P

pan [MAP DISPLAY] To shift a map image relative to the display window without changing the viewing scale. *See also* zoom.

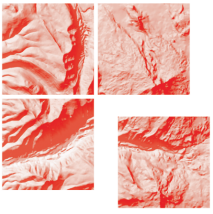
pan sharpening [DIGITAL IMAGE PROCESSING] An abbreviation of *panchromatic sharpening*. A method of radiometric or image color transformation in which a higher-resolution, panchromatic image is fused with a lower-resolution, multispectral image dataset; used to increase spatial resolution and improve the ability to resolve finer details in a multispectral image. *See also* multispectral image, resolution.

panchromatic [REMOTE SENSING] Sensitive to light of all wavelengths in the visible spectrum. *See also* color, multispectral, wavelength.

panchromatic image [REMOTE SENSING] An image that measures a single, broad band of wavelength that spans across a wide range of the electromagnetic spectrum; for instance, it may span the entire visible spectrum, or a portion of the visible and the near infrared. Because it is a single, wide band, what is measured is target brightness; objects shown appear in shades of gray. *See also* electromagnetic spectrum, panchromatic.

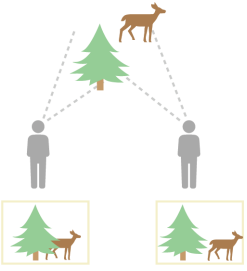
panchromatic sharpening *See* pan sharpening.

paneled map [MAP DESIGN] A map spliced together from smaller maps of neighboring areas.



paneled map

parallax [PHOTOGRAMMETRY] The apparent displacement of an object's position relative to the point of observation; the basis for the perception of depth in stereo imagery. *See also* remote sensing, stereometer.



parallax

parallax bar *See* stereometer.

parallel [GEODESY] An imaginary east–west line encircling the earth, parallel to the equator and connecting all points of equal latitude that can be used to define locations north or south of the equator. Also, the representation of this line on a globe or map. *See also* latitude.

parallel

parallelepiped classifier [PHOTOGRAMMETRY] An algorithm that is used to label unknown pixels in an image based on statistical minimum and maximum values as a surrogate for variance. *See also* variance.

parameter

1. [MAP PROJECTIONS] One of the variables that define a specific instance of a map projection or a coordinate system. Parameters differ for each projection and can include central meridian, standard parallel, scale factor, or latitude of origin.
2. [MATHEMATICS] A variable that determines the outcome of a function or operation.

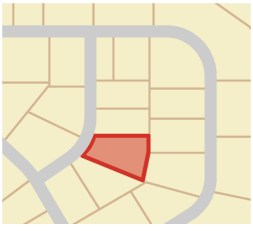
See also coordinate system, mathematical function, projection.

parametric curve [MATHEMATICS] A curve that is defined mathematically rather than by a series of connected vertices. A parametric curve has only two vertices, one at each end. *See also* Bézier curve.

parametric measure [STATISTICS] A statistical calculation in which certain assumptions are made about the parameters of the population from which a sample is taken. Most commonly, the assumption that data is normally distributed.

parcel

1. [CADASTRAL AND LAND RECORDS] A piece or unit of land, defined by a series of measured straight or curved lines that connect to form a polygon. There are some implications of landownership. Commonly also called a tract.



parcel 1

2. [SURVEYING, ESRI SOFTWARE] A group of features representing an area or volume of land or water. In the parcel fabric, a two-dimensional parcel is composed of a polygon feature and line and point features. The parcel polygon represents the land area, the parcel lines are COGO-enabled and store the boundary measurements, and the parcel points represent the

parcel corners. A parcel can be used to represent rights, restrictions, or responsibilities. Parcels can also be used to model administrative boundaries or cadastral frameworks. *See also* lot, plan, PLSS, surveying.

parcel fabric [CADASTRAL AND LAND RECORDS] A digital collection of parcel polygons and attributes spanning a municipal domain that form the framework for managing and editing administrative boundaries. *See also* boundary, connection line, parcel.

parcel fabric record [CADASTRAL AND LAND RECORDS] A polygon feature representing the footprint of a land parcel transaction. Parcel fabric record polygons match the cumulative shape of all the parcels created or retired by the transaction. Parcel features (points, lines, polygons) are associated to the parcel fabric record that created them. Historic parcel features are also associated to the record that retired them. Examples of parcel fabric records are plans, plats, deeds, records of survey, or similar. *See also* feature, historic parcel, polygon feature.

parcel identification number *See* parcel PIN.

parcel map [CADASTRAL AND LAND RECORDS] A geographic record of land-ownership at the local level. Used as a reference for surveying, tax assessment, and other municipal concerns. *See also* boundary survey.

parcel PIN [CADASTRAL AND LAND RECORDS] PIN is an acronym for *parcel identification number*. In parcel fabric records, a unique identifier for a parcel. The format of an identifier is defined by the government's organization and may contain a combination of alphanumeric values. *See also* identifier, parcel fabric record.

