Content-based Rendezvous with Upgraph Combination

• An upgraph is a dag that contains all possible paths from a given node to the tier-1 core networks
• Publisher upgraph roots from the publisher and contains all possible uphill and peer-to-peer paths
• Subscriber upgraph does not contain peer-to-peer links, but only all possible uphill paths
• Subscriber and publisher upgraphs can be combined by reversing the subscriber dags
• The rendezvous system has the responsibility of choosing the most optimal route that is going to be use

The NIRA system used upgraphs for allowing more control for receiver.
Canopy uses upgraphs for pub/sub. Upgraphs combined at publisher-side rendezvous point.
Can take both subscriber & publisher policies into account.

Initial analysis based on CAIDA topology suggests that upgraph combination is a good candidate technology for implementing a global rendezvous system