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(54) Title: ADAPTIVE MULTI-PROTOCOL COMMUNICATIONS SYSTEM

(57) Abstract: An adaptive multi-protocol communications system provides a plurality of single computer interface cards connected to a common backplane or interconnect. Each interface card sends and receives bit streams of a specific application protocol, exchanging data between possibly differing application protocols. The interface card feeds the incoming binary stream into a finite state machine dedicated to converting a specific application protocol bit stream into a multi-dimensional matrix representation for a particular communication protocol, e.g., EDI/XML, or the invention's intermediate translation representation. The invention uses finite state machines to convert from the initial communication protocol bit stream to the invention's intermediate representation. A finite state machine on a receiving interface card is used to convert the incoming bit stream into an intermediate language multi-dimensional matrix and passes the matrix to a destination interface card which has a finite state machine used to convert the intermediate language multi-dimensional matrix to an application protocol bit stream. The application protocol bit stream is then sent to a receiving computer system.



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