



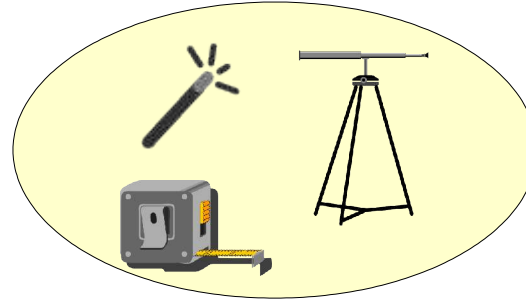
Data-Storage and processing

Data is everywhere ...

Tuesday, the 27th January 2006

What we will talk about

Sensors



Main Data Flows

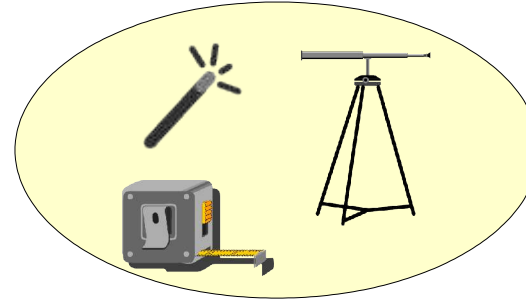


Sensors

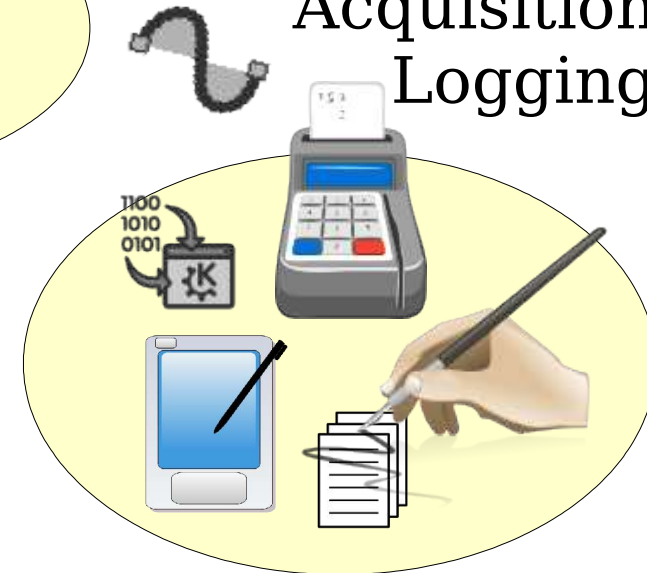
- they build an interface
 - between physical values and the usable values for the further treatment.
- they see part of the reality
 - may only see part of what is analyzed
- they have an own build in model
 - dynamic behavior
 - transfer function

What we will talk about

Sensors



Acquisition Logging



Main Data Flows

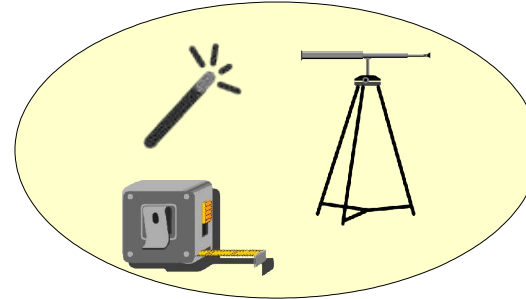


Acquisition and logging

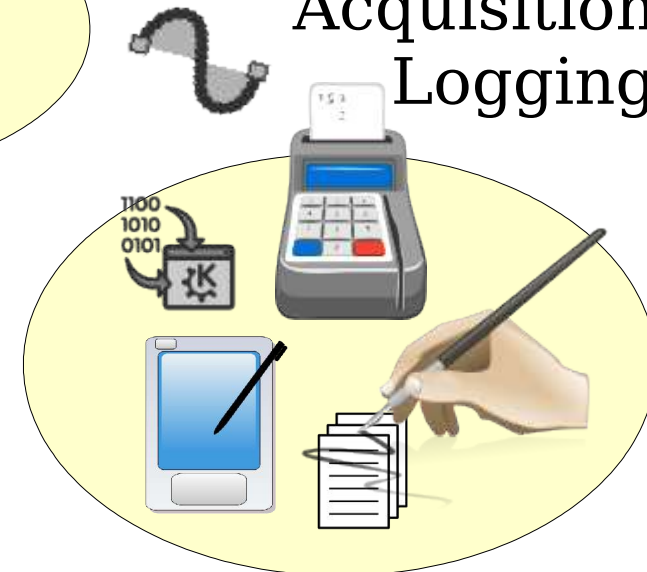
- Possible Supports
 - Paper form
 - display
 - multimeter
 - oscilloscope
 - memory
 - volatile memory
 - flash cards
 - hard disks
- Possible types
 - Manual data
 - handwritten data
 - curves
 - Analog signals
 - acoustic data
 - current/voltage
 - Digital signals
 - binary info
 - coded data

