

## **Whither Where?**

### **What is our Professional Future?**

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## **Current Hype**

- **Cartography is Dead**
- The curricula should be renamed:  
**Geographic Information Science**  
**Geoinformatik**
- **Maps are Obsolete**
- **Place is no longer important**

## Within the Profession

- Positive – if it makes us think or rethink
- Negative – if we become obsessed with it

A little rethinking is a  
necessary good

## Outside the Profession

- Positive –if it draws attention to our greater potential contribution
- Negative– if it indicates a profession in disarray

A profession needs some  
publicity

## Advice

- Spend little time on hype
- Spend lots of time on
  - Researching our new potentials
  - Developing new capabilities and methodologies

Always keep curricula updated

## Basic Infrastructures

- What
- How Much
- When
- Where

*Infrastructures  
lead to answers to  
the questions*

- How?
- Why?

## Our Responsibility

- The **WHERE** infrastructure
  - Society entrusted us with its future
  - We must:
    - Define it
    - Nurture it
    - Expand it
    - Evolve it
  - We are the experts

## Basic Infrastructures

- | Infrastructure   | Disciplinary guardian |
|------------------|-----------------------|
| ● What -----     | Language              |
| ● How Much ----- | Mathematics           |
| ● When -----     | History               |
| ● Where -----    | Geography             |

## WHERE Infrastructure

- Basic concepts
  - Size
  - Shape
  - Method of designating locations
- Common Earth based system
  - Earth size
  - Earth shape
  - Latitude and longitude

## Simple WHERE concepts

- North – East – South - West
- Up - Down
- Over – Under
- Above - Beneath
- Near - Far
- Inside - Outside
- Adjacent - Between
- Close
- Contiguous

## **Geographic Uses of Infrastructure**

- Creation of New Geographic Knowledge
- Creation of Complex Geographic Information
- Expansion of Infrastructure Methodology
- Solutions to Questions having Spatial Contexts

## **Other WHERE Infrastructure Uses**

- Structures of cells
- Organs of bodies
- Human interactions in social settings
- Plant/animal interactions in regional settings
- Communication networks
- Describing or defining a culture

## Our Profession is not DEAD

- The Where infrastructure is universal
- Vitally needed to answer scientific How and Why questions
- Interactions of the four basic infrastructures are increasing
- Our work is basic to existence on this Earth

## Whither Where?

The fundamental question is:

**Where is the  
WHERE Infrastructure  
going?**

How will we accomplish this evolution?

## Aspects of the Where Infrastructure

- Physical entities/abstractions
- Dynamic/static
- Precision of locations
- Accuracy of definitions
- Uses of scales of measurement
- Defining and collecting attributions

## Three Major Activities

Syntheses

Analyses

Visualizations

## Technology Revolutions

Two technological revolutions have greatly affected the use of the Where infrastructure by humans.

1. The introduction of printing technology
2. The introduction of electronic/computer technology

## Nature of Infrastructure Use

### **Pre Printing**

One-to-one relationship

### **With Printing**

One-to many relationship

### **With Electronic Technology**

Many-to-many relationship

## Electronic Technology Revolution

The revolution is in technology.

Our responsibility is the evolution of the  
WHERE infrastructure to take full advantage  
of the electronic technology.

In the long term, it is inconsequential what we  
call it.

## Electronic technology effect on ANALYSES

- Enables closer work with statisticians and mathematicians on creating and using more complex and precise data processing algorithms
- Enables us to better satisfy an existing market with better products leading to increased product demand

Is it -

Analytical Cartography?

Geographic Information Science?

Geoinformatik?

**It doesn't matter.**

## Electronic technology effects on SYNTHESSES

- Easy linking of multiple analyses to provide a regional synthesis
- More rigorous and precise complex syntheses
- Embedding the results of syntheses into instrumentation

Is it

Traffic management?

Battlefield strategies?

Geographic Information science?

**It doesn't matter.**

## Electronic Technology effects on VISUALIZATIONS

- Fast and easy replication of static visualizations
- Dynamic visualizations
- Audio additions
- Imagery/map flipped or combined

Is it

Virtual reality?

Electronic navigation display?

Geographic Information Science?

**It doesn't matter**

## CONCLUSION

- Joys
- Concerns
- The Future

## JOYS

- Increasing use of WHERE infrastructures
- Increased potential for research
- More robust training for professionals
- Exciting long-term prospects for the field
- Guardians of Where infrastructure are ready and excited about its future

## CONCERNS

- On-going documentation
- Time gap between expectations and reality
- Professional paranoia
  - Losing control
  - Lack of time for long-term perspective
  - Wasting time over what to call ourselves

## Future of WHERE

- Great potential for change exists
- More people involved
- Utility of where is proven

**THANK YOU**