

With regard to the scope of additional type A procedures:

Should the procedures cover a specific geographic area?

Should the procedures cover selected types of habitat?

Should the procedures cover selected types of resources?

Should the procedures cover selected types of releases (e.g., spills versus leachate from sites)?

Should the procedures cover selected hazardous substances?

Should the procedures cover all steps of the Assessment Phase or simply certain parts (e.g., injury determination or damage determination but not both)?

For which geographic regions, habitats, resources, types of releases, hazardous substances, or steps of the Assessment Phase are there adequate data with which to develop a type A procedure?

With regard to the form of additional type A procedures:

Should the Department develop additional computer models or should any additional type A procedures take a different form, such as a look-up table, a formula, or a model assessment or restoration plan?

Which form would be easiest to use?

Which form would be most useful in settlement negotiations?

Which form would be most useful in litigation?

With regard to the process for developing additional type A procedures:

Should the Department hold additional public meetings?

Should the Department hold meetings with specific interested parties?

Should the Department conduct a negotiated rulemaking?

Should the Department issue advance notices of proposed rulemaking soliciting comment on particular aspects of the procedures prior to issuing a proposed rule?

Dated: May 4, 1995.

Willie R. Taylor,

Director, Office of Environmental Policy and Compliance.

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BILLING CODE 4310-RG-P

ACTION: Proposed rule.

SUMMARY: In this proceeding, comment is sought on what procedural and substantive rules, if any, should be established regarding the transmission of ancillary digital data within the active video portion of broadcast television NTSC signals. This action is needed to determine how best to permit certain digital technologies to be integrated with the current television broadcast service (NTSC).

DATES: Comments must be submitted by June 23, 1995. Reply comments must be submitted July 10, 1995.

ADDRESSES: Federal Communications Commission, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Paul Gordon at (202) 776-1653 or James E. McNally, Jr. at (202) 418-2190.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's *Notice of Proposed Rule Making* in MM Docket No. 95-42, adopted April 10, 1995, and released May 2, 1995. The complete text of this *Notice of Proposed Rule Making* ("NPRM") is available for inspection and copying during normal business hours in the FCC Reference Center (Room 239), 1919 M St., NW., Washington, DC and also may be purchased from the Commission's copy contractor, International Transcription Service, at (202) 857-3800, 2100 M Street NW., Suite 140, Washington, DC 20037.

Synopsis of Notice of Proposed Rule Making

1. The Commission initiates this proceeding to determine how best to permit certain digital technologies to be integrated with the current television broadcast service (NTSC). Specifically, it seeks comment on what procedural and substantive rules, if any, should be established regarding the transmission of ancillary digital data within the active video portion of broadcast television NTSC signals.

2. Section 73.646 of the Commission's Rules allows the transmission, with prior Commission consent, of ancillary telecommunications services within the Vertical Blanking Interval (VBI) of television broadcast signals. No picture information is transmitted during the VBI. In order to ensure the public's ability to receive over-the-air video broadcast transmissions of the highest quality made possible by the current television standard, the Commission has generally not allowed the transmission of ancillary telecommunications services within the active video portion of broadcast television signals without specific approval.

3. Recently, two general approaches have been proposed to the Commission for the transmission of digital data. The first replaces the transmitted video signal with digitally encoded information in a part of the picture not normally seen by viewers because all TV sets to some extent "overscan" the picture to ensure that the portion of the picture tube that is visible is completely filled with the picture. To date, the Commission has authorized only the top line of the video picture (line 22) for such activity, although in theory, digital signals also could be concealed in the left or right edges of the picture, or at the bottom. The second method of concealing digital signals distributes them throughout the visible picture. The amplitudes of such signals are kept sufficiently low (or they are confined to such a limited part of the normally emitted video spectrum bandwidth) that they are invisible to the viewer. Tests of such systems indicate that, with a proper selection of system parameters, no degradation to picture brightness, contrast, color or focus is perceptible to the viewer.

4. On December 9, 1993, WavePhore, Inc. (WavePhore) requested a declaratory ruling that television broadcast licensees may, without prior Commission authorization, use WavePhore's "TVT1" system to transmit digital data signals. This system transmits digital data on a subcarrier within the standard 6.0 MHz NTSC television signal, between 3.9 MHz and 4.2 MHz above the visual carrier frequency, at an amplitude close to the video noise floor.

