Developing Open-Source Circuit Design and Flow Management Software

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Background

- Open-Source EDA Tools and Flows
- Open Galaxy Project Manager
- Tool Migration to Open-Source

Toolbar of analog tools and Synthesis Flow, with no clear order nor the flexibility to extend to other flows

Background

- Flow Managers
  - Qflow
  - Flows
    - Analog
      1. Preparation
      2. Schematic
      3. Simulation
      4. Layout
      5. DRC
      6. LVS
      7. GDS
      8. Cleanup
    - Mixed-Signal
    - Assembly

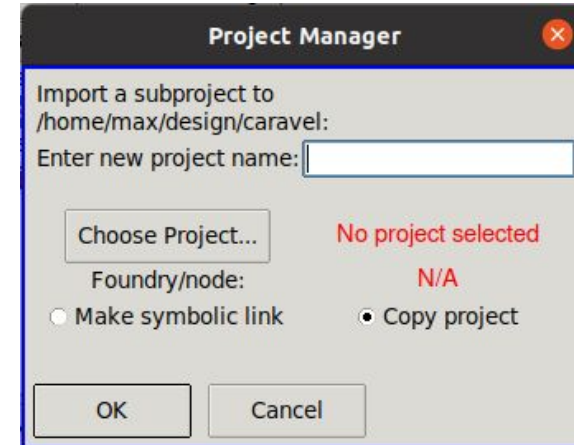| Checklist			
Preparation	(not done)	**Run**	Settings
Synthesis	(not done)	Run	Settings
Placement	(not done)	Run	Settings
Static Timing Analysis	(not done)	Run	Settings
Routing	(not done)	Run	Settings
Post-Route STA	(not done)	Run	Settings
Migration	(not done)	Run	Settings
DRC	(not done)	Run	Settings
LVS	(not done)	Run	Settings
Cleanup	(not done)	Run	Settings

Screenshot of the qflow manager and the intuitive checklist design

Implementation

- Part of Open_PDKs @ Open Circuit Design
- Removal of EDA toolbar & platform-specific features

Project view in the project manager, displaying the "caravel" project and the "simple_por" sub-project

import dialog (sub-project)

Implementation

- Flow selection

- Analog Flow Manager (In Progress)

Links/References

Open Circuit Design: http://www.opencircuitdesign.com/

Efabless: https://efabless.com/

Open_PDKs:

- http://www.opencircuitdesign.com/open_pdks/index.html
- https://github.com/RTimothyEdwards/open_pdks

Qflow:

- http://www.opencircuitdesign.com/qflow/index.html