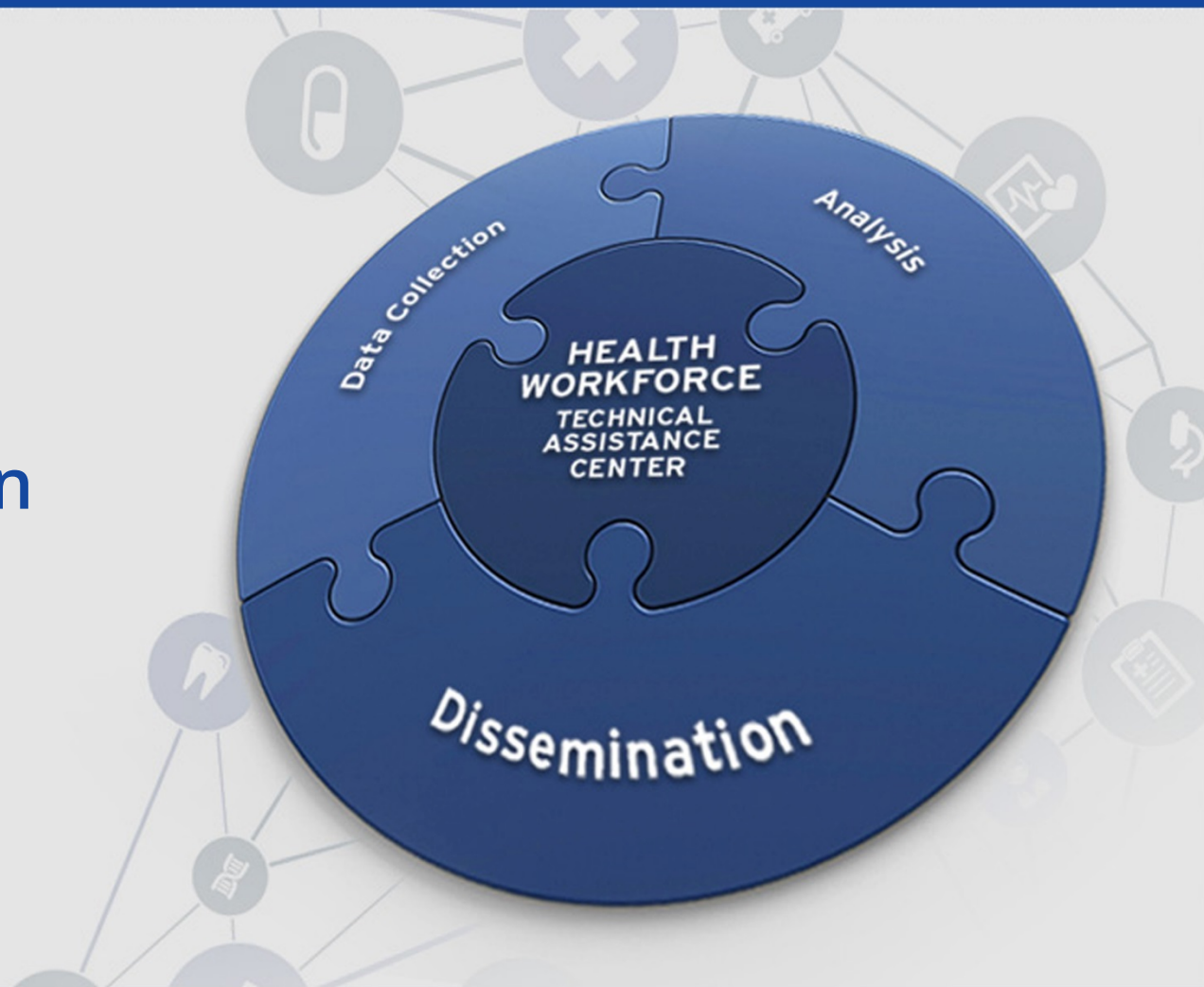


ArcGIS: An Introduction



Introduction to ArcGIS for Desktop

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Outline

- Understand Geography and Data
- Basic GIS concepts
- ArcGIS Core Applications
- ArcCatalog
- ArcMap
- Build a map in ArcMap

UNDERSTAND GEOGRAPHY AND DATA

Understand Geography and Data

- GIS is a tool for both analyzing and displaying data
- Can connect various data sources in the analysis
 - Demographic
 - Health care indicators
 - Health care infrastructure
- Need to consider:
 - Level of geography
 - Too large
 - Too small
 - Data sources

