

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of:	)	
	)	
Carriage of Digital Television Broadcast	)	CS Docket No. 98-120
Signals: Amendment to Part 76 of the	)	
Commission's Rules	)	

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**Comments of the Consumer Electronics Association  
on Second Further Notice of Proposed Rulemaking**

July 16, 2007

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In this proceeding the Commission poses what some may view as a conundrum – balancing signal quality and consumer convenience against the cable industry's bandwidth requirements. Treating cable networks as closed, proprietary systems would imply a solution at the expense of consumers, who, based on the bandwidth constraints of the cable providers, would be saddled with either diminished digital signal quality or redundant, proprietary devices in lieu of analog transmissions to homes. The Congress, however, devised a solution when it enacted Section 629 of the Communications Act in 1996. The Congress instructed the Commission to *assure* that consumers would have an open device market in the digital era.<sup>1</sup> Hence, the Commission has the tools available to achieve a *marketplace solution* to the questions it poses in this Second FNPRM. The time to apply these tools is *now*. The Commission can harness marketplace forces so that it need not and should not tolerate any noticeable impairments in either the quality or the availability of broadcast signals as carried over cable.

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<sup>1</sup>47 U.S.C. § 549(a).

The bandwidth available to the cable industry for video programming is huge compared to the relative sliver allocated to the entire Internet. The industry, nevertheless, if viewed as a closed service and device system, faces a tradeoff between HDTV resolution and the need to maintain carriage of programming, now sent as analog channels, to households. In 1996, however, the Congress decided that this system need not and should not be closed with respect to devices. A competitive market in consumer devices offers an efficient progression toward all-digital homes *without* the need to impair HDTV transmission quality, or, in the name of the Digital Transition, to shackle consumers to proprietary and redundant set-top cable converters. So while some may respond to this Second FNPRM with conventional closed-system, proprietary solutions that cause consumers to *pay for the same programming and devices again and again*, CEA urges the Commission to think “outside the box.”

**I. Introduction And Summary: The Only Satisfactory Solution To The Problems Posed By The Commission Is A Marketplace Solution.**

The Consumer Electronics Association (“CEA”) is the principal U.S. trade association of the consumer electronics and information technologies industries. CEA’s more than 2,100 member companies include the world’s leading manufacturers. CEA’s members design, manufacture, distribute and sell a wide range of consumer products including television receivers and monitors, computers, computer television tuner cards, digital video recorders, game devices, navigation devices, music players, telephones, radios, and products that combine a variety of these features and mate them with services – all as chosen by consumers in an open marketplace. CEA believes that the competitive markets in which its members routinely participate hold the solution to the problems now posed by the Commission.

This Second FNPRM, like Section 629, is focused on intra-industry competition. The laws it implements, like Section 629, seek to assure consumer welfare generally, and device interoperability specifically, *within* the realm of the cable industry. In each case, the Congress and the Commission have determined that cable subscribers, who comprise a majority of the viewing population, have certain valid rights and expectations – in one case, to receive broadcast programming without loss of original quality or viewability; in the other case, to shop for devices in an open market rather than in a closed, proprietary, non-interoperable system. Each goal set by the Congress has proven challenging for the Commission. Now is the time to achieve a solution to both.

By exploiting rather than resisting a truly competitive device market, the cable industry can preserve signal quality while assuring continued carriage to today’s analog-only subscribers, yet still fully exploit their bandwidth. The Commission notes a statistic that has been a constant for decades, and which connotes a solution rather than a problem: fully 50 percent of all cable subscribers do *not* take a proprietary set-top box, even in the age of digital cable.<sup>2</sup> This means that half of all subscribers, despite obstacles imposed by increasingly closed cable systems, still look to the competitive retail market for their devices. Actions already taken by the Commission via its Tuner Mandate<sup>3</sup> and its implementation of Section 629 have forged the tools to serve these subscribers in an all-digital context – if the cable industry, and the Commission, will now recognize and exploit them.

