SENSOR medica

MOVIT GAIT

3D GAIT ANALYSIS

Powered by CAPTIKS

SUMMARY

Check List

7 Movit Sensors

1 Dongle receiver

1 Calibration base

7 Docks

4 Velcro Bands of 35 cm

2 Velcro Bands of 55 cm

1 Velcro Bands of 80 cm

1 HUB usb with power supply

7 usb cables

1 usb-AB cable

1 Informative notes

1 Case

Introduction

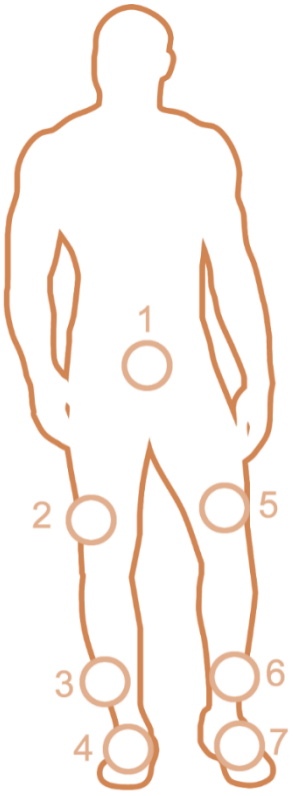
Running the gait analysis test involves the following steps:

- Positioning of the bands and anchoring supports on the subject
- Starting the Motion Studio software
- Switching on the sensors
- Calibration with base
- Positioning of sensors and alignment
- Test registration

The analysis of the gait analysis test involves the following steps:

- Starting the Motion Analyzer Software
- Import of the registration made
- Walk analysis

Band Positioning



Sensor	Band Position	Anchorsupport position
1	On the pelvis, height L5	Center of the pelvis and aligned to the spine
2	Right thigh in the middle of the femur	Lateral part of the thigh and aligned to the femur
3	Tibia right above the malleolus	Lateral part of the leg and aligned to the tibia
4	Right foot on the back	Central part and aligned to the foot
5	Left thigh in the middle of the femur	Lateral part of the thigh and aligned to the femur
6	Tibia left above the malleolus	Lateral part of the leg and aligned to the tibia
7	Left foot on the back	Central part and aligned to the foot

Place the bands and their respective anchoring supports on the subject in the positions listed above.

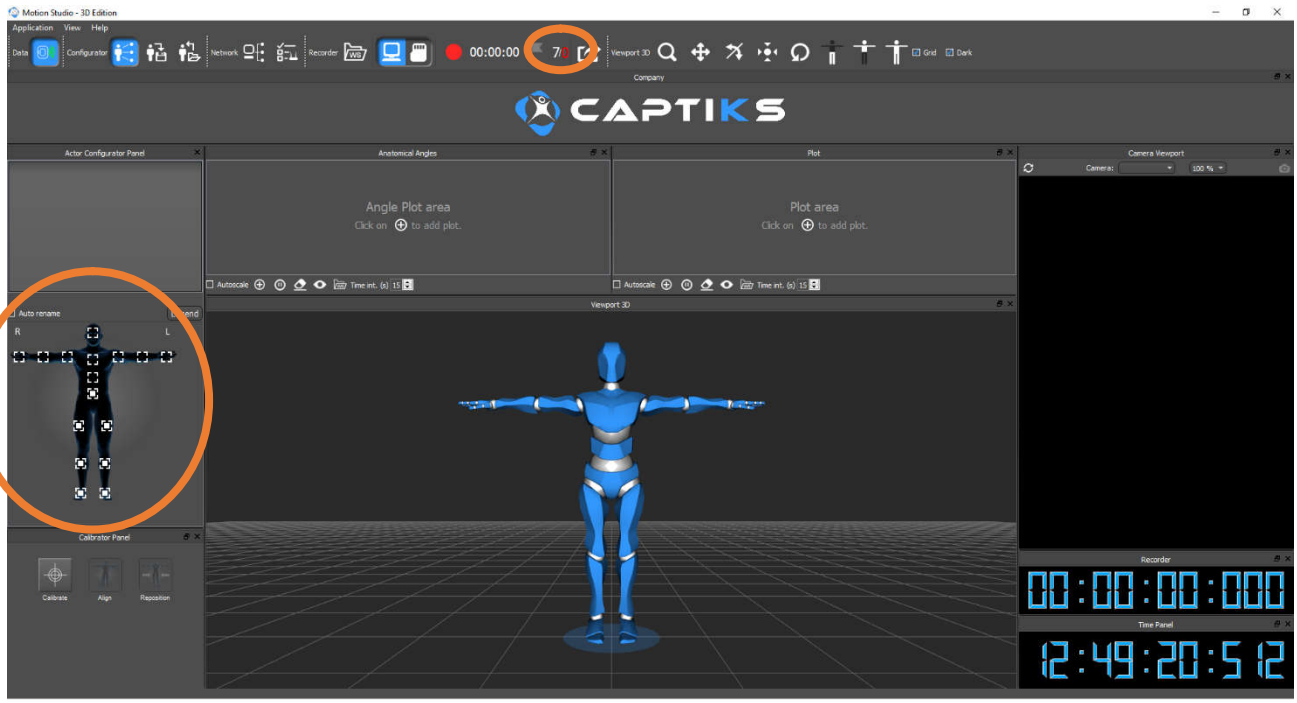
Record the data of the subject (in particular the data of height and weight since used in the analysis phase) and proceed with the ignition and calibration of the system.