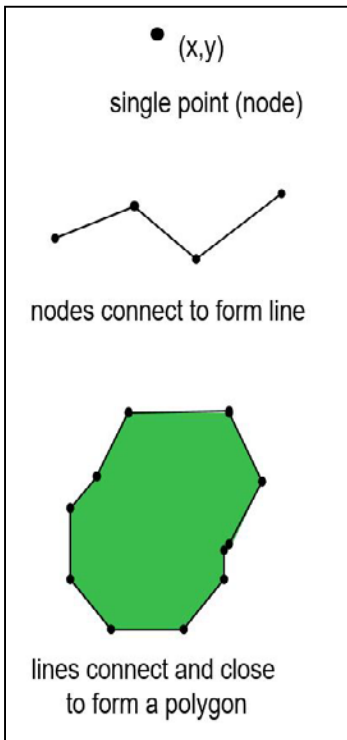
BASIC CONCEPTS

Data Models
Feature Classes
Data Storage

Data Models

- *Vector Models* are a representation of features that can be points, lines, and polygons
- *Raster Models* are images that do not contain features

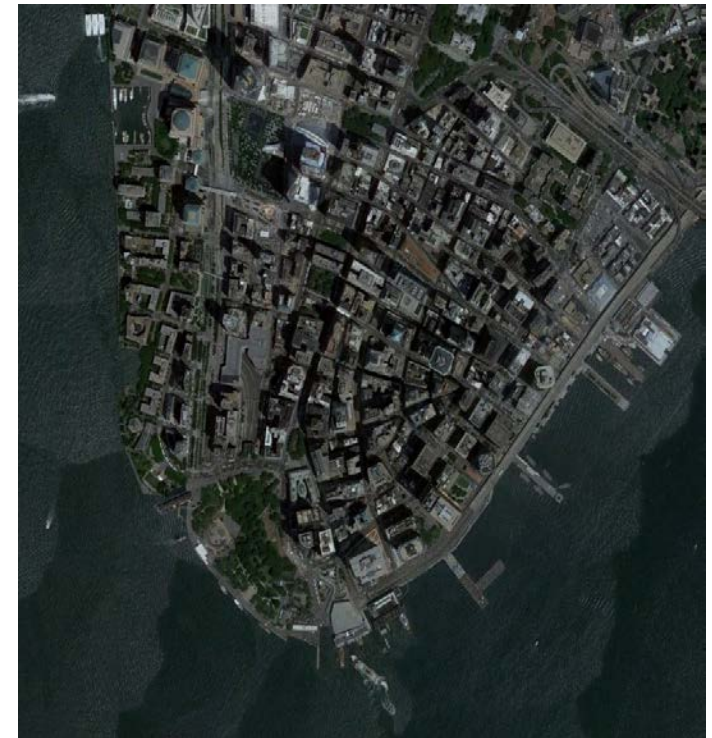
Features



Vector Model



Raster Model

