





```
<?xml version = "1.0" encoding = "UTF-8" standalone = "yes" ?>  
<?xml - stylesheet type="text/xsl" href="maps.xsl"?>  
<LIS531_Presentation>
```

```
<title>  
XML Applications  
for  
Geospatial Data  
</title>
```

```
<author>Karen A. Vagts</author>  
<date>2007-04-18</date>  
</LIS531_Presentation>
```

<title content="XML for Geospatial Applications" />

## Presentation Map:

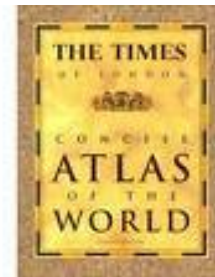
-  Defining Geo-spatial Data
-  Benefits of XML
-  Examples and Standards
-  How *YOU* can benefit

<title content="XML for Geospatial Applications" />



## Defining Geospatial Data

- The new term for:
  - Map Librarianship
  - Cartographic materials
    - Maps
    - Atlases
    - Gazetteers
    - Globes

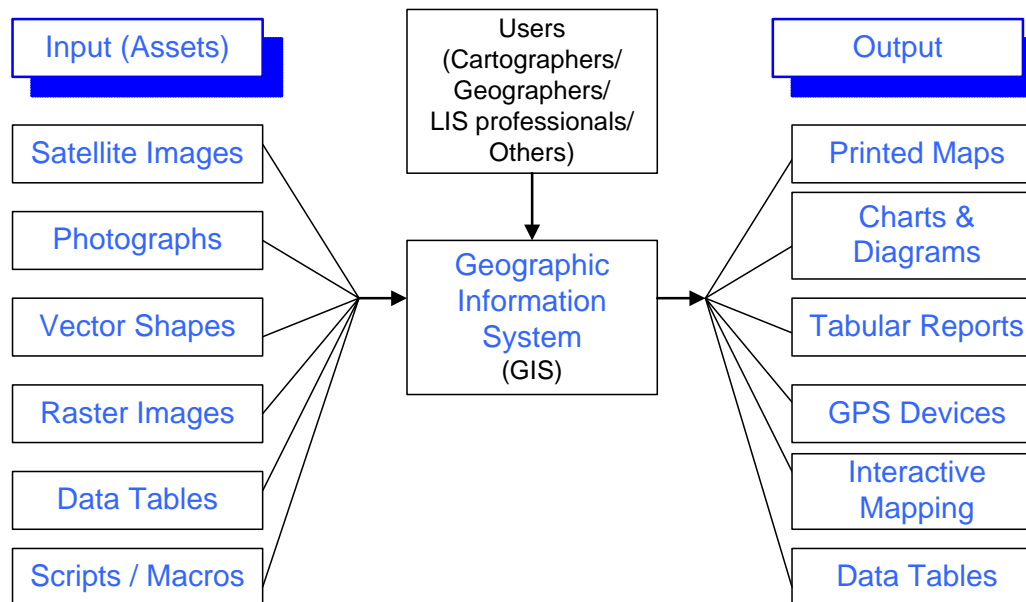


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## Defining Geospatial Data

- Reflects emergence of Geographic Information Systems (GIS)



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## Defining Geospatial Data

The screenshot displays the ArcMap interface with a geoprocessing model titled "Placess Close to Airports.mxd". The model diagram shows a workflow: "Airports" (blue oval) and "Placess" (blue oval) are inputs to a "Buffer" tool (yellow rectangle) set to "25 miles". The output is "Buffer around Airports" (green oval). This is then combined with "Placess" in a "Clip" tool (yellow rectangle), resulting in "Close Placess" (green oval). The main map view shows a map of the United States with blue circles representing buffers around airports. An inset map shows a detailed view of a road network with labels for "Cedar Br", "Oliver Hill Rd", "Park Blvd", "Branch Ave", and "Keating St". The Harris logo is visible in the bottom right corner of the inset map.

