

## Cable Advertising Revenue and Addressable Commercials

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*In 1996, U.S. cable operator local spot advertising revenue amounted to only about 6% of total cable operator revenue. Yet advertising revenue represents a full 100% of broadcast operator revenue, and broadcast TV stations have no trouble surviving on this single revenue stream. Why is advertising such a small proportion of cable revenue, and can it become a much more significant contributor to total cable revenues and therefore profits in the future? Bill Harvey, chief executive officer of Next Century Media, believes that addressable commercials may be the advertising form destined to make a major difference in this regard. Here he investigates the history, nature, and potential future of addressable commercials and projects substantial increases in cable operator advertising revenue resulting from this new type of advertising unit.*

Cable operators tend to consider advertising revenue to be a peripheral rather than a core business, because advertising revenues are only \$25.97 per home per year, as compared with \$428.05 per home per year in subscriber revenues (Kagan). This 6% of total revenue derived from advertising is about twice the percentage that it was ten years ago, a degree of increase which could be looked at as either encouraging or dismal, depending upon one's expectations.

Looking at it from the perspective of cable share of total television advertising revenues, cable operators today represent about 4% of total television advertising revenues (Kagan), while the cable operator's share of the television audience is almost eight times higher at 31% (A.C. Nielsen). Counting cable network advertising revenues as well as the

cable operator's advertising revenues brings the cable revenue share up to about 16% (Kagan), a fairer comparison, but still leaving cable with apparently "half its fair share." What accounts for this disparity between cable audience share and advertising revenue share?

The picture is quite different for spot cable (a cable ad bought locally) versus network cable. In network cable, the Cost Per Thousand (CPM) averages about \$7 (Ephron), as compared to broadcast network at about \$11 (Ephron). In other words, in network cable, the ratio of dollar value to audience is depressed. This is due to the perception by advertisers and agencies that network cable, with its lower ratings and often lower cost original productions, has lower advertising effectiveness per audience member reached. It is also due to cable networks being newcomers eager to break into the advertising industry's coffers. The advertisers and agencies were equally eager to leverage the existence of the network cable alternative as a negotiating tool to cap the growth of network broadcast CPMs. This "special reason" propelled advertiser use of network cable.

By contrast, spot cable CPMs average \$20-\$40, because 90% of the inventory is sold to retailers:

- 1) whose sophistication level falls short of CPM;
- 2) who are attracted to spot cable's low absolute prices as compared to spot broadcast TV; and
- 3) who are attracted to the better geographic match between the typical retailer's trading area with the typical cable system's coverage area (as compared to the less-than-perfect fit between the typical retailer's trading area and the much larger full ADI/DMA covered by broadcast TV stations)

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However, this local pricing strategy is a serious impediment to doing business with national advertisers who:

1. demand far lower CPMs; and
2. also find spot cable extremely difficult to buy (many transactions, each relatively small from their point of view); and
3. find spot cable a equally difficult to post-evaluate (no proof of performance, and audience measurement systems which are oriented to broadcast, and therefore which often so understate cable audiences as to present "hash marks" instead of numbers for cable channels in rating reports).

This accounts for the present situation in which national advertisers represent only 10% of spot cable revenue – versus 67% of spot broadcast revenue.

From the cable operator's point of view, therefore, it has been easy for some to write off national advertisers as being an insignificant part of an already small-to-begin-with total advertising revenue stream, as well as being a prospect class who demand lower prices than retailers are willing to pay. In short, why bother with national advertisers at all under these conditions?

Exacerbating this poor relationship between cable operators and national advertisers is the perception by the major MSOs who spearheaded zone targeting, that these national advertisers "kidded them along" to make the major investments required to provide zone targeting – and then made very little use of zone targeting once it became available. Whether this is fact or fiction, this perception exists among a significant number of influential operations.

This, then, is the present context into which new forms of spot cable advertising come, potentiated by digital set top boxes and related technology developments.

### **Interactive Television**

In the early and mid 90s, ITV testbeds came along, and national advertisers were invited to test new forms of advertising in these venues. These testbeds included the famous Time Warner Orlando Full Service Network, major telephone company trials, and various "lower" forms of ITV such as GTE MainStreet, ACTIV, ITN and Star Response.