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<sup>2</sup> *In the Matter of Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission’s Rules*, CS Docket No. 98-120, Second Further Notice of Proposed Rulemaking ¶ 4 (rel. May 4, 2007) (“Second FNPRM”).

<sup>3</sup> *In the Matter of review of the Commission’s Rules and Policies Affecting the Conversion To Digital Television*, MM Docket No. 00-39, Second Report and Order and Second Memorandum Opinion and Order (rel. Aug. 9, 2002) (“Tuner Mandate R&O”).

The Tuner Mandate, in requiring an ATSC tuner in any product with an NTSC tuner, imposed expenses that were unnecessary for most consumers, namely those who obtain TV signals via cable or satellite rather than via antenna. In upholding the Commission's regulations, the Court of Appeals recognized the redundancy and expense this imposed. Yet, the Tuner Mandate was reaffirmed as a valid policy choice – essentially, a price of the digital transition.<sup>4</sup> Tens of millions of cable subscribers have *already paid* this price by purchasing TV receivers with digital tuners that, thus far, they have not needed.<sup>5</sup> *These cable subscribers should not, now, have to pay again for the same digital transition.* Therefore, via this proceeding, the Commission should exploit the capabilities of devices that consumers already own or that are now in the market, rather than saddle consumers, again, with investments in redundant hardware.

**II. The Commission Can Assure HDTV Signal Quality By Preserving Compatibility With Equipment That Is Readily Available To Consumers In The Marketplace.**

At the core of the potential tradeoff that some may see in this Second FNPRM is an assumption that consumers' choices of channel tiers and device solutions need to be constrained to those now packaged for them by the cable industry. But even *without* any breakthroughs or new agreements as to licensing or technology – in other words, only with the tools readily to hand – this need not be the case for cable carriage of broadcast channels. And, *with* agreements and solutions that are already on the drawing board, a more complete, competitive and satisfying result for consumers is also within reach.

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<sup>4</sup> *Consumer Electronics Association v. FCC*, 347 F.3d 291, 301 (D.C. Cir. 2003).

<sup>5</sup> See SECOND FNPRM at 3 n.12.

Consumers have already paid once – via the Commission’s Tuner Mandate – to bring the cost of digital tuners down from the hundreds of dollars into the tens.<sup>6</sup> Now that over 43 million consumers, over half of which are present cable subscribers, will have paid this price in 2004, 2005, 2006, and 2007<sup>7</sup> by buying TVs with ATSC tuners, they should not have to pay *again*, to their cable operators, for set-top boxes that are similarly redundant.

By taking the steps outlined below, the Commission can utilize these sunk consumer costs. Now that ATSC and QAM tuner circuitry finally has benefited from Moore’s Law, generations of new, multi-purpose products with both types of digital tuners are already in homes and should be available on the open market.<sup>8</sup> In acting on this Second FNPRM, the FCC needs to make sure that consumers can take full advantage of the efficiencies for which they have already paid. Therefore, it is vital that cable operators carry digital broadcasts that are:

- (a) in the clear,
- (b) not subject to codecs that are incompatible with receivers covered by the Tuner Mandate, and
- (c) not subject to “switched digital” transmission that would make this programming unavailable to such receivers.

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<sup>6</sup> Tuner Mandate R&O ¶¶ 23-35. The Commission notes that the increased expense to consumers, even cable and satellite subscribers, of terrestrial ATSC tuners was a necessary public policy price in order to achieve an important national objective. Consumers *did* pay this price, the objective *was* achieved, and these consumers are entitled to the benefit of what they paid for, rather than be required to pay *again*, in cost and inconvenience, to cable operators.

<sup>7</sup> According to CEA research, the number of television displays with integrated ATSC tuners sold 2004 – 2006 respectively was 1.5 million, 4.132 million, 16.192 million, and will be 21.541 million (est.) for 2007.

