AdivaView Main Functions (User Guide)

Adiva Version 9.5

Document: 1/28/2021

Notice

Representations in this User Guide are meant as an overview and quick reference. Full details can be found in the On-Line manuals located at the *ADIVA Corporation* website - www.adiva.com

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AdivaView Functional Highlights

NOTE: To receive the full features of AdivaView, it is best to have an Adiva database that has been completed and saved after the Netlist Compare process. Netlist Compare provides netname and component information useful in design review and debug. However, the Netlist Compare function is not required for Layer Compare routines.

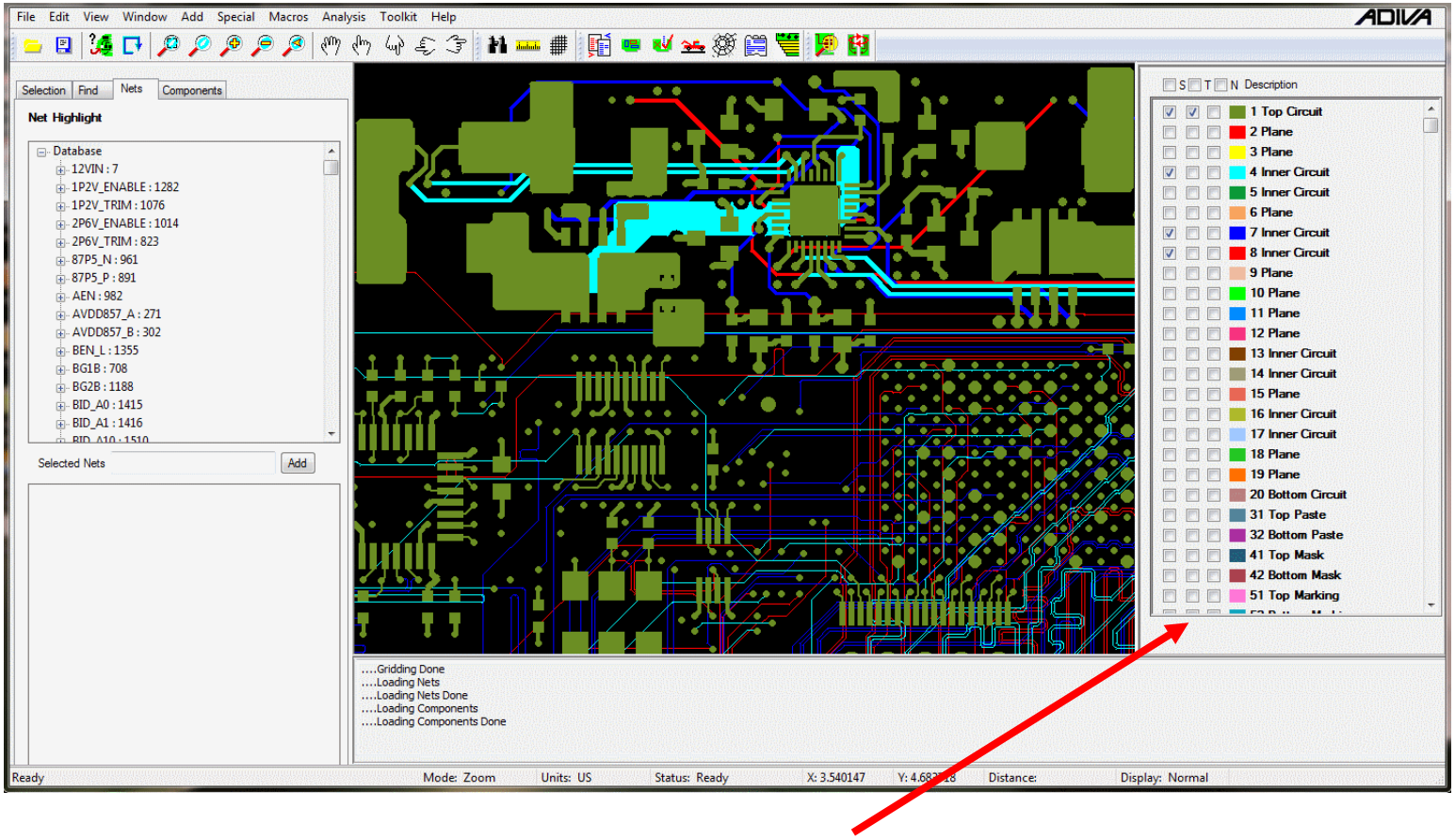
AdivaView allows the display and query of PCB Design data using Manufacturing tools

- Useful for Engineer review – compare revisions to see actual design differences
- Useful for Engineer review – replaces pen plots, photoplots and unintelligent viewers
- Useful for Engineer review – review component placement, net routing, net lengths
- Useful for Technician review – Find a net, see where it is routed and understand its characteristics, length, layers, surroundings
- Useful for Technician review – Find a component, see what its tied to and how its routed to other components
- Generate Screen-shots of issues to communicate to others with an easy web-page creation function

Starting the AdivaView Interface

On the **Windows Desktop**, double-click the **AdivaView** icon
-or-
on the command line, type >AdivaView -V <*jobname*> (jobname is optional)

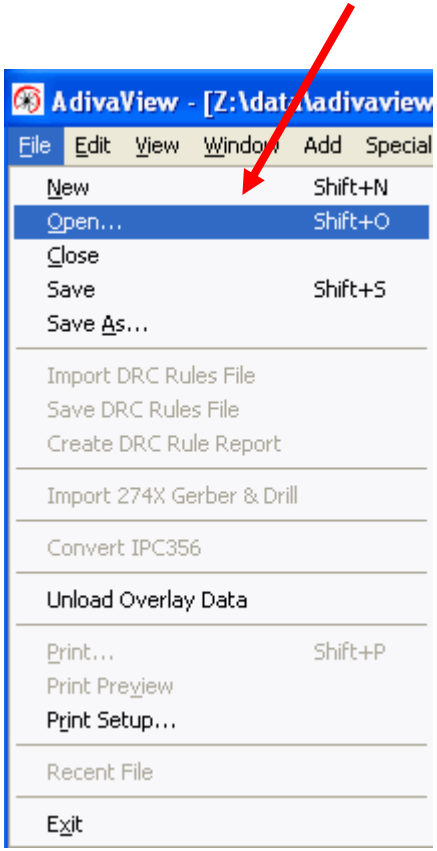
The graphical Interface will appear and if a jobname is supplied from the command line it will appear like below.



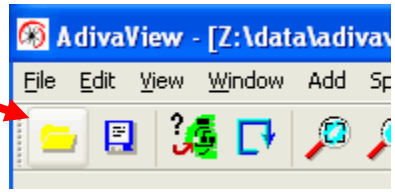
If a <*jobname*> is not supplied, the Layer Listing on the right will be empty and there will be no graphics to display. The next step will be…

Starting the AdivaView Interface

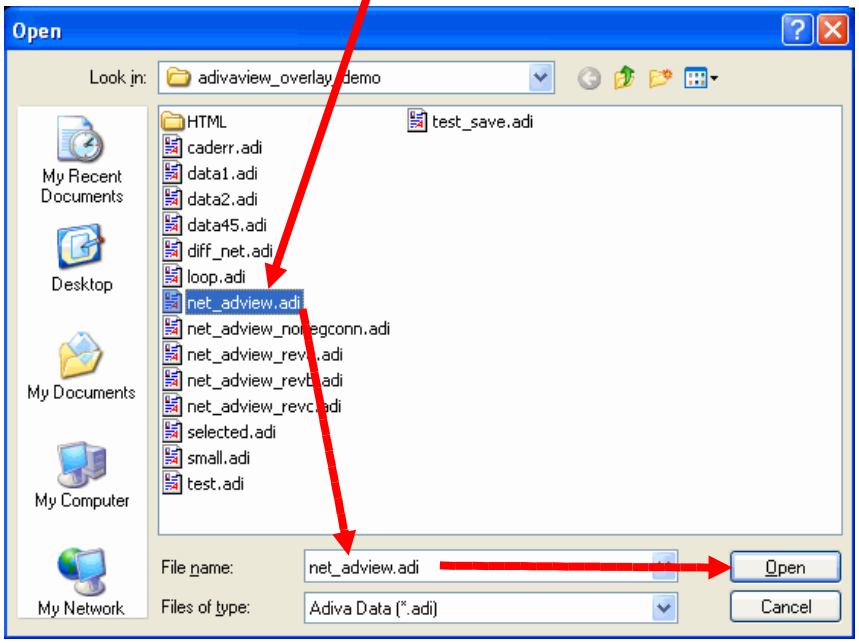
…..to access the **File** menu. Find and load a job using **File > Open**.



…or select the **File > Open** Icon

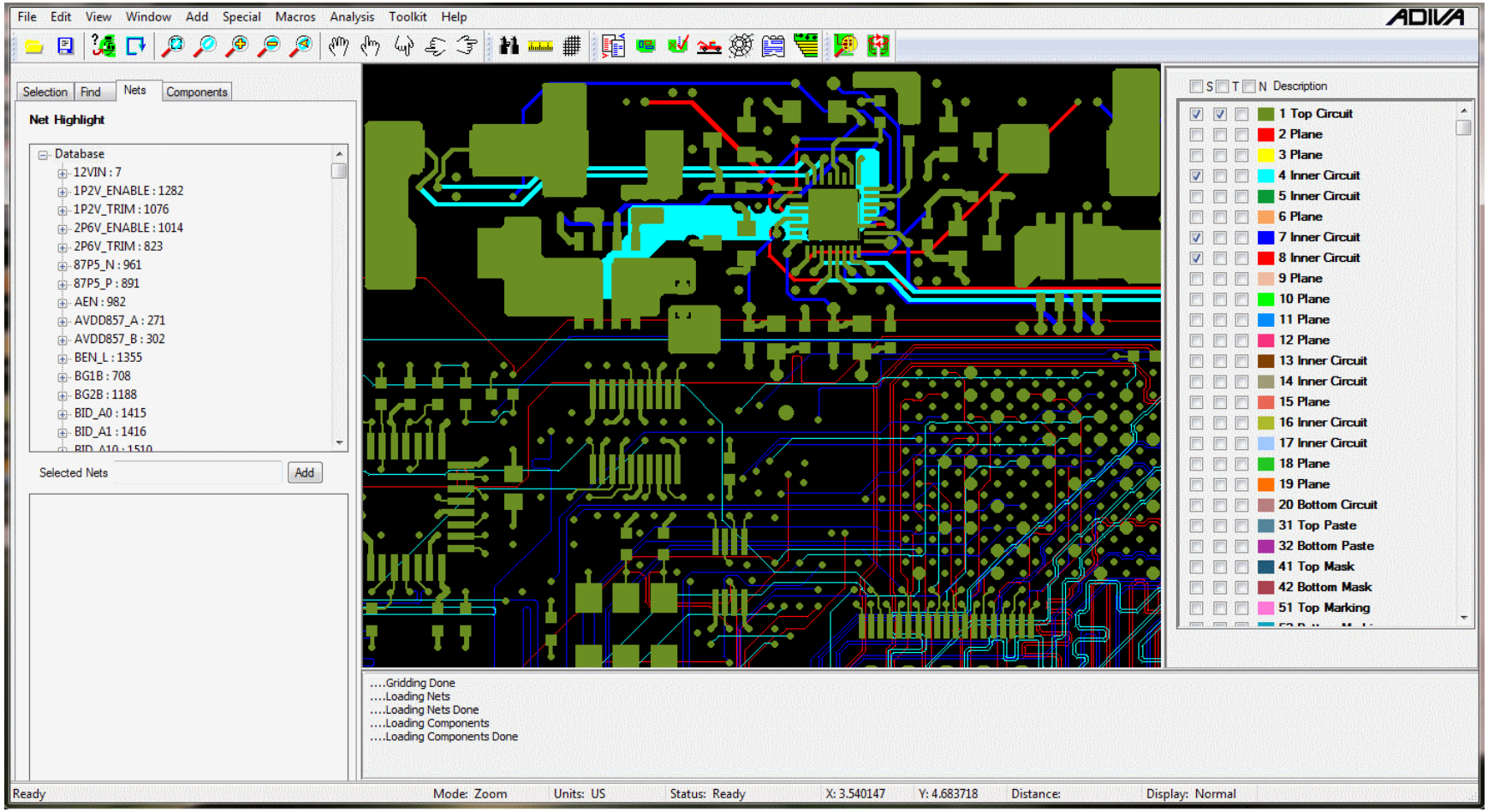


Then select an Adiva database to load and display



Starting the AdivaView Interface

The graphical Interface should now look similar to this with the Top Circuit layer on and displayed



Revision Compare

Highlights….

Two designs can be imported and compared to display any differences between them
For instance – Revision A of a design against the Original

Multiple layers of a single design can be compared to determine differences
For instance – plane layers that have been copied within a design – are they the same?

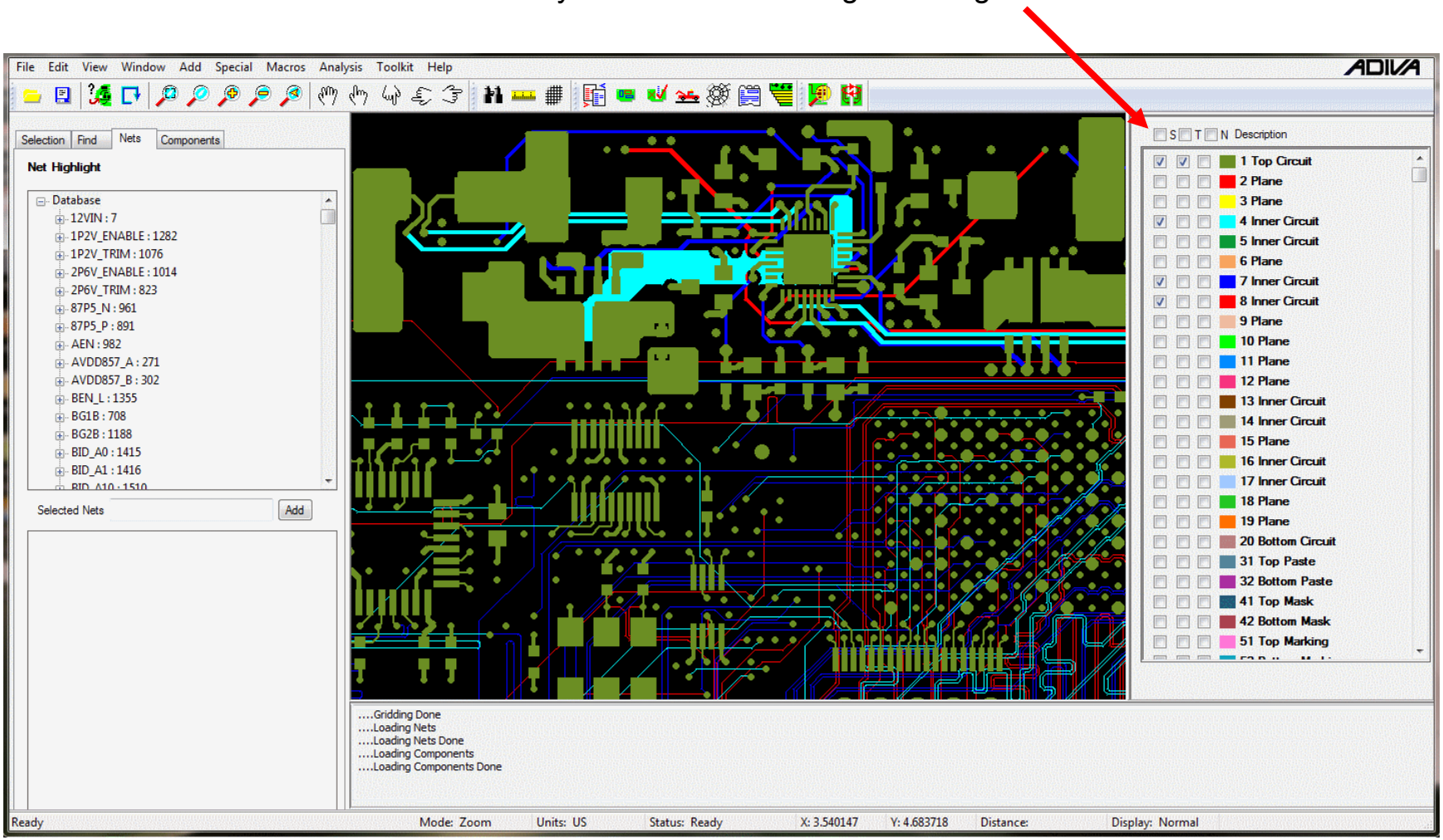
Differences are displayed graphically using a simple “Seek” routine that takes the user from location to location easily showing the differences