Top advertisers and their agencies became involved in these tests and by mid 1996 had become, to some extent, disillusioned with them. The main disappointment focused on the lack of addressable commercials. The advertising industry had incorrectly assumed that the cable and telephone industries would be aware of the high value of being able to simultaneously send different commercials into different households within the same cable system headend zone, in the same commercial slot, on the same basic cable network.

The commercials targeted by household could employ the same "creative" (e.g., the same 30-second commercial) as now used by the brand, so that agencies would not have to learn how to create new interactive commercials, or worse, interactive "applications" (expensive-to-produce longform, branching full motion video experiences that would help sell a brand) with which, as of the mid-90s, agencies had little or no experience (except for a couple of well-publicized "white elephants" which cost the advertiser in the high six figures in each case).

*“DBS in the last year caused hundreds of thousands of multipay homes to either disconnect cable entirely or to stop pay subscriptions.”*

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*Continued*

The targeting practices of the advertising community generally assume that a household falling within a defined target group is worth something, while all other households are, in effect, worthless. In buying media, the more sophisticated agencies calculate not a general CPM, but a Target CPM, counting only the households/people reached by a commercial slot in a program who fall within the defined target group. A spot that reached 100,000 homes but only 20,000 Target homes, if priced at a \$10 CPM households, would have a \$50 CPM Targets. Addressable commercials could lower the CPM Targets because if every household reached by a commercial was a Target, then the CPM Targets would be the same as the CPM households. Operators would be able to increase the price per spot while still lowering the CPM Targets for each advertiser using part of that spot's audience!

However, probably because their business had been built on consumer subscription and buy rates, neither the cable nor the telephone industry had properly anticipated the advertiser/agency desire for addressable commercials, and none of the ITV testbeds made this advertising form available. Instead, there was an excessive (as perceived by the advertising community) emphasis on self-selected interactive applications which the viewer would have to want to go see (not expected to be a high frequency event), which would be expensive to produce, and with which the agencies had no prior experience.

As a result, there was a withering of advertiser interest in participating in ITV testbeds, several testbeds closed down, and the advertising industry shifted its R&D attention to the Internet.

### **The Addressable Advertising Coalition**

In the summer of 1996, a number of advertisers and agencies who had been heavily involved in ITV testbeds urged Next Century Media, who had been the strategic new media consultant for many of these advertisers and agencies, to organize and help form a coalition of advertisers and agencies aimed at communicating the desirability of addressable commercials to the cable, telephone, and DBS industries.

The Addressable Advertising Coalition (AAC) held its formation meeting in New York in July, 1996. Over 40 companies attended and became the initial participants in the AAC. These companies included 18 of the top 20 advertising agencies, major advertisers such as General Motors, Procter & Gamble, Nissan, and many others, and major media including Your Choice TV, Time Warner, Adlink, BellSouth, and GTE. A second meeting in September, 1996 and subsequent activities broadened participation to include over 70 companies as of February, 1997. AAC advertisers and agencies as of that date represented over \$80 billion in annual advertising expenditures.

The mandate of the AAC is to communicate the value of addressable commercials to the cable, telephone, and DBS industries so as to maximize the availability of addressable commercials as quickly as possible. In doing so, the AAC stresses the following arguments:

1. Cable (and telephone-owned cable, wireless cable, and DBS) operators can make more money per spot on addressable commercial, by increasing the CPM households each advertiser will be willing to pay, since a greater proportion of those households will be Targets.

2. Cable (and competitive) operators can also increase the total national advertiser revenue stream by selling more units at these higher prices to national advertisers, since this type of unit is in great demand.

3. Most of the cost of the technology to provide addressable commercials is already going to be borne by cable (and competitive) operators anyway, in the installation of digital set top boxes, being installed in order to multiply channel capacity through compression so as to better compete for consumer dollars in the new competitive environment between DBS and cable (and, eventually, among cable and DBS and telco).

**Analysis of the Economics: Revenue Lift Per Spot**

The key questions are obviously: "How much more money could a cable operator make by selling addressable commercials as compared with existing non addressable commercials?" and "What kind of investment would a cable operator have to make in order to equip himself/herself to offer addressable commercials?"

