

CHAPTER 2330
CABLE COMMUNICATIONS BOARD
INTERCONNECTION

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2330.0100 DEFINITIONS.

Subpart 1. **Scope.** As used in this chapter, the following words and phrases shall have the meanings given them herein unless a different meaning clearly appears in the text.

Subp. 2. **Interconnection.** "Interconnection" is the provision of broadband electronic linkage between cable communications systems as defined in Minnesota Statutes, section 238.02, subdivision 3, by means of coaxial cable, microwave, or other means whereby the electrical impulses of television, radio, and other intelligences, either analog or digital, may be interchanged, provided that the term "interconnection" does not include the relaying by coaxial cable, microwave, or other means of television broadcast signals intended for redistribution by the cable communications systems or systems receiving such signals.

Subp. 3. **Interconnection entity.** "Interconnection entity" is an entity involved in the construction and operation of an interconnection system, either cable or microwave, providing interconnection services to cable communications systems as defined by Minnesota Statutes, section 238.02, subdivision 3.

Subp. 4. **Interim interconnection.** "Interim interconnection" is the provision of temporary interconnection between two or more existing cable communications systems brought about through the mutual participation of those systems and without the intervention of a separate interconnection entity, as defined in subpart 3.

Subp. 5. **Regional channel.** "Regional channel" is a segment of the electromagnetic spectrum provided by cable communications systems or an interconnection entity operating within the twin cities metropolitan area for programming on the standard VHF Channel 6.

Subp. 6. **Regional channel entity.** "Regional channel entity" is an entity designated by the board for purposes of scheduling the programming and facilitating the use of the regional channel.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*

2330.0200 RULES CONSTRUCTION.

Parts 2330.0200 to 2330.1000 shall be liberally construed to effectuate the purposes and provisions of Minnesota Statutes, section 238.05, subdivisions 2, paragraphs (c) and (d), and 12.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*

2330.0300 INTERIM INTERCONNECTION.

Subpart 1. **Information required.** In accordance with the provisions of Minnesota Statutes, sections 238.05, subdivision 2, paragraph (c) and 238.06, subdivision 5, the board upon suitable showing of need, may order the interim interconnection between cable communications systems. Before an interim interconnection occurs, the parties designated herein shall submit to the board the information specified herein.

The cable companies involved shall submit the following information: a full schedule of capital costs anticipated for such interconnection; a projection of expected operating costs; and an identification of the economic effect of such proposed interconnection upon existing cable service.

The parties seeking to arrange the interim interconnection shall submit the following information: a description of available sources of capital for construction and operating, including programming, of the interconnection system; and an identification of the uses, with a description of the attendant benefits, of such interconnection.

Subp. 2. **Notice and hearing.** The board may hold a meeting to receive testimony from interested persons concerning the proposed interim interconnection. At least 30 days notice shall be provided to all interested persons. Any cable communications system potentially involved in the interconnection shall carry an appropriate notice of the hearing on its system for at least five consecutive days immediately preceding the hearing. The board may order interim interconnection incorporating the interconnection plan if it is satisfied from all available evidence that such plan is in the public interest, will be fair both to participating systems and the public, and will not impair the ability of any system to deliver other services to subscribers and users. In determining whether to order an interim interconnection, the board may also consider the extent to which the interim interconnection plan is compatible with the applicable operational objectives contained in parts 2330.0700 to 2330.1000.

Subp. 3. **Board duties concerning interim interconnection.** In the event that interim interconnection occurs, the board may assume jurisdiction over the provision of such interim interconnection. The board shall have the following responsibility and duties:

A. assisting in the resolution of complaints, disputes, or disagreements between subscribers and participating cable communications systems and franchising authorities should the parties not first be able to resolve such disagreements;

B. requiring and reviewing reports regarding the operation of such interim interconnection as may be deemed appropriate; and

C. assuring that all tariffs and rules pertinent to the operation of the interim interconnection have been filed with the board.

Subp. 4. **Two-way transmissions and additional channels.** The board shall require interim interconnections within the Twin Cities metropolitan area to provide capacity for two-way transmission on a regional channel. In addition, as usage of the regional channel expands to such point as it is in use during 80 percent of the time between 8:00 a.m. to 10:00 p.m. during any consecutive six-week period, the persons providing interim interconnection shall have two months in which to make an additional channel available for regional channel entity use provided that provision of such additional channel or channels shall not require that cable system to install converters. However, nothing in this part shall be construed so as to preclude the installation of converters by the system on a voluntary basis, or as a result of an agreement arrived at through negotiation between the parties to a franchise, or by a potential access user who wishes to install converters in order to make use of an additional channel or channels.

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Subp. 5. **Limitation.** Nothing contained in this part shall be applicable to an interim interconnection operational on or before January 1, 1975, for a period of five years beginning January 1, 1975; provided, however, that the board may require substantiation of the date on which an interim interconnection became operational.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*

2330.0400 REGIONAL CHANNEL.

The board hereby requires that all franchises for cable communications systems franchised in whole or in part within the twin cities metropolitan area shall contain a provision designating the standard VHF channel 6 for uniform regional channel usage; provided, however, that until the regional channel becomes operational, the designated VHF channel 6 may be utilized by the cable communications company as it deems appropriate. Subject to approval of the municipality concerned, such designated regional channel may be shared with the government access channel as may be required until such time as the municipality requests a separate channel or until combined usage of the channel expands to such point as it is in use during 80 percent of the time between 8:00 a.m. and 10:00 p.m. during any consecutive six-week period. Use of time on the regional channel or channels shall be made available without charge.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subd 2 paras (c),(d)*

2330.0500 REGIONAL CHANNEL ENTITY.

Subpart 1. **Duty of board.** The board upon the activation of the regional channel as defined in part 2330.0100, shall designate a regional channel entity for the Twin Cities metropolitan area.

Subp. 2. **Designation procedures.** The board may designate the regional channel entity after the board has reviewed and approved an applicant's qualifications in accordance with the procedures provided hereinafter.

A. The board may, upon the activation of the regional channel, entertain requests for consideration of the designation of a regional channel entity. In the event the board determines to designate a regional channel entity, the board shall give public notice of that intention.

B. The board shall require that all requests for designation for the regional channel entity contain a description of the applicant's proposed operation along with such other supporting information as the board may require.

C. The board shall, in its designation of an applicant for programming and facilitation of use of the regional channel, consider the following criteria:

(1) the plans for programming including identification of sources, users, and revenues;

(2) plans for fostering extended regional participation in existing and expanded regional channel uses;

(3) terms and conditions under which regional channel usage is made available to participants insuring that priority is given to public use of the channel; and

(4) participatory representation of users in the entity operational structure and the demonstrated identification of such applicants with the regional public interest.

Subp. 3. **Public meeting.** The board shall consider such applications at a public meeting providing reasonable opportunity for all interested parties to be heard.

Subp. 4. **Designation effective for three years.** The board shall confer designation on such regional channel entity for a period of three years.

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Subp. 5. **Renewal.** Renewal of such designation shall be issued only after full board proceedings and shall be a period specified by the board. The procedure for obtaining a renewal of such designation shall be the same as is herein provided for obtaining the initial designation.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subd 2 para (d)*

2330.0600 INTERCONNECT ENTITIES.

Subpart 1. **Compliance with standards.** No person shall, without prior notification to the board, construct, install, maintain, or operate within the state of Minnesota any equipment or facilities for an interconnection entity unless such activity complies fully with all standards provided in parts 2330.0700 to 2330.1000 and the provisions of this part.

Subp. 2. **Responsibilities.** Interconnect entities are responsible for:

A. the establishment and maintenance of facilities and personnel necessary to the provision of interconnection services between cable communications companies and interconnection entities within the state and the provisions of interconnection with interstate telecommunications networks as they may develop;

B. the provision of service of such interim interconnection and the acquisition of such interim interconnection equipment as may be of demonstrable benefit to the entities in the provision of their operation, provided the owners of such interim interconnection equipment desire such purchase by the interconnection entities; and

C. if operating in the Twin Cities metropolitan area and in addition to the other requirements as may be deemed necessary by the board, the assumption of responsibility from cable communications companies for providing two-way transmission of a regional channel.

Subp. 3. **Information for board.** Before an interconnection entity commences operation, it shall submit to the board the following information:

A. plans for channel capacity including both immediate and eventual capacity;

B. plans for the interconnection system layout design operation and service area;

C. the terms and conditions, including tariffs, under which services are to be provided;

D. the time schedule for construction of the entire system including a timetable for acquisition of existing interim interconnection systems;

E. the entity's qualifications and/or experience in the broadband telecommunications field;

F. the operation's pro forma identifying anticipated expenditures and revenues associated with the construction and operation of the proposed system;

G. the plans for financing the proposed system;

H. descriptions of the equipment used in providing interconnection; and

I. such other information as the board may deem relevant.

Subp. 4. **Public meetings.** The board shall hold a meeting to receive testimony from interested persons concerning the operation of any proposed interconnection entity. At least 30 days notice shall be provided to all interested persons by publication at least once in a newspaper of general circulation in each municipality involved in the interconnection. The board may approve a request incorporating the plan of operation of any interconnection entity if it is satisfied from all available evidence that approval of such plan is in the public interest, will be fair to participating systems and the public, and will not impair the ability of any system to deliver services to subscribers and users. The board shall issue written findings based on its enunciated standards in determining

whether to approve an interconnection entity. Such approval shall be conditioned upon the receipt of all licenses and permits from appropriate agencies necessary for the construction and operation of any interconnection entity.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*

TECHNICAL STANDARDS FOR INTERCONNECTION ENTITIES

2330.0700 COMPLETION OF INTERCONNECTIONS.

Subpart 1. **Minimum standards for microwaves.** Whenever an interconnection is completed via a microwave circuit, the following shall be the minimum operational objectives as measured at the microwave receiving location.

