Division of Computational Informatics
Computational Intelligence / Computational Media
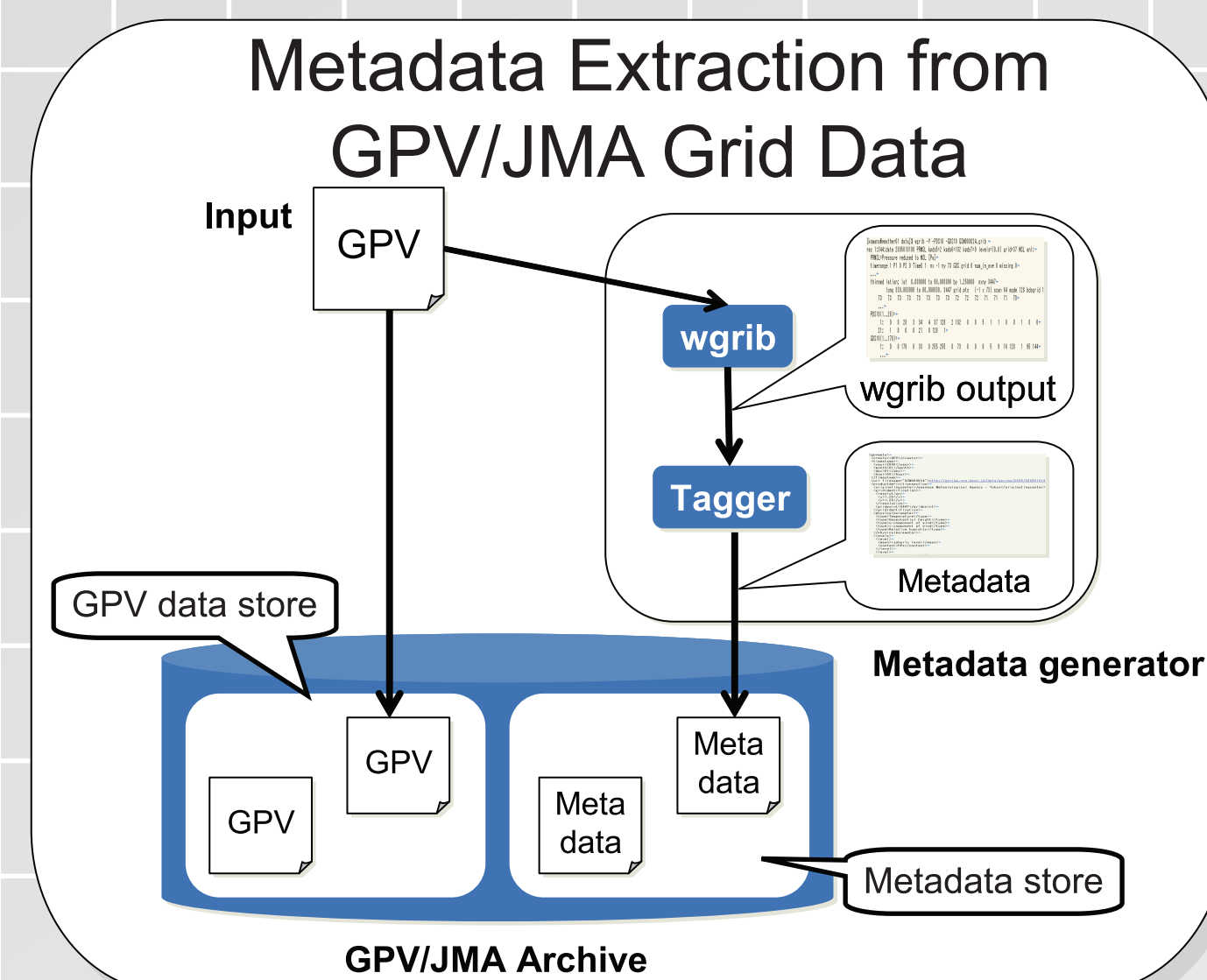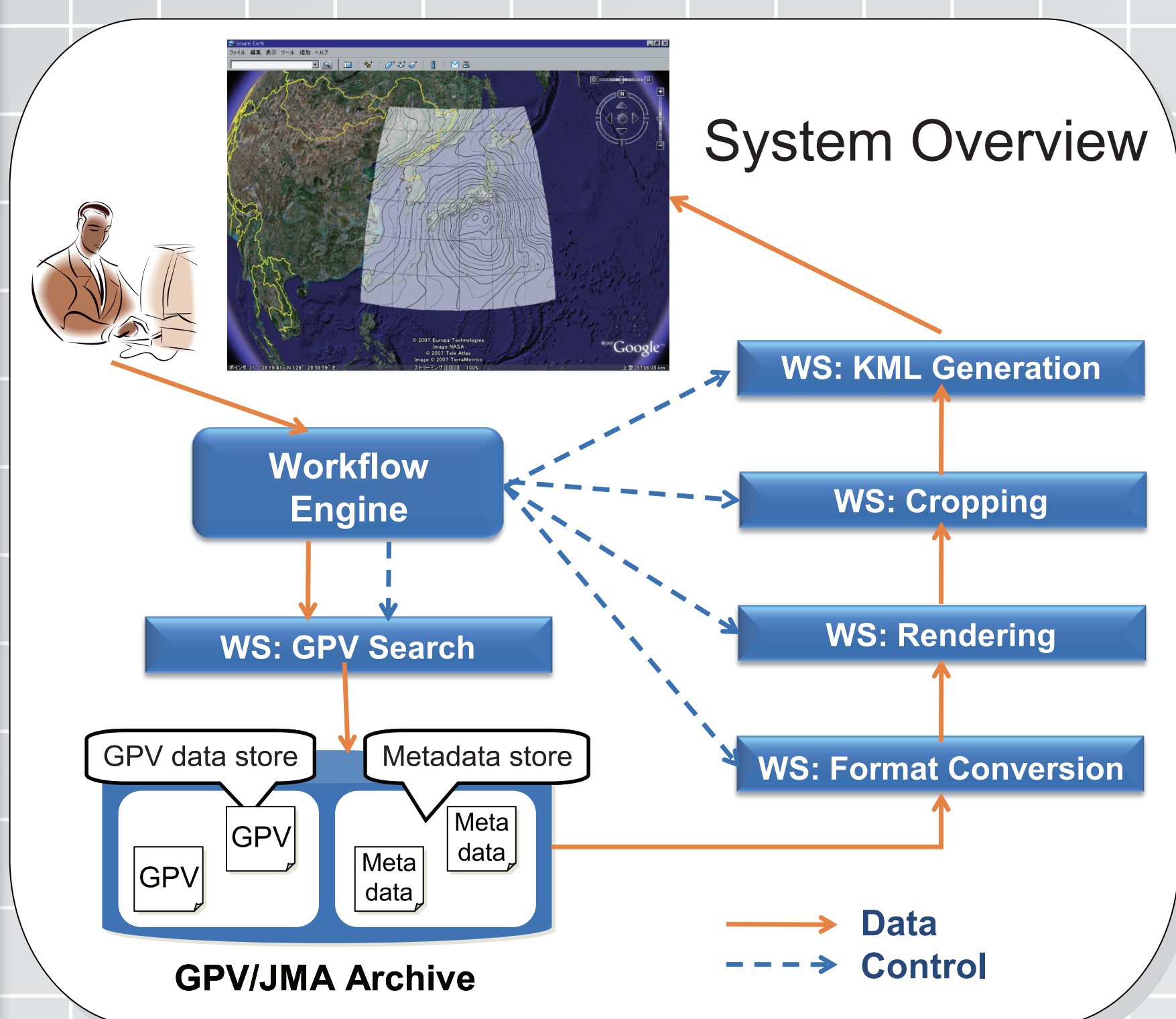
Web service system for large meteorological DB

