

# Computer Baby Popular All Over the World

**Close emotional interaction with a computer? Are you kidding? The most people feel for a computer is usually 'computer rage', in the worst case this may result in beating the computer up. Not Japanese artist and computer scientist Dr. Naoko Tosa, who wants to initiate "warm communication" with her screen and provide "emotional feedback" from computers.**

This Monday, Tosa set up a cosy baby room for her twin 'Neuro Babies' in the main building. Neuro Baby reacts to voice intonation and will cry if you shout, gurgle if you're nice or show surprise at your comments. Shy students can use a squeaky toy to elicit a reaction. "An

artwork should have power. That includes new and positive feelings. It is my artistic power to be able to create that," says Tosa, who is affiliated with Advanced Telecommunications Research Institute International in Japan and MIT in the USA. Neuro Baby is part of 'Art in Output', an interactive art exhibition from November 2 to 23 at TU/e. Seven internationally renowned artists are busy constructing their exhibits in the main building this week. Every visitor will essentially create a different set of art works, because the exhibits react to his or her behaviour.

## Lying to Baby

"People's behaviour with Neuro Baby is very interesting," says Naoko Tosa.

"Sometimes people try to lie to Neuro Baby by saying bad things in a sweet tone of voice. Of course Neuro Baby believes them."

The intricate programming needed for Neuro Baby has developed since its inception in 1993, and is still improving. Tosa hopes to contribute to better communication with computers in the future. Neuro Baby is a neural network that can be taught to adapt. At Tosa's Internet site Neuro Baby's expression and verbal reactions can be influenced consecutively by people in different countries. "I started with a big computer. Now I use two desktops and one laptop. Next year Neuro Baby will graduate to just one laptop. If technology grows, the baby grows," says Tosa, who is sometimes also called 'Neuro Mama'.

## Interactive Art Workshops

Studium Generale is also organising two workshops in connection with 'Art in Output'. The first on Friday, November 3 from 1.00 to 5.30 p.m., when artist Mirosław Rogala will talk about elements of interactive art. After an introduction, participants will help the artist create a new version of his work 'Divided we Sing'. Experience is not needed!

The second workshop is by internationally renowned media artist Ulrike Gabriel.

Participants will work with her on 'telebombs'. Telebombs is the core of Gabriel's interactive installation 'sphere' as exhibited in 'Art in Output'. Students are invited to participate in this work in progress from November 6 to 20. Conditions for participation are to be discussed with the artist, but will certainly include experience in programming C or Java. Please contact Maarten Pieterse at 040 2472634 or M.R.J.Pieterse@tue.nl if you would like more information.

## Universal Theme

Would it be interesting to program Neuro Baby to grow up? "Well, it could be. But people love this, they don't want him to grow up. Neuro Baby taps into a universal theme and causes strong identification. He's actually very popular with audiences the world over." Neuro Baby understands and reacts to male and female voices saying fifty Japanese and ten English phrases. Naoko Tosa has promised students at TU/e she will work with them to create a Dutch version of Neuro Baby.

Naoko Tosa attended a traditional art school in Japan,



Neuro Mama Dr. Naoko Tosa talking to virtual Neuro Baby. "How are you?" Photo by Bram Saeys.

before continuing her studies to become a computer scientist. "I'm interested in new kinds of art and I wanted a warmer interaction with artworks. Before Neuro Baby I did some video art, which is akin to experimental film.

But that draws only a small public, and I want everyone to understand my work." Other artists participating in 'Art in Output' are Holger Förster (Germany), David and Ulrike Gabriel (Germany), Nigel Johnson (Great

Britain), Geert Mul (Netherlands) and Mirosław Rogala (USA)./ ●

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