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BEFORE THE
Federal Communications Commission
WASHINGTON, D.C.

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

MD Docket No. 98-200

In the Matter of)
)
Assessment and Collection of Regulatory)
Fees for Fiscal year 1999)

**COMMENTS OF
THE CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION**

The Cellular Telecommunications Industry Association ("CTIA")¹ hereby submits its
Comments in the above captioned proceeding.²

INTRODUCTION

The Commission is permitted to collect regulatory fees only in the amount expressly
authorized by Congress. As required by Congress, the Commission's Notice prescribes regulatory
fees for FY 1999 that raise an additional 6 percent above the total amount of fees collected for FY
1998. For CMRS mobile services, the proposed increase raises regulatory fees from \$0.29 to
\$0.32 per subscriber, an increase of over 10 percent. This determination is erroneous for two
reasons. First, the Commission has adopted a methodology contrary to the Act that bases
regulatory fees on a particular sector's growth rather than on the cost of regulating that sector.

¹ CTIA is the international organization of the wireless communications industry for both
wireless carriers and manufacturers. Membership in the association covers all Commercial
Mobile Radio Service ("CMRS") providers and manufacturers, including 48 of the 50
largest cellular and broadband personal communications service ("PCS") providers. CTIA
represents more broadband PCS carriers and more cellular carriers than any other trade
association.

² Assessment and Collection of Regulatory Fees for Fiscal Year 1999, MD Docket No. 98-
200, *Notice of Proposed Rulemaking*, FCC 99-44 (rel. Mar. 24, 1999) ("Notice").

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List A B C D E

Second, the Commission erred in its calculation of regulatory fees for CMRS mobile services because it used last year's data and therefore significantly underestimated the number of wireless subscribers. CTIA's Semi-annual Wireless Survey, released today, establishes that there are 69,209,000 CMRS subscribers, not the 55,540,000 units estimated by the FCC. Unless these errors are corrected, the Commission will collect an excess of \$8 million from the CMRS industry. Correctly calculated, the CMRS mobile services regulatory fee for FY 1999 is approximately \$0.20 per subscriber.

I. THE METHODOLOGY ADOPTED BY THE COMMISSION HAS INTRODUCED AN IMPROPER BIAS AGAINST RAPIDLY GROWING SECTORS OF THE TELECOMMUNICATIONS INDUSTRY.

Section 9(i) of the Communications Act of 1934 ("Act"), as amended, "requires that [the Commission] develop accounting systems necessary to adjust [its] fees pursuant to changes in the costs of regulation of various services that are subject to a fee."³ Instead the Commission has adopted a more complicated, and ultimately unreliable, approach described in detail in the Notice.⁴ Briefly, the Commission began by estimating the number of units⁵ for FY 1999 for each industry and multiplying that figure by each industry's FY 1998 per unit charge. After doing this, the Commission concluded that it would only raise \$157.6 million, \$14.9 million less than required by Congress.⁶ To collect the difference, the Commission "then adjusted the revenue

³ Notice at ¶ 7 (emphasis added); 47 U.S.C. § 159(i).

⁴ See Notice at ¶¶ 8-14.

⁵ "Payment units are the number of subscribers, mobile units, pagers, cellular telephones, licenses, call signs, adjusted gross revenue dollars, etc. which represent the base volumes against which fee amounts are calculated." Notice at ¶ 9 n.16. For the purpose of these Comments, the term "subscribers" is used interchangeably with "units."

⁶ Notice at ¶ 13. This projected \$157.6 million is lower than the \$162,523,000 the Commission collected for FY 1998. Apparently, the Commission has determined that the

requirements for each category on a proportional basis."⁷ In other words, each communications sector's proportional contribution percentage was multiplied by the anticipated shortfall, and the result was added to that sector's total revenue requirement for FY 1999. Finally, the total revenue requirement was divided by the total number of estimated units to determine the per unit fee for each category.⁸

This methodology breaches the statutory requirement and instead creates a system that places a disproportionate burden of these fees on the fastest growing segments of the communications industry. As a result, the Commission will likely collect an excessive amount of fees from many regulatees, and certainly will do so with respect to the CMRS industry. A simpler approach to the requirements of the Act would have avoided this problem. The fundamental flaw in the Commission's methodology is an implausible assumption that results in the imposition of disproportionate costs on sectors experiencing growth. Effectively, the Commission's FY 1999 fee proposal has established a linear relationship between a sector's units and the cost of regulating that industry -- ignoring completely the virtually certain reality that communications regulation experiences economies of scale. The Commission recognized this fact when it correctly concluded in the Notice that "[w]hen the number of payment units in a service increase from one year to another, fees do not have to rise as much as they would if payment units had

total number of units overall in the telecommunications industry will be less in FY 1999 than in FY 1998. Without commenting about the other communications sectors the Commission regulates (although it seems likely that the Commission may have vastly underestimated the number of units in one of the fastest growing industries in the nation), CTIA is able to warrant that the CMRS industry has realized a significant gain in units since FY 1998. See *infra* Part II; Attachment (1998 CTIA Semi-annual Wireless Survey).

⁷ Notice at ¶ 13.

⁸ Notice at ¶ 14.

decreased or remained stable."⁹ In practice, however, the Commission has failed to follow this conclusion.

A better methodology is much simpler and recognizes the existence of scale economies. The Commission should have begun by considering the total amount it needed to collect, \$172,523,000 for FY 1999. Then the Commission should have apportioned that charge to each industry segment as a percentage of the cost of regulating that segment. This amount would be the numerator for that group. The apportioned charge should then have been divided by the total number of units in the industry (the denominator), resulting in the per unit regulatory fee. Instead, the Commission's methodology imposes a disproportionate burden on the fastest growing sectors subject to Commission regulation.

A review of the calculation requirements for FY 1999 demonstrates the Commission's flawed methodology. For almost every single industry segment required to pay annual regulatory fees, the Commission has proposed to increase the fees by at least 9 percent for FY 1999. This exceeds by 50 percent the amount required by Congress. This increase could only be correct, however, if the total number of units for every sector of the telecommunications industry has gone down from last year. The Commission's estimates, however, do not reflect such a conclusion.¹⁰

⁹ Notice at ¶ 12 n.18.

