ViTrox Verification Tool Solution — VVTS

User Guide

Notices

Revision

Revision E, April 2018

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Revision History

Revision	Type Of Change	Date	Author
A	First Release	1st August 2010	Venus Ooi Hong Kee
B	Second Release	31th May 2012	Lee Sin Yen
C	Add User Level Entry Notes	1st November 2013	Tan Piet Gek
D	3.01.11 Official Release New Feature and Defect Packager Configuration	28th November 2016	Teoh Chai Ling
E	3.01.12 Official Release (New Feature and New Interface)	10th April 2018	Teoh Chai Ling

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ViTrox Verification Tool Solution

Overview

The ViTrox Verification Tool Solution is the Repair GUI for V510.

Operators can:

- Use the information to decide whether the inspection call is a real defect.
- Save the repair actions performed and other related information.
- Flag defects for later repair when tools or capabilities are not immediately available.
- Access test data from the test and inspection process.

VVTS consists of the following programs:

1. Defect Packager
    - Named as DefectPackager.exe
    - A service running at background, preprocess the test data for Repair Tool.
    - Install on V510
2. Good Image Manager 
    - Named as GoodImageManager.exe
    - A GUI application that helps user to manage good image library on V510.
    - Install on V510.
    - Can be launched using shortcut at V510's desktop.

NOTE: To setup good image, user can refer application notes VVTS 3.01.12 Setup Good Image.

3. Repair Tool 

   - Named as RepairTool.exe
   - A GUI application serves as a repair interface for V510.
   - Install on Repair Station.
   - Can be launched using shortcut icon on Repair Station's desktop

The following describe the data flow from V510 to Repair Station and to Backup Station:

1. First, V510 will generate result files after inspection, there are *.rep, *.erep and error images.
2. Defect Packager start preprocess the result files to the format which can be understood by Repair Tool, details as follow:
   - Convert cpixxx.rep file to repairTicket_pre.txt
   - Convert cpixxx.erep file to pinLevel_repairTicket_pre.txt
   - Convert *.plx, *.pls and *.dat to cad.txt
   - Copy error images from c:\cpi\img folder
   - Finally create log.txt for logging purpose

All preprocessed data and error images will be saved in V510 (at path c:\Defects\Data) until Repair Tool transfer them to Repair Station.

Preprocessed data and error images will be automatically cleared when enable Defect Data Cleanup Tool. Defect Data Cleanup Tool will clear old preprocessed data and retain latest data follow user's configuration. After Defect Cleanup Tool clear data, any repair action after that will not be available, user need to re-inspect the panel.

Note: User can refer to Defect Data Cleanup Tool application notes for more info to configure the setting.

3. Repair Tool transfers data from V510 to repair station upon request from repair operator (open board by barcode, by sequence loading, or open manually). Preprocessed data and error images are

being transferred over the network using Shared Folder concept. V510 will need to share out 2 folders (c:\Defects and c:\GoodImages), these 2 folder must grant repair station the right to full access (read and write). The following explain the usage of the 2 share folder mentioned above:

c:\Defects

- Folder that keep all the preprocessed data and error images
- Defect Packager maintains the file in the folder, any data created more than time frame set in Defect Data CleanUP Tool from inspection time will be cleared

c:\GoodImages

- Folder that keep the entire good reference image
- V510 user needs to self maintain the file in the folder

4. Upon repairing work done, Repair Tool will proceed the following action:
   - Save all the repaired action to repairTicket_post.txt
   - Save all the pin level repaired action to pinLevel_repairTicket_post.txt
   - PinLevel_repairTicket_post.txt
   - Update SPC chart
   - Update History Viewer
   - Output board level xml file (optional)
   - Print board report (optional)
   - Print production summary (optional)

All the repaired data will be stored at repair station (at path c:\classifiedDefects\Data).

This user guide mainly focus on the usage of the Repair Tool

Starting the Repair Tool

Requirements:

I. A key (USB Dongle) or ViTrox Verification Tool Solution.vkey is needed to use the Repair Tool.

II. VVTS need to be connected to V510 via network.

Logging In:

I. Launch the Repair Tool by clicking its icon on the desktop.

II. Log in to the system.

III. There will be two new default accounts generate automatically. Please refer to Figure 1.

Figure 1: Login VVTS

a) c_admin: For VVTS user (Admin only)

Default User Account for 1st-time User:

Username: c_admin

Password: admin

** Note: The existing user can login using this c_admin account and **change the password of c_admin** according to user's preference.*

b) v_admin: For ViTrox's technical support only

Default User Account for Vitrox's representatives:

Username: v_admin

Password: xxxxxxx (only known by Vitrox's representatives)

Note: The password "viTroxpg" not available starting from 3.01.12 version and above.

IV. Once you are logged in, Repair Tool will display the **Work** page, refer to Figure 2.

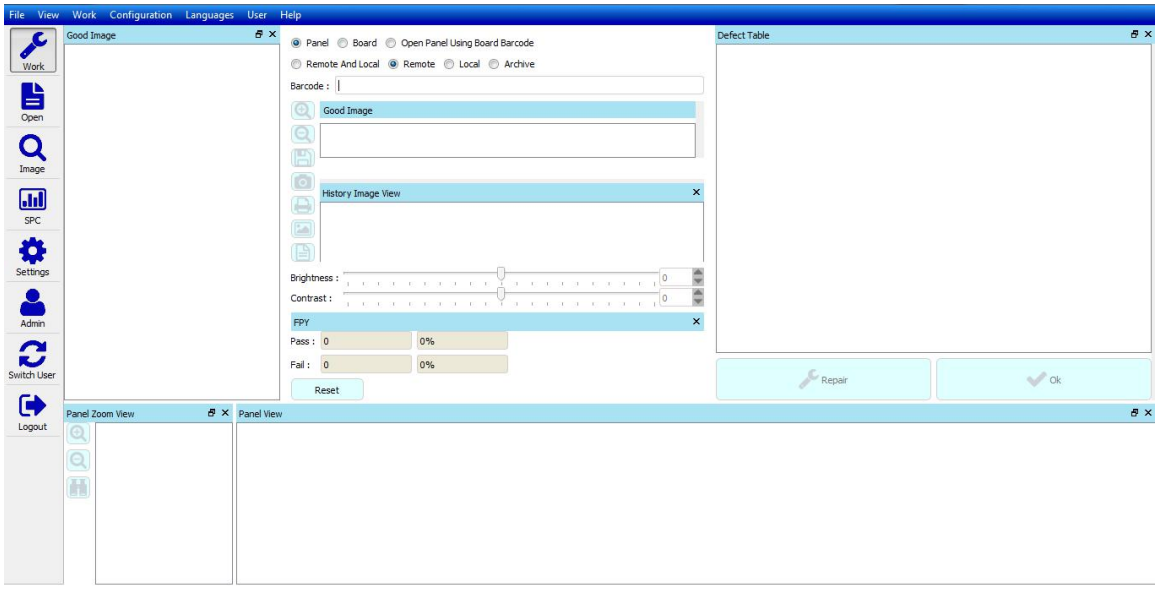


Figure 2: Working page in VVTS after login

Logging Out:

Log out by clicking the **Logout** button.

GUI of Repair Tool

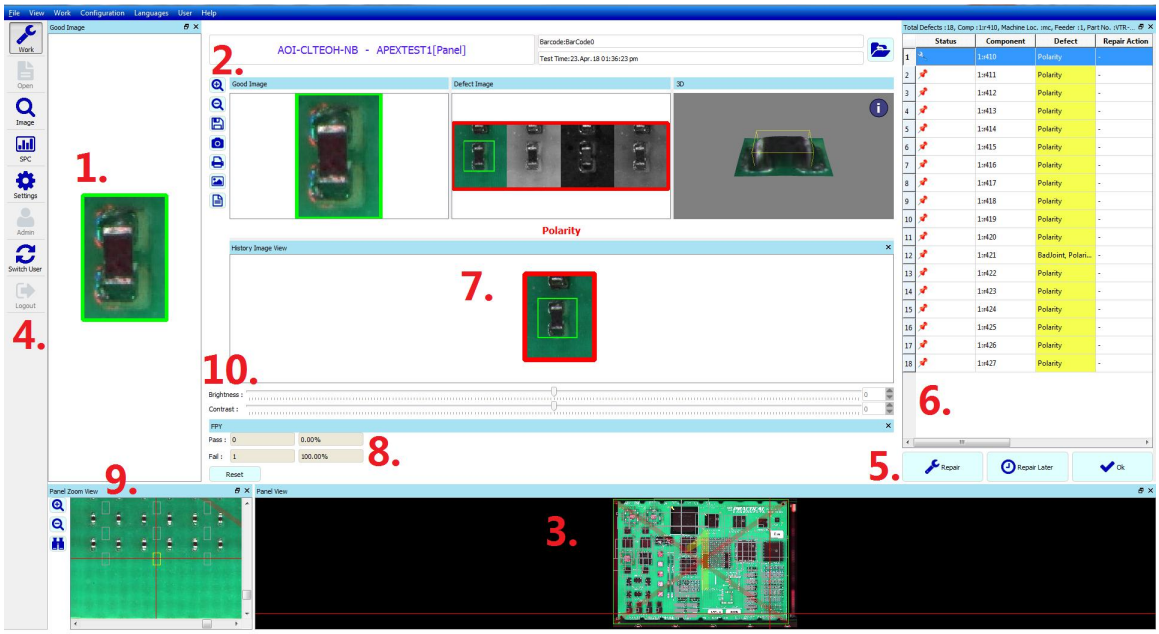


Figure 3: Working information

1. Reference window	Show good image. User can compare the images between good and defect.
2. Image window	- Show inspected image with bigger display windows. - Show good image side by side with inspected image for ease of user to buy-off. - There are some optional click-able buttons beside the image window: i. Zoom in - Zoom in to view magnified image. ii. Zoom Out – Zoom out to view shrink image. iii. Save as – Save inspected image. iv. Print out VVTS screen shot.

	v.  Print result file only. vi.  Combine current defect image with good image. vii.  Export excel file.
3. Panel window	Locate current component position, highlight in red color overlay (real panel image).
4. Tools window	Allow user to use various tools such as Admin, Setting, built-in simple SPC tools etc.
5. Action window	Allow user to choose respective repair action.
6. Defects window	A table lists all the defects information such as status, defect type, component and repair action.
7. History image window	Show last 10 history images of same board type and same component.
8. FPY	Show FPY.
9. Panel Zoom View	Show bigger inspected image with on panel.
10. Brightness and Contrast	To adjust the brightness and contrast of the defect images during verification on the work page.

Figure 4: Working page details

Menu

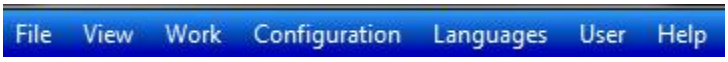


Figure 5: Menu in VVTS

File

I. Loading mode

a. Barcode mode – Open board by barcode entry

b. Sequence mode – Open board by loading sequence

II. Production Summary – Generate summary (For details, please refer to page 86.)

III. Exit – Exit application

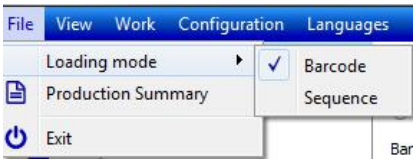


Figure 6: File in VVTS

View

I. Show defect table – Enable and display defect table view

II. Show good image – Enable and display good image view

III. Show panel view – Enable and display panel view

IV. Show panel zoom view – Enable and display panel zoom view

V. Show history image view – Enable and display history image view

VI. Show FPY – Enable and display current First Pass Yield

VII. Refresh – Refresh board list

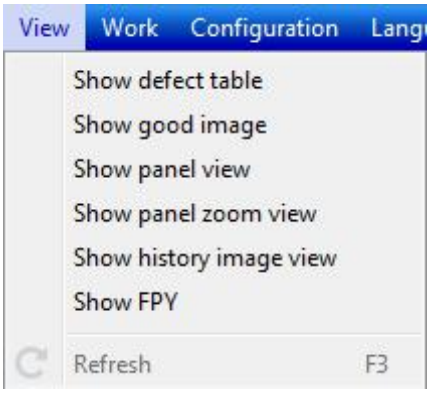


Figure 7: Views in VVTS

Work

I. Scrap board – Discard panel/board

II. Repair – Set defect's status to repair

III. False call – Set defect's status to false call

IV. Rotate board – Rotate all the view by 90 degree clockwise

V. Close board – Close the opened board and save all the repair information

VI. Move Up – Move to previous component

VII. Move Down – Move to next component

VIII. Zoom in – Image zoom in

IX. Zoom out – Image zoom out

X. Full Screen for Defect Image – Show defect image in full screen

XI. Action Key <F12> – User can set hot key and buy off critical defect by press hot key

XII. Board report – Generate board report

XIII. Repair shortcut – User can buy off the defect by using repair shortcut

NOTE: Repair shortcut can only be used when the mini keypad is displayed.