Switching on sensors

Start the Motion Studio software to record the session.

Connect the receiver and turn the sensors on level and leave them at rest for at least 10 seconds.

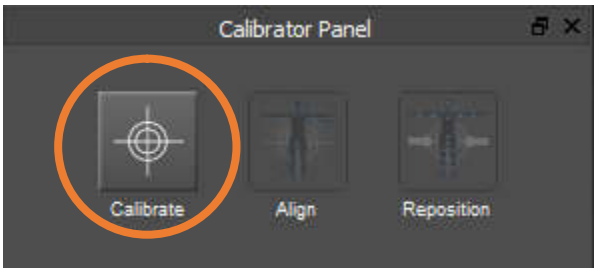
Check the association of the sensors with the receiver (slow and regular blinking and sensors mapped in the Actor Configurator).



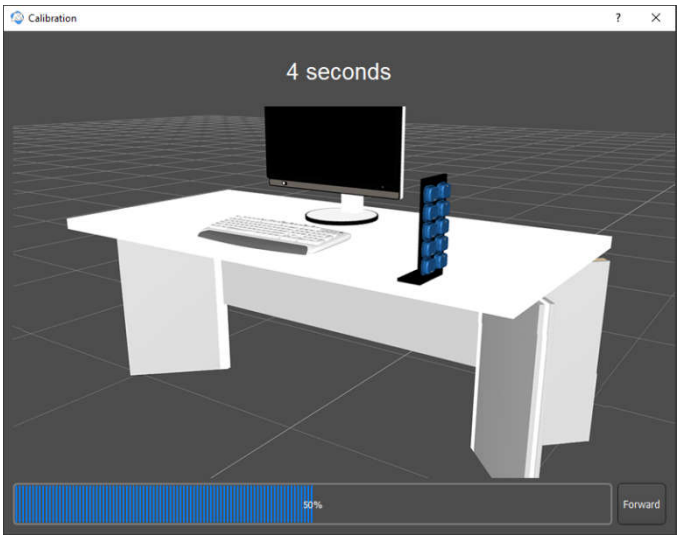
Calibration

Prepare the station so that 3 rotation movements of 90 ° around the 3 axes can be carried out using the calibration base.

