

# **A Glossary of Selected Terms Relevant to Geographic Information Systems**

## **INTRODUCTION**

This glossary is a sub-set of one developed by the Urban and Regional Information Systems Association (URISA). The full glossary is available on URISA's web site at [www.urisa.org](http://www.urisa.org) in the publications section.

## **TERMS AND PHRASES**

### **Accuracy**

Accuracy is the closeness of results of observations, computations, or estimation of spatial features to their true value of position. "Absolute accuracy" is the differential between the actual real world location of a point on the surface of the earth and its mathematically assigned geographic coordinate.

### **Address Matching**

Process that compares a table of addresses to the address attributes of a theme to convert textual addresses to locations on a map. Street name and address values are compared to database records to find the street segment with a matching name and address range. The address is then located at a prorata distance from the street segments start point proportional to the addresses value relative to the street's address range value and on the appropriate side of the street (even addresses always on the right, etc.). Also see the term "geocoding".

### **Annotation**

Annotation is text or labels plotted graphically on a map or drawing. Text or labels are used for naming such map features as streets and places; unique identification numbers assigned to individual map features including parcels, utility nodes and links; dimensioning; posted notes and instructions; descriptive text used to label area features such as soil types, zoning categories. Annotation is typically primitive map features and is not intelligently associated to the map feature and/or possible linked DBMS records.

### **Application**

An application is the use of software, data, procedures and techniques in a series of steps that are then put into practice to solve a problem or perform a function. For example, an "abutter mailing labels" application would enable a user to identify a property, typically

with its address. The application would then either enable to user to select abutting properties, or would select abutters automatically. Once the abutters were identified, the application would use information in the GIS database to produce a mailing label for each abutter. Additional capabilities might include making a map showing the target property and its abutters or performing a merge of a standard letter with each of the addresses.

## **Arc**

An arc is a series of points that form an unclosed linear feature in a spatial database.

1. A set of XY coordinates used to represent a linear feature or a polygon boundary. It is a continuous string of XY coordinate pairs (vertices) beginning at one location and ending at another location, having length but no area.
2. A coverage feature class used to represent linear features and polygon boundaries. One linear feature can contain many arcs.
3. In CAD it is a curvilinear feature defined by such location combinations as Center point, radius, and starting point.
4. Center Point, Start and End Point Start point, end point and one point in between Others.

## **Attributes**

- Single element of non-graphic data assigned to a spatial feature either as an imbedded data element within the spatial database or located in a linked database record.
- Descriptive characteristics of a feature, site or phenomenon.
- Set or collection of data that describe the characteristics of real-world conditions.

## **Base Map**

- Basic representation of a region of the earth as it would appear if viewed from above.
- Portrays basic reference information onto which other information of a specialized nature is placed. Usually shows the location and extent of natural earth surface features and permanent man-made objects.
- Contains basic digital survey control and topographic elevation reference framework for integrating all of the other map features of a particular geographic area.

## **Cartesian Coordinate**

Point whose location is expressed in terms of its distance above or below an X, a Y and a Z coordinate plane. Location of a point on a plane is expressed by two coordinate values, one representing the distance from the Y-axis and the other representing the distance from the X-axis.

## **Cartography**

Cartography is the science and art of making maps and charts. More broadly, the term includes all the steps necessary to produce a map: planning, aerial photography, drafting, editing, color separation, and multicolored printing. With regard to computerized spatial databases, a spatial feature is a point, line, arcs, string, chain, polygons, symbol, text or other form of spatial entity.

## **Centerline**

A centerline is a linear feature representing the midpoint along a linear element like a road or stream.

## **DBMS**

This acronym refers to database management software and refers to software used for entering, editing, managing, and displaying information. The acronym RDBMS is similar but refers to a specific kind of database management software commonly used with a GIS and referred to as “relational database management software”.

## **Digitize**

Digitizing is the process of tracing paper or other documents on a specialized table or “tablet” to capture in digital form lines and points representing map features. The process of converting existing data from paper maps, aerial photos, or raster images into digital form by tracing the maps on a digitizer. Feature locations are encoded as X,Y coordinate pairs in a Cartesian grid.

## **DXF**

Acronym for Data Exchange Format, a standard spatial data exchange format for CAD systems. DXF files contain ASCII or binary (DXB) records each of which describes a vector completely enough so that it can be converted into a spatial feature by any spatial database management product able to process these files.

