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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Telecommunications Services Inside Wiring	)	CS Docket No. 95-184
	)	
Customer Premises Equipment	)	

FURTHER COMMENTS OF OPTEL, INC.

OpTel, Inc. ("OpTel"), submits these comments in response to the Second Further Notice of Proposed Rulemaking (the "Second Further Notice") in the above-referenced proceeding.

INTRODUCTION

In the Second Further Notice the Commission seeks to explore the extent to which exclusive contracts between MVPDs and MDUs promote competition. The Commission also has asked whether it should prohibit exclusive agreements that are perpetual, or virtually perpetual. Specifically, the Commission seeks comment on whether it should adopt a "cap," of seven years or longer, on the length of exclusive contracts. In addition, the Commission has asked for comment on whether it should impose "fresh look" obligations on incumbent providers with perpetual contracts.

OpTel supports the Commission's efforts, either by application of the "fresh look" doctrine or otherwise, to break the stranglehold that perpetual exclusive contracts have on the competitive market. OpTel opposes, however, the suggestion that a seven-year cap on exclusivity is sufficient for a new entrant to recover system installation costs and to earn an adequate return on investment. OpTel believes that no cap is necessary, but, if a one is to be imposed, a fifteen-year cap would give better effect to the Commission's goal of promoting entry and encouraging the development of competition in the MVPD marketplace.[1]

[1] The Commission also has asked for comment on a proposal by DirecTV that MVPDs be required to share home wiring in MDUs. Although the DirecTV proposal is superficially appealing in that it would eliminate some of the difficult issues faced by the Commission in this proceeding, it raises a host of new marketplace, technical, and constitutional concerns. In OpTel's judgment, these new concerns are more

DISCUSSION

I. The Commission Should Impose "Fresh Look" Obligations On MVPDs That Are Providing Service Under Perpetual Contracts.

A. Perpetual Contracts Foreclose Competitive Entry.

As the record in this proceeding amply demonstrates, the current market for MDU MVPD services is being skewed by the existence of perpetual, or *de facto* perpetual, contracts. Prior to the introduction of competition, incumbent monopoly cable providers were able to hold MDU owners captive to their services. That is, if a building owner or manager wanted to provide multichannel video programming, it was compelled to deal with the incumbent provider on the monopolist's terms, which often included a perpetual, exclusive right-of-entry for video services. These perpetual contracts generally took one of two forms — either they are explicitly perpetual or they are perpetual in effect, because they terminate only upon an event that is unlikely to occur (*e.g.*, for the term of a cable franchise plus any renewals thereof). Because franchise renewals are all but automatic, these contracts foreclose a large segment of the market in perpetuity.

Now that MDU residents have an increasing number of competitive alternatives to franchised cable companies, existence of a large number of perpetual contracts represents a substantial barrier to competitive entry. As OpTel has pointed out in the earlier phase of this proceeding, it estimates that approximately 41,000 MDU units in OpTel's primary markets are foreclosed to competition because of perpetual agreements. Even when these contracts are not expressly exclusive, they act, in effect, as a substantial barrier to entry because of the economic barriers to overbuilding.

For this reason, OpTel was among the first to advocate the use of the "fresh look" doctrine in this context. "Fresh look" allows customers committed to long-term contracts with an entrenched monopolist to take a fresh look at the marketplace once competition is introduced and to escape those contracts with little or no termination liability. This approach "makes it easier for an incumbent provider's established customers to consider taking service from a new entrant.... [and] obtain...the benefits of the new, more competitive...environment."[2] The current MDU MVPD market thus is ideal for the application of the "fresh look" doctrine.

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serious than those already at issue in this proceeding. Consequently, OpTel opposes the wire sharing proposal of DirecTV at this time.

[2] Expanded Interconnection with Local Tel. Co. Facilities, 9 FCC Rcd 5154, 5207 (1994).

B. The Implementation Of "Fresh Look" Should Be Minimally Intrusive.

As the Commission recognizes in the Second Further Notice, several implementation issues need to be resolved before "fresh look" can be applied in this context. Specifically, the Commission has asked: (1) how it should define the types of perpetual contracts to which "fresh look" would apply, (2) what the scope of the "fresh look" window should be and how it should be triggered, and (3) whether "fresh look" should be a one-time opportunity.[3]

OpTel suggests that the Commission adopt an administratively simple, but fair and effective, test for perpetual contracts: To wit, any agreement currently in effect that lacks a specific term of years should be deemed to be perpetual and subject to "fresh look." Further, although contracts that are tied to an event that will occur on a future date certain should not be deemed perpetual, contracts that run for any indeterminate period of time should be regarded as perpetual. Thus, a contract that explicitly terminates at the end of a franchise term is not perpetual, but one that runs, or that may be interpreted to run, for any and all renewals of the franchise would be perpetual.

