

NEWS LETTER

DECEMBER 13 2010

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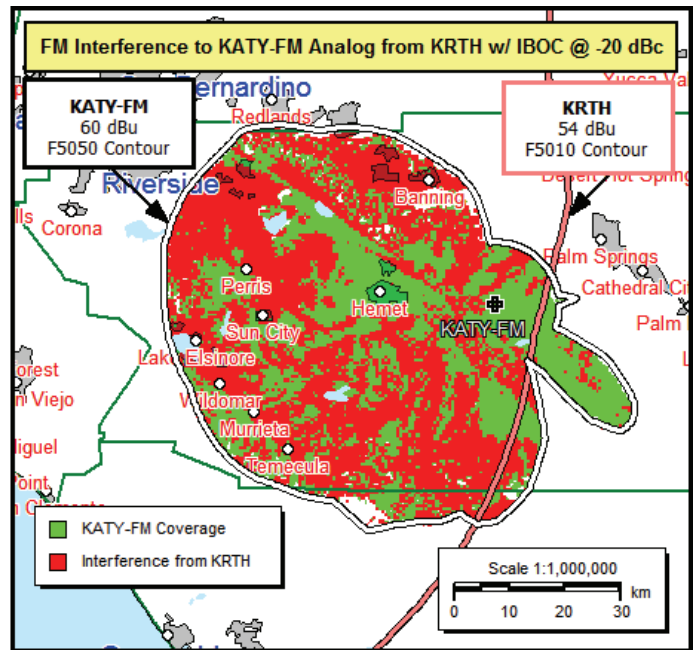
FMCMMADER TUTORIAL ON AUTOMATIC PATTERN DESIGN

MISCELLANEOUS FCC NEWS

PROBE 4 LOOKS AT THE KATY-FM IBOC DISPUTE WITH CBS'S KRTH

Station KATY-FM has gone on record claiming to be receiving large amounts of interference from first adjacent KRTH. Using a mobile radio receiver configuration, looking at points within the normally protected 60 dBu contour of KATY-FM, the Probe 4 IBOC model predicts that, KATY-FM experiences a significant amount of interference. The map on the right shows interference to KATY-FM when KRTH runs IBOC at -20 dBc. The map on page 4 shows the areas of interference received by KATY-FM without KRTH's IBOC.

The two stations meet the FCC's minimum 73.207 separations so, as the FCC sees it, there is no problem however, due to the hilly terrain, the stations' interference contours actually cross well into each other's protected contours. In fact, the FCC calculated interference contour of KRTH crosses well over the KATY-FM



Interference Predicted to be Caused KATY-FM

transmission site, as is shown on the map. This is one of a number of problems with the way the FCC assigns commercial chan-

nels in hilly areas without regard to contour-to-contour interference.

(Continued on page #4)

QUOTE OF THE DAY

“Opportunity is missed by most because it is dressed in overalls and looks like work. “

Thomas Alva Edison

FM AUCTION 91 IS POSTPONED

In concern for the time conflict with those attending the NAB Conference in early April, the FCC has postponed Auction 91 until April 27th. In a separate announcement, the FCC freezes FM commercial and non-commercial minor-change applications during filing window of January 31-February 10, 2011.

There are 144 allocations that will be put up for bid during the auction. Auction allocations can be found in

the V-Soft FM database by doing a search for all call signs beginning with “AU”. Participants must file Form 175 during the January 31st 2011 window which has a deadline date of February 10, 2011.

To download the FCC excel sheet of the 144 available allocations click the tiny link below.

<http://tinyurl.com/29hzwja>











END OF YEAR DISCOUNTS AVAILABLE ON ALL PROGRAM PURCHASES


Need a copy of your V-Soft program for another staff member? Once the initial program is purchased, each additional license is marked down by 40%. Take off 40% and then take off another 10% for our end of year discount for a total of 50% discount. That's a deal you can't afford to miss.

New purchases of AM-Pro, Conductivity, Contour, FMCommander, IDStations, Plotpath, Search-TV, Terrain 3D, V-Tower and all V-Soft terrain, census, and poly-

gon mapping data-bases and overlays are all marked down by 10% if purchased before January 1st. Call us at 800 743-3684 to place your order.