¹⁰ Under the Commission's estimates, only three sectors realize a reduction in units that would cause a significant decrease in total fees collected: interstate telephone service providers, cable systems, and UHF markets. The Commission estimates a decrease of 2.37 billion units for interstate telephone service resulting in a shortfall in excess of \$2.6 million from FY 1998. The estimated number of units for cable systems is 2 million less than FY 1998, resulting in a shortfall of \$880,000. Finally, the estimated reduction in all UHF units results in a shortfall of \$928,775. Under the Commission's methodology, each of these estimated shortfalls is then improperly apportioned among all industry participants equally. See Notice at Attach. C; Assessment and Collection of Regulatory Fees for Fiscal Year 1998, MD Docket No. 98-36, *Notice of Proposed Rulemaking*, 13 FCC Rcd. 6977 at Attach. C (1998) ("FY 1998 NPRM").

CTIA is confident that the number of CMRS mobile services units has risen dramatically over last year -- enough to result in a substantial decrease in per unit charges. Similar results are likely to be present in other sectors under the Commission's jurisdiction. As a result, the proposed fees will cause the Commission to collect amounts far exceeding the \$172,523,000 mandated by Congress.

II. THE COMMISSION HAS OVERESTIMATED THE CMRS INDUSTRY'S REGULATORY FEE LIABILITY AND IT HAS SIGNIFICANTLY UNDERESTIMATED THE NUMBER OF CMRS UNITS, RESULTING IN A PAYMENT IN EXCESS OF \$8 MILLION BY THE INDUSTRY.

A. Applying The Legally Required Methodology, The CMRS Mobile Service Contribution Should Be \$0.20 Per Subscriber.

In its decision to impose a \$0.32 per unit fee on the CMRS industry, the Commission has made two critical errors in its calculations. First, the Commission erred in concluding that CMRS mobile services are liable for \$17,453,324. The correct amount is approximately \$13,801,840. Next the Commission erred in its estimation of the total number of CMRS mobile units. The correct number for FY 1999 is 69,209,000 units, not the 55,540,000 units the Commission has estimated. As a result of these miscalculations, the proposed regulatory fees exceed by over \$8 million, \$0.12 per subscriber, the CMRS sector's actual liability.

To determine the proper amount of total regulatory fee liability for CMRS mobile services, the Commission should have multiplied the total amount required by Congress to be collected by the industry's proportionate share. In FY 1998, the industry's proportionate share for regulatory fees was approximately 8 percent.¹¹ In the Notice, the Commission does not propose increasing the total liability for CMRS providers, or for other parts of the communications

¹¹ See FY 1998 NPRM at Attach. C (for FY 1998, CMRS mobile services liability was \$12,953,173 out of a total \$162,523,000, approximately 8 percent of the total).

industry for that matter.¹² In FY 1999, therefore, CMRS mobile services' liability is \$13,801,840 (8 percent of the \$172,523,000 established by Congress).

Once CMRS' total liability has been calculated, the Commission should have calculated the per unit charge by dividing the total liability by the total number of units in the industry. Here too, the Commission erred by vastly underestimating the number of CMRS subscribers. For its calculation, "[b]ased on actual FY 1998 payment units adjusted to take into consideration industry estimates of growth between FY 1998 and FY 1999 and Wireless Telecommunications Bureau projections of new applications and average number of mobile units associated with each application,"¹³ the Commission determined that there were 55,540,000 CMRS mobile services units.¹⁴ This estimate is obviously incorrect -- it is the exact same number of subscribers the Commission used to calculate CMRS fees for FY 1998.¹⁵ In fact, the number of CMRS subscriber units for FY 1999, as determined by CTIA's Semi-annual Wireless Survey, is 69,209,000, almost 25 percent more than the Commission's estimate.¹⁶ By dividing CMRS' total contribution liability (\$13,801,840) by the total number of CMRS subscribers as of December 31, 1998 (69,209,000), the correct per unit regulatory fee for CMRS mobile services is rounded up to \$0.20.

¹² See Notice at ¶ 20 (each industry segment's liability for regulatory fees has remained effectively constant; the largest change in any one segment's fee is 0.4 percent).

¹³ Notice at Attach. B.

¹⁴ Notice at Attach. C.

¹⁵ See FY 1998 NPRM at Attach. C.

¹⁶ A 25 percent increase in the total number of subscribers used in this calculation should result in a decrease in the per subscriber contribution level, even after accounting for the congressionally mandated 6 percent increase.

B. The Correct Number Of CMRS Mobile Services Units, As Determined By The CTIA Semi-annual Wireless Survey, Is 69.2 Million.

The CTIA Semi-annual Wireless Survey, first conducted in 1985, is the leading source of data for the wireless industry. It is a voluntary survey based on responses from both members and non-members of CTIA. For the most recent installment of the survey, released today, CTIA received responses from 2,869 of the over 3,073 systems operating in the United States, a 93.4 percent response rate.¹⁷ Using the aggregate information compiled by this survey, along with statistical estimates for those systems which failed to respond, CTIA has determined that there were 69,209,000 CMRS subscribers as of December 31, 1998.¹⁸

In addition to CTIA's Semi-annual Wireless Survey, several investment and research firms have reached similar conclusions about CMRS subscribership levels. For instance, Merrill Lynch's most recent report on the wireless industry, based on its own research and the prior year CTIA survey, estimated that there were 68 million cellular, PCS, and ESMR subscribers in the U.S. as of year end 1998.¹⁹ Donaldson, Lufkin & Jenrette's most recent report on the wireless industry, based on its own model of subscriber penetration, calculates that there were 69 million wireless subscribers at the end of 1998.²⁰ Moreover, Chairman Kennard stated in his address at Wireless

¹⁷ A more detailed description of the CTIA Semi-annual Wireless Survey can be found at <http://www.wow-com.com/statsurv/survey/datasurvey_index.cfm> (visited Apr. 1, 1999).

¹⁸ The Commission's basis of 55,540,000 units more accurately reflects the total number of subscribers at the end of 1997. See CTIA Semi-annual Wireless Survey, December 31, 1997 (Attachment); see *supra*, note 15.

¹⁹ Linda J. Mutschler and Paul Wuh, *The Next Generation III; Wireless in the US*, Mar. 10, 1999 at 14.

²⁰ Dennis H. Leibowitz, *The Wireless Communications Industry*, Winter 1998/1999 at 16-17.

'99 that "there are over 68 million Americans who own a mobile phone."²¹ Clearly the Commission's 55.5 million units estimate is well below commonly accepted subscribership levels.

Under Section 9 of the Act, the Commission is permitted to collect in regulatory fees only the amount expressly authorized by Congress.²² Because the Commission has elected to impose these fees per subscriber, it is critical that the Commission make every effort to utilize the most recent data available to determine contribution requirements. This is especially true in the CMRS sector, where the number of subscribers is increasing at a rate of over 20 percent annually. Failing to use the most recent and accurate calculations found in the CTIA Semi-annual Wireless Survey and in the industry analysts' reports would result in CMRS providers paying an excessive amount in regulatory fees, in violation of Section 9.