## **Feature**

This refers to natural and man-made geographic features represented by points/symbols, lines, and areas on a map. It may also be an object in a geographic or spatial database with a distinct set of characteristics. Alternatively, it is a defined aspect of the earth's surface that is not further subdivided. For example, a road segment, manhole, building, or an area designated as having a uniform soil type.

## **File**

In computing, a collection or set of related digital data stored on a computer disk and accessed / retrieved according to an assigned unique name. A collection of related computer records grouped under a common heading and containing data according to specific units.

## **Format**

Format refers to the physical structure of an item. It is the order in which information is prepared and presented.

- 1) The arrangement of data for storage or display. A file format is the specific design of how information is organized in a collection or set of related digital data.
- 2) To divide (a disk) into marked sectors so that it may store data.
- 3) To determine the arrangement of (data) for storage or display.

## **Geocoding**

In spatial databases, a coding process wherein a digital map feature is assigned an attribute to serve as a unique ID (tract number, node number) or classification (soil type, zoning category). In polygon processing, the polygon boundary that contains the coordinate pair of a data item (text label) is assigned the value of that data item as "geocode". Also see "address matching".

## **Geographic Information System (GIS)**

NOTE: The following is not an attempt to provide a single generic definition.

- 1) Computerized decision support systems that integrate spatially referenced data. These systems capture, store, retrieve, analyze and display spatial data.
- 2) An organized assemblage of computer hardware, software, spatial data and operating instructions designed for capturing, storing, updating, manipulating, analyzing, and displaying all forms of geographically referenced information.
- 3) A manual or computer-based system for geographic data input, storage, manipulation, analysis, modeling and output. The system is used to improve geographic question-asking and problem-solving, and to enhance the overall geographic decision-making process.

## **GPS**

Acronym for Global Positioning System, hardware and software designed to communicate with specialized satellites to determine ground location.

## **Graphic User Interface**

This term refers to a software standard used to establish the menus, screens, dialog boxes, buttons, edit boxes, pick lists, toggles, radio buttons, command input, and viewing screens used to communicate instructions to the computer and for the computer to communicate findings back to the user.

## **Graphic/Non-Graphic Interface**

These terms refer to two-way interface between the spatial database (drawing) and the non-graphic DBMS table. The interface supports instructions sent by the user from the spatial database requesting specific operations to be performed by the supporting DBMS, and instructions sent from the DBMS requesting specific transactions to be performed by the spatial database (i.e. change the color, fill pattern, width or thickness of associated spatial features)

## **Ground Control**

Ground control refers to points on the surface of the earth with known coordinates as represented by some geographic grid reference system. The location of ground control points can be represented on maps and other cartographic products, and can serve as reference points with which to rectify the scale and accuracy of cartographic products to the actual area on the ground that is represented. Ground control points are classified according to their horizontal and vertical accuracy (e.g., Second Order Class I).

## **Indexing**

Indexing refers to logically ordering information components by the values present in a key field.

## **Inset Map**

An inset map is a more detailed (larger scale) representation of a specific area on a map usually placed in an uncluttered portion of the same sheet as the smaller scale main map.

## **Interface**

- 1) Surface forming a common boundary between adjacent regions, bodies, substances, or phases.
- 2) Junction between two or more components of an information system.  
Typically, the link between the spatial database and non-graphic (DBMS) databases.
- 3) Point of interaction or communication between a computer and any other entity, such as a printer or human operator.

## **Labels**

Labels are text posted on a map near a spatial feature. The source of the text typically is either a linked database record or a text element created by the cartographer at the location.

## **Layer**

This term refers to a logical grouping of map features to be viewed individually or in combination. This concept is similar to one using transparent acetate overlays of different map features to add or remove visible map features. This term also means a distinct set of spatial features that are dealt with together.

## **Legend**

A legend is an explanation of the symbols, codes, names given variables and other information appearing on a map drawing or chart. Legends include a sample of each symbol, line pattern, shading, or hatching appearing on the map along with annotations describing the meaning of each.

## **Lookup Table**

- Database table that assigns display parameters to each value in a field to generate thematic maps.
- A list of values that are correlated to a range of other values. For example, according to a soil type name, reference to this table can identify the corresponding compressive strength, percolation, and erosion potential rating.
- A file that correlates a user defined ID number permanently assigned to a spatial feature with machine-readable ID number that is subject to occasional change.

