

UTILISATION OF COTS SOFTWARE DEFINED RADIO FOR COMINT AND TELEMETRY APPLICATIONS

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Abstract

Software Defined Radio (SDR) technology has undergone exponential growth in the last decade [1]. Evolution of Integrated Chip (IC) technology and associated developments in processors have made Commercial Off the Shelf (COTS) SDRs to be commonly available. Affordable hardware and appropriate open source software has provided excellent accessibility to SDR technology for amateurs and professionals alike [1] [2]. This paper explores feasibility of indigenous development of COTS SDR based aviation applications. An attempt was made by authors to design a Communication Intelligence (COMINT) and Telemetry system using commonly available SDR and an open source software [1] [3]. The proof of concept was implemented and the system was utilized for limited COMINT and Telemetry applications by the authors. The methodology of implementation and test results are discussed in detail. The paper is concluded by bringing out the possibilities of indigenization of SDR based systems and highlighting their utility for various airborne applications.

Keywords: SDR; COMINT; RTL-SDR; GNU Radio