Although this definition would exclude some long-term contracts that are all but perpetual (*e.g.*, a contract with a specific term of 99 years), most explicit and *de facto* perpetual contracts would be swept within the "fresh look" rules and opened to new competition. In addition, the proposed test obviates line drawing based on an arbitrary "cap" (*e.g.*, sixteen year contracts deemed "perpetual" and subject to fresh look, but fifteen year contracts deemed not perpetual).

OpTel also favors an administratively simple approach to the second set of implementation issues raised by the Commission. Rather than attempt to identify a triggering event for each MDU, or even each franchise area, the Commission should proceed on the assumption that, given the Commission's new pro-competitive inside wiring rules, real competitive alternatives will be available at many or most MDUs within the next three to five years. Thus, OpTel suggests that the Commission open a single nationwide "fresh look" window for thirty-six to sixty months following the issuance of an order in this proceeding. During that time, each responsible MDU agent would have a one-time opportunity, whenever he or she determines that competitive choices are available to the subject MDU, to renegotiate or terminate any perpetual contract (as defined above) with an MVPD free from termination liability. This approach would

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[3] Second Further Notice ¶ 264.

minimize the level of regulatory oversight required and reduce or eliminate disputes regarding the scope of the fresh look window.

An extended fresh look window of thirty-six to sixty months is necessary in this context because of the wide disparity in the level of competition that exists in various markets. Many MDUs still have no choice but to take service from an incumbent franchised cable operator. Others may have a single alternative provider ready to provide service, but no real competitive choice. In still other areas, multiple MVPDs are competing to provide service to each MDU. It is only in the latter case that the MDU owners can negotiate with the service providers on a level field.

Thus, rather than require finely cut, market-by-market determinations of some arbitrary triggering event, the Commission simply should open an extended fresh look window (with the caveat that each MDU may only exercise the fresh look option once), and allow each MDU to determine in its best judgment when sufficient competition exists to warrant renegotiation of a perpetual contract. Naturally, some outer limit must be imposed to discipline the market and to ensure that there is closure on this aspect of the Commission's drive to promote competition in the MVPD market. However, that outer limit should be no shorter than thirty-six months.

Application of the "fresh look" policy as suggested above will allow the Commission to cease to regulate in this area entirely and, thus, no new fresh look periods will be required. Once the "fresh look" window is opened, MDU owners and managers will be permitted either to take service from a new provider, or renegotiate any contract with an incumbent provider. In either case, however, given the presence of a competitive alternative, the incumbent provider will not be able to force an MDU owner to accept a perpetual contract against the MDU owner's will. The result should be freely negotiated agreements between parties of roughly equivalent bargaining power. Regulatory oversight of such agreements is unnecessary.

II. The Commission Should Not Impose A Cap On The Duration of Exclusivity In MVPD Service Agreements.

A. A Cap On Exclusivity Would Skew The Market In Favor Of Dominant Service Providers.

Although "perpetual" contracts forever foreclose customers to new competitors and therefore impede the development of competition, non-perpetual exclusive contracts negotiated in a competitive environment are procompetitive in that facilitate entry by new competitors. Indeed, for a new entrant seeking to compete at a single MDU, it is only with the assurance of an exclusive arrangement that it can justify the investment required to serve an MDU.

In the Second Further Notice, the Commission has asked for comment on a proposal to limit the use of exclusive contracts in the MDU context. Specifically, the Commission seeks comment on "an approach under which a presumption that all existing and future exclusivity provisions would be enforceable for a maximum term of seven years, except for exceptional cases in which the MVPD could demonstrate that it has not had a reasonable opportunity to recover its specific investment costs."[4] OpTel opposes this approach.