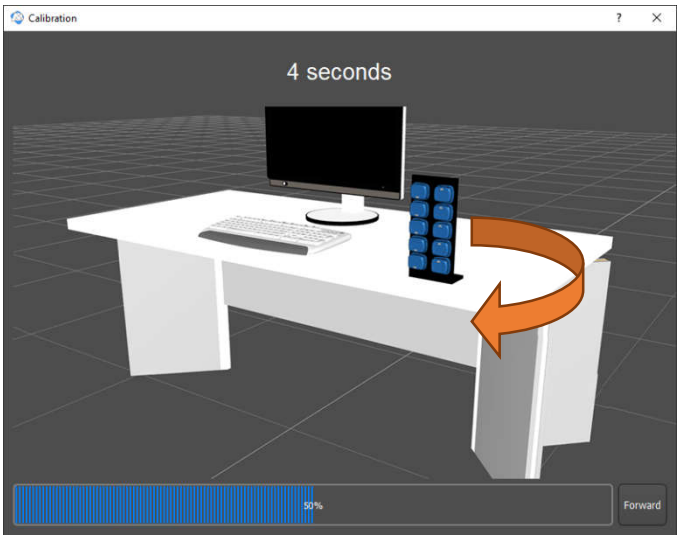
Click on the Calibrate button



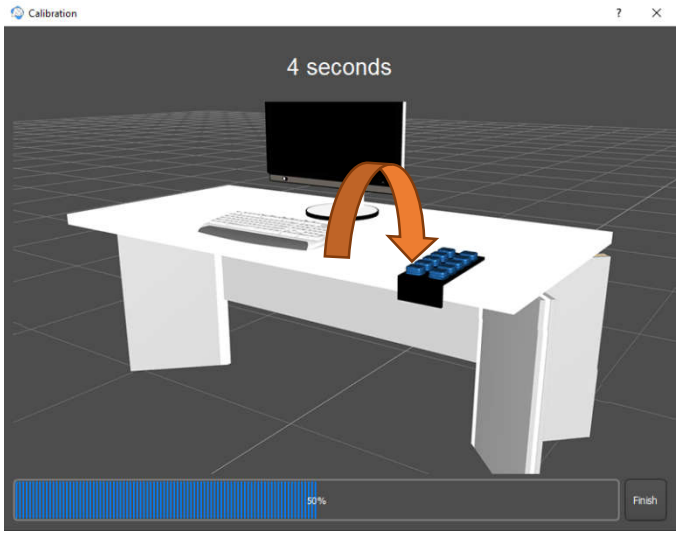
Proceed with the first position keeping the sensor led on the side



Rotate the base clockwise on the transverse plane in order to have the front sensor LED



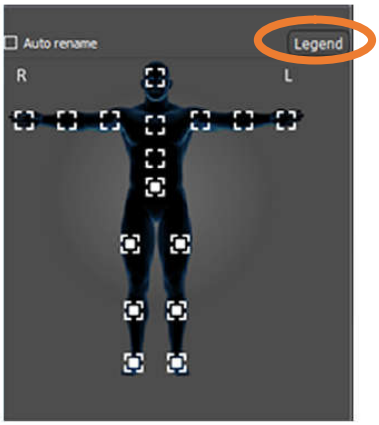
Rotate the base on the sagittal plane by 90 ° so as to observe the LEDs of the sensors from above

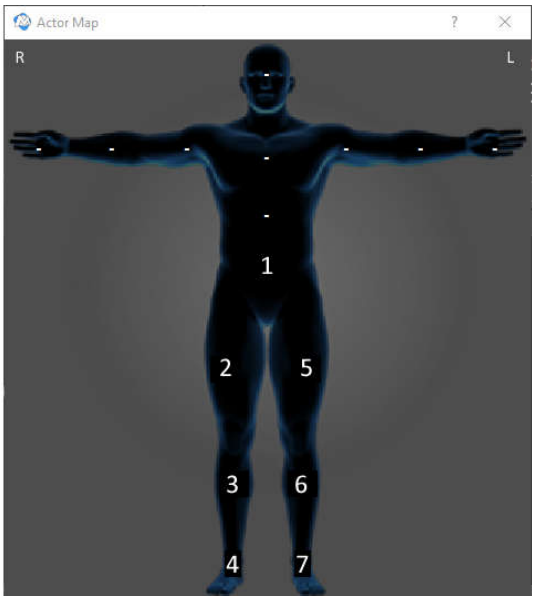


Sensor positioning and alignment

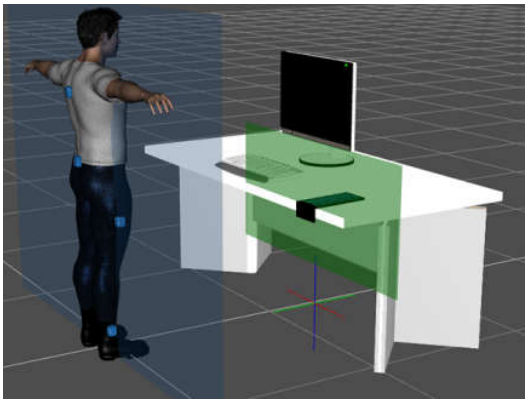
Place the sensors for each anatomical district on the anchoring supports previously positioned on the subject.

It is recommended to click on the "Legend / Legenda" button in order to see more clearly the mapping of each sensor.





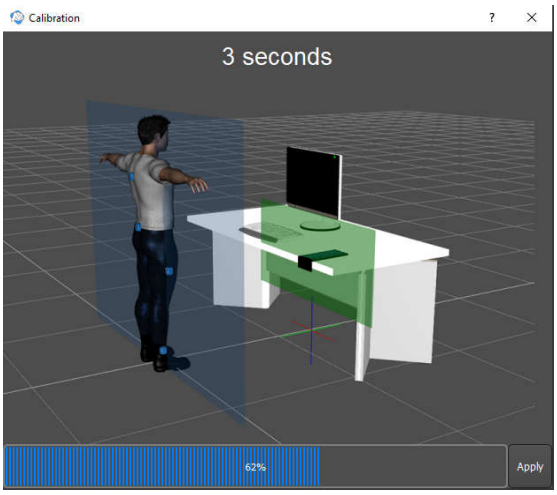
Ask the subject to reach the work station and to go to the base in the T position (T pose).



T pose: Standing position with arms spread sideways. The legs must be as wide apart as the pelvis with the feet aligned in the frontal direction. At this moment the zero position of the subject is calculated.