Comparison function is a graphical process not relying on CAD data attributes

Revision Compare – Original to Rev A

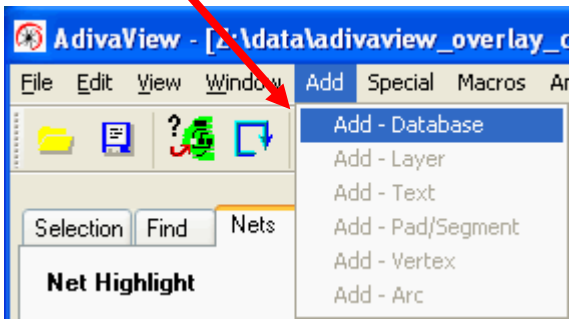
Start Revision Compare by having a single database loaded

Notice layers listed for this original design

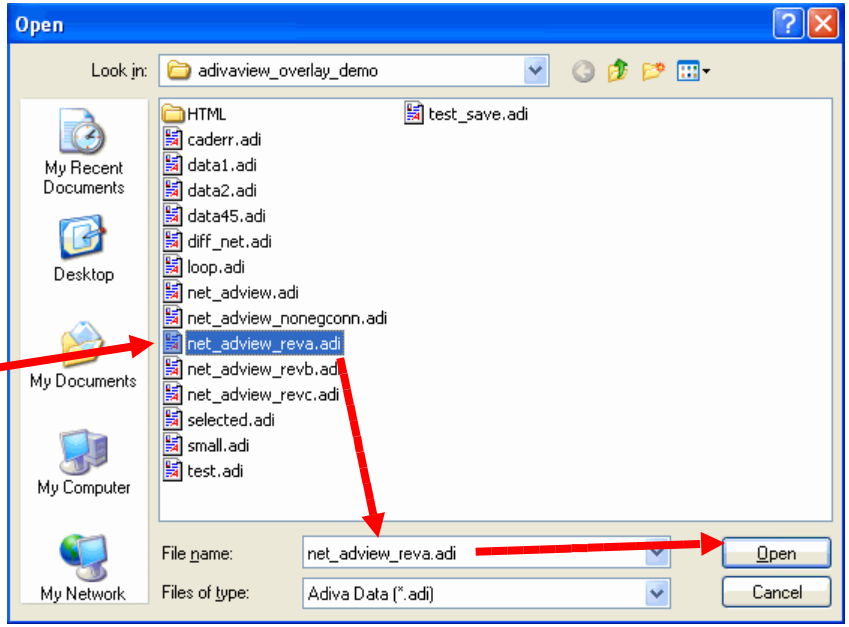


Revision Compare – Original to Rev A

Select **Add Database** to import a second database for comparison



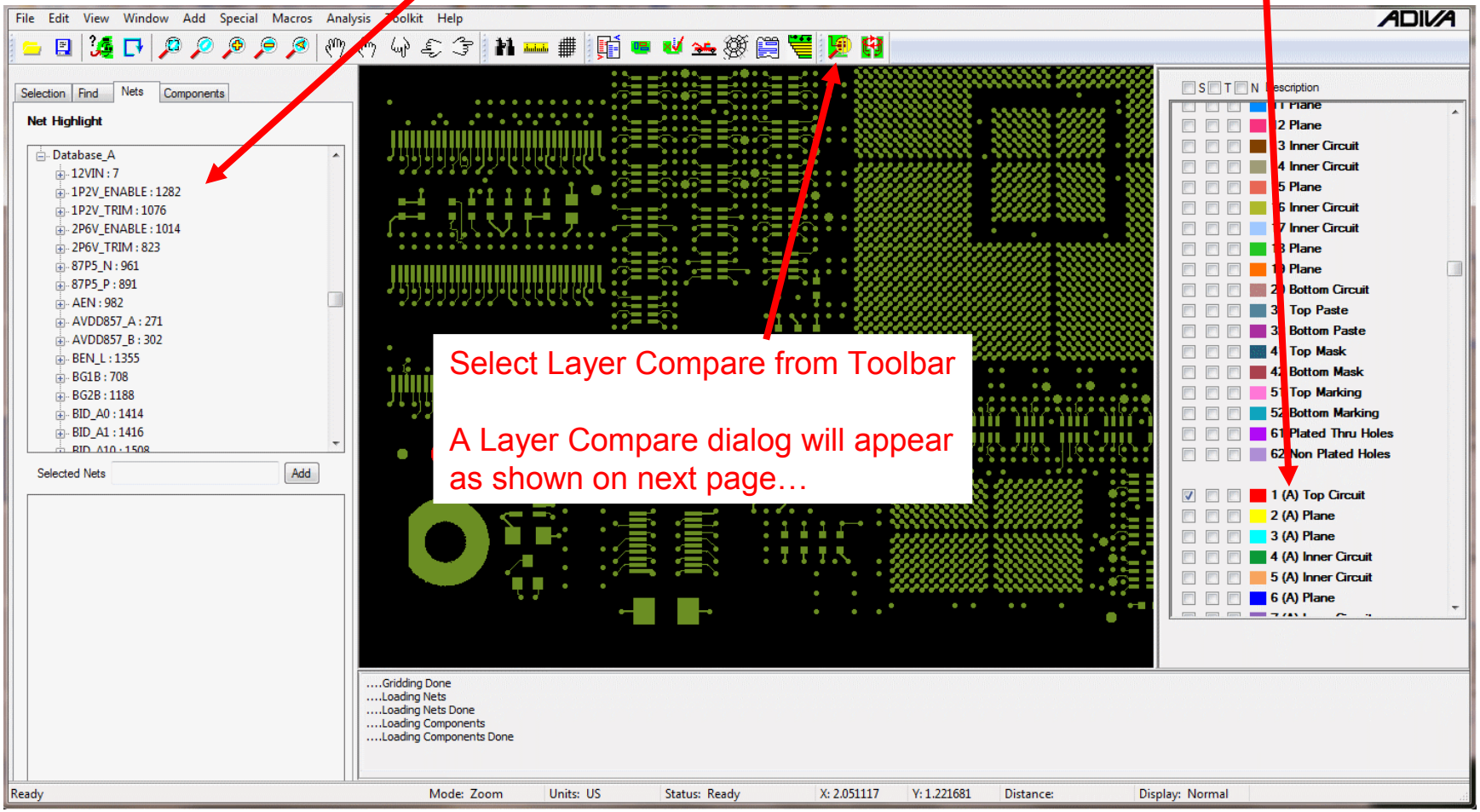
In this case, choose Revision A of the same design



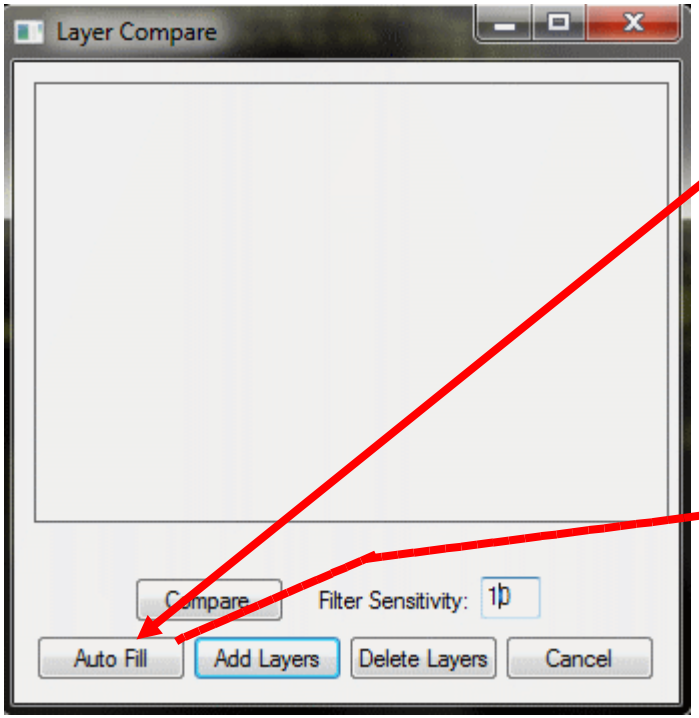
Revision Compare – Original to Rev A

Once second database loads, notice Rev A layers are now displayed in the Layer List

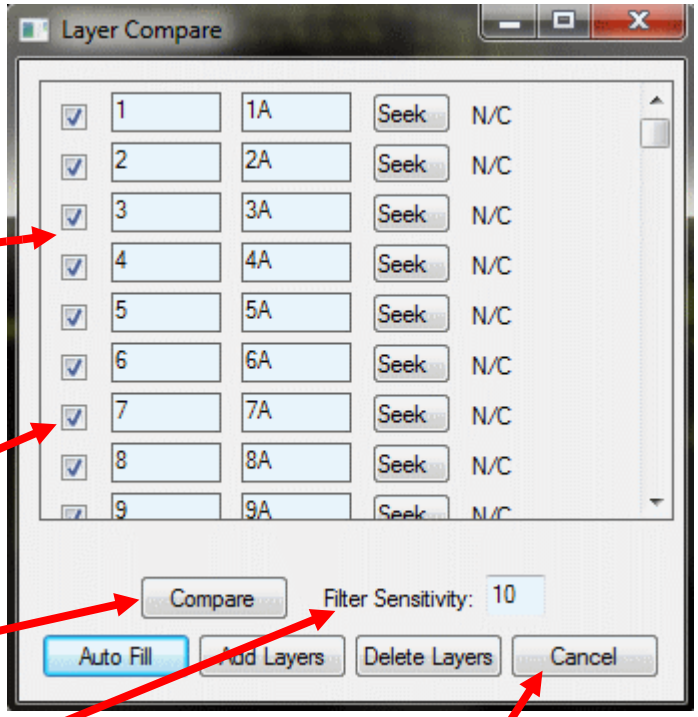
Nets and Components for Rev A are also added to the Highlight lists



Revision Compare – Original to Rev A



An empty Layer Compare dialog will appear in the lower left corner of AdivaView – select the **Auto-Fill** function which matches original design layers to Rev A in preparation for comparison



Check boxes next to layer list control which layers will be compared

Select **Compare** to perform the Layer Compare function

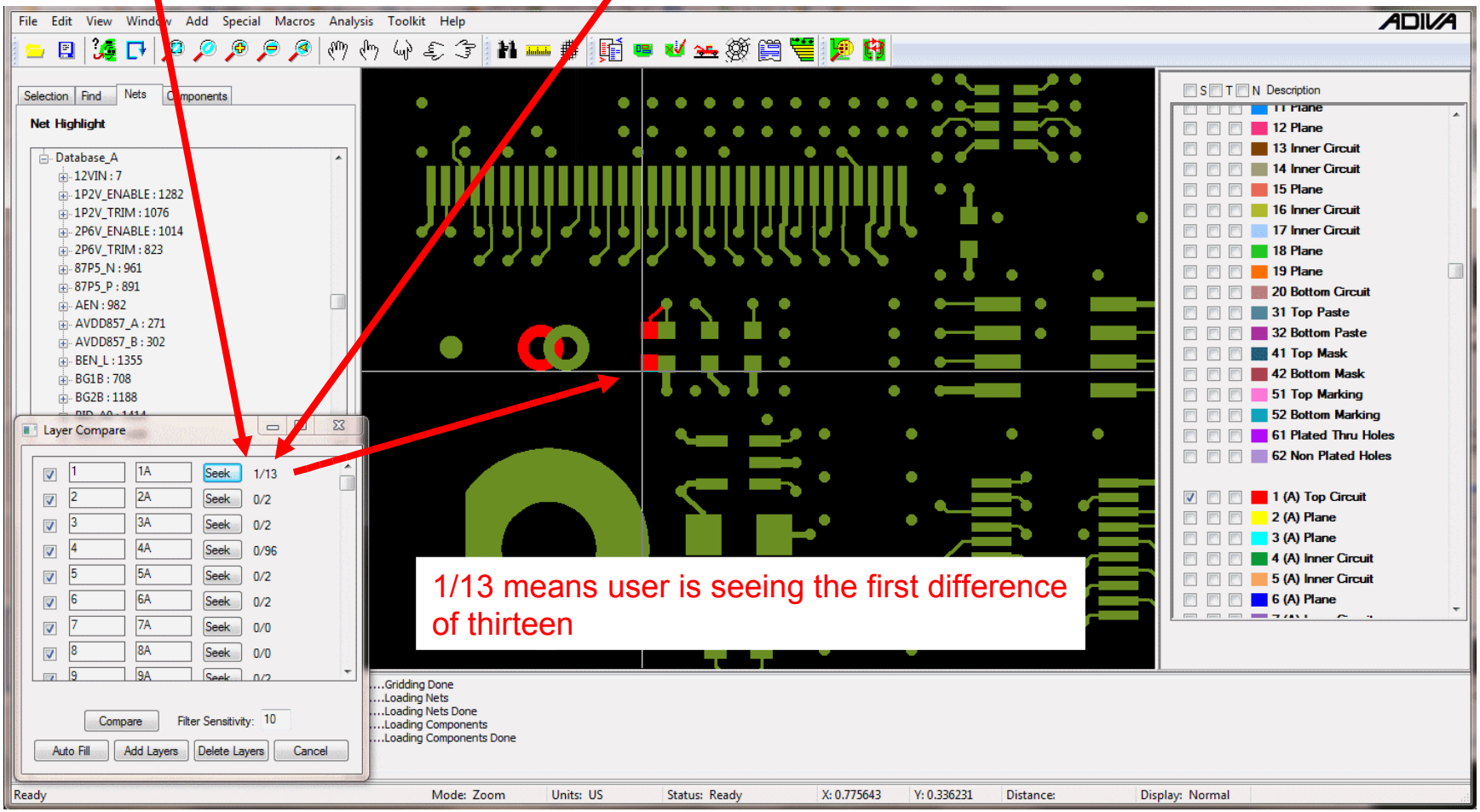
Filter Sensitivity value can be adjusted to remove unwanted minor differences. The larger the number the greater the filter power (10 pixels is default).

Cancel closes the Layer Compare function. Any results will be lost but can easily be recreated by running Layer Compare again

Revision Compare – Original to Rev A

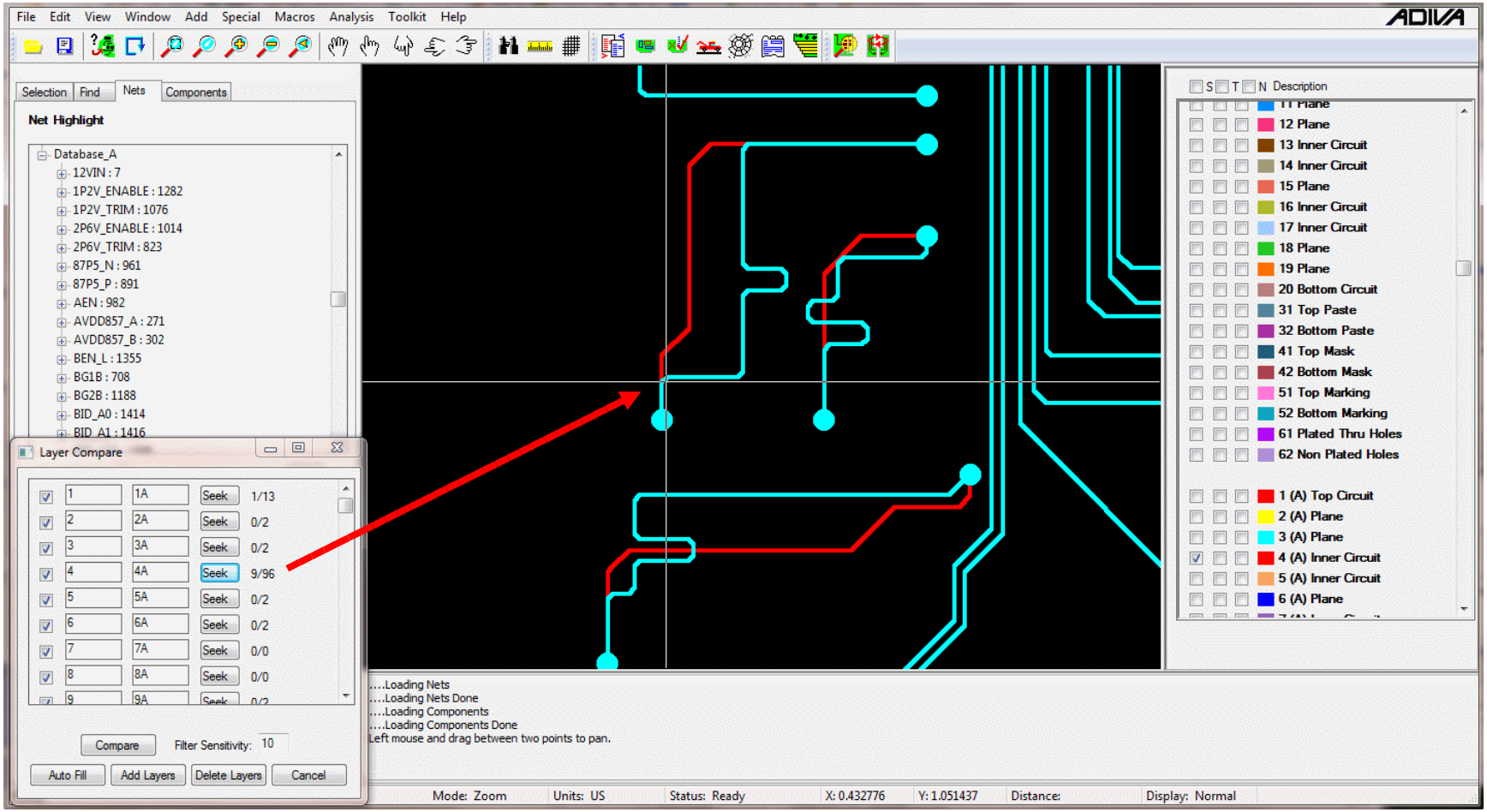
When Layer Compare completes, a summary of results will be shown next to each layer pair

