

# This Week's Citation Classic

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Lucky R W, Salz J & Weldon E J, Jr. *Principles of data communication*.  
New York: McGraw-Hill, 1968. 427 p.

**This book is a rather comprehensive exposition, circa 1968, of the mathematical principles involved in the transmission of digital information over telephone-like channels. Major topics which it contains include pulse transmission, modulation techniques, and error control. [The SCI<sup>®</sup> indicates that this book has been cited over 330 times since 1968.]**

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"I'm pleased that our book on data communications has been recognized as a 'most cited' publication. It seems so long ago since I joined with two associates at Bell Labs in 1967 to begin writing this book. We were undoubtedly in the right place at the right time. The field was young, and so were we. Between the three of us we had the knowledge that encompassed the field, and none of us was burdened with the responsibilities and commitments that make writing so difficult in later years.

"We organized the job of writing the manuscript as if it were a multi-million dollar development project. We had schedules showing expected page production from each of us in order to finish within six months, since we felt the topic was so current there wasn't a moment to lose. Little did we realize that for the next dozen years at least, no one else would write a book in this field!

"Each Wednesday evening we would stay after work and devote

three or four hours to writing our various allocated sections. Then we would meet in a local tavern to discuss integration of the component parts of the book and, more importantly, to heap shame upon any delinquent contributor. In the end there wasn't much integration of material (we each did our own thing in consecutive thirds of the book), but we had fun and the shaming process was so effective that we did meet that all-important schedule.

"I remember the night the book was finally completed. The last task was to decide upon a dedication. At first we considered dedicating it to our friendly tavern. Then someone suggested jokingly that we *sell* the dedication! Finally we decided to dedicate the book to 'the man with \$14.00 to spend on this book.' Later, this dedication caught the eye of an editor at McGraw-Hill, who had it removed and subsequently suspected our book of latent frivolity.

"In retrospect, I agree with the observation of one of my coauthors that our book was 'a factor of two away from excellence.' We could have put in twice as much work in order to include problems (there aren't any now), to eliminate mistakes (these we included), to add missing material, to increase the number of figures, and to pay more attention to the final appearance of the book. At the time none of us was willing to go that extra mile. Certainly it's better to publish an imperfect book, than to be forever polishing a perfect one. Nonetheless, I can't help but wish we hadn't been in such a hurry at the time. The world would have waited."