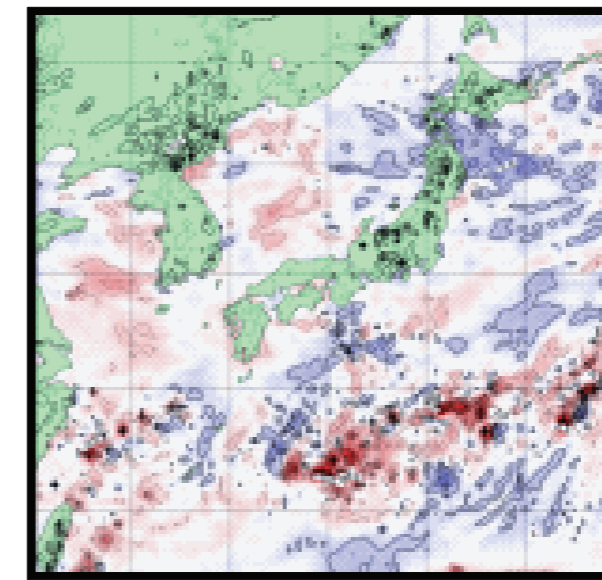




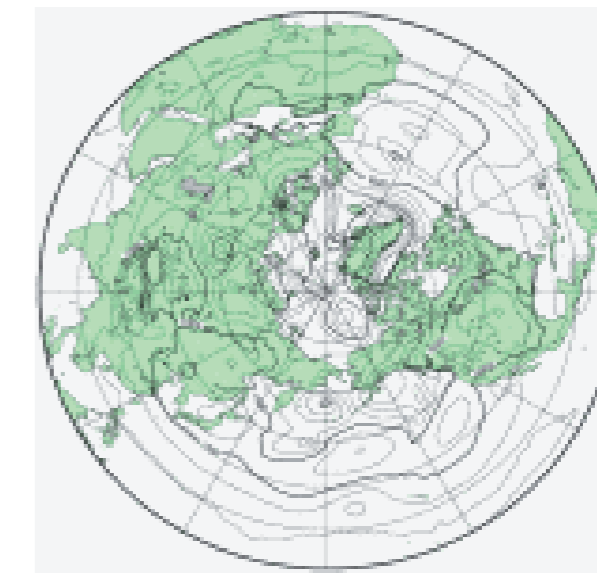
## Division of Computational Informatics Database / Computational Media

### Meteorological DB Archive

Center for Computational Sciences (CCS), University of Tsukuba offers the daily operational weather forecasting data provided by the Japan Meteorological Agency (JMA). The data are called Grid Point Values (GPV). The Archive is maintained for the purpose of scientific development of the weather and climate forecasting technology. All weather maps posted here are the product by the CCS. In the Archive, there are six kinds of JMA/GPV data. More than 170 users register and data size is about 1 TB.