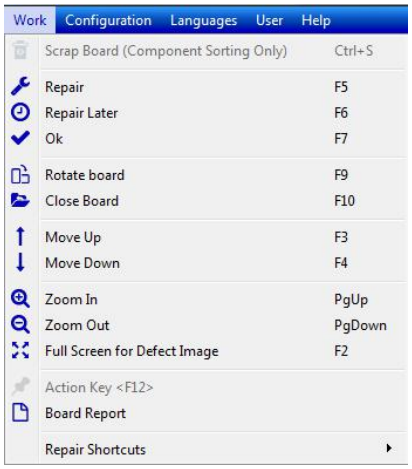


Figure 8: Work in VVTS

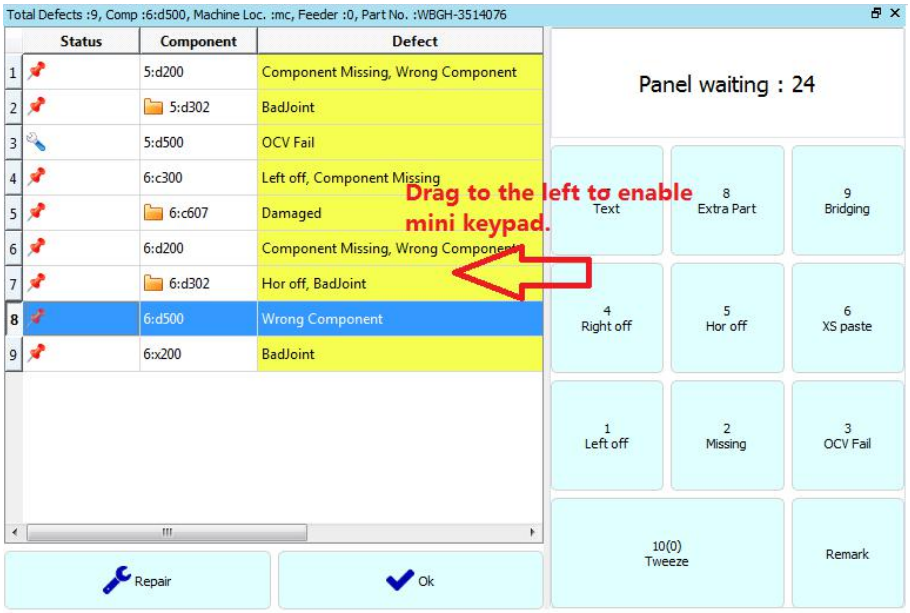
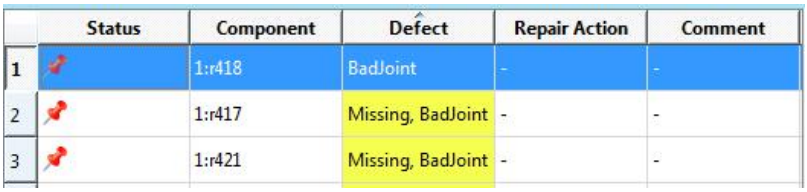


Figure 9: Mini Keypad

XIV. Defect table – User can do sorting by column by clicking the table header.



	Status	Component	Defect	Repair Action	Comment
1		1:r418	BadJoint	-	-
2		1:r417	Missing, BadJoint	-	-
3		1:r421	Missing, BadJoint	-	-

Figure 10: Sorting on Defect Table List

Configuration

I. Settings – Display settings page (Please refer to "Setting" section in page 25 for details)

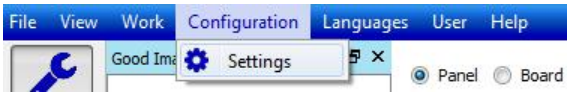


Figure 11: Configuration in VVTS

Languages

I. English – Display English version

II. Chinese – Display Simplified Chinese version

Figure 12: VVTS in English version

Figure 13: VVTS in Chinese version

User

I. Admin – Display admin page

II. Logout – Log out current user and display log in page

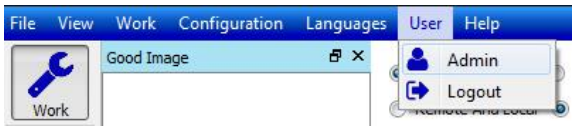


Figure 14: User in VVTS

Help

I. About Qt... - Display QT software version

II. About VVTS... - Display VVTS software version

III. VVTS Guide

- User Guide – Link to document VVTS User Guide

Figure 15: Help in VVTS

Overview of Main Tools

Page: Provide easy and quick access to GUI which have similar working model.

	**Work page** – a page where operator carry out all the repair action.
	**Open page** – a page for manually open panel/board.
	**Image page** – a page to display zoom in defect image and good image.
	**SPC page** – a page to display real time/history chart for monitoring purpose.
	**Settings page** – a page to display all the application related settings.
	**Admin page** – a page to manage user account and password.
	**Switch User page** – a page to switch user account.
	**Logout page** – a page for user log in and log out.

Figure 16: Pages in VVTS

Settings

Connection:

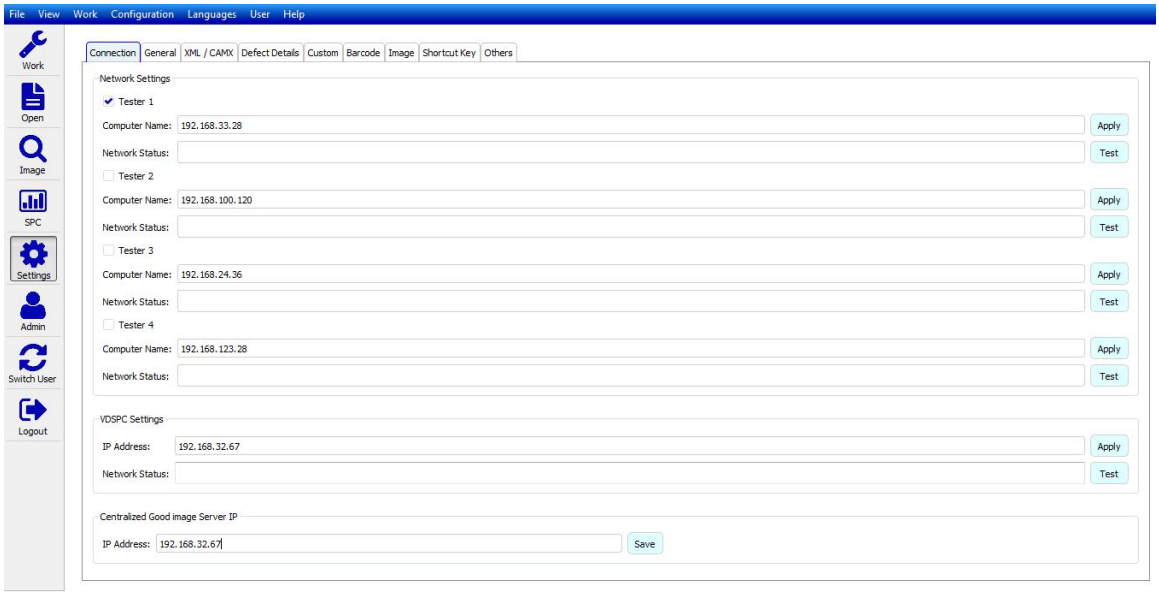


Figure 17: Connection

Network Settings

Follow these steps to enter tester computer name to establish connection:

I. Enter tester computer name or IP address, click **Apply**.

II. Click **Test**, to test the connection.

If connection is connected, it will display “Computer Found...” as Figure 18.

III. Current VVTS is able to support up to 4 AOI within the same network.

IV. Tick “Tester 2” checkbox if 2 AOI are connecting to 1 VVTS. User can key-in the 2nd AOI computer name or IP address to establish the connection.

V. The same setting applied to 3 or 4 AOI connect to one VVTS.

Note: This needs to be done prior to start using VVTS so that data transfer is working.

Figure 18: Network settings

VDSPC Settings

Follow these steps to establish connection to VDSPC server (if applicable, else leave blank).

I. Enter “IP Address” or “Server Name”. Click “Apply”.

II. Click “Test”. This is to test the connection.

III. If there is connection, it will display “Server Found...” as below.

Note: This needs to be done prior to start using VVTS so that data transfer is working.

Figure 19: VDSPC settings

Centralized Good Image Server IP Settings

Follow these steps to establish connection to server for good image accessibility (if applicable, else leave blank).

I. Enter “IP Address” or “Server Name”. Click “Save”. (Figure 20)

II. If there is valid connection, “Good Image” will be displayed at VVTS interface.

Note: This needs to be done prior to start using VVTS so that image transfer is working.

**Please refer to "VVTS 3.01.12 Setup Good Image and Centralized Good Image" application notes for details setting.*

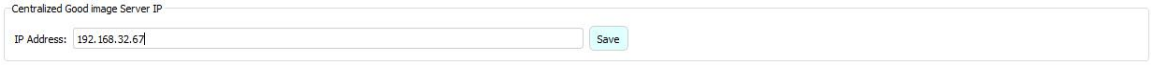


Figure 20: Centralized Good Image Server IP settings

General:

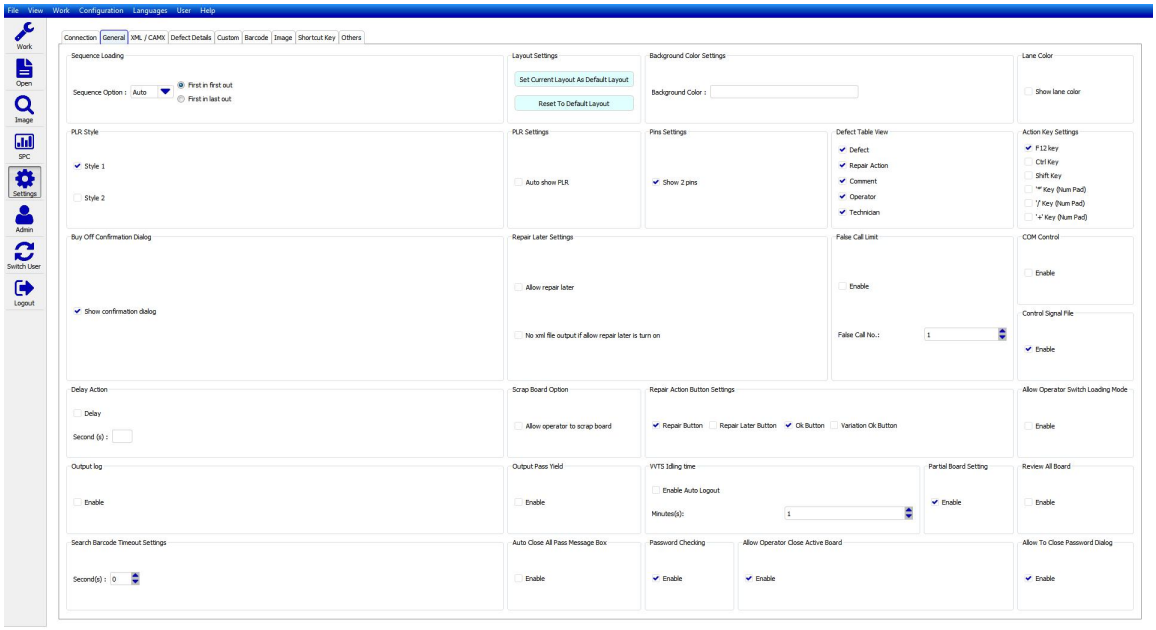


Figure 21: General Settings

Sequence Loading Settings

There are two options to select for sequence loading. (Set the loading mode to sequence mode)

I. Auto mode – Auto load the board after click the **Play** button. (Either ***First in first out*** or ***First in last out***)

II. Manual mode – After verify the board, need to click Play button to continue load next board.

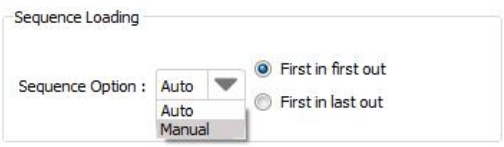


Figure 22: Sequence loading

Clear Index

There has a functionality to clear the panel waiting in the sequence buffer list.