Images from the ESRI website (<http://www.esri.com/>)

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## Benefits of Geospatial XML within the GIS context

- As a storage container
  - Application neutral
  - Platform neutral
  - Extensible
  - Requires only a basic text editor

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## Benefits of Geospatial XML

- As a transport mechanism, to promote interoperability

```
<?xml version="1.0" encoding="UTF-8"?>
<kml
xmlns="http://earth.google.com/kml/2.0">
<Placemark>
  <name>boston, ma</name>
  <address>Boston, MA</address>
  <longitude>-71.060000</longitude>
  <latitude>42.350000</latitude>
  <range>9489.758789</range>
  <tilt>0</tilt>
  <Point>
    <coordinates>-
      71.060000,42.350000,0</coordinates>
  </Point>
</Placemark>
</kml>
```

### MARC Record:

**Type of Material:** Cartographic Material

**Corporate Name:** Rand McNally and Company.

**Main Title:** Boston, Massachusetts, city map

**Description:** 1 map : both sides, col. ; 61 x 114 cm., on sheet 65 x 94 cm., folded to 23 x 11 cm.

**Scale Information:** Scale [ca. 1:31,680]. 1 in. = approx. 0.50 mile (W 71°16'00"--W 70°50'30"/N 42°35'00"--N 42°25'00").

**Subjects:** Boston Suburban Area (Mass.)--Maps.

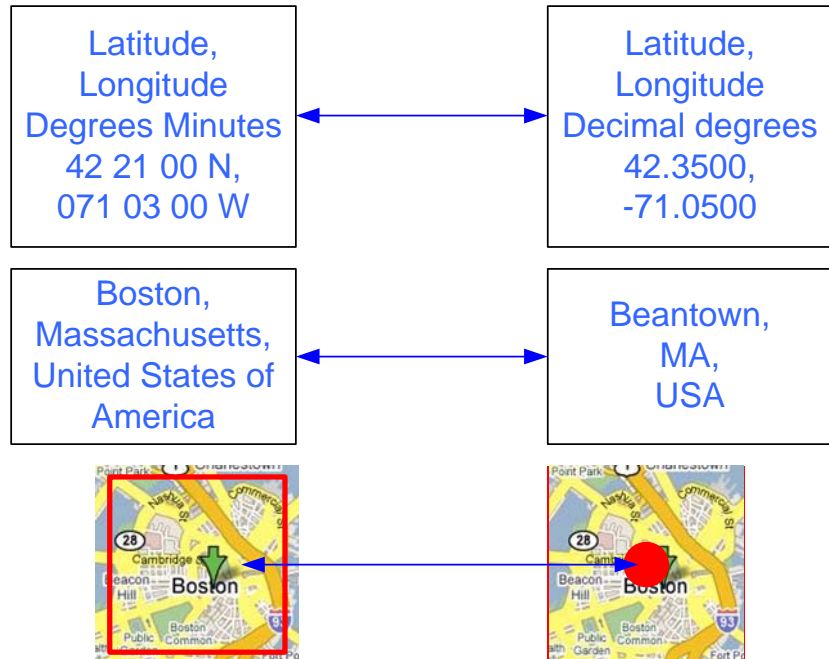
**LC Classification:** G3764.B6A1 2002

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## Benefits of Geospatial XML

- As a transformer
  - Use XML-based technologies like XSLT to perform conversions and calculations



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## Benefits of Geospatial XML

- A link between text-based and graphic-based resources

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<svg xml:space="preserve" onload="G23fcL(evt)"
viewBox="0 0 540 620" >
<a xlink:href="/atlas/state.jsp?&o=s&
c=ACC&rg=WM&t=7094&a=0&
l=county&dd=c&cc=0&
nr=10&rt=0&common=
0&pct=&ss=MA" target="_top">
<g id="G23fcR21"
onmouseover="G23fcM('G23fcR21',1)" onmouseout=
"G23fcM('G23fcR21',0)"><path d="M 515.41876
133.80328 L 516.76624 134.4754
L 495.88 130.44263 L 489.81625 131.78688 z" .....
style="&s18;"/></g></a>
```



Note: SVG source from the National Institutes of Health

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## Standards

- Geography Markup Language (GML)
- ISO TC 211
- Content Standard for Digital Geospatial Metadata (CSDGM)
- Keyhole Markup Language (KML)
- Dublin Core Metadata Initiative Georeferencing Elements
- LC MODS Georeferencing Elements

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## Some Examples

- [Harvard Geospatial Library](#)
- [Clare County Maps](#)
- [NIC charts](#)
- [CartoNet Social Patterns of Vienna](#)

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## How *You* can benefit

- Geospatial data applies to all disciplines involved with space and the earth
- Geospatial data makes powerful presentations
- Geospatial data produces new discoveries and insights
- XML facilitates access to geospatial data
- Mapping is fun!