

# ViaChange

Intelligently change via padstacks by window or filtered selection.

Features:

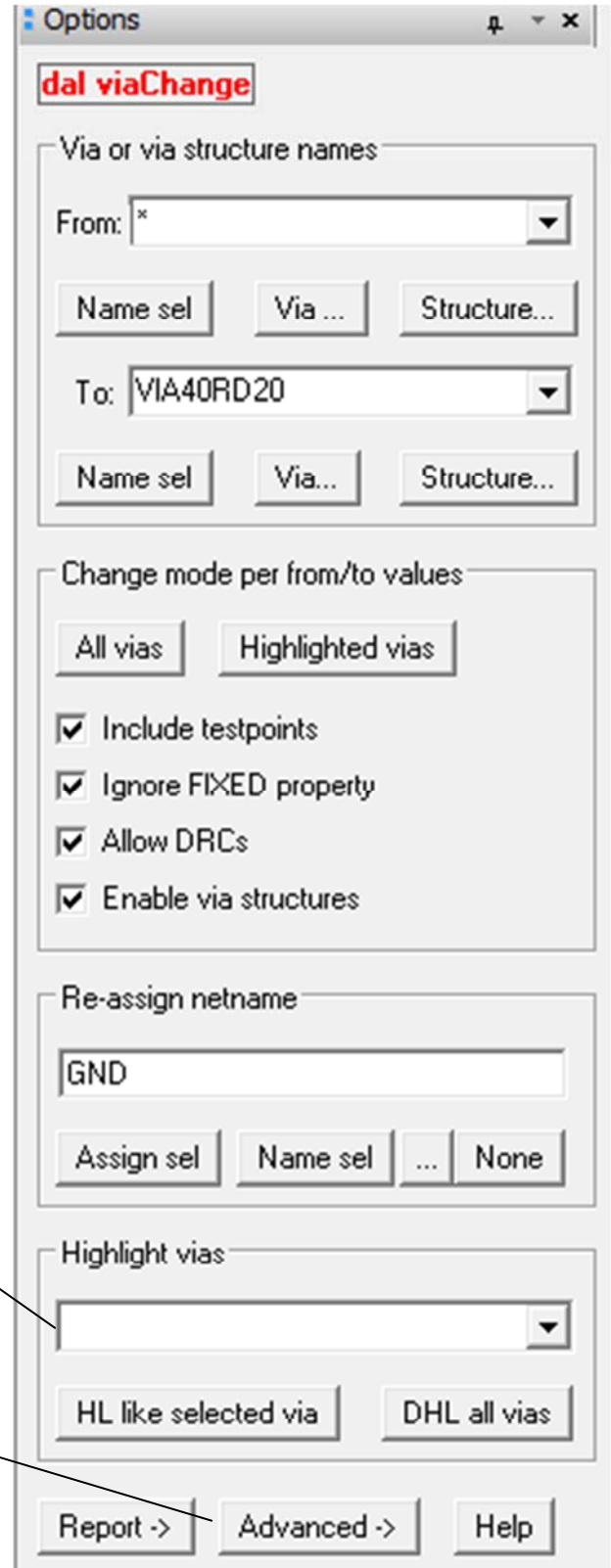
- Quick from/to name selection.
- Re-assign net name feature.
- Highlight vias by name.
- Detailed reports.
- Supports via structures.

Video demonstration available at:

[www.dalTools.com](http://www.dalTools.com)

```
* Match Any/All Qty:10982
VIA_BACKDRILL_24-6 Qty:2
VIA_BACKDRILL_24-18 Qty:4
VIA_BACKDRILL_24-10 Qty:4
VIA_8-9 Qty:451
VIA_4-5 Qty:412
VIA_20-21 Qty:340
VIA_16-17 Qty:505
VIA_10_20_19_26_32SQ_BOT Qty:1248
VIA_10_20_19_26_32 Qty:3246
VIA_10_20_19_26_20SQ_BOT Qty:707
VIA_10_20_19_26_20 Qty:3833
MICROVIA_1-2 Qty:230
```

Add VIA\_STRUCTURE property  
 Show VIA\_STRUCTURE property  
 Delete VIA\_STRUCTURE property



The screenshot shows the 'dal viaChange' Options dialog box with the following sections:

- Via or via structure names:**
  - From: \* (dropdown)
  - Name sel, Via ..., Structure... (buttons)
  - To: VIA40RD20 (dropdown)
  - Name sel, Via..., Structure... (buttons)
- Change mode per from/to values:**
  - All vias, Highlighted vias (buttons)
  - Include testpoints
  - Ignore FIXED property
  - Allow DRCs
  - Enable via structures
- Re-assign netname:**
  - GND (text field)
  - Assign sel, Name sel, ..., None (buttons)
- Highlight vias:**
  - (dropdown menu)
  - HL like selected via, DHL all vias (buttons)
- Bottom row:** Report ->, Advanced ->, Help (buttons)

# Via structures

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Via structures are special symbols that may contain vias, shapes, clines and text. They must be created as mechanical symbols and have the hidden Cadence property VIA\_STRUCTURE in the database. One way to add this property is with the advanced button in this command.