²¹ Chairman William E. Kennard, Crossing Into the Wireless Century, New Orleans, LA, CTIA Convention, Feb. 9, 1999.

²² 47 U.S.C. § 159(a)(2) ("The fees described in paragraph (1) of this subsection shall be collected only if, and only in the total amounts, required in Appropriations Acts.") (emphasis added).

CONCLUSION

For these reasons CTIA respectfully requests that the Commission adopt a new FY 1999 regulatory fee of \$0.20 per subscriber for CMRS mobile services.

Respectfully submitted,

**CELLULAR TELECOMMUNICATIONS
INDUSTRY ASSOCIATION**



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April 1, 1999



*Building the
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CTIA

Cellular Telecommunications
Industry Association

News Release

For Release

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Wireless Industry Posts 'Astonishing' Subscriber Increase **13,897,028 New Subscribers in 1998**

WASHINGTON, DC—"We've always been bullish about the wireless industry, but the final numbers for 1998 are simply astonishing," said Tom Wheeler, president and CEO of the Cellular Telecommunications Industry Association. On December 31, 1998, there were a total of 69,209,321 subscribers in the United States. This is a net gain of 13,897,028 over the previous year-end figures—a growth of more than 25 percent in one year. This is the largest one-year subscriber increase ever recorded.

"This report exceeds our own growth estimates for 1998 by more than two million new subscribers," Wheeler said. "There was a tremendous surge in subscribership during the last half of 1998. During the last six months of the year, more than 45,500 individuals signed up for service each day. To put this in context, it took the industry nine and a half years to gain its first 13 million subscribers. That's less than we added last year alone," Wheeler explained.

Wheeler predicted that vigorous growth will continue, particularly as the explosive worldwide expansion of wireless communications continues. "CTIA is concentrating on fostering partnering agreements among wireless carriers throughout the world. Making calling easier will make wireless phones even more attractive to consumers in the future." A Wireless Partnering Conference will be held in Miami, April 27-30, 1999.

Twice each year, CTIA performs a survey of actual subscribers and collects other critical information from operating wireless companies. This is not an estimate, but an actual count based on a better than 90 percent response rate. CTIA's Semiannual Survey is considered the benchmark for the industry.

The year-end survey for 1998 also showed a dramatic increase in subscribers to digital service. There are now 18,307,377 digital phone users—27.8 percent of all subscribers. This is a 183.5 percent increase in digital subscribership over December 1997, when there were 6,457,705 subscribers using digital phones.

Background on CTIA's Semi-Annual Wireless Industry Survey

CTIA's Semi-annual wireless industry survey develops industry-wide information drawn from operational member and non-member wireless service providers. It has been conducted since January 1985, originally as a cellular-only survey instrument, and has recently been designated as a survey instrument to include the new wireless service providers -- PCS and ESMR providers. No break-out of results specific to PCS or ESMR is performed at this time.

The information solicited from the service providers include: cumulative capital investment, direct employment, number of cell sites, total service revenues, roaming revenues as a subset of total service revenues, the average local monthly bill, and the average length of call. The average local monthly bill is developed on a weighted basis, to avoid skewing the figures. It is not an average of averages. No adjustments are made to these figures.

The CTIA survey also develops information on the number of reported wireless service subscribers for the responding systems, and an estimated total subscriber figure (taking into account non-responding systems). Because the CTIA survey is a voluntary survey, it cannot compel responses from wireless carriers. However, the survey has an excellent response rate. For the December 31, 1998, installment of the semi-annual survey, CTIA received responses from 2,869 of the 3,073 systems operating in the United States, a 93.4 percent response rate.

Because not all systems do respond, CTIA develops an estimate of total subscribership. The estimated subscriber figure is developed by determining the identity and character of non-responding markets (*i.e.*, RSA/MSA or equivalent-market designation, age of system, market population), and using a surrogate penetration rate applicable to similar, known systems to derive probable subscribership. These numbers are then summed with the reported subscriber numbers to reach the total estimated subscriber figures.

No carrier-specific or market-specific information is maintained as a result of the survey. All such information is aggregated by an independent accounting firm to a nationwide level. The underlying source material for the survey is then destroyed per confidentiality agreements.

The vigorous competition within the industry continues to benefit the consumer. The average monthly bill fell to \$39.43 at the end of December. This was a 7.8 percent decline for the year.

The year 1998 was also very good for business. Revenues for the year totaled \$33.1 billion and roaming revenues added \$3.5 billion. This was a 20 percent increase in revenues from the previous year.

The industry continued to plow money back into its infrastructure during the year. Capital investment for the industry now totals more than \$60.5 billion. This includes \$14.44 billion added this past year, reflecting the build-out of the new PCS providers and continued cellular investment.

There were 134,754 employees of wireless carrier companies in the United States. When manufacturing, construction and retail is added to that total, CTIA estimates that more than 1.3 million jobs have been added to the national economy by the wireless industry.

Highlights from CTIA's Semiannual Survey going back to 1985 can be found on CTIA's web site: www.wow-com.com. A detailed analysis of the results of CTIA's survey from 1995 through 1998, including information on Minutes of Use, Average Revenue Per Subscriber, Disconnects and other operational information is available in a comprehensive report titled *CTIA's Wireless Industry Indices: 1999*, for \$750. To order a copy, contact Luis Rodriquez at 202-736-3240 or Lrodriquez@ctia.org.

**To See What Competitive Telecommunications Will Look Like Tomorrow --
Look at Wireless Today**

CTIA is the international association for the wireless telecommunication industry.
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News about the wireless industry is available on CTIA's web site www.wow-com.com

