

Should Regulators Set Rates to Terminate Calls In Mobile Networks?



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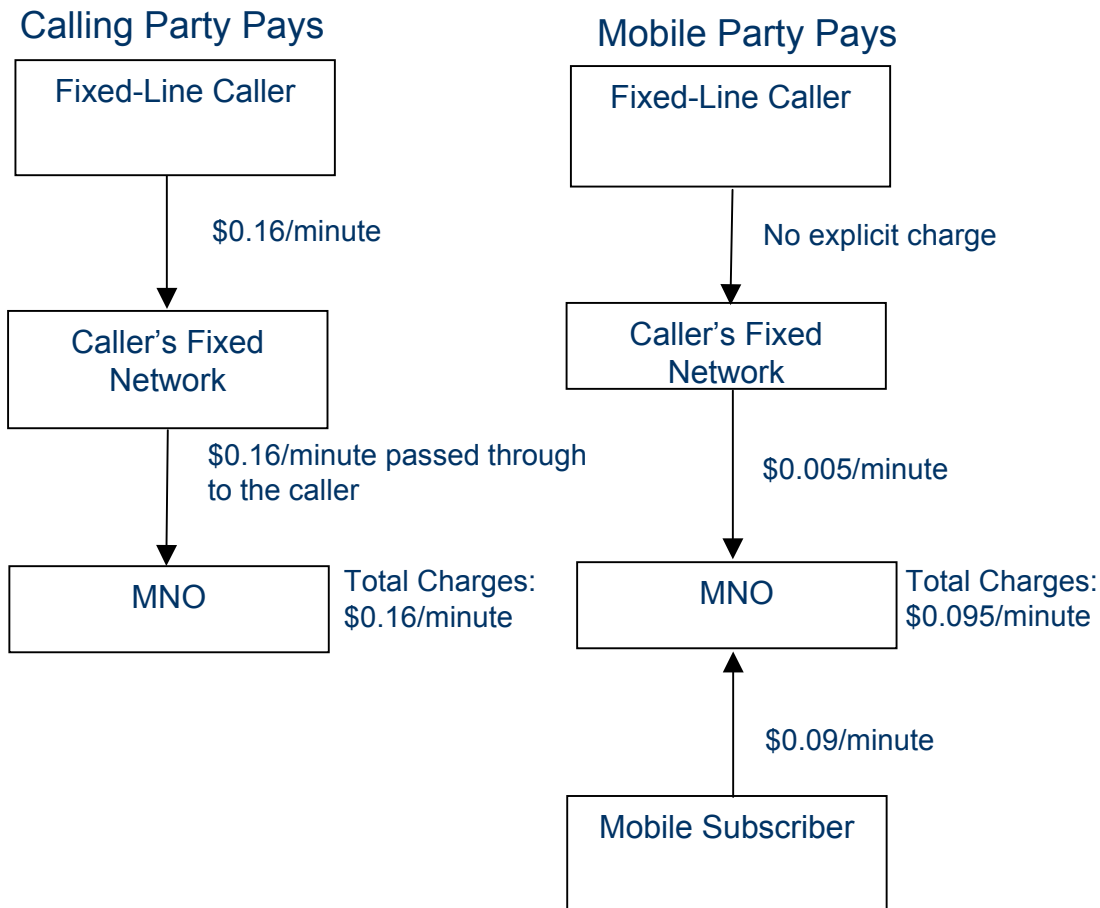
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Topics to Be Addressed

- Global movement to regulate MTRs
- Forces that constrain an MNO's market power in setting MTRs
- Should MTRs be set equal to marginal cost?
- Appropriate and inappropriate regulatory responses

Payments of Mobile Termination Rates Under CPP and MPP



Summary of Regional Regulatory Initiatives Relating to Mobile Termination Rates (as of October 2003)

Country	Initiatives Relating to Mobile Termination Rate (MTR)
Australia	ACCC issued discussion paper, but has not issued final decision.
France	ART ordered MTR reduced to 0.1494€ per minute by January 2004.
Germany	RegTP does not regulate MTRs because it concluded that MTRs were sufficiently low.
Ireland	ComReg reached an agreement with Vodafone and mm02-Ireland to decrease MTRs.
Italy	AGCOM ordered MTR reductions to 0.1495€ per minute.
Japan	MPHPT reduced rates by 12% in 2001 and 5.5% in 2002; empowered some landline operators to set MTRs.
The Netherlands	Opta reduced MTRs to “best practice” rates as determined by averaging MTRs charged by other European MNOs.
United Kingdom	OfTel recommended 14%-15% reductions on MTRs yearly until 2006.

