LPTV/TV Translator Receive Channel Update Data

July 16, 2013

For purposes of protecting the receive channels of low-power TV (LPTV) and TV translator stations from interference from unlicensed TV bands transmitting devices (TV white space devices), the TV white space (TVWS) database systems are to use receive channel data from the Commission's "ws_translator_input_channels" table (part of the CDBS "data dump") as a supplement with the receive channel data in the Consolidated Database System (CDBS). The files for the LPTV/TV translator receive channel update data are available along with the standard CDBS download files and are placed on the FCC's website daily at http://transition.fcc.gov/ftp/Bureaus/MB/Databases/cdbs/. Where there is receive channel data in the CDBS but not in the "ws_translator_input_channels" table, the database systems should use the CDBS data. Translator operators may enter data into the TVWS at https://apps.fcc.gov/oet/translator/.

The data in the "ws_translator_input_channels" table are obtained from the LPTV/TV Translator Input Signal Form, which is a web-based application that allows the party responsible for the LPTV/TV translator stations to update certain information. The receive channel update system is separate from CDBS. The TV white space database systems are to match this receive channel data with the indicated LPTV and TV translator stations from the regular CDBS data files, and then for those stations, protect the receive channels indicated in the updated data. The regular CDBS records for affected LPTV and TV translator stations will not be changed using the receive channel update records. Rather, database administrators must substitute the updated data when it exists for that in CDBS. If an update record is present for a station, use the receive channel from the update; if no update record is available for a station, continue to use the existing receive channel data that is available in the existing CDBS records.

The data element "whtspace_id" is the unique identifier for LPTV/TV translator stations across all of the data tables. Information on other data fields can be found in the document WST_White_Space_Data_Description_CDBS (see hyperlink below). The database systems should protect the receive channels indicated in the "ws_translator_input_channels" table (not "ws_history_input_channels", which is a history table). Note that the <u>Source</u> station is the station actually being received by the translator.

The LPTV/TV Translator Input Signal Form also provides two elements of data that are not contained in the existing CDBS records. The first is the method by which an LPTV or TV translator station receives an input signal; this information is contained in the "ws_delivery_method" table. The TVWS database systems only need to protect those signals that are received "off-air from TV" or "off-air from translator" or "microwave" (in the case of "microwave, protection is to be provided only if there is a valid TV channel in the "receive_transmitter_channel" field; this condition can exist when the input to the translator is licensed as a microwave station, such as a TV Translator Relay station, but operates on a TV channel). If the indicated delivery_method in the update record is "v"

(off-air from TV) or "t" (off-air from translator), then the data in the **source station** fields, *i.e.*, prim_facility_id, prim_call_sign, prim_comm_city, prim_comm_state, and prim_channel, provide the information for the received signal to be protected. If the delivery method is "m" and there is a valid channel number in the "prog_orig_channel" field, the data in the prog_orig_call_sign will provide the call sign information for the received signal to be protected. Note also that if delivery_method is "s", the source signal in the CDBS record is to be ignored (no station is to be protected in such cases).

The second data element not contained in the CDBS records is the location of the receiving antenna; this information is contained in the ws_translator_input_channels table in the various "rx_lat" and "rx_lon" (latitude and longitude) fields. Note that all coordinates are NAD-27 datum. In some cases, the receive antenna site is not co-located with the LPTV/TV translator's transmitter site. The "rx" data elements provide the locations of these non-co-located receive sites. If data are present indicating that there is a different site (from the transmit site) for the receive antenna, the database systems should protect that receive site.

Details of the data structure of the LPTV/TV translator data table files and the URL for accessing the data are provided below and in the PDF file located at ftp://ftp.fcc.gov/pub/Bureaus/MB/Databases/cdbs/ WST White Space Data Description CDBS.pd ftp://ftp.fcc.gov/pub/Bureaus/MB/Databases/cdbs/ WST White Space Data Description CDBS.pd

WST Data Table Description

Database tables from the FCC's LPTV/TV translator input signal form may be downloaded at: URL: ftp://ftp.fcc.gov/pub/Bureaus/MB/Databases/cdbs/

Tables with "history" in the table name hold the complete record of current and previous transactions along with a time stamp indicating when the modification occurred.

