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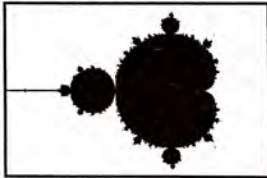
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perimeter of every peninsula and inlet, or at a higher magnification the perimeter of every small promontory and jetty, and so on. In fact, a given fractal may have a finite area but an infinite perimeter; such shapes are considered to have a fractional dimension—for example, between 1 (a line) and 2 (a plane)—hence the name fractal. See the illustration. *See also* cellular automata, graftal.



Fractal.

fractional T1 *n.* A shared connection to a T1 line, in which only a fraction of the 24 T1 voice or data channels are used. *Acronym:* FT1. *See also* T1.

FRAD *n.* *See* frame relay assembler/disassembler.

fraggle attack *n.* *See* smurf attack.

fragmentation *n.* The scattering of parts of the same disk file over different areas of the disk. Fragmentation occurs as files on a disk are deleted and new files are added. Such fragmentation slows disk access and degrades the overall performance of disk operations, although usually not severely. Utility programs are available for rearranging file storage on fragmented disks.

FRAM *n.* Acronym for ferromagnetic random access memory. A form of data storage technology in which data is recorded semipermanently on small cards or strips of material coated with a ferric oxide (iron-based) magnetic film. As with tape or disk, the data persists without power; as with semiconductor RAM, a computer can access the data in any order.

frame *n.* **1.** In asynchronous serial communications, a unit of transmission that is sometimes measured in elapsed time and begins with the start bit that precedes a character and ends with the last stop bit that follows the character. **2.** In synchronous communications, a package of information transmitted as a single unit. Every frame follows the same basic organization and contains control information, such as synchronizing characters, station address, and an

error-checking value, as well as a variable amount of data. For example, a frame used in the widely accepted HDLC and related SDLC protocols begins and ends with a unique flag (01111110). *See the illustration. See also* HDLC, SDLC. **3.** A single screen-sized image that can be displayed in sequence with other, slightly different, images to create animated drawings. **4.** The storage required to hold one screen-sized image of text, graphics, or both. **5.** A rectangular space containing, and defining the proportions of, a graphic. **6.** The part of an on-screen window (title bar and other elements) that is controlled by the operating system rather than by the application running in the window. **7.** A rectangular section of the page displayed by a Web browser that is a separate HTML document from the rest of the page. Web pages can have multiple frames, each of which is a separate document. Associated with each frame are the same capabilities as for an unframed Web page, including scrolling and linking to another frame or Web site; these capabilities can be used independently of other frames on the page. Frames, which were introduced in Netscape Navigator 2.0, are often used as a table of contents for one or more HTML documents on a Web site. Most current Web browsers support frames, although older ones do not. *See also* HTML document, Web browser.

Flag	Address	Control	Data	Frame check sequence	Flag
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Frame. The fields in an HDLC-SDLC frame.

frame buffer *n.* A portion of a computer's display memory that holds the contents of a single screen image. *See also* video buffer.

frame grabber *n.* *See* video digitizer.

frame rate *n.* **1.** The speed at which full, single-screen images are transmitted to and displayed by a raster-scan monitor. Frame rate is calculated as the number of times per second (hertz) the electron beam sweeps the screen. **2.** In animation, the number of times per second an image is updated. When the frame rate exceeds about 14 frames per second, animation seems to blend into smooth motion. *See also* animation.

frame relay *n.* A packet-switching protocol for use on WANs (wide area networks). Frame relay transmits variable-length packets at up to 2 Mbps over predetermined, set paths known as PVCs (permanent virtual circuits). It is a variant of X.25 but dispenses with some of