Click on the Alignbutton

With the person in T-Pose, press the "Apply / Apply" button or wait for the loading bar to fill



It is always recommended to calibrate the system at the start of each recording. If you want to make more recordings on the subject without repeating the calibration phase every time, it is recommended to Reposition the system using the Reposition button.

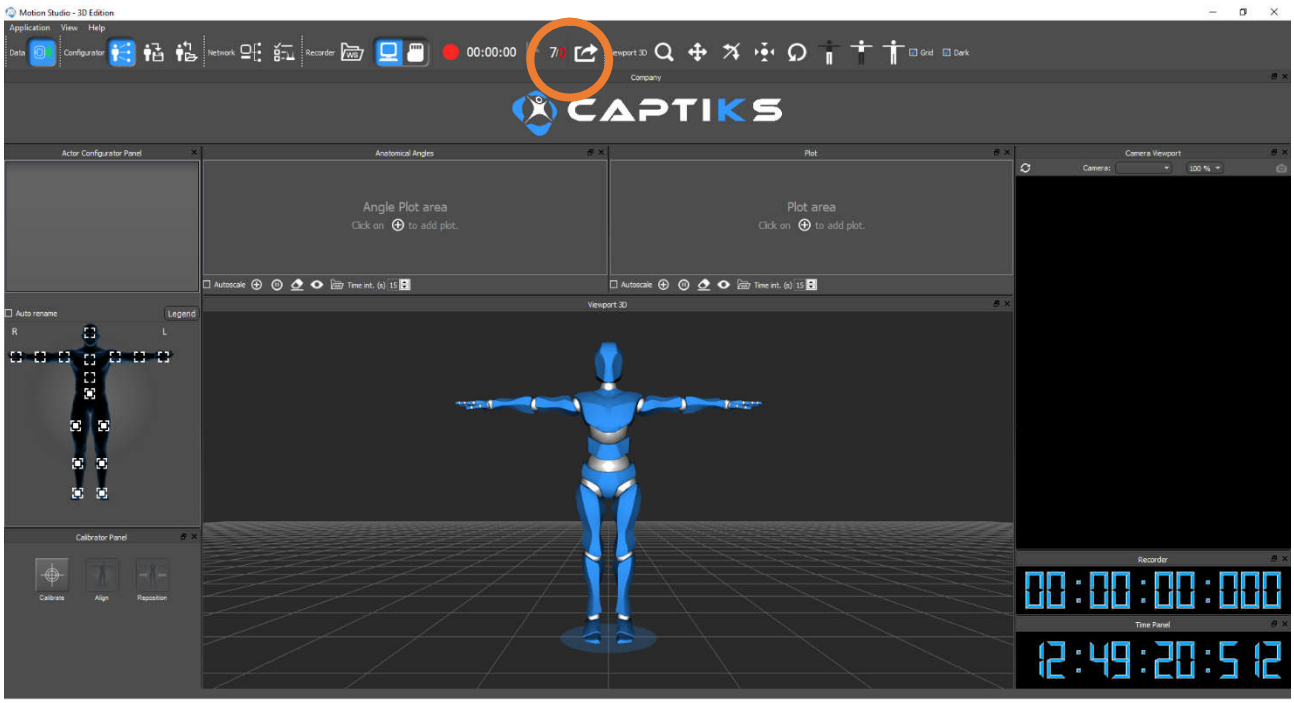
The sensorized subject will have to take the T-Pose in any direction and click on the Reposition button.

Registration

Once the alignment has been carried out, the subject can go to the initial position of the test and the examination can be recorded.

Ask the person to stand upright in the direction of the test and click the Start / Stop button.

After starting the recording the subject must maintain the static position for two seconds, after the two seconds he can start walking at his own speed



The subject must perform a walk in line (at least 5 complete gait cycles per limb) starting from the upright position and ending in an upright position in the same direction of departure (avoid turns and any steps of settling at the end of the test).

