

RADIONET3

TRIPS OF WP7

RADIO ASTRONOMICAL SPECTRUM MANAGEMENT

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| SUBJECT | CEPT SE40-meeting |
| DATE | 10/11 Dec 2015 |
| PLACE | Brest (FR), ANFR Offices |
| PARTICIPANTS | Benjamin Winkel |

BACKGROUND:

The IRIDIUM satellite system is known to cause severe radio interference for radio astronomy. Measurements of the interference were previously made at the Leeheim satellite monitoring station. Methods and software to evaluate the interference situation and to perform a EPFD simulation were developed by SE40 with the help of CRAF. The software is described in an upcoming report, ECC Report 247, a draft of which was prepared during the previous SE40 meetings.

HIGHLIGHTS:

Prior to the meeting, CRAF submitted several modification proposals for consideration of SE40 to be implemented in the ECC report 247. Most importantly, CRAF requested to change the text such that the use of pointing restrictions of individual RAS antennas should be more clearly marked as an optional feature, in contrast to the “generic” method, which is using zero degree elevation as the lower limit. In the meeting, France strongly opposed this proposal, because ITU-R Recommendation M.1563, which is the basis of the EPFD simulation method, in particular mentions pointing restrictions of RAS sites as a required parameter. However, CRAF is of the opinion that for administrations, it is important to include a “generic” case in any compatibility study, also to ensure long-term comparability with previous studies, such as ECC reports 171 and 226. A compromise could be found, by explicitly defining the meaning of the “generic method” in the modified draft, in this sense.

Other topics included work on a compatibility study for low-power animal tracking tags (DLR ICARUS project), that could possibly interfere with other services in the 401-403-MHz band, an information document by Viasat on FS-FSS sharing in the 27.5-29.5-GHz band, and information by Mr. Saidani (FM44 chairman) on the work of FM44 about regulation to protect aircrafts and helicopters from EMC.

NEXT STEPS:

A new work item was given to SE40 to refine the models in the EPFD simulations (of the IRIDIUM system) to improve the accuracy by incorporating site-specific details, such as antenna pattern, terrain and diffraction effects, pointing limitations, and near-field effects. Furthermore, the first two satellites of the IRIDIUM next system are going to be launched in April 2016. The Leeheim station will monitor the PFD levels of these new satellites.