Click **Clear Index** button. (The “Clear Index”button is available at **Work** page)

Figure 23: Clear Index

Search Barcode Timeout Settings

I. To set barcode search timeout (in archive).

Figure 24: Search barcode timeout settings

Background Color Settings

Set background color as per user preference. User need to restart RepairTool in order for background color to take effect. Please refer appendix for color code choices.

Figure 25: Background color settings

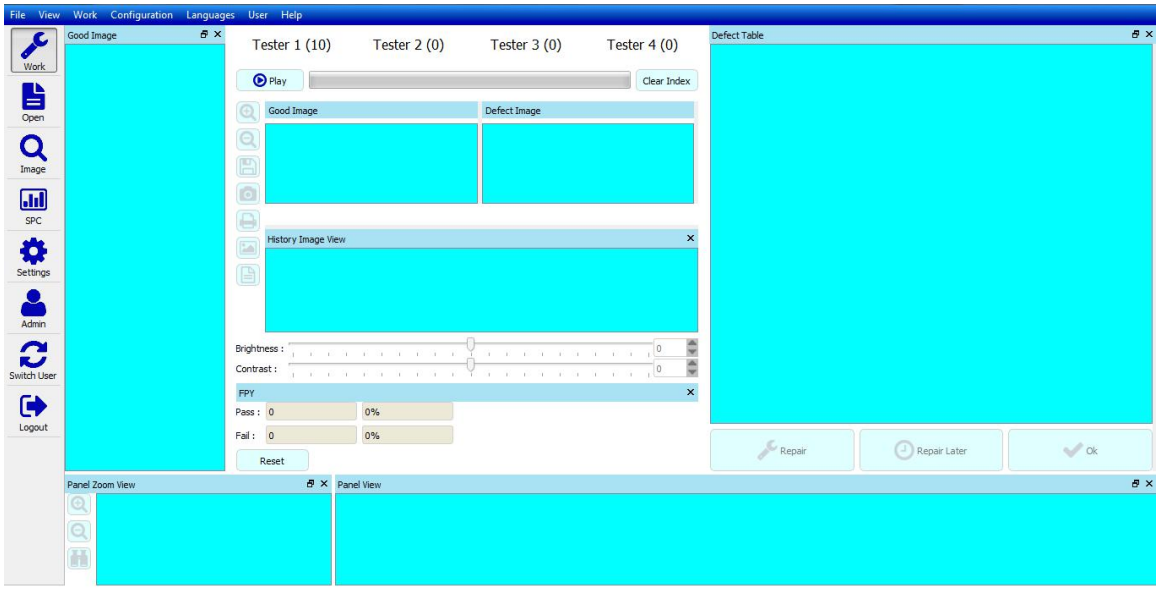


Figure 26: Change background color in VVTS

PLR Settings

To set auto show Pin Level Reporting (PLR) information **without** <enter> key.

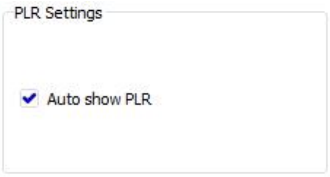


Figure 27: PLR settings

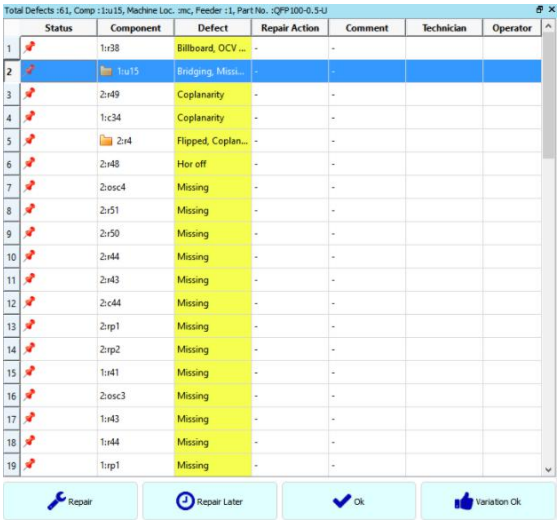


Figure 28: User need to press <Enter> to show PLR information

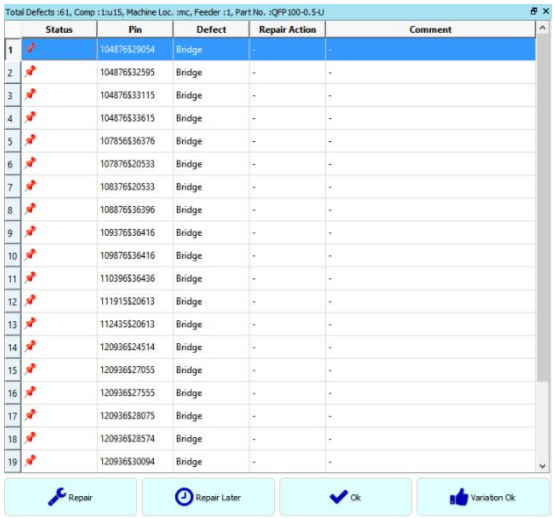


Figure 29: PLR information auto show when “Auto show PLR” is enabled

Layout Settings

I. User can customize the VVTS interface layout by dragging the viewer box.

II. Once complete, click **Set Current Layout As Default Layout** button to save as default layout.

III. Click **Reset To Default Layout** button to restore the previous saved layout.

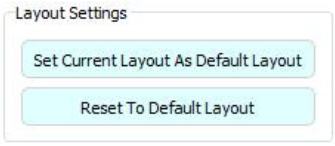


Figure 30: Layout settings

Delay Action

To activate the delay action.

I. Tick the **Delay** check-box.

II. Set the second(s) for the delay action.

III. The availability of action keys of each inspection call will be delayed to ensure operator judge correctly.

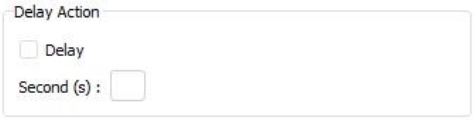


Figure 31: Delay action

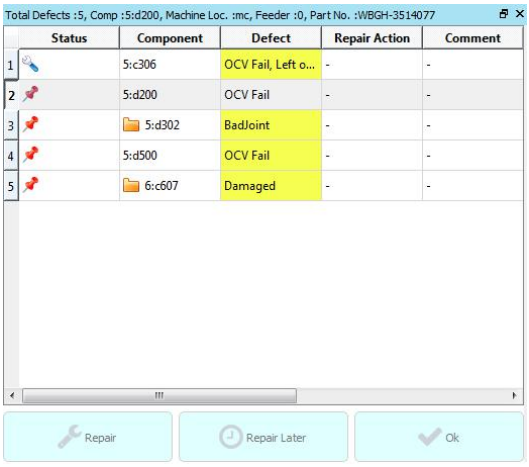


Figure 32: The availability of action keys will be delayed for every inspection call

Buy Off Confirmation Dialog

To archive results data after review.

I. If unchecked, results data will be archived after finish reviewed by operator.

II. If checked, results data will not be archived but will still be stored locally until operator select either one of the action as below:

- Yes: Results data will be archived.
- No: Results data will not be archived.
- Yes and Print: Results data will be archived and printed.

Figure 33: Buy off confirmation dialog

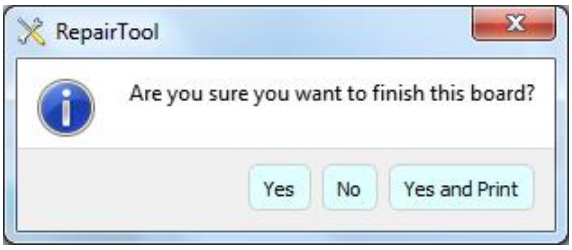


Figure 34: Buy off confirmation dialog when finish buy off

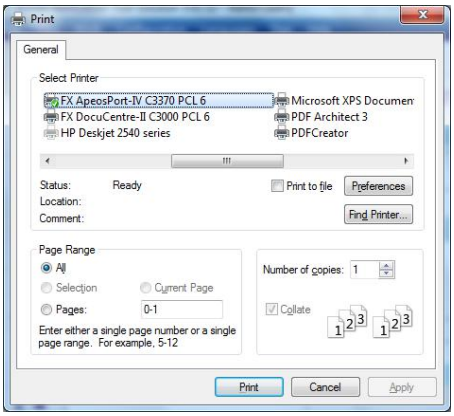


Figure 35: Choices of a printer to be selected after select "Yes and Print"

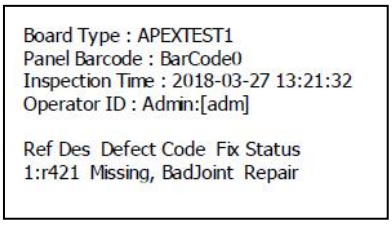


Figure 36: Printed information

Repair Later Settings

I. Tick the ***allow repair later*** checkbox to allow user select repair later action during board buy-off.

II. No xml file output if checkbox of ***No xml file output if allow repair later is turn on*** is checked.

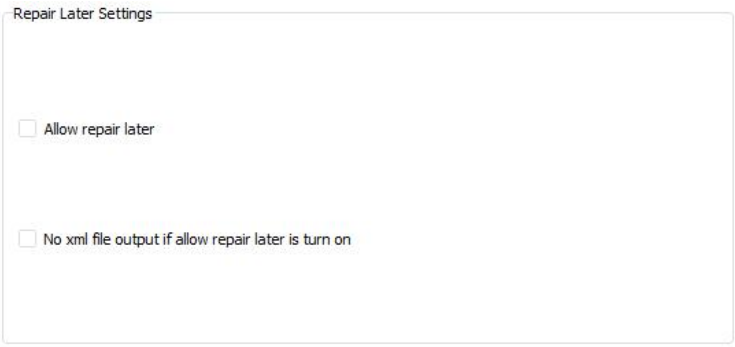


Figure 37: Repair Later Settings

Repair Action Button Settings

I. Tick the checkbox under **repair action button settings** to enable the action button in **Work** page for board buy-off.

- Repair Button: Buy-off as true defect.
- Repair Later Button: Buy-off later (will be left as active defect).
- Ok Button: Buy-off as false defect.
- Variation Ok Button: Buy-off as false defect (which is process indicator).

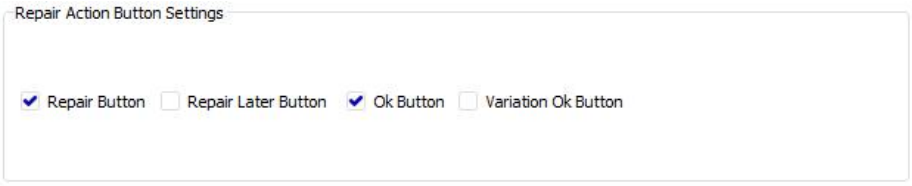


Figure 38: Repair action button settings

Scrap Board Option

I. Tick the checkbox to allow operator to scrap board during board buy-off.

Figure 39: Scrap Board Option

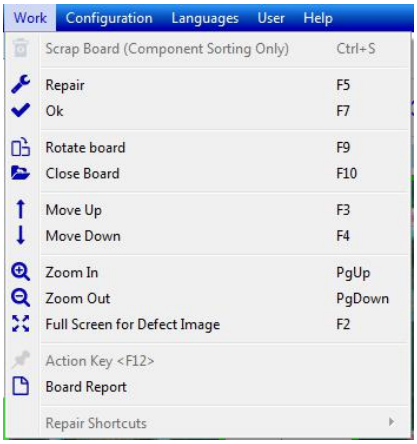


Figure 40: Scrap Board grey out in Operator mode when Scrap Board Option un-check

PLR Style

I. Display PLR styles in VVTS.

- Style 1: “Enter” to PLR folder automatically during buy off process. Figure 42 is the sample screen shot for style 1.