## **Macros**

- Sequence of commands executed as one command.
- Series of specialized procedures or instructions in a computer language that can be replaced by a set of instructions that customize and streamline basic software functions.
- Recorded and often complex sequence of keystrokes and mouse actions that can be played back with a single or simple combination of keystrokes.

## **Mainframe**

Central Processing Unit (CPU), main memory, and control units of a computer typically housed in one large cabinet or in a number of smaller ones grouped together. The term only applies to large computers.

## **Map**

A map is a representation, usually on a flat (planar) surface, of a region of the earth or heavens. Within a spatial database, an assembly of digital spatial features that represent a set of real-world features and the geographic relationships between them. This representation may exist digitally, manually (i.e. on paper), or in the human mind.

## **Menu**

On computers, menus provide options for command input by computer users rather than by typing instructions. Menus come in many forms including permanent screen menu squares, pull-downs, popups, sliders, icons, cursor, picklists, dialog and toolbar buttons, as well as printed tablet menus and cursor buttons on digitizing (mouse) devices.

## **Metadata**

This term refers to data about data. This information typically includes such information as the data's source, accuracy, data type, projection, date of origination and other general descriptions.

## **Network Analysis**

Specialized queries that reference connected linear and node features.

- 1) Typical analytical transactions within Transportation Networks: Modifying direction and/or impedance along links and through intersections. Identifying the optimal path as measured between two or more points according to a selected terms of measurement. Highlighting all components (nodes and links) of the optimal path, referred to as "routing".
- 2) Typical analytical transactions within Utility Networks: Modifying direction and ON/OFF position settings of links relative to nodes. Isolating all network nodes and links both physically and logically connected to a selected test point. Highlighting all logically connected network features, referred to a "Network Tracing". Attribute records linked to highlighted features can be subsequently isolated to perform design analysis.
- 3) Two types of utility networks: Pressure Networks. Typical transactions include resetting valves to redirect service operations or reset switches to reconfigure circuits. Typically applies to water, gas, steam, electric and telephone systems. Gravity Networks. Typical transactions include isolating all nodes and links upstream or downstream from a test point. Can include isolating a portion of the network by changing position settings of links relative to their upstream or downstream nodes to OFF. Typically applies to sewer, storm, telephone, and sometimes electric utilities.

- 4) Typical analysis performed using records linked to highlighted features in a route or trace include load loss, traffic demand and capacity, pressure loss, maximum flow, gradient, asset management and other engineering analysis.

### **Network Routing**

In transportation networks, this refers to highlighting all node and link features along the optimal path between a starting point and one or more destinations, either in terms of least distance, travel time, or other prescribed performance criteria. See Network Analysis.

### **Network Tracing**

In utility networks, this refers to highlighting all node and link features within a gravity of pressure network that are both physically and logically connected to a test point within the network according to a specified set of rules. See Utility Network, Network Analysis, Network Link, and Network Node.

### **Non-Graphic Database (also Non-Spatial)**

This phrase refers to a set of tabular data records, each record containing multiple data fields. In the context of spatial databases, one of these fields is the Unique ID Number of a corresponding map feature.

### **On-The-Fly**

This term refers to temporary performance or activity when needed. It also refers to an instruction that is transparently invoked by the user according to conditions encountered during a transaction. Automatic Boolean operations that add, modify or skip certain processing steps under a particular set of conditions. For example, when adding a new spatial feature, the ID number of the previously encoded feature is defined along with the default rules for sequentially generating the "next" ID number to be used, modified or ignored.

### **Orthophoto**

This term, refers to an aerial photograph that has had distortions due to elevation changes, variation in the distance from the camera to the ground at different locations, and aircraft movement removed. The process of distortion removal is referred to as image rectification. You can use rectified photographs, within the limits of their horizontal accuracy, be used to measure areas and distances. When first produced, orthophotos were delivered printed on paper or mylar. Today they are almost always delivered as digital files and therefore are more correctly referred to as orthoimages.



## **Out-Of-The-Box**

Refers to a software or hardware system with a user interface so intuitive that it can be implemented without little or no training or reference to documentation.

## **Overlay**

An overlay is something that is laid over or covers something else.

- 1) In a manual graphic information system, a transparent sheet containing graphic information, such as labels, symbols or colored areas, defined in a manner to expedite being viewed and interpreted in conjunction with other data overlays with a common coordinate system.
- 2) In an automated spatial information system, same as a manual system except that all overlays are in a digital format for viewing and interpretation on a CRT screen. Each overlay defines a specific aspect of the spatial database.
- 3) Typical overlays could include land use, soils, watershed boundaries or drainage system overlays, each of which is a single or set of multiple layers within the spatial information system.
- 4) Also refers to the intersection of two polygon layers to make a third composite overlay (i.e. soils overlaid with land use to define runoff conditions). See Intersection.

