Weekly Report:

Paper study:
1)Title: A Case for End System Multicast Author: Yang-hua Chu, Sanjay G.Rao, Srinivasan Seshan and Hui Zhang

This paper compares End System Multicast with IP Multicast. End System Multicast could address most problems associated with IP multicast such as network management, deployment, support for higher layer functionality with the penalty of performance. This paper studies the End System Multicast's performance in the context of the Narada protocol. So, first the authors explain the design of Narada.

In the design of Narada, authors use a two-step process to construct the overlay structure. First, it constructs a mesh, in which each node may have many neighbors. Second, it uses the routing algorithms to construct a spanning tree for data delivery based on the mesh.

Narada lets each node maintain a list of all other members in the group. This limits the group size Narada can serve. The maintenance of the mesh needs to deal with member joining, member leaving and failure. Narada uses an enhancement of distance vector routing that requires a leaving member to continue forwarding packets for some time to minimize packet loss.

Narada incremental improves the mesh quality by adding and dropping of overlay links to optimize the performance. The issue of realizing this is the design of a utility function that reflects mesh quality. The two main factors considered are latency and bandwidth. To determine the available bandwidth between two members, active measurements may be required.