SDR-based frequency interference analysis test-bed considering time domain characteristics of interferer

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***Abstract*— In this paper, we suggested a software-defined radio (SDR)-based frequency interference analysis test-bed designed to consider both frequency and time domain characteristics of the interferer. Due to the versatile programming capability of universal software radio peripheral (USRP) and LabVIEW, performance degradation effects of victim receiver due to various interferer's parameters in both frequency and time domain can be analyzed intuitively. As an example, we demonstrated a frequency interference scenario consisting of Zigbee as a victim and three Wi-Fi nodes as interferers. From the measured results, it was verified that our test-bed can analyze easily actual interference environments in both frequency and time domain.**

***Keyword*— frequency interference, frequency sharing, unlicensed band, LabVIEW, USRP, SDR**

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