

Uit het groepsverslag 1998 over het OSCAR-project door Marcel Pelgrom:

## OSCAR-project

*A joint research project with FLUKE Corp. (Everett USA) on an A/D converter with digital filtering for a multimeter front-end.*

*It contains a 5-digit readout with DC and RMS values, and a frequency counter. It has also a 10-bit 2.5 MHz output for display purposes. Bandwidth for RMS signals is 500 kHz. (With assistance from Hans v. Walderveen and Arnold Gruijthuijsen, ED&T Verification)*

*Status: Silicon of OSCAR2 is available since week 9830. DC-non-linearity is below 0.02%, but a dip occurs in the integral non-linearity at zero input, caused by the sign switches of the Sign&Magnitude DAC. Parasitic capacitive coupling in the choppers cause 2mV systematic offset. Both non-idealities will be solved in the next silicon. Noise is below 10uVpp (1000 readings) using an external reference. With the internal reference the noise is 300uVpp. Target is to improve this to 50uV by using chopping in the internal bandgap. AC RMS performance is within spec. The digital scan test chain doesn't work due to verification problems of the multiple clock domains used in OSCAR. This has been solved for next silicon. Power consumption of the complete 14.4mm<sup>2</sup> chip is 12.7mW. A paper has been accepted for publication at ISSCC '99.*

<https://ieeexplore.ieee.org/document/759319>

Fluke heeft de meetinstrumentenafdeling van Philips Almelo/Enschede overgenomen, waarbij Fluke het recht of plicht had een project in research te betalen.

Hieronder het OSCAR project team uit de Mixed-Signal Circuits and Systems groep, een project dat ongeveer van 1995 tot 1999 duurde.

Op de foto: achterste rij v.l.n.r.:

Arnold Gruijthuijsen, Hans van Walderveen (beiden ED&T), Eric van der Zwan.

Voorgrond: Peter Nuijten, Carel Dijkmans en Robert van Veldhoven.

De laatste vier uit mijn groep.

Zowel Peter als Eric zijn kort daarna overleden.