CTIA'S SEMI-ANNUAL WIRELESS INDUSTRY SURVEY RESULTS

Date	Estimated Subscribers	Total Six- Month Revenues (\$000s)	Roamer Services Revenues (\$000s)	Cell Sites	Employees	Cum Capital Invest. (\$000s)	Average Local Monthly Bill	Avg. Local Call Length (Min)	Avg. Roam Call Length
Jan 85	91,600	178,085		346	1,404	354,760			
June 85	203,600	176,231		599	1,697	588,751			
Dec 85	340,213	306,197		913	2,727	911,167			
June 86	500,000	360,585		1,194	3,556	1,140,163			
Dec 86	681,825	462,467		1,531	4,334	1,436,753			
June 87	883,778	479,514		1,732	5,656	1,724,348			
Dec 87	1,230,855	672,005		2,305	7,147	2,234,635	\$96.83	2.33	
June 88	1,608,697	886,075		2,789	9,154	2,589,589	\$95.00	2.25	
Dec 88	2,069,441	1,073,473	89,331	3,209	11,400	3,274,105	\$98.02	2.26	
June 89	2,691,793	1,406,463	121,368	3,577	13,719	3,675,473	\$85.52	2.35	
Dec 89	3,508,944	1,934,132	173,199	4,169	15,927	4,480,142	\$89.30	2.48	
June 90	4,368,686	2,126,362	192,350	4,768	18,973	5,211,765	\$83.94	2.32	
Dec 90	5,283,055	2,422,458	263,660	5,616	21,382	6,281,596	\$80.90	2.20	
June 91	6,380,053	2,653,505	302,329	6,685	25,545	7,429,739	\$74.56	2.20	
Dec 91	7,557,148	3,055,017	401,325	7,847	26,327	8,671,544	\$72.74	2.38	
June 92	8,892,535	3,633,285	436,725	8,901	30,595	9,276,139	\$68.51	2.38	
Dec 92	11,032,753	4,189,441	537,146	10,307	34,348	11,262,070	\$68.68	2.58	
June 93	13,067,318	4,819,259	587,347	11,551	36,501	12,775,967	\$67.31	2.38	3.38
Dec 93	16,009,461	6,072,916	774,266	12,824	39,810	13,956,366	\$61.49	2.41	3.26
June 94	19,283,306	6,519,031	778,116	14,740	45,622	16,107,921	\$58.65	2.36	2.89
Dec 94	24,134,421	7,710,891	1,052,666	17,920	53,902	18,938,678	\$56.21	2.24	2.85
June 95	28,154,415	8,749,625	1,120,337	19,844	60,624	21,721,711	\$52.45	2.27	2.74
Dec 95	33,785,661	10,331,614	1,422,233	22,663	68,165	24,080,467	\$51.00	2.15	2.79
June 96	38,195,466	11,194,247	1,314,943	24,802	73,365	26,707,046	\$48.84	2.24	2.80
Dec 96	44,042,992	12,440,724	1,465,992	30,045	84,191	32,573,522	\$47.70	2.32	3.14
June 97	48,705,553	13,134,551	1,392,440	38,650	97,039	37,454,294	\$43.86	2.25	2.95
Dec 97	55,312,293	14,351,082	1,581,765	51,600	109,387	46,057,911	\$42.78	2.31	2.94
June 98	60,831,431	15,286,660	1,584,891	57,674	113,111	50,178,812	\$39.88	2.34	2.65
Dec 98	69,209,321	17,846,515	1,915,578	65,887	134,754	60,542,774	\$39.43	2.39	3.11

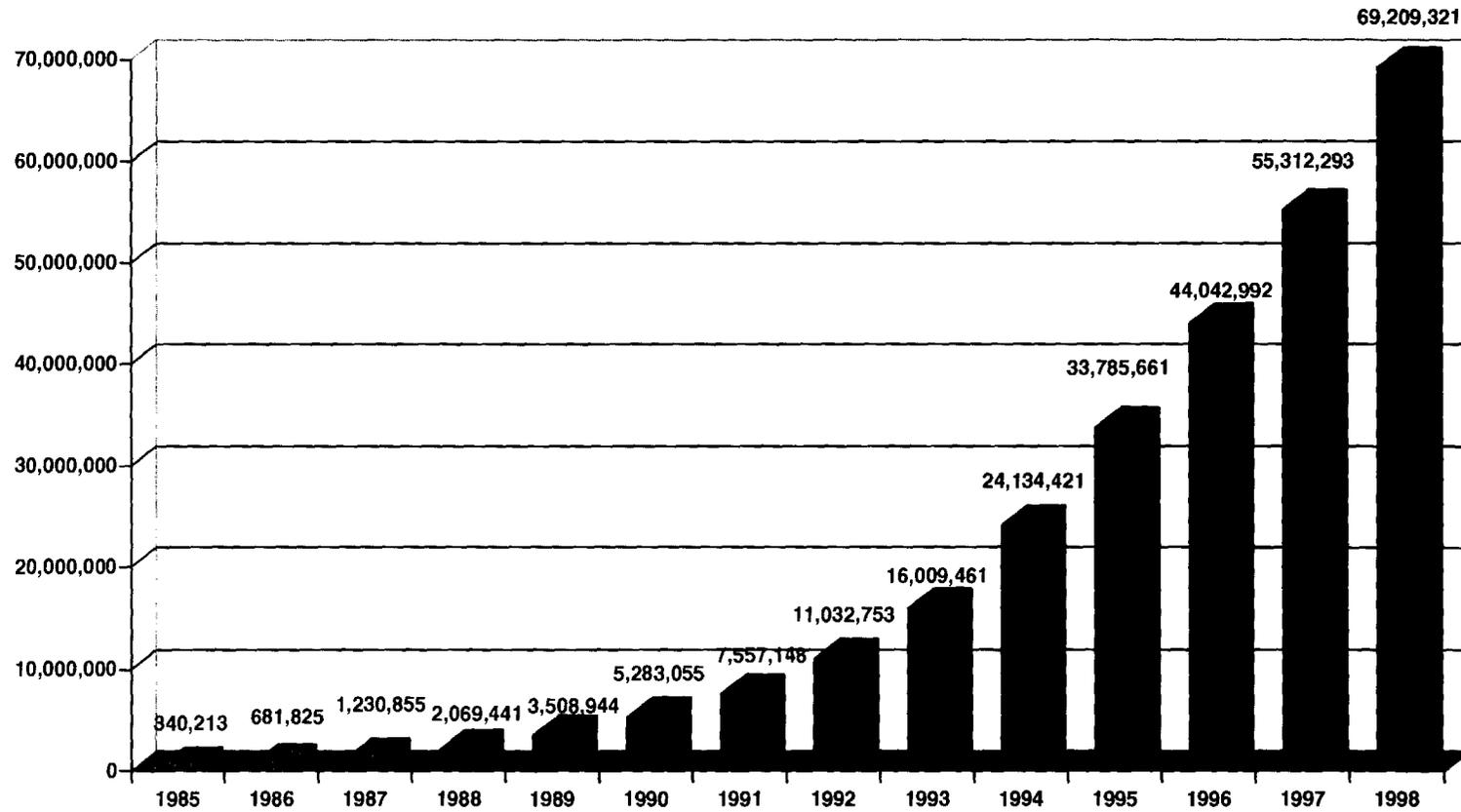
**THE CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION'S
ANNUALIZED WIRELESS INDUSTRY SURVEY RESULTS**