<sup>8</sup> As is noted further below, CEA estimates that upwards of 90 percent of all products with ATSC tuners *also* have QAM tuners.

As to the quality standard to be employed, CEA knows of no truly objective test. The Commission should simply not tolerate noticeable impairments compared to the signals as broadcast.

**A. Keeping Digital Broadcasts Unencrypted And On The Basic Tier Opens Competitive Solutions.**

Free over-air broadcasting is unencrypted, hence not subject to the licensing, technical, and interoperability constraints posed by conditional access. Therefore, competitive solutions are already available in the marketplace. The Commission needs only to ensure that cable operators do not take measures that would block or impair an efficient competitive solution.

Only a few years ago, when faced with proposals to prevent mass, indiscriminate redistribution of broadcasts via encryption at the source, the Commission rightly steered clear of the temptation to encrypt digital broadcasts. Instead, it invited solutions that preserve free broadcasting's status as an unencrypted, non-conditional access service.<sup>9</sup> The Commission should do so here as well. If broadcasts remain accessible to all cable subscribers, *on the basic tier and in clear QAM*, there are literally tens of millions of TVs, DVD recorders, and many more products to come, already on the market, that can solve the broadcast digital transition for cable subscribers right now.

While not every TV with the mandatory ATSC tuner is also a QAM receiver, over ninety percent<sup>10</sup> are. Moreover, QAM reception increasingly is showing up, on the same percentage basis, as a feature in the non-display television products that, since March 1 of

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<sup>9</sup> *In the Matter of Digital Broadcast Content Protection*, MB Docket No. 02-230, Report and Order and Further Notice of Proposed Rulemaking (rel. Nov. 4, 2003) (“Broadcast Flag R&O”). (The Commission’s “broadcast flag” solution was vacated by the Court of Appeals on grounds other than its soundness as a policy solution. *American Library Association v. FCC*, 406 F.3d 689 (D.C. Cir. 2005).

<sup>10</sup> CEA poll of manufacturers. CEA does not keep formal statistics on QAM reception.

this year, must have ATSC tuners.<sup>11</sup> The integration of QAM tuning into affordable multi-purpose products such as DVD recorders offers a tremendous opportunity for the fifty percent of all cable customers who are the focus of this rulemaking and who resist proprietary, single-purpose set-top boxes. Reliance on these products, now in the marketplace, will save these customers money, while the cable industry saves bandwidth by moving programming from unencrypted analog channels to unencrypted digital channels.

Allowing encryption of broadcast programming when carried over cable would destroy this competitive opportunity and solution. The Commission thus would be imposing a redundant and unnecessary tax on those consumers who have already paid for digital tuning capabilities in TV receivers.

Currently, the Commission does require digital broadcast channels to be available on a cable operator's basic tier in non-encrypted QAM,<sup>12</sup> but this obligation is less clear in the case of operators that have been found to have "effective competition."<sup>13</sup> However, as noted at the outset, the entire focus of *this* rulemaking is on intra-cable system competition, efficiency, and interoperability. By definition, issues of "effective competition" are not relevant to solving these intra-cable DTV transition issues. Effective competition among MVPDs will not protect consumers' investments in QAM-tuning equipment so long as they remain cable subscribers and thus are dependent on the outcome of this rulemaking. Therefore, to accomplish its purpose in this proceeding, the

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<sup>11</sup> *Id.* Many such models have emerged in the marketplace in the second quarter of this year via the DTV tuner mandate having become universal for any "television receiver."

<sup>12</sup> *In the Matter of Carriage of Digital Television Broadcast Signals*, CS Docket No. 98-120, First Report and Order and Further Notice of Proposed Rule Rulemaking at ¶ 102 (rel. Jan. 23, 2001) ("First R&O") (requiring "that a broadcaster's digital signal must be available on a basic tier"); 47 C.F.R. §76.630(a) (requiring that operators "shall not scramble or otherwise encrypt signals carried on the basic service tier").