What we will focus

Sensors



Acquisition Logging



Main Data Flows



Management Storage and Fusion

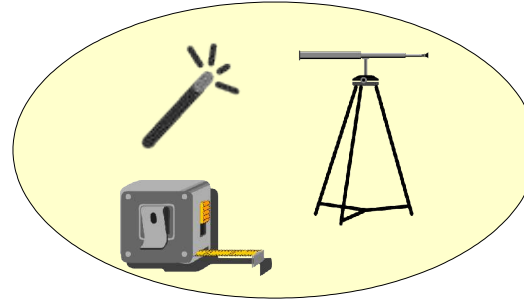


Management storage fusion

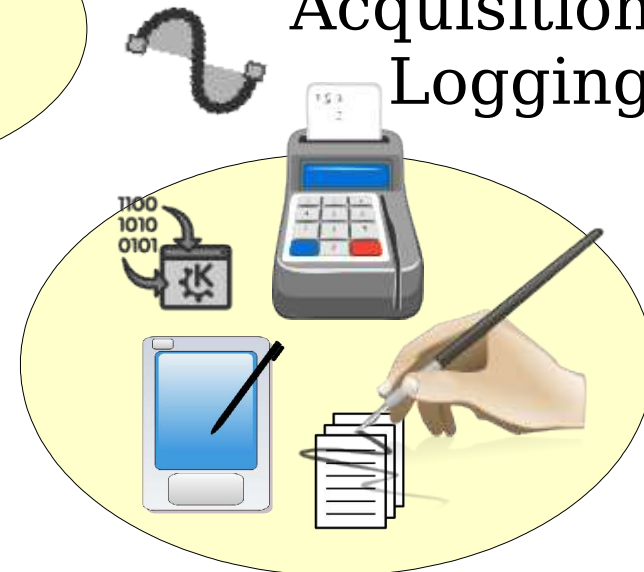
- Organize paper
 - add management information
 - structure the information and their relations
 - Build up meta information
- Organize data
 - file system and database
 - define structure and data model (ER-Model)
 - Preprocess and insert data
 - Build SQL-Queries to access the information

What we will focus

Sensors

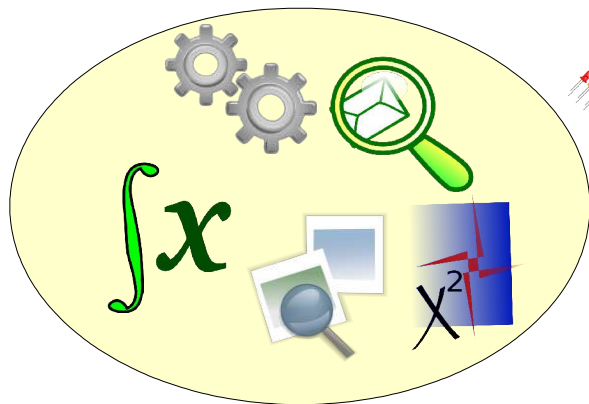


Acquisition Logging



Main Data Flows

Analysis



Management Storage and Fusion



Analysis

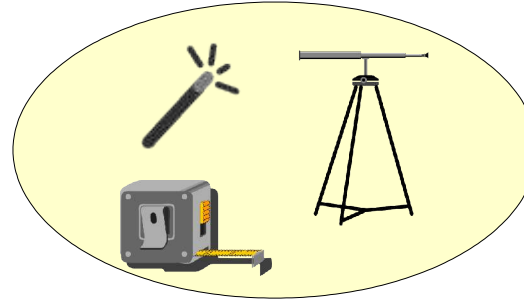
- Search for some specific raw data
- Extract statistical information
- Extract specific high level info
- Data mining
- Build specific indexation for fast access
- Get new/unknown information out of existing data
- optimize the underlying process

