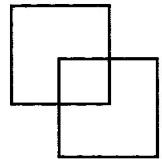


DESKTOP COMMUNICATIONS

IBM[®] PC, PS/2[®], and Compatibles



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PROPRIETARY PROTOCOLS

All the protocol designs discussed so far have been in the public domain. Several proprietary protocols are also to be found in PC communication packages. Among the best known are:

- BLAST, in the Communications Research Group's communication packages BLAST and BLAST II
- DART, in DCA®'s CROSSTALK Mk.4
- HyperProtocol™, featured in Hilgraeve's HyperAccess®
- RELAY™, in RELAY Silver™ and RELAY Gold®, both by VM Personal Computing
- CCDOS, in Carbon Copy PLUS™ from Meridian Technology

Little information can be given here about these protocols, because little is publicly available. Some copyright holders license proprietary protocols for use by others, but in all such cases the message formats and other details of protocol operation are kept more or less secret. It is tempting to assume that protocols designed by reputable companies must be of high quality. Protocols in this category are indeed of at least moderate quality, but it may be dangerous to assume more. In any case, the proof of the pudding must be in the eating.

The following is as much information as could be rooted out about some of these proprietary protocols.

BLAST

BLAST (BLocked ASynchronous Transmission) is the name of both a proprietary protocol and a communications package. Although the protocol's precise specifications are secret, general design details are known.

The BLAST protocol scores high marks for efficiency, but its outstanding selling point is the off-the-shelf availability of different versions for an impressive array of computer systems. BLAST is not particularly identified with PCs, and is equally at home on other micros, minis, and mainframes. It is sold for most popular personal computers and minis, many UNIX systems, and some mainframes, including IBM's. No other asynchronous protocol can claim commercial support by a single vendor across as wide a range of systems.

Like ZMODEM, BLAST achieves its efficiency by means of a sophisticated ARQ scheme that, under suitable conditions, allows data to be sent in a more-or-less continuous stream. Two other strong points are the protocol's ability to transfer files in both directions across a link at the same time and to resume an interrupted transfer.

BLAST employs 16-bit CRCs for error control, has a sliding window acknowledgment scheme, handles seven-bit connections, eliminates ASCII control characters from the protocol data stream, and offers data compression to boost transfer speed. It is tailored to connections with large propagation delays. At 1,200 bps, for example, BLAST can cope with a round-trip delay of 12 seconds (6 going, 6 returning) without loss of efficiency. Packet size is set by

the user. The default size is 84 bytes, while the maximum is system-dependent (2,048 bytes for the PC). Two BLASTs with different maximum packet sizes will settle on the smaller one.

BLAST products use a copy-protection ploy also found in a few other communication products, including HyperAccess. Each BLAST package has a serial number built into the software. When two BLASTs start a communication session, they exchange serial numbers; if they both have the same number, they refuse to go any further. Unlike many other methods of copy protection, this scheme does nothing to inconvenience the legitimate customer.

BLAST products are not inexpensive, and for PC-to-PC communication in particular, BLAST II has plenty of competition. For heavy duty file transfer between PCs and other computer systems, though, or between dissimilar systems generally, BLAST may be hard to beat. Indeed, in the right setting, BLAST is dynamite.



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