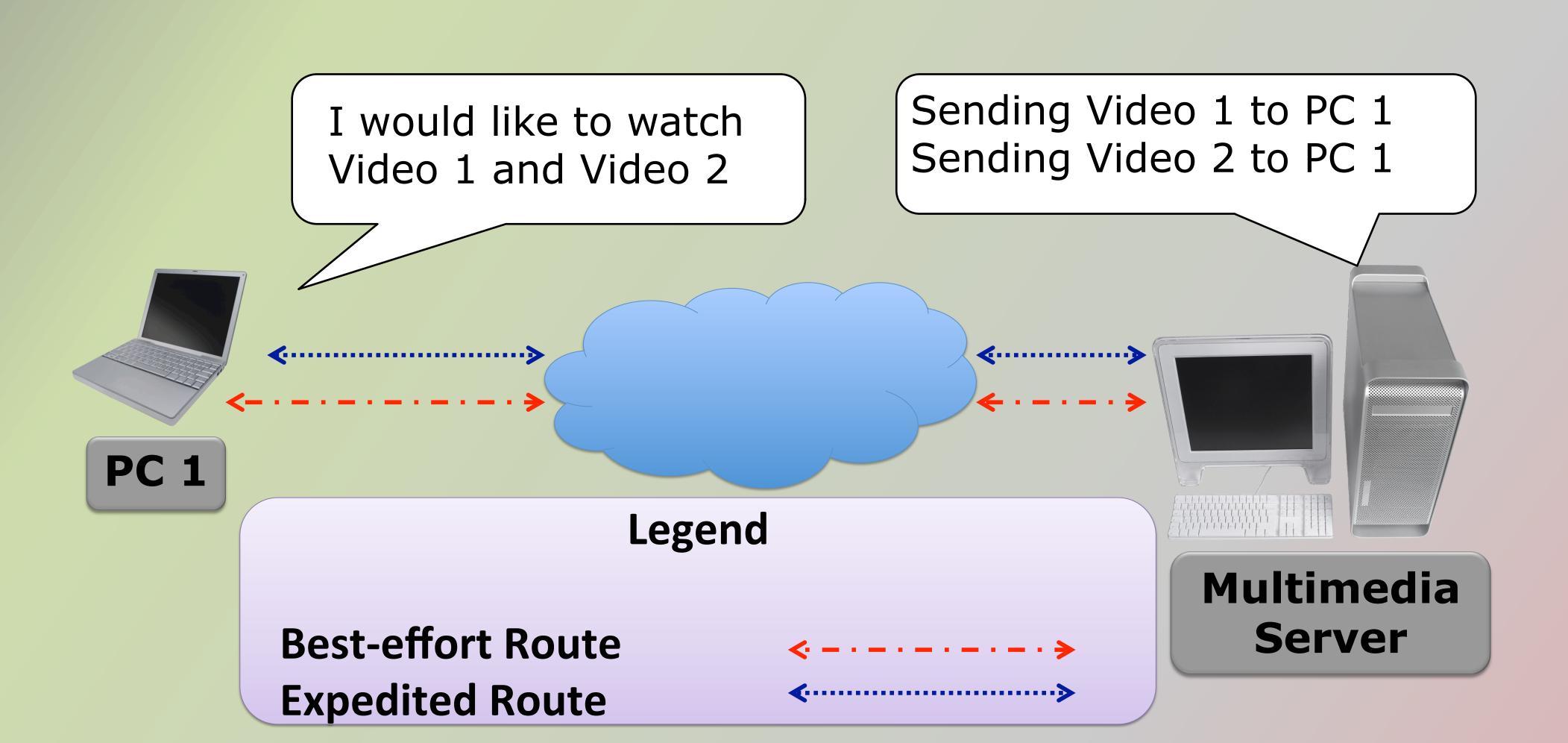


Extending OpenFlow for Managing Service Insertion and Payload Inspection

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What's going on here?

PC 1 requests two video feeds from the Multimedia Server.

PC 1 will notice that the quality of **Video 2** far exceed the quality of **Video 1**'s feed.

Unbeknownst to the **PC 1**, the network manager has programmed the OpenFlow Controller to dynamically steer traffic based on the Application-layered characteristics.

Detailed Topology

Objective: Perform Deep Packet Inspection (DPI) Analysis on network traffic and route based on that information.

How: We are dynamically programing an External Processing Box (EPB) from the Controller, to perform additional processing on network traffic and assist in steering the traffic.

Direct Benefit: Dynamically shift poor quality video traffic to an high availability (expedited) route.

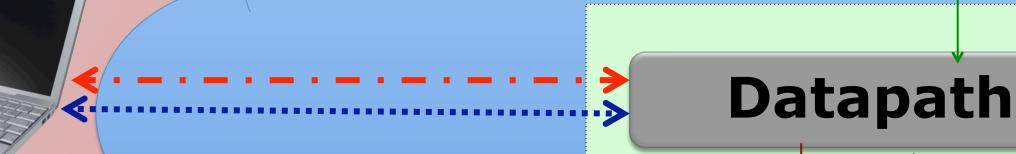
Datapath, here are some **standard** OpenFlow instructions for traffic management.

Control Plane

Controller

OpenFlow

Also Datapath, send multimedia traffic to the EPB with this constructed policy message. This action will provide policies for the EPB to implement along with this traffic.



I will perform DPI operations on traffic received and tag traffic based on the policies sent to me from the Controller (via the Datapath).

EPBData Plane

Datapath, I have tagged the port number you should route traffic out of.