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Form Approved
OMB No. 0704-0188

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1. REPORT DATE *(DD-MM-YYYY)*
02-04-2020

2. REPORT TYPE
Technical

3. DATES COVERED *(From - To)*

4. TITLE AND SUBTITLE
LOW DENSITY PARITY CHECK FORWARD ERROR CORRECTION FOR YOUR TELEMETRY LINK

5a. CONTRACT NUMBER
012100

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
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5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

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8. PERFORMING ORGANIZATION REPORT NUMBER
412TW-PA-20135

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)
N/A

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for public release A: distribution is unlimited.

13. SUPPLEMENTARY NOTES
CA: Air Force Test Center Edwards AFB CA CC: 012100

14. ABSTRACT

The telemetry standard IRIG 106 includes Low Density Parity Check forward error correction with six combinations of code rate and information block size. This correction code can be added to airborne telemetry links to increase link margin and correct random errors due to transmission anomalies. Given these benefits, why has this technology not been wholeheartedly accepted within the aeronautical mobile telemetry community? This paper will present the trade-offs when considering implementing LDPC in a telemetry link. Real-world flight test results will be presented clearly illustrating the benefits of forward error correction. The data presented will make a strong case for considering IRIG 106 compliant forward error correction in new link designs or to complement existing links in operation today.

15. SUBJECT TERMS
LDPC, SOQPSK-TG, IRIG 106, Spectrum Relocation Fund, Link Availability, Data Quality Metric, Forward Error Correction

16. SECURITY CLASSIFICATION OF: Unclassified			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**			412 TENG/EN (Tech Pubs)
Unclassified	Unclassified	Unclassified	None	13	**19b. TELEPHONE NUMBER** *(include area code)* 661-277-8615

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18