

THE KEYS TO EFFICIENT, EFFECTIVE INTRODUCTION OF ONE-WAY ADDRESSABILITY

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ABSTRACT

From the outset one-way addressable equipment manufacturers misunderstood the principal importance of their product to cable operators. The assumption they made -- that one-way pay-per-view would be wildly successful among cable viewers -- and that revenues from pay-per-view would easily offset the product's higher cost -- turned out to be a not insignificant leap of faith from early STV experience. This of course, has not yet been shown to be true.

The future of this new source of revenue is still unclear; however, there do appear to be economically attractive reasons to implement addressability if approached properly, whether or not the pay-per-view promise ever materializes.

The results of Cox Cable's studies of the technology, as applied to its own cable systems, suggest a formula for both making the addressable decision, and guidelines for getting the greatest economic benefit from addressability.

INTRODUCTION

The importance of addressable technology in the reduction of cable system operating expenses was universally misunderstood by equipment manufacturers. Instead, they overestimated the potential of pay-per-view in the equation.

This realization, that pay-per-view would not be as successful for the cable operator as it had been earlier for the STV operator, left MSO's which had already implemented addressability looking around for additional revenues or expense reductions with little experience to indicate either was available.

Cox Cable Communications was one of those MSO's. As a result, the Company undertook a study of the benefits of addressability. What Cox found was a way to implement one-way addressability which promised an attractive return on the operator's investment. But the Company also found that knowing where to look for the operating efficiencies addressability can deliver in advance of implementation was the key to achievement of that return.

WHERE ARE THE COST SAVINGS?

In its earliest research Cox had the disadvantage of having but one completely addressable system to study; that is, only one of its systems provided all customers with addressable converters. All other systems were partially programmable, partially addressable. This made separating addressability's cost efficiencies from other operations difficult. It made sense then to model the ideal addressable cable system on paper to determine whether in theory there really were any benefits, and above all, was the incremental investment warranted?

A FORMULA

The Company studied its own addressable operations, some wire linked, others stand-alone operating with double data entry (authorization through the addressable computer and input of the same transaction in the billing computer to start or change the billing). The Cox study team also interviewed other operators and the manufacturers themselves. And finally, the actual operating costs of the Company's own major urban programmable systems were compared with its major market addressable systems. The result was an assumptions model which could calculate the internal rate of return on the incremental addressable investment.

Although the model contemplates a large urban market with 85,000 subscribers, the size of the cable system is relatively unimportant in the calculation because the fixed costs of implementing addressability are also relatively unimportant compared to the converter investment.

The model compares the cost and revenue differences associated with the operation of this system in two different modes...programmable, and addressable. For example, in its programmable form the cost of making a service change in the home is assumed to be \$18.31. For making this change... let's say a swap of services (HBO for Showtime)... the operator charges the subscriber \$15. The operator's loss on paper, although currently a hidden cost for most cable systems, is \$3.31. But the same change of service in an addressable system costs only 44¢ -- the cost of having a customer service representative take the call and make the change on line. For this change the operator charges \$7.50.

Not only did the operator not lose the \$3.31 on the change, but he also improved his revenue by \$7.06. This service change revenue is critical to the achievement of an appropriate return on the operator's addressable investment.

ASSUMPTIONS MODEL

1. 85,000 subscriber system remains stable (no growth) over a 5-year period.
2. All subscribers are equipped with addressable converters.
3. Total converters in the system are assumed to be 85,000 Basic sets and 21,250, or 25% second set penetration for a total of 106,250.
4. 8,500 spare converters are also assumed.
5. Pay churn will cause a number of changes in service level equivalent to half the Basic subscriber base each year over the 5 year period.
6. The incremental cost of addressability is assumed to be \$20 per converter plus \$86,000 for addressable computer, data signal generator, software, protocol converter, printer, etc.
7. The percentage of truck rolls to over-the-counter service changes in a programmable operation will be:

<u>Year</u>	<u>Field</u>	<u>Counter</u>
1	65%	35%
2	59%	41%
3	56%	44%
4	53%	47%
5	50%	50%

8. The net ending result of service changes will be:

<u>Year</u>	<u>Upgrades</u>	<u>Swaps</u>	<u>Downgrades</u>
1	38%	13%	49%
2	33%	4%	63%
3	35%	4%	61%
4	45%	4%	51%
5	55%	4%	41%

9. Field swaps will be charged \$15; field upgrades will be \$7.50; \$7.50 for counter swaps; \$5.00 for counter upgrades; nothing for downgrades in either the field or over the counter as the ordinance prohibits such a change.

