

Digital Pennsylvania/Digital Region: A Proposed Digital Earth Demonstration Project

11/14/2000

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Digital Pennsylvania/Digital Region: A Proposed Digital Earth Demonstration Project

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Digital Pennsylvania / Digital Region

What is Digital Earth (DE)?

- DE is a global framework of interoperability

The diagram illustrates a central cloud labeled "Network computing resources with shared interfaces" connected to various sectors: Government, Business Logistics, Utilities, Municipal Services, Cadastre, Civil Engineering, and Transportation. Each sector is represented by icons and a computer monitor, with red dashed lines indicating connectivity to the central cloud and to each other.



Digital Pennsylvania / Digital Region

DE is a “Geographic Dialtone”

The diagram illustrates a workflow for geographic data. At the top left, there are four blue cylindrical icons representing databases. In the center, there are three overlapping map sheets showing a geographic area with a pink line and a green area. Below these, a horizontal line represents a network or server rack. On this line, there are three server racks. The first two are connected by a blue arrow pointing right. The second and third are also connected by a blue arrow pointing right. The third server rack is connected to a desktop computer system (monitor, keyboard, mouse). The monitor displays a map with a pink line and a green area, matching the map sheets above.



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Digital Earth and Related Programs

	Geographic Area of Interest	Sponsor	"Product"	Portals/ Central Node
NSDI	US	Government	Data Coordination	Many/No
Open GIS Consortium	Global	Not for Profit	Geospatial System Interoperability	
Digital Earth	Global	Government	Application Framework Organization	Unlimited/No
Geography Network	Global	Commercial	Services	Limited/Yes





My Experience

-- *Clearinghouse Mission* --

- To provide free and open access to spatial data from government, business, academia, and non-governmental organizations for easy query, analysis, and display.



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A Partnership

- State Council
- Universities/Colleges
- FGDC
- Local governments
- Non-governmental organizations
- Businesses





Clearinghouse

- **Spatial Data Library Approach**
- **Data-related tasks include**
 - identification
 - storage
 - documentation
 - retrieval and distribution





Clearinghouse Results

- “Pull” approach for data/metadata collection
- GBs of “native” format data centralized
- 10s of thousands of metadata records
- Millions of hits
- Terabytes of data centrally served
- High use and satisfaction from GIS professionals



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But effective service is difficult, because:

- The best geographic information is at the local level and local data is the most difficult to obtain/maintain.
- Technical assistance is essential
- Easy integration is the expectation
- Update of data cannot be ad hoc
- Need to meet the needs of the non-expert user





- Cannot separate data and metadata. Should not separate data/metadata from the source
- A “Geographic Information” perspective is emerging
- 80% of the possible users seek *solutions NOT data*





**Furthermore, in my opinion.....
geographic data:**

- is never shared or handled for free.
- rewards are either a tangible cost savings, a political gain, and/or long-term financial gain.
- is given away when the expected reward is political/long-term financial gain.
- is sold when the monetary opportunity exceeds political/long-term reward.
- distribution usually always involves a broker that enjoys a slice of the reward.



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So.. we currently have an informal....

utility that is emerging to provide geographic information *services* to the public

But we lack the effectiveness and responsiveness of ...

a locally/regionally coordinated water, electric, cable TV, or telephone system





Why not a

- *Local/Regional Geographic Information Utility (GIU)* as a formal partnership to provide essential geographic information *services* to the public, similar to, electricity, gas, water, sewerage, or telephone

Consisting of

- *Information Technology Partners (ITP)* to add value to the GIU and formally share in the “rewards”





