

RStation

Post ICT, JTAG and Boundary Scan Troubleshooting

Repair station software for integrated circuit (IC) troubleshooting

Existing repair station software tools for post electrical test troubleshooting are either insufficient or very expensive. Proventus' RStation is a highly sophisticated repair station tool that provides rich functionality while maintaining a low cost and high value for money.

IC Troubleshooting

Following ICT, JTAG and boundary scan tests, failed boards are examined by technicians in order to identify and correct the exact source of the failure. The increasing complexity of PCBs and the introduction of smaller and more complex component families such as BGAs, make it very difficult for technicians to efficiently perform this task without the use of dedicated tools that help them navigate and investigate the IC's structure.

There are many viewers that claim to provide this required functionality. Some of them can be downloaded for free. However, none of these tools really provide the functions and format support required for day by day work.

The tools that do provide such a wide set of functions and performance are very costly; priced at \$2000-\$5000 per stations. As a result, many companies end up using either inadequate tools or too few stations to satisfy the demand from technicians.

Since these tools have a significant impact on the productivity of repair and troubleshooting, companies have the choice between a large investment and compromising on productivity.

Proventus RStation

Built using latest programming tools (Microsoft .Net C#) and graphical techniques (OpenGL), RStation provides a rich set of functions for IC troubleshooting:

- Display of all IC data including components, nets, vias, test points etc.
- Zooming panning etc at very high speed

- Search for components, nets etc by name and pin
- Calculate and highlight net trace through all layers, including all components connected to specified net.
- Highlight 2 (and more) net traces to assist in shorts investigation.
- Display PDF electronic schema linked by component or net.
- Defect/Repair data entry directly from RStation (point and click) into shop floor management databases.

CAD Format Support

Proventus RStation supports most leading CAD formats including Mentor, Veribest, Cadence, PCAD, Fabmaster, Altium, ODB++, GenCAD, IPC etc. as a built-in feature with no extra cost.

This is of particular importance for companies performing several types of tests (ICT, JTAG, Flying probe, boundary scan). Using RStation such companies can use standard CAD files for IC troubleshooting, without having to invest in additional costly viewers or converters for each tester.

In addition, IPC format is the most available format in the industry with can allow obtaining most answers in zero time.

SMT Machine Data Support

Proventus RStation supports viewing PCB based on information collected directly from ASM/Siemens SIPlace Pro Database. This feature allows detecting a component position on the board in zero time.

BOM File Import

Proventus Rstation supports synchronizing catalog numbers according to imported BOM files.

This feature enables the user to update the displayed catalog numbers with the last BOM.

Figure 1 shows a standard view of the PCB with components and top layer nets.

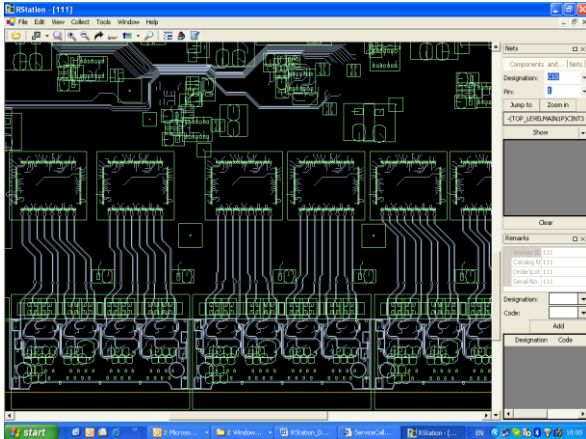


Figure 1

Figure 2 shows the trace of a selected net. Note that the components connected to the net are highlighted in blue/red, and that the net trace itself is colored in different colors (yellow/brown etc) for different layers.

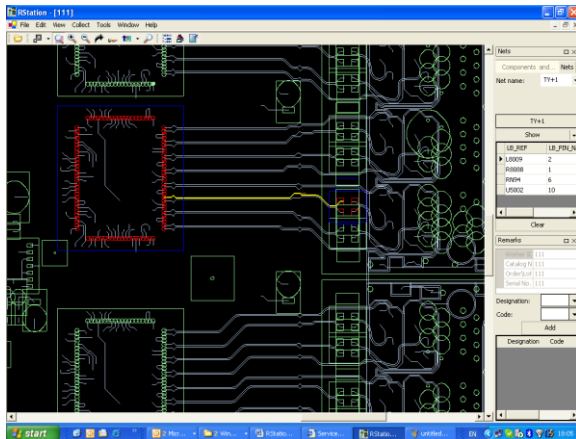


Figure 2

Figure 3 shows the list of components connected to the specified net. Note the "Jump To" and "Zoom In" commands available on right click.

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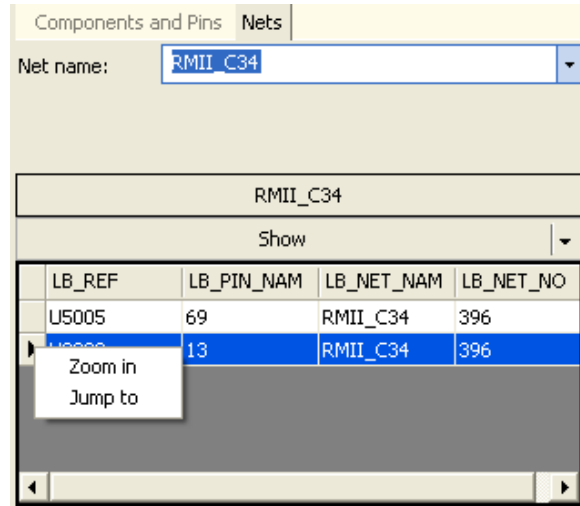


Figure 3

Figure 4 shows a BGA in zoom of 800/1. Note the component information pop-up available on clicking the object.

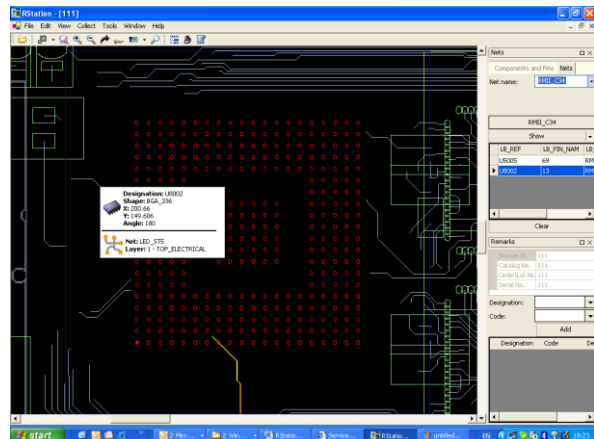


Figure 4

Proventus RStation demonstrates high performance and the rich functionality together with wide CAD format support required for productive IC troubleshooting.

At half the price of existing repair station viewers, RStation is the ultimate tool for post electrical test repair and troubleshooting.