What we will focus

Reporting



Sensors

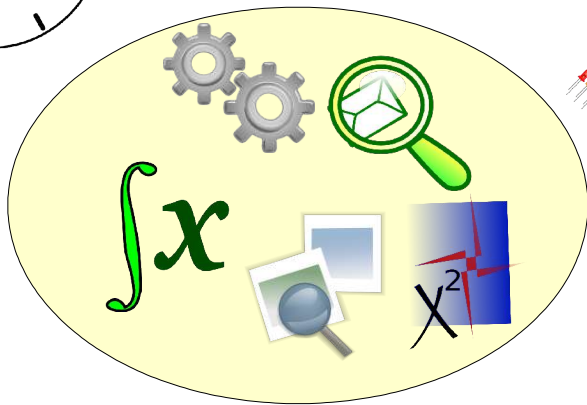
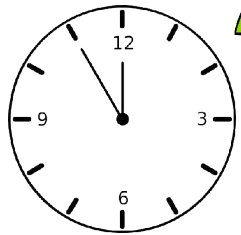


Acquisition Logging



Main Data Flows

Analysis



Management Storage and Fusion

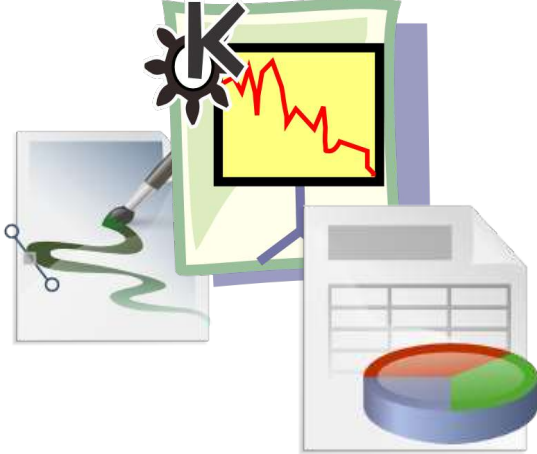


Reporting

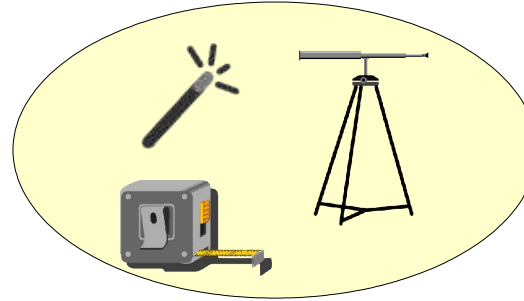
- Provide short and pertinent information
- Summarize the analysis results
- Graphical representation of results
- Reproducibility
 - math. methods
 - used tools
 - version management
- Automation of cyclic reporting
- Interoperability

Overview and relations

Reporting



Sensors

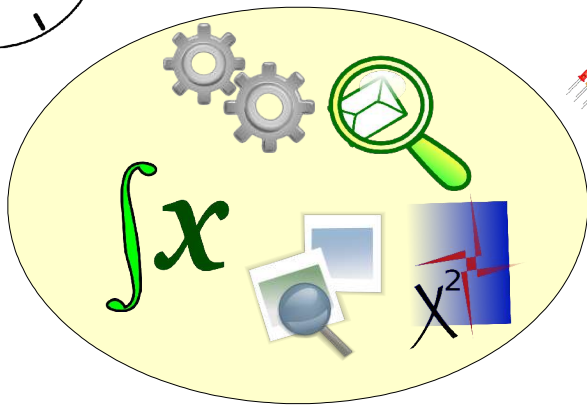
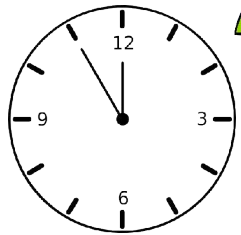


Acquisition Logging



Main Data Flows

Analysis



Management Storage and Fusion