Monitoring device for the psychomotor growth of a child

INVENTORS: Francesca Cecchi
Francesco Paolo Falotico
Paolo Dario
Cecilia Laschi
Irene Mannari
Giovanni Passetti
Andrea Pratesi

STATUS PATENT: Granted

PRIORITY N° : 102016000036049

PRIORITY DATE: 07/04/2016

PUBLISHED AS: IT

Invention

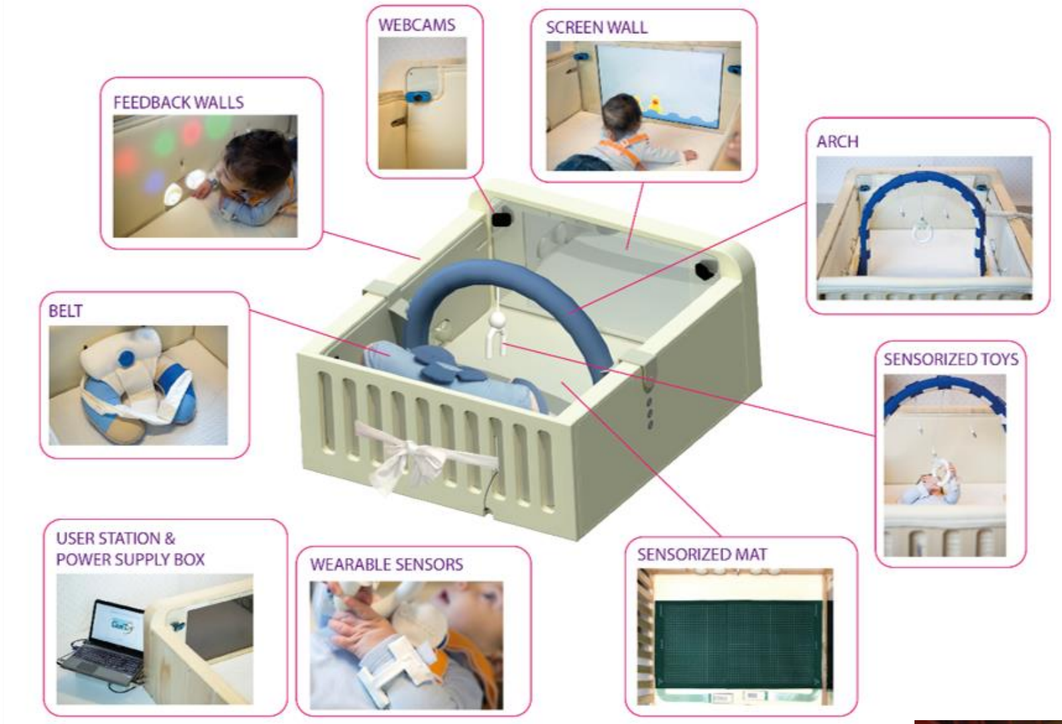
CareToy is a modular smart «toy gym» for domestic use of premature babies. It consists of an enriched stimulating environment able to provide many stimuli to the baby (lights, colours and videos) in 360° and able to record the feedback (activity of the baby) thanks to many sensors (pressure, strenght and movement) and to a webcam.

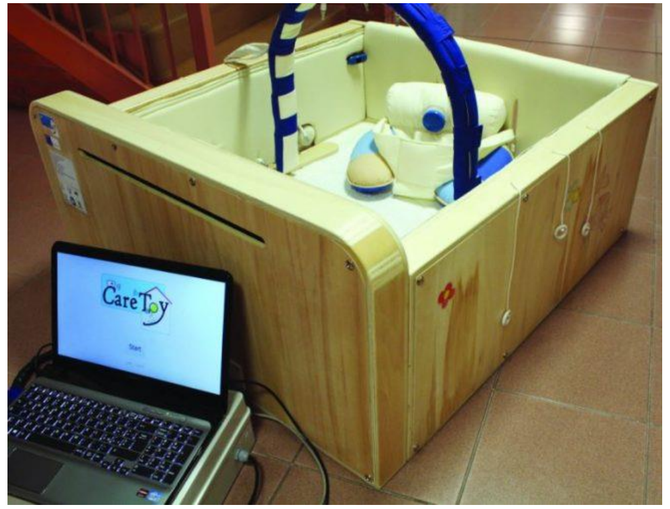
A promoting and monitoring system for the psychomotor growth of a child including a phisical interaction environment with many sensing areas (light and colours) able to record data and many sensing areas to recird pressure data to monitor the feedback of the child to the inputs. The system is completed by a control unit and a video interface. The system is completed with a control unit and a video interface. This invention is able in a distinctive manner to monitor a multiplicity of parameters, synchronize the information received and integrate it, so as to obtain better feedback than those offered by other devices based on univocal stimuli, and feedback analyzed one by one. In this way many more nuances are possible in the identification of the motor / cognitive delay of the child.

The main advantages are:

- Modularity;
- Intensive and customized rehabilitation care;
- Domestic use;
- Scientific evidence and validation (Sgandurra et al., PlosONE 2017);
- Compliance with basic requirements of safety for medical device Class II A.

Drawings & pictures





Industrial applications

The fields of application are:

- Bioengeneering;
- Promotion of children psychomotor growth;
- Children rehabilitation.

Possible developments

The research group is interested in obtaining industrial collaborations aimed at increasing the technological maturity of the present invention or industrial partners interested in taking the license of the technology object of this patent.

For more information:

Tech Transfer Office of Scuola Superiore Sant'Anna

Headquarters: Piazza Martiri della Libertà 33, 56127, Pisa

Web site: https://www.santannapisa.it/it

E-mail: uvr@santannapisa.it

For more information:

Ufficio Regionale di Trasferimento Tecnologico

Headquarters: Via Luigi Carlo Farini, 8 50121 Firenze (FI)

E-mail: urtt@regione.toscana.it

SANT'ANNA SCHOOL OF ADVANCED STUDIES PISA

REGIONE TOSCANA

urtt Ufficio Regionale di Trasferimento Tecnologico