Constructed on top of GPV/JMA Archive
- GSM, RSM, MSM, Ensemble forecast by JMA
- 170 registered users and 1TB stored data

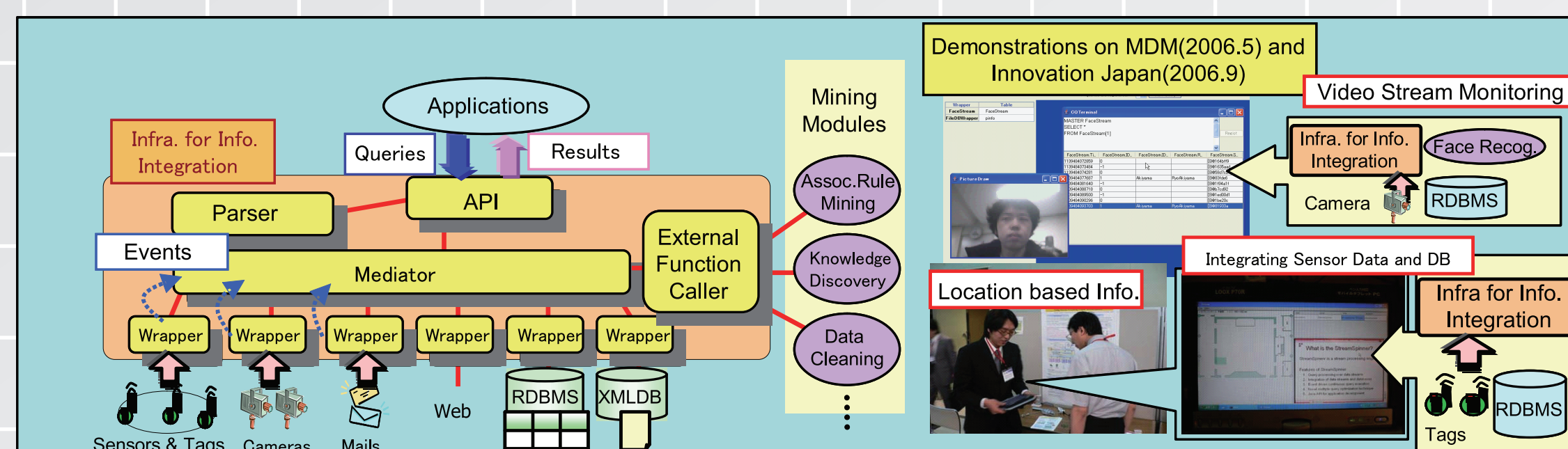Providing services for manipulating meteorological data
- Format conversion, rendering, image manipulation, etc.

