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**The Official Dictionary
of Telecommunications
Networking and
the Internet**

**16th
EXPANDED
& UPDATED
EDITION**

BY HARRY NEWTON

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Email: Harry Newton@TechnologyInvestor.com

Personal web site: www.HarryNewton.com

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Published by Telecom Books
An imprint of CMP Media Inc.
12 West 21 Street
New York, NY 10010

ISBN # 1-57820-053-9

Sixteenth Edition, Expanded and Updated, February 2000

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Distributed to the book trade in the U.S. and Canada by
Publishers Group West
1700 Fourth St., Berkeley, CA 94710

Manufactured in the United States of America

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tion. The unit provides a "virtual twisted pair" back to a local switching interface for transparent telephony operation of CLASS services and custom calling features. The RSU communicates with the Host Digital Terminal (HDT) at the head end of the CATV network. The RSU may be in the form of either an indoor or an outdoor unit, and may be powered either over the coax network or, more commonly, is powered locally powered through an A/C (Alternating Current) transformer at the customer premises. An RiSU (Remote Indoor Service Unit), a variation on the theme, is locally powered and includes battery backup. A RSUM (Remote Service Unit Multiple) is used to provide service to a MDU (Multiple Dwelling Unit), such as an apartment complex, condominium or multipurpose high-rise building. See also CATV and Network Interface Device.

RSVP The Resource Reservation Protocol (RSVP) is an IETF standard designed to support resource (for example, bandwidth) reservations through networks of varying topologies and media. Through RSVP, a user's quality of service requests are propagated to all routers along the data path, allowing the network to reconfigure itself (at all network levels) to meet the desired level of service. The RSVP protocol engages network resources by establishing flows throughout the network. A flow is a network path associated with one or more senders, one or more receivers, and a certain quality of service. A sending host wishing to send data that requires a certain QoS will broadcast, via an RSVP-enabled Winssock Service Provider, "path" messages toward the intended recipients. These path messages, which describe the bandwidth requirements and relevant parameters of the data to be sent, are propagated to all intermediate routers along the path. A receiving host, interested in this particular data, will confirm the flow (and the network path) by sending "reserve" messages through the network, describing the bandwidth characteristics of data it wishes to receive from the sender. As these reserve messages propagate back toward the sender, intermediate routers, based on bandwidth capacity, decide whether or not to accept the proposed reservation and commit resources. If an affirmative decision is made, the resources are committed and reserve messages are propagated to the next hop on the path from source to destination.

The idea is that for presumably a premium price, RSVP will enable certain traffic, such as videoconferences, to be delivered before e-mail. Today, all traffic on IP networks moves on a first-come-first-served basis and is charged at a flat rate. "In some ways RSVP will change what the Internet is all about because you'll start to have different qualities of service and differential prices which are new," said Abel Weinrib, a key Internet strategist for Intel Corp. Virtually unknown among the general Internet community, RSVP has been quietly pushing ahead towards becoming acceptable and popular. It is now part of Microsoft's TAPI 3.0. It is being pushed also by Cisco Systems Inc., which makes the routers that direct most Internet traffic, and by Intel, which wants to spur demand for microprocessors by making computers and IP networks more useful for uses like phone calls and video conferencing. In an article I read, Cisco marketing manager Peter Long said RSVP technology would be included in new network software Cisco is delivering. That software controls the routers that direct Internet traffic. Cisco sells more than 80 percent of the routers used in commercial and corporate Internets. Long expects Cisco customers to start using RSVP technology to create what he calls "diamond lanes" on the Internet. "Right now, if there is congestion on the Internet, your traffic sits there, like

you get stuck on an onramp," Long said. He said RSVP would be like "a big crane that picks you up and puts you over the congested parts of the Net. See TAPI 3.0."

RTT Round Trip Time. A measure of the time it takes for a signal to travel from a Remote Terminal to a Remote Terminal. Local loop terminates at Remote Terminal and remote points closer to the service user to improve service reliability.

RTU Remote Termination. A node at which terminates a high-speed local distribution facility in a DLC (Digital Loop Carrier) scenario. The other end of the circuit is known as a COT (Central Office Termination). See also DLC.

RTAN Real Time ANI.

RTCC Real Time Control.

RTCP Real Time Conferencing Protocol. Supports real-time conferencing for large groups on the Internet. It has source identification and support for audio and video bridges/gateways. Supports multicast-to-unicast translators.

RTF Rich Text Format. A way of encoding documents such that the messages include boldface, italics and other limited styling. RTF is meant to be a cross word processing platform such that if you send one RTF document (by email, for example) from one word processor to another word processor that second word processor will be able to recreate the document's original format.

