

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 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	)	

To: The Commission

**PETITION FOR RECONSIDERATION AND CLARIFICATION OF  
THE ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC. AND  
THE NATIONAL ASSOCIATION OF BROADCASTERS**

The Association for Maximum Service Television, Inc. (“MSTV”)<sup>1</sup> and the National Association of Broadcasters (“NAB”)<sup>2</sup> support the Commission’s adoption of rules that will ensure satisfaction of the statutory requirement that cable operators provide viewable signals for all must-carry television stations after the cessation of analog broadcasting on February 17, 2009.<sup>3</sup> MSTV and NAB disagree, however, with the Commission’s decision to reject the objective “all content bits” standard for defining what would constitute “material degradation” prohibited by Congress. We seek reconsideration of this decision. In addition, we urge the Commission to commit to monitoring the material degradation issue in the post-transition digital age, because protecting digital signals from degradation over cable systems will be central to

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<sup>1</sup> MSTV is a nonprofit trade association of local broadcast television stations committed to achieving and maintaining the highest technical quality of the local broadcast system.

<sup>2</sup> NAB is a nonprofit trade association that advocates on behalf of more than 8,300 free, local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission, the Courts, and other federal agencies.

<sup>3</sup> See *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission’s Rules*, Third Report and Order, CS Docket No. 98-120, FCC 07-170 (rel. Nov. 30, 2007) (“*Third Report and Order*”).

ensuring that consumers reap the full benefits of the transition to digital television. MSTV and NAB also seek reconsideration of the Commission's waiver decision with respect to operators of systems with an activated channel capacity of 552 MHz or less.

## **I. MATERIAL DEGRADATION**

Congress has determined that cable operators must carry all local television signals without material degradation.<sup>4</sup> In the digital era, picture quality will become an even more important issue for consumers and programmers than it is now, and a bright-line all content bits test would prohibit the material degradation of broadcast signals and protect consumer expectations. We believe that the Commission should ensure that consumers reap the full benefits of the digital transition. As the Commission has noted, “[t]he prohibition against material degradation ensures that cable subscribers who invest in a HDTV are not denied the ability to view broadcast signals transmitted in this improved format.”<sup>5</sup> Similarly, an all content bits test would ensure that consumers who purchase digital televisions are not forced to compromise on quality when they wish to view digital broadcast programming.

MSTV and NAB respectfully request that the Commission reconsider its decision to reject the objective “all content bits” standard for defining what would constitute “material degradation” prohibited by Congress. We believe that the objective standard would be the best means of preventing cable subscribers from receiving digital service that is inferior in quality to the service available over the air – in other words, materially degraded service. We also ask that

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<sup>4</sup> See Sections 614(b)(4)(A) and 615(g)(2) of the Communications Act, 47 U.S.C. §§ 534(b)(4)(A) and 535(g)(2).

<sup>5</sup> See *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules*, Second Further Notice of Proposed Rulemaking, CS Docket No. 98-120, 22 FCC Rcd 8803, at para. 5 (rel. May 4, 2007) (“*Second NPRM*”).

the Commission clarify that it will commit to monitoring this important and developing issue as broadcasters make the transition to digital television, especially after February 17, 2009.

We note the Commission's statement that the absence of digital material degradation cases is hardly dispositive at this stage in the transition on the question of whether this will be an important issue after the transition.<sup>6</sup> And the signal degradation cases from the analog era may not be applicable to the digital era – picture definition, viewer expectations, and measurement techniques will all vary significantly in the digital world. Indeed competition over picture quality has become a hallmark in the digital age.<sup>7</sup>

To the extent that the Commission proceeds with a comparative standard for digital nondegradation, MSTV and NAB are concerned about how the standard will be implemented. In the *First Report and Order*, the Commission established two requirements to avoid material degradation. “First, ‘a cable operator may not provide a digital broadcast signal in a lesser format or lower resolution than that afforded to any’ other signal on the system. Second, a cable operator must carry broadcast stations such that, when compared to the broadcast signal, ‘the difference is not really perceptible to the viewer.’”<sup>8</sup> Even if the Commission declines to impose an all content bits approach, that should not prevent the Commission from evaluating as evidence the removal of bits from broadcast signals when it is evaluating material degradation claims. For example, if a broadcaster could show that a cable system was stripping more bits

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<sup>6</sup> See *Third Report and Order* at n.19.

<sup>7</sup> As MSTV and NAB noted in their Reply Comments in this proceeding, “cable and satellite services are locked in a high stakes competitive battle over which system offers the best quality HDTV picture.” See *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules*, Third Report and Order, CS Docket No. 98-120, Reply Comments of the NAB and MSTV, at 22 (filed Aug. 16, 2007).

