

Editorial—State of this TRANSACTIONS

THE YEAR that has passed, 2004, was a very good year for this TRANSACTIONS and by extension for the health and vitality of the microwave community. In 2004, we published 2932 pages and 333 manuscripts,¹ which is the most papers we have ever published in a single year. This TRANSACTIONS continues to be ranked among the top three journals in electrotechnology in association with *Electronics Letters* and the IEEE JOURNAL OF SOLID-STATE CIRCUITS. (The measure used is the number of electronic downloads of papers.) This TRANSACTIONS exists for readers and authors primarily, but we have a critical function as the premier repository of knowledge on all things RF and microwave. For our readers, we provide new concepts and techniques to further the art of RF and microwave engineering. We also provide essential fundamentals—continuing education—that enable readers to develop a core understanding from which new concepts and products can be developed. For our authors, we provide the preeminent platform to disseminate ideas. With our rigorous review process and very high standards, we provide an imprimatur and recognition that an essential contribution to knowledge has been made. Each paper receives an average of four reviews and our selectivity (or acceptance rate) averages 45%.

Figs. 1–3 provide historical data pertinent to judging how this TRANSACTIONS is performing. Fig. 1 presents the delay-to-publication for the last several years. We have managed to reduce the time from submission of a manuscript to the time it is published to 39 weeks. This is nine months—the IEEE goal. Many factors contribute to this time including approximately two months for IEEE to produce a high-quality document and iterate with the authors using galley proofs. The review cycle is rigorous, as I have said, and manuscripts are not accepted until they have reached a very high standard. The first stage of the review process averages approximately two months with some manuscripts less than this and, unfortunately, many papers take much longer. Such papers tend to often have considerable theoretical content. Revision of a manuscript is requested approximately 95% of the time and the delay by authors in returning the revised manuscript is the longest block of time.

Over the last few years, we have experienced an increase in the number of manuscripts submitted to this TRANSACTIONS with papers from the Asia–Pacific Region responsible for most of the increase, but all regions have seen an increase. This is a good indication of the health of the microwave community and the vigorous effort to develop microwave industry in emerging economies. The number of submissions per week over the last few years is plotted in Fig. 2 in six-month intervals. The plot seems a little complicated at first, as submissions to two large

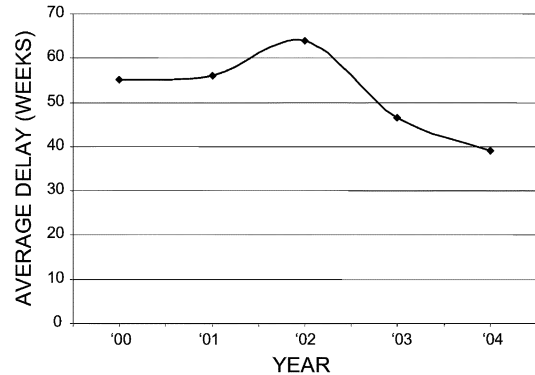


Fig. 1. Historical delays in weeks.

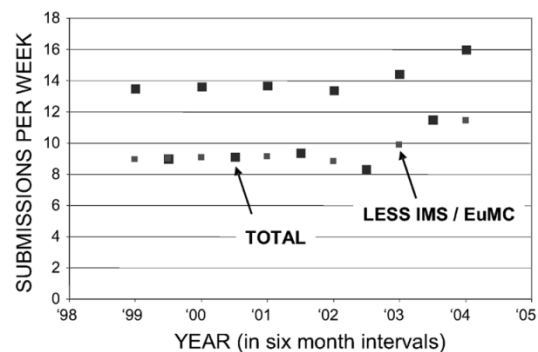


Fig. 2. Number of submissions per week plotted in six-month intervals. The total number of submissions is plotted, as well as the number of submissions with out the papers submitted to this TRANSACTIONS' Special Issues devoted to the IEEE MTT-S IMS and the European Microwave Conference.

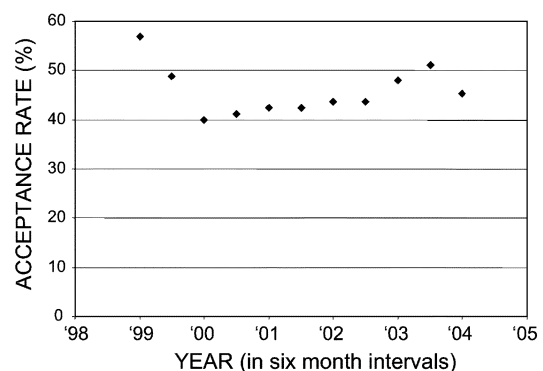


Fig. 3. Historical acceptance rates versus time in six-month intervals.

Special Issues devoted to the IEEE Microwave Theory and Techniques Society (IEEE MTT-S) International Microwave Symposium (IMS) and to the European Microwave Conference are broken out. This data is also used to predict the page budget of this TRANSACTIONS in future years. We must commit to a page budget in May of the year prior to publication. This may seem strange, but with many institutions subscribing and large human resources involved, planning is essential. In early 2003, we underestimated the number of pages we would require in 2004 and this resulted in a backlog of several months at the end

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¹Remember that we publish an index, table of contents, and calls for papers/announcements; thus, the average length of a published paper in 2004 was 8.1 pages.

of the 2004. Just the same, we reduced the average backlog. In response to this, the Administrative Committee (AdCom) of the IEEE MTT-S provided special funding to increase the number of pages that this TRANSACTIONS publishes to 3500 for 2005. This is a considerable cost and will only be offset marginally by revenue as subscription rates to this TRANSACTIONS were set long ago. We are able to do this as the IEEE MTT-S operates with keen fiscal responsibility, but also with a recognition of responsibility for timely dissemination.