BPEL-based workflow engine to orchestrate the functionalities

Metadata Extraction from GPV/JMA Grid Data
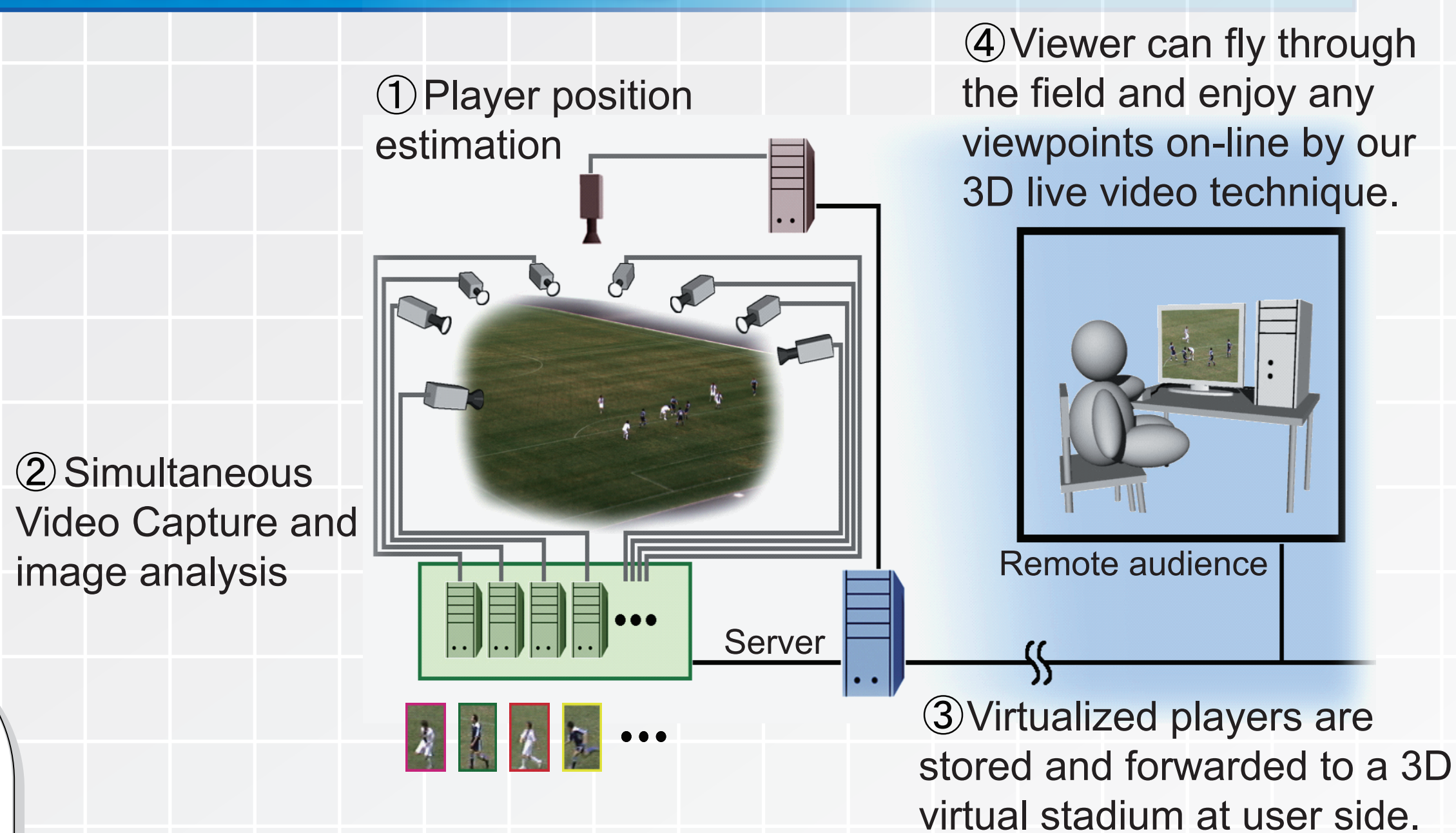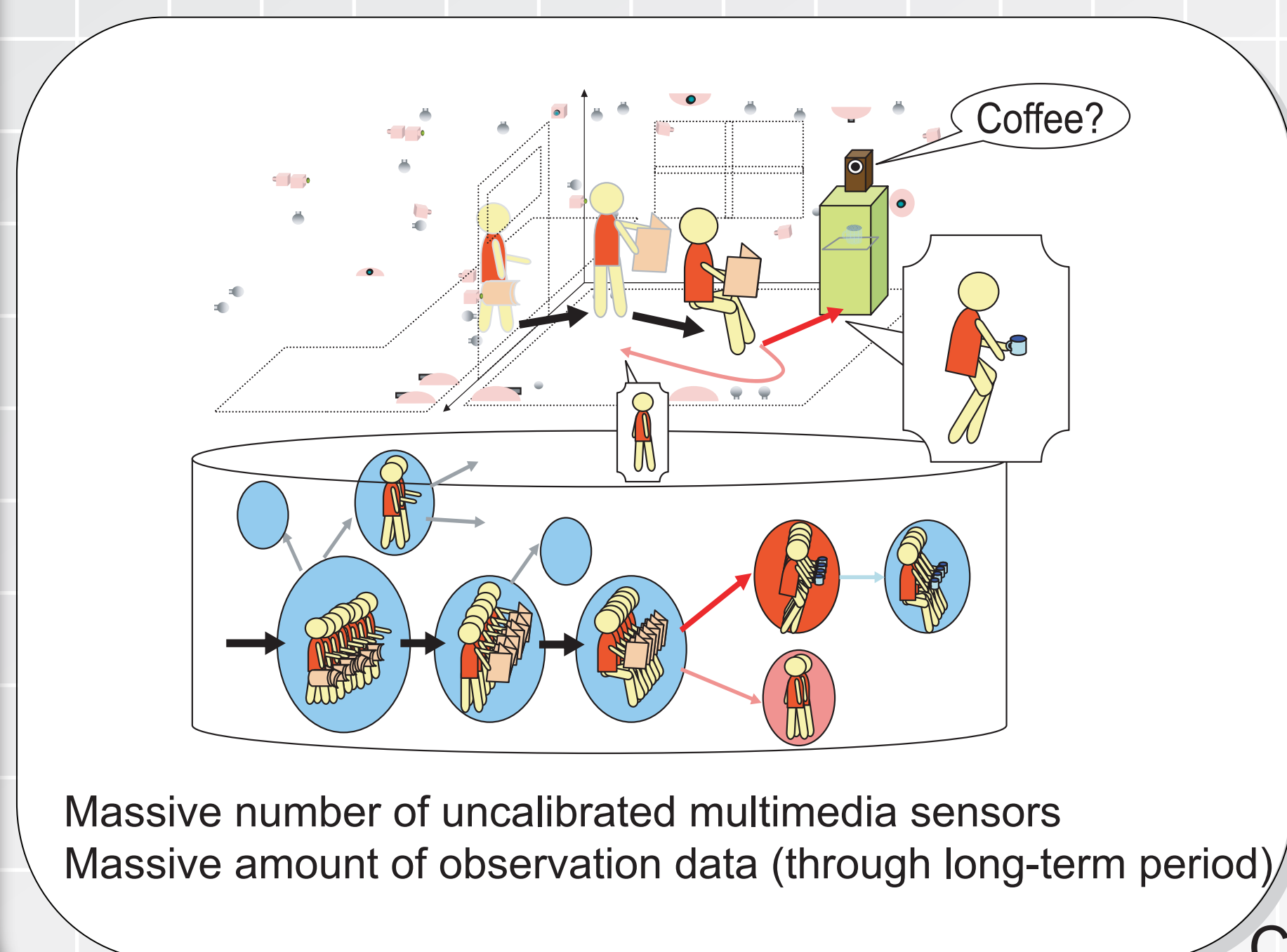
Input
GPV
wgrib
wgrib output
Tagger
Metadata
Metadata generator