- Style 2: Hide the panel view, panel zoom view and good image view. Figure 43 is the sample screen shot for style 2.

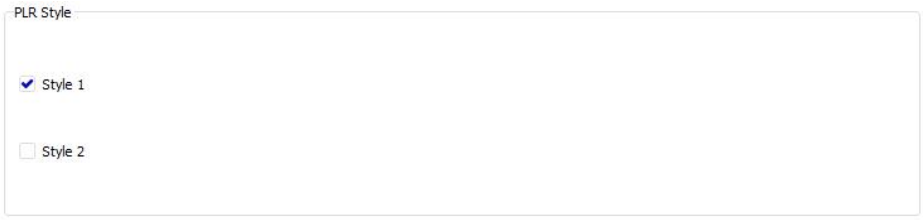


Figure 41: Set the PLR style

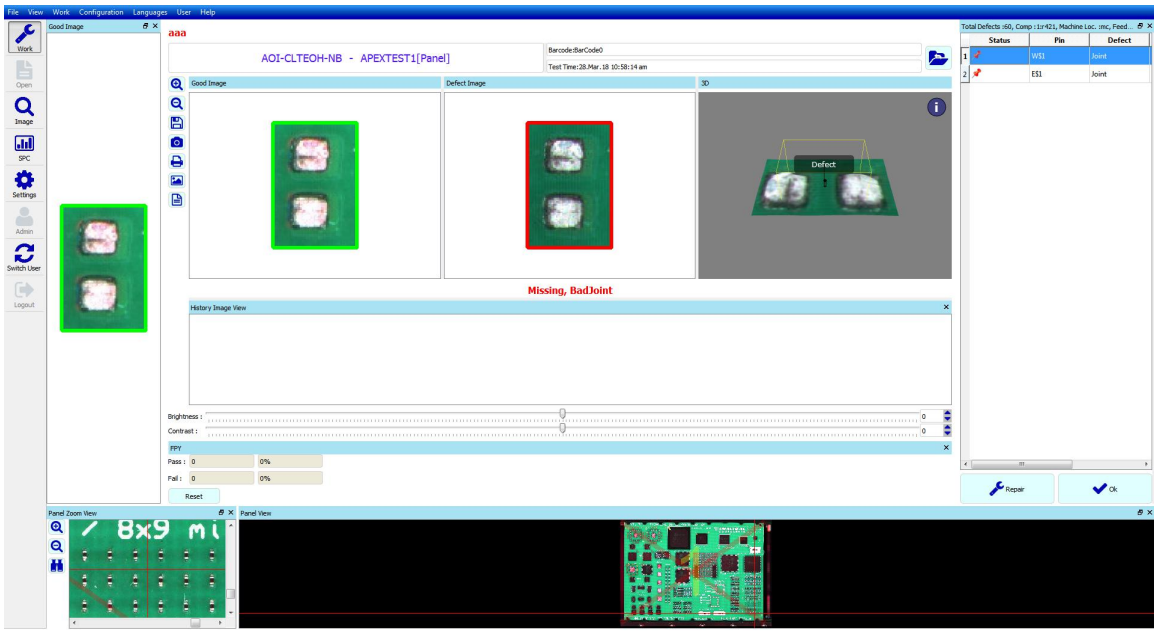


Figure 42: PLR style 1

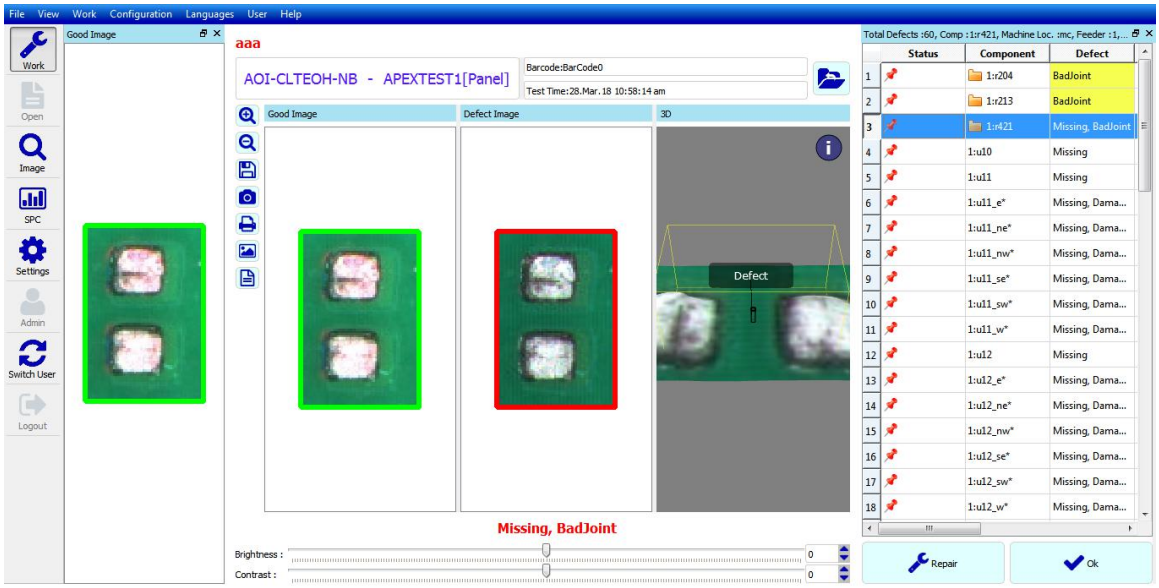


Figure 43: PLR style 2

Auto Close All Pass Message Box

I. Pass message box will be closed automatically when user enables this function.

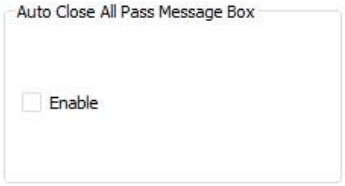


Figure 44: Auto close all pass message box

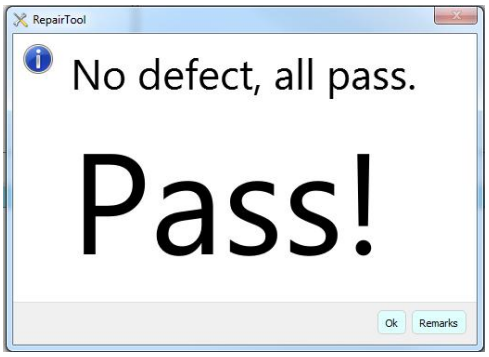


Figure 45: VVTS will close the message box above automatically

Pin Settings

I. User can view pin information for component which only has two pins.

Figure 46: Show 2 pins

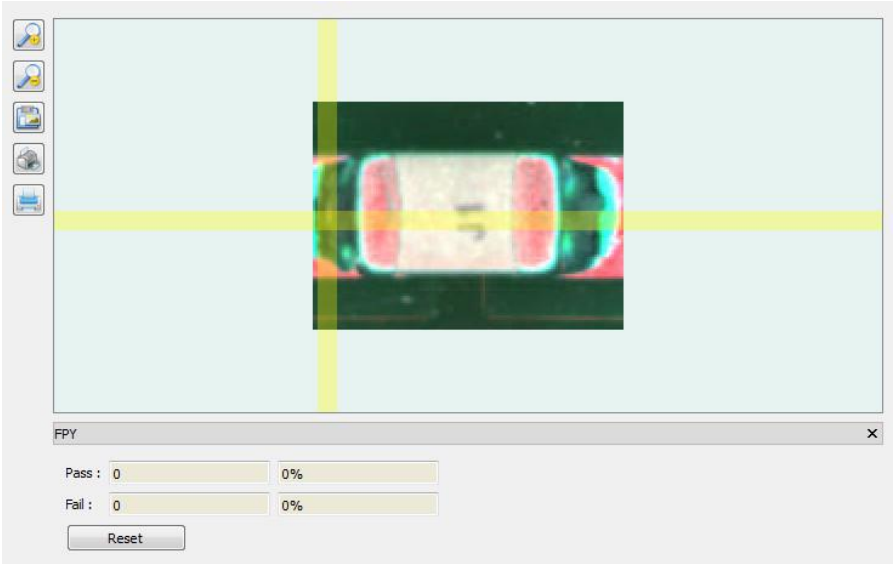


Figure 47: Component show 2 pins in VVTS

Action Key Settings

I. User is required to set the critical defect in **criticalDefect.txt** file in C:\Program Files\RepairTool\Config in advance, refer Figure 48.

II. During verification, if the defect for the particular component is **critical defect**, the repair action button will be disabled until user press the hot key that set by admin, refer Figure 49.

III. There are some hot keys option for critical defect, such as F12, Ctrl, Shift, "*" (num pad), "/" (num pad) and "+" (num pad) as in Figure 50.

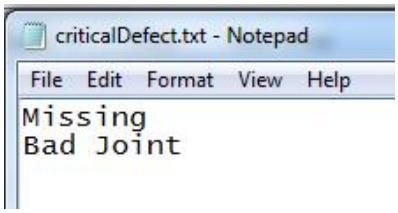


Figure 48: CriticalDefect.txt

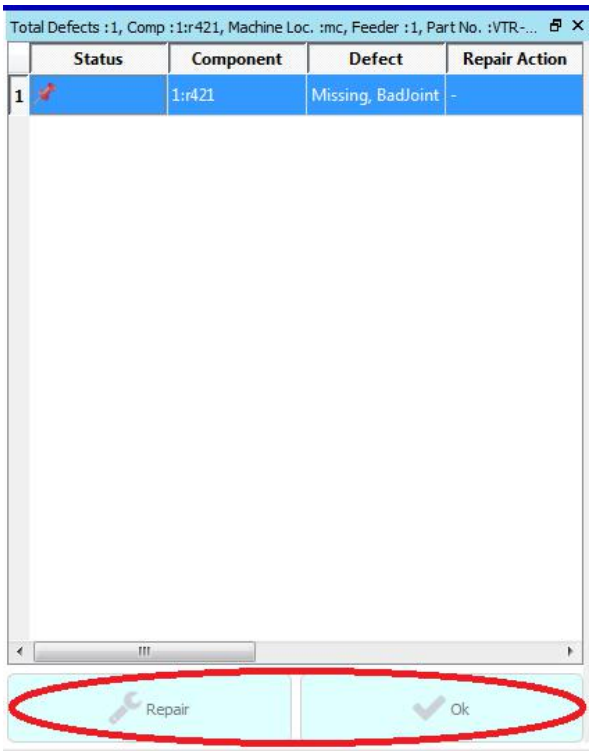


Figure 49: Disable repair action

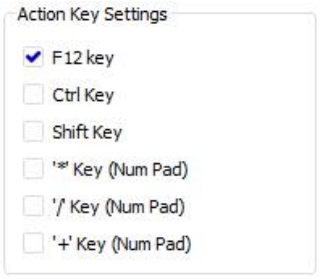


Figure 50: Action key settings

Password Checking

I. If user wants to change the repair action (true call/false call) for a defect component, user needs to enter user name and password (engineer or admin entry) in order to do so.

II. Example: In figure 51, if user wants to change the repair status from 'repaired' to 'false call' for component “1:r213”, user needs to select user name from the drop down list and enter password.

