)

**This work, because it provides inspiration containing humor and wisdom, offers people new opportunities for stimulation and symbiosis.**



# Video Art

## Trip (1985)

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This work involved studying images burned into people's minds while loosening people's tensions. The form and color of the image transform, and an extremely strong feeling of tension is given to the transformed image. To Naoko Tosa, the balance of video technology and creativity went well in this work, and she was able to grasp the rhythm of video editing. This work is a homage for Ed Emshwiller "Sunstone"



## Trance (1989)

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This work traces images connected by human and computer generated fractal images.





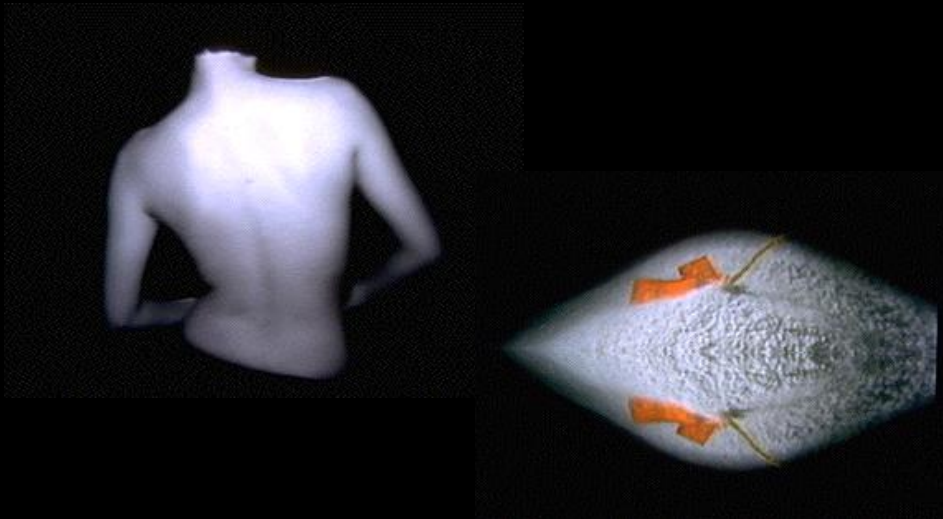
# Video Art

## Ecstasy (1987)

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**This work was presented in a lot of international film festivals, including the animation section of SIGGRAPH in 1986.**

**Formed an image of ecstasy and lifting up. This is a work that stacked images as a new method, using pictures taken from real life, like a woman's torso, and compounding it with computer graphics.**



## Gush! (1989)

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**Image practice of Cubism. The image Cubism was tried to realize by overlapping various time sequence images.**

**Firstly the image of the dancer are recorded with six cameras from different angles. Then dancer's image is divided into nine and recorded in the digital frame memory. As a next step dancer's images with images of six different angles and nine sections were overlapped with the same time axis. Thus an image collage is composed that means emotions expressed by Human body movements.**

