**Network Fundamentals Week 15 Log Book**

**Summary**

Generally, compressing your data before sending it over the network is a good idea because the network would be able to deliver compressed data in less time than uncompressed data. However, compression/decompression algorithms often involve time- consuming computations. The question you have to ask is whether or not the time it takes to compress/ decompress the data is worthwhile given such factors as the host's processor speed and the network bandwidth.

OPNET IT Guru Academic Edition provides two methods of compression: Per-Virtual Circuit (payload) Compression and Per-Interface (entire packet) Compression. In Per- Virtual Circuit Compression, the compression and decompression of the packet payload take place only at the end nodes. With Per-Interface Compression, the whole packet is decompressed and compressed at each hop on the route. Therefore, Per-Virtual Circuit Compression entails fewer additional delays, and Per-Interface Compression results in smaller packets.

Web caching has many benefits. From the client's perspective, a page that can be retrieved from a nearby cache can be displayed much more quickly than if it has to be fetched from across the Internet. From the server's perspective, having a cache intercept and satisfy a request reduces the load on the server. Caching can be implemented in many different places. For example, a user's browser can cache recently accessed pages and simply displays the cached copy if the user visits the same page again. As another example, ISPs can con- figure a node in the network to cache Web pages for their users. This is sometimes called a *proxy*.

**Implementation**

**Results**

**Conclusion**