GPV data store
GPV
GPV
Meta data
Meta data
Metadata store
GPV/JMA Archive

System Overview

WS: KML Generation
WS: Cropping
WS: Rendering
WS: Format Conversion

Workflow Engine

WS: GPV Search

GPV data store
Metadata store
GPV
GPV
Meta data
Meta data

→ Data
- - → Control

GPV/JMA Archive

Infrastructure for real-world data integration

Stream processing engine StreamSpinner
- *http://www.streamspinner.org*

Infra. for Info. Integration
Applications
Queries
Results
Mining Modules
Assoc.Rule Mining
Knowledge Discovery
Data Cleaning
Parser
API
Mediator
External Function Caller
Events
Wrapper Wrapper Wrapper Wrapper Wrapper Wrapper
Sensors & Tags   Cameras   Mails   Web   RDBMS   XMLDB

Demonstrations on MDM(2006.5) and Innovation Japan(2006.9)
Video Stream Monitoring
Infra. for Info. Integration
Camera
Face Recog.
RDBMS
Location based Info.
Integrating Sensor Data and DB
Infra for Info. Integration
Tags
RDBMS

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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.

①Player position estimation

②Simultaneous Video Capture and image analysis

Server

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

Remote audience

③Virtualized players are stored and forwarded to a 3D virtual stadium at user side.

Coffee?

Massive number of uncalibrated multimedia sensors
Massive amount of observation data (through long-term period)

Massive Sensing

Intelligent video processing and human behavior understanding by networked sensors

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