Let's first look at the question of incremental revenues per spot. Let us imagine the case of one specific spot which a cable operator has available for sale today. See the illustrative numbers in Figure A below:

Figure A

Spot	Advertiser	Cost	House-holds	Targets	CPM Households	CPM Targets
1	A	\$10	1,000	100	\$10	\$100

This spot reaches 1,000 homes, only 100 of which are Advertiser A's Target. The advertiser is paying a \$10 CPM Homes but a \$100 CPM Targets. In this illustration the cable operator would derive only \$10 from the sale of the spot (ignoring agency and

rep commissions if any). Ninety percent of the audience that the advertiser is paying for is not his Target audience, i.e., waste. The advertiser probably would have a low opinion of local spot cable under these conditions, and would probably buy very little of the medium at this point.

Now let's say that the same spot's audience could be sliced ten ways. Say that Advertiser A could just buy the 100 homes he considers to be his Target. He has been paying \$10 to reach those 100 homes. We can say to him, "Now we are no longer making you pay for those other 900 homes you didn't want."

Meanwhile let's sell each of the ten slices, each to a different advertiser who wants those homes, and considers them to be his/her Target. Each one, let us say, has been paying a \$10 CPM Homes and a \$100 CPM Targets. Let's charge each of them a \$90 CPM Targets. They are now all happier. Figure B shows how the money comes out for the medium:

Figure B

Spot	Advertiser	Cost	House-holds	Targets	CPM Households	CPM Targets
1a	A	\$9	100	100	\$90	\$90
1b	B	\$9	100	100	\$90	\$90
1c	C	\$9	100	100	\$90	\$90
1d	D	\$9	100	100	\$90	\$90
1e	E	\$9	100	100	\$90	\$90
1f	F	\$9	100	100	\$90	\$90
1g	G	\$9	100	100	\$90	\$90
1h	H	\$9	100	100	\$90	\$90
1i	I	\$9	100	100	\$90	\$90
1j	J	\$9	100	100	\$90	\$90
1-Total		\$90	1,000	1,000	\$90	\$90

In this "perfect world" example, we have increased the cost per thousand and the price of the spot by a factor of 900%.

*"Addressable commercials could, in theory, garner an even higher CPM than direct mail."*

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## Cable Advertising Revenue and Addressable Commercials

*Continued*

In the real world, we do not expect addressable commercials to lift the revenue per spot that much – a realistic objective might be more like 300%. This latter more conservative goal is also intended to give the advertiser a more impressive improvement in terms of CPM Targets, so he/she likes the medium more and spends lots more money in it.

### **Investment Costs**

In order to be in a position to offer addressable commercials, what will the cable operator have to invest? The answer is that the operator will be covering most of this investment cost for another reason, once the operator decides to deploy digital set top boxes. The latter decision is being made by many MSOs today for a very different reason: DBS.

DBS in the last year caused hundreds of thousands of multipay homes to either disconnect cable entirely or to stop pay subscriptions, with negative domino effects on cable stock prices. From the cable subscriber point of view, DBS enjoys the advantages of more channel choices, staggered start times for PPV movies (also known as NVOD or Near Video On Demand), better picture and sound – all of these advantages attributable to digital set top boxes introduced by DirecTV, the leading DBS service in the U.S.

As a result, the top MSOs including TCI, Time Warner, Continental, Cox, Comcast, Cablevision, Century, and others have ordered digital set top boxes. These orders, when added to those of DBS and telephone companies worldwide, total over 14 million digital set top boxes now on order. (Kagan's more conservative estimate is 7.2 million.)

These boxes allow MPEG2 compression and therefore multiply channel capacity, the principal requirement for addressable commercials. Operators have made a case for these new digital set top boxes based solely upon consumer revenue increase from PPV/NVOD plus retention/acquisition increase due to more channels, better picture, and better sound. But as a bonus, operators will now also benefit from increased advertising revenues due to addressable commercials.

In addition to set top boxes, operators will also need to invest in clickstream measurement software and commercial decider software if they want to enjoy the benefits of addressable commercials unless they are working in concert with YCIV on a similar service. (More on YCIV later.) Next Century Media has set the installation costs of such software at very low levels, preferring to make their money on royalties from ongoing addressable commercial revenues. This means the upfront software costs are close to negligible to the operator, the set top box costs are already justified based on NVOD and retention/acquisition, and so addressable commercials can be made available at no significant incremental upfront cost once the operator has decided to deploy digital set top boxes anyway.

One ongoing investment cost of addressable commercials is the bandwidth for feeder channels. Feeder channels are channels set aside for the purpose of carrying alternative commercials to be switched into individual households. Subscribers are blocked from switching to these channels manually, and instead can only be switched to these channels by forced channel tuning.