Meso-scale  
Non-hydrostatic Model

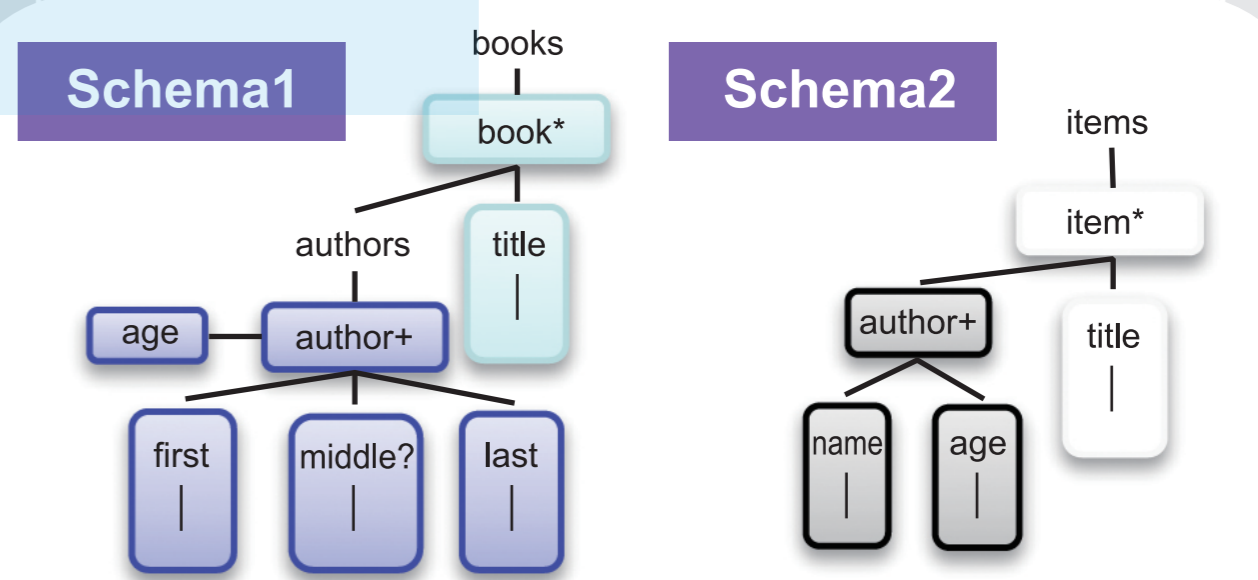


Global Spectral Model

### Facet search over heterogeneous XML data

Facet search is an exploratory search method. It is often used on EC sites such as amazon.com. This work applies facet search over XML data since there are scientific data in the form of XML.

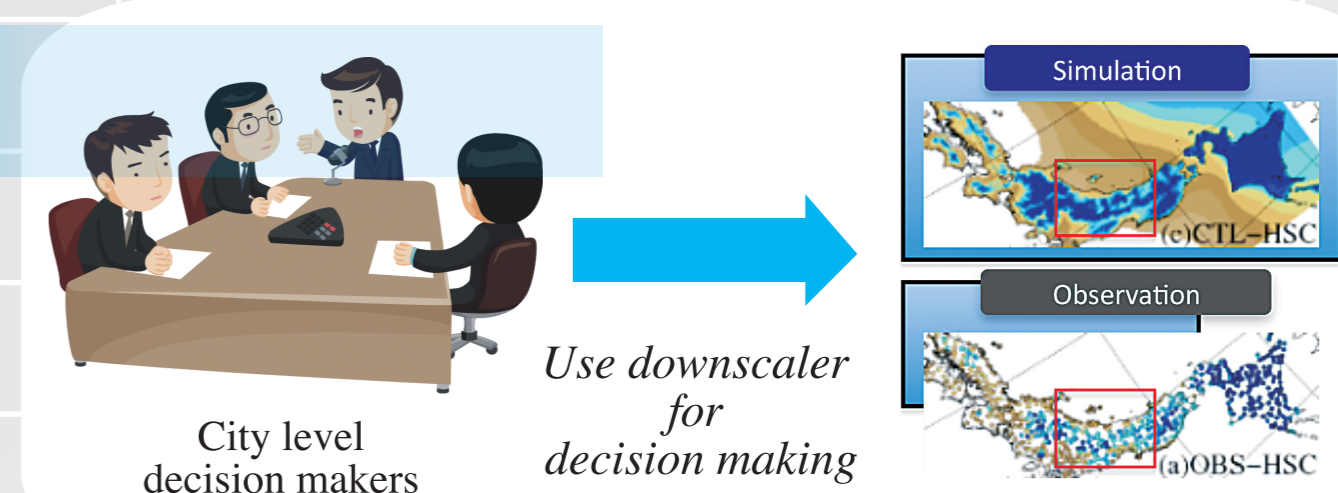
- To apply facet search over XML, we give formal definitions of "object" and "facet" for XML, and of searches for XML. Our facet search system works for DBLP and SIGMOD Records.



### Climate change downscaler implementation

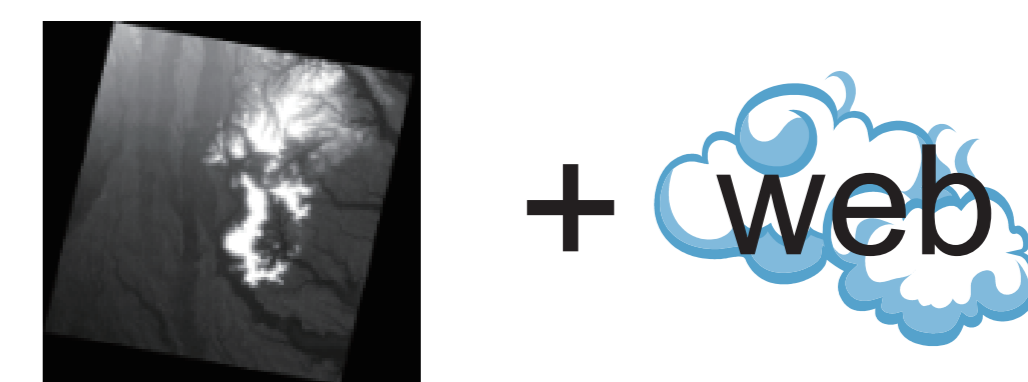
The purpose of this research is to develop a practical downscaler system for city-level decision-makers in Japan. The system provides WRF based simulation, data analyses, and visualizations with GUI.