Zoom in for greater detail of the design and then select the “Seek” button – a cross-hair will be displayed at the location of difference – both layers involved will also be on for easy display of the issue



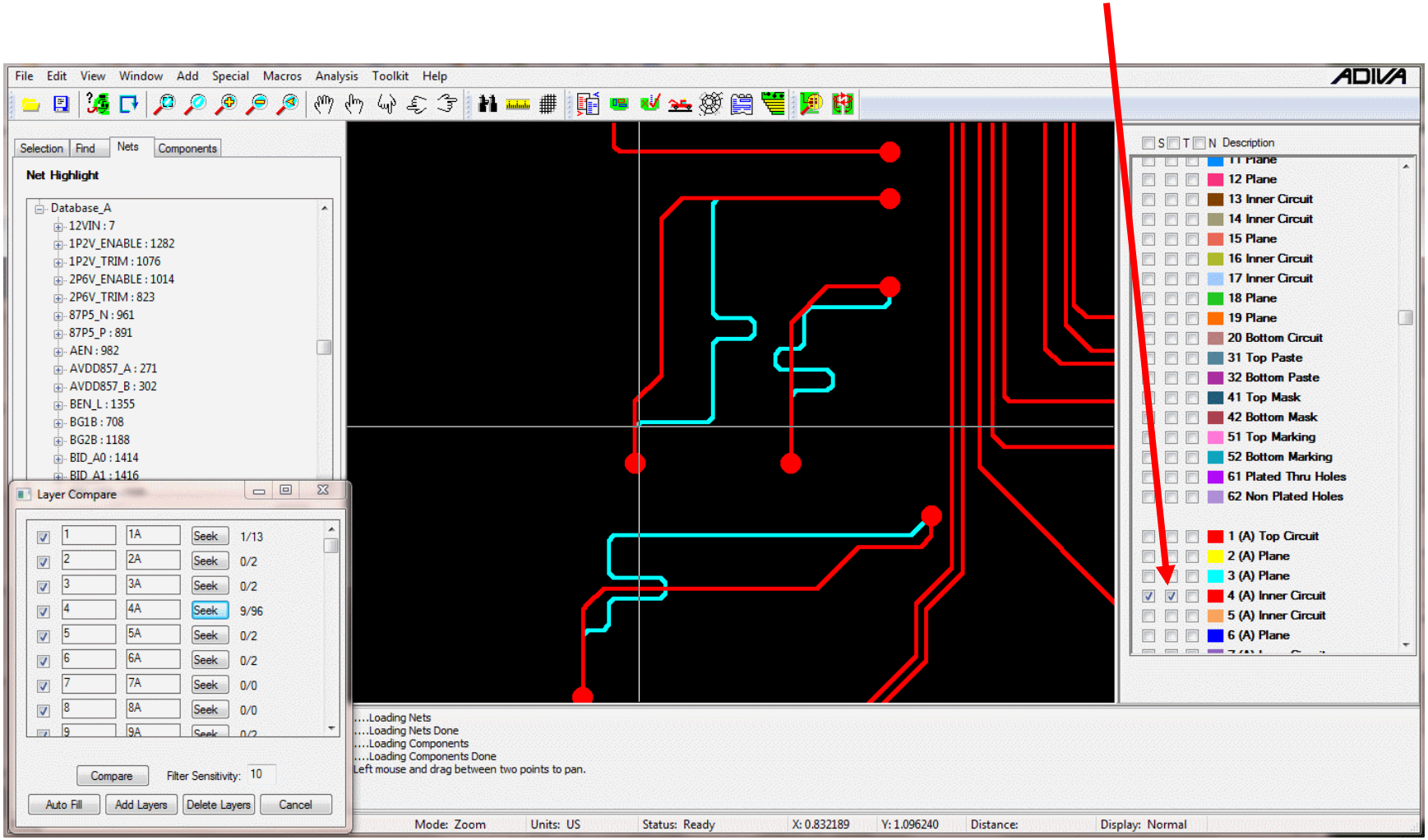
Revision Compare – Original to Rev A

Another view of layer differences – in this case layer 4 of each revision is displayed
This is number nine of ninety-six differences with layer 4



Revision Compare – Original to Rev A

This is the same image as the previous page, except layer 4 of Rev A has been placed on top by checking the second box for better viewing of Rev A – original layer 4 is in blue



Revision Compare – Layer to Layer

Layers from the same design can also be compared meaning a second design does not have to be used to perform the compare function.

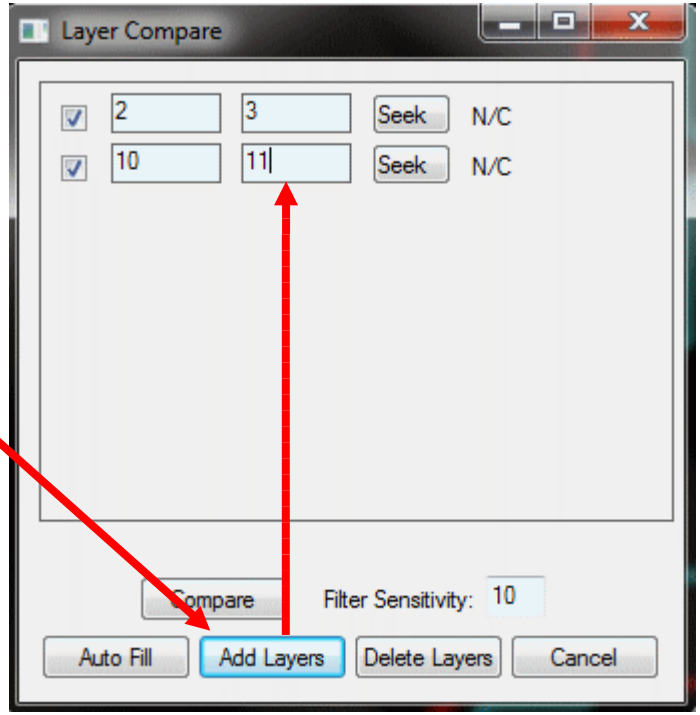
This is handy if a design has copied layers and the user wants to verify that copied layers are exactly the same.

Simply select the **Add Layer** button and fill in layer numbers to be compared. Any combination can be created and compared.

The **Delete Layers** button keys off of the check box. If a layer pair is checked on and the **Delete Layers** button is selected, all layer pairs checked on will be deleted from the list.

When all layers are defined for comparison, simply choose the **Compare** button and review the results as described earlier in this guide.

All layer pairs with check boxes on will be compared.



Net Highlight

Highlights….

Select a netname from a Highlight Nets list and it highlights in graphics

Select a net in graphics and it highlights its name in the Highlight Nets list

Highlight a net or a group of nets in layer color to see what layers it routes on and its proximity to other nets of the same group

Highlight components that tie to a net

See ACTUAL net length for a selected net – unseen trace data is not counted in net length providing an actual functional net length, not a routed net length

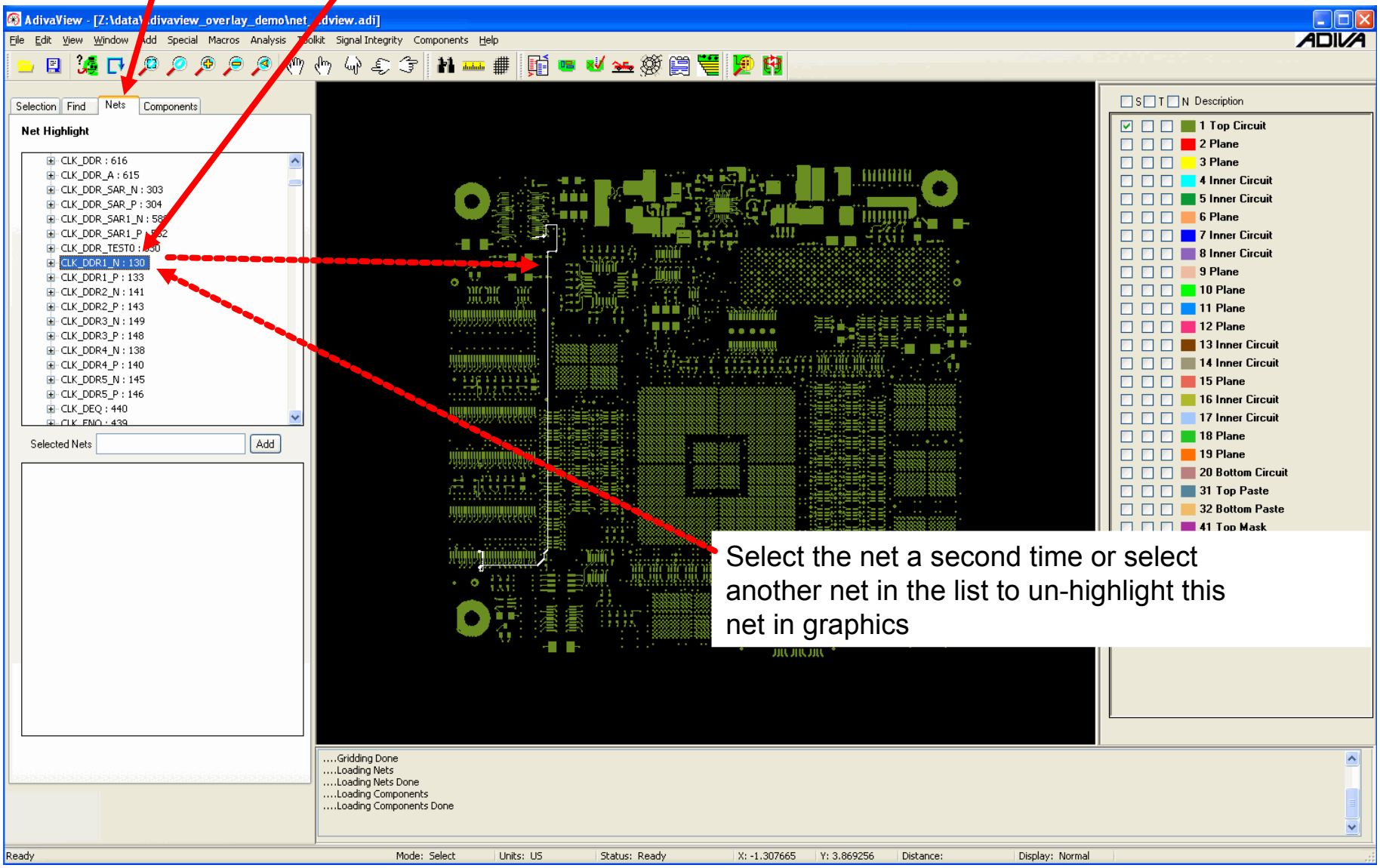
Type in a net name(s) and they highlight in graphics and report net length(s)

Produce a list of nets and their lengths into a printed report for review

Net Highlight

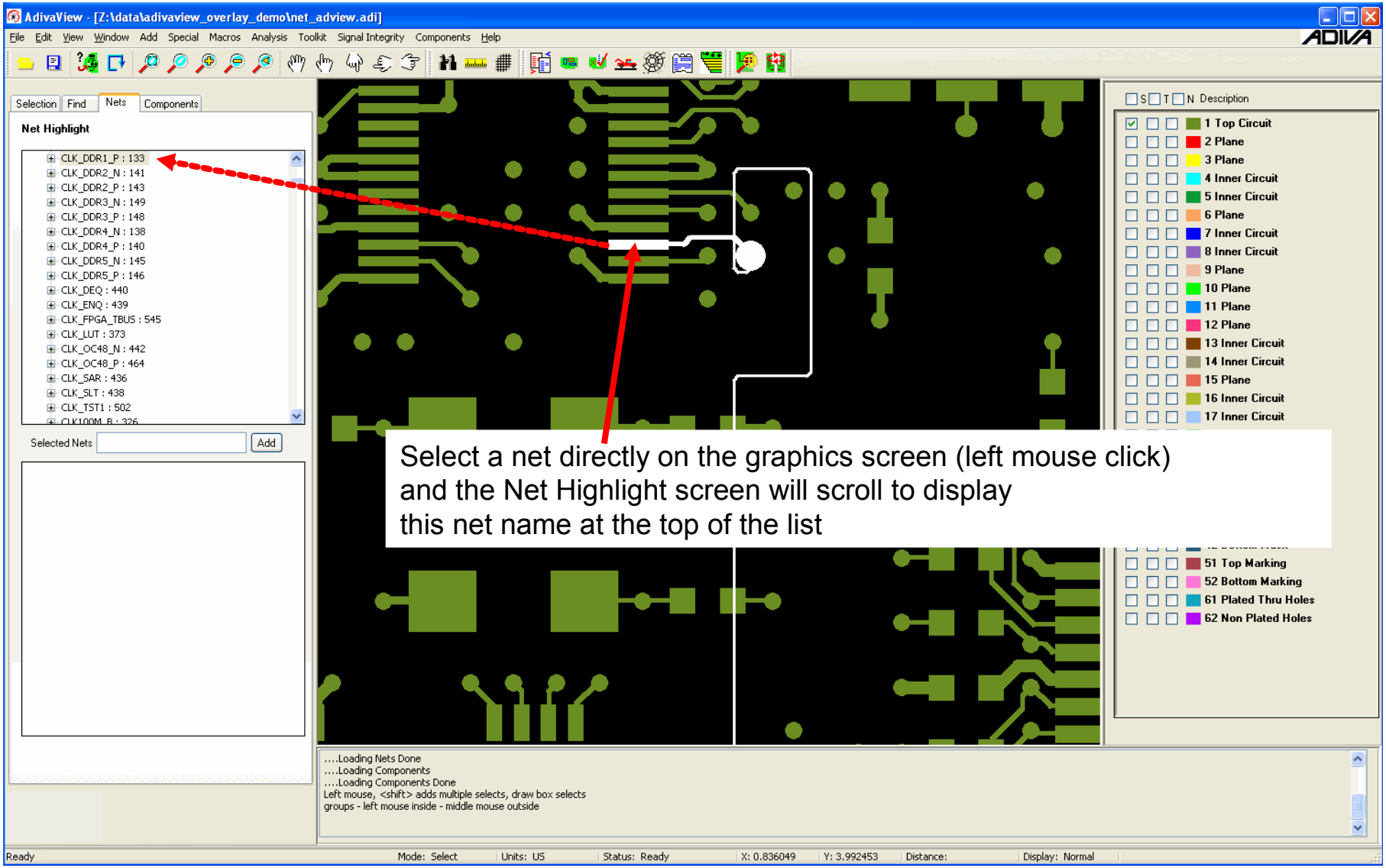
With the **Nets** tab forward….

