NECTEC
a member of NSTDA

Environment Informatorium:: The Sustainable Web Portal for Observation Data

National Electronics and Computer Technology Center

Outline

- Recall our work ….
- Current Work
  - Data Integration
  - Data Visualization

Objectives

To build a common place to share and use environment related data in an efficient way

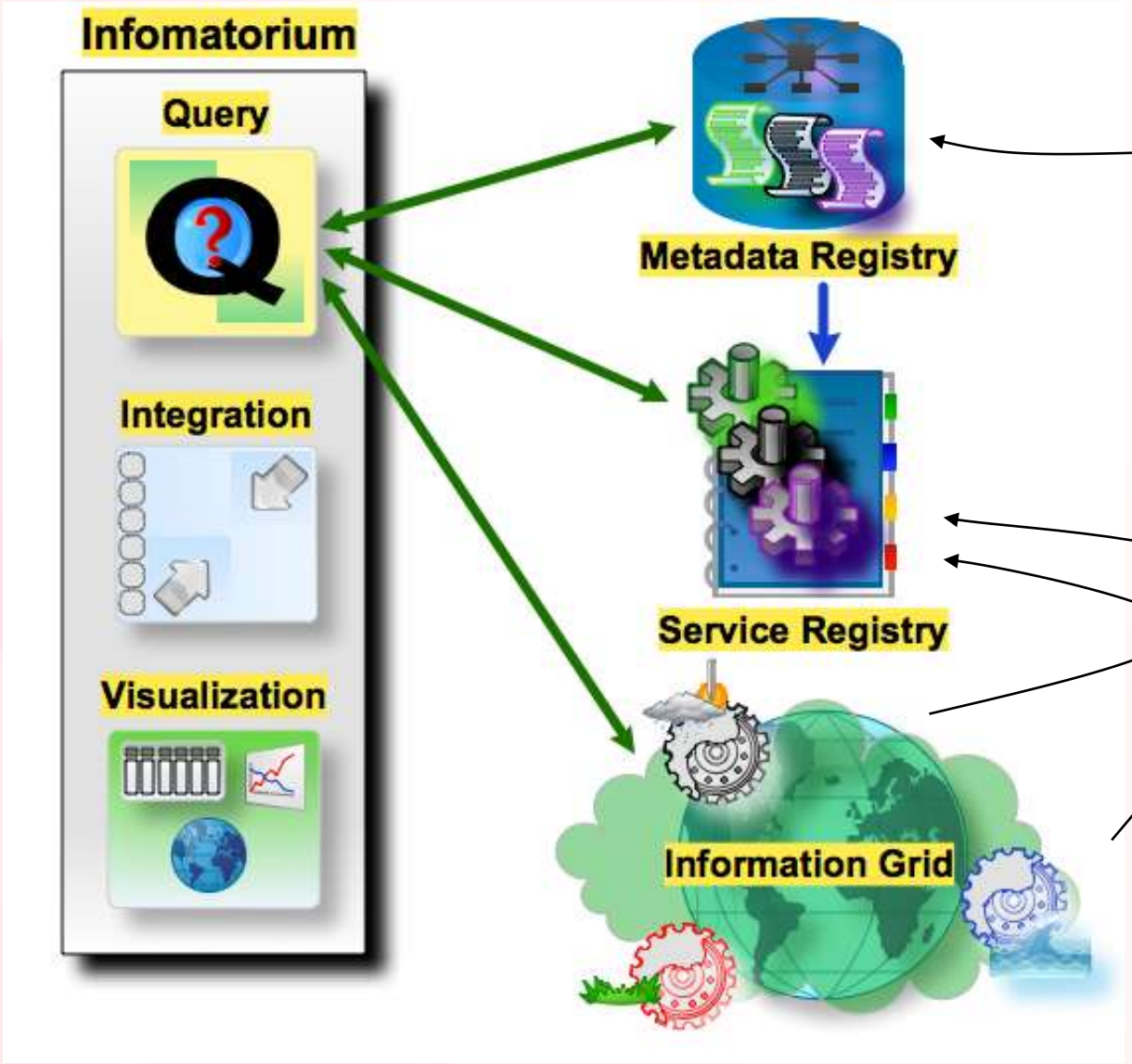
Data Consumer Perspective:

- To support the retrieval of the desirable observation data across geographically distributed repositories with ease
- To facilitate the application of observation data in a user-oriented manner

Data Provider Perspective:

- To promote the publication of the observation data on-line in a standard way without changes in the legacy systems
- To support the workflow for servicing observation data to public

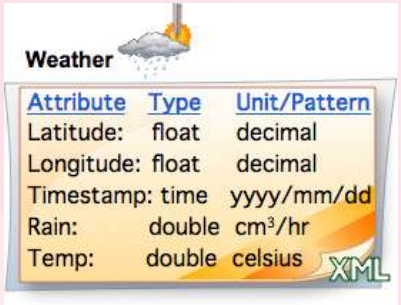
Our System


Infomatorium
Query
Integration
Visualization
Metadata Registry
Service Registry
Information Grid
Weather
Attribute Type Unit/Pattern
Latitude: float decimal
Longitude: float decimal
Timestamp: time yyyy/mm/dd
Rain: double cm³/hr
Temp: double celsius
XML

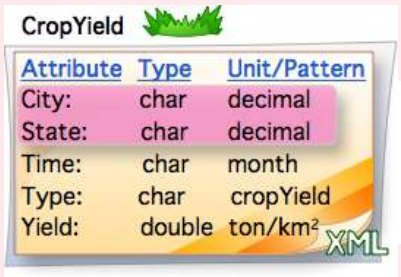
Query

- Depends on the metadata standard

Query Builder

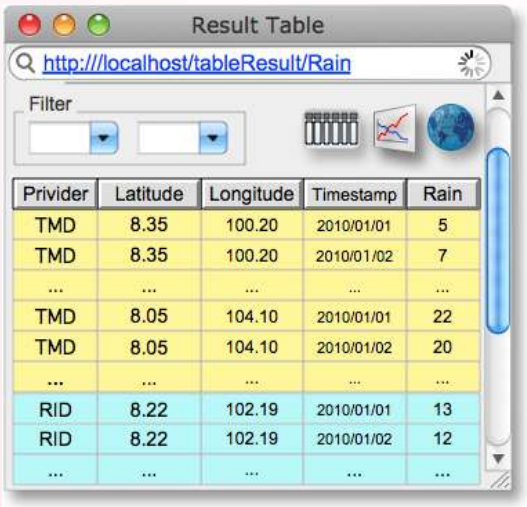


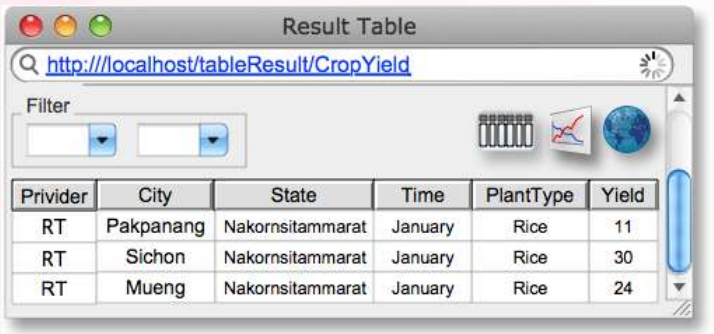
timestamp = "2010/01/01" to
"2010/01/31"
BBOX = "7.38, 99.27,
9.21, 100.16"
provider = {"TMP", "RID"}



time = "January"
state = "Nakornsitammarat"
provider = "RT"