5. On November 22, 1989, the staff granted A. C. Nielsen Company ("Nielsen") temporary, conditional authority to use line 22 of the active portion of the television video signal to transmit the Nielsen Automated Measurement of Lineup ("AMOL") system signal identification codes. By a subsequent letter dated May 1, 1990, the temporary authority as extended until the Commission acts on the request for permanent authority, or until the temporary authority is expressly withdrawn.

6. As a result of the difficulties encountered in obtaining assurance that its system for identifying commercials would not be overwritten (and thus be rendered useless) by Nielsen's AMOL system, Airtrax filed a petition for rule making (RM-7567), which requested the Commission to set standard for "special signal" use of line 22. As justification for the rule making, Airtrax noted that even with the limited number of special signals currently authorized, disputes had arisen as to how to ensure

FEDERAL COMMUNICATIONS COMMISSION

47 CFR PART 73

[MM Docket No. 95-42, FCC 95-155]

TV Broadcast Service, Ancillary Communications Services

AGENCY: Federal Communications Commission.

compatibility of existing systems and to ensure that one entity's system would not preclude other users from access to line 22 at individual TV broadcast stations. Airtrax argued that the Commission had a statutory duty to promote the provision of new technologies and service to the public and that it should establish the ground rules by which competition may take place.

7. By letter of November 8, 1993 Yes! Entertainment Corporation ("Yes!") requested the Commission to permit television broadcasters to transmit a pulsed amplitude (7.5 to 100 IRE) signal at the beginning of each line of active video, yielding a data rate of 14,160 pulses per second, which could be coded to carry audio information. By means of equipment at a viewer's television receiver, this signal would be detected, processed and retransmitted from a set-top box to an external "TV Teddy" toy bear (a stuffed animal with a built-in receiver and speaker) for the purpose of making it "talk." Yes! indicates that there would be no visible degradation of received video because the affected portion of each scanning line is in an "overscanned" area.

8. On January 19, 1995, the Commission authorized Station WWOR-TV in Secaucus, New Jersey, to conduct tests of a data transmission technology developed by Digideck, Inc. (Digideck called "D-Channel." This system, like that of WavePhore, operates in the active video part of the TV spectrum and is represented as being imperceptible to viewers.

9. The commission believes that it does not yet have sufficient information upon which to act on the requests from Yes! and WavePhore and therefore initiates this proceeding to address them as well as the Airtrax petition. Both requests raise significant questions pertaining to potential use for other purposes and technical compatibility. The Commission solicits additional information in order to ascertain the long-term impact the authorization of these or other potential systems may have on broadcasters, the data transmitting industry, consumers, and others.

10. Generally, the Commission proposes that licensees be allowed to transmit acceptable data signals without prior Commission authority or notification but not be allowed to relinquish to the data or program supplier the right to delete the data. A licensee should be notified of any upstream data insertion in programming supplied to it unless the presence of the data is readily detectable. The Commission further proposes that a

licensee be required to maintain a copy at the station of any contract regarding ancillary data transmissions within the video, as is currently required for data transmissions in the VBI.

11. With the possibility that other manufacturers will want to employ different schemes for their own products or services, a substantial demand for such "hidden video spectrum" could develop, potentially posing difficult system compatibility problems. Maintaining the licensee's ultimate responsibility gives the broadcaster flexibility to choose among clearly mutually-exclusive uses. However, the Commission is concerned that newly-developed systems might be incompatible with systems already in use without that fact being obvious to the broadcaster. It is also possible that while a single system's digital data insertions on a particular video signal would cause no discernible degradation to reception of the TV signal by itself, a combination of transmissions could have destructive cumulative effects. Comment is sought on how to be certain that broadcasters and users are aware of such cumulative effects and also on how, if at all, such incompatibilities could harm consumers, broadcasters, or the data delivery industry. Comment is also sought on whether the resolution of questions concerning system compatibility and the impact of cumulative effects on the video signal should be left to presumably informed broadcasters or whether compatibility standards and insertion limits should be prescribed by regulation.

