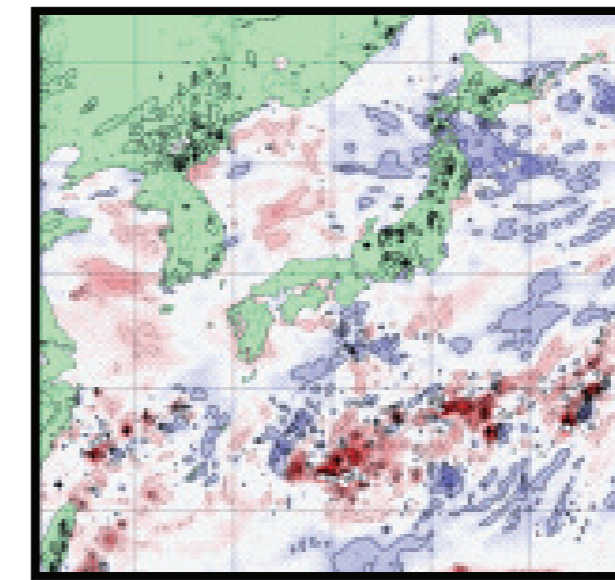




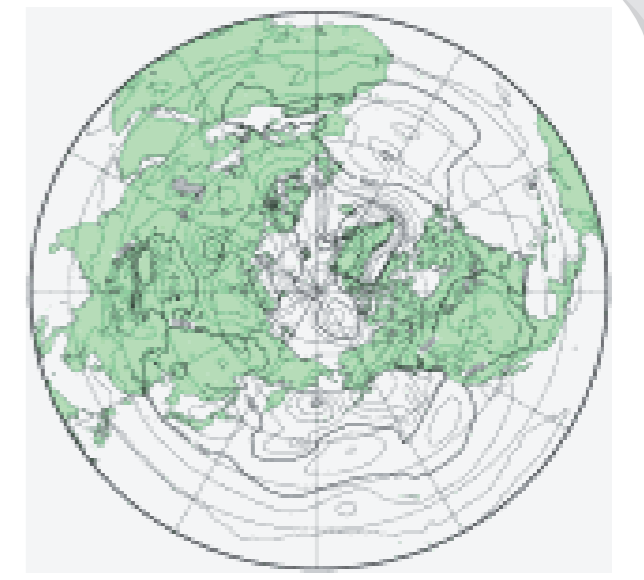
Division of Computational Informatics Database / Computational Media

Meteorological DB Archive

The Center for Computational Sciences (CCS), University of Tsukuba offers daily operational weather data archive provided by the Japan Meteorological Agency (JMA). The data archive is called Grid Point Values (GPV). GPV is maintained for the purpose of scientific development of the weather and climate forecasting technology. All weather maps posted here were produced by the CCS. The archive stores six kinds of JMA/GPV data. More than 170 users have registered and the amount of the archive is about 1 TB.



