1. Mainly on course work.
   Clear the deadlines...

2. Re-read paper "ISP Uplink Pricing in a Competitive Market" carefully.

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Source: 15th Int. Confernece on Telecommunications (ICT), 2008.

summary

Given the current assumptions in this model, it can be easily proved that the co-existence outcome will never happen. For the other two outcomes, we can intuitionally know that two main factors p (the original flat-rate price) and beta will decide the outcome. If p is very low, but high enough to guarantee the profit is positive, the profit of ISP2 is too slow since he demands a low price while the P2P traffic cost is relative heavy. ISP2 will adopt the uplink pricing immediately to revert the market back to a symmetric one, which will bring the ISP2 a profit of P0(Profit-neutral stance). On the other hand, if p is high enough, it causes the P2P traffic cost accounting for a small proportion, less dominant. The more P2P users, the better ISP2 is, because it can attract more users and get more prices. The extreme condition is that p is rather high and P2P users occupies 50 percent, where both ISPs get equal user population, and their profit is almost the same, P0.

Critiques

(1) The author categorizes the users into regular ones and P2P ones by evaluating their uplink traffic with a threshold. But ISPs should deploy statistical modules on the access network for an accounting work to identify the specific users, which contributes a lot to the total cost under high line speed. In addition, users will frequently transit between the two kinds, and the pricing policy should be based on a reasonable time interval.
(2) The pricing between ISPs on cross-ISP traffic is too complicated, and case-dependent. In this model, author assumes ISPs will only accounts on the outbound external traffic. The model is not very practical when applied to real-life ISP market.
(3) As for the elasticity rou, indicating the percent of population who will lower down its uplink traffic when applied to a uplink pricing policy, should be dependent on the original flat-rate price p and q, the charge per volume of traffic. The simplest relationship is rou~q/p.
(4) When considering about the economies of scale, the cost of ISP will decreased a lot, since peers within the same ISP can feed one another. The q is inappropriate for a fixed value, otherwise the unfair charging plan will make the ISP loose its P2P customers.