First, as OpTel has documented in the earlier phase of this proceeding, the economics of the MDU marketplace favor the use of exclusive agreements. Indeed, there is a direct relationship between the term of exclusivity and the investment that the new entrant can afford to make in an MDU. If a new entrant is limited to a relatively short term of exclusivity, it may be able to afford to install a very low-end system capable of providing only the most basic MVPD services. At the other extreme, a very long-term exclusive agreement may provide the new entrant with a secure income stream and allow it to invest in state-of-the-art communications equipment capable of providing a wide range of products and services (*e.g.*, voice, video, and data services) along with top-of-the-line customer service capabilities (*e.g.*, on-site customer service representatives).

The correlation between the two is simple: the longer the term of exclusivity, the greater the investment in the MDU a new entrant can afford to make. Long-term exclusivity is problematic only when it is conferred by an MDU not in exchange for commensurate benefits (*i.e.*, in a competitive market), but because the MDU has no other choice (*i.e.*, the service provider has market power). As new competitors seek to gain entry in the this previously monopolistic market, any artificial constraint on the term of exclusivity will only limit the investment that MVPDs will be willing or able to make in MDUs. Accordingly, the Commission should not intrude upon private exclusive arrangements.

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[4] Id. ¶ 259.

B. If The Commission Does Impose A Cap, Terms Of Exclusivity Of Up To Fifteen Years Should Be Permitted.

Exclusivity is essential to the ability of alternative video programming distributors to compete. As discussed above, there is a direct correlation between the term of exclusivity and the size of the investment that a new entrant can afford to make in any single MDU. OpTel's analysis indicates that an exclusive period of seven to ten years is the absolute minimum required in many cases to recover the investment required to serve an MDU.[5] In many instances, more than ten years of exclusivity are required if the service provider has made the significant technological investment in the MDU necessary to provide residents access to top quality communications and multichannel video services.

Further, when seeking capital in the financial markets, right-of-entry agreements are the single most important asset that a new entrant such as OpTel has to offer. Any limitation on the duration of such agreements works as a *de facto* limitation on the new entrant's ability to raise capital. Accordingly, OpTel suggests that new entrants have at least the flexibility to enter into agreements of approximately fifteen years.

For the same reasons, the Commission should not prohibit follow-on exclusive arrangements or otherwise regulate the terms of exclusive arrangements (*e.g.*, whether buy-outs should be allowed or required). Absent evidence of coercion, consumers and MVPDs should be free to contract in mutually beneficial ways, whatever form those agreements take.

CONCLUSION

For the foregoing reasons, OpTel supports the application of the fresh look doctrine to perpetual exclusive agreements between MDUs and MVPDs, but opposes any suggestion any term of exclusivity should be capped. The imposition of a "fresh look" period, in combination with a decision to allow non-perpetual exclusive contracts would achieve the Commission's goal of ensuring that customers periodically may reevaluate their choice of service provider without undermining the economic

[5] Ex Parte Letter from Henry Goldberg to Michael Riordan, CS Docket No. 95-184 (July 22, 1997) (attached).

incentives to provide the highest quality telecommunications products and services to residents of MDUs. If a cap is imposed, it should be no shorter than fifteen years.

Respectfully submitted,

OPTEL, INC.

/s/ W. Kenneth Ferree
Henry Goldberg
W. Kenneth Ferree

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December 23, 1997

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July 22, 1997

EX PARTE

Michael Riordan
Federal Communications Commission
1919 M Street NW
Washington, D.C. 20554

Re: CS Docket Nos. 95-184

Dear Michael:

During our last set of meetings regarding inside wiring issues, you expressed interest in the financial necessity of long-term exclusive contracts for new entrants into the cable television market. As Mike Katzenstein from OpTel explained at that time, without at least a ten-year exclusive period, it will be very difficult for private cable companies and other new entrants to compete with the established franchised cable operators and to attract adequate financing.

In support of this position, I am enclosing a report prepared for me by OpTel's Treasurer, Richard Alden, which provides analysis of the positive effects of exclusive arrangements on a new entrant's expected return on investment. As Mr. Alden's report demonstrates, in order to recoup the up-front investment in facilities needed to serve a typical MDU, new entrants require at least ten years of exclusivity. This minimum period, moreover, does not allow for the "time value of money," nor does it allow the investor to make any return on his/her investment to compensate for the risk involved in engaging in the project.

I have also attached a letter from Mr. Robert J. Gemmell of Salomon Brothers, one of the leading investment banking institutions in the U.S.. This letter makes clear that a limit on the life of exclusive contracts would have a negative effect on the ability of new entrants, such as OpTel, to obtain financing for operations and system expansion. If new competitors to franchised cable are going to emerge, they are going to need financing. Limiting their ability to enter into beneficial long-term exclusive contracts and thereby limiting their ability to obtain such financing can only help to preserve the franchised cable monopolies.