In addressable operation, all upgrades and swaps would be charged \$7.50

10. Over a 5-year period a premium service will fail. It will have 4% pay-to-basic penetration. All subscribers will require a truck roll in the programmable operation to change out the converter. Ten percent of these subscribers will require a revisit because of "not home"

11. Over a 5-year period a premium service will be introduced. It will achieve 10% pay-to-basic penetration. 70% will be upgrades; the balance, swaps. 64% of upgrades will require field changes; balance will be over the counter.

12. In addressable operation pay-per-view events would be offered once a quarter. Average penetration will be 6%; revenue will be split 50/50 on a \$15 retail ticket. Average net to the operator is \$3.

13. Addressable converters will have a slightly higher failure rate and will be somewhat more expensive to repair. (1% higher rate at \$3 incremental is assumed.)

14. Unit costs of making service changes average \$18.31 for field changes and \$7.55 for counter changes. Includes labor, vehicle maintenance and fuel, converter repair and maintenance, customer service support, CRT rental/lease, installation support (verification), issue and return, and other costs associated with field changes. Counter costs include facility lease, labor, communications lines, CRT rental/lease, and others.

In addressable operation it is assumed that the average service level change can be made for 44¢.

15. Incremental addressable operation costs include wire link communications costs, computer maintenance agreement, modem lease, and modem sharing device lease.

INCREMENTAL ADDRESSABILITY COST/BENEFIT ANALYSIS

	(\$000's)					
	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Incremental Investment	\$2,381					
Net of ITC	\$2,143					
Incremental Income/Cost						
--Pay-Per-View		61.2	61.2	61.2	61.2	61.2
--Cost Reduction in						
Launch		127.4				
Demise				50.6		
--Service Changes		586.6	578.8	567.5	560.3	553.7
Increase in Converter		(3.4)	(3.4)	(3.4)	(3.4)	(3.4)
Repair/Maintenance						
Addressable Operating		(11.4)	(11.4)	(11.4)	(11.4)	(11.4)
Costs (incremental)						
Net Cash Flow		\$760.4	\$625.2	\$664.5	\$606.7	\$600.1
Discounted Cash Flow @ 15%		\$661.2	\$473.6	\$437.2	\$346.7	\$298.6
Sum of Discounted Cash Flows		\$2,217.3				

COMMENTS ON THE MODEL'S APPLICABILITY

Using conservative assumptions, the model produces a somewhat greater than 15% internal rate of return on the addressable investment before taxes. The operator who wishes to make a similar computation may have the freedom to charge for downgrades; the model will obviously produce a much higher return when the losses associated with truck rolls for downgrades in the programmable operation are combined with the revenue associated with making these same changes in an addressable operation. In other words, the operator who had been programmable could forecast a real operating cost for making downgrade changes in the field. If addressable, the operator could eliminate the costs of making these field changes and would produce certain operating income making the same changes through the customer service organization.

There is a case that can be made that addressability reduces theft and office errors which lead to giving service away. Although this model does not include incremental income associated with such a reduction, the result of including this calculation, even conservatively projected, is dramatic. Assuming for example that the current theft rate in the programmable system is 9% of gross revenue, and addressability can eliminate half of that the first year, and that the loss of revenue grows each year over the next 4 years by a full percentage point each year (because of pirate converters), the internal rate of return could be doubled.

It is clear that another operator's assumptions may differ from those presented in the model. It simply sets a framework and may be changed to reflect the unique characteristics of any given system operation.