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Forced channel tuning has been a built-in feature of most analog set top boxes since 1982 when Bob Block's Telecast MAAST set top boxes patented and introduced the feature, subsequently licensing it to other set top box manufacturers. Forced channel tuning had the original purpose of warning subscribers about natural disasters by turning on TV sets and/or switching subscribers to a local origination channel, where the news of a hurricane or other impending severe weather problem could be reported.

In the addressable commercial paradigm, forced channel tuning capability is used not for promoting programs or warning subscribers about natural disasters, but for switching specific households to specific feeder channels where specific commercials can be presented instead of the commercials that are loaded into the channel that the subscriber is watching. This process is, by design, invisible to the subscriber, who might have no idea that he/she is being switched across channels. When the program resumes, the subscriber has been placed back on the channel he had been watching so no program viewing is lost.

The commercial decider software has the job of deciding which addressable commercial to play to the specific household, and clickstream measurement software has the job of reporting the audience measures to the advertiser who has used these addressable commercials. Today the first such software products are Next Century Media's (NCM's) Opti\*Mark commercial decider software and NCM's Interactive Index clickstream measurement software, the latter delivered in conjunction with Arbitron. The first media company announcing use of these software products is Your Choice TV (YCTV), which has committed to delivering addressable commercials

to the advertising community in 1997 via these NCM software tools customized to YCTV.

YCTV is a package of 7 channels and a barker channel, where the core programming consists of the best of television made available for viewing the same week by households who missed the original appointment telecast day/time, in many other timeslots on the same day and on other days of the week. YCTV points out that with digital set top boxes and compression, their 6 to 8 channels plus a number of feeder channels can be delivered within the space of only two analog channels. With statistical multiplexing now becoming available through Imedia, the same two analog channels could provide enough room for about 25 YCTV channels plus about 16 or more feeder channels. We believe that even four feeder channels provide enough addressable commercial capacity to generate significant advertiser revenues.

#### **Optimizing Return On Channel Space**

The economic equation for the cable operator considering the potential use of addressable commercials involves deciding which use of channel space returns the most profit. For example, if compression via digital set top boxes yields 100 extra channels, what is the most profitable way to use these channels? One possible answer is to use all of these channels for movie NVOD. However, tests of NVOD by TCI and Time Warner, among others, have shown that there is a severe diminishing returns curve to the use of channel space for movie NVOD, such that after about 24 channels used this way, the return per subscriber household per month has dropped off to very low levels, i.e., around 4 to 6 cents per household per channel per month net to the operator.

*“Cable operators might someday find that they are deriving more income from advertising than they are deriving from direct consumer revenues!”*

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*Continued*

The reason for this dropoff is the number of hit movies entering the PPV window each month — about four. Giving each of these four movies six start times each results in the use of 24 channels. Offering additional movies and/or start times tends to provide only small increases in revenue to the operator.

The next use of these “surplus” channels created by compression is arguably YCTV, whose three-year test in eight markets suggests that 8 to 24 channels used in this way accomplishes as much as can be accomplished in the way of operator revenue.

This means that if compression yields more than 33 to 50 new channels, the strong likelihood is that the best use of these new channels beyond the first 33 to 50 such channels is to make at least a few of them feeder channels so as to potentiate addressable commercials. In fact, it may turn out that the real advertiser demand for addressable commercials causes feeder channels to be the most profitable use of “surplus” channels even within the first 33 new channels added.

The AAC has asked that cable operators make addressable commercial testbeds available this year, so that both the advertising and cable industries might evaluate the real economic values to both buyer and seller. It should be noted that there is a need for additional software to handle forced channel switching.

### Addressability Plus Interactivity

Digital set top boxes generally contain the capability for Impulse PPV (IPPV), that is, the ability to order a PPV/VOD program/movie by clicking on specific buttons of the remote control device. This also introduces the capability of

responding to commercials by means of clicks on the remote.

The “click on remote” feature (COR) adds more value for advertisers above and beyond addressable commercials. The combination of COR plus addressable commercials provides the cable operator with the equivalent of television plus direct mail benefits to offer to advertisers. A 1995 car advertiser test of Star Response (one of the early providers of COR to advertisers) showed that COR generated ten times the percentage response to a free brochure offer as compared to an 800 number commercial in the same market (San Antonio).

Advertising practitioners know that media vary in effectiveness, assuming equal creative material, based upon length and quality of exposure, sensory involvement, interactivity, and ease of response. CPMs reflect the sum total of these variables.