I hope this letter provides you with the information that you were seeking. I will be happy, however, to discuss the matter further with you if you have any questions.

Sincerely,

Henry Goldberg

cc: Thomas Spavins
John Nakahata
Rebecca Dorch

encl.

OpTel℠
The choice is clear.

Direct line: 214 879 8257
Direct fax: 214 634 3871

July 21, 1997

H. Goldberg
Goldberg, Godles, Wiener & Wright
1229 Nineteenth Street, N.W.
Washington, D.C. 20036

Dear Henry

FCC Proposals

I enclose a copy of report I prepared recently in connection with the proposals currently before the FCC to limit the life of exclusive contracts between MDUs and Multi-channel Video Programming Distributors. If you would like to discuss the content of this report please do not hesitate to contact me directly.

Sincerely

R. Alde

Richard Alden
Treasurer

1111 W. Mockingbird Lane Dallas, TX 75247 USA Tel: (214) 634-3800 Fax: (214) 634-3838

A Vidéotron Company

Resume

Richard Alden

Richard Alden is the Treasurer of OpTel, Inc, the largest private cable company in the US. Mr. Alden was Deputy Finance Director & Treasurer of Videotron Holdings Plc, a UK based integrated cable and telephone company, from 1995 to 1997. From 1985 to 1995 he was a senior manager with Deloitte & Touche, specializing in corporate finance transactions for telecommunications companies. Mr. Alden is a UK Chartered Accountant.

Proposals to limit the life of exclusive service agreements

1. Introduction

1.1 Proposals to restrict to no more than seven years the exclusive service agreements between Multi-channel Video Programming Distributors ("MVPDs") and the Multiple Dwellings Units ("MDUs") which they serve are inherently contrary to the consumers' interest because they will discriminate against new market entrants to the benefit of existing distribution methods, inhibiting the growth of competitive modes of delivery and therefore restricting customer choice.

1.2 The proposals discriminate against new market entrants because seven years is an inadequate time period for an MVPD to recoup the upfront investment in facilities needed to serve a typical MDU. The purpose of this paper is to explain the typical level of upfront capital investment required and to compare the average return that can be expected from such an investment with the typical return expected by investors. This paper will also explain that the typical return required by investors has certain characteristics which reflect the risk of investing in projects where well established competition exists.

1.3 The minimum amount of time necessary in order to generate a satisfactory return on the initial investment is at least 10 years. Without a satisfactory return there will be no investment and therefore no competition.

2. Initial Investment

2.1 The initial capital investment required to serve, via wireless network, a typical MDU of 300 units is approximately $185,000 comprised as follows:

Table 2.1 Initial investment required to serve a typical MDU of 300 Units

	$'000
Wiring & distribution (300 x $250 per unit)	75
Microwave receivers	35
Addressable interface (converters or similar) (300 x $140 per unit)	42
Distribution network (Master headend, microwave transmitters, repeaters and towers)	35
Total typical initial investment	187

2.2 Typical distribution costs and average ratios of MDUs to such distribution equipment is shown below:

Table 2.2 Explanation of distribution cost

	$'000	Approx. number of MDUs served	Cost Per MDU
Master headend	180	14	13
Microwave receivers	150	12	13
Towers	220	25	9
			35

2.3 The actual variation of actual costs around this mean is dependent upon geographic market, demographic concentration, topography and climatic features which affect signal quality.

2.4 Other costs of "acquiring" exclusive contracts include:

- "Key Money" - lump sums of money regularly paid on signing of an exclusive contract and typically expressed in terms of dollars per unit in the MDU. As amounts paid vary between $0 and in excess of $100 per unit an average of $50 per unit has been used in the financial evaluation. In practice, however, lower levels of Key Money are often more than offset by a commitment a higher revenue share to pay the relevant property owner.

- Sales commissions paid to the sales executive who secures the exclusive contract. A typical amount is $10 per unit under contract. Note that this cost does not include central selling expenses, any costs of the salesman's salary or any other support costs which could fairly be deducted in order to arrive at a true economic return in respect of the property.

- Other incentives given to a property owner, such the provision of free security cameras at the relevant property.

