**Session layer functionality and design issues**

**Dialog Control –** Session layer allows two systems to enter into a dialog exchange mechanism which can either be full or half-duplex.

**Managing Tokens –** The communicating systems in a network try to perform some critical operations and it is Session Layer which prevents collisions which might occur while performing these operations which would otherwise result in a loss.

**Synchronization –** Checkpoints are the midway marks that are added after a particular interval during stream of data

transfer. These points are also referred to as synchronization points. The Session layer permits process to add these checkpoints.

For example, suppose a file of 400 pages is being sent over a network, then it is highly beneficial to set up a checkpoint after every 50 pages so that next 50 pages are sent only when previous pages are received and acknowledged.

**Design Issues with Session Layer :**

**Establish sessions between machines –** The establishment of session between machines is an important service provided by session layer. This session is responsible for creating a dialog between connected machines. The Session Layer provides mechanism for opening, closing and managing a session between end-user application processes

**Enhanced Services –** Certain services such as checkpoints and management of tokens are the key features of session layer and thus it becomes necessary to keep enhancing these features during the layer’s design.

**To help in Token management and Synchronization –** The session layer plays an important role in preventing collision of several critical operation as well as ensuring better data transfer over network by establishing synchronization points at specific intervals. Thus it becomes highly important to ensure proper execution of these services.