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TV TechCheck

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# FCC Seeks Comment on STELA DTV Signal Strength Prediction and Measurement Procedures

On July 28, 2010 the *FCC released a Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking* which seeks comment on a prediction model and on-site measurement procedure for determining the strength of a DTV signal at any specific location. These would be used to determine whether a household could be considered "unserved" by a local network affiliated DTV station and thus would be eligible to receive a distant DTV network affiliated signal retransmitted by DTH satellite carriers (e.g DirecTV or Dish Network).

The Commission is taking this action as a consequence of the Satellite Television Extension and Localism Act of 2010 (STELA) which was enacted by Congress in February, 2010. The STELA requires the FCC, within 270 days enactment, to: 1) "…develop and prescribe by rule a point-to-point predictive model for reliably and presumptively determining the ability of individual locations, through the use of an antenna, to receive signals in accordance with the signal intensity standard in Section 73.622(e)(1) of the rules…" and 2) Issue an order completing its rulemaking to establish a procedure for on-site measurement of digital television signals in ET Docket No. 06-94 (See *TV TechCheck* from May 17, 2006)

In the Notice of Proposed Rulemaking (NPRM) portion of this action the FCC proposes to prescribe a point-to-point predictive model (referred to as ILLR - Individual Location Longley-Rice) for determining the ability of individual locations to receive an over-the-air digital television broadcast signal at the intensity level needed for service through the use of an antenna, as required by the STELA. The NPRM states that the Commission believes the proposed predictive model, which is based on the current model for predicting the intensity of analog television signals at individual locations, will allow consumers, TV stations and satellite carriers to determine eligibility to receive distant DVT signals in a timely and cost effective manner.

The previous incarnation the STELA, called SHVIA, mandated an ILLR computer model that predicted an NTSC station's signal strength assuming the use of a conventional, stationary, outdoor rooftop receiving antenna. Language in the STELA changed the words "conventional, stationary outdoor rooftop antenna" to just "antenna", thus, the NPRM seek comment on whether the FCC should consider the impact of the location and performance of actual antennas consumers use to receive DTV signals.

However, because the STELA specifically mandates the use of the digital television signal strength standard in Section 73.622(e)(1) of the Rules and those rules are based on the use of an outdoor antenna, the FCC has tentatively concluded that the current standard for an outdoor antenna as specified in the DTV planning factors in OET Bulletin No. 69 should be used in predicting digital television signal strengths using the ILLR model. Therefore the FCC proposes to modify the existing ILLR to use the DTV noise-limited service contour values in Section 73.622(e)(1) as the standard for determining whether a predicted field strength is sufficient for reception of a signal at an individual location. The NPRM states:

The NPRM also seeks comment on a number of other issues regarding certain parameters of the ILLR model such as:

- Time and Location Variability Factors;
- Land Use and Land Cover Factors, and
- Applicability to Analog Low Power TV and TV Translator Stations.

In the Further Notice of Proposed Rulemaking (FNPRM), the FCC seeks information to update the record in ET Docket No. 06-94 (SHVERA NPRM), which was intended to prescribe rules for determining eligibility of satellite subscribers for receiving distant network signals from their satellite TV provider using on-location testing/measurements. The Commission previously sought comment on a variety of issues related to establishing a procedure for on-location DTV measurements, but never adopted final rules specifying a procedure. The STELA raises three issues regarding the DTV measurement procedure not addressed in the *SHVERA NPRM*:

- the stations whose signals are to be measured;
- the antenna to use in performing on-location testing; and
- the program stream from a station in the market to be measured.

The FCC proposes to retain the same general procedure used for analog stations. However, it wishes to address these issues by to both refreshing the record and obtaining additional information and comment on STELA requirements that differ from the original SHVERA requirements.

Comments in this proceeding are due on **August 24, 2010**, and reply comments must be filed on or before **September 3, 2010**. A copy of the item is available on the FCC's web page at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-133A1.pdf

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The NAB Broadcast Engineering Conference is a highly-technical conference where presenters deliver technical papers ranging over a variety of topics relevant to the broadcast and allied industries. Presentations are limited to thirty minutes in length, including five or ten minutes for questions from the audience. The conference rooms are equipped with audio visual equipment that will accommodate standard computer presentations.

Papers accepted for presentation at the 2011 NAB Broadcast Engineering Conference will be eligible for the NAB Best Paper Award. Established in 2010, the Best Paper Award honors the author(s) of a paper of exceptional merit published in the *NAB Broadcast Engineering Conference Proceedings*. The yearly proceedings, published as both a book and a CD-ROM is a compendium of these technical papers, and an important archive of the leading edge of broadcast engineering issues.

Proposals for technical papers submitted for the 65th annual Broadcast Engineering Conference will be accepted until the October 22 deadline. If you have any questions, contact John Marino, VP NAB Science and Technology at (202) 429-5346.