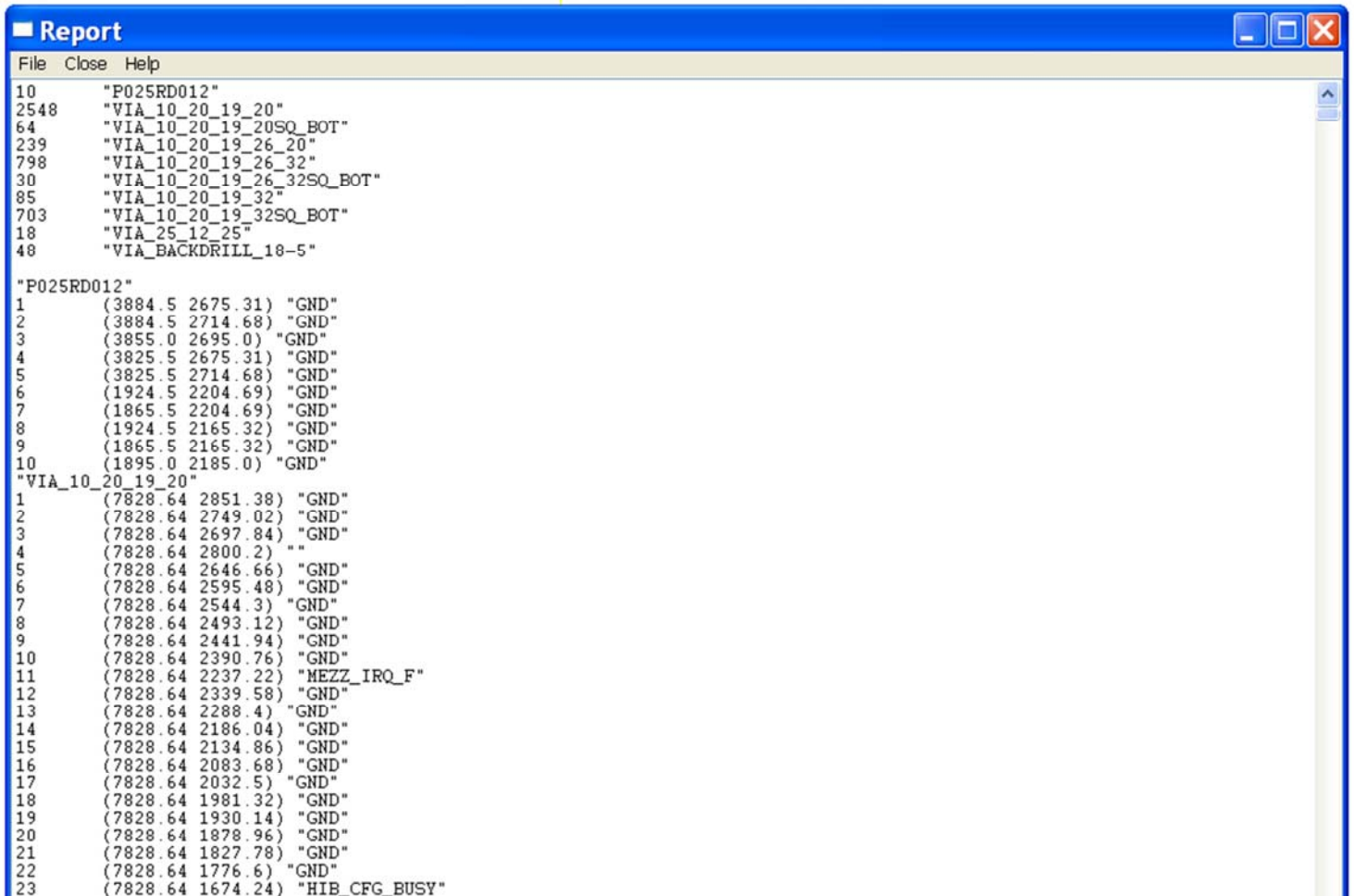
The dal viaChange command supports the changing of via to via structures and vice versa.

