Better CRC Polynomials for Internet Error Detection

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Cyclic redundancy check polynomials (CRC) are used to detect errors in Internet packages. Errors are measured in terms of the Hamming distance. Using the theory of cyclic codes, the CRC polynomial provides a check which allows the receiver of the package to detect possible communication errors. Empirical data has shown that errors often come in bursts. On the other hand, currently used CRC polynomials are based on random errors. For this reason, it is necessary to revisit the design of CRC polynomials. This is joined work with Alissa Brown, Sajeeb Chowdhury, Waylon Jepsen, Craig Partridge and Susmit Shannigrahi.

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