Will smart pricing finally take off?

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“Smart” telecom pricing

- “Holy Grail” of the industry for hundreds of years
- huge literature
- many disappointments
- is it really going to be different this time?

Reasons it *might* be different this time

- different balance between rates of technological progress and demand

- huge potential sources of additional demand

- might lead to different balance between user preferences for simplicity and predictability and service provider desire for fine-grained pricing

US wireless industry reported data traffic

- 2010H1 161.5 PB
- 2010H2 226.5
- 2011H1 341.0
- 2011H2 525.7

vs. about 20,000 PB for US wireline Internet in 2011H2

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wireline growth rate of 40–50% per year appears sustainable without major investment increases, wireless 100+% rate probably cannot go on much longer (and spectrum reallocation can take care of at most 1 year of such growth)

Underlying trends

- incentives to price discriminate are increasing
- technology to price discriminate are improving (one of the great but seldom mentioned promises of wireless!)
- how will this be reconciled with human desire for simplicity and fairness?

Value (or at least price) per MB

SMS	$1,000.00
cellular voice	1.00
wireline voice	0.10
residential Internet	0.01
backbone Internet	0.0001

Voice to text substitution (US)

year	voice minutes billions	texts billions
2005	1,495	81
2006	1,798	159
2007	2,119	363
2008	2,203	1,005
2009	2,275	1,563
2010	2,241	2,052
2011	2,296	2,304

US wireless industry statistics

year	revenues \$B	capex \$B	capex/revenues
2004	102.1	27.92	27.3%
2005	113.5	25.24	22.2
2006	125.5	24.42	19.4
2007	138.9	21.14	15.2
2008	148.1	20.17	13.6
2009	152.6	20.36	13.3
2010	159.9	24.89	15.6
2011	169.8	25.32	14.9

US wireless industry statistics (cont'd)

- service providers do not appear willing to increase capex much
  - apparently they do not see prospects of much higher revenues

- likely are counting on pricing to play a major role in lowering demand

Telecom industry hobbled by many misleading dogmas

- content is king
- streaming real-time multimedia traffic will dominate
- carriers can develop innovative new services

“Content is king” delusion

- US wireless industry revenues in 2011: \$170 B
- Google worldwide revenues in 2011: \$38 B
- Hollywood worldwide video revenues around \$100 B

Need to consider the full spectrum of smart pricing tools and aims

- Scott Bradner: Will the Internet be reliably bad enough to justify QoS?
- How many courses teach students how to effectively degrade or disrupt traffic?
- Craig Moffett (Bernstein Research): “For years, the telecom industry has thrived on obfuscation.”

Jules Dupuit (1849) and railroad “smart pricing”

It is not because of the few thousand francs which have to be spent to put a roof over the third-class carriages or to upholster the third-class seats that some company or other has open carriages with wooden benches. What the company is trying to do is to prevent the passengers who pay the second class fare from traveling third class; it hits the poor, not because it wants to hurt them, but to frighten the rich.

And it is again for the same reason that the companies, having proven almost cruel to the third-class passengers and mean to the second-class ones, become lavish in dealing with first-class passengers. Having refused the poor what is necessary, they give the rich what is superfluous.

Caveats on the road to "smart pricing"

- negative public reaction (possibly leading to regulatory restrictions)
- customer willingness to pay more for simplicity
- flat or semi-flat rates as bundling
- effects on usage and thereby on network effects
- distinction between B2B and B2C and the all-important C2C connectivity, by far the largest source of value

More information, papers, and presentation decks:

http://www.dtc.umn.edu/∼odlyzko/

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