Patient Simulation System for Dental Education

SIMROID

Thinking ahead. Focused on life.

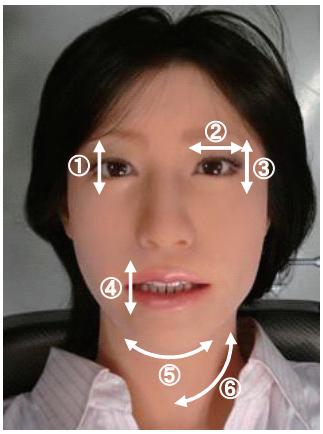
MORITA

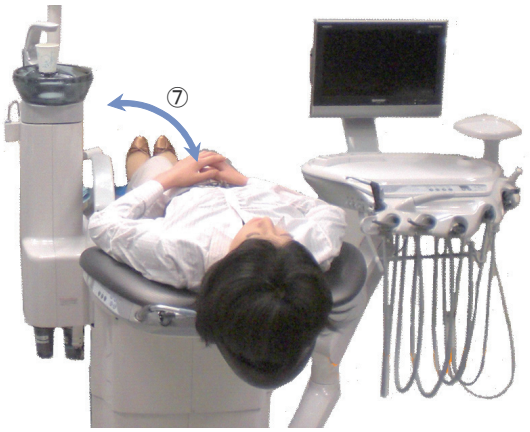
Development Background

○ Target Needs
Until now, training using simulators has focused primarily on the acquisition of skills and techniques necessary for treatment, but has paid little attention to patient stress or comfort. However, it is now recognized that dental training should give more consideration to the stress patients endure during treatment.

○ Goals
To address these shortcomings, we have developed a multifaceted training program combined with an interactive simulation system using a robot that closely mimics typical human behaviors such as head and eye movement, arm movement, and a variety of facial expressions. The robot has also been designed to respond to questions and react to verbal commands. Furthermore, the system provides objective feedback by recording, reproducing, and evaluating the trainee's actions taken while delivering treatment. In this way, trainees will improve both their technical and communication skills in order to further support the ideal of human-centered treatment.

Moving Parts





Movable parts (By air cylinder)

① Eyelids (Up-Down)
② Eyeballs (Left-Right)
③ Eyeballs (Up-Down)
④ Mouth (Open-Close)
⑤ Neck (Left-Right)
⑥ Neck (Up-Down)
⑦ Left Hand (Up-Down)

SIMROID System Components

SIMROID ®CCD Camera Arms
(upper and frontal)

SIMROID ®GUI System
- Computer
- SIMROID ®GUI System
- CCD Camera System
- LCD Monitor (touch panel)

SIMROID ®Voice Recognition Headset

SIMROID ®Robot

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