

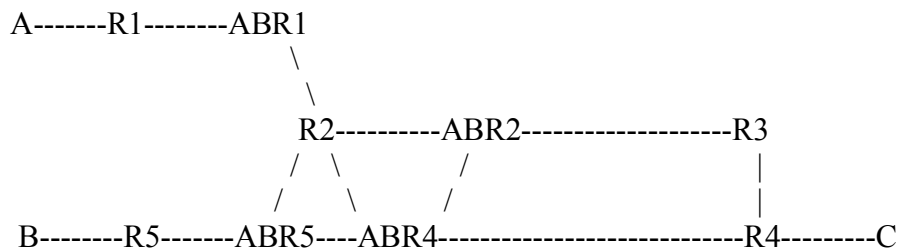
## CS 430/594 Routing Spring, 2005 straight

Lab4: due: March 3<sup>rd</sup>

**Dynamic routing:** initial steps. This builds on lab 3. Routers need to gather metrics (say once a minute, or every 30 seconds) and then broadcast any changes to the other routers. You can use the built-in VRNET functions. Each router must use the shortest path algorithm to generate its routing table—so the metrics should be reasonable—see the web page for suggestions. Non-changing metrics and number-of-hop metrics are NOT OK here. To simplify things, non-router nodes can have fixed routing tables.

**Lab 5: due March 17<sup>th</sup>**

**OSPF-like areas.** We will not have designated routers, etc, but we will have areas. ABRs should broadcast LSA 3 type summaries, and all routers broadcast LSA 1's. The web pages will have information about how to specify areas. Area 0 will be the backbone—all ABRs will have one or more interfaces to the backbone. We may or may not have totally stubby areas—check the web page. In the diagram below, A, B, and C are ordinary hosts. R1 is in area 1, R2 is in area 0, R3 and R4 in area 3, R5 in area 2.



**Lab 6: due: April 7<sup>th</sup>**

**Connecting groups.** See lab 5. Host A will be an “internet” gateway. To help simplify things, rather than implement something like BGP, you'll need to have host A connect to other groups' host A. Is host A an ASBR? Not exactly, since an ASBR is normally part of 2 different AS's, and here host A is in a single AS. Perhaps think of host A as being a stub BGP speaker—all unrecognized destinations get sent out over the “internet”. We'll provide suggestions. Topology: same as lab 5.

Lab X: maybe lab 5 1/2? Maybe not. We might have host C be a DNS. Or, we might have DHCP or something of a similar nature. I'm open to suggestions.....we might also have ASBRs or virtual links, etc.