

SDP: Smart Data Pricing, from Theorems to Trials

Mung Chiang, Princeton University

ABSTRACT

Fifty years ago, the transition from voice calls to bursty data traffic justified packet switched networks. As data traffic becomes more heterogeneous today, what are the implications to network architecture? Instead of just counting bytes, Smart Data Pricing (SDP) manages traffic by treating different bytes differently.

SDP can refer to (a) usage pricing like \$10/GB, with throttling/booster, (b) time/location/app/congestion-dependent dynamic pricing, (c) two-sided 1-800 pricing, (d) WiFi offloading/proactive caching, (e) quota-aware content distribution, (f) transaction-based pricing... or any of the above. It can help create happier users, less congestion and better QoE, lower CapEx/OpEx, higher revenue/profit margin, less churn, more consumption, and more ad revenue. But it also requires smart interfaces among pipe providers and content/app providers, and a combination of fundamental research, systems implementation, and user trials.

This talk summarizes what we learned about the win-win that awaits the whole ecosystem.