12. There are two fundamentally different methods employed to prevent the inserted data from being discernable to viewers. In this proceeding, the Commission will refer to them as "overscan" technology, where data is inserted at the top, bottom, right or left edge of the picture and "sub-video" technology, where data is inserted in a manner that could affect regularly viewable portions of the TV picture but would still not be detectable by the ordinary viewer. Line-22 uses and the Yes! proposal are examples of the "overscan" approach. WavePhore's and Digideck's proposals use the "sub-video" approach. Comments are sought to explore two aspects of these different approaches: discernable degradation and broadcasters' ability to delete the data.

13. Current policy generally does not allow any use of the video portion of the TV signal for ancillary purposes if the picture or sound would be adversely affected in a manner that is discernable by viewers. The Commission proposes to continue to require that broadcasters

not be allowed to use any digital data transmission system (or combination of such systems) that would perceptibly degrade the video signal. Comment is also sought on whether further reductions in overscan might result in signals in "overscan" areas becoming discernible to viewers in the future and on whether "overscan" technologies are visible on standard TVs and VCR recordings when "picture-in-picture" modes of viewing are invoked or will be more visible in the future when a TV signal is displayed as a "window" on a computer terminal graphics display. If development of these methods of television video display suggests that continuing use of "overscan" data transmission technology could create problems as the previously hidden information becomes visible on the screen, comment is sought on whether "overscan" technologies should be phased out in favor of more subtle, less intrusive methods of data transmission, and if so, on a timetable for such a phase out.

14. Comment is sought on whether there is some method by which picture degradation or "distortion" due to sub-video methods of data transmission can be objectively measured and on whether there is some limit which should not be exceeded. Comment also is invited on the extent if at all, the Commission should permit alteration of the video signal or the video bandpass characteristics to permit the insertion of data. Any further information on the potential for Digideck's D-Channel system to cause adjacent channel interference also is requested. Finally, the Commission asks whether some types of receivers might be more prone to showing degradation caused by any method of sub-video data transmission.

15. Licensees must maintain control over all aspects of their signal, including data transmissions within the video and must thus retain the right to reject any material they deem unsuitable. Comment is sought on whether an ability to reject the entire program should be considered to satisfy this obligation or if any acceptable data insertion method must allow the broadcaster the option of stripping out the data.

16. "Overscan" data signals are limited to specific places in the picture and are easily deleted by the licensee. Comment is sought on what would happen to the picture if the licensee deletes sub-video data, if the licensee replaces sub-video data, and if multiple occurrences of such deletions or replacements take place. The Commission is concerned that individually insignificant degradations

to the picture could become cumulative, noticeable, and objectionable.

17. The Commission wishes to encourage the use of television signals for ancillary data transmission and to permit new technological developments. Comment is sought on whether special rules should be applied to digital data transmissions that are directed to the general public.

18. While the Commission seeks comments now to expedite resolution of this proceeding and to gain information that can assist any interim decisions it may make, it intends also to consider the work of the National Data Broadcasting Committee as requested by several commenters in this proceeding.

19. The Commission next seeks comments on whether there are limitations that should be imposed on a technical standard developed by industry. The Commission asks whether any system that may be recommended as a standard must be "partitioned by use" at the time of its possible adoption or whether its design permits its adaptation to potential future uses on a flexible or dynamic basis. This question should also be considered in relation to digital signal decoders that might be used by the general public, either as an optional accessory provided on certain models of televisions or as some kind of external converter.

20. Comment is sought on how the rules should reflect the industry standards. The options range from continuing to authorize such transmissions on an *ad hoc* basis to adopting a comprehensive set of rules defining and regulating permissible transmissions. Comment is requested on adopting rules analogous to those that govern multichannel television sound, where an industry committee evaluated the technology and recommended a standard. The Commission's Rules refer to the standard, which is also published in a Bulletin issued by the Commission's Office of Engineering and Technology, but are only designed to protect receivers designed to the standard from signals to which they would respond incorrectly.

21. Pending the Committee's completion of its work, comment is invited on whether the Commission should consider the near-term authorization of individual methods of such transmission on an *ad hoc* basis. The Commission expects technical conflicts between users to be resolved by the individual licensees, but requests comments on whether Commission involvement or guidance is necessary to focus licensee decisions on the public interest. Commenters are invited to

address how questions of picture or sound degradation can be resolved.

22. The Commission proposes that the policies currently contained in Sections 73.646 (which sets forth the rules currently applicable to non-broadcast services provided in the VBI) and 73.667 (TV subsidiary communications services) be extended to include non-broadcast use of overscan and sub-video data transmission technologies.