December 1985 to December 1998

Reflecting Domestic U.S. Commercially-Operational Cellular, ESMR and PCS Providers

Date	Estimated Total Subscribers	Annualized Total Service Revenues (in 000s)	Annualized Roamer Revenues (in 000s)	Cell Sites	Direct Service Provider Employees	Cumulative Capital Investment (in 000s)	Average Local Monthly Bill	Average Local Call Length
1985	340,213	482,428	N/a	913	2,727	911,167	N/a	N/a
1986	681,825	823,052	N/a	1,531	4,334	1,436,753	N/a	N/a
1987	1,230,855	1,151,519	N/a	2,305	7,147	2,234,635	\$96.83	2.33
1988	2,069,441	1,959,548	N/a	3,209	11,400	3,274,105	\$98.02	2.26
1989	3,508,944	3,340,595	294,567	4,169	15,927	4,480,142	\$89.30	2.48
1990	5,283,055	4,548,820	456,010	5,616	21,382	6,281,596	\$80.90	2.20
1991	7,557,148	5,708,522	703,651	7,847	26,327	8,671,544	\$72.74	2.38
1992	11,032,753	7,822,726	973,871	10,307	34,348	11,262,070	\$68.68	2.58
1993	16,009,461	10,892,175	1,361,613	12,824	39,810	13,956,366	\$61.49	2.41
1994	24,134,421	14,229,922	1,830,782	17,920	53,902	18,938,678	\$56.21	2.24
1995	33,785,661	19,081,239	2,542,570	22,663	68,165	24,080,467	\$51.00	2.15
1996	44,042,992	23,634,971	2,780,935	30,045	84,161	32,573,522	\$47.70	2.32
1997	55,312,293	27,485,633	2,974,205	51,600	109,387	46,057,910	\$42.78	2.31
1998	69,209,321	33,133,175	3,500,469	65,887	134,754	60,542,774	\$39.43	2.39

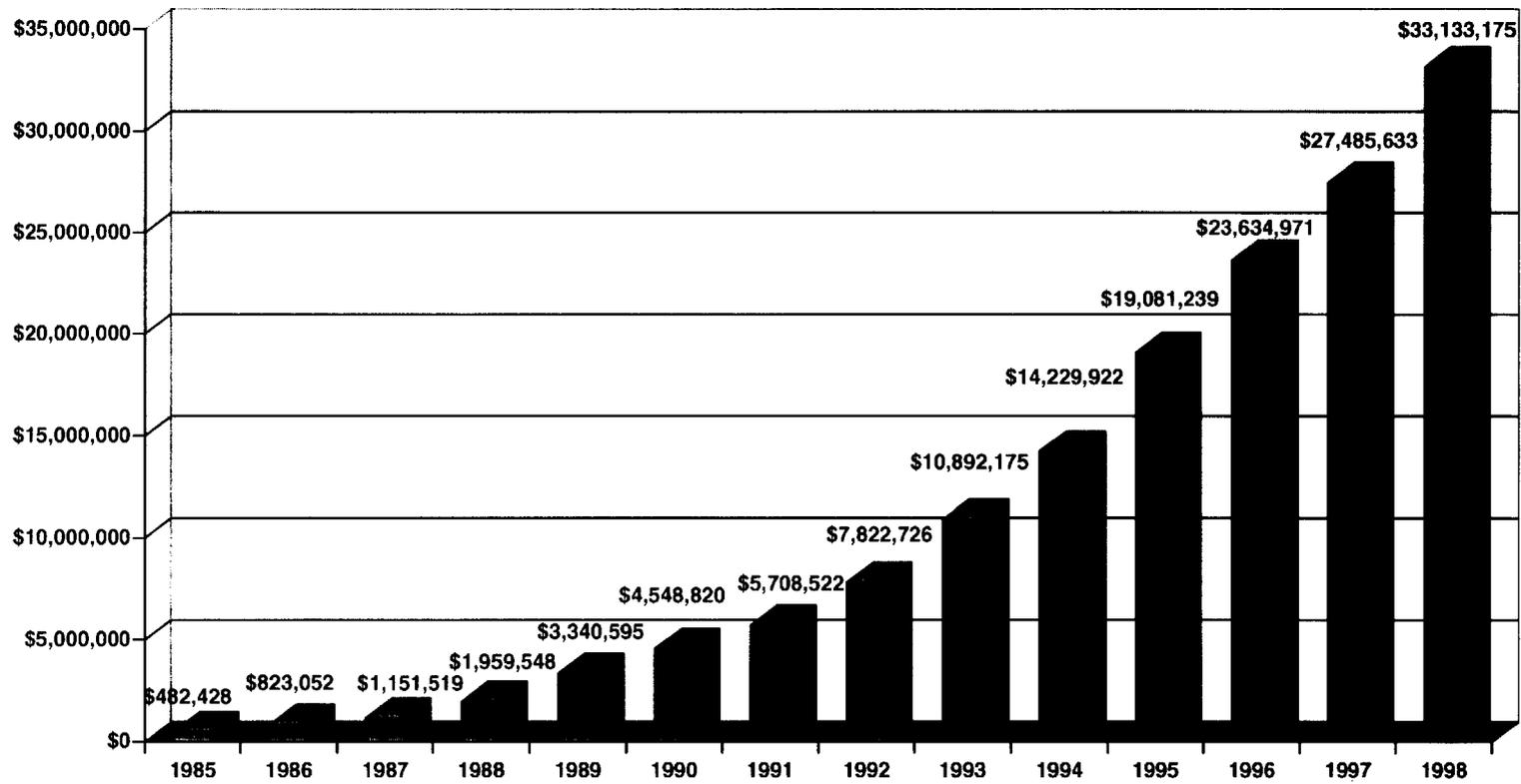
Wireless Subscribership: December 1985 - December 1998



Source: CTIA

1997 to 1998: Greatest one-year increase in subscribers.