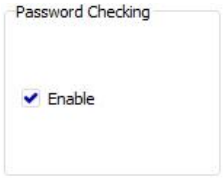


Figure 51: Password Checking

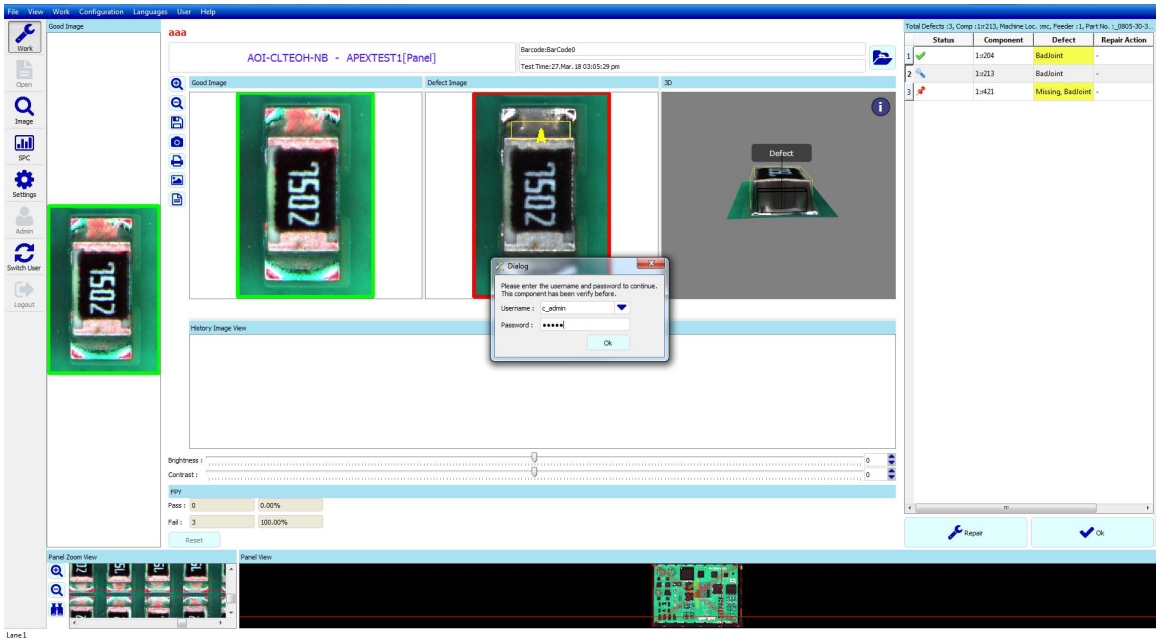


Figure 52: Changing repair status

Lane Color

I. Color will show on title when this feature is on. Only available for dual lane system.

II. Lane 1 will display as Green and Lane 2 will display as Yellow.

Figure 53: Changing repair status

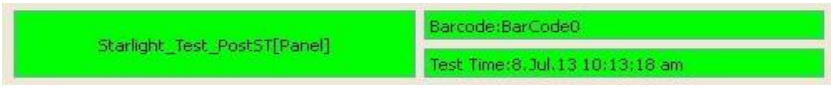


Figure 54: Lane 1

Figure 55: Lane 2

Allow operator switch loading mode

I. With this feature, administrator allows operator to switch the loading board mode.

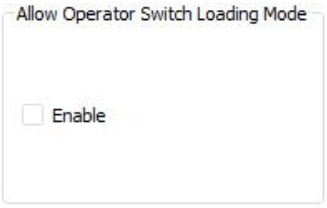


Figure 56: Allow operator to switch loading board mode

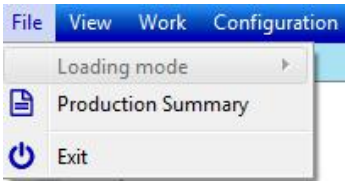


Figure 57: Operator mode unable to switch loading mode if the box un-check

Output Log

I. This feature is able to output log at C:\ClassifiedDefects\dataLog.

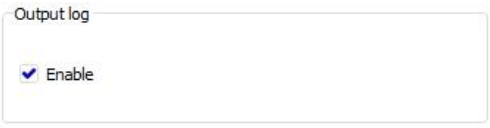


Figure 58: Output log

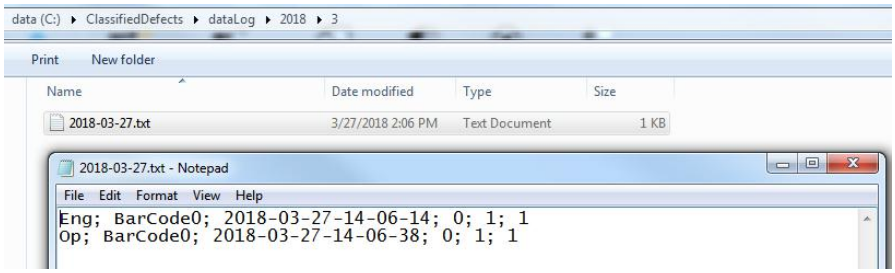


Figure 59: Output log in C:\ClassifiedDefects\dataLog by date

Output Pass Yield

I. This feature is able to output pass yield data in V510 machine path *C:\Defects\PY* and *C:\Defects\Pareto* for FPY tool used.

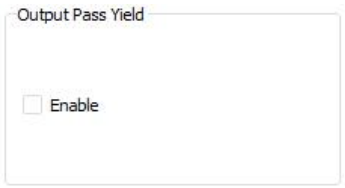


Figure 60: Output Pass Yield

VVTS Idling time

I. User can configure to auto logout VVTS after the VVTS idling maximum 60 minutes only.

Figure 61: VVTS Idling time

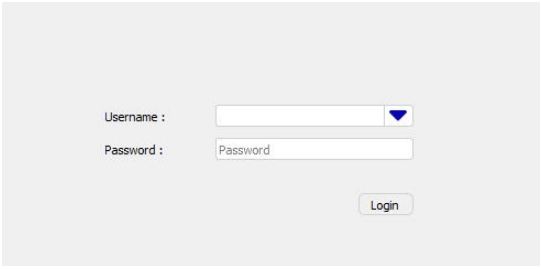


Figure 62: Auto logout VVTS after VVTS idling in configure minutes

Partial Board Setting

I. This feature is used to filter the board data display at VVTS which is not inspected by V510**.** Board data which is fail all for single board will be filter and message box as Figure 63 will prompt out for notification.

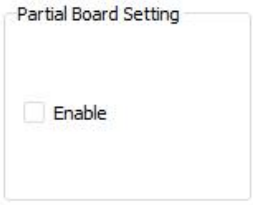


Figure 63: Partial Board Setting

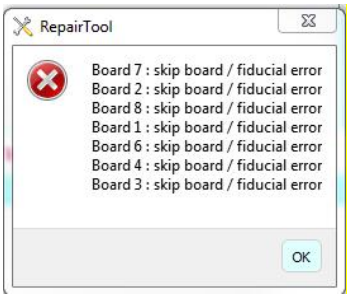


Figure 64: Message box prompt

Review All Board

I. This feature is force operator review every single board.

Figure 65: Review All Board

Allow operator close active board

I. This feature is able to allow operator to close the active board which is have not finish review by operator.

Figure 66: Allow Operator Close Active Board

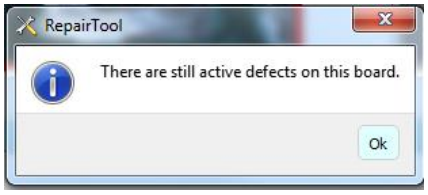


Figure 67: Operator not allow to close active board if buy-off not complete

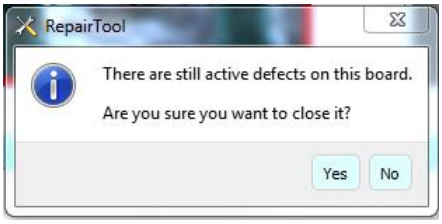


Figure 68: Operator is allowed to close active board if buy-off not complete with "Allow operator close active board" is checked

Allow to close password dialog

I. User is allowed to close password dialog with this feature.

Figure 69: Allow To Close Password Dialog

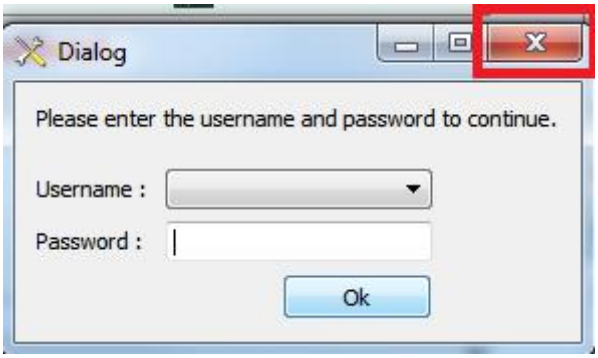


Figure 70: Close button is enable when password dialog prompt out

Control Signal File

I. Tick ***Control Signal File*** checkbox to enable *VVTS buyoff control* feature. (For details, please refer to VVTS buyoff control application note)

II. The machine will hold the panel board until operator finishes buy-off at VVTS station.

III. A releaseBoard.txt file will output at C:\Defects when finish buy-off the panel board at VVTS.

IV. The file will trigger machine to release the entire panel board.

Figure 71: Control Signal File

Defect Table View

I. User can configure the information to be displayed in Defect Table by setting of ***Defect Table View***.

II. "Status" and "Component" is displayed by default.

Figure 72: Defect Table View Setting

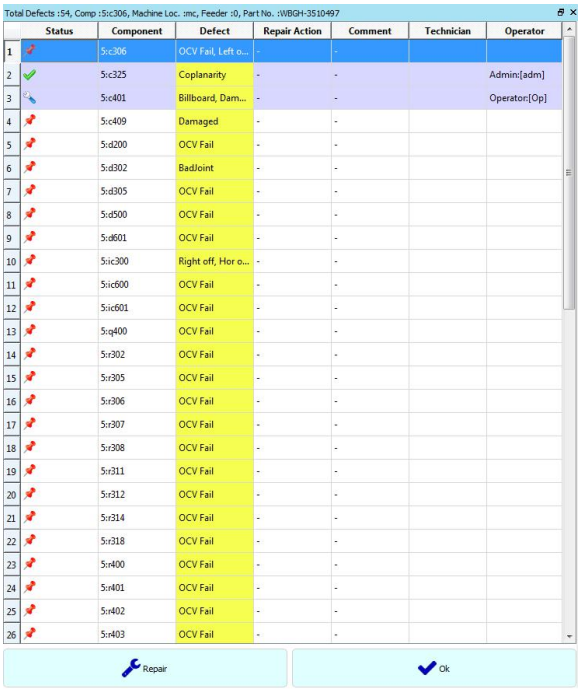


Figure 73: Defect Table Displayed

False Call Limit and COM Control (Customize setting)

I. If the inspection calls more than value set by user, VVTS will output a signal file.

II. TBDAgent will be triggered to transfer data to offline VVTS when false call limit exceeded.

III. No buy off action is required.

*Please request files and information from ViTrox if wish to use this feature.