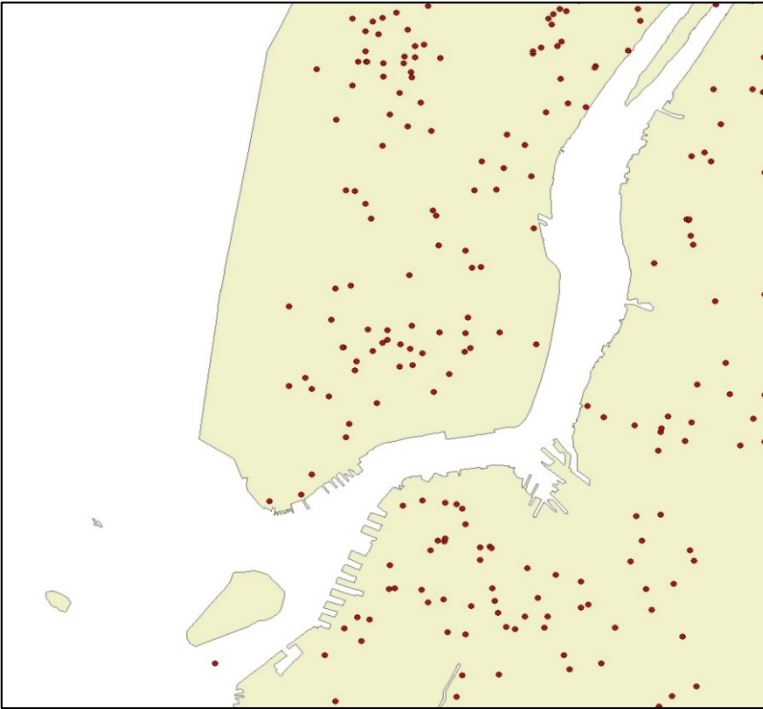


Source: Google Earth

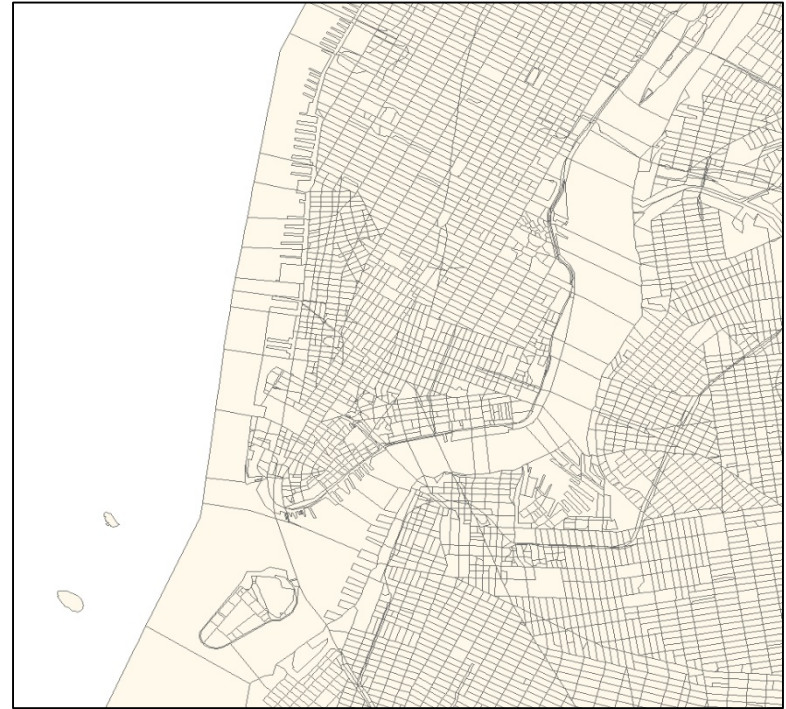
Feature Classes

- Feature Classes are groups of features that share a common geometric representation
- Formats of Feature Classes:
 - "Shapefile" - An older format that stores several files in a folder 📁
 - "Geodatabase Feature Class" - Stored in a Geodatabase File 🗄️