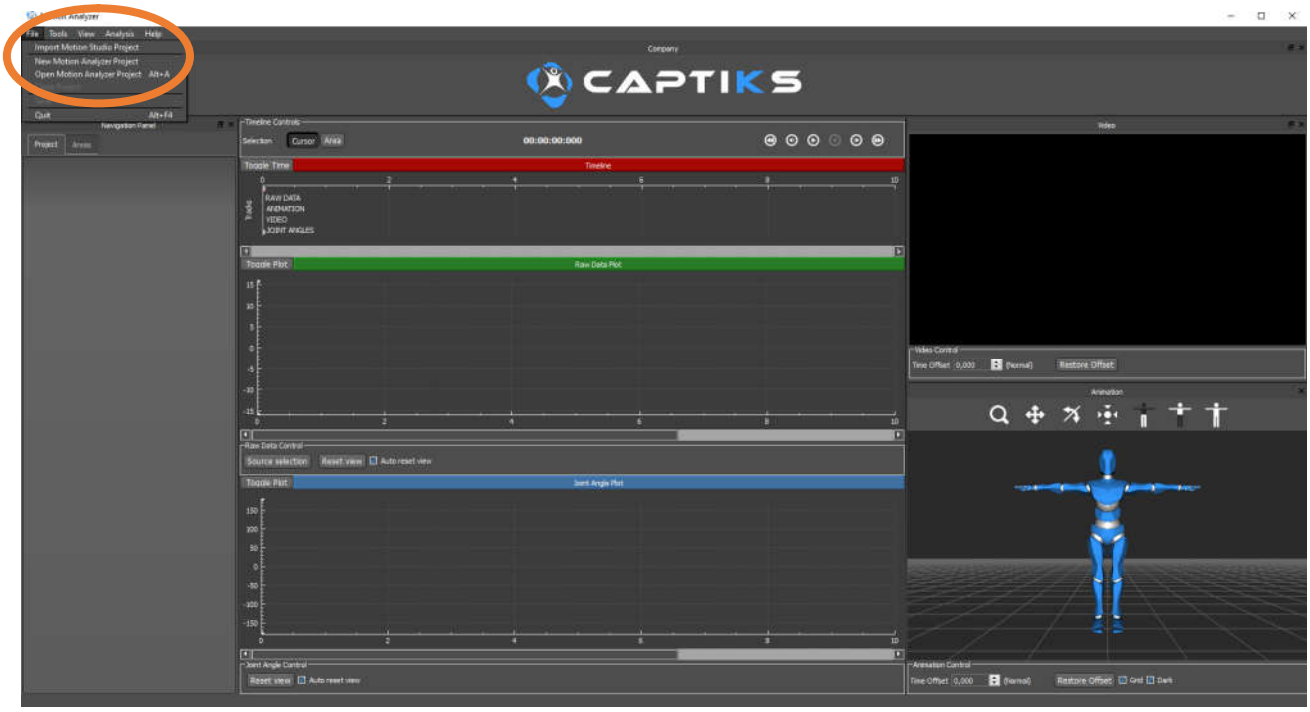
To end the recording, click the Start / Stop button

It is possible to make multiple walks in a single recording as long as the starting position in the direction of the path is marked with a marker and there is a stop phase signaled with an additional marker before the turn for the change of direction. Carrying out multiple tests in a single recording will involve selecting the respective areas of analysis in the Analyzer software.