-- [http://www.nies.go.jp/s8\\_project/english/member.html](http://www.nies.go.jp/s8_project/english/member.html)



### Integration of Satellite Images and Web Contents

The GEO Grid project has collected satellite observation images from 2000 to present, and the amount of the collection is about 150 TB. We have developed a system that integrates web contents about newly constructed buildings and their satellite images with SciDB scientific database.



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### Free Viewpoint Watching of Live Soccer Games

Multiple viewers over computer network can browse a live soccer game from 3D free viewpoints.

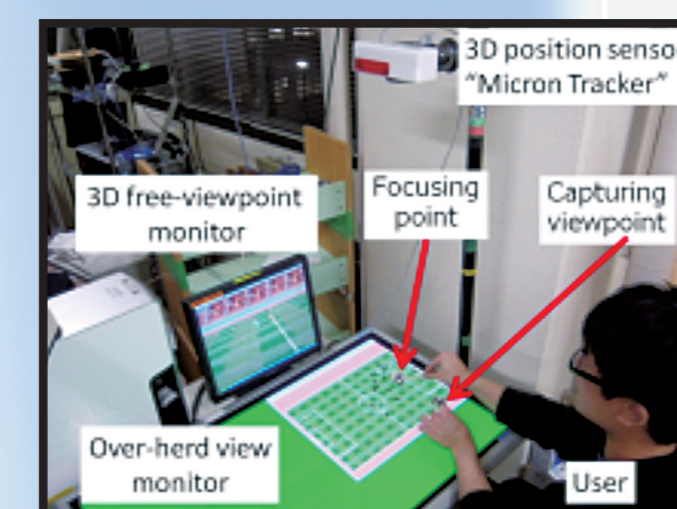


① Player position estimation



② Simultaneous video capture and image analysis

④ Viewer can fly through the field and enjoy any viewpoints on-line using our 3D live video technique.

