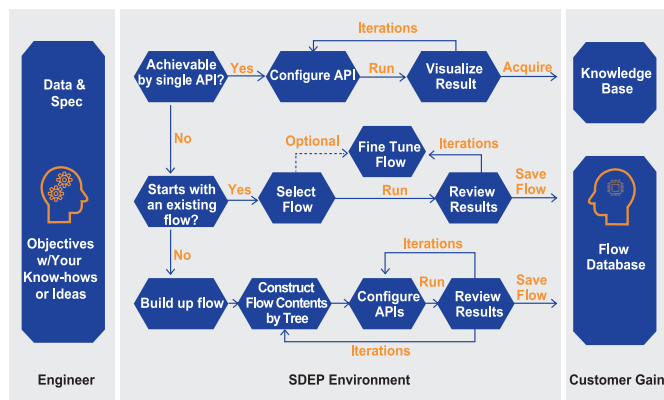# SDEP

PRIMARIUS

Spec-Driven Modeling Automation Platform

Introduction

SDEP (abbreviation of Spec-Driven Extraction Platform) - an innovative modeling platform, providing powerful & rich APIs to build automatic and reusable modeling flows. SDEP enables a new way to shorten the model development turnaround time dramatically. It also provides customers with a system to retain and inherit valuable device modeling expertise and solidify modeling know-hows.
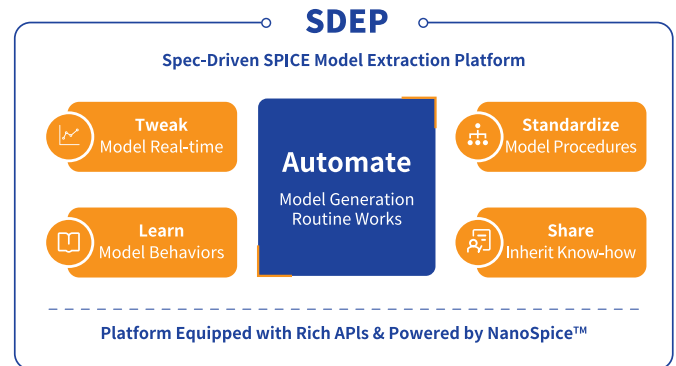
SDEP integrates Primarius' latest technologies in all modeling essential functions covering data analysis, model parameter extraction and model quality checking. It gives users a new powerful weapon & platform to tackle modeling challenges. With the flexible GUI environment and flow control functions, modeling engineers can easily establish a flow for model extraction procedures, routine modeling works, new ideas, etc. These flows mentioned above can be naturally automated, reused, and customized.

SDEP can also be used as a modeling expert system to understand model, accumulate modeling know-hows, and train modeling engineers.
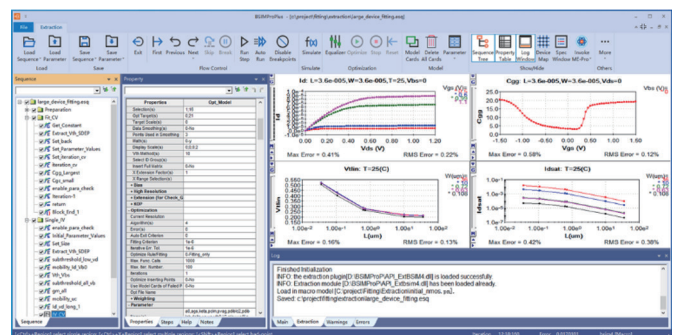
SDEP
Spec-Driven SPICE Model Extraction Platform

- **Tweak** Model Real-time
- **Automate** Model Generation Routine Works
- **Standardize** Model Procedures
- **Learn** Model Behaviors
- **Share** Inherit Know-how

Platform Equipped with Rich APIs & Powered by NanoSpice™

Specifications

- High resolution trend control
- Support irregular device map
- Support data analysis & validation
- Rule-based device & bias selection
- Fitting & QA spec co-optimizations
- On-the-fly model QA with rich checking rules
- Flow variable, control & debugging features
- Flow configuration with editable API properties
- Easy model format (global, local & bin) conversions
- Flexible GUI environment & powerful data presentation functions
- Customizable optimization options with local & global algorithms
- Parameter sensitivity analysis, smoothing, boundary & effective value control
- Complete modeling functions covering IV/CV/Temperature best-fitting, re-targeting, corner and LDE

Key Advantages

- **Spec-Driven**
  Fitting & QA spec co-optimization to reduce iterations and improve modeling efficiency & quality
- **High Efficiency**
  Customable and reusable modeling process and automatic modeling procedures to shorten model development TAT
- **Powerful APIs**
  - Better balance strategies between fitting & QA
  - Better parameter selection strategies with parameter auto-filtering function
- **Flexible GUI**
  Easy and fast to build modeling process efficient for co-optimization of model fitting, parameter analysis & optimization, and model QA
- **Know-Hows**
  Standardized modeling process that is easy to retain and optimize continuously for inheritance of valuable modeling expertise
- **Easy-to-Use**
  User-friendly GUI without programming skill needed to build up a complicated flow

Applications

- SPICE model library development & analysis
- Modeling talent training
- Modeling know-hows inheritance
- Accelerate DTCO process