5.3.3 Performance requirements **EXAMPLE**

This subsection should specify both the static and the dynamic numerical requirements placed on the soft-

ware or on human interaction with the software as a whole. Static numerical requirements may include the

following:

a) The number of terminals to be supported;

b) The number of simultaneous users to be supported;

c) Amount and type of information to be handled.

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Static numerical requirements are sometimes identified under a separate section entitled Capacity.

Dynamic numerical requirements may include, for example, the numbers of transactions and tasks and the

amount of data to be processed within certain time periods for both normal and peak workload conditions.

All of these requirements should be stated in measurable terms.

For example,

95% of the transactions shall be processed in less than 1 s.

rather than,

An operator shall not have to wait for the transaction to complete.

NOTE—Numerical limits applied to one specific function are normally specified as part of the processing subparagraph

description of that functions

**Static Numerical Requirements**

The server application will allow only one terminal from each company to be opened at any given time. This limitation will prevent data inconsistencies between client and database and help to lower the chance of deadlocks within the system. It will also lead to a higher efficiency in that it will eliminate the processing of the same request multiple times. In order to provide a greater level of functionality, the system will be able to provide services to at least 100% of the registered users simultaneously. As the number of users grows, more hardware will have to be added to maintain this level of service. The system will be able to process only the data specified in the data requirements. Any erroneous data will simply be discarded at the time of process.

**Dynamic Numerical Requirements**

Although the system will have the ability to service all registered users simultaneously, this represents only an extreme case. On average the system will expect to see a 50-75% load at peak times and no more than a 25% load at off peak times. During these times the amount of data transfer and processing will vary. During peak times the system will be expected to handle a maximum of 10Gbps data transfer and 2Gbps during off peak times. While the system is under these limits, users can expect to see response times between 1 and 10ms dependent on network conditions.