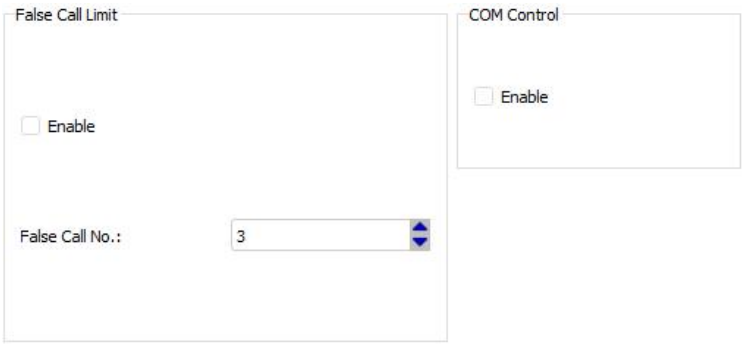
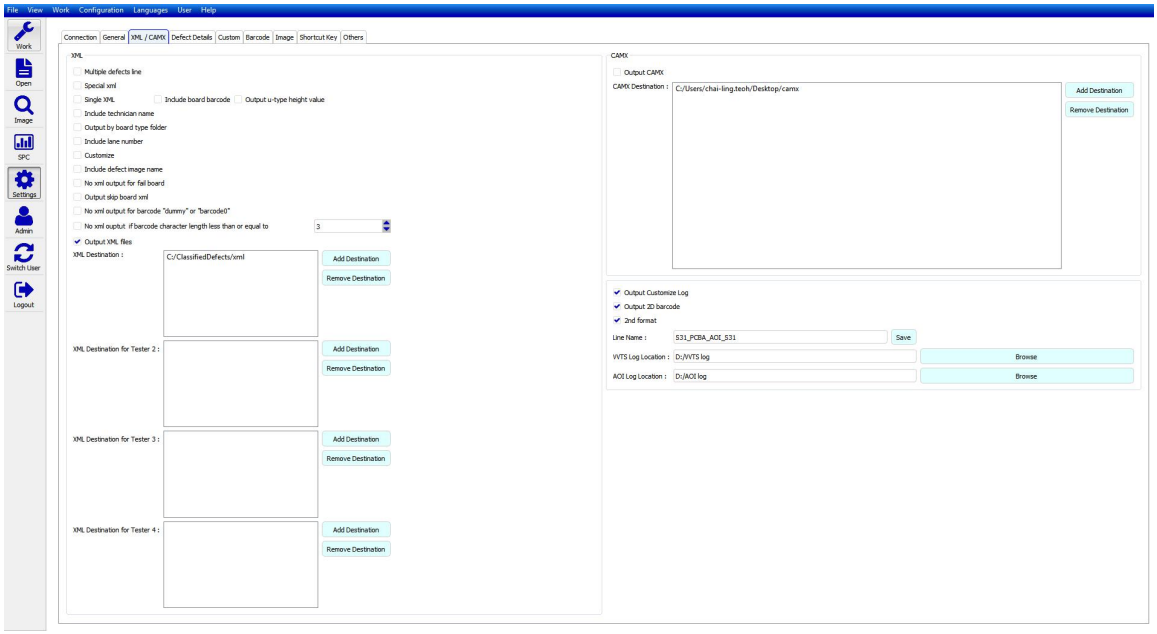


Figure 74: Transfer exceed false call limit data

XML/CAMX:



XML:

VVTS has the option to output repaired action as XML format and pass it to production shop floor system for further analysis.

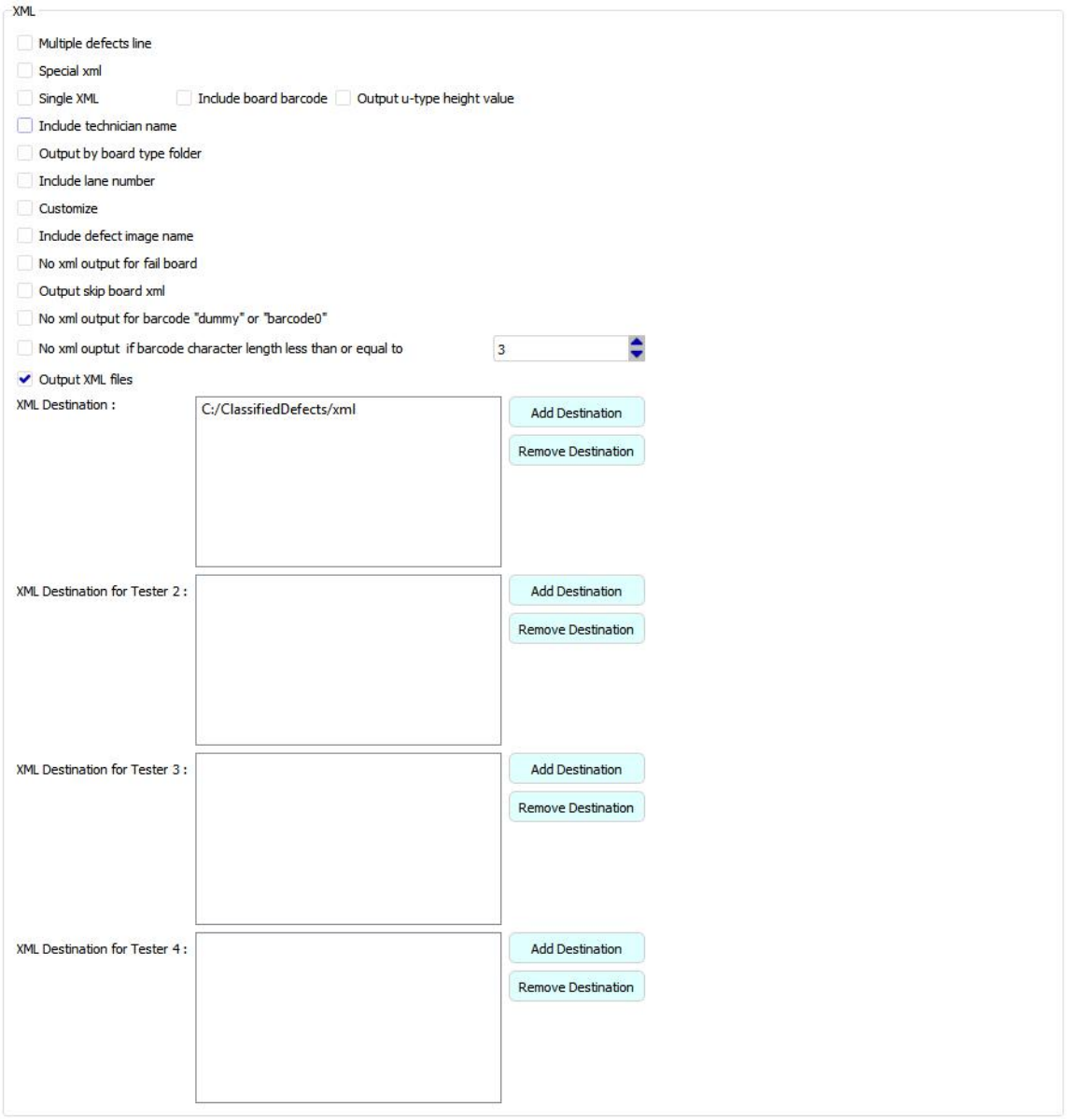


Figure 75: XML in VVTS

Output XML file

I. Check the **output XML file** check-box.

II. User can add XML destination by click on **Add destination** option.

III. The XML destination can be removed by selecting a row and click on **Remove destination** option.

Note:

a) VVTS is able to support multiple XML location output.

b) XML destination can be configured according to different tester.

Figure 76: XML file in VVTS

Multiple defects line

I. To output multiple defects line, user needs to check **Multiple defects line** check-box.

Figure 77: Multiple defects line in VVTS

Special XML

I. In special XML, reference designator of a component will be displayed in short form without the prefix of board number.

II. Example: Figure 78 shows the special XML file, the reference designator of the first component is displayed as “c18” instead of “1:c18”.

```
<?xml version="1.0" encoding="UTF-8"?>
- <ns1:BoardTestXMLExport xmlns:ns1="http://tempuri.org/BoardTestXMLExport.xsd" numberOfDefects="26" repairStatus="Reviewed Passed" testStatus="Reviewed Passed"
numberOfIndictedPins="0" numberOfIndictedComponents="26" numberOfJointsTested="0" numberOfComponentsTested="152" testerTestEndTime="2012-05-
23T11:46:46.000+08:00" testerTestStartTime="2012-05-23T11:44:57.000+08:00" testTime="2012-05-23T11:44:57.000+08:00">
    <ns1:BoardXML assemblyRevision="DemoBoard" boardRevision="1337740854000" boardType="DemoBoard" imageId="1" serialNumber="BarCode0-1"/>
    <ns1:StationXML stage="V510" testerName="AOI-SYLEE-NB"/>
    <ns1:RepairEventXML numberOfVariationOkPins="0" numberOfVariationOkComponents="0" numberOfVariationOkDefects="0" numberOfRepairLaterPins="0"
        numberOfRepairLaterComponents="0" numberOfRepairLaterDefects="0" numberOfRepairedPins="0" numberOfRepairedComponents="0" numberOfRepairedDefects="0"
        numberOfFalseCalledPins="0" numberOfFalseCalledComponents="26" numberOfFalseCalledDefects="26" numberOfActivePins="0" numberOfActiveComponents="0"
        numberOfActiveDefects="0" repairOperator="engineer" repairEndTime="2012-05-23T11:50:17.000+08:00" repairStartTime="2012-05-23T11:50:14.000+08:00"/>
  - <ns1:TestXML name="c18">
      - <ns1:IndictmentXML algorithm="ccap0805" indictmentType="BadJoint">
            <ns1:RepairActionXML repairStatus="False Call" repairOperator="engineer" indictmentType="BadJoint" comment="-" repairActionType="-" repairTime="2012-05-
                23T11:50:16.000+08:00"/>
            <ns1:ComponentXML packageId="CAP-0805" partId="CAP-0805" designator="c18"/>
        </ns1:IndictmentXML>
    </ns1:TestXML>
  - <ns1:TestXML name="u2">
      - <ns1:IndictmentXML algorithm="splcc32u" indictmentType="Component missing">
            <ns1:RepairActionXML repairStatus="False Call" repairOperator="engineer" indictmentType="Component missing" comment="-" repairActionType="-" repairTime="2012-
                05-23T11:50:16.000+08:00"/>
            <ns1:ComponentXML packageId="PLCC32-U" partId="PLCC32-U" designator="u2"/>
        </ns1:IndictmentXML>
    </ns1:TestXML>
  - <ns1:TestXML name="r14">
      - <ns1:IndictmentXML algorithm="r0603r" indictmentType="Hor off">
            <ns1:RepairActionXML repairStatus="False Call" repairOperator="engineer" indictmentType="Hor off" comment="-" repairActionType="-" repairTime="2012-05-
                23T11:50:16.000+08:00"/>
            <ns1:ComponentXML packageId="0603-R" partId="0603-R" designator="r14"/>
        </ns1:IndictmentXML>
    </ns1:TestXML>
```

Figure 78: Special XML file

Single XML

I. To output single xml, user needs to check **Single XML** check-box.

Figure 79: Single XML file

Single XML: Include Board Barcode

I. To output single xml include board barcode, user needs to tick **Single XML** and **Include board barcode** checkbox.

Figure 80: Single XML file with board barcode included

Single XML: Output u-type height value

I. To output u-type height value in single xml, user needs to tick **Single XML** and **Output u-type height value** check-box.

II. The rep output must have *.BoxToBoxResult3D* in order to include the u-type box-to-box height information.

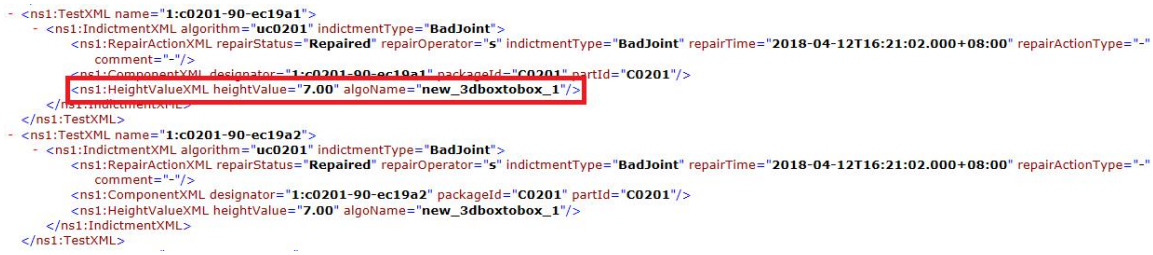


Figure 81: Single XML file with output u-type height value

Output technician name into XML file

I. Technician name will be included into XML file as QA as Figure 82 when tick the checkbox of ***Include technician name***.

