

Your Teeth in 3-D

by Jess Morrison

If you think brushing your teeth is a bore, researchers from the National Taiwan University have just the gadget for you. And this gadget might even save you from cavities.

Hao-hua Chu and his colleagues have come up with a toothbrush that makes sure you don't miss a spot. It's called the Playful Toothbrush, and it turns brushing your teeth into a video game.

It all starts with a cube-like extension attached to the end of your toothbrush. This extension contains three light-emitting diodes (LEDs) on each side. Using computer vision technology, these LEDs allow sensors to detect 24 areas of your mouth in 3-D as you brush.

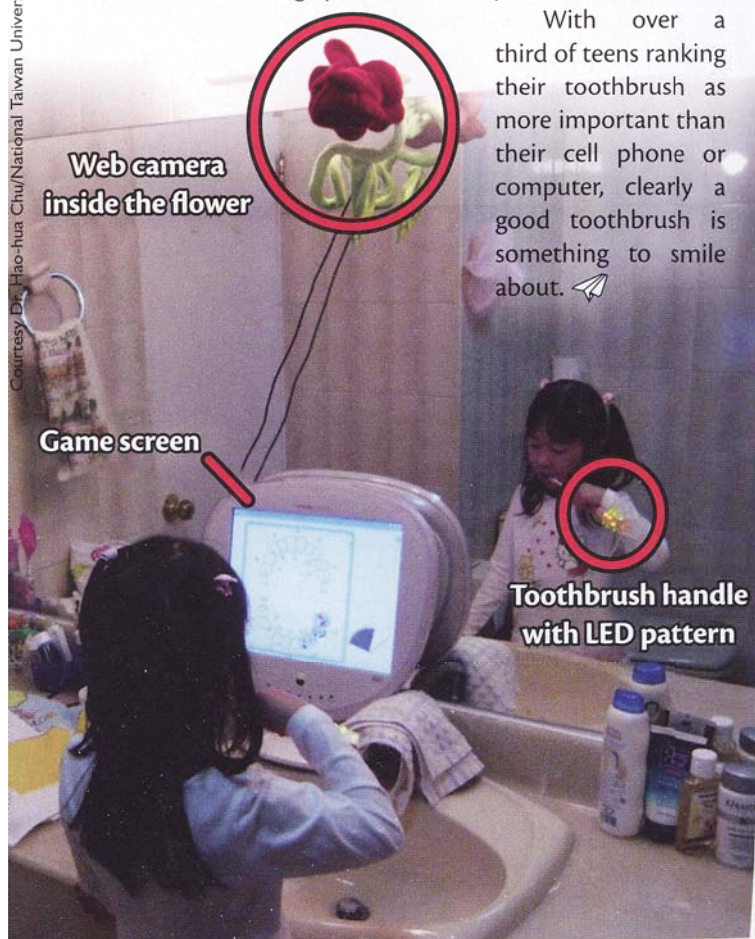
A webcam on the wall tracks your brushing movements, and feeds the information it sees into a computer. (Yes, the computer screen is in the bathroom with you.) As you brush up, down, and sideways, the computer can work out exactly which teeth are getting cleaned.

Where's the game in this? The Playful Toothbrush uses your brushing information and displays it on a screen so you can watch colourful dirt from your "virtual teeth" being scrubbed away in front of you in real time. Colours and sounds then encourage you to brush any missed teeth.

With over a third of teens ranking their toothbrush as more important than their cell phone or computer, clearly a good toothbrush is something to smile about. ✈

Naphthalina

Courtesy Dr. Hao-hua Chu/National Taiwan University



Web camera
inside the flower

Game screen

Toothbrush handle
with LED pattern