

- Air temperature near the Earth's surface
 - Key variable for several environmental models
 - Commonly measure at 2 meter above ground
- In most case, Spatial interpolation from sample point of meteorological station is carried out.
 - Uncertainly spatial information available of air temperature is often present.
- MODIS Land Surface Temperature
 - Not a true indication of “ambient air temperature”
 - However, there is a strong correlation between LST and air temperature
 - Huge required effort from users (process time and computer skills)
 - Redundancy tasks

OGC System Framework

GetObservation 

GetFeatureInfo 

GetCoverage 

GetFeatureOfInterest 



Client

Execute

JSON/PNG/CSV

GetMap

SOS

52NorthSOS



Node

LiveE! Sensor Node

WPS

PyWPS

- Evaluation of Relationship process
- Least Squares Fitting process
- Calculating Estimated Air Temperature process

R

rpy2

GRASS
GIS

GDAL

...

...

...

...

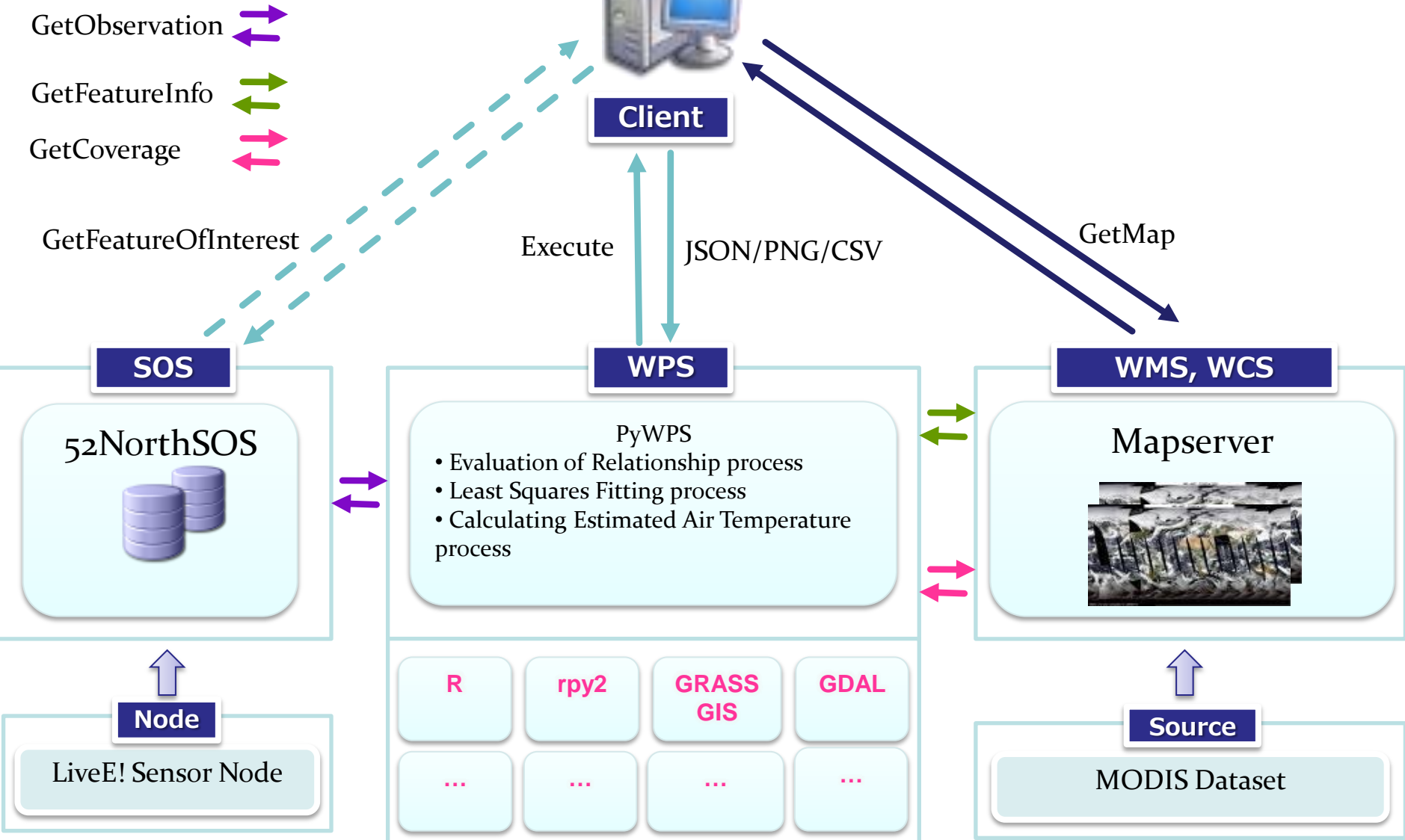
WMS, WCS

Mapserver

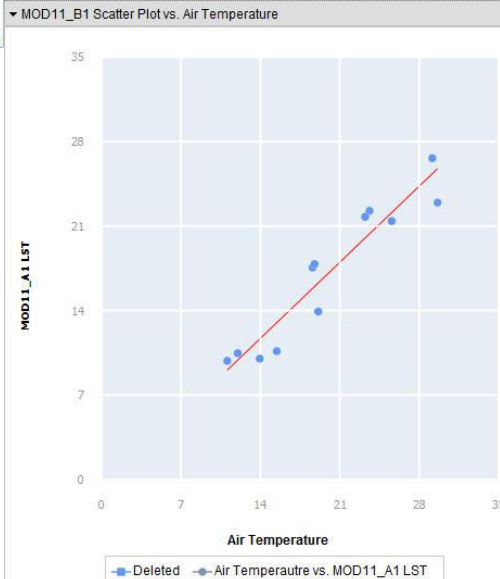
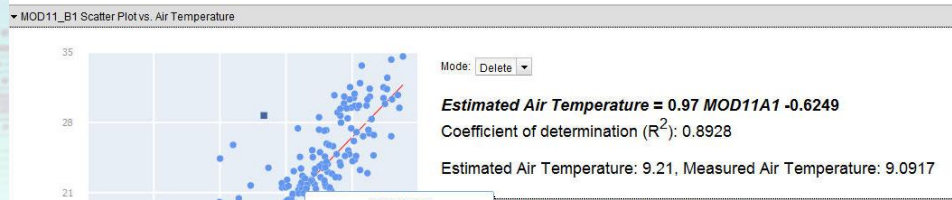
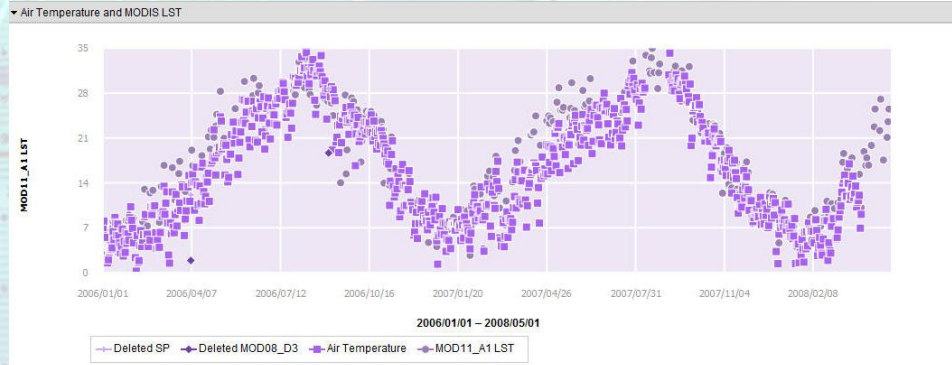


Source

MODIS Dataset



Prototype System



▼ Time Plot Options

Observation Sites:
 Mizushima Industrial School Data Center Pedagogy Child Museum Kasumi
 livee-datacenter

Observation Period to Process:
 From: 2006-01-01 UTC+09:00
 To: 2008-05-01 UTC+09:00

Plot Ranges:
 Min. Air Temperature: 0.0
 Max. Air Temperature: 45.0

Platform (Satellite):
 Terra Aqua

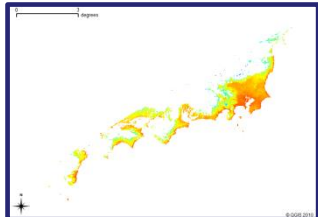
Passtime:
 Day Night

QA Filter:
 Data QA: 0.0

Plot

Processing Air Temperature Map Paramter:
 Processing Area:
 Xmin : 134.47260934608
 Xmax : 138.3527390654
 Ymin : 32.704094357741
 Ymax : 36.584224077061
 Process Date: 2006-05-01
 Unit: Celcius Kelvin

Process



[Download Result Image](#)