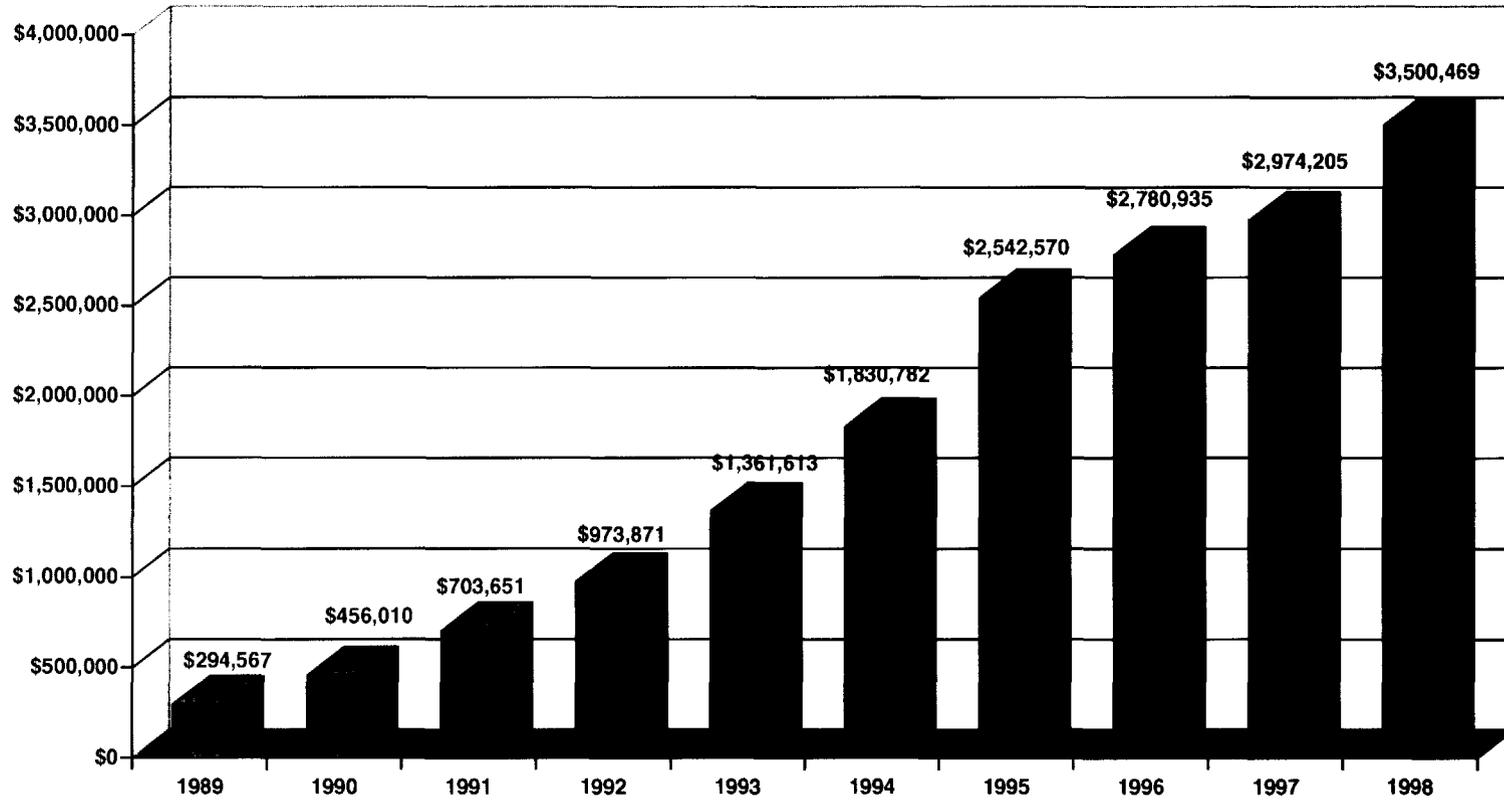
Annualized Revenues: December 1985 - December 1998 (in Thousands)



Source: CTIA

Service revenues increased 20.4 percent from 1997 to 1998.

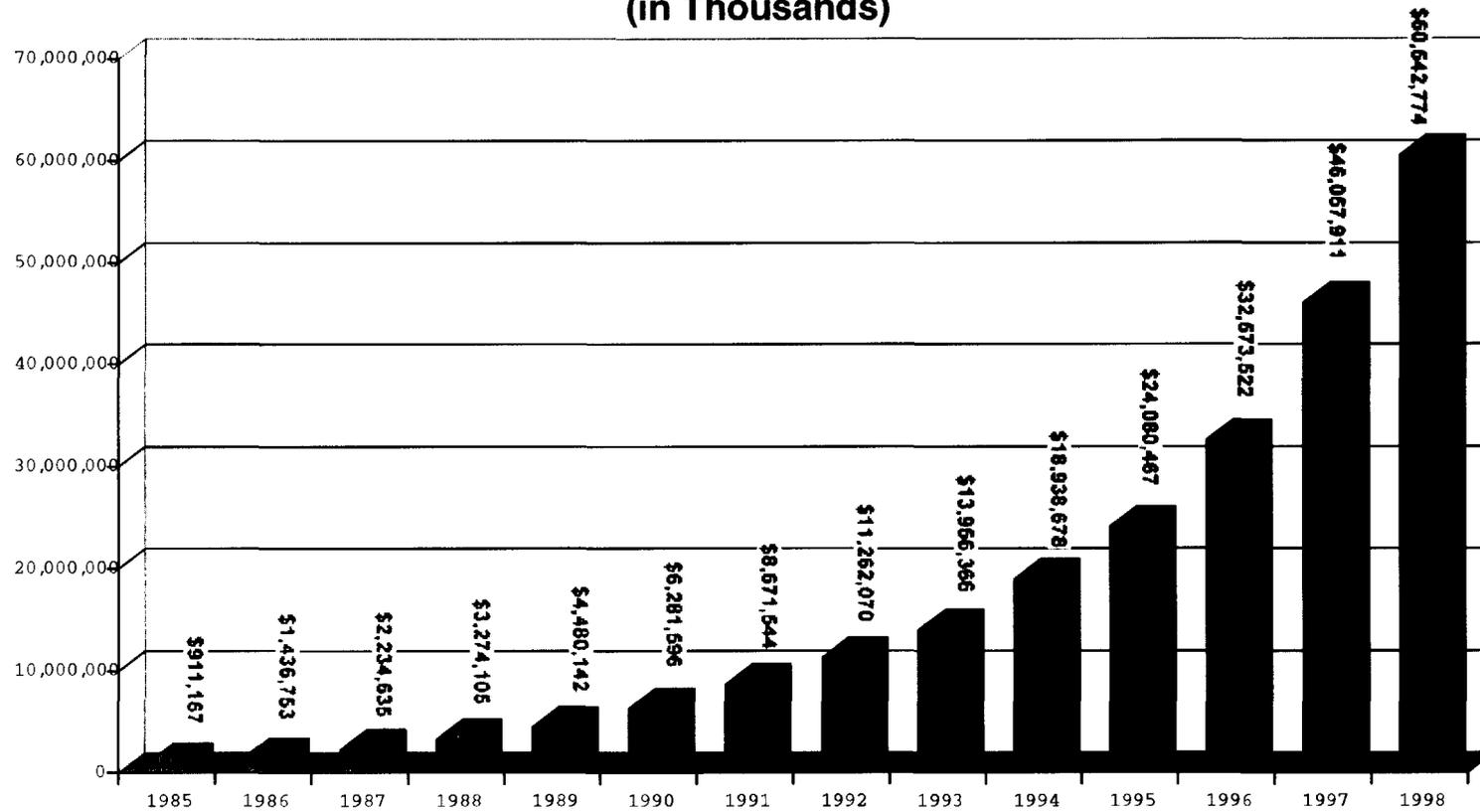
Annualized Roamer Revenues: December 1985 - December 1998 (in Thousands)



Source: CTIA

Roamer Revenues climbed 17.9 percent from 1997 to 1998.