3. Expected Returns

3.1 Consider a typical MDU with 300 units. The US annual average vacancy rate is around 6%.

3.2 Of the occupied units an acceptance level of cable penetration would be between 55% and 65%. For calculation purposes we have used a penetration rate of 60% in the first year, increasing to 65% at the end of the tenth year.

3.3 Typical monthly revenues per customer are currently in the order of \$25. This is comprised as follows:

Table 3.1 Average monthly revenues per customer

	$
Basic revenues	19.0
Premium services	5.0
Other fees	1.0
Total	25.0

3.4 After deducting the costs of programming which are paid to program providers, expected gross margins are in the order of 65%. Revenue sharing arrangements with property owners generally reduce this margin to around 58%. Revenue sharing consists of the average proportion of revenues given to property owners in order to secure the exclusive contracts initially necessary to generate competition. Typical revenue sharing percentages are currently in the range of 6% to 8%, but can easily be as high as 12% or 13%.

3.5 Customer specific costs further reduce this gross margin. These customer specific costs are comprised as follows:

Table 3.2 Average customer specific costs as % of revenues

	%
Bad debt	4
Billing & postage	1
Customer Service	6
Technical Support	6
Marketing	4

3.6 Therefore, the typical average monthly net return per cable customer, before allocation of central administrative expenses, is around \$9 (\$111 per annum), or around \$5.65 per unit (\$68 per annum), assuming 65% penetration and a 6% vacancy rate.

3.7 Note that these costs does not include allocation of central overhead or any other support costs which could fairly be deducted in order to arrive at a true economic return in respect of the property.

4. Calculation of Return on Investment

4.1 Assuming:

- cable revenue growth of approximately 4% - this is well below the price increase employed by the franchised cable operators in recent years and is one of the key advantages to the consumer of encouraging competition.
- initial (year 1) penetration of 60%, growing over five years to 65%.
- a terminal value of 7 times is applied to final year calculations in order to project the value of the MDU contract in perpetuity. The 7 times multiple is indicative of the typical terminal multiple employed in the evaluation of hardwire cable systems today. In our financial analysis we have demonstrated the effect on the financial return of adjustments to this terminal multiple.
- a probability factor has been applied to cashflows at the end of the prescribed exclusivity period in order to reflect the likelihood of contract renewal at that time. For illustrative purposes the return on investment - the "Internal Rate of Return" ("IRR") - has been calculated based on a 25%, 50% and 75% probability of renewal.

Table 4.1 After tax IRR of investment

	Probability of renewal		
Contract Duration	25%	50%	75%
7 years	(6.8)%	(0.6)%	4.0%
10 years	1.0%	4.5%	7.2%

4.2 Details of the supporting calculations are set out in Appendices 2 through 4, attached.

5. Typical Investment Returns

5.1 The typical returns required by investors in similar new industries/ technologies is dependent upon the risk profile inherent in the investment instrument. Typical expected returns, derived from analysis performed by leading investment banks, are as follows:

Table 5.1 Expected return on investment - by investment type

US risk free rate	6.9%
Risk adjusted equity investment	16.7%
After tax risk adjusted cost of debt	8.6%

5.2 Based on a typical leverage ratio for a new market entrant (70% equity or similarly structured instruments, 30% debt) a typical after tax weighted average cost of capital ("WACC") would be approximately 14.3%. This means that a typical investor in this market would require a return of around 7.3% greater than the rate that would be earned by investing in risk free investments (US Treasuries).

5.3 Based on the returns set out in table 4.1 the typical investor would not achieve a WACC of 14.3% if the contract exclusivity was less that 10 years (even with a 100% probability of renewal at contract expiration). This explains why investors have been largely unwilling to commit significant amounts of equity to the private cable industry and instead the industry has typically had to rely more heavily on debt funding. It also explains why investors would be fundamentally opposed to committing funds to projects that have a potential maximum life of 7 years.

6. Payback Analysis

6.1 In table 2.1 we indicated that the approximate capital investment per average MDU is $187,000.

6.2 In section 3 we indicated that the average return per unit is approximately $68 per annum.

6.3 On this basis financial payback is only achieved after more than 9 years. This is the minimum period required before the investor can even recover his/her initial investment. It does not allow for the "time value of money" - the fact that inflation will have reduced the value of future dollars when compared to current investment. Nor does it allow the investor to make any return on his/her investment to compensate for the risk involved in engaging in the project. This demonstrates that 7 years is too short a time period to encourage investment.