Meso-scale
Non-hydrostatic Model

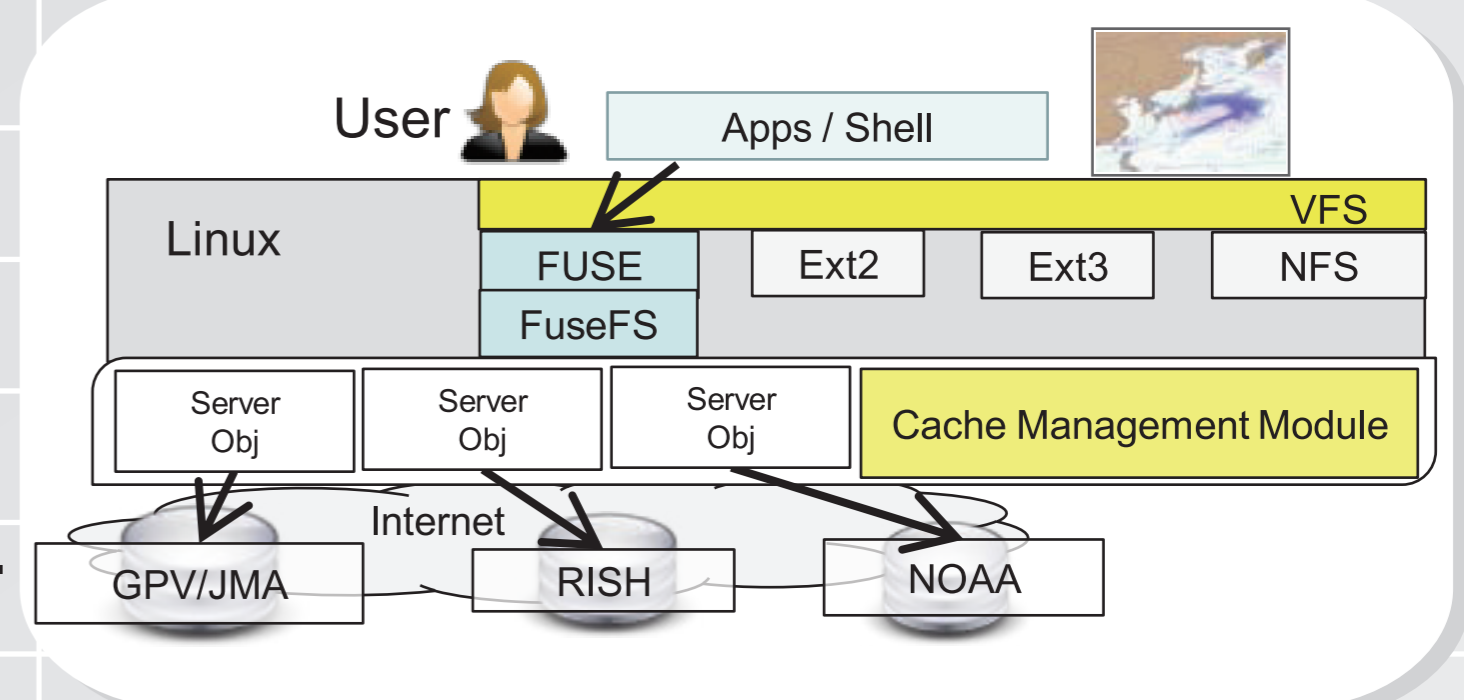


Global Spectral Model

Meteorological Data Integration

The CCS supports scientists accessing online meteorological data

- Using FUSE, we make online meteorological data logically appear to users/applications as if it were on the local file system.
- * FUSE is a Linux kernel module for mounting file systems in user space.
- It adopts intelligent prefetch and cache management for efficiency.



Automatic Classification of Weather Patterns

Japanese pressure patterns are classified into 15 patterns. When meteorology researchers need data of a specific pressure pattern, they must look through a lot of data by their eyes. We have developed an automatic pattern classification system using support vector machine, which showed 0.869 F-measure.



Integration of Satellite Images and Web Contents

The GEO Grid project has collected satellite observation images from 2000 to present, and it has collected about 150 TB of data. We have developed a system that integrates web contents about newly constructed buildings and their satellite images.