Click one of the links below and to the right to read more about these programs. A link to our various databases is:

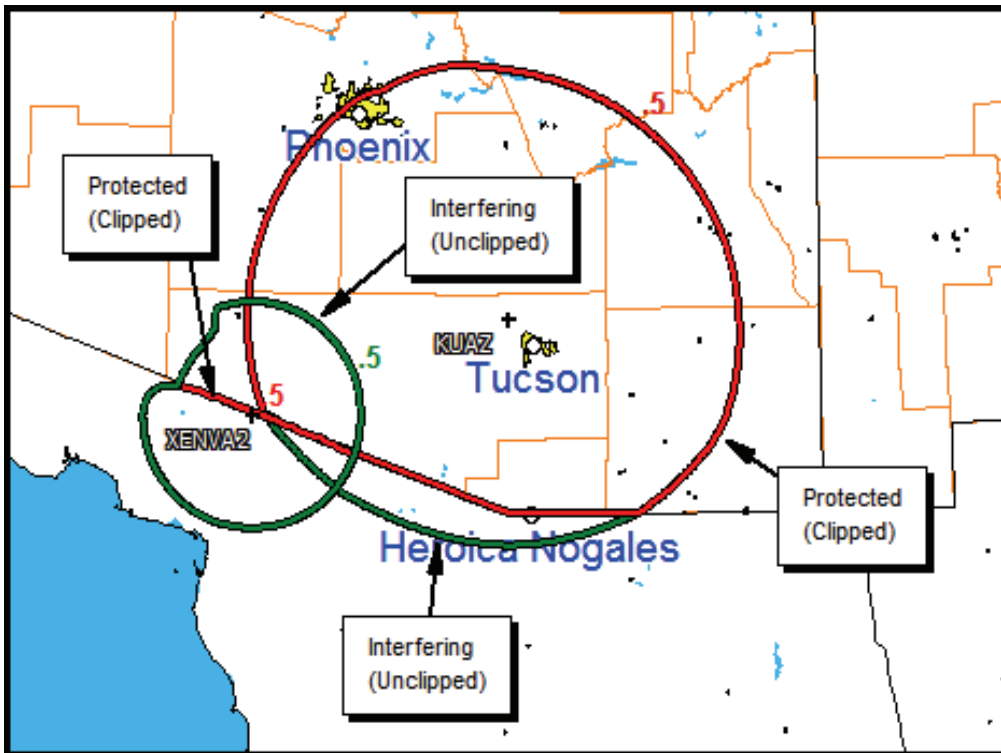
-  FM Commander
-  Probe 4 @ V-Soft
-  Conductivity
-  CONTOUR
-  AM AM-Pro 2
-  3D Terrain 3D
-  SEARCHTV
-  VT V-Tower

 Related Databases



End of Year Savings

AM-PRO 2 ADDS AUTOMATIC BORDER CLIPPING



“AM-Pro uses automatic border clipping to enhance mapping and to define interference. This program is used by the FCC as their exclusive regulatory standard.”

As of version 2.35 of AM-Pro the program now automatically clips protected contours to the border when performing groundwave allocation studies. Also added is the ability to specify the border clipped status on a relationship-by-relationship basis. In previous

versions of the program, only full contours were considered by default and when doing border clipping the program was able to clip all contours associated with a station or none at all.


The new feature was added because when considering protection of cross border stations, stations are only protected to the border of their country. In these cases, you will want to consider the

"protected" contour clipped at the border and you need to let the interfering contour extend regardless of the border location.

This new capability can generate some confusion (Continued next page)

HOW TO QUICKLY DESIGN AN ANTENNA PATTERN USING FMCOMMANDER

One of FMCommander's most powerful tools is the built in Pattern Editor. Here's a step by step, sure fired, method of quickly creating an antenna pattern that works.

1.) Perform a study using the contour-to-contour mode, with the "Views" menu on the Main screen set to "Detail Contours by greatest overlap". Once your study is showing, click the heading beginning with "Call" or click the  icon to bring up the "Find Information" Screen.

2.) Next add the directional antenna box to your reference station, if it is not already directional. The easiest way to do this is to click the word "Non-DA" on the first text line. Then answer the "Toggle Antenna Type" question with a "Yes."

3.) Remove any non-relevant station entry from the listing by clicking its call sign in the left hand column and then click the "Change" menu and select "Delete Station."

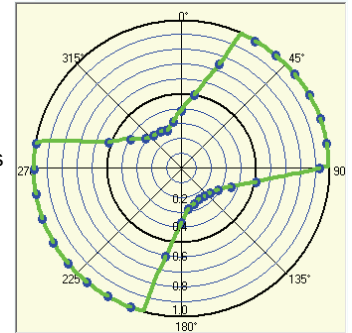
4) Click the reference station call sign from the list, then click the

antenna pattern box to bring up the antenna pattern editor. The editor will show a circle pattern, some of which may be colored red, indicating contour overlap, along the circumference of the circle.