23. Lines in the VBI are also used for broadcast and broadcast-related services. The Commission proposes to permit both broadcast and broadcast-related use of sub-video data transmission technology and asks for comment on this proposal.

24. As a final matter, given the pendency of the advanced television proceeding, MM Docket No. 87-268, which proposes to replace the current NTSC transmission standard, the Commission seeks comment on whether by further enhancing NTSC television in the manner described herein the Commission would provide a disincentive for the public to readily accept and upgrade to the digital service that the Commission expects will be introduced in the near future. Similarly, the Commission requests comment on the extent to which enhancing NTSC service in the manner described herein could slow or create a disincentive to the recovery of the spectrum currently used by NTSC stations, as discussed in the advanced television proceeding.

Procedural Matters

25. Pursuant to applicable procedures set forth in §§ 1.415 and 1.419 of the Commission's Rules, 47 CFR 1.415 and 1.419, interested parties may file comments on or before June 12, 1995, and reply comments on or before June 27, 1995. To file formally in this proceeding, you must file an original and four copies of all comments, reply comments, and supporting comments. If you want each Commissioner to receive a personal copy of your comments, you must file an original plus nine copies. You should send comments and reply comments to the Office of the Secretary, Federal Communications Commission, Washington, DC 20554. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center, room 239, at the Federal Communications Commission, 1919 M Street NW., Washington, DC 20554.

26. This is a non-restricted notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in the Commission rules. See

generally 47 CFR 1.1202, 1.1203, and 1.1206(a).

Initial Regulatory Flexibility Act Statement

I. Reason for Action

In recent years, a number of requests have been submitted to the Commission concerning systems of embedding digital data within television video signals. These proposals raise important questions about how embedded data systems could be accommodated, concerns over the extent to which broadcasters' control over their signals may be impaired or lost, and to what degree embedding multiple digital signals in the television picture may result in discernable picture degradation.

II. Objectives of the Action

The purpose of this proceeding is to develop policies and rules defining the respective rights and responsibilities of broadcast licensees and persons wishing to provide different types of digital information service, to explore the potential uses of such digital technology, to determine to what extent different systems may be compatible, to determine whether a national technical standard is necessary for the provision of such service, and to determine the probable impact of such service on the quality of primary television service.

III. Legal Basis

Authority for the actions proposed in this Notice may be found in Sections 4(i) and 303 of the Communications Act of 1934, as amended, 47 U.S.C. 154 and 303.

IV. Reporting, Recordkeeping and Other Compliance Requirements

Policies adopted in this proceeding could lead to increased record-keeping requirements being imposed on broadcast licensees and/or providers of digital information service. If such requirements are imposed, they would probably take the form of such entities being required to maintain copies of contracts relating to the provision of such service and making them available to the Commission upon request.

V. Federal Rules Which Overlap, Duplicate or Conflict With These Rules

None.

VI. Description, Potential Impact and Number of Small Entities Involved

Approximately 10,000 licensees of television broadcast facilities of all types (Commercial and educational VHF and UHF stations, translators, boosters and Low Power TV stations) could be

affected. The number of digital service providers affected would probably be much less.

**VII. Any Significant Alternatives
Minimizing the Impact on Small
Entities Consistent With Stated
Objectives**

A decision to implement a national standard applicable to all digital information to be contained within the television picture, in conjunction with a decision as to the general types of information that could be provided, could greatly reduce or eliminate the compatibility problems related to the provision of digital data services and decrease the need for additional record-keeping requirements.

27. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the proposals suggested in this document. The IRFA is set forth above. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines as comments on the rest of the Notice, but they must have a separate and distinct heading designating them as responses to the Initial Regulatory Flexibility Analysis. The Secretary shall send a copy of this Notice of Proposed Rule Making, including the Initial Regulatory Flexibility Analysis, to the

Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603(a) of the Regulatory Flexibility Act. Pub. L. 96-354, 94 Stat. 1164, 5 U.S.C. Section 601 *et seq.* (1981).

28. Authority for the proposed amendments is contained in Section 4(i) and 303 of the Communications Act of 1934, as amended.

List of Subjects in 47 CFR Part 73

Television broadcasting.

Federal Communications Commission.

William F. Caton,

Acting Secretary.

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