Simulation Scenarios for Distributed Keying:

Scenario #1:
Topology: Two nodes connected by a channel.
Channel one-way Latency: 40ms in simulation (typical TCP/IP connection across the internet)
Object creation: Equal rates between the two nodes, randomly occurring creations, average rate 1 per simulated minute.
Run time: one simulated day (1,440 simulated minutes). Of course the simulation runtime should be far less than this!
Objective: Ensure the functionality of sharing keyspace blocks and the stability of subblock sharing (there should be minimal, if any, subblock sharing in this scenario).

Scenario #2:
Topology: Two nodes connected by a channel.
Channel one-way Latency: 40ms in simulation
Object creation: Unequal rates, one node having 7x the object creation rate as the other, one averaging 1 per simulated minute, the other 1 per 7 simulated minutes
Run time: 7 simulated days.
Objective: There initially should be a lot of subblock sharing to fill in "holes", but eventually block sharing should happen, reducing the volume of subblock sharing. Block sharing should eventually result in the higher-rate node having 7x the keyspace as the lower rate node. (these values were chosen so that the keyspace blocks will end up being divided up into eighths, with one node having 1/8 of the keyspace and the other having 7/8 of the keyspace)

Scenario #3:
Topology: Three nodes connected in a straight line, using two channels (no cycles in the graph)
Channel one-way Latency: 40ms in simulation for each channel
Object creation: Equal rates, 1 object per minute on each node.
Run time: 7 simulated days.
Objective: Ensure block sharing eventually stabilizes, and determine what resolution the keyspace is broken up into (eighths, 16ths, 32nds) by ADAK in an attempt to distribute the keyspace according to object creation rate.