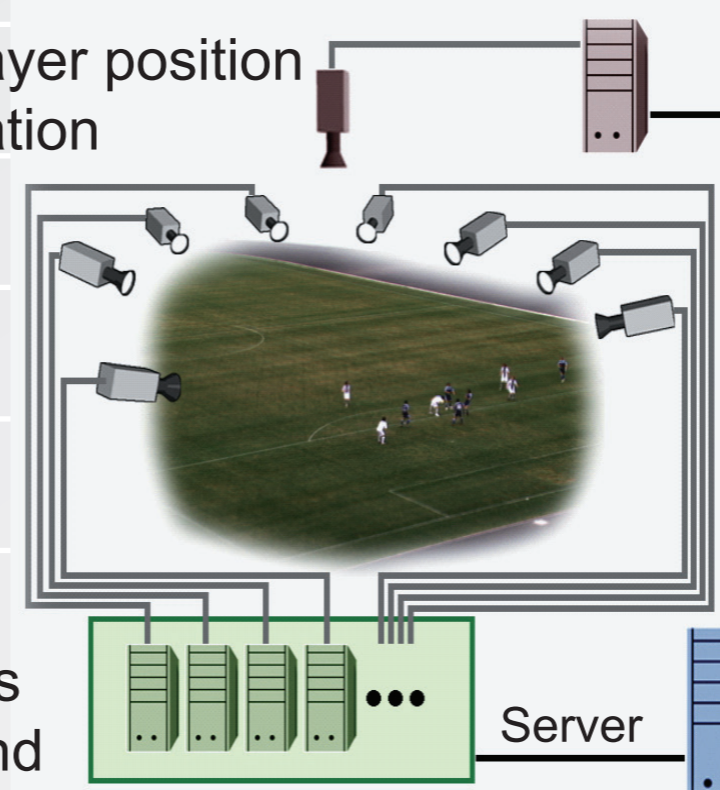
Contact: {kitagawa, amagasa, kawasima}@cs.tsukuba.ac.jp

Free Viewpoint Watching of Live Soccer Games

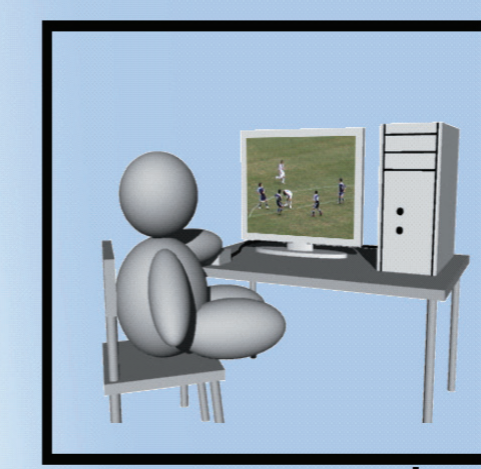
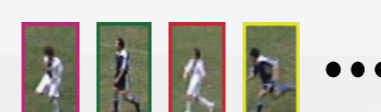
Viewers can observe a live soccer game from 3D free-viewpoint over computer networks.