<sup>13</sup> First R&O at ¶ 102.

Commission needs to assure that free, over-air broadcasts remain unencrypted when carried over cable.

The current rule forbids encryption of digital broadcast channels specifically because those channels must be included on the basic tier. 47 C.F.R. §76.630(a). As the basic tier is subject to rate regulation, the Commission has suggested that the requirement does not apply where, due to effective competition, rate regulation is not necessary.<sup>14</sup> The subject of the instant Second FNPRM, however, is not rate regulation; it is the effective implementation by the Commission of 47 U.S.C. § 534(b)(4) and (b)(7). The Commission thus has both the statutory authority and the clear necessity to require, in its regulations adopted in this proceeding, and as a vital complement to its tuner mandate, that digital broadcast channels subject to must-carry obligations must remain unencrypted, preferably on the basic tier, but in any case, irrespective of any considerations of tiering or rate regulation. Such a rule will provide for a marketplace solution that benefits the cable industry, in its own transition to digital carriage, while preserving subscribers' access to local broadcasts via their investments in equipment that is subject to the tuner mandate.

**B. The Commission Must Keep Carriage of Digital Broadcasts Free of Additional Codecs To Preserve Competitive Solutions.**

The marketplace solution would also be lost if the Commission were to allow cable operators to move digitally carried broadcasts to “codecs” other than the MPEG-2 codec for which present and near term products have been designed. None of the digital TV receiver products in which consumers have invested or that are on the market today could display cable content if encoded with a codec other than MPEG-2. Moving free,

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<sup>14</sup> *Id.*

over-the-air broadcasting to codecs not readily received on existing competitive devices would be another way of imposing the redundant “cable DTV transition tax” on consumers who have already paid once. It would deny to them the single most competitive option: products that may already be in their homes.

**C. The Commission Must Keep Digital Broadcasts Free of “Switched Digital” Transmission To Preserve Competitive Solutions.**

The Digital Cable Ready products in consumer homes and the many, many other products now emerging on the retail shelves that have QAM tuners unfortunately do not have the capacity to work interactively with cable headends. Therefore, the application of “switched digital” transmission to broadcast signals would also mean the loss of these products as ready consumer solutions to the DTV cable transition addressed by this Second FNPRM.

That the “switched digital” option is not available for competitive devices is entirely the fault of the cable industry. This technology emerged shortly after the groundbreaking “plug & play” framework was approved by the Commission in 2003; the prospect of its implementation immediately began to undermine the usefulness of “digital cable ready” devices. CEA began then, and continues now, to ask the cable industry to cooperate on solutions that will maintain the usefulness of competitive devices designed to work on cable systems. While these devices have inherent interactive capabilities that are walled off by cable specification and license, it is too late to modify the ones already in homes to receive switched digital transmissions.<sup>15</sup> Therefore it is simply too late for the cable industry to move broadcast signal carriage to switched digital. Doing so would

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<sup>15</sup> In Docket No. 97-80 the Commission has asked for comment on one such solution, but even that solution is addressed to an encrypted, conditional access environment and could be implemented only in new products.

be unfair to consumers and would impede the Digital Transition. The Commission must assure that this does not occur.

**D. No Noticeable Impairment Of Signals, Compared To Broadcast Quality, Should Be Tolerated.**

The Commission asks whether it should move from subjective to objective means of assuring the quality of HDTV broadcast signals as carried over cable. CEA, however, is not aware of any automated, objective measure of video degradation which faithfully matches human visual perception. Moreover, CEA research has documented a persistent gap between consumers obtaining HDTV displays, and consumers obtaining HDTV programming for these displays.<sup>16</sup> Consumers have made substantial investments in HDTV displays which, as noted above, perforce have included substantial investments in digital tuners. The FCC should maintain a high standard in implementing its referenced 2001 decision on material degradation.<sup>17</sup> The FCC should not tolerate noticeable impairments of the video, audio, or system information as originating in the broadcast, and should give substantial weight to opinions and concerns of broadcasters in such respect.<sup>18</sup>