Select a net from the Net Highlight list and see it highlight in graphics



Select the net a second time or select another net in the list to un-highlight this net in graphics

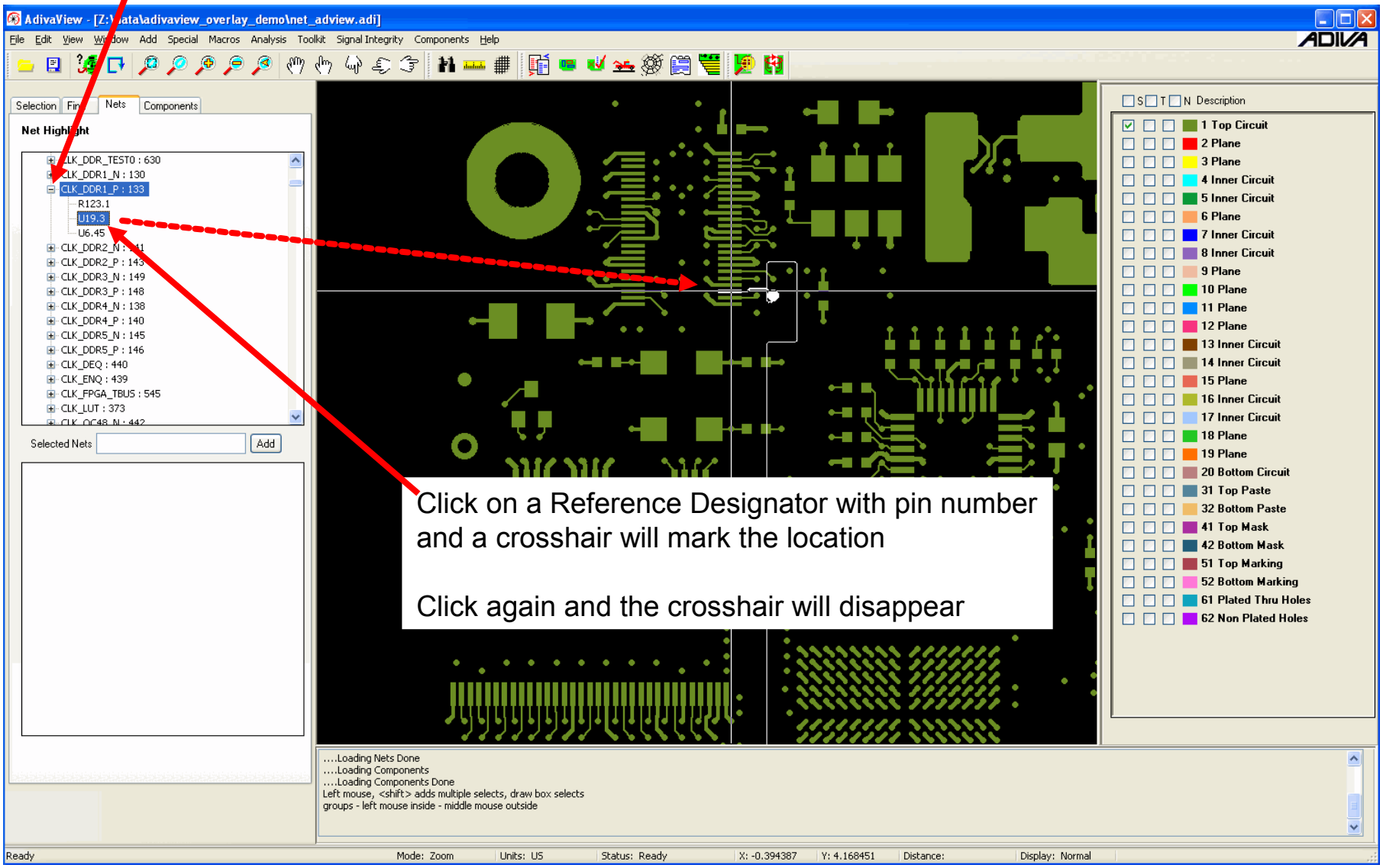
Net Highlight



Select a net directly on the graphics screen (left mouse click) and the Net Highlight screen will scroll to display this net name at the top of the list

Net Highlight

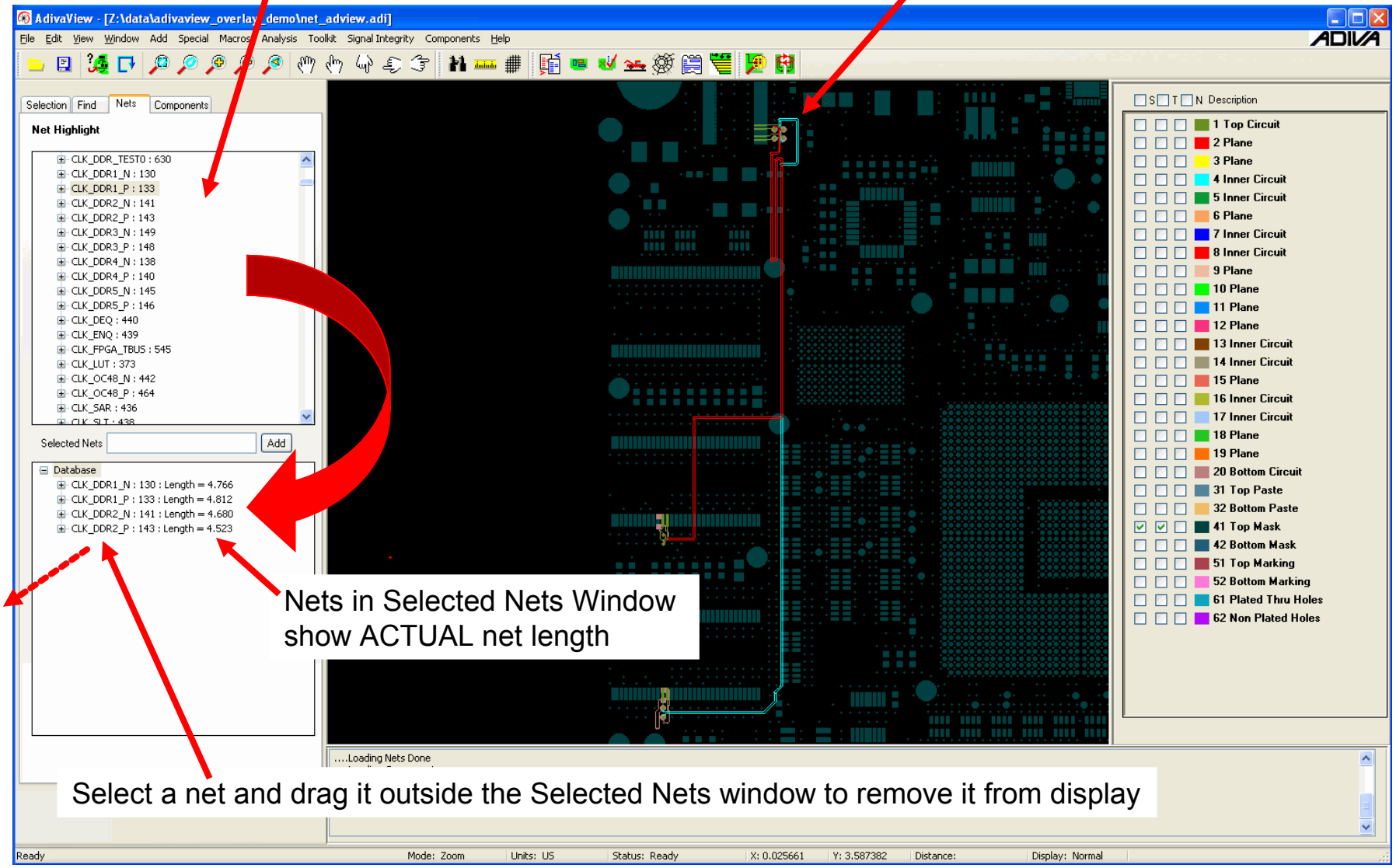
Expand the net name to reveal a list of Reference Designators and pin numbers this net connects



Net Highlight

Select and drag a net from the Net Highlight window to the Selected Nets window

Nets highlight with layer color in graphics

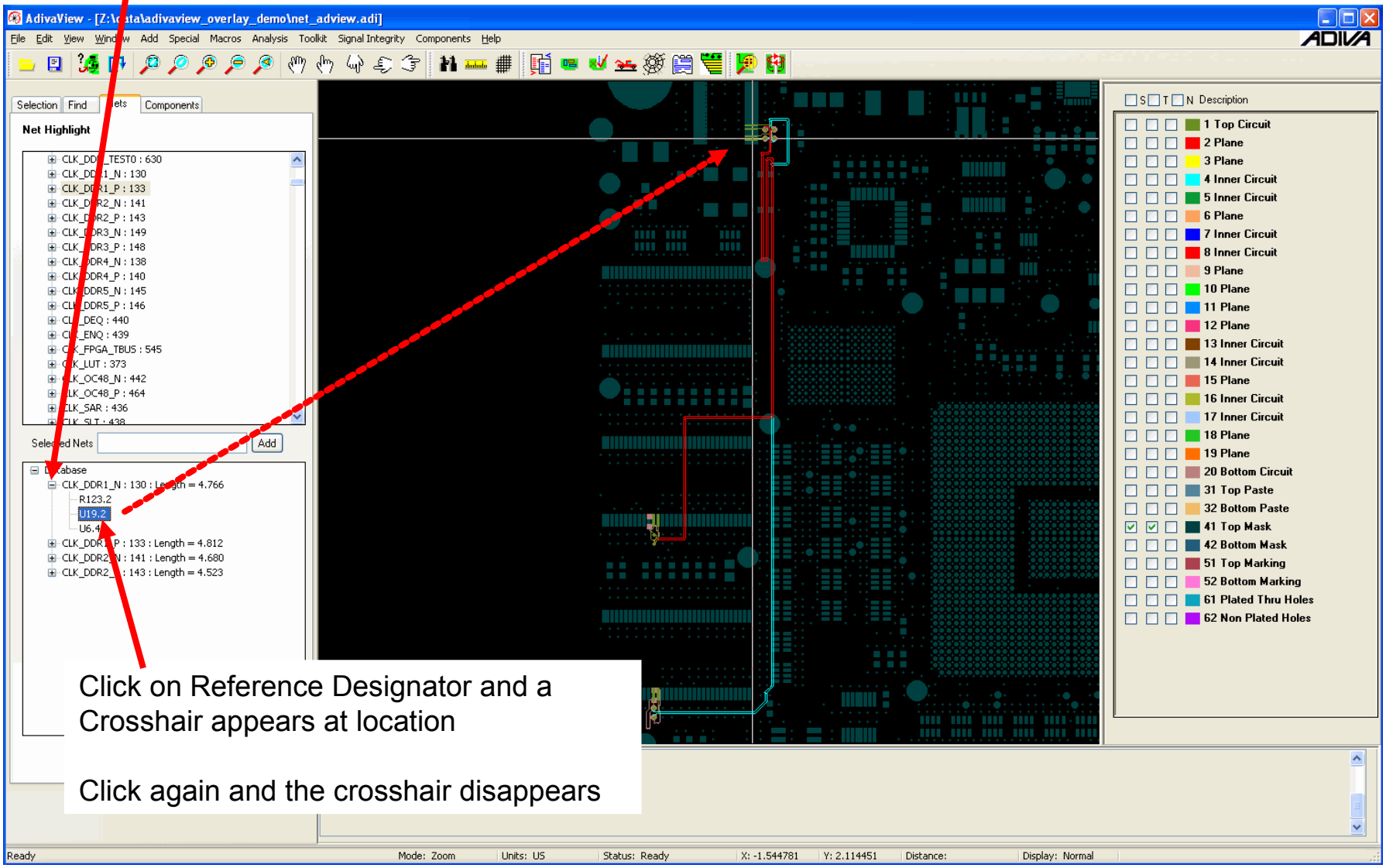


Nets in Selected Nets Window show ACTUAL net length

Select a net and drag it outside the Selected Nets window to remove it from display

Net Highlight

Expand the Selected Net to show reference designators and pin numbers that connect to the net

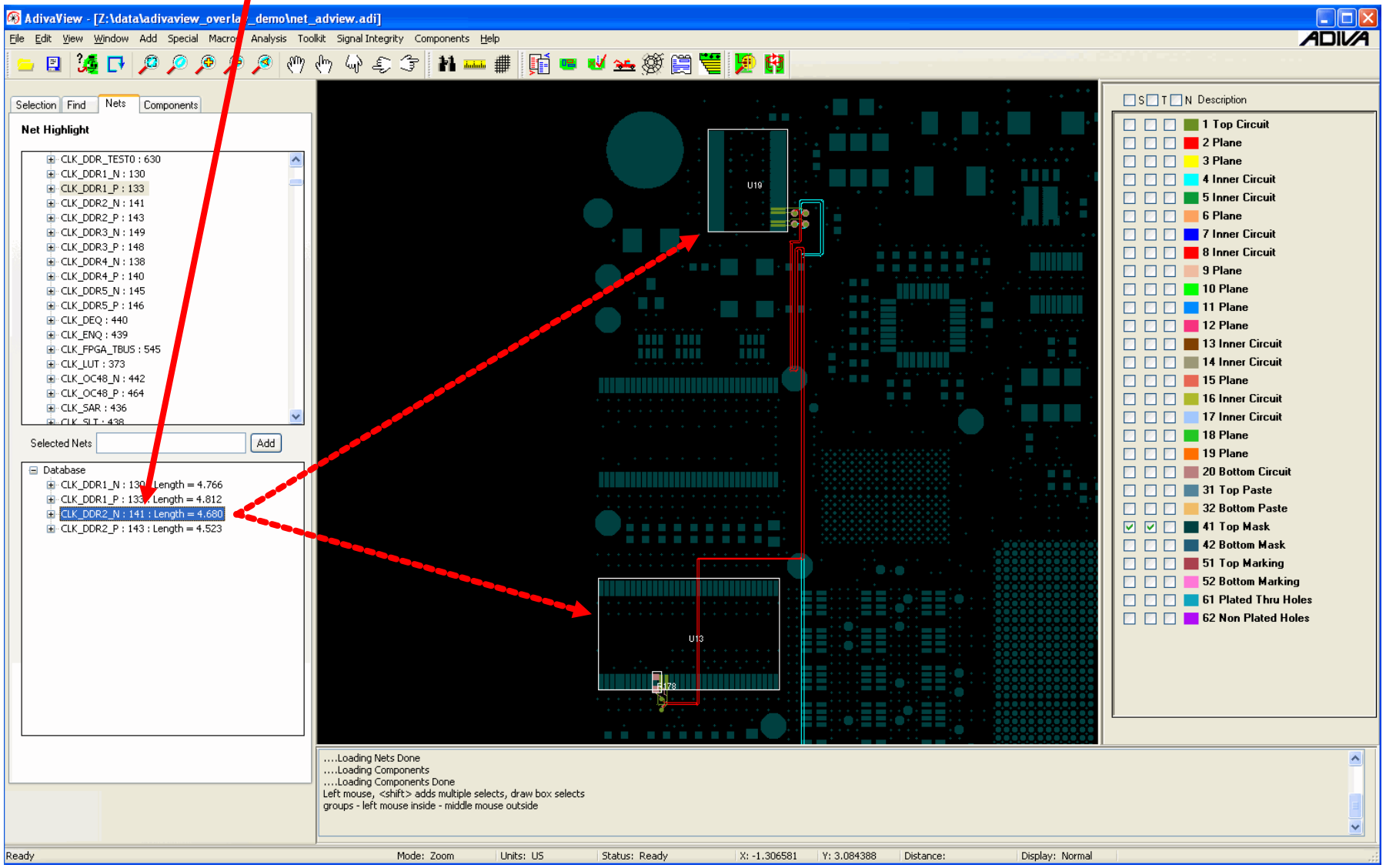


Click on Reference Designator and a Crosshair appears at location

Click again and the crosshair disappears

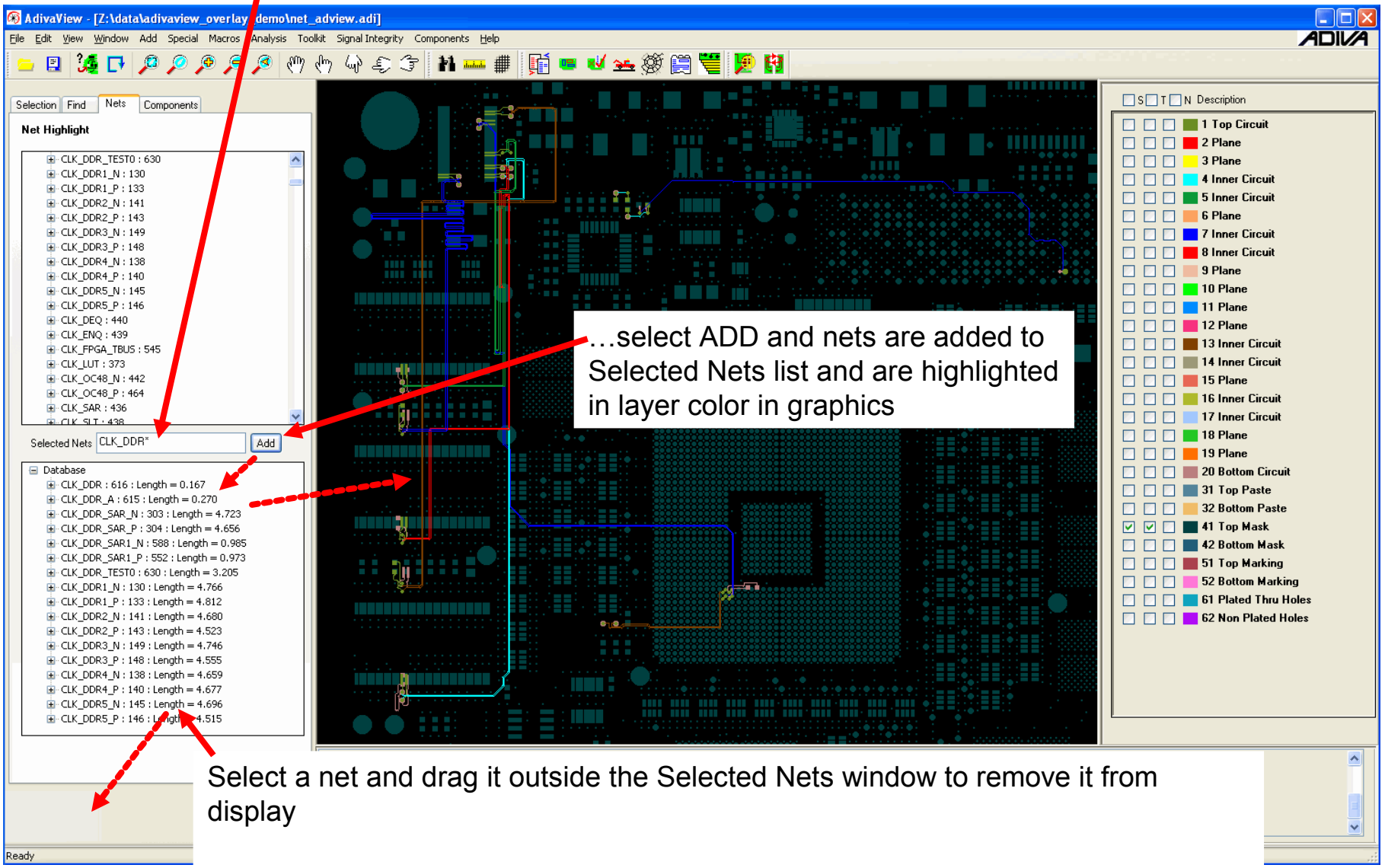
Net Highlight

Click on Selected Net name and components highlight that connect to selected net
Click again and the component highlights disappear