<sup>8</sup> See *Third Report and Order* at para. 7.

from a broadcast HD signal than it was from a cable HD signal during signal processing and/or transmission, then that should establish material degradation.<sup>9</sup>

In addition, if the broadcaster can show that there has been removal of bits, then that should be evidence of material degradation. Generally, it is not correct to assert, as the Commission did,<sup>10</sup> that it is possible to convert a broadcaster's compressed video signal to another compression format that uses fewer bits and still deliver the same subjective picture quality.<sup>11</sup> MSTV and NAB can find no such claim in the literature, and we are advised by our broadcast video engineers that some perceptible degradation always occurs in a concatenated decompress/recompress process. Depending on the specific programming and the care taken in the conversion process, the scale of output quality resulting from such a conversion can vary greatly from minimal degradation to the nearly unwatchable. The Commission should not base a material degradation standard only on ideal situations.

Even if the results of this conversion consistently yielded picture quality that was generally considered to be non-materially degraded, there is another problem that makes advanced compression scheme use problematic. Since none of the advanced compression schemes are backward compatible with MPEG-2, allowing their use on broadcast signals would immediately make those broadcast signals unwatchable on millions of digital cable-ready

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<sup>9</sup> See *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules*, First Report and Order, CS Docket No. 98-120, 16 FCC Rcd 2598, at n.209 (2001) (noting "the Act's general mandate of ensuring that cable operators do not favor their own cable programming video services over those video services provided by broadcasters").

<sup>10</sup> See *Third Report and Order* at para. 11.

<sup>11</sup> It is correct to assert that the newer (than MPEG-2) compression technology can be used to deliver the same picture quality in fewer bits, but both compression systems must have the same original source content as their input, not a cascade of compression/decoding/recompression steps.

television sets, as defined by the Commission. The Commission's argument that requiring the carriage of all content bits is inadvisable because it would inhibit the use of advanced compression schemes is therefore squarely at odds with the use of digital cable-ready television sets and not in the public interest. Maintaining backward compatibility with digital television products widely deployed in the marketplace is an important principle that should not be threatened by new regulatory decisions that conflict with this principle.

In short, there is no question that competition in the digital world will be a function of both consumer choice and quality. The definition of material degradation employed in the analog world may not be sufficient to provide consumer protection in the digital world. Even today, it is common for MVPDs retransmitting over-the-air broadcast signals to compress these signals significantly. The harm to the MVPD is minimal, because to the viewer, all of the programming provided by the MVPD appears the same. Nonetheless, the harm to consumers is real, because they are not receiving the full benefit and quality of the over-the-air digital broadcast signal. We are just beginning to gain real world experience with digital signals and consumer expectations. We urge the Commission to adjust its material degradation policies to insure that all consumers get the full benefit of digital television. Including a prohibition against bit-stripping as an element in its consideration of material degradation would help protect consumers and their expectations about the quality of HDTV and digital television signals.

Finally, we note that in the *First Report and Order*, the Commission stated that, in determining whether the cable system is materially degrading the signal, "the signal should be tested at the input terminal of either the television set or set-top box if the subscriber owns that piece of equipment. The signal should be tested at the output point of the set top box if the

subscriber rents that equipment from the cable operator.”<sup>12</sup> We believe that this is an appropriate approach to the issue of measuring signal degradation.

## **II. SYSTEMS WITH ACTIVATED CHANNEL CAPACITY OF 552 MHz**

The Commission determined that “operators of systems with an activated channel capacity of 552 MHz or less that do not have the capacity to carry the additional digital must-carry stations may seek a waiver from the Commission.”<sup>13</sup> MSTV and NAB object to this waiver decision. The Commission did not explain the statutory basis for providing relief for systems with 552 MHz or less of activated channel capacity. Congress has clearly articulated the bases for relief for systems that may have limited capacity. It has provided relief for systems with 12 or fewer usable activated channels, and for systems within that category with 300 or fewer subscribers.<sup>14</sup> Further, it has provided a one-third capacity cap to the must-carry requirement. And Congress did not articulate any caps or carve-outs to the viewability and material degradation requirement.<sup>15</sup>

The statutory requirement to ensure that signals are viewable to all subscribers and are not materially degraded is fundamental. All subscribers are entitled to a viewable signal and are entitled to be protected from material degradation. We respectfully submit that a special rule for systems with a capacity of 552 MHz or less would be contrary to the pro-consumer statutory framework that Congress has provided.

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<sup>12</sup> See *First Report and Order* at para. 75.

<sup>13</sup> See *Third Report and Order* at para. 37; see also *id.* at para. 119 (noting that “[s]uch systems must, however, commit to continue carrying an analog version such that their subscribers are assured of being able to view all must-carry stations carried on the system”).

<sup>14</sup> See 46 U.S.C. § 534(b)(1).

<sup>15</sup> See 46 U.S.C. § 534(b)(4)-(b)(7).