One of the commonly used measures of the quality of a journal is its selectivity, which, for this TRANSACTIONS is indicated by the acceptance rate. Historical acceptance rates are plotted in Fig. 3. Acceptance rates of around 50% or less place us among the top journals in terms of selectivity. Many factors affect the acceptance rate including the types of Special Issues we run. One factor is the quality of the submitted manuscript. The great majority of manuscripts are submitted almost exactly as they appear in print. Some are submitted with low-quality figures and multiple small errors and often are not successful in the review process. The biggest factor leading to rejection is probably incremental publication. In the past, it was accepted practice to effectively disregard a prior conference publication and repeat material in a journal paper. In the last few years, we have seen a tremendous change in online accessibility of publications including conference papers. Thus, manuscripts that repeat earlier published material without significant expansion so that the submitted manuscript is a distinct paper are generally rejected.

Also, for the first time, we have been able to get an estimate of how many people read papers in this TRANSACTIONS and also get an idea of what readers appreciate the most. Below I have compiled a list of the top downloads of this TRANSACTIONS in 2004. The list is based on IEEE Xplore usage. To be on this list, a paper was one of IEEE's monthly top 200 downloads, which corresponds, coincidentally, to at least 200 downloads, approximately, in the month. Placing the downloads in areas, we see a prioritization of the following:

- 1) ultra wideband (UWB);
- 2) RF integrated circuit (RFIC);
- 3) microelectromechanical systems (MEMS);
- 4) components (filters, couplers, transitions);
- 5) power amplifiers;
- 6) metamaterials.

There are many ways to interpret the meaning of this, but I will not attempt to do so. The papers below are ordered by when they first achieved "top download" status. Generally this was in the month of publications, but you will see that there some exceptions. In a few cases, top downloads were not published in 2004.

- G. M. Rebeiz, "Phase-noise analysis of MEMS-based circuits and phase shifters," pp. 1316–1323, vol. 50, no. 5, May 2002.
- C. M. Krowne, "Electromagnetic-field theory and numerically generated results for propagation in left-handed guided-wave single-microstrip structures," pp. 2269–2283, vol. 51, no. 12, Dec. 2003.

- S. Peroulis, S. P. Pacheco, and L. B. Katehi, "RF MEMS switches with enhanced power-handling capabilities," pp. 59–68, vol. 52, no. 1, Jan. 2004.
- B. Sahu and G. A. Rincon-Mora, "A high-efficiency Linear RF power amplifier with a power-tracking dynamically adaptive buck-boost supply," pp. 112–120, vol. 52, no. 1, Jan. 2004.
- S. J. Spiegel and I. I. G. Kovacs, "An efficient integration of GPS and WCDMA radio front-ends," pp. 1125–1131, vol. 52, no. 4, Apr. 2004.
- L.-C. Tsai and C.-W. Hsu, "Dual-band bandpass filters using equal-length coupled-serial-shunted lines and Z-transform technique," pp. 1111–1117, vol. 52, no. 4, Apr. 2004.
- J.-S. Hong and S. Li, "Theory and experiment of dual-mode microstrip triangular patch resonators and filters," pp. 1237–1243, vol. 52, no. 4, Apr. 2004.
- I.-H. Lin, M. DeVincentis, C. Caloz, and T. Itoh, "Arbitrary dual-band components using composite right/left-handed transmission lines," pp. 1142–1149, vol. 52, no. 4, Apr. 2004.
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- L. Zhu and W. Menzel, "Broad-band microstrip-to-CPW transition via frequency-dependent electromagnetic coupling," pp. 1517–1522, vol. 52, no. 5, May 2004.
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- C.-C. Chen and C.-K. C. Tzuang, "Synthetic quasi-TEM meandered transmission lines for compacted microwave integrated circuits," pp. 1637–1647, vol. 52, no. 6, Jun. 2004.
- L. Harle and L. P. B. Katehi, "A silicon micromachined four-pole linear phase filter," pp. 1598–1607, vol. 52, no. 6, Jun. 2004.
- A. Birafane and A. B. Kouki, "On the linearity and efficiency of outphasing microwave amplifiers," pp. 1702–1708, vol. 52, no. 7, Jul. 2004.
- Y. Wang, D. Gope, V. Jandhyala, and C.-J. R. Shi, "Generalized Kirchoff's current and voltage law formulation

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 - J. Kim and Y. Rahmat-Samii, "Implanted antennas inside a human body: Simulations, designs, and characterizations," pp. 1934–1943, vol. 52, no. 8, Aug. 2004.
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- This TRANSACTIONS maintains a web site at <http://www.mtt.org/publications/Transactions/transactions.htm> where Calls for Papers for Special Issues and links to author tools are maintained. Current calls for papers are as follows.
- Special Issue on Ultra-Wideband. Deadline for submission of manuscripts: 1 August 2005; scheduled publication date: April 2006.
 - Special Issue on Microwave Photonics. Deadline for submission of manuscripts: 1 April 2005; scheduled publication date: February 2006.
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