Net Highlight

Enter a net name (wildcards work *) or enter a set of net names (ie: CLK* ADDR* *bus*) then…

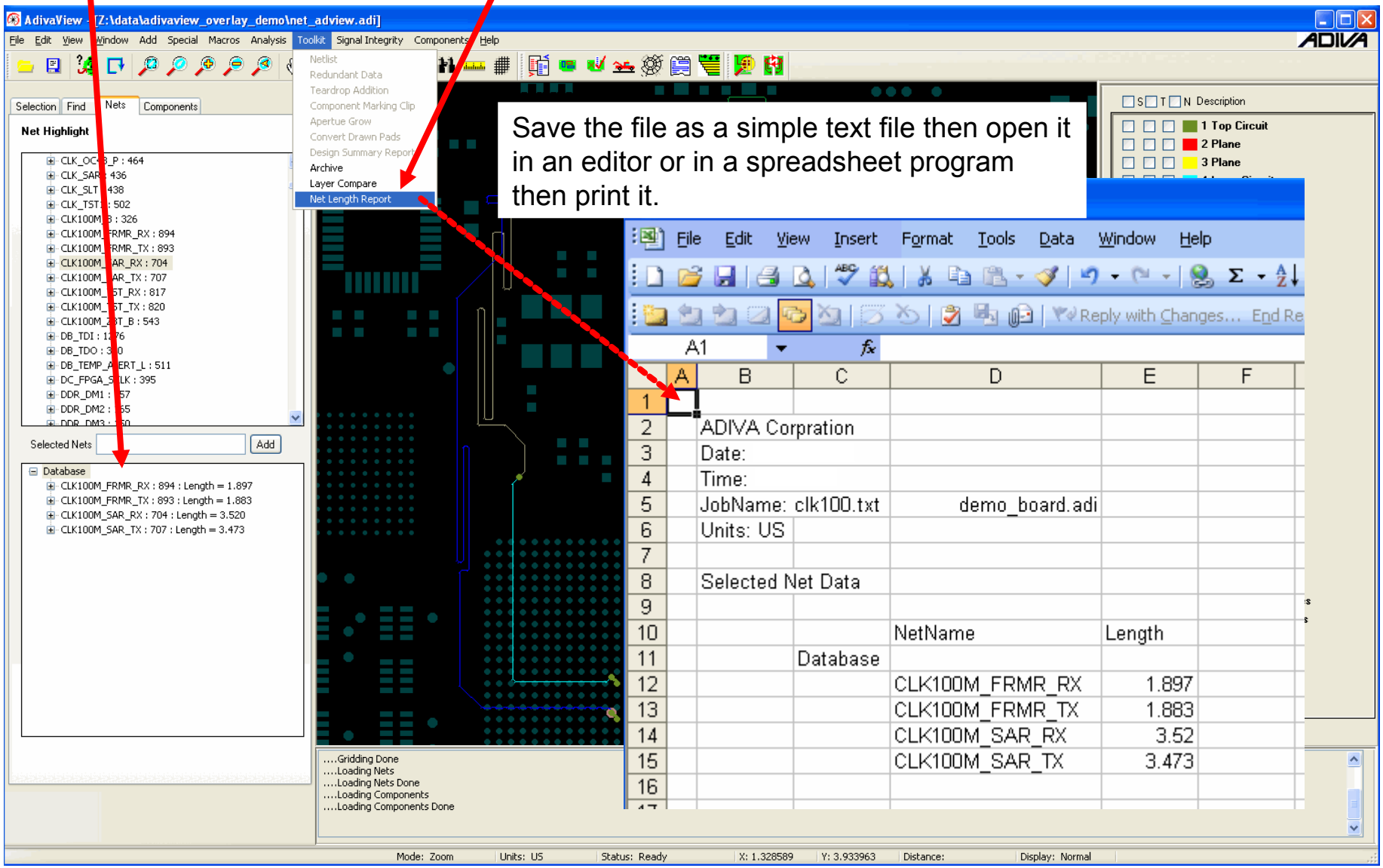


Select a net and drag it outside the Selected Nets window to remove it from display

Net Length Report

Generate a Net Length report by selecting nets of interest

Then select **Toolkit>Net Length Report**



Component Highlight

Highlights….

Select a component from the Component Highlight list and it highlights in graphics

Select a component in graphics and it highlights its name in the Component Highlight list

Find components in graphics by typing in their name (re: U6, R*, etc)

Highlight groups of components

Highlight components by side of board, top or bottom

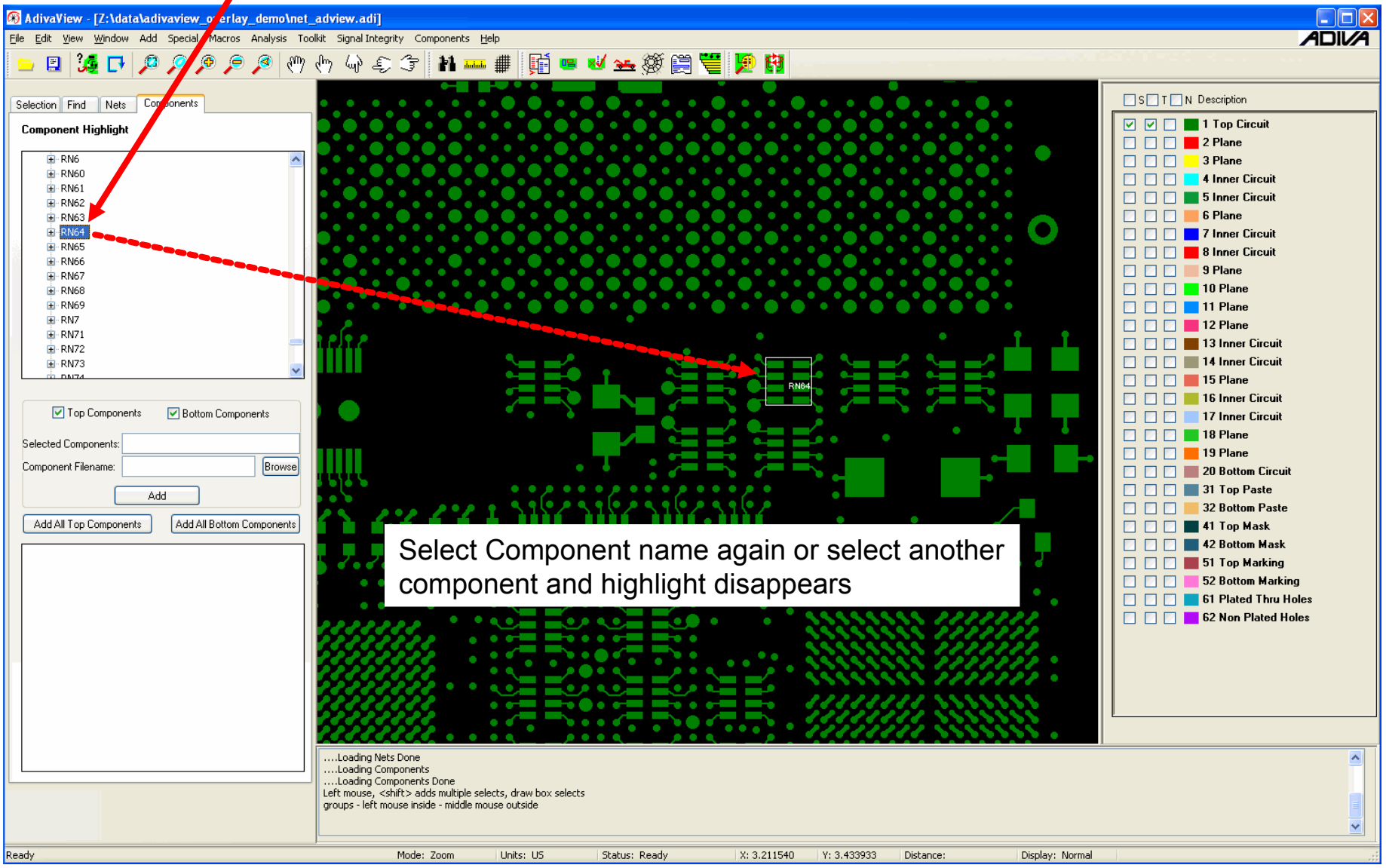
List component pin numbers and the net names they tie to and mark their location graphically

Flip board to see components from back-side

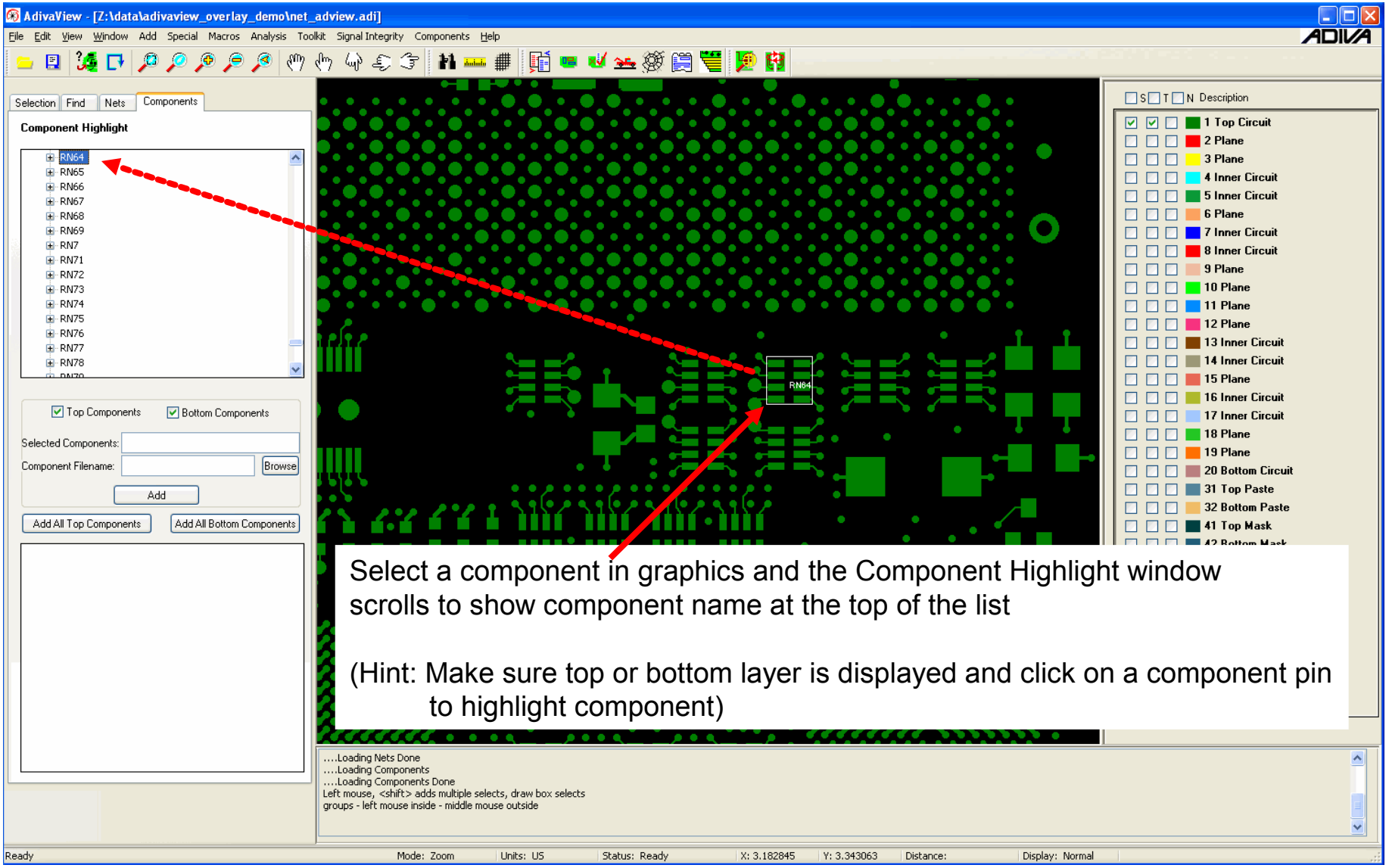
Enter a file of component names to highlight components (useful from manufacturing repair type systems)

Component Highlight

Select a Component in the Component Highlight list and the component highlights in graphics



Component Highlight

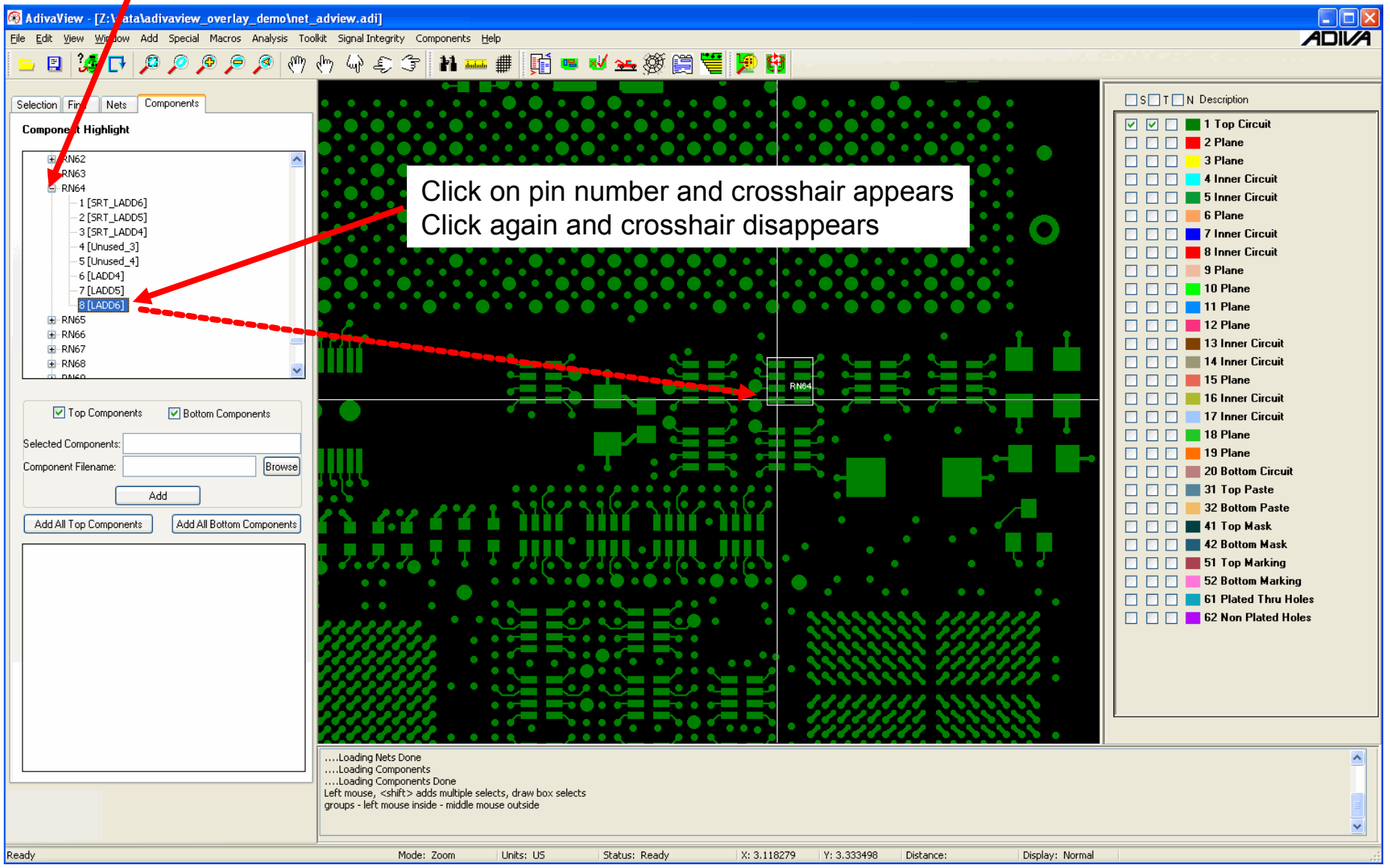


Select a component in graphics and the Component Highlight window scrolls to show component name at the top of the list

(Hint: Make sure top or bottom layer is displayed and click on a component pin to highlight component)

