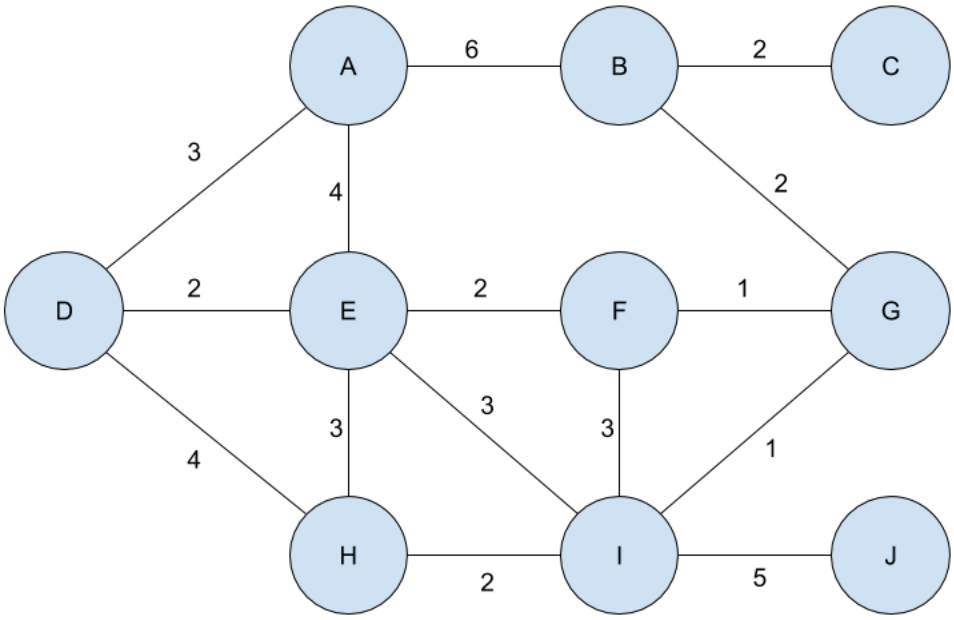
CS 168 Introduction to the Internet
Fall 2017 Scott Shenker

Discussion 13: Multicast

1 Multicast



For parts A and B, use DVMRP Multicast.

1. Assume that nodes D, H, J are members of a multicast group M. If C sends a packet to that group, what path does the packet take to reach H? **Solution:** C-B-G-I-H

2. Does that path change if F joins the group? If so, what is the new path? **Solution:** The path does not change.

Now assume we're using CBT with B as the initial core and no group members.

1. Suppose J joins the group initially. What path does its join message take? **Solution:** J-I-G-B

2. Five minutes later, after J's successful join, suppose H joins the group. What path does its join message take? **Solution:** H-I

3. Five minutes later, after H's successful join, suppose D joins the group. What paths does its join message take? **Solution:** D-E-F-G

4. Suppose H sends a multicast packet to its fellow group members, J and D. What path does the message take? **Solution:** H-I-G-F-E-D, with I-J and G-B

5. Suppose that C was the core instead. What would the path from the previous part have been? **Solution:** H-I-G-F-E-D, with I-J and G-B-C