Web Application for the Engineering Data Files Processing

K.Salminsh

Institute of Astronomy
University of Latvia
kalvis@lanet.lv

15th International a Ranging Workshop. 15-20 October v2006, Canberra, Austra lia

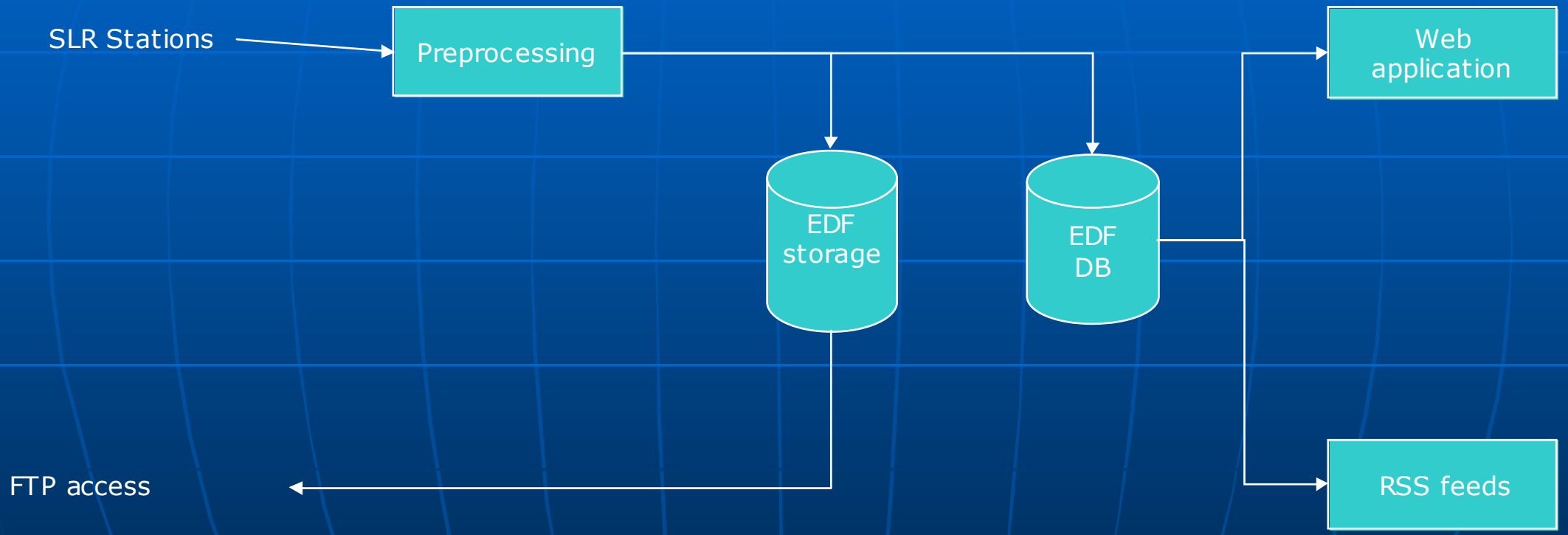
Basic EDF contents

- Epoch (MJD, ISO date)
- Station ID (Name, SOD)
- Link to NP (SCH, SCI, calibration method, time scale)
- Laser (Wavelength, pulse width, rep. rate)
- Timer
- Detector (type, model)
- Calibration data (value, RMS, target distance)
- Meteo data (pressure, humidity, temperature)

Basic EDF XML

```
<EDF Version="1.0" MJD="53744.982639" Epoch="2006-01-09T23:35:00"
   xmlns:Wettzell="http://www.astr.lu.lv/Wettzell">
   <Station SOD="88341001" SCH="0" SCI="2" CalibMethod="1" TimeScale="3" Name="Wettzell"/>
   <Hardware>
      <Laser Wavelength="532.0" Energy="0.075" PulseWidth="60" Divergence="0.000250"
RepRate="10"/>
      <Receiver>
         <Detector Model="ITT F4129F" DeviceID="1" DetectorType="MCP" TWCompensation="No"/>
         <Filter Model="BARR ASSOCIATES" DeviceID="1002347" BandWidth="0.35"/>
      </Receiver>
      <Timer Model="PET4" DeviceID="Module 1+2+3+4" CorrectionID="0"/>
   </Hardware>
   <Meteo Temperature=" -9.11" Pressure="954.70" Humidity="97.50"/>
   <Calibration TargetDistance="10.345" CalValue="40220" PeakMinusMean="5" RecordedPoints="1200"
      AcceptedPoints="1165" SigmaUsed="2.2" RMS="10" Skew="0.0001" Kurtosis="0.0000"
      Wettzell:ReturnQuote="97.08"/>
   <CustomData> </CustomData>
</EDF>
```

