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Meet the new ACX.Rehab concept

SFB Tracking – Space Full Body Tracking system with User's Workstation

SFB Tracking system allows therapists to work with patients within specific ranges of motion, engaging selected body segments in multiple starting positions for an active rehabilitation training in virtual reality environment using advanced depth 3D videocamera for space full body tracking & motion capture in real time without the need to attach any sensors to the user's body.

By this way, SFB Tracking is used for:

- enhancing stability and postural control
- improving muscle strength and endurance with progressive effort exercise
- increasing joint mobility and flexibility through guided stretching and range-of-motion exercises
- improving walking patterns and functional mobility
- improving spatial orientation and navigation skills
- developing and improving fine and gross motor skills
- strengthening memory, attention and recall abilities
- enhancing fast problem solving & decision-making abilities
- Performing exercises for selected body segments or the whole body in a standing or sitting position
- Possibility to perform exercises for only one specific limb at a time

Features:

- exercises with integrated real-time biofeedback
- proprioception training
- total body training
- assessment of ranges of motion
- static and dynamic movements
- balance training for patients
- measurement of angles, speed, acceleration

Rehabilitation games in virtual reality environment

Assessment and Evaluation:

- Angles of motion
- Single leg stance test
- Romberg test
- Movement precision tests
- Dynamic test
- Balancing
- Stability test
- Go-NoGo test
- Speed test

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Depth stereo 3D videocamera:

- Array size: 2688 x 1520 pixels
- Baseline: 120 mm
- Output resolution: 2x (2208 x 1242) @ 15 fps
  2x (1920 x 1080) @ 30 fps
  2x (1280 x 720) @ 60 fps
  2x (662 x 376) @ 100 fps
- Depth Range: 0.3 – 20 meters
- FoV (HxVxD): 110º x 70º x 120º
- Object detection: persons, vehicles, custom objects
- Connection: USB 3.0 Type-C with dual locking screws
- Power: via USB 5 V / 380 mA

Wired communication of the depth stereo camera with User's Workstation

User's Workstation provides the integration into a single operation platform and the interconnection with Central Therapist Workstation for assessment, control and set-up of dedicated sessions

Observation of the user test's performance results in live time

Wired & wireless connection and integration with Central Therapist Workstation

Mobile stable stand on 4 wheels with brakes.

Monitor: color display, 43 inches or more (additional sizes available upon individual requests)

PC computer (more advanced parameters available upon individual requests):
- Windows 10, 64 bit
- Processor 2 GHz
- RAM: 8 GB
- Integrated graphics card
- Integrated network card for Wi-Fi & LAN communication
- 2 x USB (3.0) / 2 x USB (2.0)
- wireless keyboard & mouse