The NCM Cube Of Advertising Value (Figure C) is a display of average CPMs for different media which explains the difference in CPMs across media based on three factors: targetability, sensory intensity, and interactivity. The higher each of these three factors

Figure C

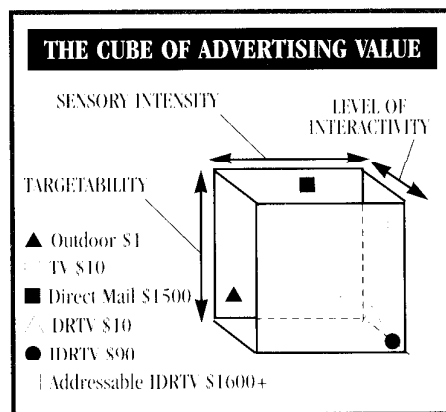
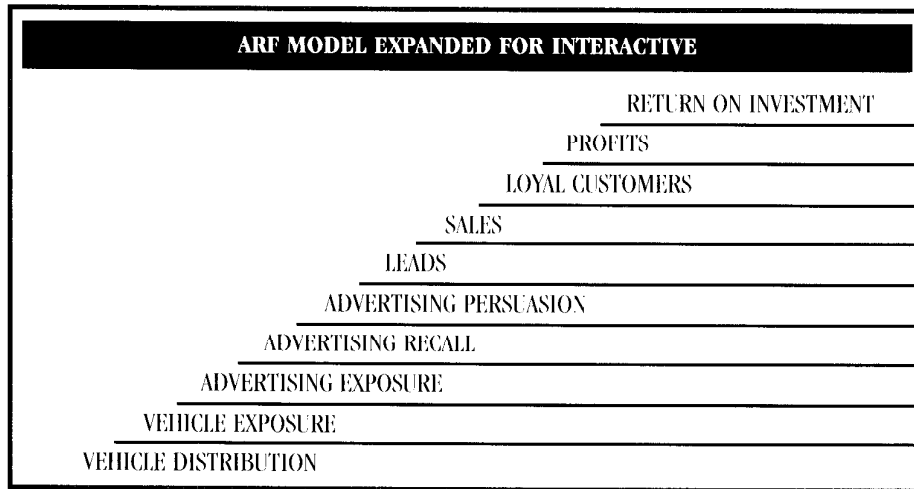


Figure D



*“The average CPM for direct mail is \$1,500, more than 100 times higher than the average CPM for television.”*

is, the higher the CPM that the advertiser is willing to pay. In fact, the average CPM for direct mail is \$1,500, more than 100 times higher than the average CPM for television. This suggests that addressable commercials with COR, offering both the targetability and interactivity of direct mail plus the sensory intensity of television, could, in theory, garner an even higher CPM than direct mail — yielding revenue gains to the cable operator far greater than the three-to-one goal espoused above.

Another revealing model is the ARF Model of Advertising Communication, recently expanded by NCM to include direct marketing measures. This venerable advertising industry model, first introduced by the Advertising Research Foundation in 1961, shows a progression of stages at which advertising has its effects. NCM’s extension of the model brings it from 6 stages to 10 as shown on Figure D.

The expanded ARF Model can be used to demonstrate the value increase provided by addressable commercials plus COR as seen from the perspective of the

advertiser. Assume that by addressing commercials to specific target households, the impact of these commercials increases by only 20% at each level of the ARF Model. For example, if Sega commercials could be directed only to households with videogame players, eliminating, for example, households with senior citizens uninterested in playing videogames, the average commercial recall scores for these commercials might increase far more than 20%.

The effect of a mere 20% increment in effectiveness at each level of the ARF Model — substituting a conservative 300% at the “Leads” level where the Star Response automotive advertising test found an increment of 1000% for COR over 800 numbers — the compound effectiveness increase at the top of the ARF Model is a three-to-one improvement in Return On Investment for the advertiser. (See Figure E.)

