# Abstracts

## Electronic design assistance tool for circuit optimization: application to microwave power amplifiers

*C. Duperrier, M. Campovecchio, J. Rousset, R. Quere, S. Mons, A. Mallet and L. Lapierre. "Electronic design assistance tool for circuit optimization: application to microwave power amplifiers." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 2067-2070 vol.3.*

An electronic design automation tool is being developed to assist the designer in optimizing RF and microwave nonlinear circuits. This paper reports the first version of this software dedicated to power amplifier design. This tool does not intend to simulate nonlinear circuits because CAD tools are already available and reliable. It intends to develop an efficient and predictive design process from reusable knowledge databases (components, circuits, methodologies, etc.). The reported assistance tool has been implemented into an open computing environment using the DB2 database, C/sup ++/ programs, template files, Java interfaces and the ADS software for simulation. The design process starts off from circuit specifications. Either, the history database is explored to find already carried out circuits demonstrating performances close to specifications or the component database is explored to select appropriate active device(s) and to generate a first-cut amplifier architecture meeting the requested specifications. Then, this assistance tool guides the designer at each step by proposing suited methods and specific helps (substitute generators, matching, nonlinear stability, linearity, etc.) up to yield analysis.

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