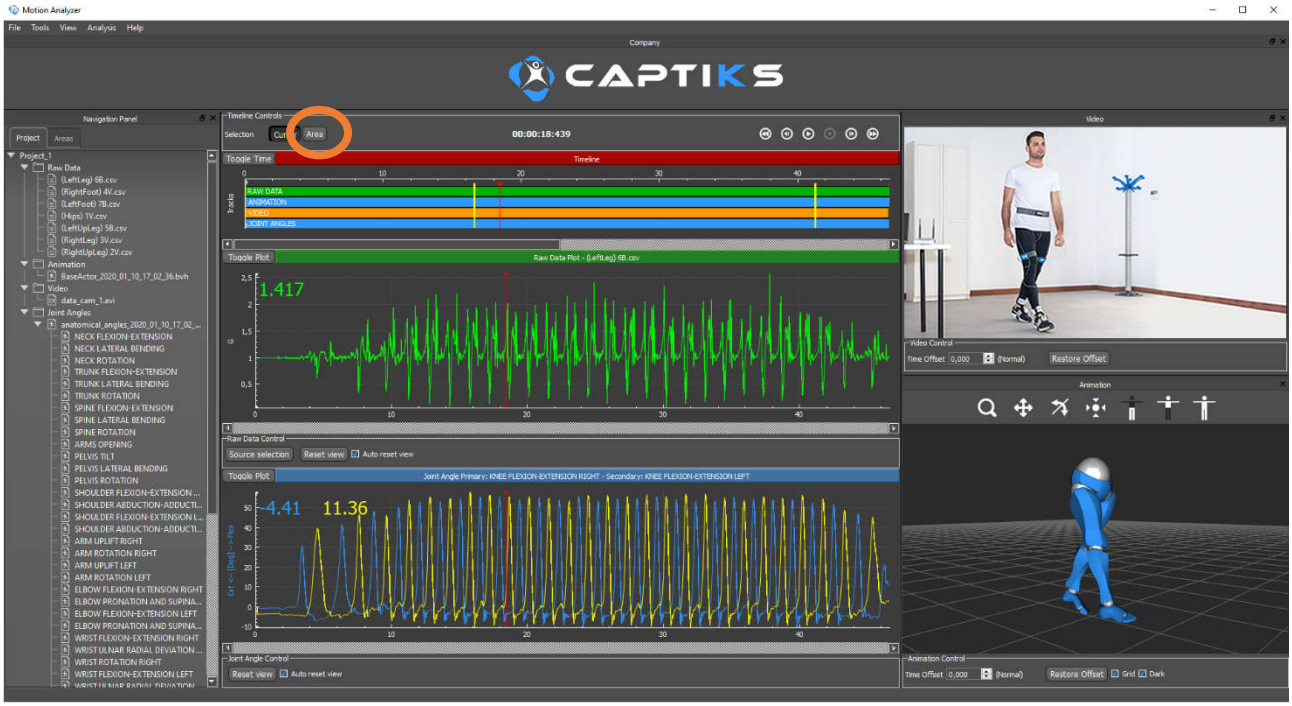
Importing the registration

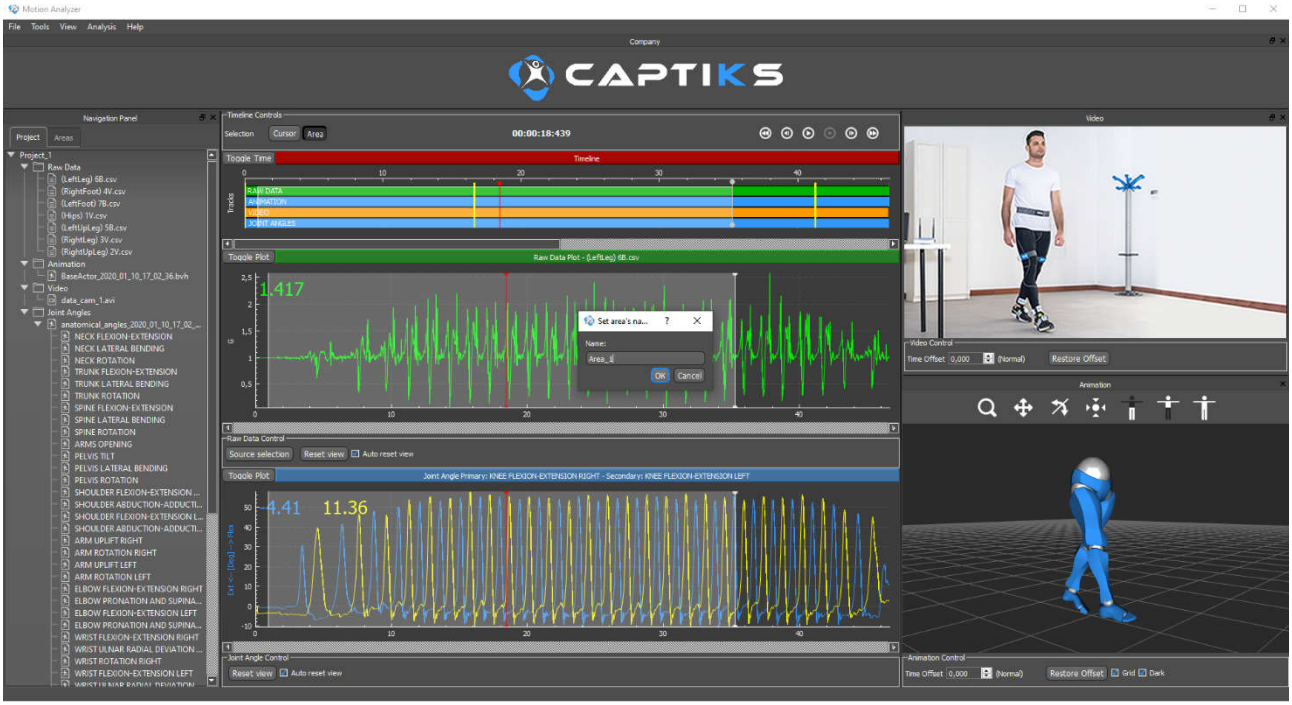
Start the Motion Analyzer software to perform the analysis of the recording.

