



CASE STUDY /

Ansys + CompoundTek

"Ansys CML Compiler enabled us to generate accurate compact models for all elements in our PDK along with the option to add statistical data. This has enabled our customers to shorten their learning and design cycle, thus improving their time to market."

Mr. K.S. Ang
COO / CompoundTek

As an innovate leader in silicon photonics, CompoundTek set out to deliver 3-sigma statistical support to provide customers with best-in-class PDK models that are representative of CompoundTek's proprietary manufacturing process.

/ CHALLENGES

To deliver statistical support with minimal time-to-market, CompoundTek looked for innovative ways to improve its processes for the development and maintenance of PDKs.

/ TECHNOLOGY USED

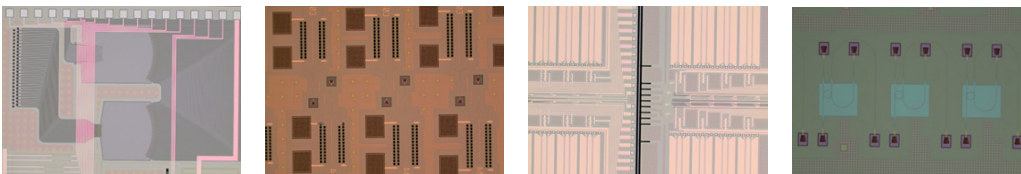
- Ansys CML Compiler

/ ENGINEERING SOLUTION

- CompoundTek decided to go with CML Compiler embracing a solution for increased automation for building and maintaining compact model libraries (CMLs).
- With the addition of statistical support to CML Compiler, it was the perfect tool to help improve productivity. The statistical models enable CompoundTek customers' designs to have a better fit of the simulation results with the actual performance, resulting in a more accurate prediction of the actual chip performance and yield.
- CML Compiler enabled integration of CMLs with 3rd party EDA tools, allowing customers to link their INTERCONNECT schematic to the layout and perform electro-optical co-simulation.
- The built-in capability of encrypting the CML was another feature that was important to CompoundTek.

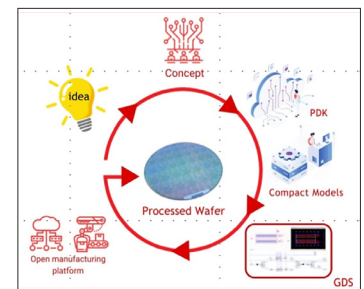
/ BENEFITS

- Data requirements of CML Compiler makes it easier to identify what measurements are needed for statistical enablement of models.
- Switching from nominal to statistical model is easily accomplished by adding the required statistical data measured from CompoundTek's actual silicon wafer.
- Built-in QA to verify statistical and nominal behavior of generated compact models.
- Ansys Lumerical's technical support makes the process/troubleshooting easier.



/ COMPANY DESCRIPTION

CompoundTek is a global leader in enhanced foundry services for silicon photonics which offers to the industry its revolutionary semiconductor applications designed to meet critical requirements in high bandwidth and high data transfer solutions particularly in emerging connectivity driving Industry 4.0. The company's in-depth know-how includes end-to-end technologies — from proprietary fabrication process expertise to product design support with strategic partners, on-wafer silicon photonics testing and other extended services for end-product manufacturing.



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