1056-90-2041   **Ahlam E Tannouri*** (`ahlam.tannouri@morgan.edu`), Baltimore, MD 21251, and **Sam F Tannouri** (`sam.tannouri@morgan.edu`), Baltimore, MD 21251. *Modeling Network Traffic as a Filtered Semi-Markov-Process.* Preliminary report.

The Markov renewal process known as the semi-Markov process (SMP) is an important generalization of the Markov chain. This process is critical in analyzing and studying queuing Problems. Network traffic congestion causes serious problems affecting major websites at critical times. The extent of disturbance on the major flow of information in a network is modeled as a filtered SMP. Clustering, variability and spacing are considered. The model can be used to establish an intervention plan at random times in transient and asymptotic cases. (Received September 22, 2009)