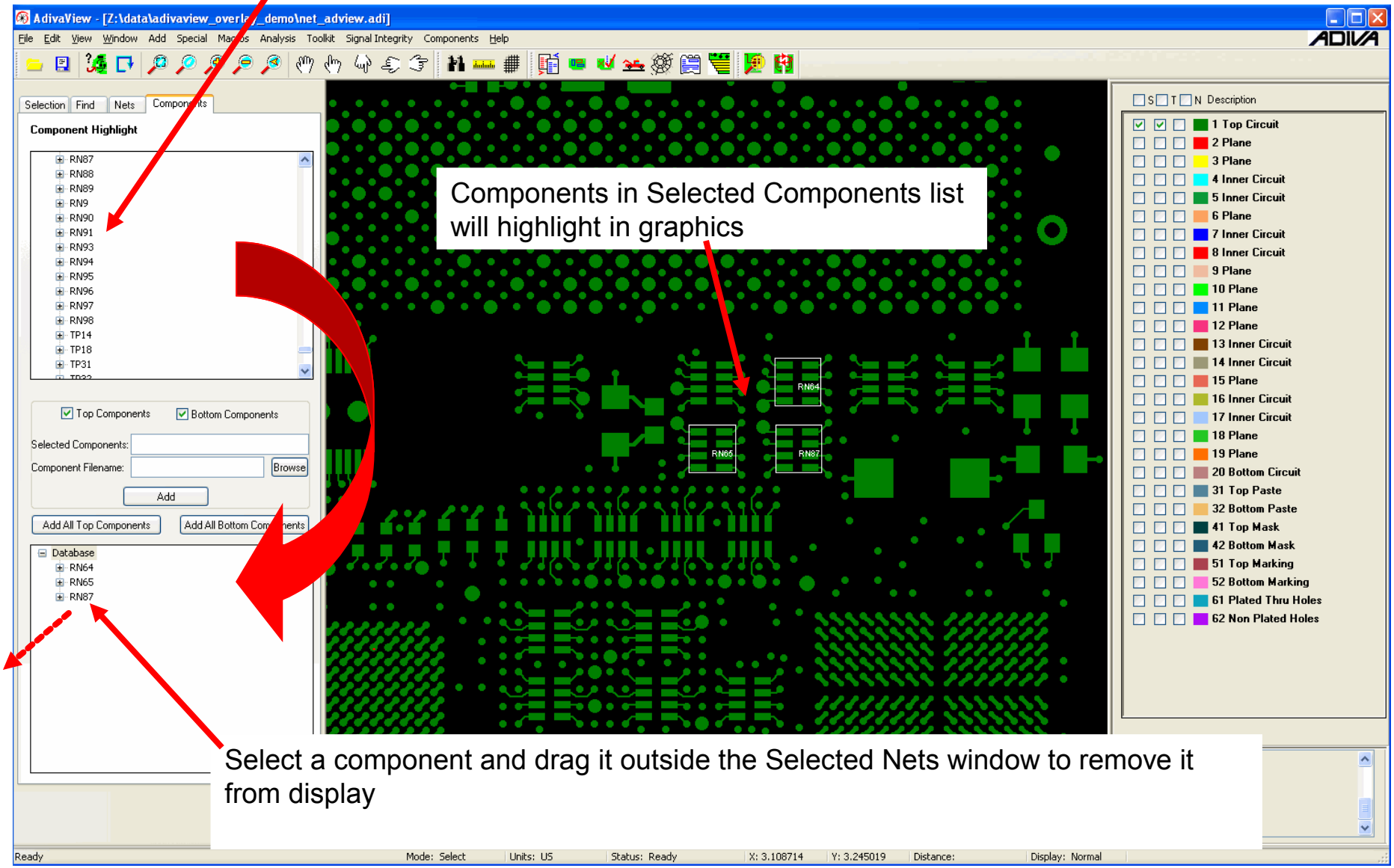
Component Highlight

Expand component name and see pin numbers with net names



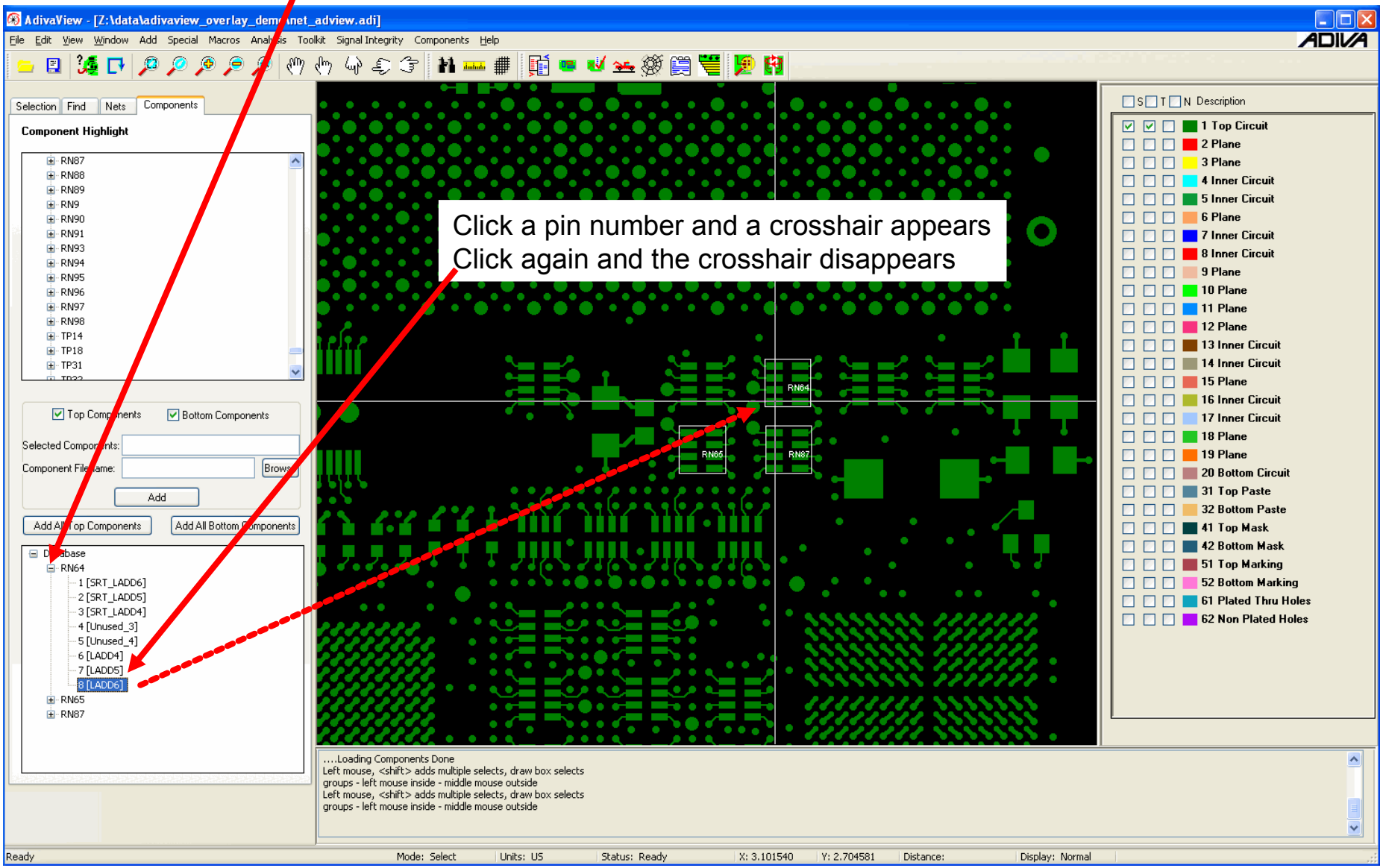
Component Highlight

Drag and Drop components from the Highlight list to the Selected Components list



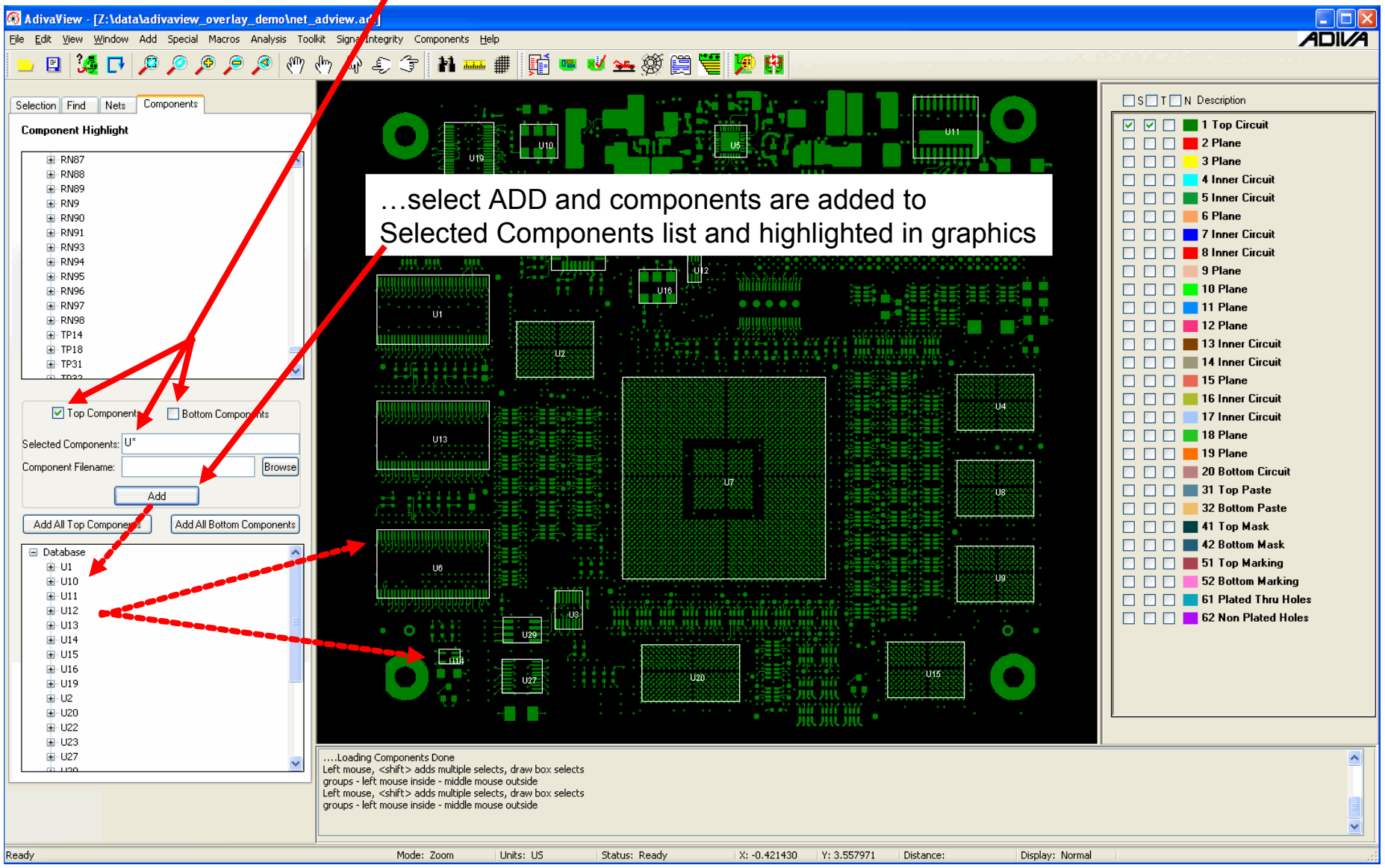
Component Highlight

Expand components to see pin numbers and net names



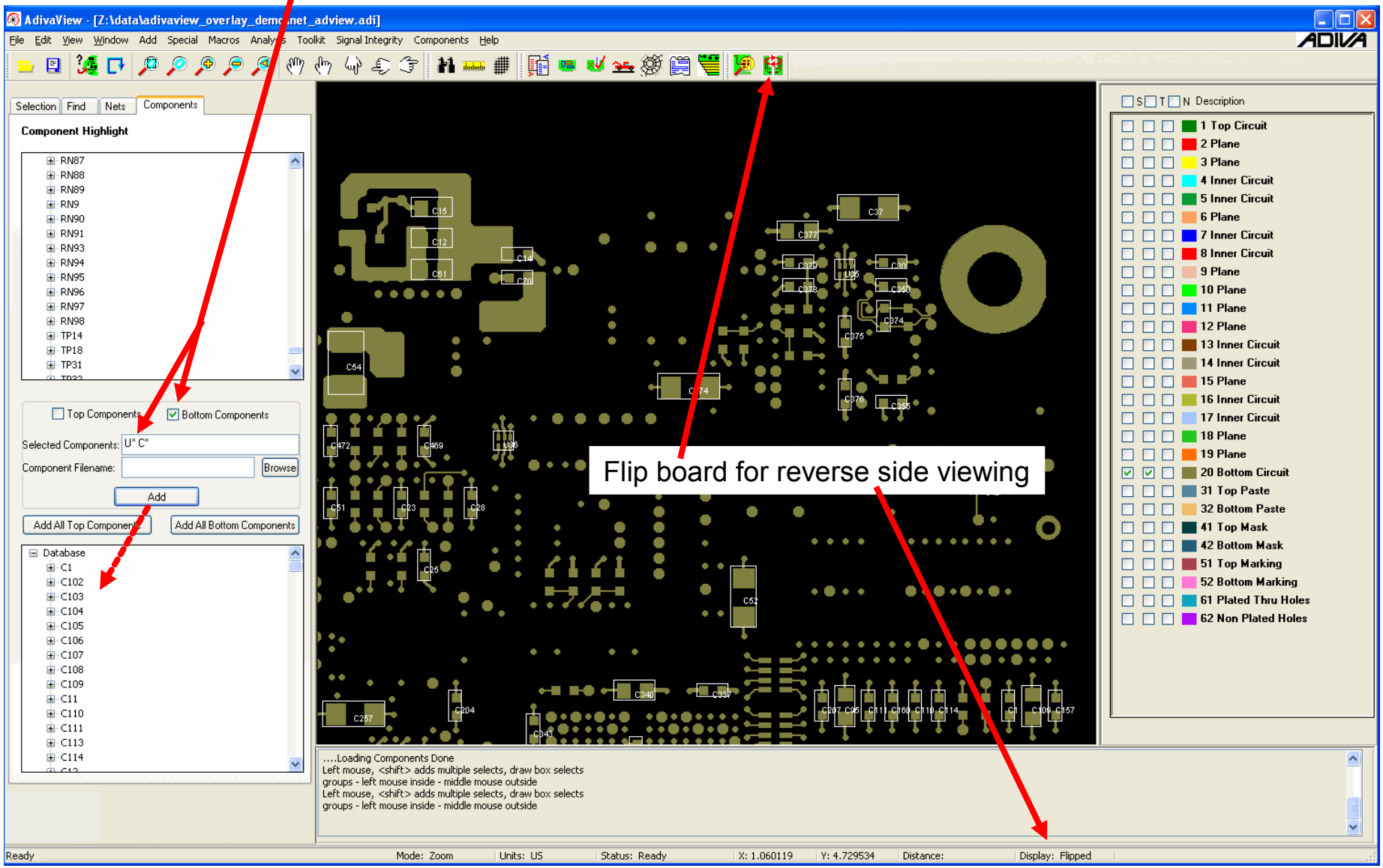
Component Highlight

Choose a particular Reference Designator (wildcards work *), choose side of board…



