Integrated human-analysis platform: AVATAR mealyze

Having problems with human body measurement and analysis?
Realize overwhelming efficiency improvements in people-centric development

1. Issues

* mealyze (pronounced "me-lise") is a portmanteaux of the English words "<u>mea</u>sure" and "ana<u>lyze</u>".

People-centric development is accelerating.

Low motion sickness
Do X while moving
Fun
Comfort
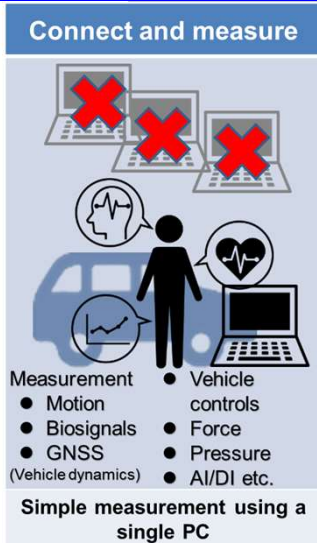Autonomous driving
User experience
AI

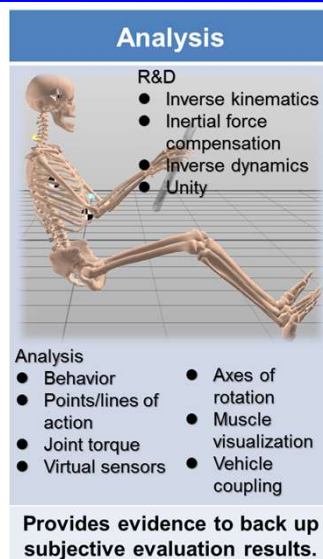There are many processes involved in understanding people. It takes too much time and needs a dedicated team.

Even organizing the data is difficult.
Analysis variations
Complex procedures

2. Solutions

Connect and measure

Measurement
- Motion
- Biosignals
- GNSS (Vehicle dynamics)
- Vehicle controls
- Force
- Pressure
- AI/DI etc.

Simple measurement using a single PC

Analysis

R&D
- Inverse kinematics
- Inertial force compensation
- Inverse dynamics
- Unity

Analysis
- Behavior
- Points/lines of action
- Joint torque
- Virtual sensors
- Axes of rotation
- Muscle visualization
- Vehicle coupling

Provides evidence to back up subjective evaluation results.

Faster Better — Development
Wider use — Product
Three-in-one approach
Service
Identify requirements and issues in use by yourself.

3. Functions/performance/specs

AVATAR mealyze — measure and analyze & service

- Motion capture
- Force (6-axis))
- Muscle Activity Heat Rate

Momentary axis of rotation
Virtual sensors (speed/acceleration)
Force point, Moment (reaction, torsion)
Seat surface pressure
Muscle Activity (kinematic chain)
Inverse dynamics (joint torque)
Inverse kinematics (joint angle, center of gravity)
Vehicle behavior/ controls

- Surface pressure
- Vehicle controls

CAN/ECU
TTDC Data loggers (AIO, CAN, Temp.strain) PANEL4
Wireless
TTDC Vehicle behavior Wireless GPS & IMU

- ■ Realize dramatic efficiency improvements.
- ■ Can be combined with existing assets.
- ■ Provides evidence to back up subjective evaluation results.
- ■ Analysis services

4. Contact

Contact for AVATAR mealyze support (Contact us to help resolve your people-centric measurement and analysis issues.) Email: avatar.support@ml.toyota-td.jp

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