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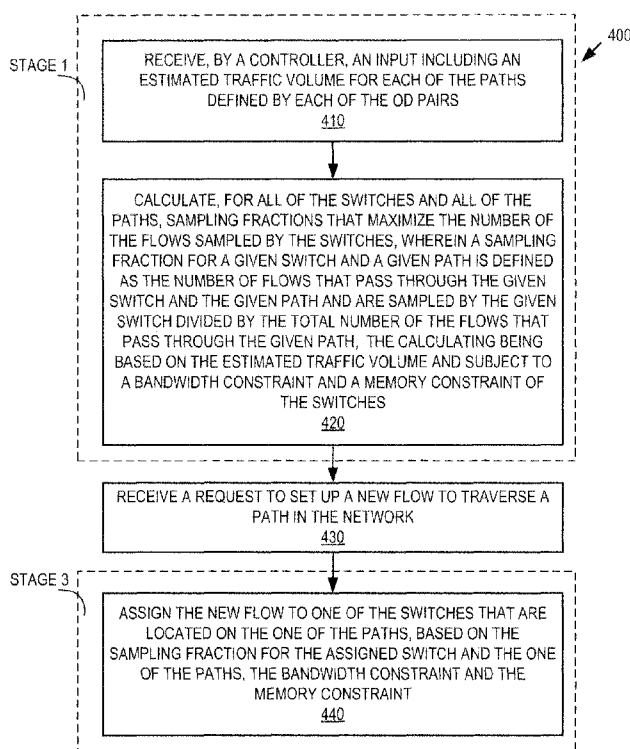
(54) **Title:** NETWORK-WIDE FLOW MONITORING IN SPLIT ARCHITECTURE NETWORKS

FIG. 4

(57) **Abstract:** Flow monitoring tasks are assigned to a set of switches in a split architecture network to optimize network-wide flow monitoring. The assignment maximizes the number of monitored flows and reduces overhead of the flow monitoring. A controller receives an estimated traffic volume for each path in the network. The controller calculates, for all of the switches and all of the paths, sampling fractions that maximize the number of the flows sampled by the switches. In response to a request for setting up a new flow to traverse one of the paths in the network, the controller assigns the new flow to one of the switches that are located on the one of the paths, based on the sampling fraction for the assigned switch and the one of the paths, the bandwidth constraint and the memory constraint.



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