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Experience-based Design Optimization for A/D-Converters

Take the guesswork out of your design by systematically reusing the results of others before making any prototypes of your own. Identify and reject unrealistic target specifications without the cost and lead-time of making a test design. Explore more options. These are some of the advantages of Experience-Based Design Optimization offered by ADMS Design AB. "I believe all A/D-converter projects will use this approach in 3–5 years from now", says Dr. Bengt Jonsson, founder of ADMS Design AB. "There is no room for guesswork".

ADMS Design is launching the service "*Experience-based Design Optimization*" (EDO) for A/D-converters (ADC). Through systematic analysis of a massive data set containing design and performance data from nearly all reported scientific ADC implementations and a majority of commercial ADC parts, highly educated and empirically well-founded design decisions and performance predictions can be made early in a project.

Impossible or unrealistic specifications can be rejected even before initiating a project. Initial exploration of the design space is based on large amounts of measured performance data reported for ADCs designed, taped-out, measured, documented ***and paid for*** by others. Alternative solutions can be evaluated without the cost and lead-time associated with making a prototype for each. When the first prototype is eventually designed, resources can be spent on a design that is likely to hit the mark.

"I believe all A/D-converter projects will use this approach in 3–5 years from now", says Dr. Bengt Jonsson, founder of ADMS Design AB. "Even before the official launch, we have had companies expressing their interest in the method. The competition is fierce, and there is no room for guesswork and ill-founded personal opinions. At the same time, the amount of reported information grows rapidly while senior designers and architects are busy working in the projects. They will not have time to read and process everything that's published anymore, and that's why we are doing it for them."

Experience-based design optimization is a highly flexible approach that can easily adapt to each unique client project. Client preferences regarding for example architecture, or fixed design parameters such as CMOS node or supply voltage, are simply used as design constraints. EDO relies on three main components:

- Access to large amounts of experimental data
- Custom-developed analysis software
- A thorough insight and understanding of data-converter design

EDO is not a replacement for thinking designers and ADC architects – it just provides a larger and more unbiased view of the available design options and their possible consequences.

Read more in "*EDO Introduction*" (http://www.admsdesign.com/en/edo/EDO_intro.pdf)

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