Introduction of Digital Asia

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Asian Center for Research on Remote Sensing (ACRoRS)
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Digital Asia

- A project to realize an Asian version of Digital Earth.
- It is a three year project started in 2002.
- It is supported by JAXA (Former NASDA).
- Its secretariat office is located at ACRoRS, AIT.
Digital Earth (1)

- **Digital Earth:**
  Mr. Al Gore proposed a framework of the Internet and Web-based GIS systems to provide digital geo-spatial data.

- **Implementation of Digital Earth:**
  By international society including USA, Japan, China, etc, with UNEP.
LANDSAT image

Resolution: 30m, Observation Cycle: 16 days
High Resolution Satellite
Data requirement for Model Setup

- Topographic Data
  - source: 50m grid data
  - + additional contours of 1m

- River
  - source: DEM

- Land cover Data
  - source: satellite image

- Soil Data
  - source: soil maps

- Groundwater aquifer
  - source: borehole data

DISTRIBUTED MODEL

Hydrologic Data for Verification
Open and interoperable geo-processing

Sharing Geo-data within and between Information communities

Network computing resources with OpenGIS interfaces

Government
Natural Resources & Agriculture
Business Logistics
Utilities
Municipal Services
Civil Engineering
Transportation
Cadastre

http://www.opengis.org/techno/presentations/VancouverIntro_files/frame.htm
Digital Earth (2)

- **Open GIS Consortium (OGC):**
  Established in the USA to develop Web-based GIS and implement test bed systems.

- **Web Map Technology (WMT):**
  A standard for Web-based GIS developed by OGC.
Digital Earth (3)

• Earth observation data:
  Powerful tools for various socio-economic and Earth environmental topics.

• Potential type-II activity for World Summit for Sustainable Development (WSSD):
  Japan is following up the program.
Background of Asia:

- A lot of useful regional data and information are available in Asia by using Earth observation satellites and in-situ observation.
- Weak economic potential.
- Lack of social infrastructure for network.
- Lack of trans-boundary data and information sharing.
Digital Asia (2)

• Proposal of Digital Asia:
  To provide easy and effective sharing of digital geo-spatial data among Asian countries for environmental studies of sustainable development.

• Digital Asia Network (DAN) :
  An open forum to implement the Digital Asia concept.
Structure of DA (1)

• DAN is a self-funding best-effort forum, each participant has the responsibility to develop and operate their own data sharing system.

• Participants:
  agencies, universities, commercial companies, experts of  IT and GIS.
Structure of DAN (2)

• **Steering Committee**
  – Propose and coordinate the Digital Asia concept and future direction.

• **Technical Support Team**
  – Collect and maintain freeware GIS and IT tools.
  – Develop software as a shared tool on a voluntary basis.
  – Support the implementation of demonstration systems through provision of technical training courses and consulting services.
Structure of DA (3)

- **The Secretariat office**
  - Support overall management of DA and its activities.
  - Coordinate with the Steering Committee.
  - Host workshop or special session at various international conferences.
  - Located at ACRoRS/AIT.
Digital Asia Activities (1)

Workshops/sessions: To promote Digital Asia concept.

• DAN 1st preparation meeting at GISTDA, August, 2002
• DAN special session at ACRS in Nepal 11/27, 2002
• DAN special session at GMSARN (Great Mekong Sub region Academia and Research Network) workshop at AIT, February 27, 2003
• 3rd Water Forum at Osaka, March, 2003
Digital Asia Activities (2)

Workshops/sessions

• DAN special session at Global Map Forum at Okinawa, July 12-14, 2003
• APAN EM session at Pusan, Korea, August, 2003
• CEOS WGISS at Chiang Mai, Thailand, September, 2003
• Digital Earth 3rd workshop at Brno, Czecho Republic, September, 2003
• ACRS at Pusan, Korea, November, 2003
Digital Asia Activities (3)

Development of Web-based GIS demonstration systems:

- Prototypes Development for the Digital Earth
  by H. Fukui (Keio Univ.)
- Application of OGC services to Digital Asia
  by K. Hiraishi (NEC Aerospace Systems, Ltd.)
- Forest monitoring prototype system using WEB mapping technology,
  by S. Kawahito (JAXA/RESTEC)
- Implementation of WMS test-bed using free and open source software,
  by V. Raghaban (Osaka City Univ.)
Digital Asia Activities (4)

OGC training course:
At GAC/AAIT, 11/11-15, 2002

Publication:
Digital Asia Activities (5)

• DAN Home page:
  http://www.acrors.ait.ac.th/digital_asia

• Mailing list for all DAN participants
Next Step

• *Call for Participation*
  – Request to co-host training course
  – Request to co-host Digital Asia Special Session in international symposium
  – Promotion (Outreach)
  – Distribute brochure, WMS cookbook CD-ROM, WMS text
  – Collaborate to list up potential sharing data and information
  – Join to test-bed activity (use case)
URL

Please visit the DAN homepage.
Thank you

http://www.acrors.ait.ac.th/digital_asia