① Player position estimation



② Simultaneous video capture and image analysis

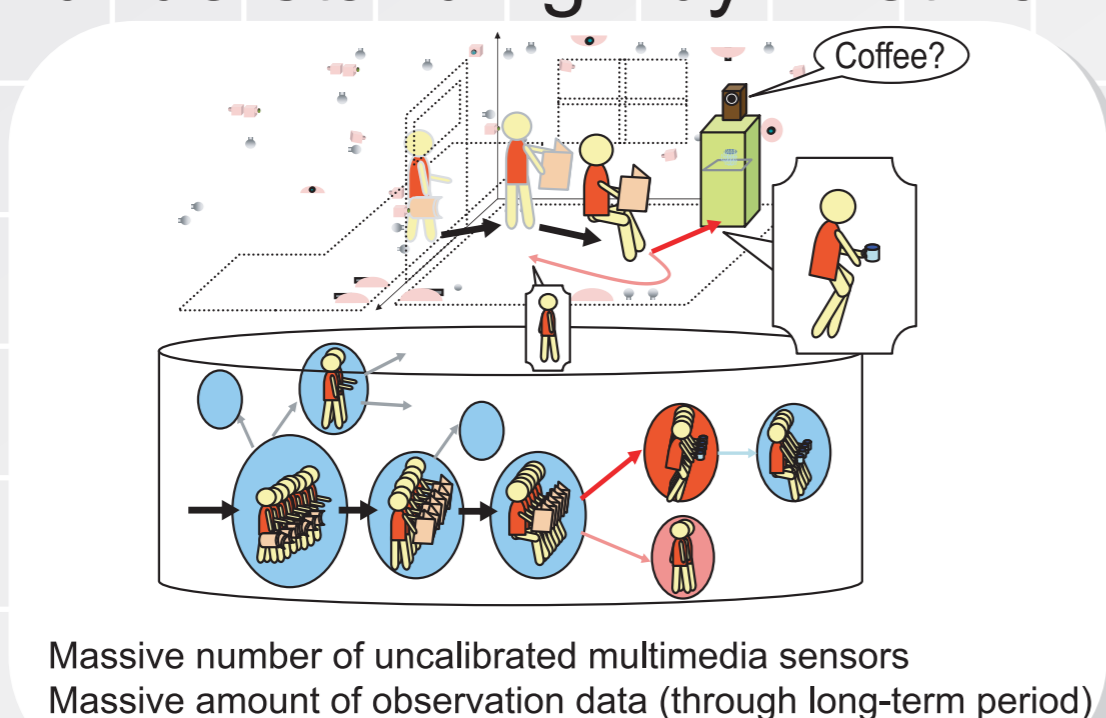


④ Viewer can fly through the field and enjoy any viewpoints on-line using our 3D live video technique.

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

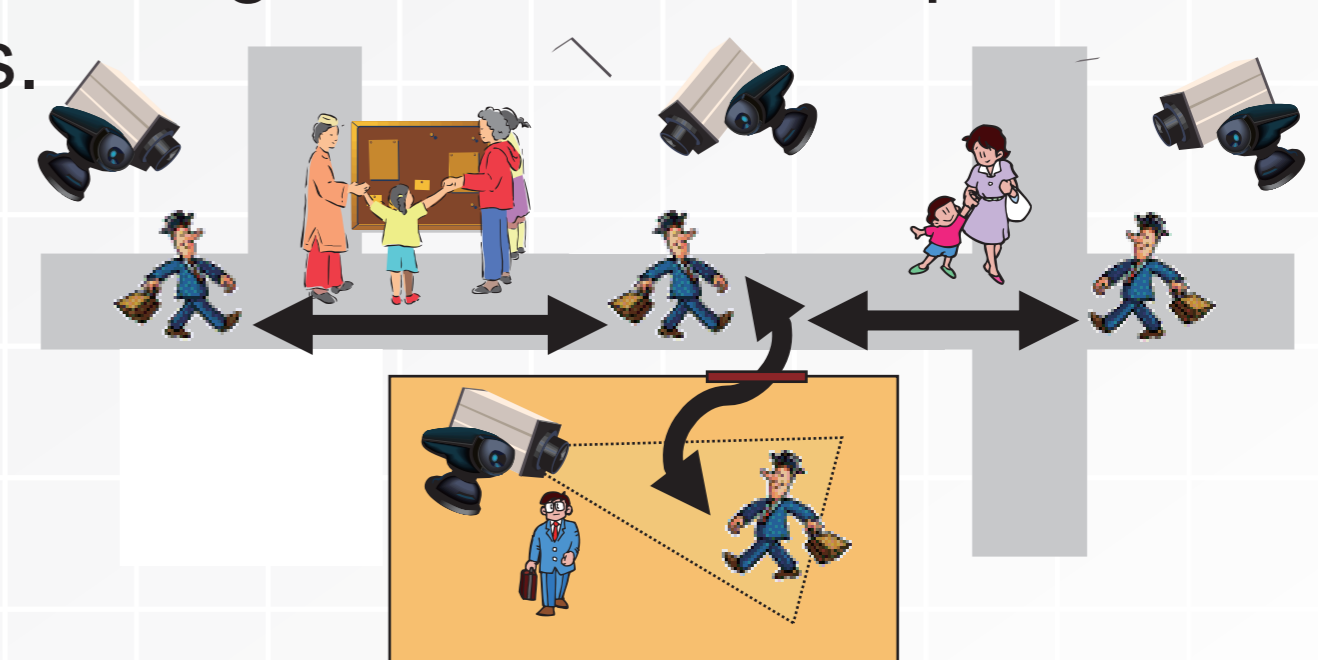
Massive Sensing

Intelligent video processing and human behavior understanding by networked sensors.



Sensing Web

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



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