## **Overshoot**

Situation where a digital line extends past the intended boundary line. This extension past the intended juncture point is called a dangle.

## **Pan**

This term is usually used in the phrase “pan and zoom” and refers to elements of a computer interface that enable use of a mouse cursor on a computer screen to “click and drag” your viewing area so that an adjacent area is displayed.

## **Parcel**

A portion of the earth defined by a boundary inside of which certain assigned rights apply regarding occupancy and/or use of land, air or water apply. Can also include linked attributes that define the rules and conditions for exercising these rights.

## **Photogrammetry**

This term is used in surveying and mapping, and refers to the science, art and technology of obtaining reliable measurements and maps from photographs. This is also, the means for measuring or plotting planimetric, topographic, and other features of the earth through the use of aerial photographs and ground control.

## **Pixel**

This acronym stands for Picture Element, the smallest non-divisible image-forming unit of a plot or video display. Each cell can have assigned attributes, in addition to color. In raster processing, pixels refer to a single cell within a matrix of grid cells. See Image.

## **Planimetric Map**

Horizontal depiction of map features on a two-dimensional plane without any reference to contours or topographic relief. Typical features defined within a planimetric map include such natural and cultural features as streams, roads, shorelines, waterways, building footprints, reservoirs, bridges, roadways, overpasses, sidewalks and parking lots.

## **Point**

A point is a single X,Y (optionally Z) location in space. It is a dimensionless geometric feature having no other spatial properties except location. Many different natural and man-made features are modeled as points in spatial databases including trees, fire hydrants, poles, building, etc.

## **Point-In-Polygon**

A spatial query that determines which polygon boundary encompasses a specified point. A typical operation is to select multiple points within a boundary and assign to them an attribute equal to a characteristic assigned to all areas within the boundary (i.e. soil type) to the attributes describing the point. As a variation, one or more polygons are selected and all points within them are likewise assigned new attributes. Process can be extended to apply to linear features (line-in-polygon) and closed polygons (polygon-in-polygon) located within or partially within polygons as well.

## **Polygon**

- Closed plane figure bounded by three or more line segments with a nonzero area. Alternatively, a polygon is a multisided feature that represents an area on a map. Many different natural and man-made features are typically represented by polygons in a spatial database including zoning districts, soil types, water bodies, building footprints, lot boundaries, etc.
- A type spatial query wherein the spatial selection area is a polygon shape rather than a square, rectangle, or circle.

## **Polygon Overlay**

- A group of polygons on one or more layers, representing various areas that make up a particular geographic theme (e.g., soil types, zoning designations, parcels, land use, etc.)
- Spatial analysis function that uses Boolean logic to combine two sets of polygon boundaries to create a third that represents an intersection or union of the first two.

## **Precision**

In general, precision refers to how close a measured value matches another measured value.

- 1) Degree of exactness with which a quantity is stated (i.e., the number of significant decimal places in an expressed coordinate value).
- 2) Can be expressed in terms of "repeatability" of a measurement, i.e., the likelihood of deriving the same coordinate values from the same mathematical calculations.
- 3) In spatial databases, refers to how many places allocated to the storage of coordinate information.

## **Query**

A logical search specification finding spatial features with linked records that contain matching geographic and/or non-graphic attributes. A typical spatial query is the comparison of XY coordinates of features/records with a user-defined spatial window (square, rectangle, circle, or multipoint polygon). Conversely, a query can refer when you ask for various combinations of non-graphic attribute assignments that meet specific conditions (e.g., =, <, >, in a set, etc.; also called "Boolean conditions").

## **Raster**

- Images containing individual dots with color values, called cells (or pixels), arranged in a rectangular, evenly spaced array. Aerial photographs and satellite images are examples of raster images used in mapping. When maps or other documents are scanned, the result is also a raster.
- Method for storing spatial data that involves assigning a value to each dot in a large matrix. This method is very useful for modeling continuous phenomena like elevation or temperature.

## **Record**

- An assemblage of textual data within a DBMS table and/or drawn statement as a means of preserving knowledge.
- Collected and preserved data describing a particular subject.