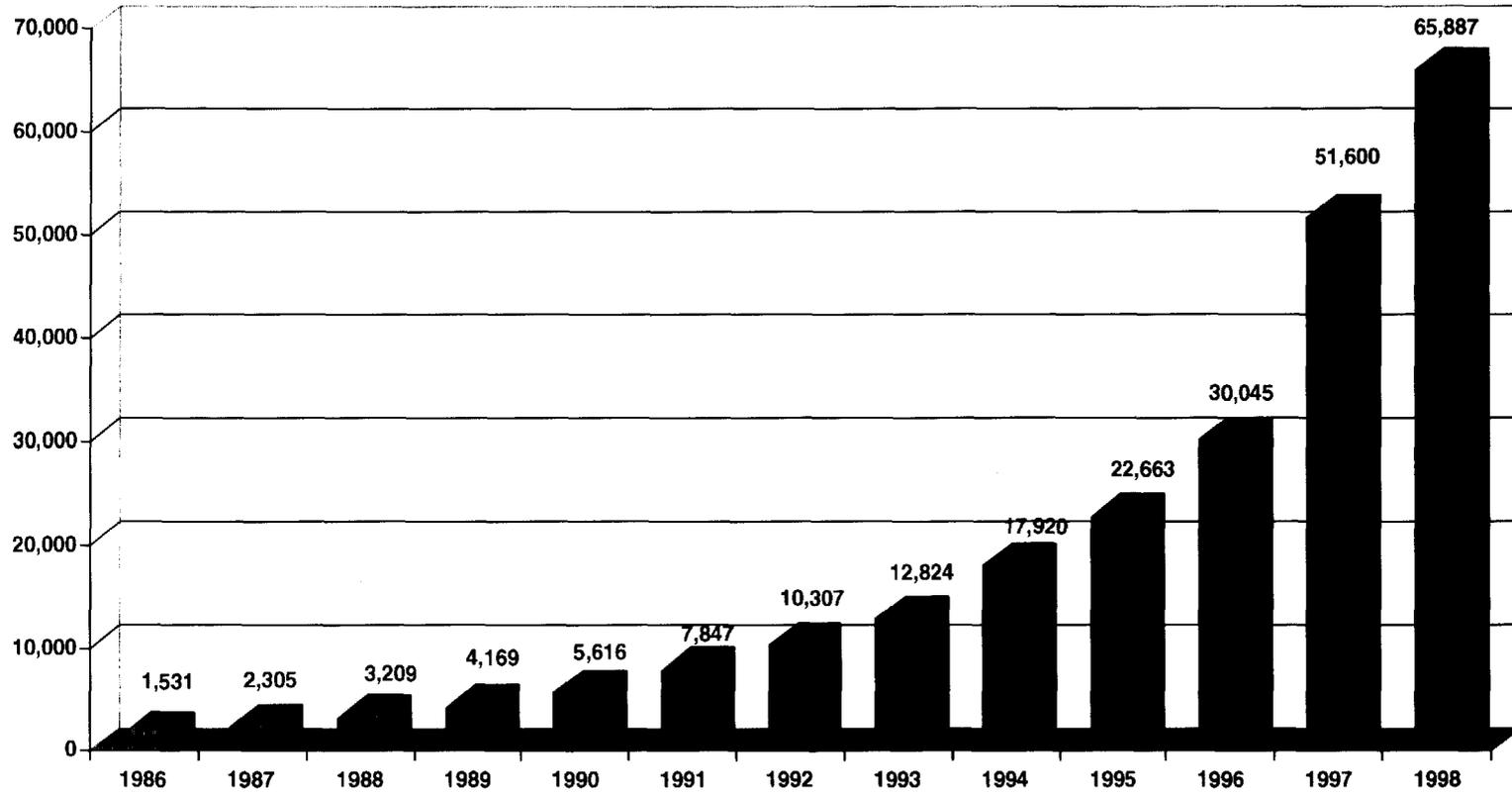
Cumulative Capital Investment: December 1985 - December 1998 (in Thousands)



