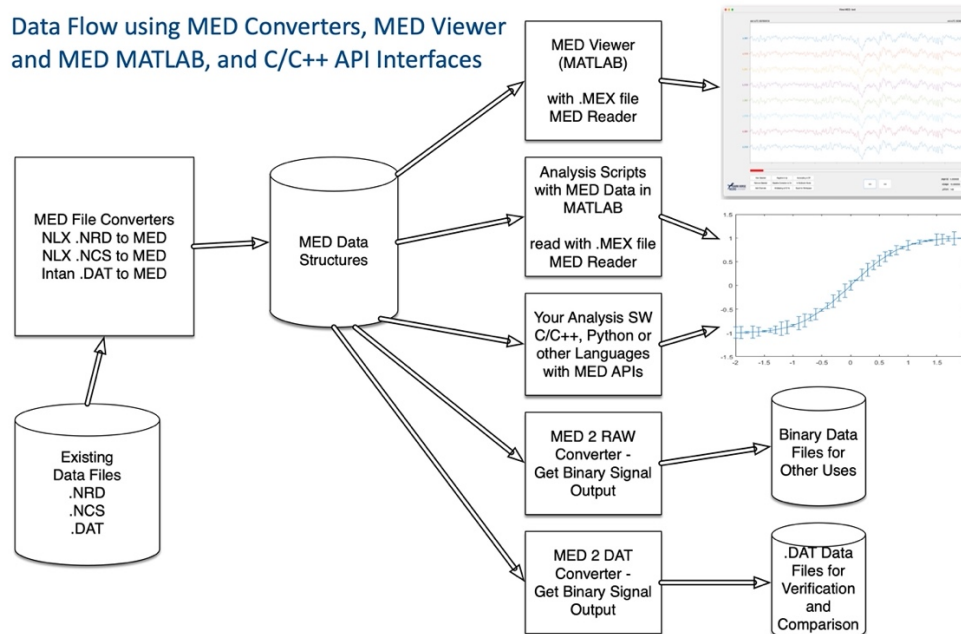


How to Test and Evaluate MED with Already-Acquired Data

Overview

Changing your data storage format to **MED** is a simple process with **MED's** five data converters:

- Neuralynx NRD to MED
- Neuralynx CSC to MED
- Intan .DAT to MED
- MED to RAW - to get binary data
- MED to DAT - for comparison and verification.



MED contains **MED Viewer** and MATLAB tools (.MEX file) for reading data into MATLAB. After viewing with **MED Viewer**, you can use the MATLAB readers to evaluate **MED** structures, MATLAB tools and the code changes you will need to make to your analysis software.

- A C/C++ API library is provided for C/C++ and other language support.
- An Open Source Python interface is on the MEDformat.org website.



Process Overview

1. Download and install the appropriate **Data Converter** for your file type and operating system (Win10, Mac OSX, or Linux) from DarkHorseNeuro.com.
 - a. You will sign up for a Trial License when you run the converter for the first time;
2. Convert an existing data file to **MED** Structures;
3. Download and install the **read_MED** MATLAB software suite and install.
4. View **MED** waveform and event data with **MED Viewer** (launches from MATLAB);
5. Use the **MATLAB reader** (MEX File) to read **MED** data into memory, run scripts, inspect data, and call MED functions.
6. If you started with a .DAT file you can use the MED2DAT converter to make a new .DAT file for comparison (to the original) and see the differences of the filters and lossy compression – generally you will see very little difference, typically +/- 0.5 μ volt.
7. If you are using the .DAT format run the before and after .DAT files thru a program like KiloSort and you should notice very little difference in the two KiloSort output results.

MED Features and Benefits

- Data compression typically results in sizes of 2% to 15% of raw data file sizes
- Two levels of configurable encryption: Patient Information and Experiment Data
- Small data set size and encryption make sharing with collaborators practical
- Faster data analysis by reading less data from slow disk storage (even on “fast servers”)
- Direct access to time-indexed records – no need to read sequentially thru files
- Organized in long-term Sessions and duration-based Segments
- Published format and Open Source access to low level code to prevent a closed protected format
- Library and executable versions for Linux, Mac OSX, and Windows

See [DarkHorseNeuro.com](https://www.DarkHorseNeuro.com) for details

MED meets your “Big Data” challenges: spiraling file server costs; analysis solutions; and protected data sharing for collaborations.

The **MED** data storage format was developed and used by Matt Stead MD PhD over the past 20 years through various versions of MEF and now **MED**. MEF/MED was originally designed to store the 100’s of Terabytes generated by Neuralynx’s high resolution, full bandwidth, and high channel count ATLAS recording system for clinical intercranial EEG recording. It is typical to collect 50 Terabytes of data from a single patient!

Neuralynx is an authorized distributor of MED software and products.

Contact Sales@Neuralynx.com for information, quotes, and purchasing MED for your lab.