ENVIRONMENTAL AGENCY OF THE REPUBLIC OF SLOVENIA

Information System of Measuring Networks (ISMN)

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An information system of measuring networks (ISMN) at the Environmental Agency of the Republic of Slovenia was built two years ago. ISMN gives complete information about instruments and operational events in network that can affect measurement of different physical quantities. A base for tracing the history of instruments and events is set in a Oracle RDBMS. It is always known where a measuring instrument is (or was) at the appointed time or what it is (or was) a configuration of a measuring station during the time. Measured data are also connected with measuring instruments and with the operational events on each measuring place, therefore more information about meta data is given to the users. Due to ISO 9001 standard we also connected measured data with calibration flag.

Legenda
- Air Quality Monitoring
- Water Quality Monitoring
- Meteorological monitoring
- Meteorological monitoring on Airports
- Monitoring of Radioactivity
- Hydrological Monitoring - Groundwater
- Hydrological Monitoring - Springs
- Hydrological Monitoring - Sea
- Hydrological Monitoring - Surface water
- Precipitation Quality Monitoring
- Seismological Monitoring

0   12,5   25   50 Kilometers

Network

Hydrology
Meteorology
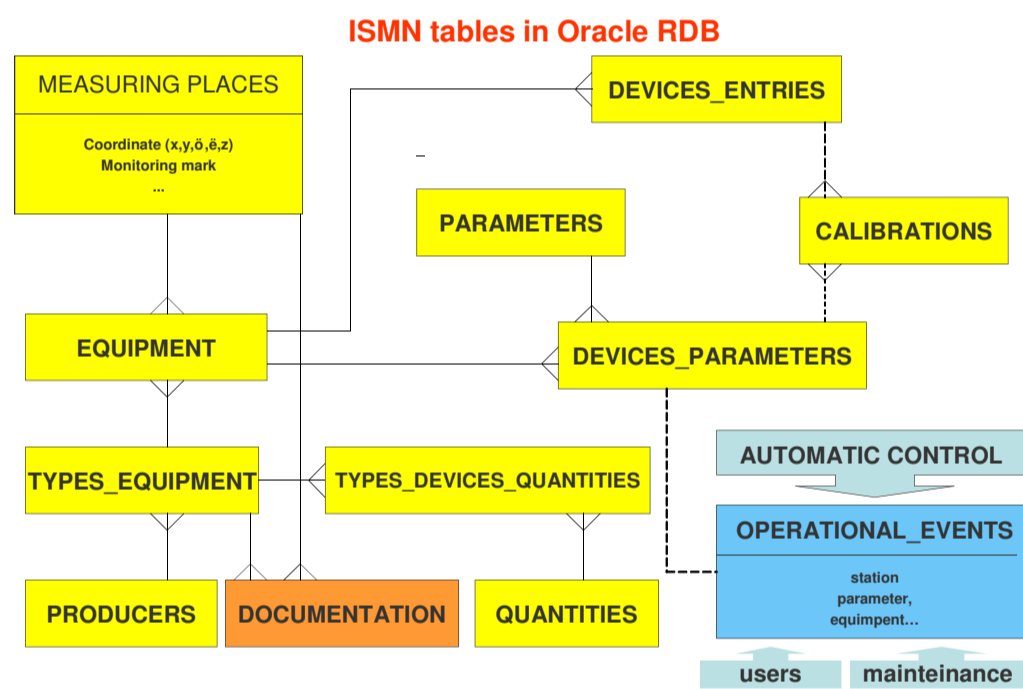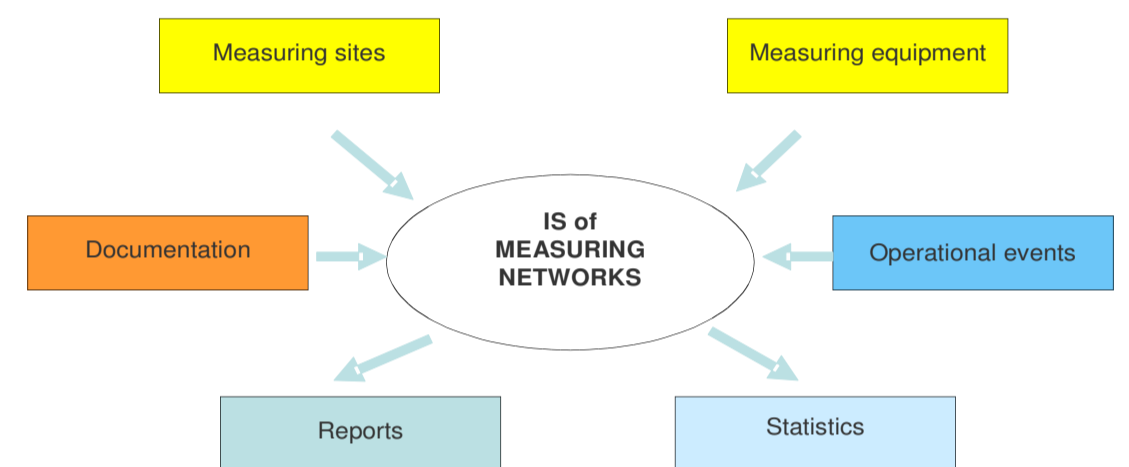Seismology
Water Quality
Air Quality
Radioactivity

} 1026 measuring sites

Equipment

} 2622 devices
330 types
103 producers

} 70 quantities
204 parameters

Parts of ISMN

ISMN tables in Oracle RDB

Dataflow in IS
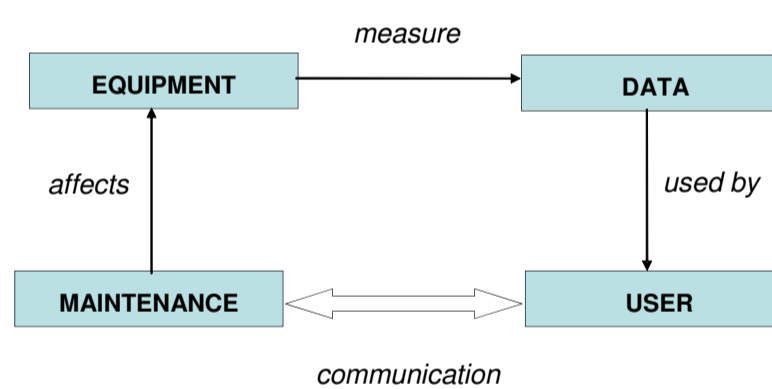

Applications

- Oracle forms
  - Inserting a new equipment into ISMN
  - Transfer of equipment between measuring sites
  - Inserting a calibration certificate

- PHP script language
  - Reports from ISMN:
    - Which devices are in selected monitoring
    - Which quantity, parameters are measured and where
    - What it is measured at selected site
    - Where is measuring device with entered number of certificate
  - Documentation
  - Statistics

- DB procedures and functions in Oracle PL/SQL language
  - Sending e-mails
  - Inserting identification number of instrument in data tables
  - Calculating of statistical values

Operational event table

- Connecting channel between data users and the maintenance service.

- Operational event is anything what is entered in this table. It can be a message from automatic data control, an output from DB procedures or anything what is manually entred by controllers or maintenance service. DB procedures insert some messages with information when certificate expiry dates or which measuring device should be checked in the next period.