Table name	ws_delivery_method		
column name	Entity-Attribute Definition	Data Type	
Counter	Data table row count	int	
delivery_method	Signal reception input type id	varchar(1)	
input_type	Signal input definition	varchar(255)	

The delivery_method and input_type column values are as follows:

delivery_method	<u>input_type</u>
V	Off-air from tv
t	Off-air from translator
m	microwave
S	satellite

 Table name
 ws_history_translator_data

column name	Entity-Attribute Definition	Data Type
Counter	Table row counter	int
frn	FCC Registration number	varchar(10)
inserted_date_stamp	Date and time of entry	datetime
modification_type	Data added/modified/deleted	varchar(10)
translator_call_sign	translator call sign	varchar(12)
translator_facility_id	translator facility ID	int
whtspace_id	Unique ID for TV translator. Relates across data tables	varchar(255)

Table name	ws_translator_data	
column name	Entity-Attribute Definition	Data Type
Counter	Table row counter	int
frn	FCC Registration number	varchar(10)
inserted_date_stamp	Date and time of entry	datetime
translator_call_sign	translator call sign	varchar(12)
translator_facility_id	translator facility ID	int
updated_date_stamp	Date data was modified	datetime
whtspace_id	Unique ID for TV translator. Relates across data tables	varchar(255)

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column name	Entity-Attribute Definition	Data Type
call_sign_of_microwave	Source Microwave call sign	varchar(12)
collocated_rec_ant	Antenna is/is not located with translator	varchar(3)
counter	Data table row count	int
delivery_method	Signal reception input type id	varchar(1)
inserted_date_stamp	Date and time of entry	datetime
modification_type	List change type	varchar(10)
prim_call_sign	Source station call sign	varchar(12)
prim_channel	Source station channel number	int
prim_comm_city	Source station city	varchar(20)
prim_comm_state	Source station state	varchar(2)
prim_facility_id	Source station facility ID	int
prog_orig	Indicates program origination source	int
prog_orig_call_sign	Call sign of program origination source	varchar(12)
prog_orig_channel	Channel num. of program origination source	int
prog_orig_facid	FACID of program origination source	int
receiver_ant_str_reg	Antenna structure registration # for receiver antenna structure	varchar(12)
rx_lat_deg	Receiver antenna latitude degree	int
rx_lat_dir	Receiver antenna latitude dir	varchar(1)
rx_lat_min	Receiver antenna latitude minute	int
rx_lat_sec	Receiver antenna latitude second	float
rx_lon_deg	Receiver antenna longitude degree	int
rx_lon_dir	Receiver antenna longitude dir	varchar(1)
rx_lon_min	Receiver antenna longitude minute	int
rx_lon_sec	Receiver antenna longitude second	float
source_id	ID for translator input source	varchar(25)
whtspace_id	Unique ID for TV translator	varchar(255)

 Table name
 ws_history_input_channels

column name	Entity-Attribute Definition	Data Type
call_sign_of_microwave	Source Microwave call sign	varchar(12)
collocated_rec_ant	Antenna is/is not located with translator	varchar(3)
counter	Data table row count	int
delivery_method	Signal reception input type id	varchar(1)
inserted_date_stamp	Date and time of entry	datetime
modification_type	List change type	varchar(10)
prim_call_sign	Source station call sign	varchar(12)
prim_channel	Source station channel number	int
prim_comm_city	Source station city	varchar(20)
prim_comm_state	Source station state	varchar(2)
prim_facility_id	Source station facility ID	int
prog_orig	Indicates program origination source	int
prog_orig_call_sign	Call sign of program origination source	varchar(12)
prog_orig_channel	Channel number of program origination source	int
prog_orig_facid	FACID of program origination source	int
receiver_ant_str_reg	Antenna structure registration # for receiver antenna structure	varchar(12)
rx_lat_deg	Receiver antenna latitude degree	int
rx_lat_dir	Receiver antenna latitude dir	varchar(1)
rx_lat_min	Receiver antenna latitude minute	int
rx_lat_sec	Receiver antenna latitude second	float
rx_lon_deg	Receiver antenna longitude degree	int
rx_lon_dir	Receiver antenna longitude dir	varchar(1)
rx_lon_min	Receiver antenna longitude minute	int
rx_lon_sec	Receiver antenna longitude second	float
source_id	ID for translator input source	varchar(25)
whtspace_id	Unique ID for TV translator	varchar(255)