THE MODEL'S IMPLICATIONS

The most obvious difference, in economic terms, between the programmable operation and the addressable operation, is obviously in the virtual elimination of costs associated with making service changes. To make the most efficient conversion to addressability then, the operator needs to focus on all the component costs of making service changes in his present operation, and eliminate them quickly as addressability is implemented.

WHERE TO LOOK FOR ADDRESSABILITY'S IMPACT

So you've computed your internal rate of return and find that addressability makes sense. You're ready for a conversion. But what processes and systems need changing? Which expenses can be eliminated? Here's a sample check list which may help realize those efficiencies faster.

Rates and Charges

--Be sure your second outlet will produce the margin you've been experiencing. Don't forget, you're adding to your investment.

--Can you restructure your service change charges to produce an average of \$10 per net ending transaction? The convenience of not having to stay home for a change of service is worth something. Make certain your change of service rate is understood by your subscribers and consider calling it an "administrative transaction charge" instead of an upgrade or downgrade charge.

Installation

--Since service changes will not be made by installers, what impact will this have on your staffing? And how about the number of vehicles you require with their associated maintenance and fuel costs?

--Don't forget the more subtle savings including uniforms and tools for those employees.

--Since you'll experience an installation staff reduction, what costs can you eliminate in supervision and the routing of these employees?

Look at automating your installation process using voice response technology so that the installer can automatically authorize the addressable converter in the home using touch-tone telephones. This can further reduce support resources which will be required if the installer must call customer service for converter authorization.

Service Centers

--If you've established converter exchange locations to reduce your programmable operation costs, you may wish to close them altogether. Your converter changes to upgrade or downgrade services will be eliminated.

Converter Reprogramming/Repair

--Whatever staff you have employed today to reprogram converters for changing service levels can be eliminated altogether. This will be one of your most significant savings.

Paperwork/Check-In/Work Verification

--Most programmable systems have a function they call "work verification" but may be called "check-in" by others. It's the clearing house for all completed work orders and generally is responsible for starting or changing the subscriber's billing. Stop and think that when you're addressable, all service change paperwork will disappear. It will be handled on-line. If you have a clerk that files this paperwork, look for ways to reduce this expense. There will be a savings. Won't you also have a reduction in your forms printing expense also?

Repair

--Whereas your technicians now carry a full complement of converters programmed to all possible required service levels, once you're addressable they may need to carry 85% fewer converters. This has implications to you in the control of your most mobile asset.

Disconnection

--There are of course conflicting views as to whether to leave the drop active to the home. You'll have to balance the cost of disconnection of drops against the possibility that you may be encouraging pirate converter operation in your system if you leave them active.

Collections

--Rather than lose a customer who is obviously not able to pay for the level of service he's currently subscribing to, your collections effort may need to incorporate a voluntary downgrade program. It will of course be far less expensive to downgrade the subscriber by computer than by truck roll.

Sales

--Providing you leave drops active and you assign fully authorized converters to your direct sales staff, they could be demonstrating your product in the home. Consider also that free previews will be far less complicated to conduct using addressability. No scheduling of service changes and no delay in responding to your subscriber's interest in upgrading. Wouldn't you also want a telemarketing staff to be selling additional premium services by phone?

CONCLUSIONS

The conversion plan Cox Cable employs is somewhat more complicated and detailed than this check list. It diagrams present and future converter flow through warehouse operations. It also is specific in identification of staff functions and support resources which will be changed by addressability or eliminated altogether.

For the operator who's convinced a conversion is right, my recommendation is to spend at least two days in an audit of system functions to determine how each will change with the conversion. After identifying the expense reductions, chart retraining requirements, and be sure you understand your communication requirements. If subscribers currently call installation for a change of service, for example, won't you want them calling customer service for instant authorization in the future? And what number do you have listed in your phone directory, newsletter, or subscriber information booklet?

If you have the right regulatory environment consistent with fair rate setting for addressable services and are careful in the detailed planning for conversion there is every reason to believe you can make one-way addressability pay in your system.