

The Center of Attention

With the dizzying amount of software available on the market today, communication across different computer platforms and applications has become a must. A data-collection and processing “middleware” package that was developed with NASA’s **Small Business Innovation Research (SBIR)** funding is making strides in computer systems integration.

Creare, Inc., of Hanover, New Hampshire, has made it possible to synchronize interaction among different computer applications. Originally created in conjunction with NASA’s Dryden Flight Research Center for collecting and processing aircraft vibration test data, DataTurbine™ is now used as a software tool for industrial monitoring, collaborative simulation and modeling, and multimedia data streaming.

DataTurbine serves as “glueware,” allowing communication among dissimilar computer platforms and permitting analysis, storage, and acquisition of shared data. The middleware technology solves many problems posed by real-time or online data management in collaborative environments. These environments must be capable of exchanging large volumes of data from dissimilar systems at local and remote sites. DataTurbine’s underlying technology, Creare’s

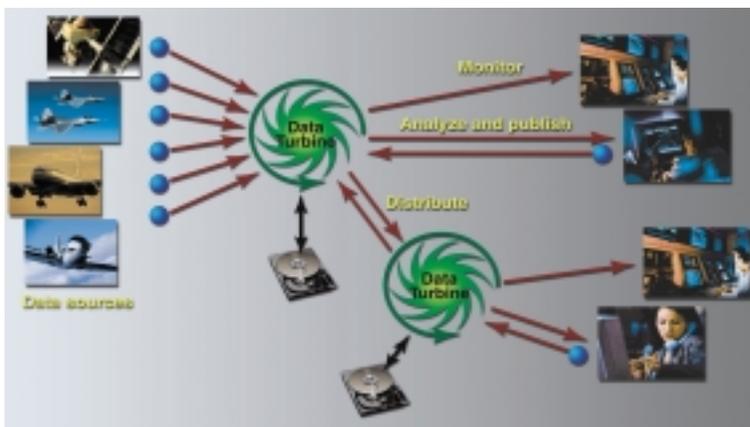
patent-pending Ring Buffered Network Bus (RBNB), is a software server that provides a buffered network data path between suppliers and consumers of information. Diverse distributed applications pool and share data using DataTurbine as a common intermediate point of contact. Therefore, the RBNB manages all aspects of inter-application data traffic, including storing, retrieving, and routing information within the network.

The RBNB acts as a nerve center within a network of applications, enabling synchronized data distribution, application integration, and collaborative processing. Like a neuron, RBNB uses a mechanism to receive, store, process, and forward signals from many sources to many destinations. A network of DataTurbine servers creates a type of nervous system that bonds applications and data sources together.

The software allows connected users to extract or input audio and video information nearly instantaneously, no matter what type of computers they are using. DataTurbine can separate information, as well as integrate it. If a user wishes to receive only news from a data stream that also includes sports and concert information, he or she can use DataTurbine to filter out only the news information. Using this method of data extraction, the RBNB can also be used for securing information through authorization restriction on a client-by-client basis.

Many applications for DataTurbine continue to emerge. Advantages of this technology include a possible network-oriented infrastructure for managing information on an aircraft. Continuous updates of weather information to and from an aircraft can be integrated with engine health monitoring and other tools.

The RBNB fills multiple needs that would otherwise require ad hoc and expensive software development. Given the benefits of DataTurbine off-the-shelf products, faster development of more useful software is possible.



Creare, Inc.’s DataTurbine™ serves as “glueware,” allowing communication among multiple users and dissimilar computer platforms.

DataTurbine™ is a trademark of Creare, Inc.