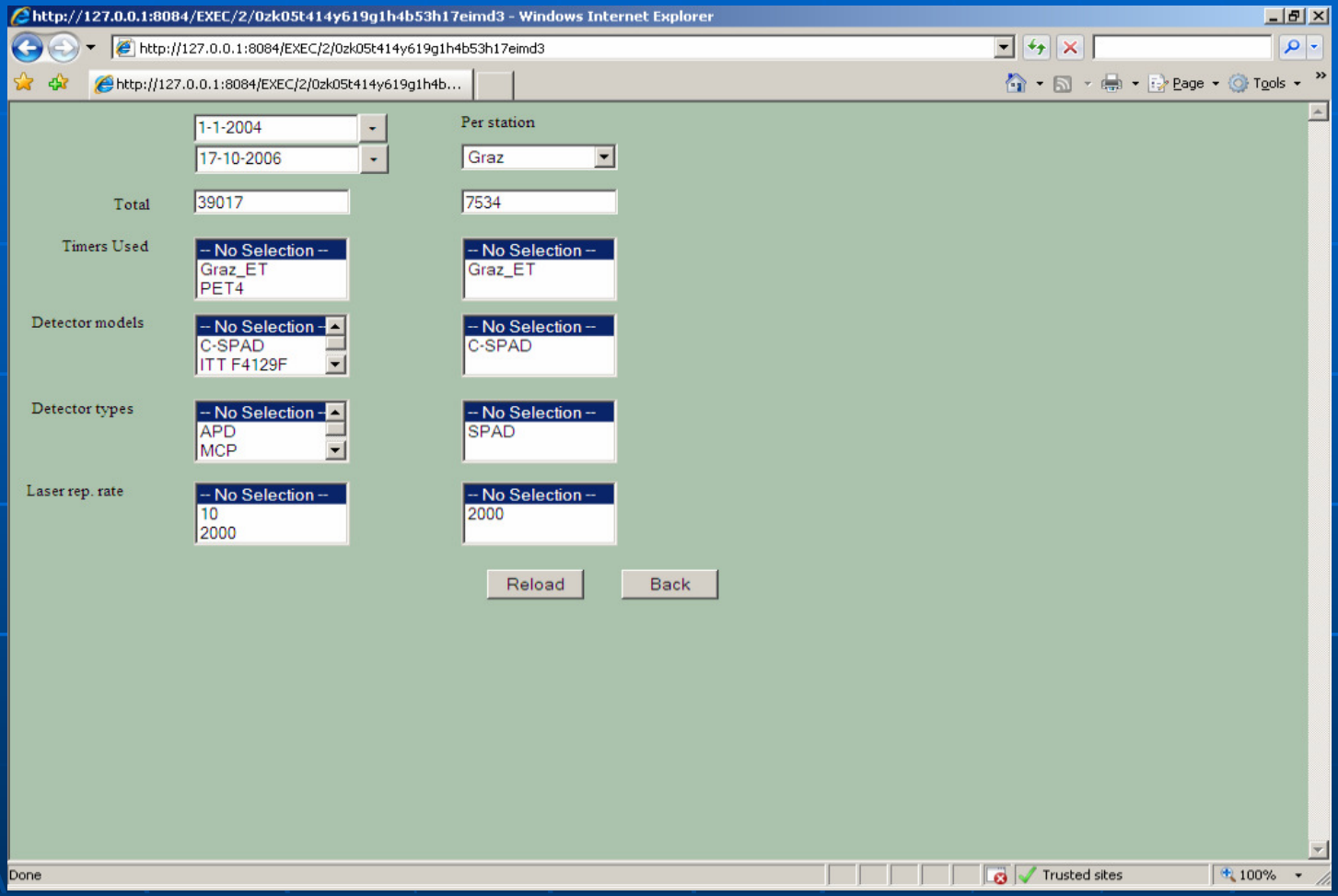
EDF Data Flow



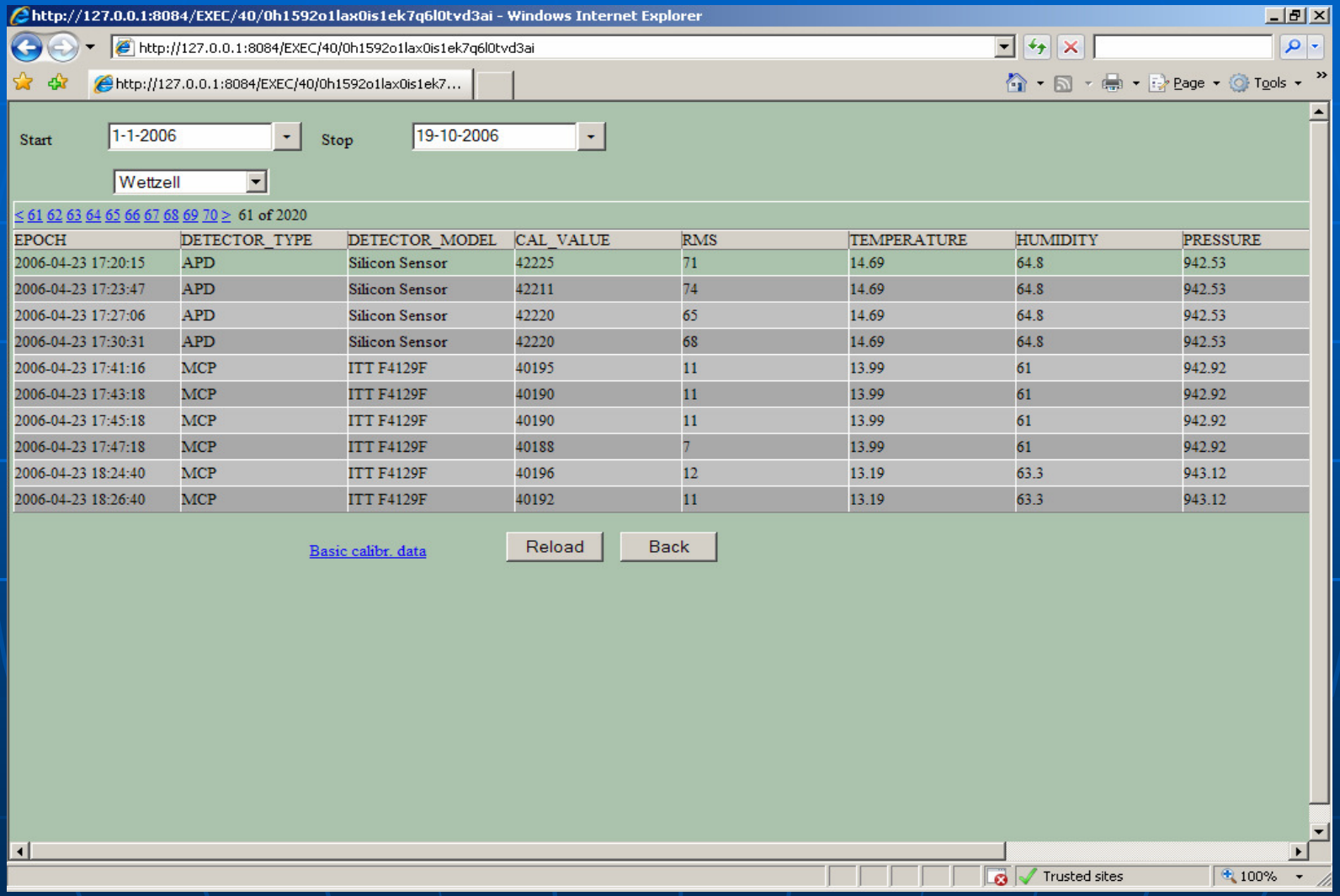
Application functionality

- Overview of the used equipment
  - Query based interface
  - Map based interface
- Calibration time series
- Calibration charts
- Statistics
- External interfaces (RSS feeds, web services, Excel)

Query form


http://127.0.0.1:8084/EXEC/2/0zk05t414y619g1h4b53h17eimd3 - Windows Internet Explorer
http://127.0.0.1:8084/EXEC/2/0zk05t414y619g1h4b53h17eimd3
http://127.0.0.1:8084/EXEC/2/0zk05t414y619g1h4b...
Page
Tools
1-1-2004
17-10-2006
Per station
Graz
Total
39017
7534
Timers Used
-- No Selection --
Graz_ET
PET4
-- No Selection --
Graz_ET
Detector models
-- No Selection --
C-SPAD
ITT F4129F
-- No Selection --
C-SPAD
Detector types
-- No Selection --
APD
MCP
-- No Selection --
SPAD
Laser rep. rate
-- No Selection --
10
2000
-- No Selection --
2000
Reload
Back
Done
Trusted sites
100%

