

5DT VRPDS

Virtual Reality Pain Distraction System



Description

The objective of the 5DT Virtual Reality Pain Distraction System (VRPDS) is to distract the attention of patients that undergo painful procedures from the pain associated with the procedure. VRPDS is aimed at painful procedures (e.g. wound-dressing for burn victims) where anesthesia is not a viable option. ***The clinical applications of this system are under development. The current system is intended for investigative and research purposes only.***

The patient wears a Head Mounted Display (HMD) during the procedure (see VRPDS Hardware image below). The HMD fully immerses the patient in the distraction game. The HMD also serves to isolate the patient from the procedure, since the patient cannot see the procedure being performed. The patient controls the distraction game with either a game pad or a joystick (see image below).

The distraction games were designed to provide a rich sensory experience. Fast-moving, colorful and interesting imagery provide visual stimulation. A variety of background sounds and music provides aural stimulation. Force-feedback by the game controls provides tactile stimulation. The games are interactive and require serious concentration. There are various game levels to keep the patients challenged and interested continuously. Two pain distraction games are currently featured namely the ***Jolly Jumpin Jellies*** (above image - bottom left and right) and ***Street Luge*** (above image - top left and right).

The Jolly Jumpin Jellies are aimed at the younger age group (3-8). The game features a fantasy virtual world with Jolly Jumpin Jellies, a play park, a rainbow, boat rides, birds, butterflies and the main character 'Gotcha'. The patient

controls 'Gotcha' to catch the jellies. There are 7 jumpin jellies that must be caught in the shortest possible time. Each progressive game level provides for faster jellies that are more difficult to catch.

Street Luge is aimed at the 8-88 age group. It is essentially downhill racing on a big skate board, with the game player lying on his/her back on the skate board. The game features a fast-moving reality-based virtual world. Each progressive game level features a higher gravity value, resulting in increasing downhill speeds for the Luge.



VRPDS Hardware

Features

- Multisensory Stimulation (visual, aural, force-feedback)
- Head Mounted Display (HMD) with Head Tracking
- Distraction Games for Different Age-groups
- Multicultural Distraction Games
- Multiple Game Levels offer a Continued Challenge
- Webcam for View of Patient (for Research Purposes)
- Force-feedback Game Pad or Joystick
- Full User Administration Module
- Interactive Non-violent Content
- Distraction Games appeals to Both Sexes
- Sensory-rich Virtual Worlds
- Reporting Tools

Further Information

Detailed product brochures and product images may be viewed (and/or downloaded) on the web at: www.5DT.com

Other Medical Systems and Simulators by 5DT

- * **Exposure Treatment Phobia Simulator**
Fear of height, fear of small spaces, fear of darkness (more phobias are added continuously)
- **Endoscope Training Simulator Series**
Gastroscope, Duodenoscope, Colonoscope, Histeroscope, Bronchoscope, Cystoscope, Arthroscop

About 5DT

5DT (Fifth Dimension Technologies) is a high technology company specializing in Virtual Reality [VR]. 5DT develops, produces, and distributes affordable VR hardware, software and systems. 5DT's main focus is training simulators. 5DT also develops custom systems for clients.

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