5.) Click "Function " on the Pattern Menu bar, then click "Auto Design Draft Pattern", then click , "Consider All Adjacents." (If you are designing a pattern for a translator that has a second or third adjacent incoming overlap, you can select "Ignore Behavior" and then configure the Editor to skip protection for those channels.

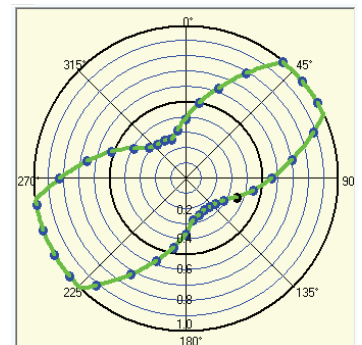
6.) If your reference station can be fully protected, the Pattern Editor will reveal a new calculated pattern. This pattern may not meet the 2 dB per ten degree rule or the 15 dB front-to-back rule. If you are attempting to meet the 2 dB per ten degree rule, the following step applies and if you are trying to meet the 15 dB rule you may have to reduce transmitter ERP.

7.) The 2 dB smoothing increment is already set as a default. There is little reason to change this setting. The sample pattern to the right was developed using the "Auto Design" tool and it needs smoothing along the four arms extending from the nulls to full field. The blue buttons are shown at each of the 36 radial azimuths. You can physically drag these points using your mouse or you can automatically smooth them by clicking the point immediately before the pattern the point where the pattern exceeds 2 dB. The azimuth of the points will be seen at the top-center of the pattern display as the mouse passes over the points. In the example, to smooth the points after 20 degrees, set the "Direction" to "Positive (clockwise)" and then right-click the 20 degree point. To smooth the points after 100 degrees, select the "Negative" direction and then right-click the point. Once you have smoothed the other points in



UN-Smoothed Pattern

the pattern you will see a pattern that looks similar to the pattern shown below.



Smoothed Pattern

8.) Check your pattern by clicking "Function", then click "Check for 2 dB". When you are finished click "Function" then click "Attach to Station Record".

NEW BORDER CLIPPING CAPABILITIES IN AMPRO 2

Continued from Page 2

when looking at the map. The graphic shows a first adjacent relationship where the protected and interfering contours are both the 0.5 mV/m contour. Because of the clipping, there are now four distinct contours involved instead of two. Each station has a "clipped 0.5 mV/m" contour that is considered as the "protected" contour for the station, and each station has an "un-clipped 0.5 mV/m" contour that

is considered for causing interference to the other station.

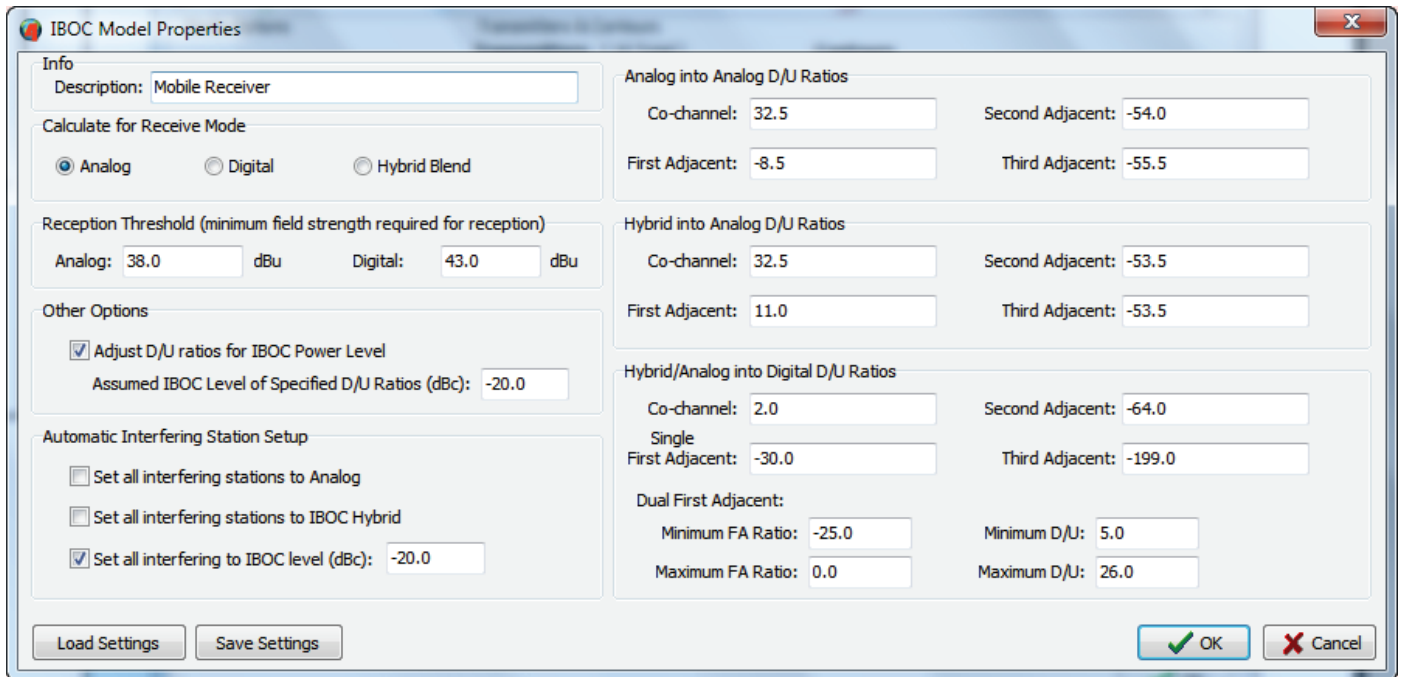
To view and/or edit the clipping status of the individual contours for each relationship, select a station in the main allocation table, click the "Relationships" button, then click the "Edit" button that corresponds to the relationship you wish to see. In the new window you will see a check box type option for "Clip

