CS8803 High Performance Communication, Spring 2005
Assignment #2
DUE: Friday, February 4, in class (or via email)

Benchmarking the Radisys Forwarder - Work in pairs!

Part I
The IXP2400-based Radisys ENP-2611 board comes with a sample application, a Static Forwarder. The first part of this assignment requires that you run the application on the ILAB ixps. Note – you will need access to the ILAB cluster, and you will need to have a homedirectory on /net/hp31. If you don't have either, email help@cc and copy me to the request.

Copy of the sample application can be found at:
/net/hp31/ixpdev/opt-links/ixp/IXA_3.1/EDU_Wkstn/ENP_SDK_3.1_release1/enp-2611

or from the tarball in
/net/hp31/ixpdev/CD-Images/IXA_Education_Wkstn_3.1/enp2611/

The addresses of the IXP interfaces are available at
www.cercs.gatech.edu/projects/npg/ilab

To test the forwarder, you can download the raw sockets packet generator from the class web page.

Part II
Design your own set of benchmarks to evaluate the performance of the forwarder. You may use existing tools, or build your own. Select your performance metrics (throughput, latency, both…), and design meaningful experiments, which test the limits of the IXP forwarder.

Make sure your measurements are not bound to the performance of the packet generator or the receiver (i.e., if you are delivering 50Mbps data to the IXP, it doesn't mean that 50Mbps is its limit!).

Turn in a report describing your evaluation techniques, and the results measured.