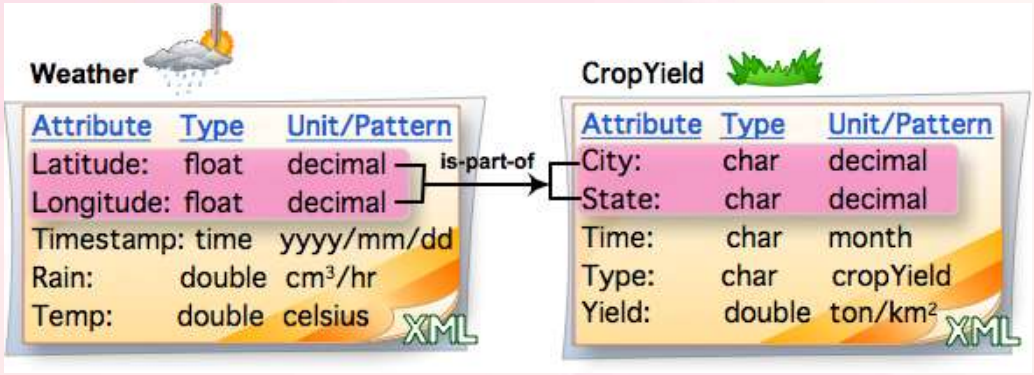
Result





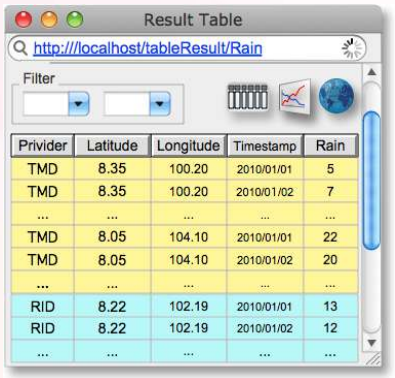
Integration

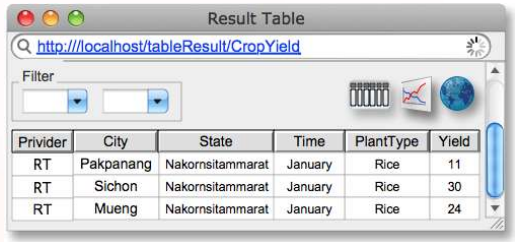
- Depends on the relation configuration of two given metadata standards
  - Structural relation
  - Semantic relation