Figure 82: XML sample with QA field

Output by board type folder

I. The generated XML file will be kept into folder by board type as below.

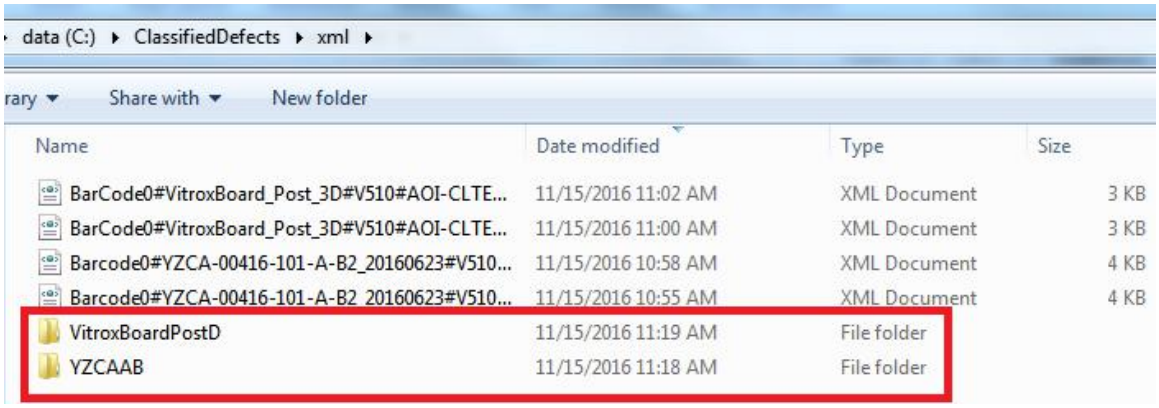


Figure 83: Board type folder generate in xml location

Include lane number

I. The lane number information will be included into XML file.

```
<?xml version="1.0" encoding="UTF-8"?>
- <ns1:BoardTestXMLExport repairStatus="Repaired" numberOfDefects="43" numberOfJointsTested="400" numberOfComponentsTested="149" numberOfIndictedPins="24"
xmlns:ns1="http://tempuri.org/BoardTestXMLExport.xsd" testerTestEndTime="2016-10-17T17:24:10.000+08:00" testStatus="Repaired" repairStationId="AOI-
YCCHAN-NB" testTime="2016-10-17T17:23:53.000+08:00" testerTestStartTime="2016-10-17T17:23:53.000+08:00" numberOfIndictedComponents="19"
Lane="1">
    <ns1:BoardXML boardRevision="1469516951000" boardType="DemoBoard" assemblyRevision="DemoBoard" serialNumber="Barcode0-1" imageId="1"/>
    <ns1:StationXML stage="V510" testerName="AOI-YCCHAN-NB"/>
    <ns1:RepairEventXML numberOfFalseCalledComponents="4" numberOfRepairedDefects="15" numberOfActivePins="0" numberOfActiveComponents="0"
        numberOfRepairLaterComponents="0" repairOperator="Developer" numberOfRepairLaterDefects="0" repairStartTime="2016-10-17T17:24:27.000+08:00"
        repairEndTime="2016-10-18T10:48:45.000+08:00" numberOfVariationOkComponents="0" numberOfActiveDefects="0" numberOfFalseCalledDefects="22"
        numberOfRepairLaterPins="0" numberOfRepairedPins="0" numberOfVariationOkPins="0" numberOfRepairedComponents="15" numberOfFalseCalledPins="18"
        numberOfVariationOkDefects="0"/>
```

Figure 84: XML sample with lane number

Customize

I. This setting is to output another customize XML format.

```
<?xml version="1.0" encoding="UTF-8"?>
- <ns1:BoardTestXMLExport repairStatus="Repaired" numberOfDefects="43" numberOfJointsTested="400" numberOfComponentsTested="149" numberOfIndictedPins="24"
xmlns:ns1="http://tempuri.org/BoardTestXMLExport.xsd" testerTestEndTime="2016-10-17T15:09:51.000+08:00" testStatus="Repaired" repairStationId="AOI-
YCCHAN-NB" testTime="2016-10-17T15:09:41.000+08:00" testerTestStartTime="2016-10-17T15:09:41.000+08:00" numberOfIndictedComponents="19">
    <ns1:BoardXML boardRevision="1469516951000" boardType="DemoBoard" assemblyRevision="DemoBoard" serialNumber="Barcode0-1" imageId="1"/>
    <ns1:StationXML stage="V510" testerName="AOI-YCCHAN-NB"/>
    <ns1:RepairEventXML numberOfFalseCalledComponents="16" numberOfRepairedDefects="3" numberOfActivePins="0" numberOfActiveComponents="0"
        numberOfRepairLaterComponents="0" repairOperator="Developer" numberOfRepairLaterDefects="0" repairStartTime="2016-10-17T15:10:02.000+08:00"
        repairEndTime="2016-10-17T15:10:02.000+08:00" numberOfVariationOkComponents="0" numberOfActiveDefects="0" numberOfFalseCalledDefects="40"
        numberOfRepairLaterPins="0" numberOfRepairedPins="0" numberOfVariationOkPins="0" numberOfRepairedComponents="3" numberOfFalseCalledPins="24"
        numberOfVariationOkDefects="0"/>
  - <ns1:TestXML name="1:c36">
    - <ns1:IndictmentXML indictmentType="Missing" algorithm="d150uf">
        <ns1:RepairActionXML repairStatus="False Call" repairOperator="Developer" indictmentType="Missing" comment="-" repairActionType="-"
            repairTime="2016-10-17T15:10:12.000+08:00"/>
        <ns1:ComponentXML designator="1:c36" partId="150UF-C" packageId="150UF-C"/>
      </ns1:IndictmentXML>
    </ns1:TestXML>
```

Figure 85: Original XML Format

```
<?xml version="1.0" encoding="UTF-8"?>
- <ns1:BoardTestXMLExport repairStatus="Repaired" numberOfDefects="43" numberOfJointsTested="400" numberOfComponentsTested="149" numberOfIndictedPins="24"
xmlns:ns1="http://tempuri.org/BoardTestXMLExport.xsd" testerTestEndTime="2016-10-17T17:23:25.000+08:00" testStatus="Repaired" testTime="2016-10-
17T17:23:07.000+08:00" testerTestStartTime="2016-10-17T17:23:07.000+08:00" numberOfIndictedComponents="19">
    <ns1:BoardXML boardRevision="1469516951000" boardType="DemoBoard" assemblyRevision="DemoBoard" serialNumber="Barcode0-1" imageId="1"/>
    <ns1:StationXML stage="V510" testerName="AOI-YCCHAN-NB"/>
    <ns1:RepairEventXML numberOfFalseCalledComponents="4" numberOfRepairedDefects="15" numberOfActivePins="0" numberOfActiveComponents="0"
        numberOfRepairLaterComponents="0" repairOperator="Developer" numberOfRepairLaterDefects="0" repairStartTime="2016-10-17T17:23:43.000+08:00"
        repairEndTime="2016-10-18T10:52:26.000+08:00" numberOfVariationOkComponents="0" numberOfActiveDefects="0" numberOfFalseCalledDefects="22"
        numberOfRepairLaterPins="0" numberOfRepairedPins="0" numberOfVariationOkPins="0" numberOfRepairedComponents="15" numberOfFalseCalledPins="18"
        numberOfVariationOkDefects="0"/>
  - <ns1:TestXML name="1:c36">
    - <ns1:IndictmentXML indictmentType="Missing" algorithm="d150uf">
        <ns1:RepairActionXML repairStatus="Repaired" repairOperator="Developer" indictmentType="Missing" repairActionType="-" repairTime="2016-10-
            17T17:23:43.000+08:00"/>
        <ns1:ComponentXML designator="1:c36" partId="150UF-C" packageId="150UF-C"/>
      </ns1:IndictmentXML>
```


Figure 86: Customize XML Format

Include defect image name & Output Image

I. The defect image path will be included into XML file.

II. The setting to keep the defect image location at VVTS settings → Custom →Output Image. The defect image will be kept under YYWW (year and work week) folder.

Figure 87: Output defect image location (in Custom tab)


```
- <ns1:TestXML name="1:c36">
    - <ns1:IndictmentXML indictmentType="Missing" algorithm="d150uf" imageFileName="D:\aa\1643\Barcode0-1_1017_24172305_E_155_1-c36.jpg">
        <ns1:RepairActionXML repairStatus="False Call" repairOperator="Developer" indictmentType="Missing" comment="-" repairActionType="-"
            repairTime="2016-10-18T11:31:20.000+08:00"/>
        <ns1:ComponentXML designator="1:c36" partId="150UF-C" packageId="150UF-C"/>
      </ns1:IndictmentXML>
  </ns1:TestXML>
```


Figure 88: XML sample with defect image path

No xml output for fail board

I. There is no XML output if there is fail board.

Output skip board xml

I. The XML output will include skip board information.


```
<?xml version="1.0" encoding="UTF-8"?>
- <ns1:BoardTestXMLExport repairStatus="Repair None" numberOfDefects="0" numberOfJointsTested="0" numberOfComponentsTested="0" numberOfIndictedPins="0"
xmlns:ns1="http://tempuri.org/BoardTestXMLExport.xsd" testerTestEndTime="2018-03-29T18:32:29.000+08:00" testStatus="Passed" repairStationId="AOI-CLTEOH-NB"
testTime="2018-03-29T18:32:17.000+08:00" testerTestStartTime="2018-03-29T18:32:23.000+08:00" numberOfIndictedComponents="0">
    <ns1:BoardXML boardRevision="1522310243000" boardType="test_addcomponent" assemblyRevision="test_addcomponent" serialNumber="12345_2" imageId="2"/>
    <ns1:StationXML stage="V510" testerName="AOI-CLTEOH-NB"/>
    <ns1:RepairEventXML numberOfFalseCalledComponents="0" numberOfRepairedDefects="0" numberOfActivePins="0" numberOfActiveComponents="0"
        numberOfRepairLaterComponents="0" repairOperator="adm" numberOfRepairLaterDefects="0" repairStartTime="2018-03-30T10:00:28.000+08:00" repairEndTime="2018-03-
        30T10:00:52.000+08:00" numberOfVariationOkComponents="0" numberOfActiveDefects="0" numberOfFalseCalledDefects="0" numberOfRepairLaterPins="0"
        numberOfRepairedPins="0" numberOfVariationOkPins="0" numberOfRepairedComponents="0" numberOfFalseCalledPins="0" numberOfVariationOkDefects="0"/>
</ns1:BoardTestXMLExport>
```


Figure 89: Skip board XML

No xml output for barcode "dummy" or "barcode0"

I. This feature will not output XML file if barcode captured is "dummy" or "barcode0".

No xml output if barcode character length less than or equal to "--"

I. This feature is to control XML file output based on barcode length.

II. XML file will be generated if barcode length is longer than the barcode length set.

CAMX

I. User is able to configure to output the CAMX files by select the location.

II. CAMX files include summarize of VVTS known as **ItemProcessStatus** and **ItemRepair** details.

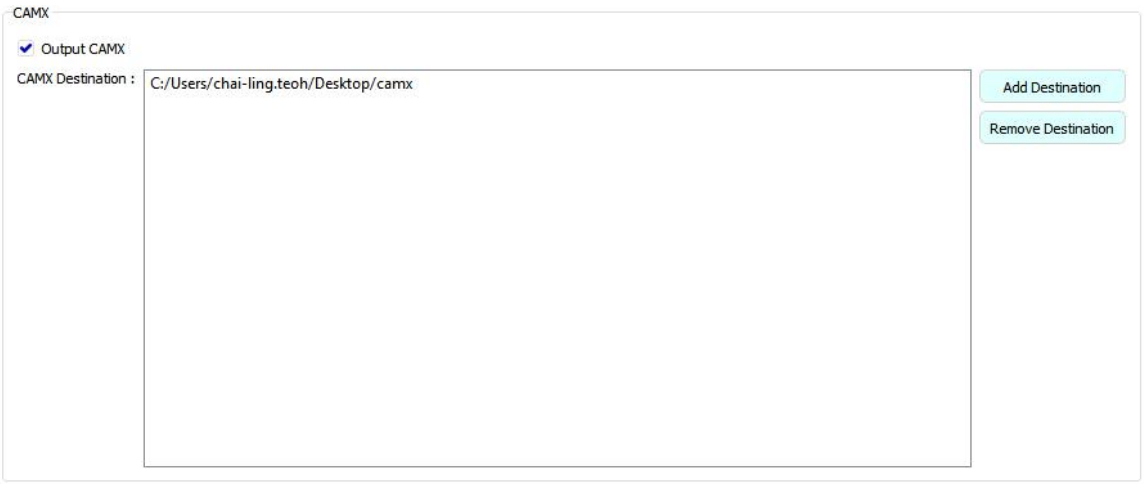


Figure 90: Output CAMX destination

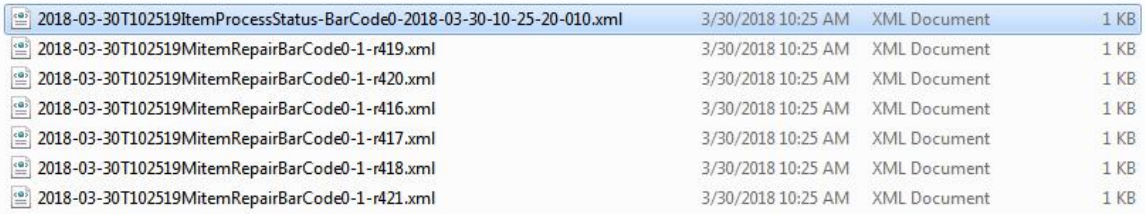


Figure 91: Files Output CAMX

```
<?xml version="1.0"?>
- <ItemProcessStatus imageId=" " mode="PRODUCTION" status="FAILED" itemInstanceId="BarCode0" dateTime="2018-03-30T10:25:19.000+08:00">
    <ItemEventCount count="12" eventType="PROCESSSTEPSTATUS"/>
    <Extensions falseFails="6"/>
  </ItemProcessStatus>
```