Calibration data



EPOCH	DETECTOR_TYPE	DETECTOR_MODEL	CAL_VALUE	RMS	TEMPERATURE	HUMIDITY	PRESSURE
2006-04-23 17:20:15	APD	Silicon Sensor	42225	71	14.69	64.8	942.53
2006-04-23 17:23:47	APD	Silicon Sensor	42211	74	14.69	64.8	942.53
2006-04-23 17:27:06	APD	Silicon Sensor	42220	65	14.69	64.8	942.53
2006-04-23 17:30:31	APD	Silicon Sensor	42220	68	14.69	64.8	942.53
2006-04-23 17:41:16	MCP	ITT F4129F	40195	11	13.99	61	942.92
2006-04-23 17:43:18	MCP	ITT F4129F	40190	11	13.99	61	942.92
2006-04-23 17:45:18	MCP	ITT F4129F	40190	11	13.99	61	942.92
2006-04-23 17:47:18	MCP	ITT F4129F	40188	7	13.99	61	942.92
2006-04-23 18:24:40	MCP	ITT F4129F	40196	12	13.19	63.3	943.12
2006-04-23 18:26:40	MCP	ITT F4129F	40192	11	13.19	63.3	943.12

Next steps

- Integrate application in the EDF website http://www.astr.lu.lv/EDF
- User interface improvements
- Establish links to ILRS website
- Move to native XML database
- Links with the NP, site logs