These considerations suggest that the value of addressable plus COR commercials to the advertising community could be far greater than a tripling of demand/CPM. In fact, addressable/COR

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*Continued*

Figure E

EXPANDED ARF/OPTI*MARK SIMULATION			
	800#	CLICK ON REMOTE	ADDRESSABLE PLUS C.O.R.
ROI	\$943,047	\$1,144,427	\$3,158,910
LOYAL CUSTOMERS	777	858	1,664
PROFITS	\$554,438	\$715,542	\$2,327,128
SALES	1,554	1,716	3,327
LEADS	26,125	52,250	53,434
ADVERTISING PERSUASION	522,500	348,333	296,800
ADVERTISING RECALL	5,000,000	3,333,333	2,400,000
ADVERTISING EXPOSURE	50,000,000	33,333,333	20,000,000
VEHICLE EXPOSURE	100,000,000	66,666,667	33,333,333
VEHICLE DISTRIBUTION			
CPM HOUSEHOLDS	\$10	\$15	\$30
ADVERTISING COST	\$1,000,000	\$1,000,000	\$1,000,000

commercials on spot cable could become the most desirable advertising/promotion medium, ultimately carving out a major share of the \$400 billion advertising/promotion pie in the U.S. (\$750 billion worldwide). (See Figure E)

In such a scenario, cable operators might someday find that they are deriving more income from advertising than they are deriving from direct consumer revenues!

### Levels of Addressable Commercials

What we have been describing is in fact one of five levels of addressable commercials. For completeness, here is the AAC definition of the five levels of addressable commercials:

#### Level I - Measurement Based Targeting

In this level, all households tuned to a channel

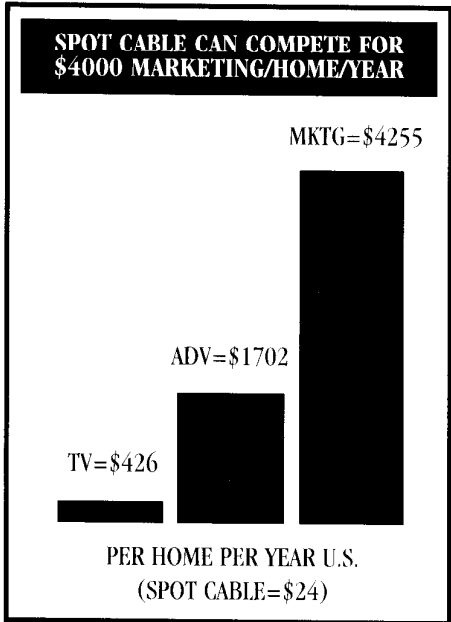
receive the same commercials; however, the selection of which commercials to insert in that program is determined by the clickstream which indicates the profile of the households tuned to that program.

Based on the clickstream we have a profile of who watched which shows therefore advertising placement decisions can be made based on that.

#### Level II - Zone Targeting

This level has already been deployed in about 10 million U.S. cable homes. However, it has not ignited the advertising community, who generally seek individual household targeting rather than geographic targeting within a market. This form has also been hampered by lack of clickstream measurement, and by lack of commercial decider software to make its use easier for advertisers and agencies.

Figure F



**Level III - Individual Household Targeting, Geodemographics Only**

Here, feeder channels are used to allow individual homes to be targeted. However, all that is known about each household is its address, and so all demographic and product usage profiling is extrapolated from zip+4 data via such information services as MicroVision plus MRI.

**Level IV - Individual Household Targeting, Individual Household Data**

This is the same as the prior level, except that installer questionnaires or other data gathered on an individual household basis are used to decide the targeting value of individual households to specific advertisers.

**Level V - Persons Targeting**

Here the addressable commercials are targeted to individuals within households, using methods of estimating who within each household is actually present in the room, such as the NCM Custom Menu system.

**Digital Advertising Insertion**

Ironically, the cable industry's digital advertising insertion technology is currently unable to insert commercials into an MPEG2 digital programming stream. This problem is being solved by the manufacturers and digital insertion into a digital channel should be a reality by sometime in 1998.

The software for feeder channel implementation in the set top box could become available earlier than 1998. If this were the case, feeder channels would perform yet another industry service, making local insertion of advertising possible sooner on digital channels.

**Conclusion**

Addressable commercials offer the promise of the targetability and interactivity benefits of direct mail added to the sensory intensity benefit of television, and so suggest a major revenue potential from advertising. The cable industry has the opportunity to test addressable commercials in small testbeds during 1997, so as to help realistically size this revenue potential, while building stronger relationships with national advertisers and agencies. The cable industry deployment of digital set top boxes is happening anyway due to the incursion of DBS. If the opportunity pans out, it will represent a great leap forward for cable. ■

*"The cable industry deployment of digital set top boxes... will represent a great leap forward for cable."*