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| U.S. Radiocommunications SectorFact Sheet |
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| **Document Title:** Calculation of fractional degradation of performance (FDP) over smooth earth and over random terrain |
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| **Purpose/Objective:** Provide equations and a methodology for calculating the FDP over smooth earth and over random terrain, for facilitating the completion of sharing studies in response to WRC-27 Agenda item 1.7. |
| **Abstract:** This contribution outlines an approach and derives equations for calculating the FDP. FS links are engineered to achieve extremely high availability targets—typically between 99.9% and 99.999%—requiring substantial fade margins (often exceeding 20 dB). Because of these high margins, a long-term criterion that reflects only a small performance degradation does not adequately capture the impact on service availability. In contrast, the FDP directly measures the effect of both short-term and long-term interference on link availability. This paper does not consider the effects of power control or ACM. |