Import the Motion Studio project (or Motion Analyzer if it has been previously saved)



It is possible to analyze the entire piece or portions of it by selecting the Area button and then highlighting the part of interest


Motion Analyzer
File Tools View Analysis Help
Company
CAPTIKS
Navigation Panel
Project
Areas
Timeline Controls
Selection
Cursor
Area
00:00:18:439
Toggle Time
Timeline
RAW DATA
ANIMATION
VIDEO
JOINT ANGLES
Toggle Plot
Raw Data Plot - (LeftLeg) 6B.csv
1.417
Raw Data Control
Source selection
Reset view
Auto reset view
Joint Angle Primary: KNEE FLEXION-EXTENSION RIGHT - Secondary: KNEE FLEXION-EXTENSION LEFT
-4.41
11.36
Joint Angle Control
Video
Video Control
Time Offset
Restore Offset
Animation
Animation Control
Grid
Dark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Set area's na...
Name:
Area_1
OK
Cancel
Raw Data Control
Source selection
Reset view
Auto reset view
Joint Angle Primary: KNEE FLEXION-EXTENSION RIGHT - Secondary: KNEE FLEXION-EXTENSION LEFT
-4.41
11.36
Joint Angle Control
Video
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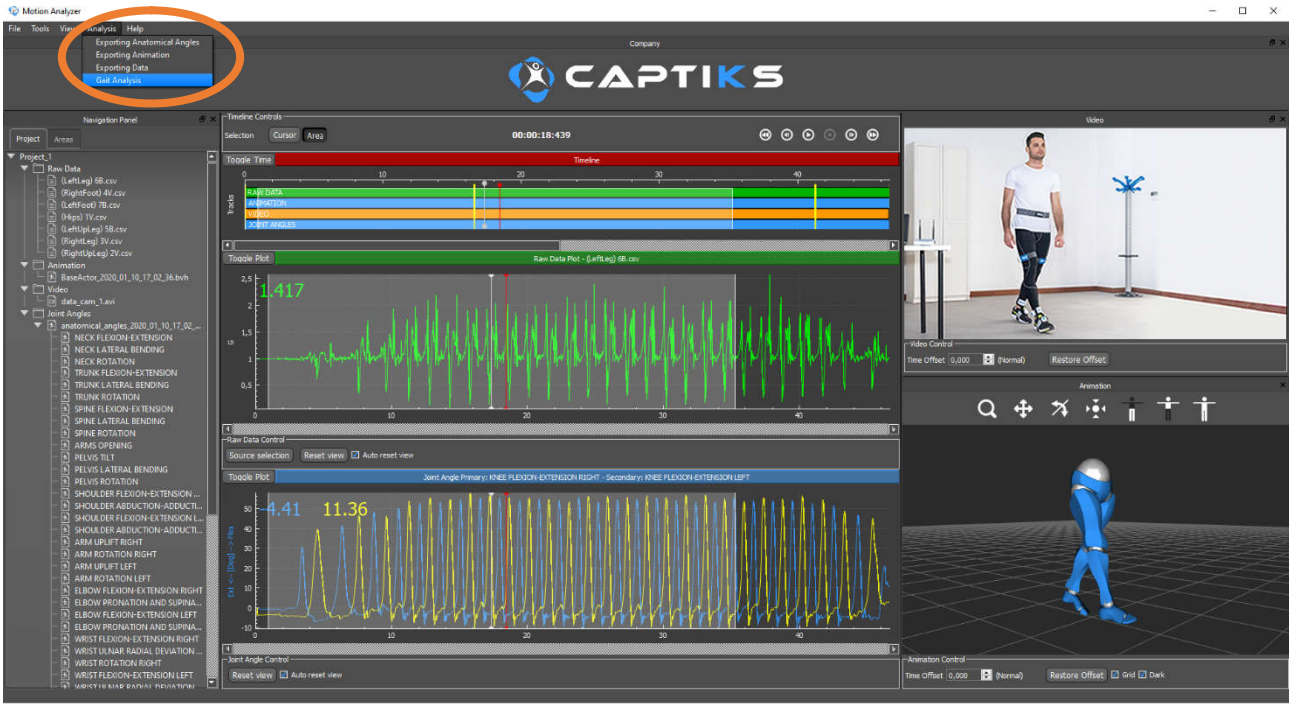
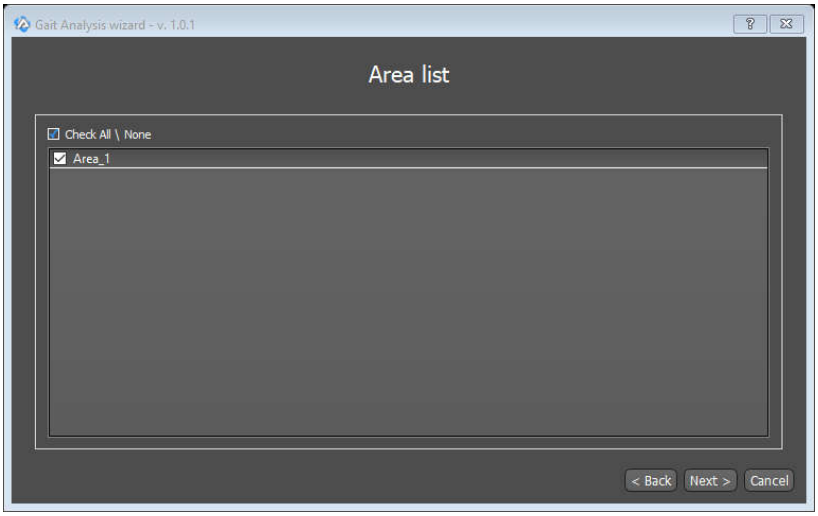
Restore Offset
Animation
Animation Control
Grid
Dark