parcel polygon [CADASTRAL AND LAND RECORDS, ESRI SOFTWARE] A closed shape that stores COGO dimensions obtained from the recorded, legal document. *See also* connection line, parcel.

parcel type [CADASTRAL AND LAND RECORDS] The way parcels are categorized in the parcel fabric. For example, lot, tax, ownership, subdivision, and so on, are all parcel types. Parcel types are composed of a polygon and a line feature class; there can be one or many parcel types in a parcel fabric. *See also* classification, parcel, parcel fabric, surveying.

parity [MATHEMATICS] The even or odd property of an integer. In address matching, parity is used to locate a geocoded address on the correct side of the street (such as odd numbers on the left-hand side, even numbers on the right). *See also* address matching.

parse [EDUCATION] A method of syntax analysis. For example, to analyze symbols, data structures, or parts of speech. For example, to break

a sentence into a sentence diagram, identifying the grammatical components. *See also* schema.

partial address support [GEOCODING] The ability to return a list of geocoding candidates based on incomplete address information. For example, if a city name but no country is entered in a partial address support search, the result list contains cities whose names match the name entered. *See also* address, candidate, geocoding.

partial sill [SPATIAL STATISTICS (USE FOR GEOSTATISTICS)] A parameter of a covariance or semivariogram model that represents the variance of a spatially autocorrelated process without any nugget effect. In the semivariogram model, the partial sill is the difference between the nugget and the sill. *See also* sill, nugget.

partial-hachuring system [MAP DESIGN] A hachuring method on north-oriented maps in which hachures are eliminated on the northwest sides of hills to improve the three-dimensional impression of relief and make terrain features easier to identify. Developed in the mid-19th century by Swiss cartographer Guillaume Henri Dufour (1787–1875), this method largely replaced the Lehmann system. *See also* hachured contour, Lehmann system.

passive remote sensing [REMOTE SENSING] A remote-sensing system, such as an aerial photography imaging system, that detects only energy naturally reflected or emitted by an object. *See also* active remote sensing, remote sensing.

passive sensors [REMOTE SENSING] Imaging sensors that can only receive radiation, not transmit it. *See also* passive remote sensing, sensor.

patch [3D GIS] A single triangular face inside a multipatch geometry. In most cases, many patches (faces) are used together to create a complex 3D model. Examples include geometric shapes, such as spheres, cubes, and tubes; geographic features, such as buildings, cars, and light poles; and other boundary representations, such as isosurfaces, used to represent geologic structures or environmental plumes. Patches in a multipatch geometry may or may not include an image (texture) displayed on them. *See also* 3D model, face, multipatch.

path

1. [NETWORK ANALYSIS] The connecting lines, arcs, or edges that join an origin to a destination.
2. [DATA MODELS, ESRI SOFTWARE] A geometric element from which polylines and polygons are constructed. A path is a sequence of connected, nonintersecting segments, with no two segments having the same start point or the same endpoint.

See also segment.

path distance analysis [SPATIAL ANALYSIS, ESRI SOFTWARE] A description of each cell's least accumulative cost relationship to a source or a set of sources, accounting for surface distance, horizontal cost factors, and vertical cost factors. *See also* cost, path, spatial analysis.

pathfinding [NETWORK ANALYSIS] The process of calculating the optimal path between an origin and a destination point or points in a network. *See also* destination, network, origin.

PATRF2022 [MODELING] Acronym for *Pacific Terrestrial Reference Frame of 2022*. A geometric reference frame of the National Spatial Reference System (NSRS) used to define the geodetic latitude, geodetic longitude, and ellipsoidal height of points on the Pacific tectonic plate. The coordinates defined in PATRF2022 are time-dependent. *See also* NAPGD2022, National Spatial Reference System, reference frame.

pattern [DIGITAL IMAGE PROCESSING] An image element that provides information about the spatial and spectral arrangement or configuration of objects; used to identify features of interest, land use, or land cover. *See also* image element.

pattern arrangement [GRAPHICS (MAP DISPLAY)] The order, usually random or uniform, of a set of shapes or lines that create a pattern within a graphic mark.

pattern orientation [GRAPHICS (MAP DISPLAY)] The orientation of a pattern arrangement. *See also* pattern arrangement.

pattern recognition [DIGITAL IMAGE PROCESSING] In image processing, the computer-based identification, analysis, and classification of objects, features, or other meaningful regularities within an image. *See also* digital image processing.

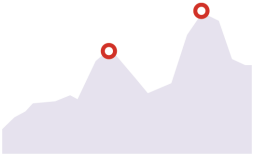
P-code [GPS] The PRN code used by United States and allied military GPS receivers. *See also* PRN code, civilian code.

PDF [DATA STRUCTURES] Acronym for *Portable Document Format*. A proprietary file format that creates text-based, formatted files for distribution to a variety of operating systems. *See also* CSV.

PDOP *See* dilution of precision.

peak

1. [GEOGRAPHY] The highest point of a mountain or hill.



peak 1

2. [MODELING] In modeling, a point on a surface around which all slopes are negative.

See also pit.