Source: CTIA

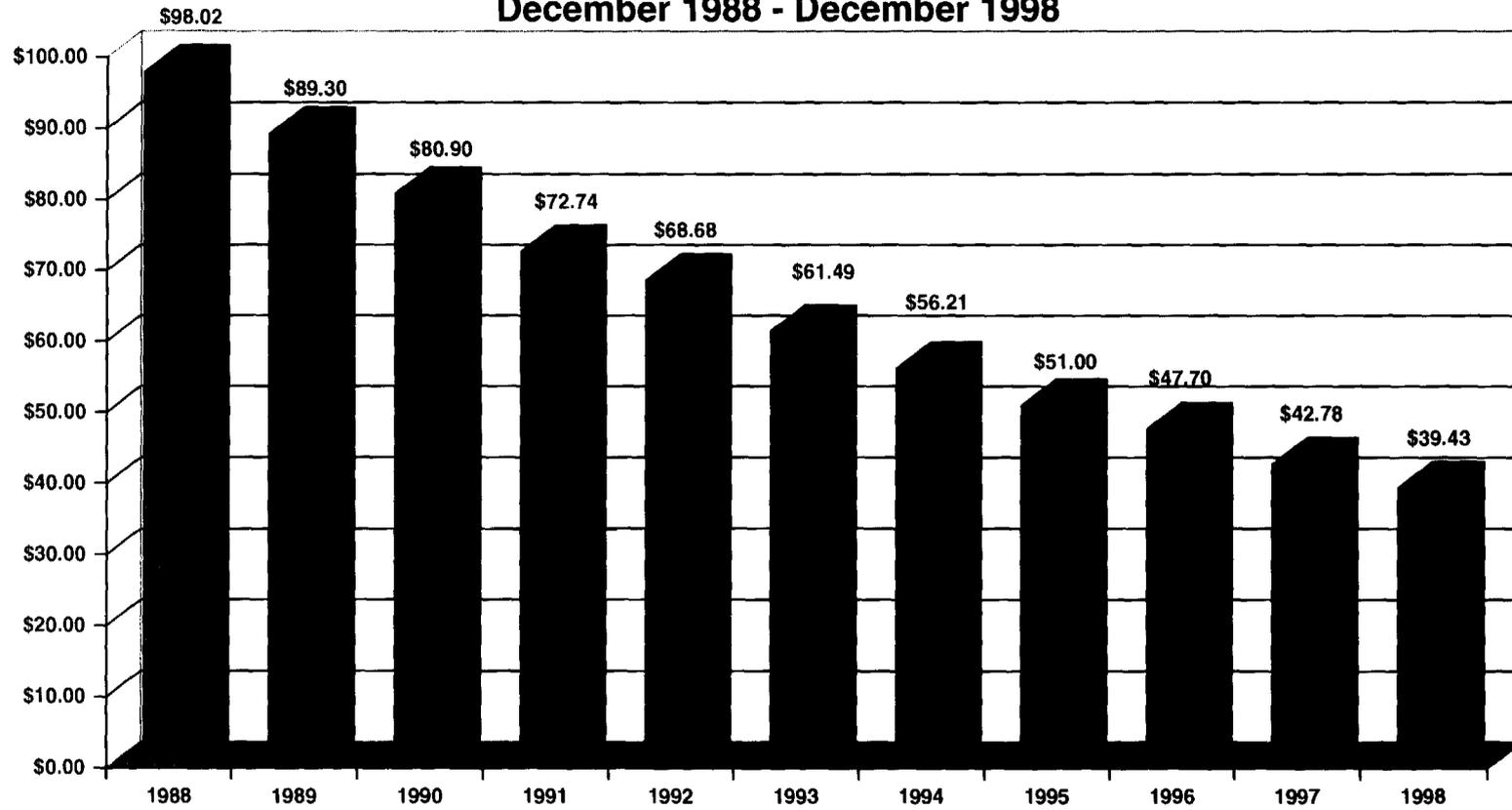
Capital Investment surged 31.3 percent during 1998.

Cell Sites in Commercial Use: December 1986 - December 1998



Source: CTIA

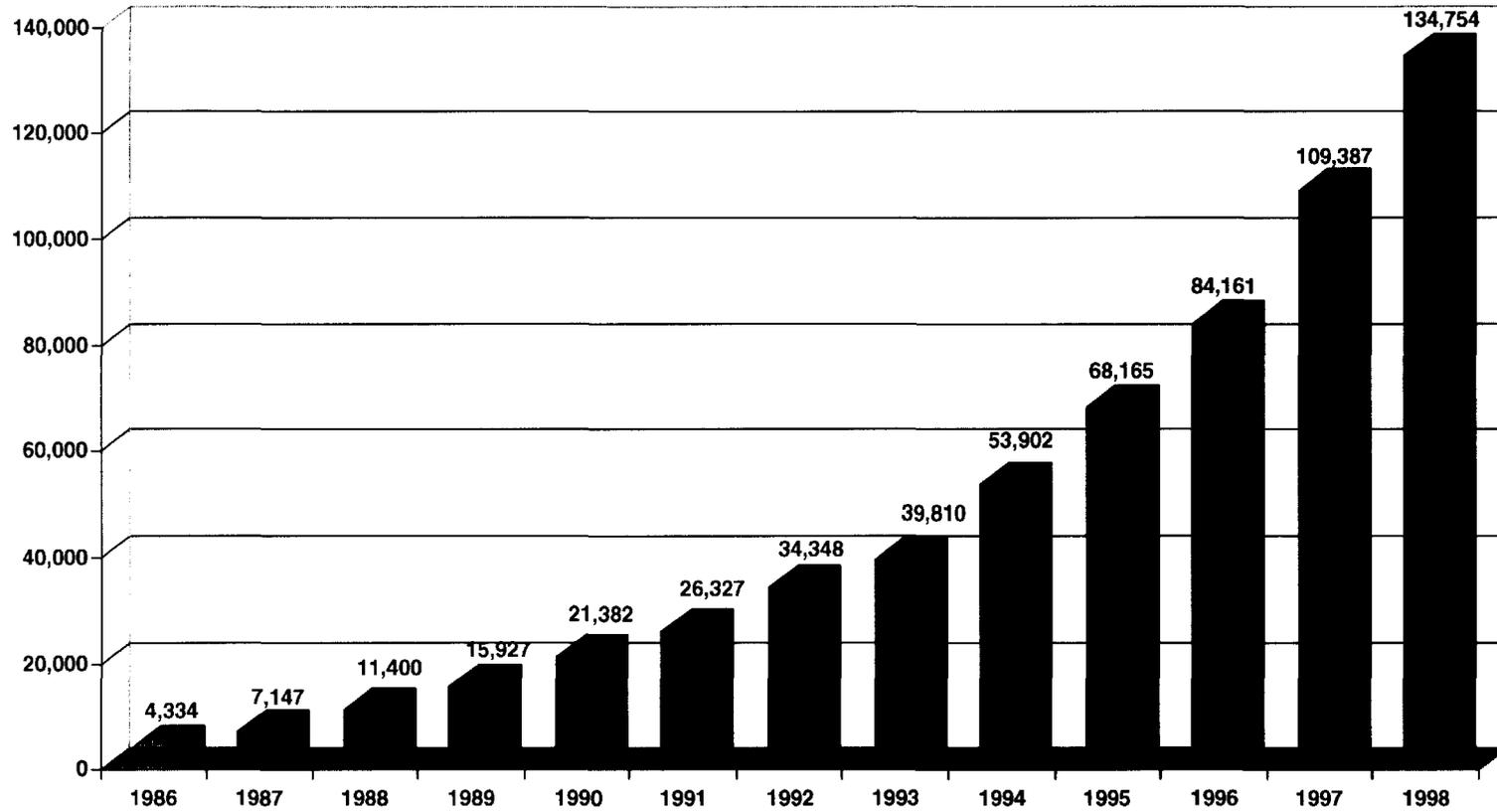
Average Local Monthly Bill: December 1988 - December 1998



Source: CTIA

The average monthly bill fell 7.8 percent in 1998.

Direct Employment by Wireless Service Providers: December 1986 - December 1998



Source: CTIA

The wireless industry now accounts for 1.3 million jobs in the U.S. economy.