Live E! project

Internet architecture
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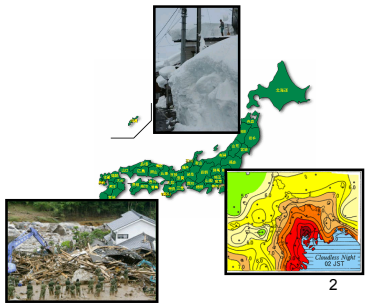
background

- Environmental problems
  - Heat island
  - Flood disaster
  - Snow disaster
  - etc.



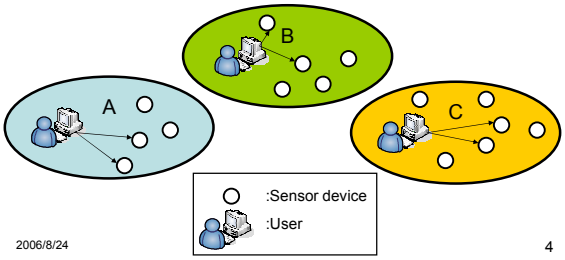
Background 2

- Development of sensor devices
  - Many kinds of sensors
  - Connect to the Internet




issues

- Closed sensor network
  - Companies and parties don't share data



Live E! project

- Sensing data are "shared possession"
  - Everyone can freely use data

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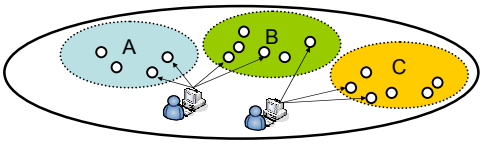
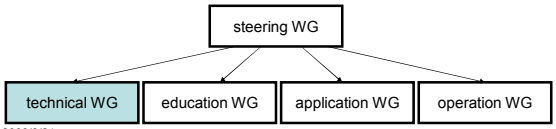
- Establish new information platform
  - Share sensing data
- Environmental problems, education, business



Live E! platform

About Live E! project

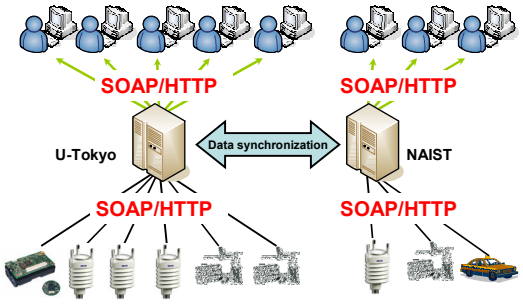
- 2005.05~
- Industry-academic-government project
- Build new platform
  - Share sensing data freely all over the world
- I'm belong to the technical WG(chair)



Participating companies, parties
（2006.3.31）

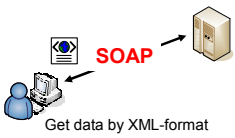
〔university, parties〕
WIDE project(NAIST、Tokyo-university, Hiroshima-university、HiroshimaCity-University、Saga-University、TokyoDenki- university、Kurasiki-University、Keio-University、National Astronomical Observatory of JAPAN、NiCT、etc.)、U18 IPv6
〔companies〕
IRI-ubitec、weathernews、Uchida Yoko、Echelon Japan、Cisco Systems、DAI-DAN、Net One Systems、NTT、WILCOM、NTT neo mate、Panasonic、MRI
〔local government〕
Minato-city、Kurashiki-city、Mitaka-city

Use standard interface

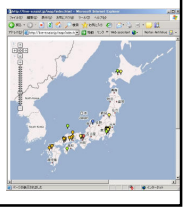


Example: get data

- Get current data from all sensor devices
  - WEB service
    - getCurrentDataAll() is defined
- Data standardization
  - easily create application (same format)
  - Get profile information(location, address, environment, etc.)

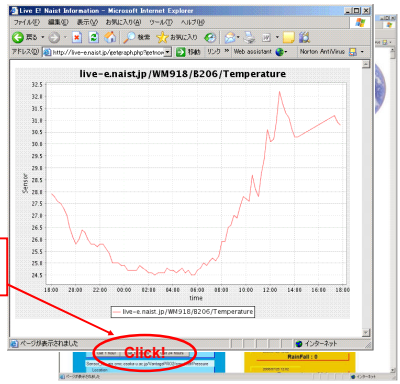


Create application

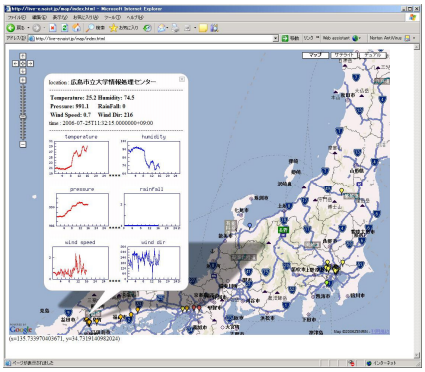


Application examples: WEB page

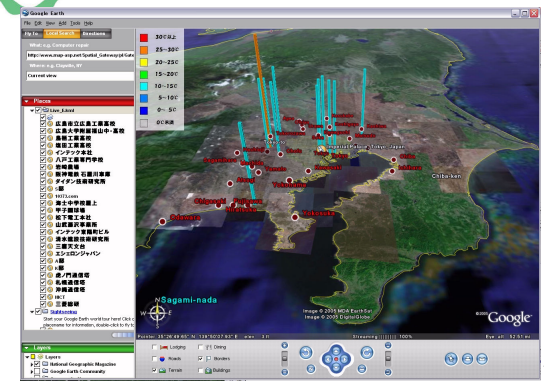
Get graph at each location



Application examples: Google map

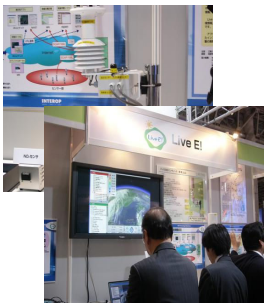


Application examples: Google earth



other activities

DEMO@INTEROP

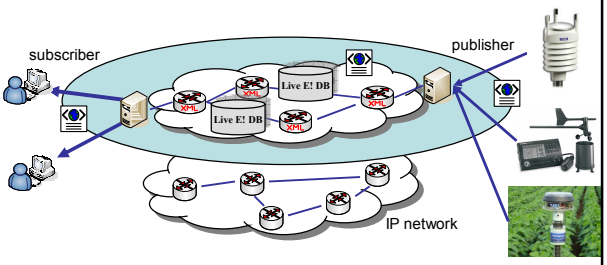


Symposium@Tokyo-u

Future work

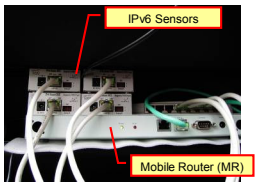
- My research
  - Geographical peer to peer
  - Works my P2P on Live E! platform
- Collaborate with other organization
- Small node, mobile node
- Enhance web-service

Appendix.1 P/S system



• XML based publish/subscribe system

Appendix.2 internet car



MR and IPv6 Sensor

IPv6 based on-board equipment

IPv6 GPS Sensor

Vehicle information can be retrieved using SNMP/IPv6