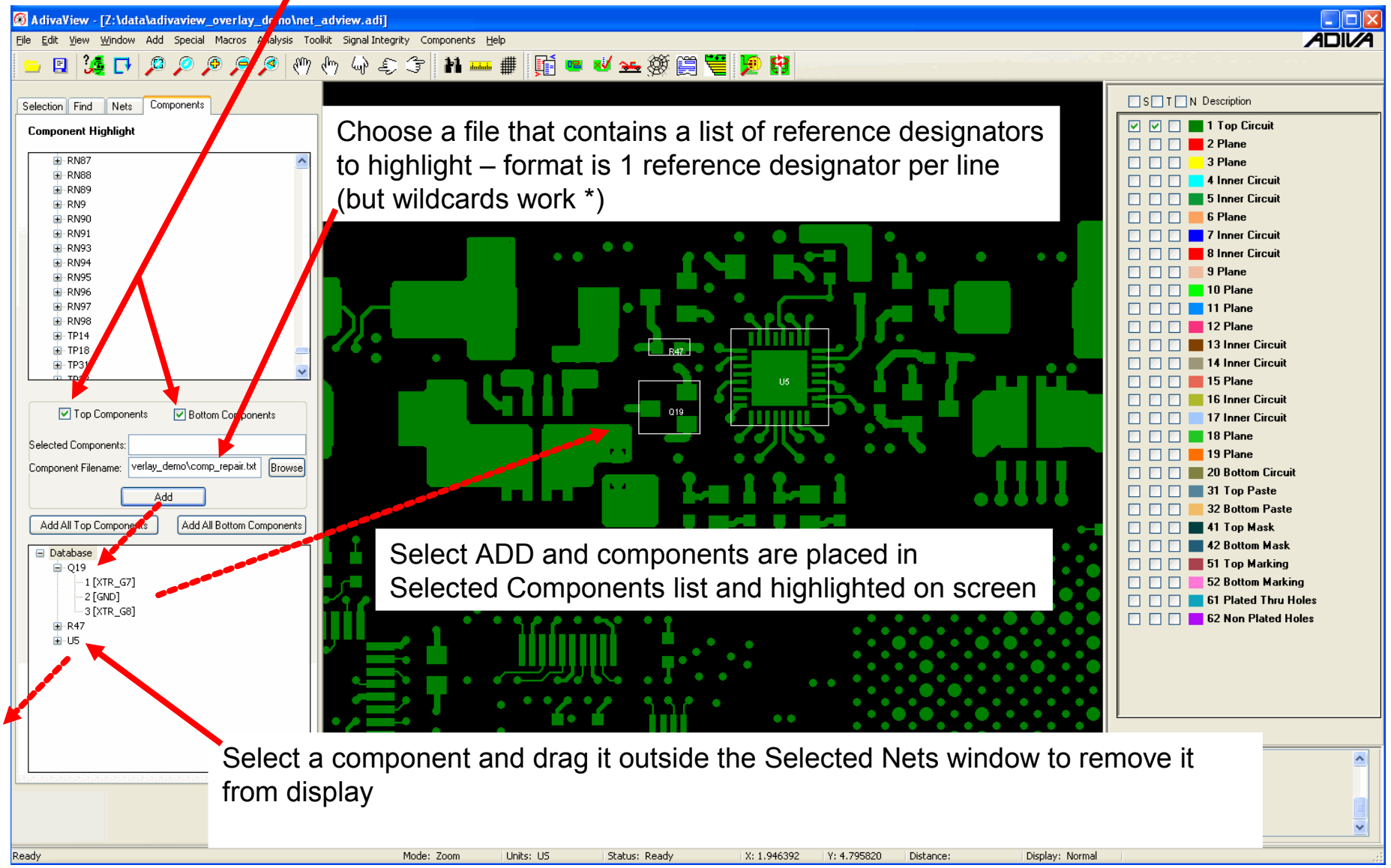
Component Highlight

Select particular component types for bottom side



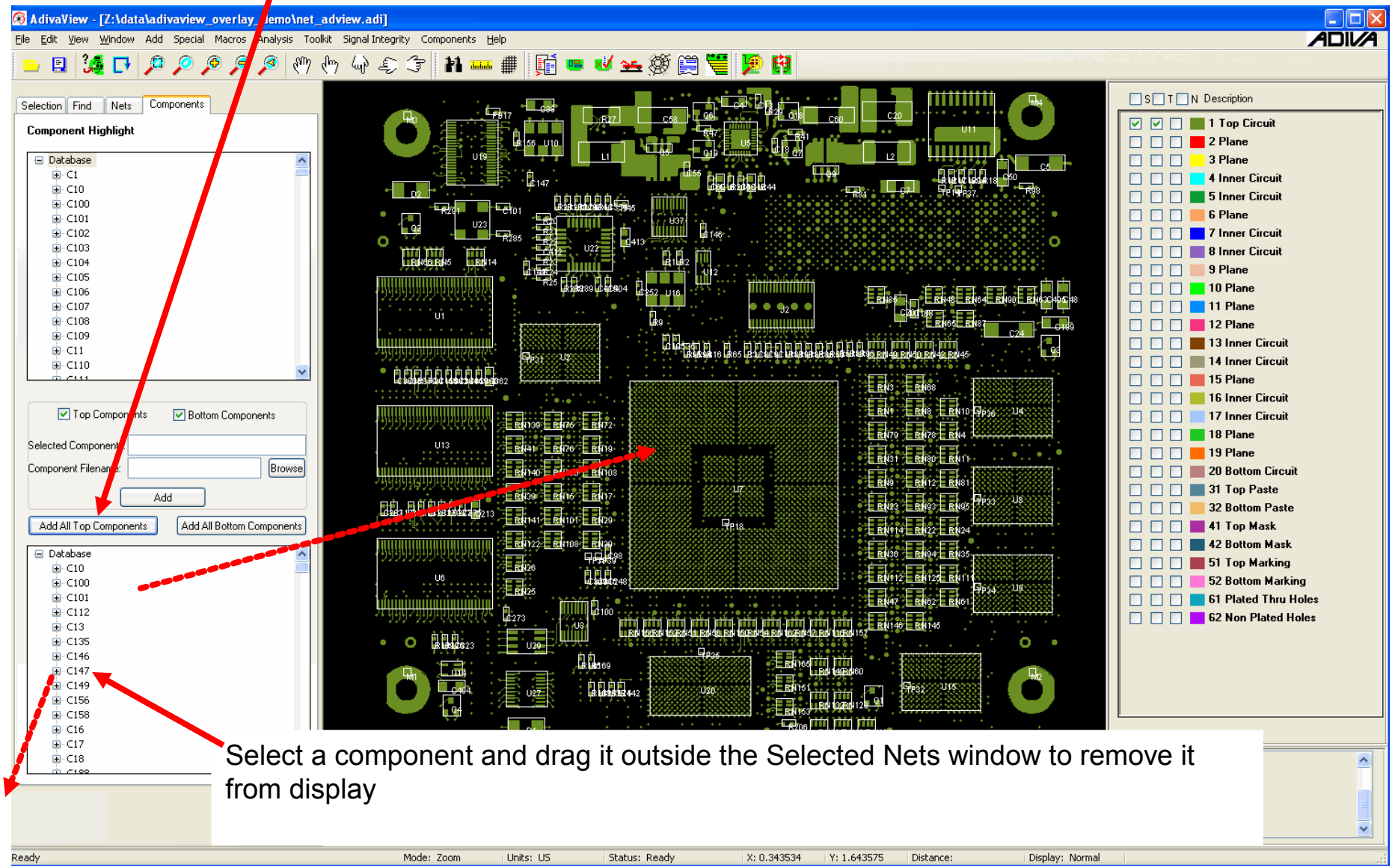
Component Highlight

Choose side of board to highlight components



Component Highlight

Select to turn on for display all Top (or Bottom) components



Select a component and drag it outside the Selected Nets window to remove it from display

Measure Objects

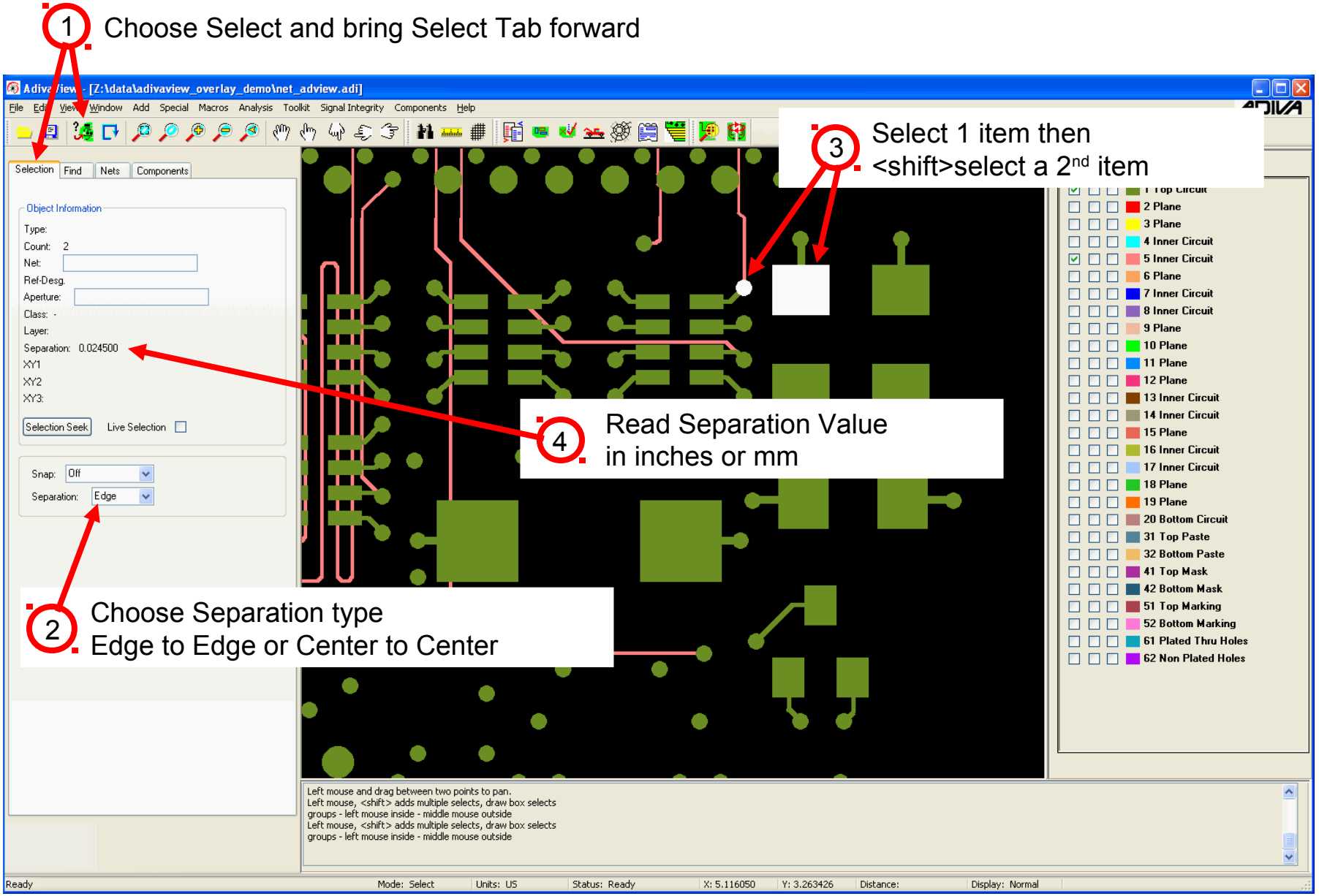
Highlights…

Pairs of items can be selected in graphics and the edge to edge or center to center distance is calculated between them

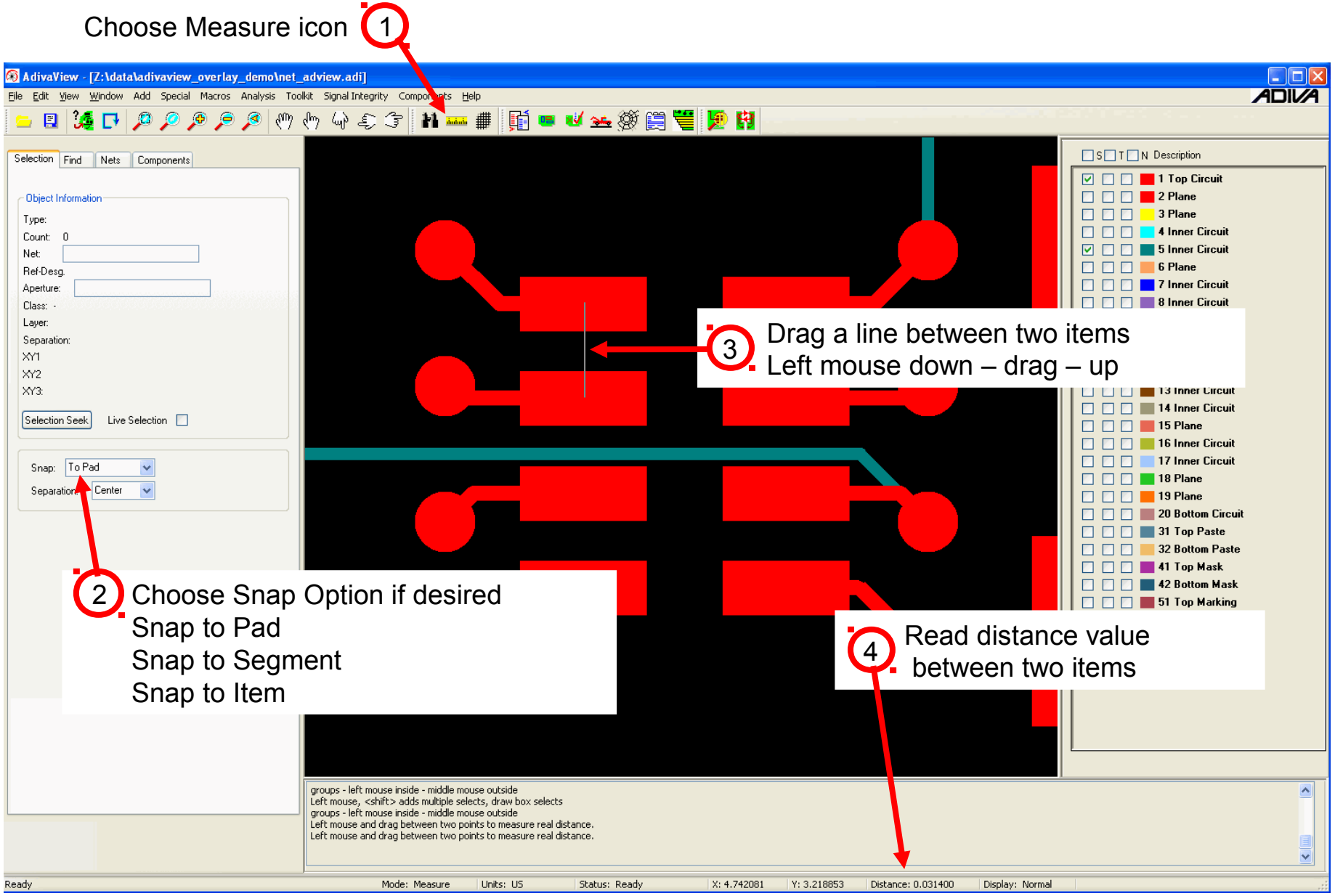
A line can be drawn between two items or from one place to another and the length of the drawn line is displayed

The above drawn line can have a snap function applied to it so that the drawn lines snaps between object centers, edges, etc

Distance Between Two Objects – Using Select Item



Distance Between Two Objects – Using Drag Line



Web Page Creation

Highlights…

Web Pages can be created showing AdivaView graphics for reference

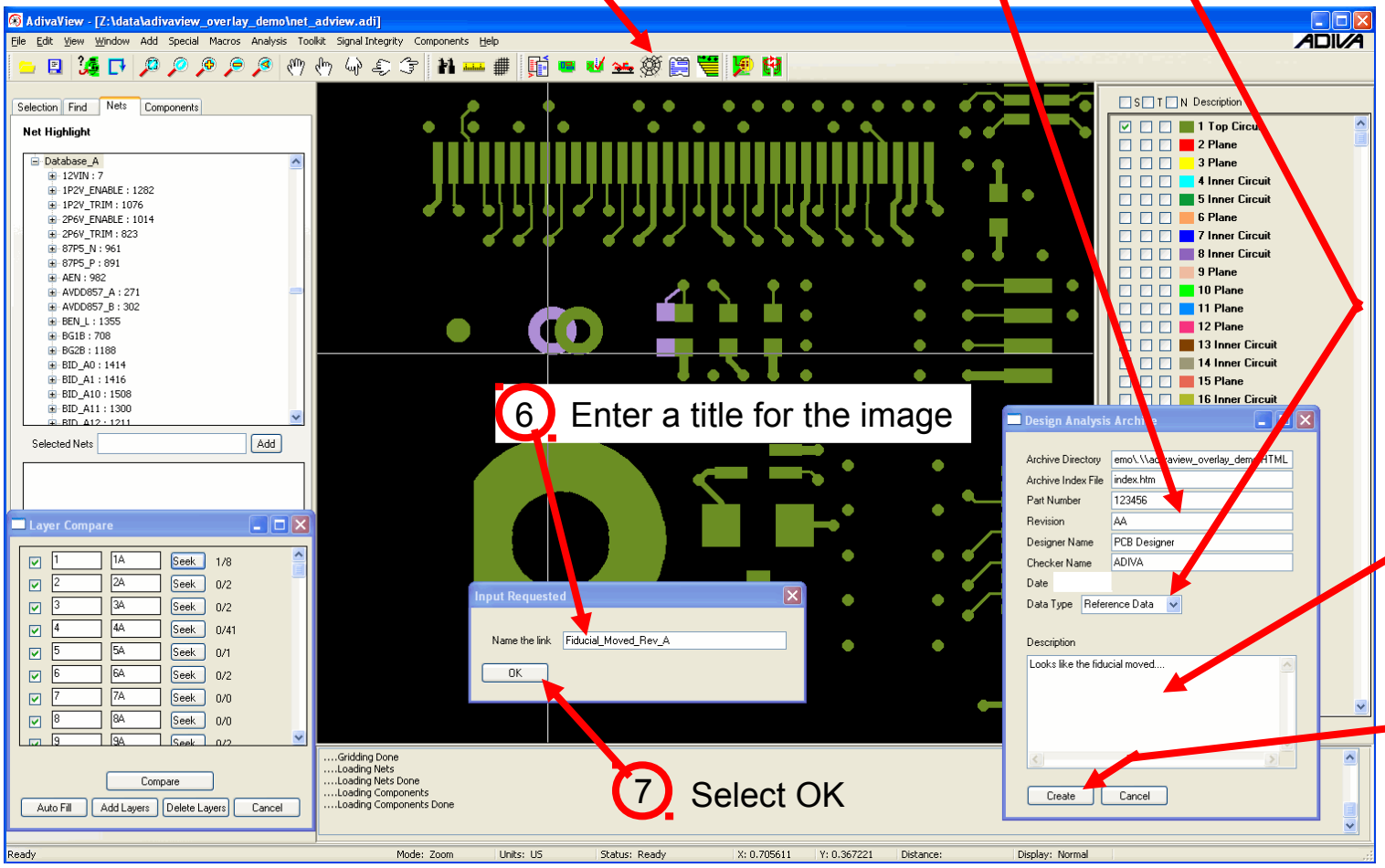
Images contain exactly what is displayed on the current AdivaView screen