at International Boundary".

AM-Pro 2 continues to be the AM engineering allocation program of choice used by the entire AM branch FCC engineering staff. AM-Pro 2 has also been adopted by Industry Canada and is in daily use by regulatory engineers there.



PROBE'S IBOC MODEL Continued from page #1



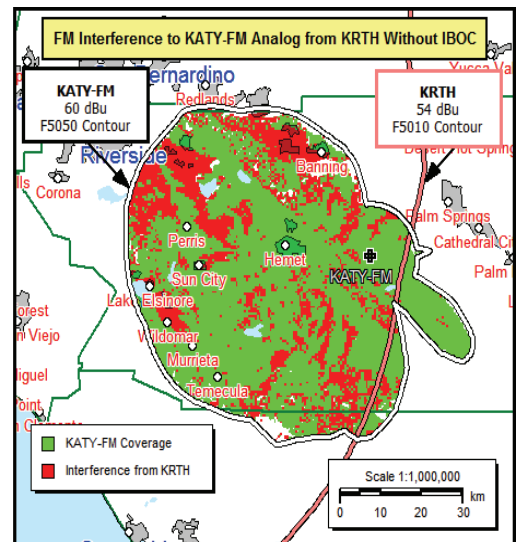
The new Probe 4 IBOC model works as part of the standard "FM Interference" study. The model is designed to be as flexible as possible to properly predict numerous IBOC to IBOC and IBOC to analog scenarios. The user can choose to study one receive mode (analog, digital, or hybrid blend) at a time. Each transmitter in the study can be configured to use a different IBOC power level.

The D/U ratios (the default settings are shown above) are defined with reference to one particular power level and the program can adjust them when it encounters stations using IBOC power

levels that are different from the reference. For considering interference to the digital part of a hybrid signal, the program will apply a sliding D/U to compensate for dual first adjacent interferers.

The map shown to the right is an interference analysis of KATY-FM without the presence of KRTH's IBOC signal. As it plainly shows, there is still some interference caused to the KATY-FM signal from KRTH, however it is much reduced.

The new IBOC module comes as a standard model in all Probe 4 programs.



Miscellaneous FCC Happenings

The FCC continues its work to totally modernize the way CDBS works. A mock-up of the new interface was revealed at the fall NAB Radio Show in Washington, D.C. this year. The presentation was quite impressive, as FCC staff hailed the capability of the new CBDS to aggregate all the information and forms in one spot convenient to stations. There are rumors that the new database will be stored in the "cloud" on non-FCC servers.

We have been told that the new system will operate in tandem with the existing system for several months. (Let's hope this is true so we can all work out the bugs.)

In our last issue, we reported that the FCC has placed a freeze on all LPTV applications until it can work out the specifics of the proposed TV band reallocation to accommodate broad-

band mobile. The Commission has now released a Notice in Docket 10-235 and requests comments on its TV band shrinking proposals. Within the Notice is the Commission's interest in allowing VHF DTV stations to increase their ERP well above current limits, as long as interference is kept at a minimum or sign-offs are received from stations that would be caused additional interference.