



Recommendation WG 1.92.034

TERRESTRIAL EPCN FORMAT

www.nhma.org

NSMA RECOMMENDATION WG1.92.034

TERRESTRIAL EPCN FORMAT

ADOPTED 5-13-96

**Terrestrial Microwave
Prior Coordination Notice (PCN) Format v2.0**

This document describes the recommended format for the electronic transfer of Terrestrial Microwave Prior Coordination Notices (PCNs).

1. Introduction

This version (2.0) of the Terrestrial Microwave Prior Coordination Notice (PCN) Format for electronic transfer was developed to recognize and accommodate the following needs:

- Since the electronic PCNs will be sent by e-mail and will in some cases be processed by computer, header and footer coding needed to be added to enable extraction of the PCN data from the e-mail message
- Because some e-mail systems cannot handle long lines without introducing errors, the line length needed to be limited to 80 characters
- To prevent truncation of vital data in fields containing codes or free-form data when converting between FCC, ITU, Industry Canada and the coordinating organizations, some field sizes needed to be expanded.
- Because of difficulties experienced in programming the conversion from version 1.0 of the electronic PCN format to in-house systems, definitions needed to be made clearer for some fields and some fields needed to be added

The general layout of an e-mail message containing PCN data would be as follows:

E-mail message header
Beginning of e-mail message body

PCN header
PCN
or
Conversion error report
or
Conversion success report
or
List of affected operators report
PCN footer

End of e-mail message body

It is intended that the reports which may take the place of the PCN in the foregoing layout will be read by a human being rather than a computer and may have a variety of formats and any length. The computer processing the e-mail message containing the PCN free-form reports must be programmed to recognize the field in the Header Record which signals this free-form content and

store it in a file rather than in indefinite fields in a table or spreadsheet. The file would then be routed to an e-mail address keyed by the coordinator fields in the initial PCN.

To overcome the problems created by long lines (over 80 characters) in some mail systems, all ASCII PCNs must be converted to the uuencoded format which has a line length limited to 80 characters.

It may be desirable to compress and/or encrypt a PCN. "ZIP" indicates compression using PKZIP software. "PGP" indicates encryption using the Pretty Good Privacy software. Most message systems require that the compressed and/or encrypted portion be uuencoded (or the PGP equivalent) before transmission to translate binary to ASCII characters. This part will then be unreadable without decoding and decompression and/or decryption. To alert the reader (human or computer) to the process that was used and to allow extraction of the file, the header and footer are transmitted in the original ASCII

The agreed-upon combinations of encoding, compression and encryption are shown in Table 1, Header Record Fields, field 1, Text Format.

A comma (,) delimiter between fields and double quotes (") around each free-form field (a field which may contain commas) have been chosen to enable importation of the flat file into spreadsheets used commonly in Personal Computers (PC). This choice was based on the belief that most users will be pre-processing the data in PCs before entering it into a larger (UNIX) computer for interference analysis against a large database. To enable separation of the header and footer portions of the message (in either the PC or the larger computer), a dollar sign (\$) is used as a flag (within its own field) to signal the start of the header and the footer.

To ease the detection of the end of a record in a UNIX environment, a carriage return and line feed are inserted between each pair of records and after the last record

2.0 Header and Footer

The PCN header tags the beginning of the PCN data part of the e-mail message. The footer tags the end of the PCN data. Thus, a computer reading the message can extract the PCN data from the overall message. The header contains the text format, the type of data (PCN, conversion error report, conversion success report, list of affected operators report), format version number, the serial number of the PCN the revision number of the PCN and the revision date. See Attachment 4 for examples of PCN header and footer usage.

All the header and footer fields are required, with the idea that, at some time, all Electronic PCNs may be read by a computer.

2.1 Header Record

The content and format of the header record are described in Table 1.

2.2 Footer Record

The footer record consists merely of \$EPCN End\$

Table 1. Header Record Fields

Field	Maximum Length	Description of Data Field	Con/Opt/Req
1	5	Text format - ASCII: ASCII, uuencoded - ZIP: Compressed using PKZIP & uuencoded - PGP: Encrypted, compressed and encoded using PGP.	Req
2	9	Type of the PCN and the format version - EPCNT2.0 Terrestrial - EPCNE2.0 Earth Station - EPCNP2.0 Personal Communication System (Future use)	Req
3	12	PCN data being sent - EPCN: Electronic PCN - EPCN Errors: Errors found in conversion to receiving system - EPCN OK: EPCN converted to receiving system OK - EPCN Op List: List of potentially affected operators	Req
4	10	PCN Internal ID (serial #) - Unique to the originating coordinator	Req
5	2	Revision number of this PCN serial number - 00 to 99	Req
6	8	Date of this revision - YYYYMMDD	Req

3.0 PCN Body - General

A. In the field description tables, all fields marked '**Req**' are required for intra-United States of America coordination only and must be included. That is, transborder coordinations may require the use of less or more fields for proper exchange of PCN data between American and Canadian companies or American and Mexican companies. Fields marked '**Con**' are conditional, but may be required. If the conditions are not obvious, they are listed. Fields marked '**Opt**' are optional. Fields marked '**Info**' are informational and, if included, are used for verification.

In Canada, FCSA will not enter fields which are related to PCN type or status, as the PCN is not an official document required by Industry Canada. Also, FCSA will enter its own codes for antennas, equipment and loading but will recognize FCC/NSMA codes in incoming PCNs.

The format of the PCN record is generic. That is, it is to be used for both Terrestrial and Earth Station EPCNs. When using the format for Terrestrial coordination the Earth Station specific fields are null, and vice versa when it used for Earth Station coordination. Specifically, fields 23, 24, 25 and 26 are used only for Temporary Earth Station PCNs. All other fields may be used for either an Earth Station coordination or a Terrestrial coordination.

B. For increased readability, use both upper and lower case letters for descriptions and narratives.

C. The Electronic Terrestrial Microwave PCN consists of one PCN record followed by an even number of Path records. If a PCN is informational, there might not be any Path records.

D. The fields are separated with a comma (,) and do not require justification or padding. Where a field may contain comma(s) it must be surrounded by double quotes, as well. There must be one delimiter (,) per field per field in each record whether the field is blank or not. An asterisk (*) in both the status code and polarity code for a blank frequency signifies the end of meaningful data in the Path Record and there is no need to include more commas after the asterisk fields. Only printable ASCII characters can be used for data. The PCN record and each path record is followed by a blank line (a carriage return and line feed at the beginning of a line). See Attachment 4 for examples.

E. Use the two-character United States Postal Service standard abbreviation for the State Code, or the two-character Canadian Postal Service standard abbreviation for the Province Code.

F. There is sufficient room in all numeric fields for a minus sign (-) and, if needed, a decimal point, (.). If no sign is entered, the value is positive. If no decimal point is entered, the number is an integer.

G. Passive repeaters will have one pair of Path records from Station A to the repeater and a second pair from the repeater to Station B.

H. There will be no more than one PCN per e-mail message and it will be identified by the PCN Internal ID plus revision number in the header.

3.1 PCN Record Description

The PCN record contains data describing the entire PCN, including who is doing the coordinating and for which Owner/Licensee it is being done. The relationship of this PCN to the previous PCN is included for tracking purposes.

As plans change, paths and frequencies may be removed or added from the PCN, or the data itself may be changed. Five fields in the PCN record reduce confusion by linking this PCN to a previous PCN revision. The fields and their numbers are as follows: PCN Revision 0 Date(4), PCN Type(27), and Previous PCN Revision Date(28).

For example, if an Owner/Licensee wants to add a fourth hop to a 3-hop PCN already in coordination, he/she would send a PCN revision showing all four hops. In this case, field 27 of the PCN revision would contain an 'S' to indicate this PCN revision supersedes another, and field 28 would contain the Date of the superseded PCN revision.

These linking fields are used with fields at the path and frequency level. See Section 3.2.1 and 3.2.2 for more information on these fields.

As some coordinators may prefer initially to process PCN revisions as a whole, rather than analyzing the effect of revised portions in isolation, field 27 and the related change code fields in the Path record are classed as Optional.

Table 2 describes the PCN record in detail.

Table 2. PCN Record Fields

Field	Maximum Length	Description of Data Field	Con/Opt/Req
1	3	Type of Coordination Refer to Attachment 1	Req
2	15	Coordinating company code - Assigned by FCC or Canada - 0000 if no code assigned	Req
3	2	Coordinating company code suffix -Use for alternate mailing address	Opt
4	8	Date original PCN was issued (revision 0) - YYYYMMDD	Req
5	40	Frequency Coordinator. Company name	Req
6	40	Frequency Coordinator title/dept.	Info
7	50	Frequency Coordinator street address	Req
8	20	Frequency Coordinator city	Req
9	2	Frequency Coordinator state	Req
10	10	Frequency Coordinator ZIP code	Req
11	10	Frequency Coordinator telephone, numerics only	Req
12	15	Owner/Licensee company code - Assigned by Frequency Coordinator - 0000 if no code assigned	Req
13	2	Owner/Licensee code suffix - Use for alternate address	Opt
14	40	Owner/Licensee Co. name	Req
15	50	Owner/Licensee street address	Req
16	20	Owner/Licensee city	Req
17	2	Owner/Licensee state	Req
18	10	Owner/Licensee ZIP code	Req
19	10	Owner/Licensee telephone, numerics only	Req
20	40	Owner/Licensee e-mail address	Opt
21	60	PCN site , hop or route description	Req
22	180	PCN description and purpose	Opt

Table 2. PCN Record Fields (Continued)

Field	Maximum Length	Description of Data Field	Con/Opt/Req
23	8	Start of operation date - YYYYMMDD - Req if Temporary Earth Station	Con
24	8	End of operation date - YYYYMMDD - Req if Temporary Earth Station	Con
25	10	On-site Phone Number - Req if Temporary Earth Station, numerics only	Con
26	40	On-site e-mail	Opt
27	1	PCN type code - C: Cancel. - I: Informational PCN only - N: New PCN. No previous PCN. - R: Renewal PCN. No changes. - S: Superseding PCN	Opt
28	8	Date of previous revision of PCN - YYYYMMDD - Req if field 27 is R, C, or S	Con
29	1	Owner/Licensee request - A: System added with this PCN - C: Change existing system with this PCN - D: Turn down existing system - N: No Change from previous PCN. Only for Cancel or Renewal - R: Remove PCN from Coordination - U: Turn up new system	Req
30	8	Requested reply date - YYYYMMDD - Req if field 27 is N, R, or S	Con
31	2	Number of pairs of path records	Req

3.2. Path Record Description

Path records contain all the technical information necessary to perform interference calculations, including location, antenna, equipment, and frequency information. There is a separate Path record for each direction on a hop. All frequencies in a band on a single transmitter and receiver pair of antennas and equipment should be grouped together on a single Path record. If automatic power control (APC) is used then fields 40 and 41 are required and the APC study must be attached to the PCN as ASCII data set delineated by commas.

There will always be a pair of Path records for each hop. The first record of each pair will have an 'A' suffix to the record number; the second, a 'B'. Each A/B Pair will have the same record number. If a transmit frequency in one direction has no corresponding frequency in the opposite direction, some of the data fields in the pair of Path records will be empty.

3.2.1. Links to Previous Paths

As PCNs are superseded, time may be wasted processing the whole PCN instead of only the changed parts. Many fields are used to reduce this work. The Owner/Licensee Request field, (2), shows what the Owner/Licensee wants to do with this path.

Other fields show if changes have been made in a particular section of the PCN. The fields and their numbers are as follows: Latitude/Longitude Change Code(7), Transmitter Change Code(21), Receiver Change Code(28), Diversity Change Code(35), Transmit Power Change Code(42), Equipment Change Code(46), Amplifier Change Code(51) and Loading Change Code(57).

As some coordinators may prefer initially to process PCN revisions as a whole, rather than analyzing the effect of revised portions in isolation, the change code fields in the Path record are classed as Optional.

3.2.2. Links to Previous Frequency

As PCNs are superseded, frequencies being prior-coordinated can be added, deleted, or have their polarization changed. The Transmit Frequency Status field shows the status of these frequencies as of the PCN revision Date. A frequency being prior-coordinated is considered 'added' the first time it shows up on a PCN. A frequency is considered 'changed' on the first superseding PCN revision showing the polarization change. Otherwise, a frequency being prior-coordinated is considered 'not changed.'

For completeness and verification, the PCN should contain all licensed or coordinated frequencies between the transmitter- receiver pair that are controlled by the Owner/Licensee.

All frequencies listed as Coordinated, License Applied For, or Construction Permit Granted will be renewed if this is a Renewal PCN.

Table 3 gives a detailed description of the Path record.

TABLE 3. PATH RECORD FIELDS

Field	Maximum Length	Description of Data Field	Con/Opt/Req
1	5	Path record number - Numbered sequentially in pairs. - Sequence is 0001A, 0001B, 0002A,...	Req
2	1	Owner/Licensee request *- C: Change this existing path *- D: Turn down this licensed path - R: Remove path from Coordination - N: No Change from previous PCN - A: Path added with this PCN	Req
3	20	Call Sign - Fictitious call signs start with '?' - Req if transmitter	Con
4	20	Site name	Req
5	30	Site county	Req
6	2	Site state code	Req
7	1	Latitude/longitude change code - C: Changed from previous PCN - N: No change from previous PCN	Opt
8	3	Site latitude, degrees Use (-) to indicate South	Req
9	2	Site latitude, minutes	Req
10	5	Site latitude, seconds - to 2 decimal places (SS.SS) e.g., 52.00	Req
11	4	Site longitude, degrees Use (-) to indicate West	Req
12	2	Site longitude, minutes	Req
13	5	Site longitude, seconds - to 2 decimal places (SS.SS)	Req
14	1	Datum flag for location & elevation - (1 for NAD83, 2 for NAD27) See Attachment 2	Req
15	2	Site location accuracy - 01 to 99 meter tolerance	Opt
16	5	Site ground elevation - Above Mean Sea Level, meters, integer	Req
17	2	Site elevation accuracy - 01 to 99 meter tolerance	Opt
18	20	Antenna tower registration Number	Opt

* These request classifications are not currently used in practice. They are retained for possible future use.

TABLE 3. PATH RECORD FIELDS (Continued)

Field	Maximum Length	Description of Data Field	Con/Opt/Req
19	15	Owner/Licensee company code - Assigned by FCC or Canada - Use 0000 if no code assigned	Req
20	2	Owner/Licensee company suffix - Use for alternative address	Opt
21	1	Transmitter change code - C: Changed from Previous PCN - N: No change from Previous PCN	Opt
22	12	Transmit antenna FCC/NSMA Code - Req if transmitter - Use FCC if it exists, else get NSMA code from manufacturer - Use 0000 if unknown	Con
23	40	Transmit antenna manufacturer name - Req if field 18 is 0000	Con
24	20	Transmit antenna model number - Req if field 18 is 0000	Con
25	6	Transmit antenna gain - dBi in main beam to one decimal place(XX.X) e.g. 37.2 - Req if field 18 is 0000	Con
26	6	Transmit antenna centerline height - AGL, nearest meter - Req if transmitter	Con
27	4	Transmit antenna pad/line loss - dB (to one decimal place) - Req if transmitter	Con
28	1	Receiver change Code - N: No change from previous PCN - C: Changed from previous PCN	Opt
29	12	Receive antenna FCC/NSMA code - Req if receiver - Use FCC if it exists, else get NSMA code from manufacturer - Use 0000 if unknown	Con
30	40	Receive antenna manufacturer name - Req if field 25 is 0000	Con
31	20	Receive antenna model number - Req if field 25 is 0000	Con
32	6	Receive antenna gain - dBi in main beam (to one decimal place. e.g. 37.2) - Req if field 25 is 0000	Con

TABLE 3. PATH RECORD FIELDS (Continued)

Field	Maximum Length	Description of Data Field	Con/Opt/Req
33	6	Receive antenna centerline height - AGL, meters - Req if receiver	Con
34	4	Receive antenna pad/line loss - dB (to one decimal place) - Req if receiver	Con
35	1	Diversity change code - C: Changed from previous PCN - N: No change from previous PCN	Opt
36	12	Diversity antenna FCC/NSMA code - Req if receive diversity - Use FCC if it exists, else get NSMA code from manufacturer - Use 0000 if unknown	Con
37	40	Diversity antenna manufacturer name - Req if field 32 is 0000	Con
38	20	Diversity antenna model number - Req if field 32 is 0000	Con
39	6	Diversity antenna gain - dBi in main beam (to one decimal place. e.g. 37.2) - Req if field 32 is 0000	Con
40	6	Diversity antenna centerline height - AGL, nearest meter - Req if receive diversity	Con
41	4	Diversity antenna pad/line loss - dB (to one decimal place) - Required if receive diversity	Con
42	1	Transmit power change code - N: No change from previous PCN - C: Changed from previous PCN	Opt
43	5	Transmit power - dBm (to one decimal place) - Required if transmitter	Con
44	5	Coordinated power - dBm (to one decimal place) - Required if APC	Con
45	5	Licensed (maximum) power - dBm (to one decimal place) - Required if APC	Con

TABLE 3. PATH RECORD FIELDS (Continued)

Field	Maximum Length	Description of Data Field	Con/Opt/Req
46	1	Equipment change code - C: Changed from previous PCN - N: No change from previous PCN	Opt
47	10	Equipment FCC code - Use 0000 if unknown - Use 9999 if no equipment	Req
48	40	Equipment manufacturer - Req if field 43 is 0000	Con
49	20	Equipment model number - Req if field 43 is 0000	Con
50	9	Equipment ITU emission designator - Req if field 43 is 0000	Con
51	8	Equipment transmit stability - Percent of carrier - With decimal. e.g. 0.0005 - Req if field 43 is 0000	Con
52	1	Amplifier change code - C: Changed from previous PCN - N: No change from previous PCN	Opt
53	10	Amplifier FCC code - Req if amplifier module is used - Use 0000 if unknown	Con
54	40	Amplifier manufacturer - Req if field 48 is 0000	Con
55	20	Amplifier model number - Req if field 48 is 0000	Con
56	9	Amplifier ITU emission designator - Req if field 48 is 0000	Con
57	8	Amplifier transmit stability - Percent of carrier - With decimal. e.g. 0.0005 - Req if field 48 is 0000	Con
58	1	Loading change code - C: Change from previous PCN - N: No change from PCN	Opt
59	10	Transmit loading type - Required if transmitter - See Attachment 3	Con

TABLE 3. PATH RECORD FIELDS (Continued)

Field	Maximum Length	Description of Data Field	Con/Opt/Req
60	5	Transmit Loading - Required if transmitter - Number of 4 kHz voice channels if Analog system - Number of Mbps to one decimal place if Digital system - Peak deviation in MHz to one decimal place if Video system	Con
61	6	Transmit Frequency Plan	Info
62	1	Transmit frequency #1 status - Required if transmit frequency #1 exists - Prior-coordinate w/ this PCN: A: Added frequency w/ this PCN P: Polarization changed w/ this PCN N: No change from previous PCN - Do not prior coordinate with this PCN: U: Under prior-coordination F: Finished prior-coordination G: Planned growth frequency L: License applied for C: Construction permit granted O: Operational T: Temporary R: Removed from operation ?: Status unknown. Frequency used	Con
63	17	Transmit Frequency #1 - Required if transmit frequency #1 exists - MHz to 3 decimal places	Con
64	4	Transmit frequency #1 polarization - Required if transmit frequency #1 exists - H: Horizontal - V: Vertical - D: Both Horizontal & Vertical - CR: Right Circular - CL: Left Circular - ?: Unknown - SR: Linear, rotated 45° clockwise, by right hand rule, from vertical - SL: Linear, rotated 45° counter-clockwise, by right hand rule, from vertical - M: Mixed polarization - L999: Linear, rotated 1° to 359° from a	Con

		line parallel to the equatorial plane	
--	--	---------------------------------------	--

TABLE 3. PATH RECORD FIELDS (Continued)

Field	Maximum Length	Description of Data Field	Con/Opt/Req
65	1	Transmit Frequency #2 Status	Opt
66	17	Transmit Frequency #2	Opt
67	4	Transmit Frequency #2 Polarization	Opt
68	1	Transmit Frequency #3 Status	Opt
69	17	Transmit Frequency #3	Opt
70	4	Transmit Frequency #3 Polarization	Opt
71	1	Transmit Frequency #4 Status	Opt
72	17	Transmit Frequency #4	Opt
73	4	Transmit Frequency #4 Polarization	Opt
74	1	Transmit Frequency #5 Status	Opt
75	17	Transmit Frequency #5	Opt
76	4	Transmit Frequency #5 Polarization	Opt
77	1	Transmit Frequency #6 Status	Opt
78	17	Transmit Frequency #6	Opt
79	4	Transmit Frequency #6 Polarization	Opt
80	1	Transmit Frequency #7 Status	Opt
81	17	Transmit Frequency #7	Opt
82	4	Transmit Frequency #7 Polarization	Opt
83	1	Transmit Frequency #8 Status	Opt
84	17	Transmit Frequency #8	Opt
85	4	Transmit Frequency #8 Polarization	Opt
86	1	Transmit Frequency #9 Status	Opt
87	17	Transmit Frequency #9	Opt
88	4	Transmit Frequency #9 Polarization	Opt
89	1	Transmit Frequency #10 Status	Opt
90	17	Transmit Frequency #10	Opt
91	4	Transmit Frequency #10 Polarization	Opt
92	1	Transmit Frequency #11 Status	Opt
93	17	Transmit Frequency #11	Opt
94	4	Transmit Frequency #11 Polarization	Opt
95	1	Transmit Frequency #12 Status	Opt
96	17	Transmit Frequency #12	Opt
97	4	Transmit Frequency #12 Polarization	Opt
98	1	Transmit Frequency #13 Status	Opt
99	17	Transmit Frequency #13	Opt
100	4	Transmit Frequency #13 Polarization	Opt
101	1	Transmit Frequency #14 Status	Opt
102	17	Transmit Frequency #14	Opt
103	4	Transmit Frequency #14 Polarization	Opt

TABLE 3. PATH RECORD FIELDS (Continued)

Field	Maximum Length	Description of Data Field	Con/Opt/Req
104	1	Transmit Frequency #15 Status	Opt
105	17	Transmit Frequency #15	Opt
106	4	Transmit Frequency #15 Polarization	Opt
107	1	Transmit Frequency #16 Status	Opt
108	17	Transmit Frequency #16	Opt
109	4	Transmit Frequency #16 Polarization	Opt
110	1	Transmit Frequency #17 Status	Opt
111	17	Transmit Frequency #17	Opt
112	4	Transmit Frequency #17 Polarization	Opt
113	1	Transmit Frequency #18 Status	Opt
114	17	Transmit Frequency #18	Opt
115	4	Transmit Frequency #18 Polarization	Opt
116	1	Transmit Frequency #19 Status	Opt
117	17	Transmit Frequency #19	Opt
118	4	Transmit Frequency #19 Polarization	Opt
119	1	Transmit Frequency #20 Status	Opt
120	17	Transmit Frequency #20	Opt
121	4	Transmit Frequency #20 Polarization	Opt

GLOSSARY

AGL	Above Ground Level
ASCII	American Standard for Computer Information Interchange
ASK	Amplitude Shift Keying
CCW	Counter Clockwise
Con	Conditional. These fields are conditional and may be required. Conditions are listed if not obvious.
CR	Carriage return. ASCII 13 decimal. Usually shown as <CR>.
CW	Clockwise
DAV	Data Above Voice
dB	Decibel
dBi	Decibel relative to Isotropic Antenna
dBm	Decibel relative to 1 milliwatt
DMSK	Dual Minimal Shift Keying
DUV	Data Under Voice
FCC	Federal Communications Commission
FDMFM	Frequency Modulation with Frequency Division Multiplexing
FDMSSB	Single-Side-Band Frequency Modulation with Frequency Division Multiplexing
FSK	Frequency Shift Keying
Info	Informational. These fields are not required under any circumstance. Because of variations in spelling context or abbreviation, these fields cannot easily be used for computer analysis.

GLOSSARY (Continued)

LF	Line Feed. ASCII 10 decimal. Usually shown as <LF>.
Mbps	Megabits per second
MHz	Megahertz
YYYYMMDD	Year, Month and Day, e.g., 19900301 is 1990, March 1
MSK	Minimal Shift Keying
Opt	These fields are optional but may be supplied if the originating coordinator believes they would be useful. (See 'Req' below)
PCN	Prior Coordination Notice. Can be a Terrestrial Microwave or an Earth Station PCN.
PSK	Phase Shift Keying
nPSK	n-Level Phase Shift Keying. 'n' is a power of 2. It can be 4, 8, 16, 32, etc.
nQAM	n-Level Quadrature Amplitude Modulation. 'n' is a power of 2. It can be 4, 8, 16, 32, 64, etc.
QPRSn	Quadrature Partial Response System, Level n. 'n' can be 3, 7, 9, 25, or 49.
QPSK	Quadrature Phase Shift Keying. Same as 4-level Phase Shift Keying (4PSK).
Req	These fields are required under all circumstances. For Opt fields, the circumstances which make them Req fields are obvious or listed
VIDFM	Video with normal Frequency Modulation
VIDSSB	Video with Single-Side-Band Frequency Modulation

Attachment 1

Types of Coordination

The following abbreviations are to be used in Field 1 of the PCN Record Description. Note that the first character C, M, and U indicate Canada, Mexico, and the United States, respectively. The second character F, E, and M denote fixed terrestrial, earth station, and mobile station, respectively. The third character T, if present, denotes a temporary station.

Coordination type	Description
CF	Canada Fixed (terrestrial)
CFT	Canada Fixed Temporary (terrestrial)
CM	Canada Mobile
CMT	Canada Mobile Temporary
CE	Canada Earth Station
CET	Canada Earth Station Temporary
MF	Mexico Fixed (terrestrial)
MFT	Mexico Fixed Temporary (terrestrial)
MM	Mexico Mobile
MMT	Mexico Mobile Temporary
ME	Mexico Earth Station
MET	Mexico Earth Station Temporary
UF	USA Fixed (terrestrial)
UFT	USA Fixed Temporary (terrestrial)
UM	USA Mobile
UMT	USA Mobile Temporary
UE	USA Earth Station
UET	USA Earth Station Temporary

Attachment 2

Coordinate System Designators

The following alphabetic or numeric characters are to be used in Field 29 to indicate the coordinate system used in the PCN to describe the site locations' latitude/longitude coordinates.

Character	Coordinate System
0	No coordinate system since PCN is only informational.
1	North American Datum83 (NAD/83)
2	North American Datum27 (NAD/27)
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	
G	

Attachment 3

Transmission Loading Type

Transmission Type	Transmission Loading Type
Analog systems	ANALOG (general)
	FDMFM
	FDMSSB
	DUV
	DAV
Digital systems	DIGITAL (general)
	FSK
	ASK
	MSK
	DMSK
	PSK
	QPSK
	8PSK
	16PSK
	4QAM
	8QAM
	16QAM
	32QAM
	64QAM
	256QAM
	QPRS3
	QPRS7
	QPRS9
	QPRS25
	QPRS49
Video systems	VIDEO (general)
	VIDFM
	VIDSSB

Attachment 4

Examples

Example #1 - 2 hops, A to B to C, one-way video, one channel, no diversity

```
,$ASCII,EPCNT2.0,EPCN,ATT0000001,1,19950911,$<CR><LF>
<CR><LF>
CF,"CoordCompanyXYZ",,19950901,"FreqCoordName","FreqCoordTitle",111,
"Freq.Coord.St","FCCity",FCState,99999,9089491111,0000,
"OwnerLicenseeName","OLStreet","OLCity",OLState,OLZip,9086991111,
emp@owner.com,"PCN Site/Route Description","PCN Descr/Purpose",,,,,
N,19950901,U,19951001,1<CR><LF>
<CR><LF>
01A,U,A,?CSgnA,"SiteNameA","SiteCountyA",NJ,N,40,02,7.00,
-101,20,1.00,1,10,508,10,,0000,,C,0000,"TxAntMfrA",
"TxAntModelA",37.2,97,3.5,N,,,,,N,,,,,
C,30,,C,0000,"EqpManufA","EqpModelA",Emission,,0005,N,,
,,C,VIDFM,4.7,,U,6404.790,H,*,,*<CR><LF>
<CR><LF>
01B,U,A,?CSgnB,"SiteNameB","SiteCountyB",NJ,C,39,38,5.00,
-101,19,1.11,1,10,499,10,,0000,,N,,,,,C,
0000,"RxAntMfrB","RxAntModelB",37.2,100,3.0,N,,,,,N,
,,C,0000,"EqpManufB","EqpModelB",Emission,,N,,,,,
C,,,*,*,<CR><LF>
<CR><LF>
02A,U,A,?CSgnB,"SiteNameB","SiteCountyB",NJ,N,39,38,5.00,
-101,20,1.00,1,10,508,10,,0000,,C,0000,"TxAntMfrB",
"TxModelB",37.2,97,3.5,N,,,,,N,,,,,C,
30,,C,0000,"EqpManufB","EqpModelB",Emission,,0005,N,,
,,C,VIDFM,4.7,,U,6152.750,H,*,,*<CR><LF>
<CR><LF>
02B,U,A,?CSgnC,"SiteNameC","SiteCountyC",NJ,C,39,18,5.00,
-101,29,1.01,1,10,499,10,,0000,,N,,,,,C,
0000,"RxAntMfrC","RxAntModelC",37.2,100,3.0,N,,,,,N,
,,C,0000,"EqpManufC","EqpModelC",Emission,,N,,,,,
C,,,*,*,<CR><LF>
<CR><LF>
$,EPCN End,$
```

Attachment 4

Examples (Continued)

Example #2 is a response by some company to AT&T, who sent out EPCN with internal ID ATT00000024 (revision 0). Example #3 indicates that there is still a problem with ATT00000024 even after the first revision. The last example is an acknowledgement that the second revision was received and it looked OK. It goes without saying that the acknowledgement does not indicate whether or not interference was found. Acknowledgement only means that the EPCN has the right information to do work with.

Example #2 - Notification to the coordinator regarding insufficient information in an EPCN

mail stuff

TO ATT

etc.

\$.ASCII,EPCNT2.0,EPCN Errors,ATT00000024,0,19950912,\$<CR><LF>

<CR><LF>

"Hello:

Your EPCN had the following errors:

Antenna information missing.

Please call me.

Chris

908 949 8112"<CR><LF>

<CR><LF>

\$.EPCN End,\$<CR><LF>

<CR><LF>

Example #3 - Notification to the coordinator of an EPCN with incomplete information

mail stuff

TO ATT

etc.

\$.ASCII,EPCNT2.0,EPCN Errors,ATT00000024,1,19950913,\$<CR><LF>

<CR><LF>

There is still missing equipment information.

Call me please,

Davey Jones<CR><LF>

<CR><LF>

\$.EPCN End,\$<CR><LF>

<CR><LF>

Example #4 - Acknowledgement of receipt of a properly coded EPCN

mail stuff

TO ATT

etc.

\$.ASCII,EPCNT2.0,EPCN OK,ATT00000024,2,19950914,\$<CR><LF>

<CR><LF>

\$.EPCN End,\$<CR><LF>

<CR><LF>