MAPPS™
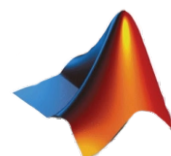
Multi-modal Analysis of Psychophysiological and Performance Signals

Analysis software that's intuitive and powerful.

1 EYE TRACKING
2 PHYSIOLOGY
3 BEHAVIORAL
4 VIDEO
5 AUDIO

eDx eyesDx®
Exploring human
behavior objectively

With MATLAB® Integration

INPUT }

Real-time synchronization
Any data rate, variable data rate
Any data type
Tightly time-synced across multiple machines
H.264 video compression

MATLAB }
INTEGRATION

Tightly coupled, bi-directional data sharing.
Live editing and exporting.
Sync and buffering automatically provided.
Easily perform custom fixations, heatmaps, and filtering.
Do your signal processing in MATLAB.® Use MAPPS™ to visualize results.
Powerful signals page.

REAL-TIME SYNCHRONIZATION

record subject facing video

record scene camera

MAPPS™
LIVE MONITORING AND ANALYSIS

SEARCHABLE DATABASE

record human physiology

record microphone audio

capture computer displays

record multiple simultaneous subject eye tracking

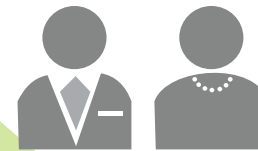record mouse and keyboard input

MAPPS™

MATLAB®

Easily transfer signals live between MAPPS and MATLAB

EYE }
TRACKING

Multi-subject eye tracking.
Heatmaps, including colored, multi-subject, and blur.
Live analysis of data.

Single or multiple subjects.

MAPPS™

Live analysis.

Different types of heatmaps.

eDx eyesDx®
Exploring human behavior objectively

MAPPS™
FEATURES

1. Intuitive graphical user interface.
2. Cross-platform support.
   + Windows 7 through Windows 10, coming soon to Mac OS and Ubuntu Linux.
3. Integrates scene video input from built-in screen capturing tool and webcams. Unlimited video sources.
4. Interact and record data from third-party hardware devices.
   + e.g. Biopac, Nexus, ABM's X10 EEG system, Zephyr, Zynex, Shimmer Mindo. Customer integration requests welcome.
5. Recording and playback of GPS tracking data.
6. Gaze calibration on 2D surfaces.
7. Real-time and post-processing modes of analysis.
8. Powerful tools for scrolling through video and selection of analysis time windows.
9. Click-and-drag definition of static and dynamic regions of interest (ROIs).
10. On-the-fly selection of fixation parameters.
11. Graphical data output of gaze variables.
    + e.g. crosshair, gaze trail, fixations.
12. User-selected video overlays.
    + e.g. Colored and shadow heatmaps, gaze cone.
13. Summary graphs of processed data.
    + e.g. Pie chart of ROI fixation over selected time window.
14. User-directed video recording of analysis results.
15. Easy export of graph data to Excel.
16. Improved signal processing and video compression algorithms.
17. Record and play back synchronized audio.
18. Enables analysis and visualization of multiple simultaneous subjects.
19. Heart rate analysis.
    + Locate QRS complex locations, compute heart rate and variability, Poincare analysis.
20. Provides an API which allows ROIs to be marked in real-time as they are generated.
    + Useful in simulator environments where ROI may be known at run time and can be transmitted and saved automatically.
21. MATLAB® and third-party application API:
    + Request and access synchronized multi-modal data streams from MAPPS™ in real time.
    + Publish data to MAPPS™ for visualization in real time.
    + Implicit data synchronization.
    + Data types supported include signals, video overlays, graphs, and ROIs.

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