

New Data Interchange Format?

Concerns of Commercial Software Providers

Jeff Kuznia
Compumedics

Original Experience with EDF

- EDF was not an ideal format for PSG data
- Incomplete documentation of the standard OR improper interpretation of the standard led to incompatible implementations from various vendors
- Format did not work well when systems moved from differential amplifiers to referential amplifiers

Why Vendors Use Proprietary Data Formats

- Limits competitors ability to encroach on established customer base
- Proprietary format may mate more efficiently with amplifier systems
- Possible advantage in developing data processing/analysis solutions
- Avoids any development limitations imposed by adherence to a standard format

Vendors wish list for a new common data format

- Easy conversion to and from common format
- Format must handle various data sampling rates from 1 Hz through 10,000Hz (of higher if supporting evoked potentials or some EMG studies)
- Support for DC-coupled, stepped data channels such as Body Position
- Format should support floating point data storage to make it independent of data resolution (8,16,24-bit data)
- Format should support multi-segmented data files

Vendors wish list

- Configuration file must be more flexible – using XML rather than ASCII
 - Allow extension of structure
 - Supports international language support
 - Ability of vendors to add special custom tags or unique features that could be ignored by other vendors
- Universal method of storing hypnogram, events and tags
 - XML storage