**III. “Viewability” Issues Also Can And Should Be Addressed Via The Competitive Marketplace.**

In offering consumers a marketplace solution for integrating digital broadcasts with digital cable, there is no reason to accept a dichotomy between inexpensive, non-encrypted product solutions, on the one hand, and fully blown, conditional access cable-only products on the other. It was a key feature of the **plug and play** solution approved

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<sup>16</sup> Consumer Electronics Association, *HDTV: You Have the Set, But Do You Have the Content*, June 2007.

<sup>17</sup> See First R&O ¶¶ 70-76.

<sup>18</sup> As is discussed above, comparison of codecs should not be relevant to this inquiry because moving broadcast signals to additional codecs would take the utility of tens of millions of products out of the hands of consumers and thus adversely impact the DTV transition.

by the Commission in 2003 that **digital cable ready** products would receive broadcast signals via ATSC tuners. An interactive (“two-way”) solution for digital cable ready products would allow both cable and broadcast reception capability to be built into new generations of multi-purpose products that meet consumers’ digital transition needs and need not be provided or subsidized by cable operators.

**A. The Commission Should Not Limit Its Horizon To Proprietary Devices That Can Be Supplied Only By The Cable Operator.**

The Commission has recognized in CS Docket 97-80 that achieving a “two-way” solution for digital cable ready products is vital to the DTV transition.<sup>19</sup> Therefore, for purposes of the instant proceeding, the Commission should keep in mind that an additional consumer toolbox, directed toward solving digital transition as well as overall competitive issues, may soon be at hand.

**B. The Commission Has Already Required That Digital Cable Ready Products Include Broadcast Tuners, But This Solution Has Been Undermined By Lack Of Support, And Diversion Of Programming, By the Cable Industry.**

In considering any solution that would involve the furnishing of set-top devices to consumers, the Commission cannot and should not ignore the Congress’s forward-looking prescription of competitive availability, and the FCC’s own decade-long attempt to achieve this goal. In its Memorandum Opinion and Order on the Consolidated Requests for Waiver of Section 76.1204(a)(1) in Docket No. 97-80 and 00-67, the Commission noted that no cable operator has shown any interest in deploying “one way” devices.<sup>20</sup> Presumably, therefore, any large scale deployment of set-top devices by cable

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<sup>19</sup> *Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Third Further Notice of Proposed Rulemaking (rel. June 29, 2007).

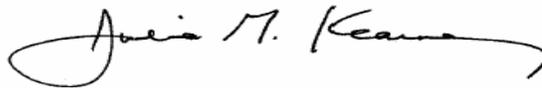
<sup>20</sup> *Commercial Availability of Navigation Devices*, Consolidated Requests for Waiver of Section 76.1204(a)(1) of the Commission’s Rules, CS Docket No. 97-80, Memorandum Opinion And Order ¶ 60 (rel. June 29, 2007) [DA 07-2921].

operators in aid of “viewability” would involve entry-level, limited function devices that still offer a range of interactive services. Yet, at present, the cable industry has not made available any license or specification for comparable “two-way” competitive products. In its Third FNPRM the Commission has asked for comment on one such solution as posed by CEA, and properly recognized the importance, to the DTV transition, of achieving competitive entry. There should be a reciprocal recognition in the instant rulemaking.

**IV. Conclusion**

This proceeding represents a unique opportunity for the Commission to harness rather than frustrate competitive entry. By assuring that consumers can actually use the tools that it took a decade to forge, the Commission can achieve a win-win solution. Allowing the cable industry to wall off these tools from consumers will enmesh these consumers in an ever-tightening grip of a closed system, in which all industry problems can be solved only at their expense.

Respectfully submitted,



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