RTFM Read The Fantastic Manual. This acronym is often used when someone asks a simple or common question. The word "fantastic" is usually replaced with one much more vulgar. Used on e-mail, newsgroups, and the Internet.

RTM Ready To Manufacture.

RTM Read The Manual.

RTMP Routing Table Maintenance Protocol. It is the native protocol for routing table maintenance. It sends updates out every 10 seconds.

RTNR A British term. Ring Tone No Reply, a telephone call which has not been answered. Typically a telebusiness system will automatically re-dial the number after a pre-determined period.

RTO-IS Ready To Order - In Service.

RTP 1. Realtime Transport Protocol. An IETF standard for streaming realtime multimedia over IP in packets. Supports support of real-time data like interactive voice and video over packet switched networks. A thin protocol providing support for content identification, timing reconstruction, loss detection and security. The ARPA DARTnet transcontinental IP network experiments lead to RTPs popularity. Now championed by the Audio/Video Transport (AVT) Working Group. AVT is part of the IETF (Internet Engineering Task Force). RTP does not do resource reservation or quality of service control. It relies on resource reservation protocols like RSVP. See H.323.

RTP 2. Routing Table Protocol. Used in Banyan VINES routing with VINES as a routing metric.

RTP 3. Request To Send. One of the control signals on a standard RS-232-C connector. It places the modem in the originate mode so it can begin to send. See the Appendix.

RTSE Reliable Transfer Service Element. The OSI application layer service element responsible for transfer of bulk-mode objects.

RTSP Real Time Streaming Protocol. See Real Time Streaming Protocol.

RTT Radio Transmission Technologies. See G3.

RTTU Remote Trunk Test Unit.

RTU 1. Remote Termination Unit, Remote Telemetry Unit or Remote Terminal Unit. Basically an RTU is a little black box connected to some remote gadget. The RTU lets the gadget connected at one end of an analog circuit respond to commands

that are sent to it over an analog, dial-up phone line. Imagine an oil pipeline. There's a leak. You have to shut the pipe off — not only at the beginning of it. You have to shut it down at the spot closest to the leak, to minimize the spill. Thus you call that switch and tell it over the phone line and using the Remote Termination Unit at the switch to shut off. It does. Obviously there's also a big electrically driven device that physically turns the handle to shut the oil down.

2. Right To Use. A term manufacturers have invented to stifle the used/secondary market in their equipment. Basically, the manufacturer says "Fine, you can sell your no-longer-needed product to some used equipment dealer. But if someone buys it from the dealer and wants to use it, they have to pay me a Right To Use fee." Without payment of this fee, the manufacturer won't contract to maintain the customer's equipment and certainly won't sell the customer software updates, etc. The right to use fee is exorbitant — typically considerably more than what the product actually sells on the used market for. A better approach for a manufacturer would be to innovate a little more and make the customer wants his new product more than his old price (despite the old product's lower price).

3. Remote Terminal (not terminating) Unit. RTUs are employed by utilities' SCADA (Supervisory Control And Data Acquisition) systems in electric substations or gas/water/steam pumping plants to monitor status/condition and/or metering data and to control operations at a remote site. SCADA systems are not limited to distribution systems; SCADA is also used to manage transmission facilities. Distribution is local delivery to end customers; transmission is backbone transport facilities. The analogies between the electrical, water, gas, and telecommunications infrastructures/networks go on and on. See SCADA.

RTV Real-Time Video. DVI software that implements quick-and-dirty, realtime video compression. Once called "edit-level video," it stores video as only 10 frames per second. Meant for use while developing DVI applications.

RU 1. Request Unit or Response Unit. A basic unit of data in SNA.

2. Receive Unit

3. Abbreviation of rack unit. See Rack Unit.

Rubber Bandwidth A term coined by Ascend, an inverse multiplexer manufacturer, to refer to the ability to support applications needing varying speeds. It breaks the original signal up into 56- or 64-Kbps chunks, and places these separate transmissions on the public switched digital network. See also Inverse Multiplexer.

Rule Based System The most popular way to represent knowledge in an expert system. In general, a rule-based system's knowledge base contains both facts and IF..THEN production rules.

Rule of Thumb The phrase "rule of thumb" came from an old English law which made it illegal to beat your wife with anything wider than your thumb.

Run To start a software program.

Run/Stop On a Northern Telecom Norstar phone, this feature inserts a delay in a dialing sequence. The delay can be any length of time.

Run Length Encoding A form of data compression which is semantic-dependent in nature. Such techniques are designed to respond to specific types of local redundancy, such as image representation and processing. Run length encoding is a common technique which involves the scanning of image elements along a scan line or row. As the device scans the image, it identifies redundant data and con-