Point feature class

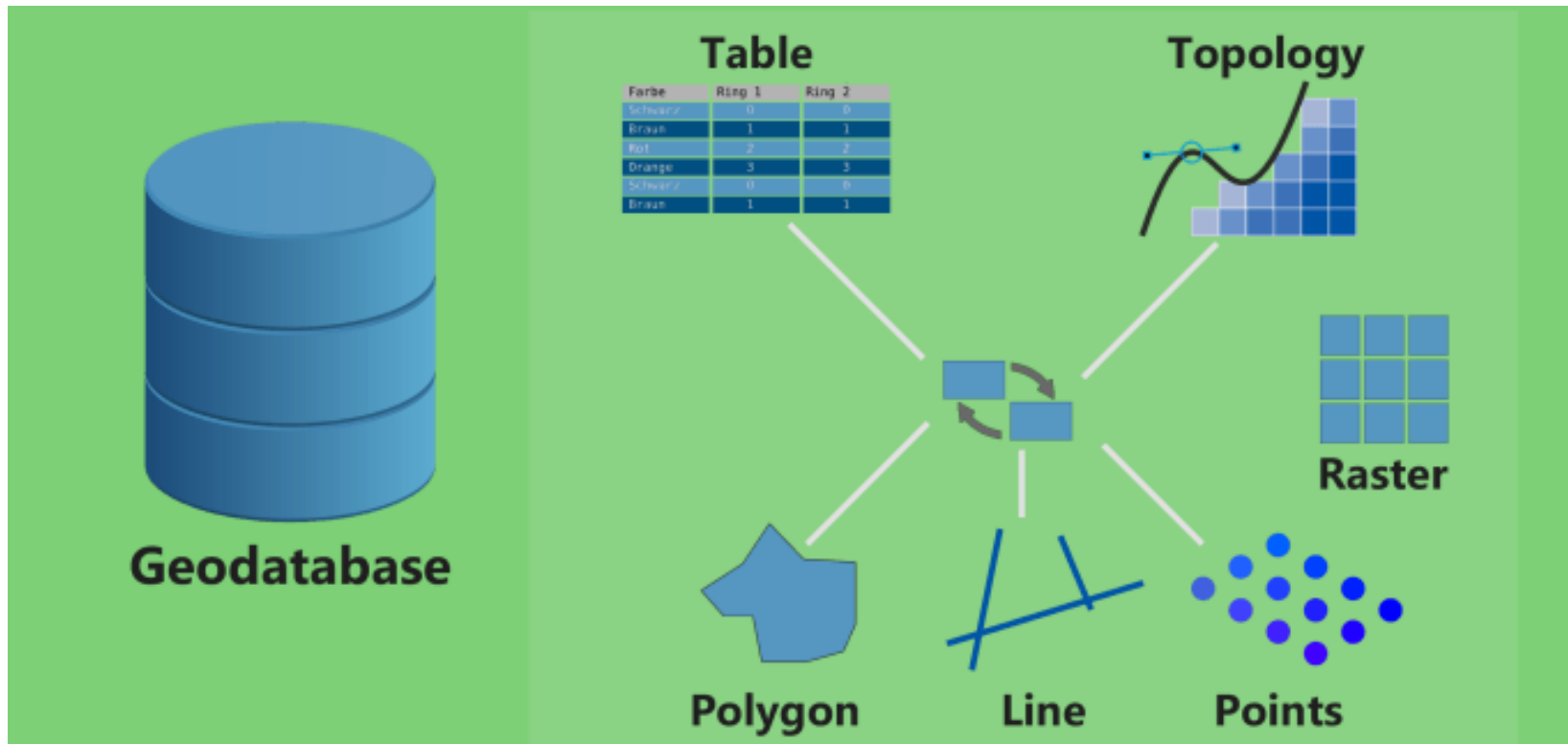


Polygon feature Class



Storage

- Geodatabases file (GDB) is the primary data format used for spatial and non-spatial data management in ArcGIS



Source: <http://gisgeography.com/>

ARCGIS FOR DESKTOP

ArcGIS Core Applications

ArcGIS Core Applications

ArcGIS Desktop includes 2 core applications:

- ArcCatalog – data management
- ArcMap – developing maps



ARCCATALOG

Introduction

ArcCatalog - Introduction

- Catalog Tree
- Connect to Folder
- Review Data
- Import Feature Classes into Geodatabase File
- Import Table into Geodatabase File

More information:

<http://desktop.arcgis.com/en/arcmap/10.3/manage-data/using-arccatalog/a-quick-tour-of-arccatalog.htm>

ARCMAP

Introduction

Map Production

Additional Information

ArcMap Introduction

- ArcMap is the primary mapping component of ArcGIS for Desktop software from ESRI
 - User Interface
 - Toolbar
 - ArcCatalog View
 - Layers order and display
 - BaseMaps
 - Review attribute data

More Information:

<http://desktop.arcgis.com/en/arcmap/10.3/main/get-started/a-quick-tour-of-arcmap.htm>

Map Production

- Join spatial and non-spatial data

<http://desktop.arcgis.com/en/arcmap/10.3/manage-data/tables/essentials-of-joining-tables.htm>

- Export files

<http://desktop.arcgis.com/en/arcmap/10.3/manage-data/geodatabases/an-overview-of-exporting-data.htm>

- Symbolize Features Layers

<http://pro.arcgis.com/en/pro-app/help/mapping/symbols-and-styles/symbolize-feature-layers.htm>

- Working in Layout View

<http://desktop.arcgis.com/en/arcmap/10.3/map/working-with-arcmap/displaying-maps-in-data-view-and-layout-view.htm>

- Add Legend and map elements

<http://desktop.arcgis.com/en/arcmap/10.3/map/page-layouts/map-elements.htm>

- Export map

<http://pro.arcgis.com/en/pro-app/help/sharing/overview/export-a-map-or-layout.htm>

- Save Layers' Symbol style

<http://pro.arcgis.com/en/pro-app/help/sharing/overview/save-a-style-file.htm>

Questions?

- For more information, please email me at:
nharun@albany.edu

- Visit us on:

