

Extraction of Canadian Television Assignment Data
March 29, 2012

For purposes of protecting Canadian TV stations (serving locations wholly within Canada) from interference from unlicensed TV bands transmitting devices (TV white space devices), the TV white space database systems are to use Canadian TV station engineering data from Industry Canada's licensing system rather than the Canadian records in the Commission's Consolidated Database System (CDBS). (The Canadian station records in the CDBS contain data for internationally coordinated TV station agreements, which may not reflect actual station operations.) Industry Canada's TV station engineering data for actual operations is placed on the FCC's website daily using the following procedure and may be obtained by the database systems from the FCC's website.

Early each morning, the Commission downloads the latest version of Industry Canada's broadcast station assignment database and places select files from this database on its website. The downloaded Industry Canada file, "basead.zip" consists of one "*.txt file", 28 "*.DBF III files", and one "*.DBT file", which provide all the licensing and operational information on each AM, FM and TV station and allotment in Canada. This complete file set is about 28 MB in size, but only the following five files are needed to fully protect Canadian Television operations from United States-based White Space devices: "APATDAT.DBF", "APATDESC.DBF", "APATKEY.DBF", "APATSTAT.DBF", and "TVSTATIO.DBF". Further, only those records which have the "tvstatio.banner" code equal to either AU (Authorized), OP (Operational) or TO (Temporary Operation) and the "tvstatio.border" code less than 400 km are extracted from the Canadian DBF III file set and placed on the FCC's website. (The raw Canadian data is located on the Industry Canada website at <www.ic.gc.ca/eic/site/sp_dgse-ps_dggs.nsf/eng/gg00026.html>; the TV white space database systems should extract their data from the FCC website facility below.)

The FCC extracts the relevant contents of the above five Industry Canada files and converts them into ASCII, pipe-delimited records and zips them into the file "ca_tv_data.zip". This zipped file <http://data.fcc.gov/download/white-space-database-administration/ca_tv_data.zip> is posted on the Commission's web site at about 4:00 a.m. daily. The IC data in the daily zipped file includes records for all Canadian stations (this is not an extract of just the daily changes to the IC data) and is updated (replaced) overnight each day. Details of the data structure of the FCC extractions of the Industry Canada data are provided below:

Data Structure of Canadian Television Assignments Tables

As of: 2012 Mar 28

APATDAT.TXT -> tv_apatdat.txt B AAntenna PATtern DATa@ Detail records for pattern points.

#	Field Name	Type	Len	Dec	Description
1	PATT_KEY	N	6	0	Pattern key number used in all APAT files.
2	ANGLE	N	8	4	Angle in Degrees; AZIMUTH.
3	GAIN	N	8	4	RADIATION at ANGLE. (dB above ERPVPK)

APATDESC.TXT -> tv_apatdesc.txt B AAntenna PATtern DEScriptions@ Description record of pattern.

#	Field Name	Type	Len	Dec	Description
1	PATT_KEY	N	6	0	Pattern key number used in all APAT files.
2	HOR_VER	C	1	0	Pattern Type; H or V.
3	PATT_NUMB	N	1	0	Unused
4	PATT_TYPE	C	12	0	Type of Pattern; BRIEF, THEO, PRECISE
5	PUNITS	N	1	0	Unused
6	NUMPOINTS	N	3	0	Number of points in APATDAT file.
7	PATT_DATE	D	8	0	Last date of change

APATKEY.TXT -> tv_apatkey.txt B AAntenna PATtern KEY@ File holding pattern names and counter.

#	Field Name	Type	Len	Dec	Description
1	S_NAME	C	12	0	Station name ACALL_SIGN@
2	PATT_KEY	N	6	0	Pattern key number used in all APAT files.

APATSTAT.TXT -> tv_apatstat.txt B AAntenna PATtern STATION@ Link of pattern keys to Callsign/banners.

#	Field Name	Type	Len	Dec	Description
1	CALLS_BANR	C	14	0	Station name ACALL_SIGN@ + ABANNER@
2	PATT_KEY	N	6	0	Pattern key number used in all APAT files.
3	CALL_BANR_KEY	C	15	0	

TVSTATIO.TXT -> tv_statio.txt B ATV stations@

#	Field Name	Type	Len	Dec	Description
1	PROVINCE	C	2	0	Province / State
2	CITY	C	20	0	City name
3	CALL_SIGN	C	12	0	Station call sign
4	FREQUENCY	N	7	2	Frequency in MHz.
5	CLASS	C	3	0	Class of Station; A, B, C, D, F, N, R, S, LP, VLP
6	LATITUDE	N	7	0	Latitude coordinate in degrees of the Station's Transmitter
7	LONGITUDE	N	8	0	Longitude coordinate in degrees of the Station's Transmitter
8	BANNER	C	2	0	AU (Authorized), OP (Operational) or TO (Temp. Operation)
9	LIMITE	C	5	0	Limitation Identification code ALAAAA@
10	NETWORK	C	4	0	Network; AECC, ASN, CANC, CBCE, CBCF, CTV, GTN, HC, INDE, INDF, KNOW, MITV, MM, NN, PATV, R-QF, TSN, TVA, TVO, and Space
11	ANT_MODE	C	1	0	Antenna Mode: O, D, Space; Omnidirectional or Directional
12	BC_MODE	C	1	0	Broadcasting Mode; S, P, B, Space; Stereo, Second Audio Channels or Both
13	OFFSET	C	1	0	Refers to TV Off-set Code. Space, +, -, Z.
14	OFF_PREC	C	1	0	Refers to Off-set Precision. Valid Y, Space.
15	BRDR_LAT	N	7	0	Latitude used when BORDER last calculated
16	BRDR_LONG	N	8	0	Longitude used when BORDER last calculated

#	Field Name	Type	Len	Dec	Description
17	BORDER	N	7	1	Closest distance to Canada US Border (km)
18	CAN_LAND	N	7	1	Closest distance to Canada Land Edge (km)
19	USA_LAND	N	7	1	Closest distance to USA Land Edge (km)
20	FRE_LAND	N	7	1	Closest distance to French Land Edge near Newfoundland (km)
21	ST_CREAT	D	8	1	Date station entered in database
22	ST_MOD	D	8	1	Date station last modified
23	OK_DUMP	D	8	1	Last date of record Modification for a Consultants dump
24	DOC_FILE	N	5	0	I.C. file number
25	DEC_NUMBER	N	6	0	CRTC Decision Number: AYYNNNN@
26	UNATTENDED	C	1	0	Unattended Operation Code (Y, N)
27	CERT_NUMB	C	6	0	Broadcasting Certificate Number ATANNNN@
28	CLOSE_CAP	C	1	0	Closed Captioning; Y or N
29	ALLOC_ZONE	N	1	0	Allocation Planning Zone 0, 1 or 2
30	BEAM_TILT	N	5	1	Beam Tilt Angle in Degrees; -10.0 to 10.0
31	EHAATT	N	7	1	Effective Height of Antenna Above Terrain -1,200.0 to 2,000.0 meters
32	ERPVAV	N	7	0	ERP Visual Average in Watts
33	ERPVPK	N	7	0	ERP Visual Peak Power in Watts, 0 to over 5,000,000
34	ERPAAV	N	7	0	ERP Aural Average in Watts, 0 to 1,000,000
35	ERPAPK	N	7	0	ERP Aural Peak Power in Watts, 0 to 1,000,000
36	ERPVTA	N	7	0	ERP Peak Visual Power at Tilt Angle in Watts, 0 to more than 5,000,000
37	ERPATA	N	7	0	ERP Average Power at Tilt Angle in watts, 0 to 5,000,000
38	GROUND_LEV	N	6	1	Ground Level at Tower Base above Sea Level in Meters: 0.0 to 9,999.9
39	OVERALL_H	N	5	1	Overall Height Above ground in Meters, 0.0 to 999.9
40	RAD_CENTER	N	6	1	Radiating Center Above Ground Level, 0.0

#	Field Name	Type	Len	Dec	Description
					to 5,000.0 metres
41	CHANNEL	N	4	0	CHANNEL; 2 - 83, or 2,500 - 2,680
42	CALLS_BANR_KEY	C	15	0	

Notes:

- 1 The field ACALL_BANR_KEY@ found in the tables ATVSTATIO@ and AAPATSTAT@ is filed with Trim(CALL_SIGN) & A~@ & Trim(BANNER) where all the blank spaces in the field ACALL_SIGN@ have been removed and is the key for tying together the two table together.
- 2 Latitudes are currently expressed in degrees, positive for Northern Hemisphere and negative for Southern Hemisphere. Unless otherwise indicated latitudes are expressed in +-DDMMSS
- 3 Longitudes are currently expressed in positive degrees only and have the meaning of West. Some longitudes exceed 180 degrees. Unless otherwise noted longitudes are expressed in +-DDDMMSS.
- 4 Latitude & Longitude in terms of NAD83
- 5 Unless otherwise noted, antenna heights are in meters(m) and distance is expressed in kilometres(km)

Television Class of Stations

Code	Class of Station	Description
R	R	Regular B Digital station.
VL	VL	Digital transition station (low VHF band)
VU	VU	Digital transition station (upper VHF band)
LVP	LVP	Analog very low power station
S	S	Analog high power station
A	A	NTSC UHF station
B	B	NTSC UHF station
C	C	NTSC UHF station
D	D	
LP	LP	Low power NTSC VHF/UHF station