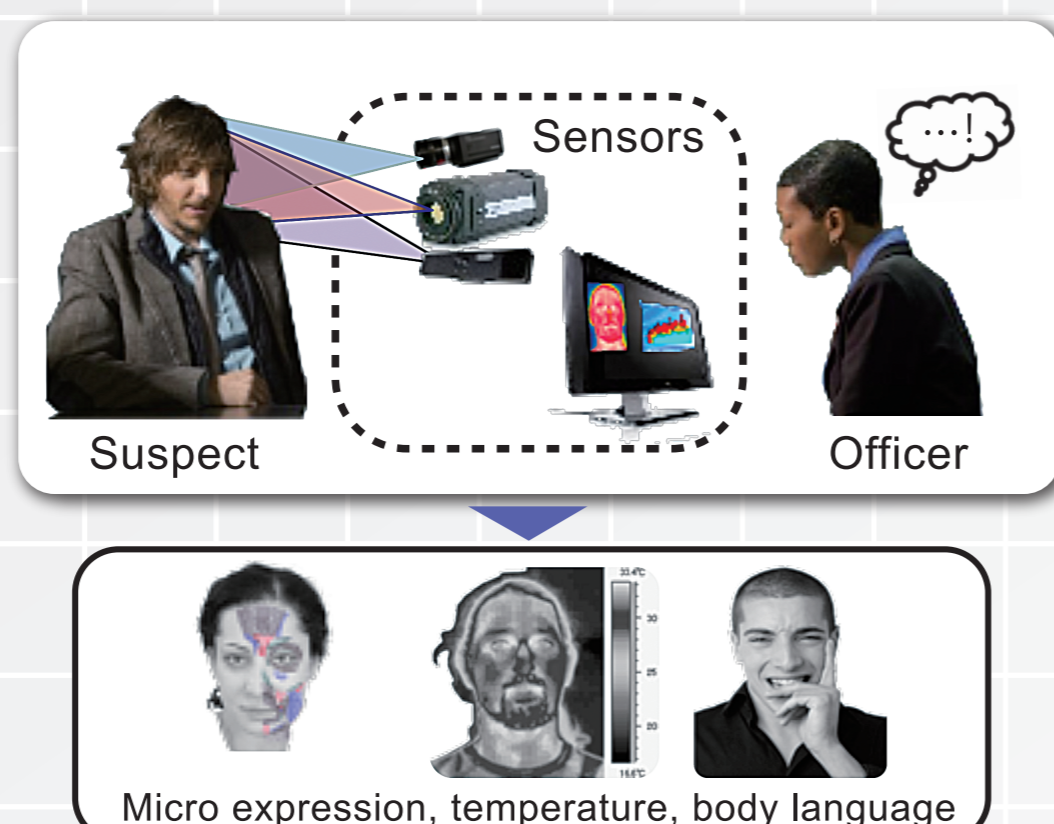


Remote audience

③ Virtualized players are stored and forwarded to a 3D virtual stadium on the client.

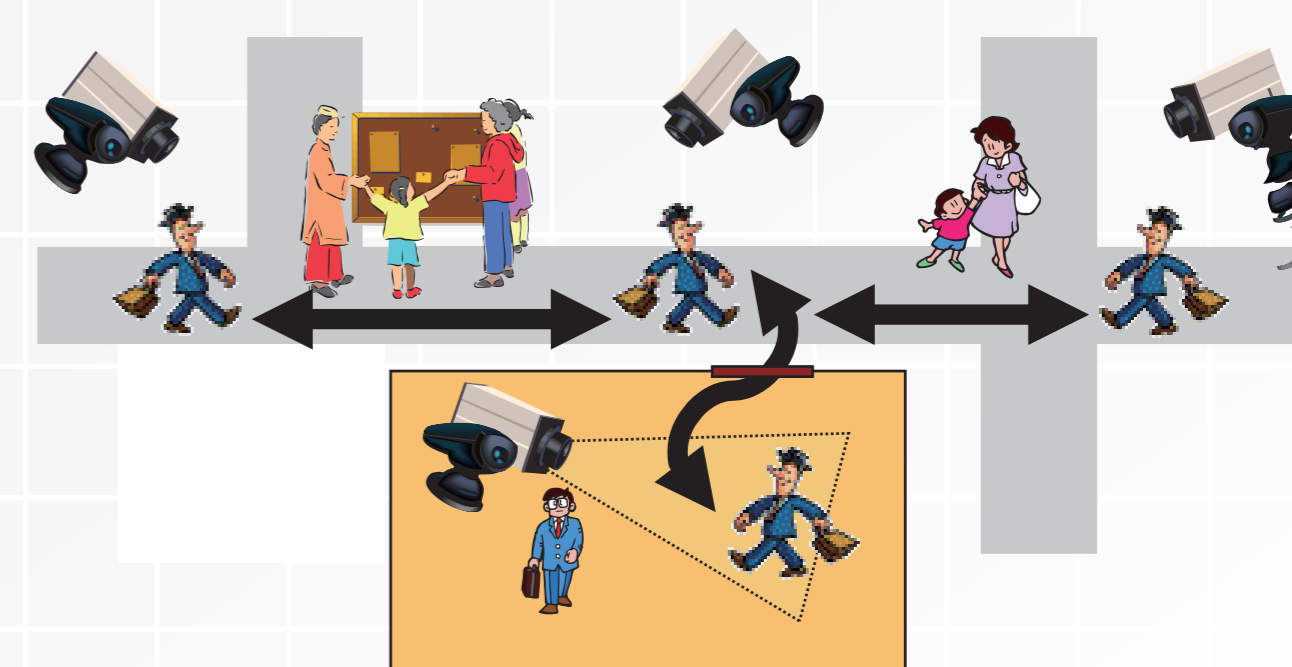
### Hostile Intent Detection

Intelligent analysis on hi-order remote sensors with psychological methodology assists to detect suspicious people.



### Sensing Web

Sensing Web is a framework for everyone to freely utilize the sensory information of ubiquitous sensor networks.



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