

# PyCell Studio, Version 4.6, Release Notes

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## Introduction

Welcome to PyCell Studio, Version 4.6, released 2011-12-01. This release is based on OpenAccess 22.41.004.

Highlights of Version 4.6 include:

- New class AttrDisplay.
- New command cntechcheck.
- New DRC Script Debugger.

Highlights of Version 4.6 premium features include:

- New DRC operators.

Supported Platforms:

- Baseline supported Linux operating system is Red Hat Enterprise Linux 4.x.

See Change Requests for specific differences from Version 4.5.

These release notes summarize the important enhancements, bug fixes, and other changes which have been made since Version 4.5. For complete technical details, please see the related documentation.

## **New Features and Enhancements**

1. New class AttrDisplay.  
Create text matched to attributes of other objects, such as Terminal name or Instance name.
2. New cntechcheck command.  
Utility to check Santana.tech for correctness.
3. New DRC Script debugger.  
Enhancement to cndbg, Ciranova debugger, to enable step-by-step debugging of DRC Script.
  - Breakpoints.
  - Viewing of intermediate results.
  - Vector display of DRC edge results.

## Change Requests

Like many companies, Ciranova uses Bugzilla ([www.bugzilla.org](http://www.bugzilla.org)) to track change requests. As yet, Ciranova does not have a publicly accessible request tracking system. If your request was assigned a Bugzilla number, you should have been notified by Ciranova technical support when it was closed. Otherwise, you can check the following listing of Bugzilla requests which were closed for this release.

### 2011-12-01

- 708 Check for consistency of units information in OA tech.db and Santana.tech
- 788 Tech Checker should check for consistency between OA tech DB and Santana.tech
- 796 Provide checking for layerMaterials section of technology file
- 797 Checking for layers in viaLayers section of technology file
- 798 Additional checking for Electrical Rules section of technology file
- 803 Provide checking for maskNumbers section of technology file
- 1231 Debug assertion during Solver::fgEnclosingPolygonImp()
- 1670 result of STAMP has no connectivity information
- 2220 Unlimited Shape' option for fgPlace() and fgAddEnclosing\*()
- 2404 fgDeriveLayer doesn't report input syntax errors
- 2597 cni/vpcells/abut.py should be updated to use AttrDict and ProtocolString
- 2996 Device Contexts and Variants.py files needed for Bandgap/PNP cells
- 3289 OR EDGE operation to be documented
- 3429 Inconsistent parameter order in PyCell Parameters window
- 3498 Pyros Information window should report true area
- 4044 Add API to collect all interconnect layers
- 4084 need layer mapping for derived layers
- 4096 Enhancement request to support oaAttrDisplay
- 4116 local derived layers logged as global
- 4254 Improve DRC engine performance loading geometries
- 4394 Parameters saved from Pyros to support instance or submaster loading
- 4441 Remove "Last MinSpacing Rule" from cndbg
- 4476 Code bundling with encrypted\_source fails on Windows
- 4479 New gui files for packaging
- 4483 Pyros should show show backtrace and line number for Internal errors
- 4485 running DRC breaks Undo
- 4486 Internal error during SPACING DRC operation
- 4487 cnexp documentation lists obsolete option
- 4494 Source tracing does not work on Windows, due to ":" notation
- 4526 Santana 4.6 Documentation Tracking
- 4532 techfile reader has to check mask numbers for layers in viaLayers section
- 4542 DRC assertion error with no message
- 4549 Ciranova DRC Operations: Orientation filters to be documented as for non-adjacent edges
- 4550 Ciranova DRC Operations: documentation should state fixed size of OFFGRID markers
- 4552 Need to add exportDesignUi.ui
- 4553 Error retrieving CDF information
- 4556 SPACING rules with OPPOSITE\_PLUS result is confusing
- 4557 Doc string error for ShapeFilter
- 4559 Ciranova DRC Operations: INTERACT\_AREA documentation mistake
- 4591 DRC Script debugger problems
- 4592 Ciranova DRC Operations: HOLES documentation should be clarified
- 4610 Use of parentheses in Pyros combo box item causes crash

4623 new cntechcheck utility  
4625 Remove obsolete techcheck.py from PyCell Studio and Helix packages  
4630 cndbg crashes when error encountered in PyCell code  
4632 cngenlib assertion error using tech/schematic/src/Santana.tech  
4633 cngenlib reports cryptic error message, instead of actual error message and line number  
4639 support for scoping to purpose in OA constraints processing  
4652 Documentation correction on Lib.definePcell()  
4659 addEnclosingRects method needs to support a list of context layers.  
4674 OA exception when converting OA tech DB  
4676 fgAddEnclosingRects error when input layout also contains layer to be created  
4704 ShapeFilter copy constructor is missing from Santana Python wrapper  
4707 package request for cntechcheck  
4732 open file window takes a long time after selecting a library  
4742 Support for dummy poly sharing in PyCell Studio  
4752 Parsing CDF does not correctly handle prefix "+" or "-" characters for numbers  
4761 package request for license.ciranova  
4769 Package request for cnpy\_nogui scripts  
4788 Descend from Pyros does  
4805 Selecting instances by window does not update selection in other design windows  
4808 Unable to enter valid double values in Pyros parameter window  
4811 Change permissions of PyCell code packages .cnbundle file  
4834 Missing doc file