Some common uses for Via structures:

1. Add positive layer route keepouts per layer for certain drc situations.
2. Stack vias on top of each other for easy single object manipulations.
3. Group multiple vias together as a single symbol.

# Report

---




```
Report
File Close Help
10 "P025RD012"
2548 "VIA_10_20_19_20"
64 "VIA_10_20_19_20SQ_BOT"
239 "VIA_10_20_19_26_20"
798 "VIA_10_20_19_26_32"
30 "VIA_10_20_19_26_32SQ_BOT"
85 "VIA_10_20_19_32"
703 "VIA_10_20_19_32SQ_BOT"
18 "VIA_25_12_25"
48 "VIA_BACKDRILL_18-5"

"P025RD012"
1 (3884.5 2675.31) "GND"
2 (3884.5 2714.68) "GND"
3 (3855.0 2695.0) "GND"
4 (3825.5 2675.31) "GND"
5 (3825.5 2714.68) "GND"
6 (1924.5 2204.69) "GND"
7 (1865.5 2204.69) "GND"
8 (1924.5 2165.32) "GND"
9 (1865.5 2165.32) "GND"
10 (1895.0 2185.0) "GND"
"VIA_10_20_19_20"
1 (7828.64 2851.38) "GND"
2 (7828.64 2749.02) "GND"
3 (7828.64 2697.84) "GND"
4 (7828.64 2800.2) ""
5 (7828.64 2646.66) "GND"
6 (7828.64 2595.48) "GND"
7 (7828.64 2544.3) "GND"
8 (7828.64 2493.12) "GND"
9 (7828.64 2441.94) "GND"
10 (7828.64 2390.76) "GND"
11 (7828.64 2237.22) "MEZZ_IRO_F"
12 (7828.64 2339.58) "GND"
13 (7828.64 2288.4) "GND"
14 (7828.64 2186.04) "GND"
15 (7828.64 2134.86) "GND"
16 (7828.64 2083.68) "GND"
17 (7828.64 2032.5) "GND"
18 (7828.64 1981.32) "GND"
19 (7828.64 1930.14) "GND"
20 (7828.64 1878.96) "GND"
21 (7828.64 1827.78) "GND"
22 (7828.64 1776.6) "GND"
23 (7828.64 1674.24) "HIB_CFG_BUSY"
```

[Sample report](#)

# Help

1.0\_002 11-08-2013



### Help

**Command:** dal viaChange

**Purpose:** Changes via padstacks or via structures by selection, window, group, all or highlighted.

**From:** The existing via name or structure to change.

- Name sel** - Selects the name of the From: via by selecting an existing via or structure name.
- Via.** - Opens a padstack selection browser.
- Structure** - Opens a VIA\_STRUCTURE selection browser.

**To:** The new via name or structure to substitute for the From name.

- Name sel** - Selects the name of the To: via by selecting an existing via or structure name.
- Via.** - Opens a padstack selection browser.
- Structure** - Opens a VIA\_STRUCTURE selection browser.

**Change mode per from/to values**

- All vias** - Changes all vias or structures on the board that match the From: name.
- Highlighted vias** - Changes all vias on the board that are highlighted. For example, if the GND net is highlighted then all vias that match the From: name are changed.

**Include testpoints** - Allows testpoints to be changed.

**Ignore fixed property** - When checked fixed objects are changed.

**Allow DRCs** - Keeps changed vias if drc(s) are created.

**Enable via structures** - When checked via structure changes are allowed.

**Re-assign netname** - Assigns or overrides a net name for the via.

- Assign sel** - Assigns the netname to the selected via.
- Name sel** - Selects the name of the net by selecting an existing net.
- ...** - Opens a netname selection browser.
- None** - Selects DUMMY NET for the netname.

**Highlight vias** - Highlights the selected via padstack from the pulldown menu.

- HL like selected via** - Highlights other vias that match the name of a selected via.
- DHL all vias** - Dehighlights all vias.

**Report:** Displays a via padstack usage report.

**Advanced**

- Add VIA\_STRUCTURE property** - Adds the hidden Cadence default property inside the drawing editor. Must be a mechanical symbol.
- Show VIA\_STRUCTURE property** - Shows the names of any via structures in the .brd database.
- Delete VIA\_STRUCTURE property** - Deletes the hidden Cadence default property inside the drawing editor. Must be a mechanical symbol.

**Visit our website:** [www.daltools.com](http://www.daltools.com) [More Documentation \(PDF\)](#) [Web Demonstration](#)

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