7. The View of the Markets

7.1 The financial markets place a great deal of importance on the ability of a project to generate a satisfactory return.

7.2 Attached at Appendix 1 is a letter from Salomon Brothers, one of the leading US Investment Banks and a major adviser to the media and telecommunications industry. This letter indicates that a reduction in the life of an exclusive contract would have a negative impact on the ability of new entrants, such as OpTel, to obtain financing.

Appendices

1. Letter from Salomon Brothers
2. IRR of Investment - Assumptions
3. IRR - 7 Year Exclusivity period
4. IRR - 10 Year Exclusivity period

APPENDIX 1

Salomon Brothers Canada Inc
BCE Place, 161 Bay Street
Suite 4600 P.O. Box 631
Toronto, Ontario M5J 2S1

416-866-2301
FAX: 416-866-7484

Robert J. Gemmell
President and
Chief Executive Officer

Salomon Brothers

July 18, 1997

Mr. Bertrand Blanchette
Chief Financial Officer
OpTel, Inc.
1111 W. Mockingbird Lane
Dallas, Texas 75247

Dear Bertrand:

As you informed us recently, the FCC is considering proposals to limit to no more than seven years the exclusive service agreements between multichannel video programming distributors and the multiple dwelling units ("MDUs") that they serve. We feel that reducing the duration of exclusive contracts to seven years could have a negative impact on the ability of OpTel to obtain external financing.

We had extensive contact with potential and actual investors in private cable companies when we lead-managed the $225 million high-yield offering for you in February 1997. Your current ability to enter into exclusive contracts of sufficient long duration (ten to fifteen years) with MDUs was one of the key selling features for investors. We feel that reducing the exclusivity period to seven years would make it more difficult to attract new investments in OpTel. As you are aware, failure to raise sufficient funds on terms acceptable to OpTel on a timely basis may require you to delay or abandon some of your future expansion or expenditures, which may have a material adverse effect on your growth and your ability to compete in the cable television industry.

Please do not hesitate to contact me if you would like to discuss this further.

Best regards,

Robert J. Gemmell

Private Cable
IRR Analysis - Assumptions

Appendix 2

July 21, 1997

Operating Assumptions

		1	2	3	4	5	6	7	8	9	10
Cable price increases		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Number of units		300.0	300	300	300	300	300	300	300	300	300
Vacancy rate		6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Cable Penetration		60.0%	60.6%	61.1%	61.7%	62.2%	62.8%	63.3%	63.9%	64.4%	65.0%
Annual revenue per unit	$25.0	$300.0	$312.0	$324.5	$337.5	$351.0	$365.0	$379.6	$394.8	$410.6	$427.0
Revenues		$50,760	$53,274	$55,909	$58,668	$61,559	$64,588	$67,760	$71,083	$74,563	$78,208
Direct Variable Costs											
Programming fees	35.0%	$17,766	$18,646	$19,568	$20,534	$21,546	$22,606	$23,716	$24,879	$26,097	$27,373
Revenue Sharing	6.0%	$3,046	$3,196	$3,355	$3,520	$3,694	$3,875	$4,066	$4,265	$4,474	$4,692
Total Direct Variable Costs		$20,812	$21,842	$22,923	$24,054	$25,239	$26,481	$27,782	$29,144	$30,571	$32,065
Direct Operating Costs											
Bad debt	4.0%	$2,030	$2,131	$2,236	$2,347	$2,462	$2,584	$2,710	$2,843	$2,983	$3,128
Billing & Postage	1.0%	$508	$533	$559	$587	$616	$646	$678	$711	$746	$782
Customer Service	5.0%	$2,538	$2,664	$2,795	$2,933	$3,078	$3,229	$3,388	$3,554	$3,728	$3,910
Technical Support	6.0%	$3,046	$3,196	$3,355	$3,520	$3,694	$3,875	$4,066	$4,265	$4,474	$4,692
Marketing	3.5%	$1,777	$1,865	$1,957	$2,053	$2,155	$2,261	$2,372	$2,488	$2,610	$2,737
Total Direct Operating Costs		$9,898	$10,388	$10,902	$11,440	$12,004	$12,595	$13,213	$13,861	$14,540	$15,251
Acquisition Costs											
Key Money	$50.0	$15,000									
Sales Commission	$10.0	$3,000									
Total acquisition costs		$18,000	0	0	0	0	0	0	0	0	0
Capital Expenditure											
Wiring & distribution	$250.0	$75,000									
Microwave receivers	$116.7	$35,000									
Addressable interface	$140.0	$42,000									
Distribution network	$116.7	$35,000									
Total Capital Expenditure		$187,000	$0	$0	$0	$0	$0	$0	$0	$0	$0

