Techno-economic analysis of software defined networks

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Computer engineers are changing your internet connection:
One central piece of control software can save you millions.

That million is not exactly going right into your pocket but think of Gmail, YouTube, Skype and Dropbox. All great products and it is even better that they are offered for free. These applications send huge trunks of bits which your internet provider (Belgacom or Telenet) and large data storage facilities have to handle.

Moving and storing those bits is however far from free and the amount of bits that is sent is increasing day by day while our internet bill has luckily not been increased by the same amount. To make that possible computer engineers around the world are working on ways to reduce costs and provide you with a better experience at the same price. The newest innovation is a true paradigm shift in the way the bits are pushed from your computer to their destination.

Think about moving bits as driving in rush hour from your home to Brussels. Where now at every crossroad a bit (or car) has to be handled by a specific part of software (think traffic light along your route) and has to be sent over a possibly congested link (traffic jam) it is now possible that a single piece of software handles the entire flow of bits across the best possible path (think of an escort which brings you directly to your destination without any congestions). This makes moving bits a lot easier and the crossroads are cheaper and easier to manage.

What exactly will be cheaper and by how much? Who will lose and gain from this change and where are their opportunities for the industry? That are all questions posed by many and that is what Im trying to answer in my research. After all, none of us would be happy with a higher internet bill.