A. Composite video and associated sound levels: the composite video level shall be one volt peak to peak ± 0.1 volts across 75 ohms. The associated sound carrier level shall be maintained 20 db below the one volt peak to peak video level.

B. Differential gain: the differential gain objective of the microwave system shall be within ± 1.5 db (50 percent APL).

C. Differential phase: the differential phase objective of the microwave system shall be within ± 2.25 db (50 percent APL).

D. Frequency response: 60 Hz square wave tilt shall be within two percent, ten KHz-4.5 MHz within ± 1.0 db.

E. Signal to noise: the peak to peak signal to RMS noise ration shall be weighted per CCIR and determined by the following formula: $S/N = 65 - 10 \log N$ where N equals the number of hops in the interconnection.

F. Design reliability: for microwave interconnections, the total microwave path, whether single or multiple microwave hops, shall have a design reliability of no less than 99.9 percent per operational week. Outages due to causes beyond the control of the interconnection entity, shall not be counted as to the allowable outages accrued.

G. Demodulator requirements: field proven state of the art demodulators shall be used to process the "off the air" signals prior to insertion onto the carriers' microwave systems. The final composite video as measured with a 75 ohm terminal load shall not exceed the following:

- (1) differential phase of $\pm .5$ degrees;
- (2) differential gain of $\pm .25$ db;
- (3) group delay of ± 50 ns;
- (4) 20 db IF quieting with 100 uv input.

Subp. 2. **Minimum standards for cable systems.** Whenever a cable system acts as a final link in an interconnect path for video signals, its technical operational objectives as measured at the using subscriber location shall as a minimum be in accordance with the technical requirements set forth in part 76, subpart K of the Federal Communications Commission's rules and regulations for Class I signals in Code of Federal Regulations, title 47, or those set forth in its franchise, whichever is more stringent.

The signal level as measured across 75 ohms at the video carrier frequency at the using subscribers locations shall be not less than 1,000 microvolts.

All specifications set forth above shall be met over an outdoor temperature range of -20 degrees Fahrenheit to +100 degrees Fahrenheit over variations in supply voltages from 105 to 130 VAC.

Subp. 3. **Data grade signals.** Whenever an interconnection is completed via either a microwave or coaxial cable circuit for the transmission of data grade signals, the technical operational objectives shall be in accordance with the specifications promulgated by the Federal Communications Commission for data grade signals. In the absence of any such specifications, the interconnect entity and its subscriber shall mutually agree on the objectives and file pertinent data

with the board.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*

2330.0800 COAXIAL CABLE FACILITIES.

Subpart 1. **Video signals.** Whenever a coaxial cable facility acts as the initial or interim link in an interconnect path for video signals, its technical operational objectives as measured at the end interface location shall as a minimum be in accordance with the technical requirements set forth in part 76, subpart K of the Federal Communications Commission's rules and regulations for Class I signals in Code of Federal Regulations, title 47. In addition the following design requirements shall be observed:

A. The video carrier level to RMS noise ratio shall be not less than 43 db across a four MHz band as measured across 75 ohms.

B. For interconnection of multiple video channels, spurious beat components shall be not less than 52 db below the video carrier level for the worst channel.

C. For interconnection of multiple video channels cross modulation components shall be not less than 63 db below the video carrier level for the worst channel.

D. Ghost, echoes, hum modulation, and other coherent disturbances shall be not less than 40 db below the video carrier level.

E. The ratio of the amplitude of the horizontal synchronization pulse to peak color burst shall not be greater than two db.

F. The signal level as measured across 75 ohms at the video carrier frequency at the using subscribers location shall not be less than 1,000 microvolts.

G. All specifications set forth above shall be met over an outdoor temperature range of -20 degrees Fahrenheit to +100 degrees Fahrenheit over variations in supply voltages from 105 to 130 VAC.

Subp. 2. **Data grade signals.** Whenever a coaxial facility acts as the initial or interim link in an interconnection path for data grade signals, its technical operational objectives shall be in accordance with the specifications promulgated by the Federal Communications Commission for data grade signals. In the absence of any such specifications, the cable system, the interconnect entity, and the subscriber shall mutually agree on the objectives and file pertinent data with the board.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*

2330.0900 REPORT OF MEASUREMENTS.

At the completion of the installation of any interconnection, the interconnecting entity shall conduct a measurement of all specifications set forth herein and file these with the board. Also upon written request, remeasurements may be requested at any time by the board.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*

2330.1000 COMPLIANCE WITH BOARD.

The board may require full compliance with the objective standards in parts 2330.0200 to 2330.1000 and the performance of such tests as may be necessary to assure compliance in order to resolve such recurring problems in performance as may be brought to the attention of the board. In addition, the board reserves the prerogative to impose more stringent standards as may be necessary to resolve such problems.

Statutory Authority: *MS s 238.04 subd 9; 238.05 subds 2 paras (c),(d),12*