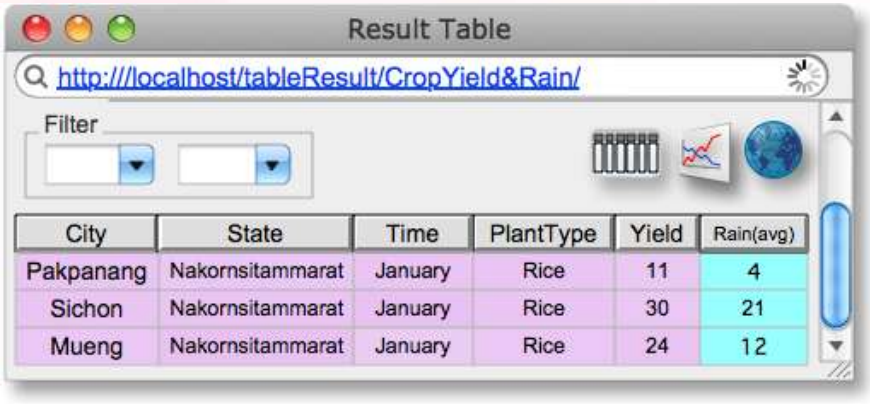


relation configuration

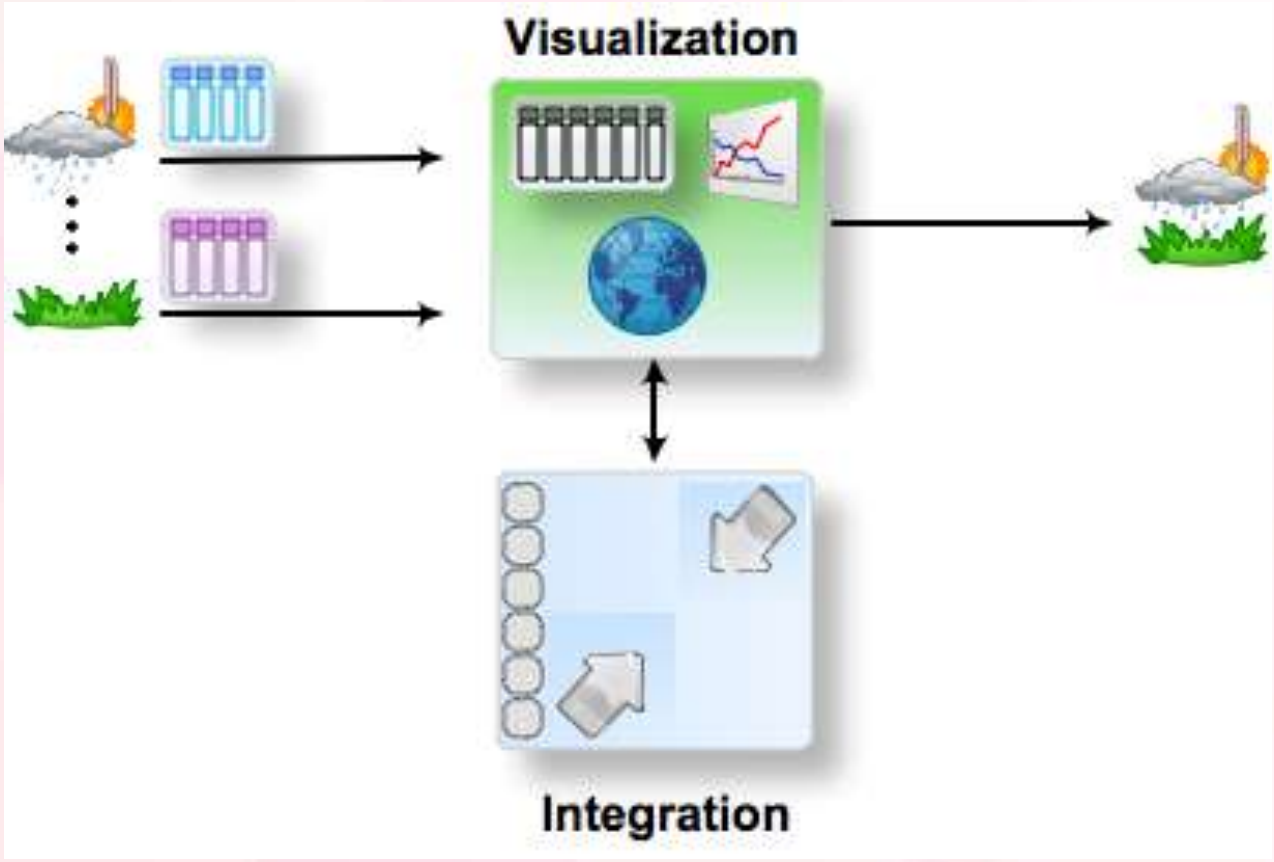
Latitude+Longitude	is-part-of	City+State
Timestamp	is-part-of	Time

