Advanced Data Extraction Infrastructure
Web Based System for Treatment of Time Series

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One challenge for physics experiments with international collaborations and distributed data acquisition systems is to provide an easy access to the data of all measurement and control devices in the experiment.

### Objectives
- Uniform access to a distributed system of data sources
- Fast and intuitive Browser through experiment database
- Integration with major control and data analysis systems
- Support for long running experiments and high data rates
- Platform independent programming interface

### ADEI Architecture
- Pluggable data sources with customizable filtering support
- Cache to accelerate plotting of charts and data searches
- Simple web services abstracting data storage

### Applications
1. AJAX Web Display
2. Export
3. TDMS, ROOT, CSV, XLS,
4. ROOT Connectivity
5. LabVIEW Connectivity

### ADEI Web Services
- Search
- Export
- Plot

### Data Sources
- Relational Databases
- ZEUS
- KATRIN

### ADEI Data Flow
- Hierarchical data organization: sources, groups, channels
- Filter out invalid data and reduce its amount
- Aggregate and cache data on several detail levels
- Plot aggregated data using multiple supported algorithms

### Wiki Engine
- Standard Wiki commands
- ADEI version information
- Wiki page inclusion
- ADEI plot thumbnails
- [processed=web service arguments]
- Automatic channel lists

### ADEI Web Services and Applications
- Sample Query: http://adei.org/services/?service=list&target=items&db_server=katrin&db_name=prespec&db_group=0

### 3D Temperature Monitor
- LabVIEW Express VI

### 2 LabVIEW Express VI

### 1 ADEI Web Display (Web 2.0)
- Fast and flexible navigation
- Support for multiple axes
- Reporting invalid data
- Multiple modes of data aggregation
- Bookmarking of data views
- Integrated Wiki engine

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