- A row (series of field values) in a database table. In a spatial database, each graphic feature may be linked to one or more records in one or more tables.
- A collection of fields or other sub-portion of computer file treated as a data unit.

### **Rectification**

Rectification is a set of techniques for removing data errors through calculation or adjustment. In image processing, computer programs that remove distortion within a digital image, aerial photography or remotely sensed data by removing parallax errors due to relief (high ground being closer to the camera than low lying areas), camera tilt, corner and other distortions.

### **Relate**

Relate means to establish or demonstrate a connection between two or more things. In spatial analysis, establishing a temporary connection between records in two different tables using an item common to both. For example, a property identifier on a map can be used to relate the property to information in an assessing database because the same identifier appears in the assessor's database.

### **Relational Database**

This phrase refers to an information storage system in which there is an association between two or more things organized according to relationships between data items. A relational database is a collection of tables that are logically associated to each other by shared common attributes. Entering the table name, attribute name, and the value of the primary key, any data element or set of elements can be retrieved. A relational database consists of table rows and columns. Also see DBMS.

### **Remote Sensing**

Using a recording device not in physical contact with the surface being analyzed including:

- 1) Using sensors sensitive to various bands of the electromagnetic spectrum.
- 2) Assessing its spectral image without having the sensor in direct contact with the surface.
- 3) Interpreting environmental conditions at, below and above the surface of the earth, typically by processing images from an aircraft (i.e. aerial photography), satellite imaging (ie. SPOT), or radar.

### **Resolution**

Fineness of detail that can be distinguished in an image, as on a video display terminal.

- 1) "Display Resolution" The density of the pixels that compose an image (See Pixels). The greater the number of pixels per square inch of screen, the greater the resolution. In print, resolution is measured in dots per inch (dpi).
- 2) "Spatial Resolution" The smallest possible map feature that can be accurately displayed at a specified map scale. For example, in a 1:24000 scale map, a 50 foot distance between a roadway and railroad track centerline is one fortieth of an inch. Since the thinnest pen line width is presumed to be one fortieth of an inch, it is impossible to accurately represent the alignment of these two centerlines and still have a visible gap between them. To do this takes a smaller map scale (< 1:24000).

### **Scale**

- Relationship between the dimensions of a feature on a map and the geographic features they represent on the earth,
- Commonly expressed as a fraction. For example map scale of 1:24000 means that one unit of measure on the map equals 24000 of the same unit on the earth (1 inch would equal 24000 inches = 2000 feet).
- A calibrated line, as on a map or an architectural plan, indicating such a proportion.
- Description of how length in the real world is related to length on a map. This can be portrayed in a variety of ways including a representational fraction.

### **Scroll**

To cause a spatial display to move vertically or horizontally across the screen so that a new line of text or graphics appears at one edge of the screen for each line that moves off the opposite edge.

### **Spatial analysis**

- Methods used to explore the spatial relationships between features both real and theoretical.
- Process of extracting or creating new information about a set of geographic features; techniques to determine the distribution of a spatial feature(s); and the relationships between two or more features, the location of, proximity to, and orientation of these features in space.
- Study of the locations and shapes of geographic features and the relationships between them.

### **Spatial Data**

- One of the three kinds of Data (spatial, textural and image). Spatial data is categorized according to the following feature types:
- Zero dimensional features: Primitive Points; topological Node.

- One dimensional features: Primitive Lines, Strings (multiple nonbranching lines), arcs (mathematically defined curve; topological Links, chains, and rings).
- Two dimensional features: Polygons defining enclosed areas, Pixels, and Grid Cells.

### **Spatial Query**

Function that allows a user to find, display, and/or isolate attributes records linked to map features located within a defined area of interest - window, circle, polygon or trace. Also see “query”.

### **SQL**

Acronym for Structured Query Language, a computer industry-standard syntax language for querying and manipulating most relational database management systems (RDBMS). Commands can be embedded within a programming language to interface to a database or used interactively.

### **State Plane Coordinate System**

System of X,Y coordinates defined by the USGS for each state. Locations are based on the distance from an origin point defined for each state.

### **Survey Control Network**

- Graphically defined lattice work of precise control points (monuments) and traverse alignments reconciled to those monuments, serving as a framework for referencing the position of all map features in the spatial database, thereby assuring appropriate precision standards.
- Points with a given horizontal position and surface elevation.
- Used to determine unknown horizontal positions and elevations of locations elsewhere in the active portion of the spatial database.

