The annotate node (Fig. 1) is special because it is the only node other than the source and sink nodes that interacts with the external environment. It is necessary to create an external annotate server to service the annotation requests. When an event arrives at an annotate node, it causes the engine to generate a CMIP event (an EcsAnnotateRequest notification) which is transmitted to the annotate server via the HP OpenView DM postmaster (pmd) and the XMP (X/Open Management Protocol) application programming interface. The server must have registered with HP OpenView DM to receive the annotate request event. Any data from the incoming event, or from elsewhere in the circuit, can be output with the request. This data is used to parameterize the request. The annotate server must perform some user-implemented action or inquiry to obtain the information required by the request. The server will return the obtained data to the requesting annotate node with another CMIP event (an EcsAnnotateResponse notification) issued by the server (acting as an agent entity). The response must be returned within a configured time limit or the request will time out. Any required data can be returned (subject to the limits of the protocol). All ECS data types are supported (string, integer, real, time, duration, Boolean, list, tuple, etc.), including any combination of these types. The data in both the request and the response is specified as a list. Since all requests use the same CMIP event, it is necessary for the designer of the annotate server to specify some mechanism to differentiate between requests. The response event will include the requesting node name and request ID provided in the request event. These are used to route the response to the requesting annotate node.

The end user must create the annotate server. Examples of the server’s agent and manager functions are provided as source code along with guidelines.

Fig. 1. The annotate mechanism.