




~ GIS overview ~

A map and so much more !!

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GIS: a brief development history

Technology led developments !!

1960s: first GIS in Canada


1970s: theoretical concepts in spatial data handling developed



1980s: big software companies emerge (e.g. ESRI)

1990s: GIS capability on PCs

2000s: data transfer on internet, satellite data availability, FREEWARE

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BUT.....what is a GIS ?

Definition

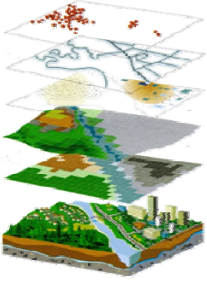
A system that merges cartography with database technology

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How does it work ?



- Uses software to combine spatial data 'layers'
- You can query the associated database to find out how layers relate
- Any data can be used so long as it is spatially referenced.
- Layers of data are often arranged as 'themes' e.g. soil, water, elevation, people, biodiversity, etc

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The real power of GIS

The underlying *relational* database allows you to:

1. Capture and store data
2. Represent physical features *and* quantities
3. View data at different scales
4. Change co-ordinate systems, datum and projections
5. Undertake analysis:
 - Derive new information
 - Statistics

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Why use GIS ?

A GIS allow you to:

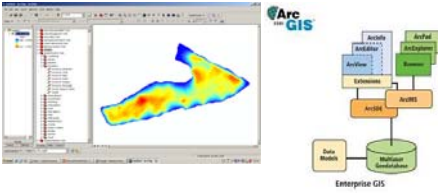
- Derive new variables
- Analyse your data
- Visualise complex data

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GIS approaches (models)

Project and geodatabase approaches



The diagram illustrates the Enterprise GIS architecture. It shows a central 'Enterprise GIS' box connected to 'Data Stores' and 'ArcSDE'. Above 'ArcSDE' are 'ArcToolbox' and 'ArcCatalog'. To the right, a stack of boxes represents 'ArcGIS Desktop' components: 'ArcMap', 'ArcCatalog', 'ArcToolbox', and 'ArcGIS Desktop'. The 'ArcGIS Desktop' box is connected to 'ArcSDE'.

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ERT Conservation