### **Thematic Map**

A thematic map is a representation of an area portraying how one or more real features or theoretical concepts are distributed.

1. Displays a distribution of attributes. Typically a single variable (univariate) map such as soil or land use. Can also depict ranges of calculated values such as: Value category (i.e. 10-20% slope); Density (10-20 persons per acre); Relative suitability scores.
2. Graphic display parameters typically include color assignment, solid fills, hatch patterns, symbols, and other graphic techniques.
3. Uses information stored in a spreadsheet or database to create map displays for graphic presentations.



## **Tolerance**

Tolerance refers to a leeway for variation from a standard. It is also the permissible deviation from a specified value of a structural dimension, often expressed as a percent. Tolerance is a parameter for defining a limiting distance for an operation. For example, a snap tolerance for 2 units apart means that any two endpoints less than 2 units apart will be moved to at a single point location.

## **Topographic Feature**

Spatial representation of the surface features of a place or region on a map, indicating their relative positions and elevations.

## **Topology**

Relationships between spatial features including such things as continuity, nearness, inside vs. outside, etc. Set of defined relationships between links, nodes, and centroids.

1. Polygon Topology - representation of areas and area relationships using links and enclosed areas.
2. Network Topology - representation of a linear network by links and nodes.

## **Transportation Network**

System of interconnecting nodes and links that represent intersections of roadways, railroads, transit lines, or other forms of transportation systems. (See Intersection, Network Routing, Spatial Analysis).

## **Undershoot**

Situation where a digital line does not meet up with its intended boundary line. The space between the two is called a gap.

## **Union**

A set, every member of which is an element of one or another of two or more given sets. \ The combination of two spatial data sets where the result includes all of the features of the two inputs.

## **UNIX**

Industry standard operating system (OS) developed as a joint venture between University of California at Berkeley and the AT&T Bell Laboratories. A multi-user multitasking OS operates on a wide variety of computer systems from micro to mainframe. Written in the "C" language, it carries with it C's inherent transportability that enables it to be easily



ported to many different hardware platforms. In addition to their own proprietary operating system, many hardware vendors offer UNIX as an auxiliary OS further expediting the free flow of data between multiple hardware platforms.

## **User Interface**

The user interface is software that expedites its intuitive and competent use. It includes options for command input by computer users rather than typing instructions at the command line. User interfaces can take on many forms including screen, pull-down and pop-up menus; icons, dialog buttons, toggles, and pick lists; toolbar buttons; printed tablet menus and cursor buttons on digitizing (mouse) devices. A user interface may also include productivity enhancements, error messages, error trapping, on-line help, MACROS (and their prompts), sample databases, tutorials, manuals, and other documentation. Also see Interface, On-the-fly, Out-of-the-Box

## **Vector**

Method for storing spatial data involving assigning coordinates for each entity.

1. Mathematical object with precise direction and length but without specific location. Vector data is stored as XYZ coordinates that describe points, symbols, lines, areas, and volumes.
2. Method for storing spatial data involving assigning coordinates for each entity; an X,Y,Z for a point, a pair of such points for a line, a series of such lines for a polygon, the method is very useful for modeling discrete physical features.
3. Quantity, such as velocity, completely specified by a magnitude and a direction.

## **Viewer**

A read-only stand-alone software system that supports the display, manipulation, and query of spatial databases. Commercial products that enable users reference and analyzed spatial databases prepared by a full function read-write product within the same product line. A viewer typically has a user interface simpler than full function products; it supports a rich command set but less than that available in the full function product.

## **Window**

- Rectangular portion of a larger mapped area selected for display, for example, a rectangle surrounding Colorado and ignoring other areas in a database covering the Western U.S.
- The defined outline of a section of an image that can be viewed simultaneously with other portions of the same or other images.

- In spatial queries, a type of boundary for creating a selection set of all spatial features and their linked DBMS records.
- A portion of the graphic user interface that enables you to open, close, resize, or relocate a rectangular area on the computer screen that is displaying information other than that being displayed by the spatial database (i.e. DBMS Table, edit, query, report display screens; documents in a word processor, image in a document management system).

## **Zoom**

Computer screen function to enlarge (zoom in) or decrease (zoom out) proportionately the size of the display features shown on the computer screen by rescaling the image. Zoom is a common term in both CAD and GIS software for changing the scale and or extents of a viewing area. For example, "zooming in" shows more detail while "zooming out" shows less detail.