U.S. Interest in MTRs

- FCC proceeding
- U.S. Trade Representative negotiations

The Alternative Approach in the United States and Canada: MPP

- Both caller and recipient pay
- MPP and reciprocal compensation obviate regulation
- Superior effect on wireless penetration and usage

Penetration and Usage of Mobile Telephony in Selected Countries

(CPP)

Country	Penetration (% of Population)	Share of Prepaid (% of Subscribers)	Minutes of Use per Subscriber per Month	Revenue per Minute (\$)
Australia	68		173	0.16
Finland	85		146	0.24
France	63		156	0.20
Germany*	72	54	72	0.29
Italy	93		121	0.20
Japan	62	3	170	0.30
South Korea	68	1	296	0.10
United Kingdom	85	69	132	0.22
<i>Range</i>	<i>62-93</i>	<i>1-69</i>	<i>72-296</i>	<i>0.10-0.30</i>

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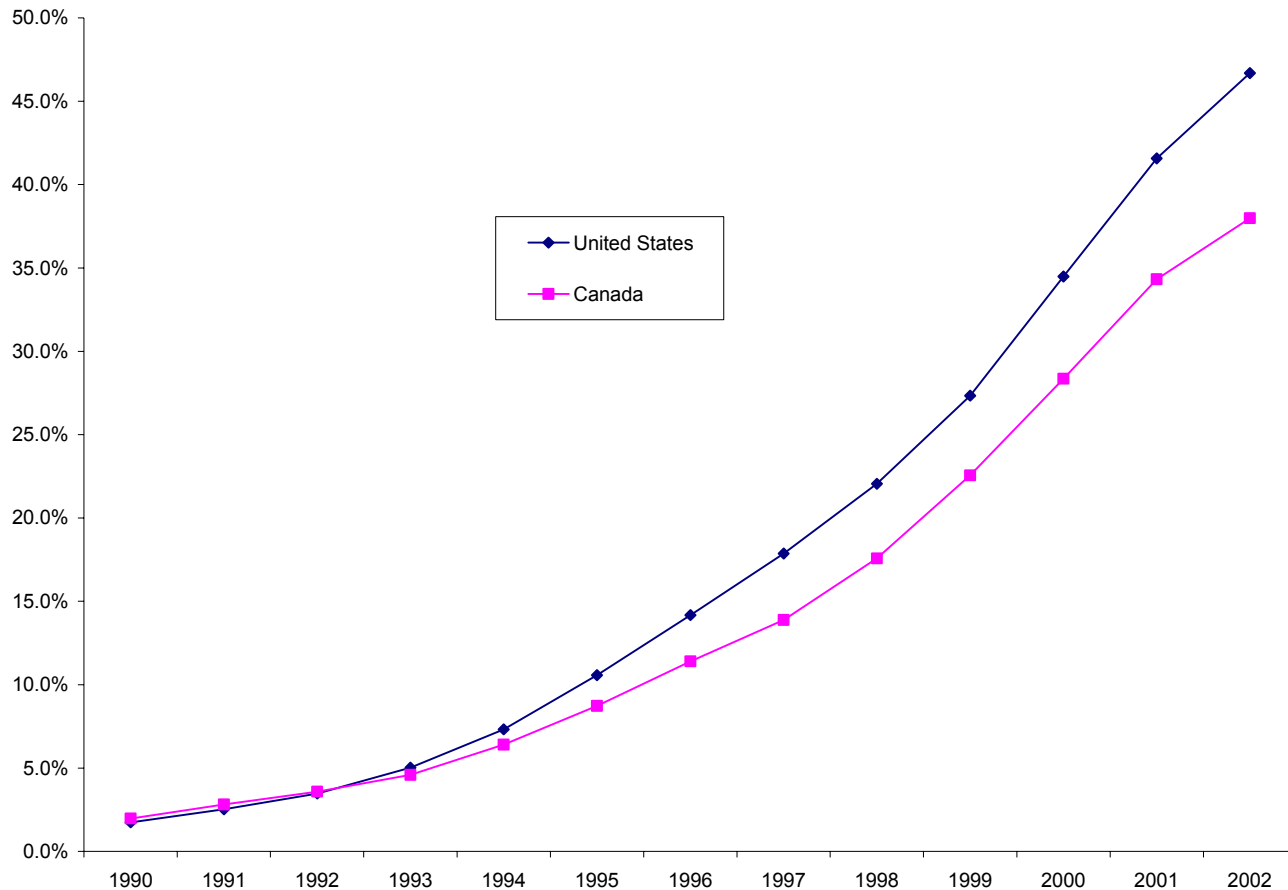
(MPP)