Walk analysis

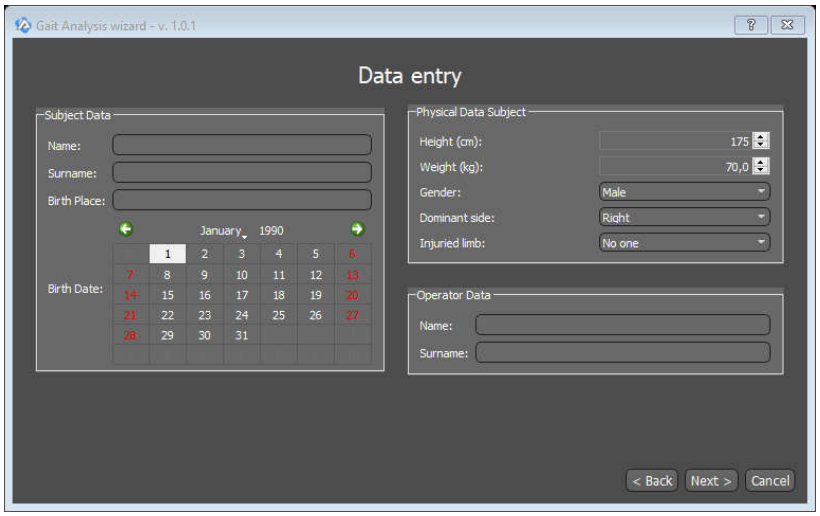
Select "Walk Analysis" in the "Analysis" panel



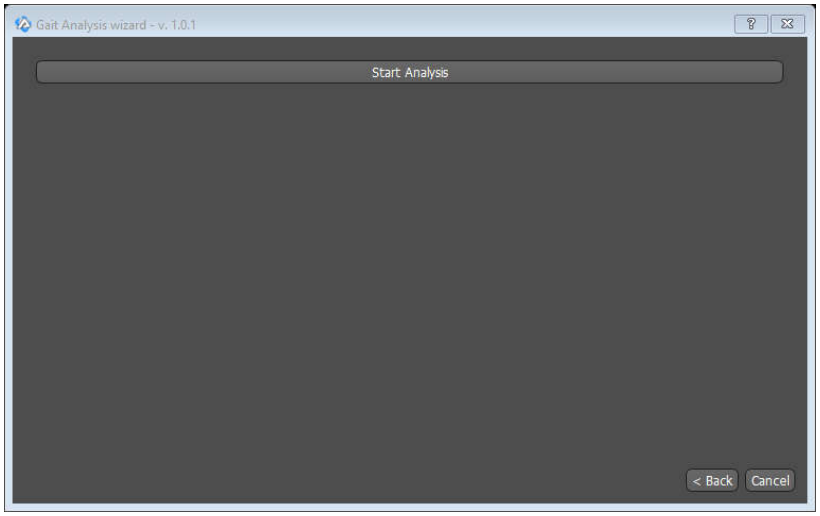
Select any areas to be analyzed



Enter the subject's personal data



Start the analysis



The test results will be provided in PDF format and by means of 2 .csv files (data and signal) containing respectively the average values of the spatio-temporal parameters, the symmetry indices and the curves of the average articular angles.

Declaration of conformity

Company: CAPTIKS S.R.L.
We declare under our own responsibility that for the following system:

Product description: Wearable Wireless Motion Capture System
Model:CPKMSG1-XY(XY varies from 01 to 18).

Product description: Wireless USB receiver
Model: CPKDDG1

Product description: Inertial wearable wireless device (3D accelerometer, gyroscopes 3D, 3D magnetometer, barometer)
Model: CPKMG1

The above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:
Direttive 1999/5/EC
ETSI EN 300 440-2 V1.3.1:2008
ETSI EN 300 440-1 V1.6.1.2010
ETSI EN 301 489-3 V1.4.1:2002
ETSI EN 301 489-1 V1.9.2:2011
ETSI EN 300 440-2 v1.3.1:2008
ETSI EN 300 440-1 V1.6.1:2010

The following CE mark is added to the equipment or the packaging.

CE

Person is responsible for marking declaration:

Carlo Alberto Pinto
Chief Executive Officer