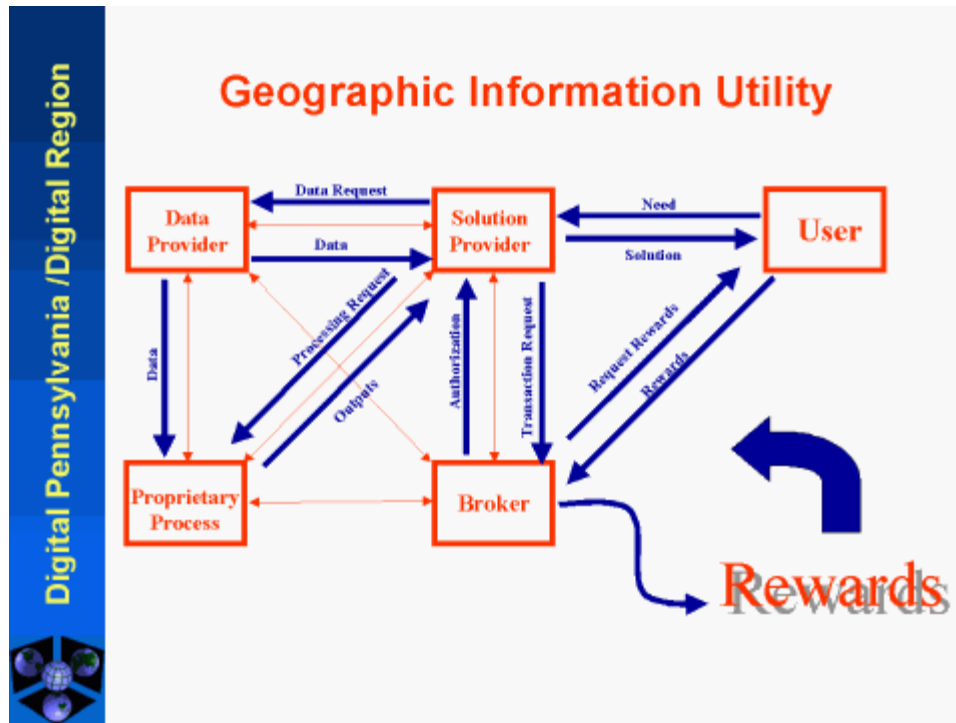
Vision: DP/DR is an information utility that enables the user easy access to **local and regional** geographic services

Goals:

- broaden focus to Geographic Information
- empower the grassroots to share what they know about a place on the Earth
- provide a “toolbox” that forms a core capability
- make newly identified geospatial data and services known to higher level frameworks



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DP/DR Intent

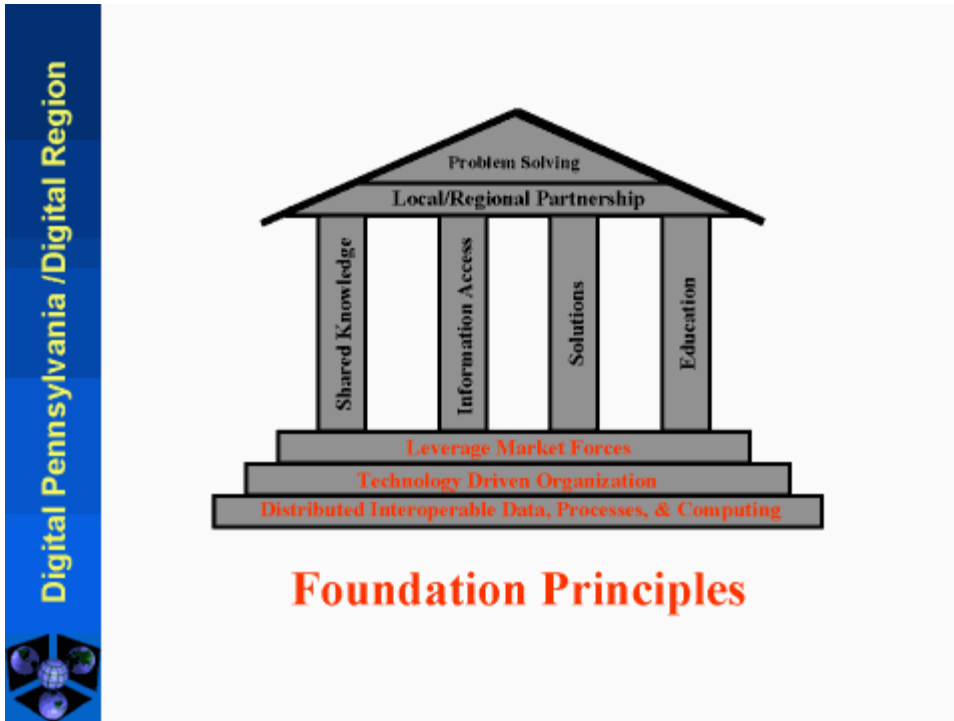
- Establish a local/regional **paradigm** for place-based problem solving activities.
- This means a new:
 - Local/regional marketplace for value added data and services
 - unlocking the vast amounts of digital geospatial knowledge capabilities sequestered at all levels
 - leverage market incentives for integration



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Notes:

Goal is the capture and delivery of knowledge, not just data.





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