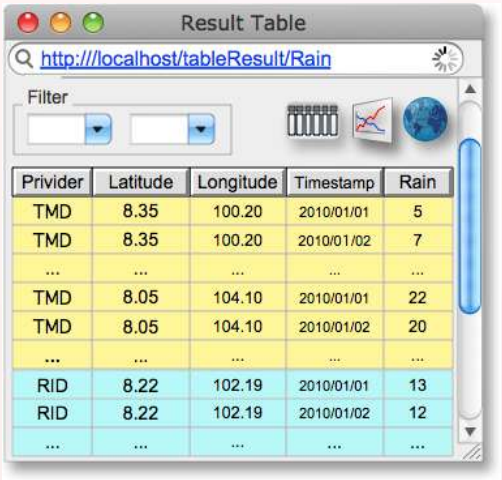


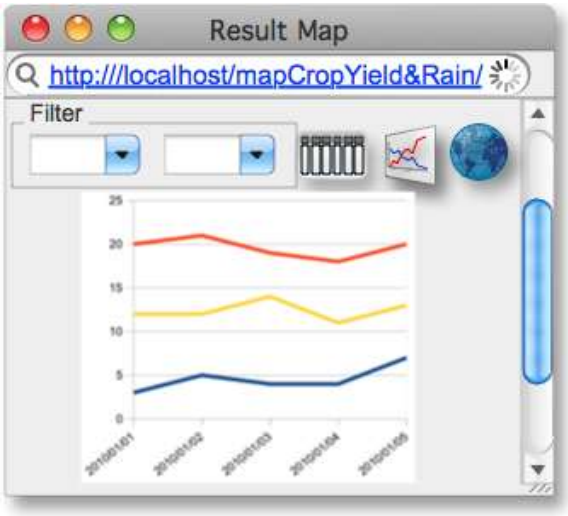




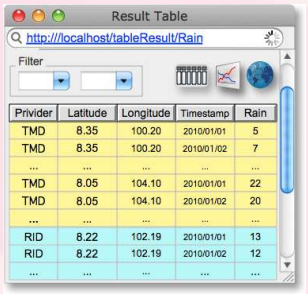
Visualization

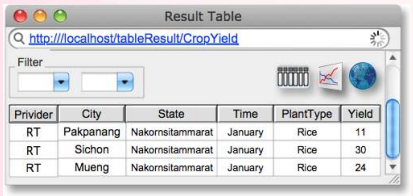


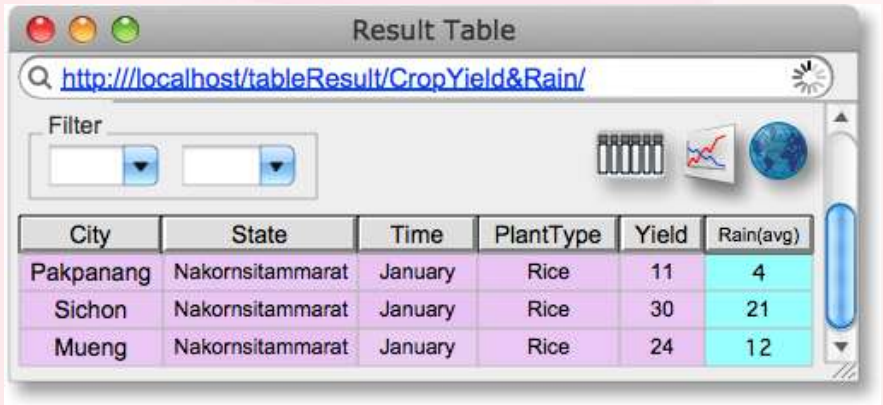


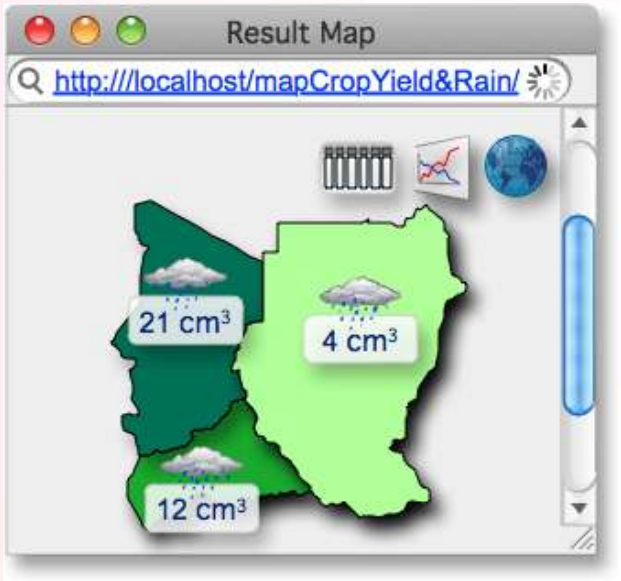


one-domain integration & visualization









across domains integration & visualization

Our Collaborators

NECTEC
a member of NSTDA

GEOGrid

Data : aerosol, angstrom

- Sunphoto meter (SP) 400 500 600 nm
- Automatic-capturing Digital Fisheye Camera (ADFC)
- Hemi-Spherical Spectral Radiometer (HSSR)

Southeast Asia START Regional Center
IHDP · IGBP · WCRP

Data : aerosol, pm10

- Sunphoto meter (SP) 460 540 620 nm

Future Work

- Fulfill Env. Informatorium to be able to
  - Access data from services in different formats
  - Integrate any data across a single & multiple domain(s)
  - Visualize integrated data via table, graph & map
- Collaborate with other organizations to
  - Publish data through Env. Informatorium
  - Access data from Env. Information