Country	Penetration (% of Population)	Share of Prepaid (% of Subscribers)	Minutes of Use per Subscriber per Month	Revenue per Minute (\$)
Canada	37		270	0.11
United States	49	5	458	0.12
<i>Range</i>	<i>37-43</i>	<i>5</i>	<i>270-458</i>	<i>0.11-0.12</i>

Sources: Linda Mutschler, *Global Wireless Matrix 4Q02*, Global Securities Research, Merrill Lynch, Apr. 2, 2003; Linda Mutschler, *The Next Generation VII*, Global Securities Research, Merrill Lynch, Feb. 21, 2003.

Note: * MTRs are not regulated in Germany.

Canadian and U.S. Mobile Penetration Rates, 1990-2002



Forces that Constrain Market Power

- Demand substitutes for fixed-to-mobile calls
 - Mobile-to-mobile calls
 - Mobile-to-fixed calls
 - Data messages
 - Fixed-to-fixed calls
 - Routing fixed-to-mobile calls through mobile networks

Forces that Constrain Market Power, cont'd

- Effect of MTRs on subscriber's inbound calls
- Closed user groups: mobile customers' concern for the welfare of their callers
- Effect of mobile affiliation with a fixed network: double marginalization

Should MTRs Be Set at Marginal Cost?

- The Role of Network externalities
- Should fixed network costs and customer acquisition costs be recovered from MTRs?
- Ramsey pricing

The Range of Regulatory Responses

- TELRIC-style price regulation
- Mandatory disclosure of MTRs to callers and mobile subscribers by fixed networks and MNOs
- Implicit disclosure through dedicated number prefixes (Not possible with LNP)
- Regulation of mobile-to-fixed termination rates

Payments of Mobile Termination Rates Under CPP and MPP

Country	1999			2000		
	Fixed-to-Mobile Termination Rate (A)	Mobile-to-Fixed Termination Rate (B)	Ratio (A) / (B)	Fixed-to-Mobile Termination Rate (A)	Mobile-to-Fixed Termination Rate (B)	Ratio (A) / (B)
CPP						
Austria	0.225	0.019	11.6	0.230	0.017	13.5
Denmark	0.170	0.019	9.0	0.170	0.008	21.3
Finland	0.187	0.018	10.5	0.210	0.013	16.2
France	0.329	0.019	17.1	0.200	0.006	33.3
Germany*	0.354	0.014	25.3	0.240	0.008	30.0
Italy	0.289	0.030	9.8	0.230	0.009	25.6
Mexico	0.200	0.030	6.7	0.200	0.026	7.7
Netherlands	0.345	0.017	20.4	0.180	0.009	20.0
Sweden	0.256	0.012	21.9	0.220	0.008	27.5
United Kingdom	0.204	0.009	23.2	0.160	0.005	32.0
<i>Average</i>			15.5			22.7

Payments of Mobile Termination Rates Under CPP and MPP

MPP

Canada	NA	NA	NA	NA	0.007	0.0
Hong Kong	NA	NA	NA	0.008	0.008	1.0
United States**	0.023	0.023	1.0	0.020	0.020	1.0
<i>Average</i>			<i>1.0</i>			<i>1.0</i>

Demographic and Economic Characteristics and Weighted Average Access Rate of Selected U.S. States

State	Population (1,000s)	Population Density (people/sq mile)	Degree of Urbanization	Wage Rate Index	1999 Weighted Average Access "Loop" Rate* (\$)
DC	519	8,452.8	100.0	133.3	10.81
IA	2,869	51.4	44.6	101.4	8.20
IL	12,128	218.2	84.5	100.4	9.81
IN	5,943	165.7	71.7	104.6	8.20
MA	6,175	787.9	96.1	107.7	14.98
MD	5,172	529.1	92.7	105.2	14.50
MI	9,864	173.6	82.6	126.0	10.15
MN	4,776	60.0	70.1	109.3	17.87
NC	7,651	157.0	67.1	92.1	16.71
NH	1,201	133.9	60.2	96.9	17.99
NJ	8,143	1,097.6	100.0	109.1	16.17
NY	18,197	385.3	91.9	101.3	14.81
PA	11,994	267.6	84.5	103.6	14.06
TN	5,484	133.0	67.8	90.2	18.00
VA	6,873	173.6	78.1	98.8	13.60
WA	5,756	86.5	82.9	109.4	11.33
WI	5,250	96.7	67.8	105.9	10.90
AVERAGE	5,248	424.4	70.3	101.9	15.77