Final product is completely independent of AdivaView toolset allowing easy sharing and archiving of AdivaView images and information

Simply set the graphics screen to an image of interest and click the archive button to generate HTML based web pages for visual reference

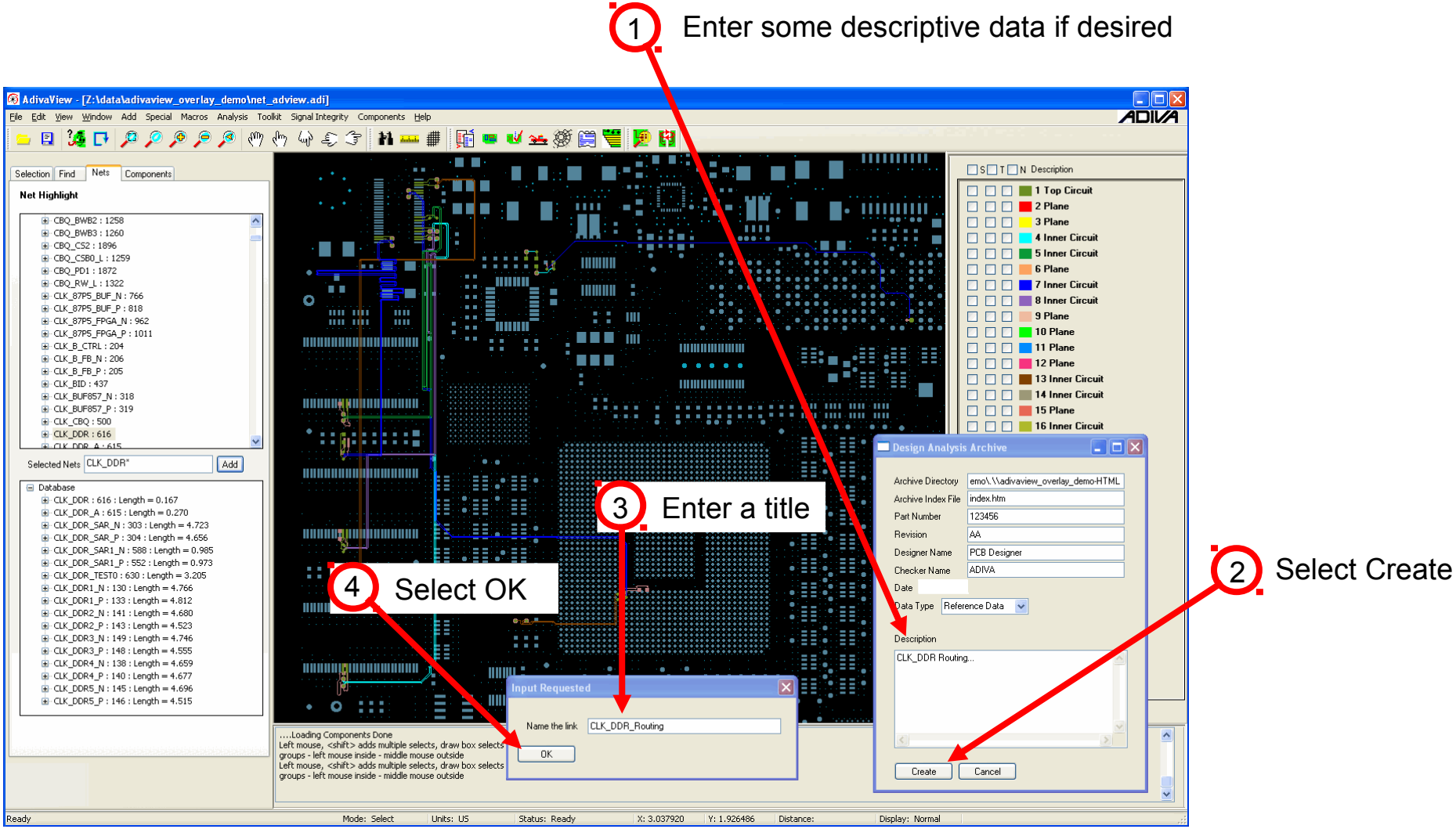
Web Page Creation

This is a case where the Layer Compare function results are being viewed. To create a web page showing the issue displayed, follow these steps….



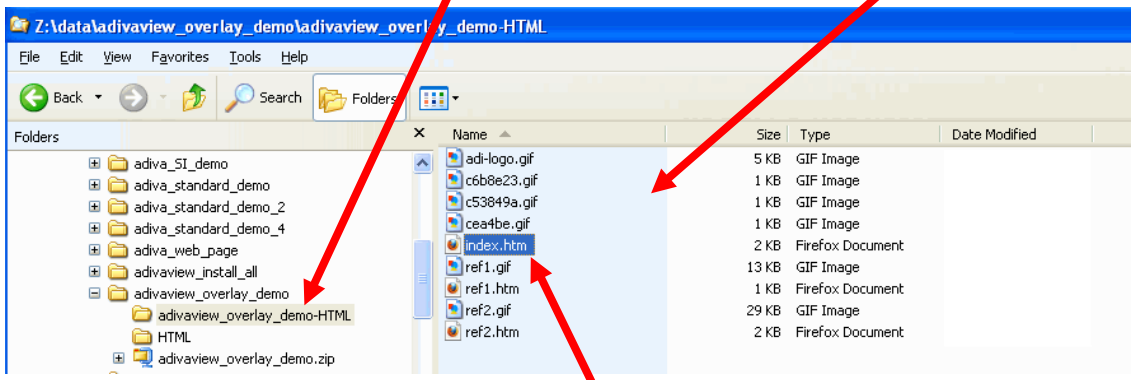
Web Page Creation

This is the same process of creation for a set of highlighted nets. The HTML Archive window can remain open and each “Create” selection will create a new image to add to the archive matrix….



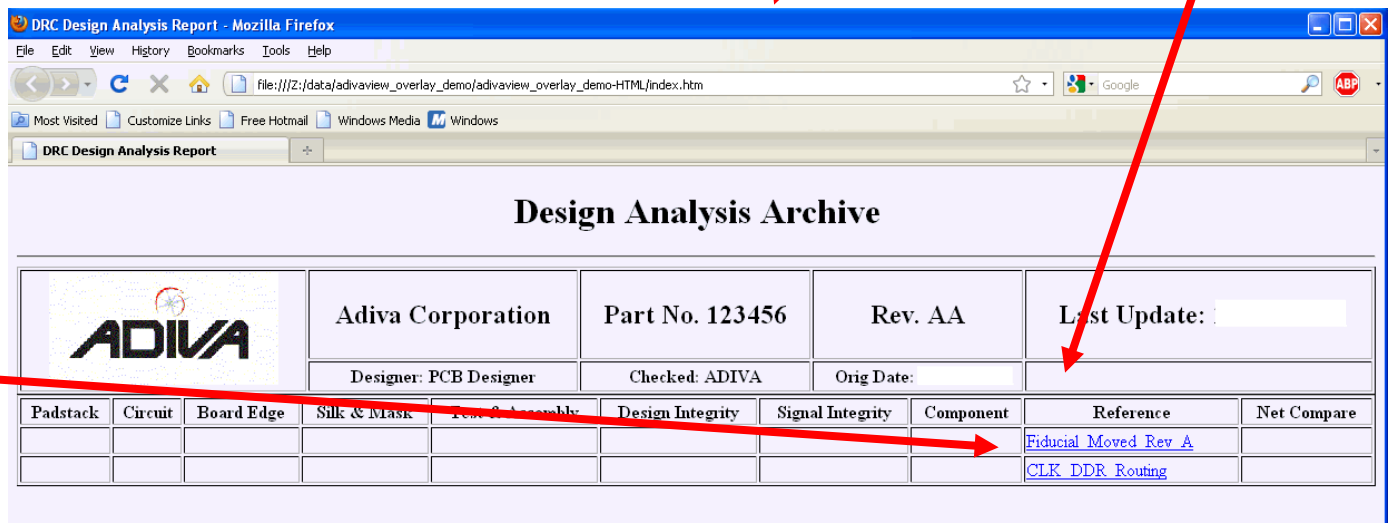
Web Page Creation

As web pages are created,
they are placed in a project directory and a series of files are created under that directory

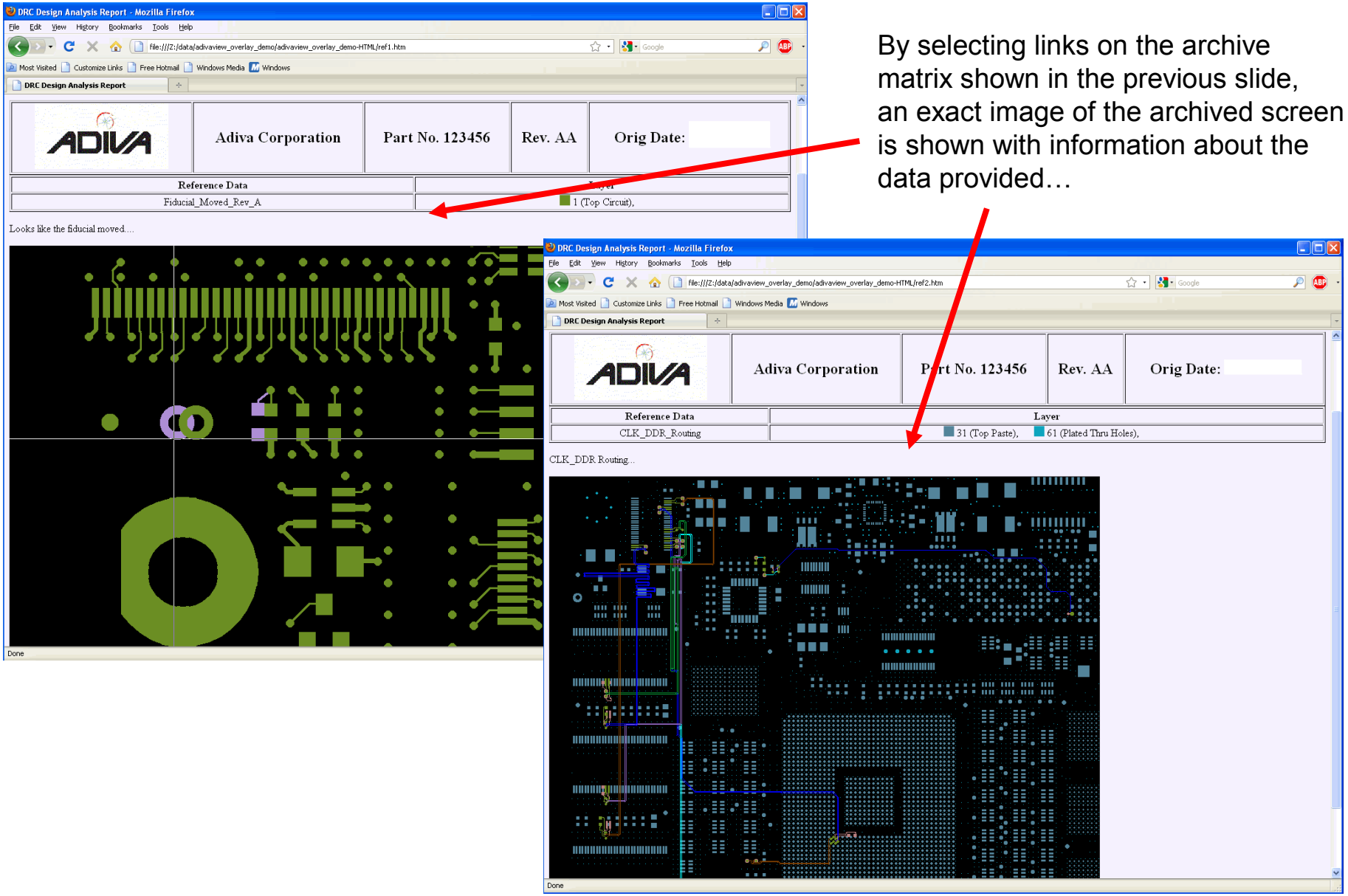


The most important file is the “index.htm” file. Open this file in a web browser to see the archive matrix.

Select one of the links to view the archived web image



Web Page Creation

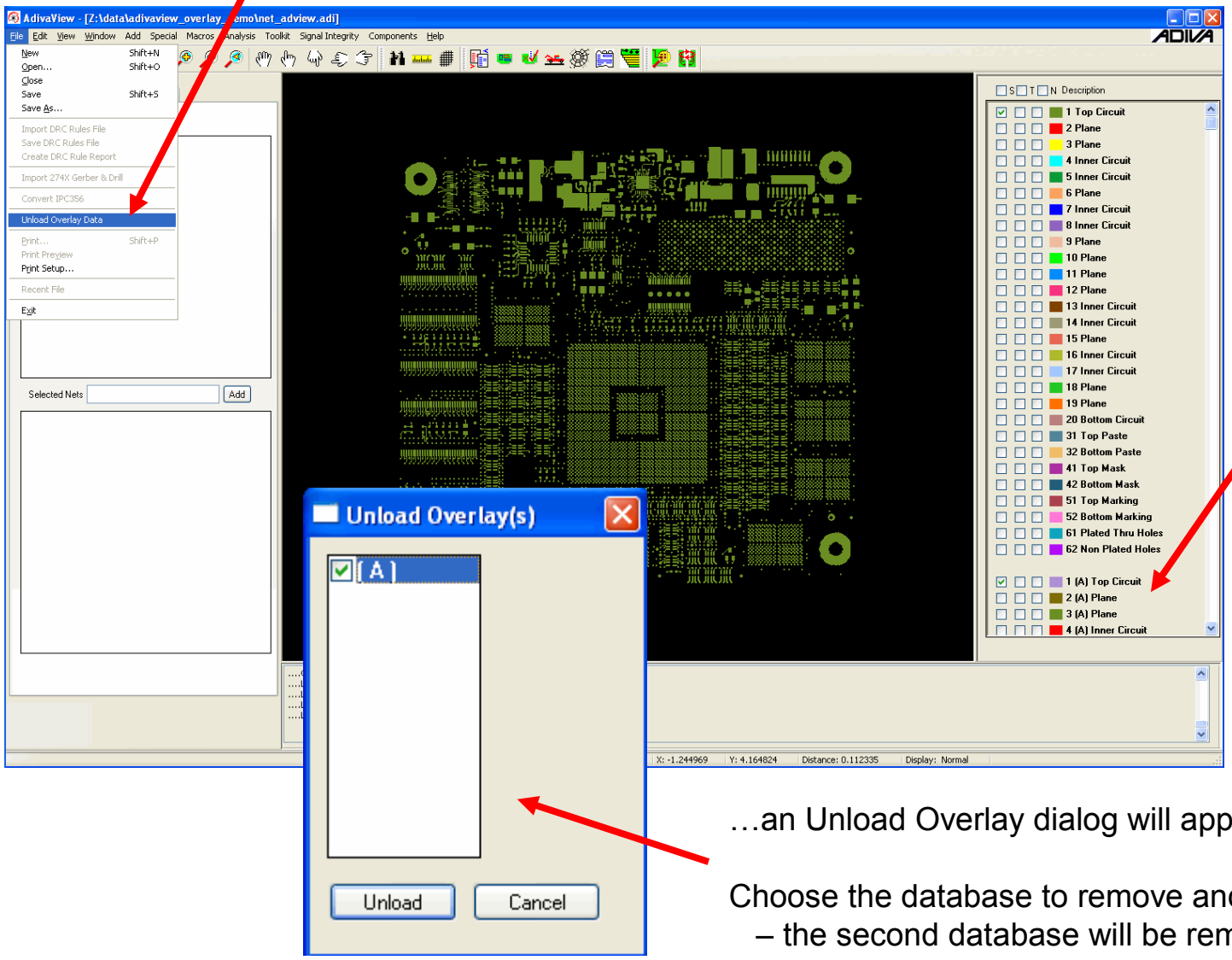


By selecting links on the archive matrix shown in the previous slide, an exact image of the archived screen is shown with information about the data provided…

Unload an Added Database

Remove (unload) an Added Database

Choose **File > Unload Overlay Data**…



Notice a second database is loaded

…an Unload Overlay dialog will appear

Choose the database to remove and select Unload – the second database will be removed

END
AdivaView Main Functions
(User Guide)

Adiva Version 9.5

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