Private Cable
IRR Analysis

Appendix 3

July 21, 1997

Return on an MDU of 300 units - 7 Year Exclusivity Period

Cable

($)		1	2	3	4	5	6	7	8	9	10
Revenue		50,760	53,274	55,909	58,668	61,559	64,588	67,760	71,083	74,563	78,208
Variable Costs		(20,812)	(21,842)	(22,923)	(24,054)	(25,239)	(26,481)	(27,782)	(29,144)	(30,571)	(32,065)
Gross Margin		29,948	31,432	32,986	34,614	36,320	38,107	39,978	41,939	43,992	46,143
Operating Costs		(9,898)	(10,388)	(10,902)	(11,440)	(12,004)	(12,595)	(13,213)	(13,861)	(14,540)	(15,251)
EBITDA		20,050	21,043	22,084	23,174	24,316	25,512	26,765	28,078	29,452	30,892
Taxes @	35.0%	(7,018)	(7,365)	(7,729)	(8,111)	(8,511)	(8,929)	(9,368)	(9,827)	(10,308)	(10,812)
Unlevered Net Income		13,033	13,678	14,355	15,063	15,805	16,583	17,397	18,251	19,144	20,080
Acquisition Costs		(18,000)	0	0	0	0	0	0	0	0	0
Capital Expenditure		(187,000)	0	0	0	0	0	0	0	0	0
Free Cashflow		(191,967)	13,678	14,355	15,063	15,805	16,583	17,397	18,251	19,144	20,080
Terminal Value								140,518			
Net Free Cashflow		(191,967)	13,678	14,355	15,063	15,805	16,583	157,915	18,251	19,144	20,080

Sensitivity Analysis - IRR

Terminal multiple		5.5x	6.0x	6.5x	[redacted]	7.5x	8.0x
	25.0%	(8.4%)	(7.9%)	(7.3%)		(6.2%)	(5.7%)
Probability of contract renewal	50.0%	(3.0%)	(2.1%)	(1.3%)		0.1%	0.8%
	75.0%	1.2%	2.2%	3.1%		4.8%	5.6%

Private Cable
IRR Analysis

Appendix 4

July 21, 1997

Return on an MDU of 300 units - 10 Year Exclusivity Period

Cable

($)		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Revenue		50,760	53,274	55,909	58,668	61,559	64,588	67,760	71,083	74,563	78,208
Variable Costs		(20,812)	(21,842)	(22,923)	(24,054)	(25,239)	(26,481)	(27,782)	(29,144)	(30,571)	(32,065)
Gross Margin		29,948	31,432	32,986	34,614	36,320	38,107	39,978	41,939	43,992	46,143
Operating Costs		(9,898)	(10,388)	(10,902)	(11,440)	(12,004)	(12,595)	(13,213)	(13,861)	(14,540)	(15,251)
EBITDA		20,050	21,043	22,084	23,174	24,316	25,512	26,765	28,078	29,452	30,892
Taxes @	35.0%	(7,018)	(7,365)	(7,729)	(8,111)	(8,511)	(8,929)	(9,368)	(9,827)	(10,308)	(10,812)
Unlevered Net Income		13,033	13,678	14,355	15,063	15,805	16,583	17,397	18,251	19,144	20,080
Acquisition Costs		(18,000)	0	0	0	0	0	0	0	0	0
Capital Expenditure		(187,000)	0	0	0	0	0	0	0	0	0
Change in Working Capital		0	0	0	0	0	0	0	0	0	0
Free Cashflow		(191,967)	13,678	14,355	15,063	15,805	16,583	17,397	18,251	19,144	20,080
Terminal Value											162,183
Net Free Cashflow		(191,967)	13,678	14,355	15,063	15,805	16,583	17,397	18,251	19,144	182,263

Sensitivity Analysis - IRR

Terminal multiple		5.5x	6.0x	6.5x	[redacted]	7.5x	8.0x
	25.0%	0.1%	0.4%	0.7%		1.3%	1.6%
Probability of contract renewal	50.0%	3.2%	3.6%	4.1%		5.0%	5.4%
	75.0%	5.6%	6.2%	6.7%		7.7%	8.2%