Figure 92: Summarize of Item Process Status


```
<?xml version="1.0"?>
- <ItemRepair stationId="AOI-CLTEOH-NB" repairId="" itemProcessRef="BarCode0-xxx" imageId="E_247_1-r419.jpg" itemInstanceId="BarCode0" dateTime="2018-03-30T10:25:13.000+08:00">
  - <RepairAction repairKey="-">
      <Component package="VTR-201-L" partId="VTR-201-L" layer="" type="rvtr-201-l" designator="1:r419"/>
    </RepairAction>
    <IndictmentRef/>
    <DefectDetail category="" detailKey="Billboard"/>
    <Operator familyName="" givenName="" employeeId="adm"/>
  </ItemRepair>
```


Figure 93: Details for Item Repair

Output customize log

I. This setting is able to output customize log file. This log file will be stored in VVTS log location. User needs to set the line name to add the information into the log file naming.

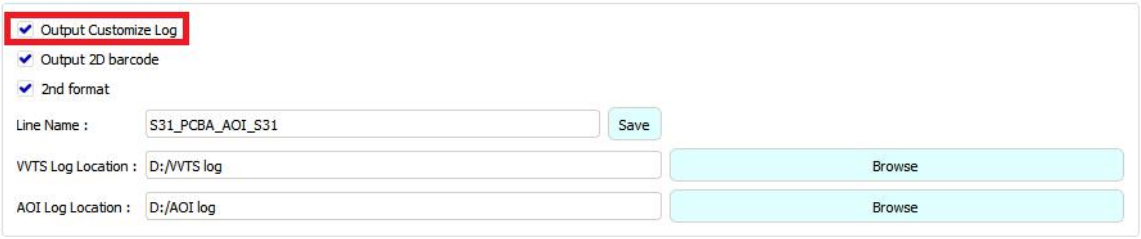


Figure 94: Output customize log file

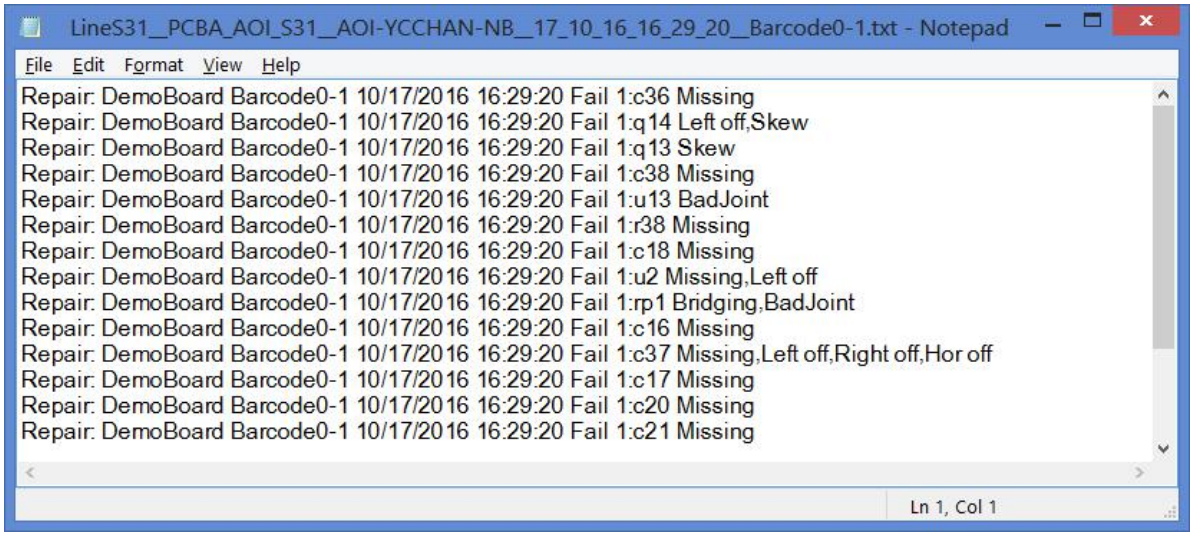


Figure 95: Customize log sample

Output second format of customize log

I. This setting is able to output second format of customize log file. This log file will keep into VVTS log location. User needs to set the line name and the line name will include into the log file naming.

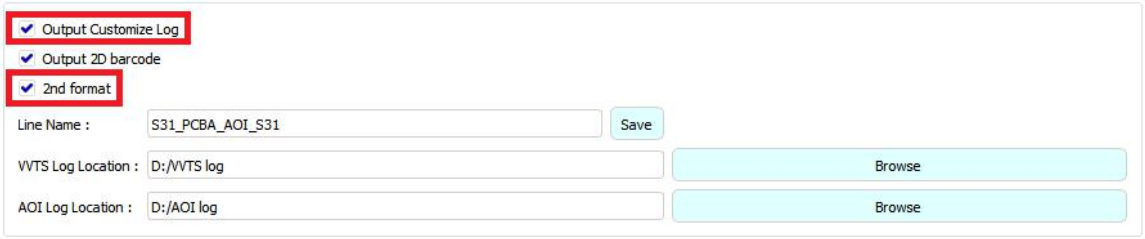


Figure 96: Output second customize log file

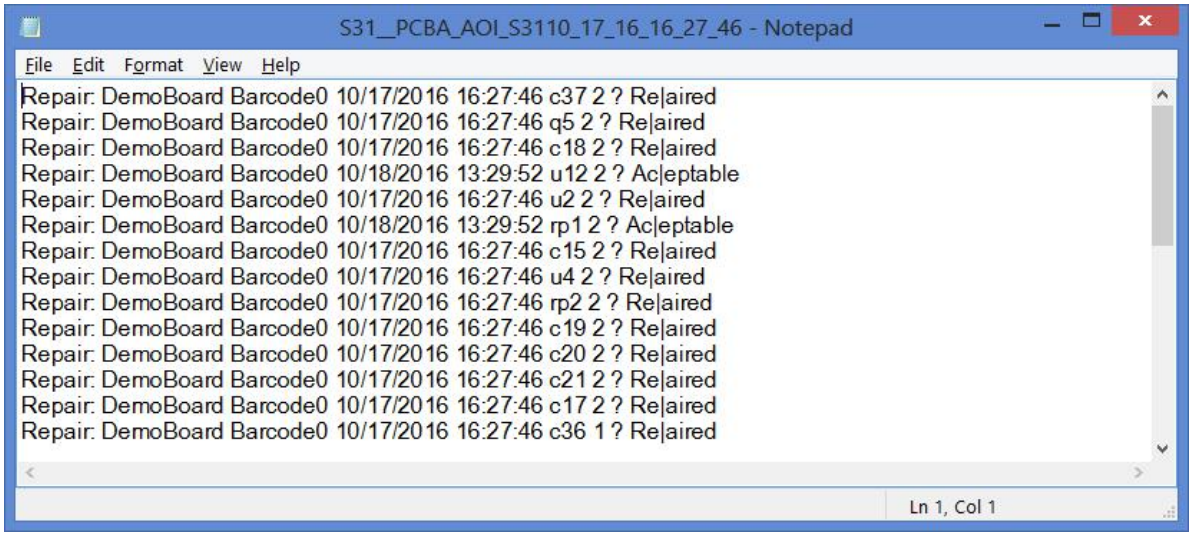


Figure 97: Second customize log sample

Output 2D barcode

I. User able to output 2D barcode into the customize log file.

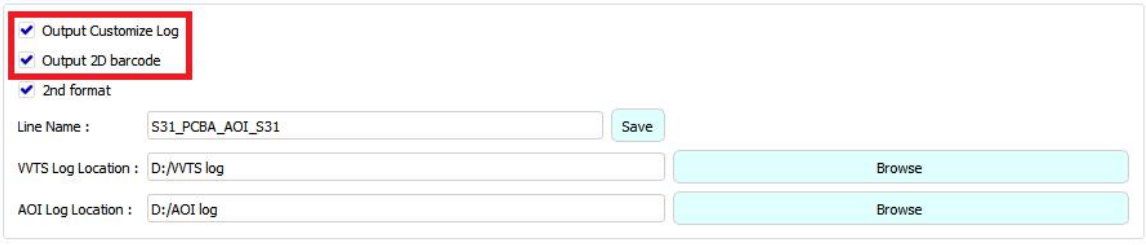


Figure 98: Output 2D barcode into customize log file

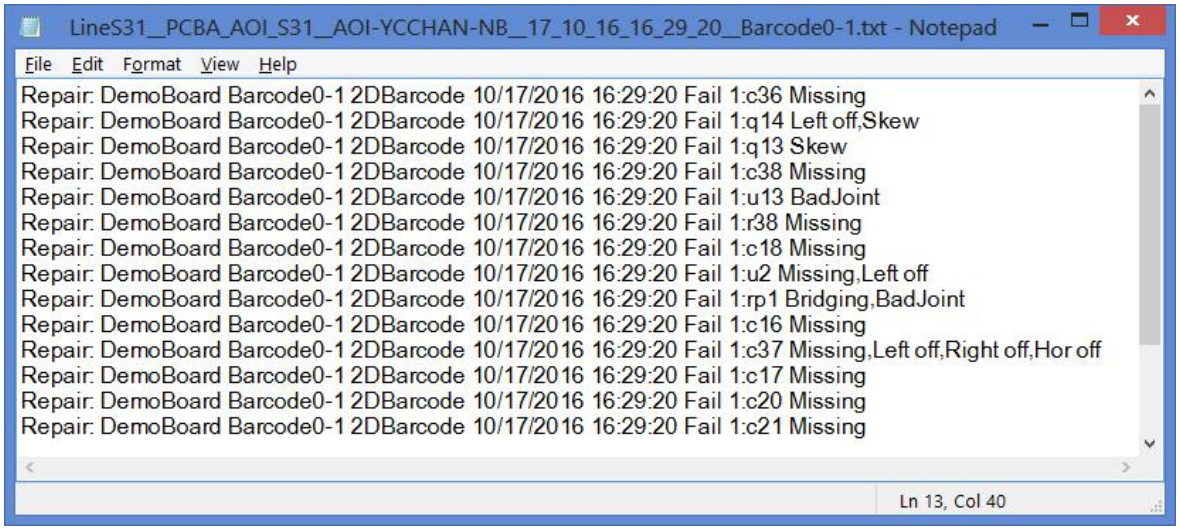


Figure 99: Sample of customize log with 2D barcode

Defect Details:

I. Repair Tool provides a default list of defect names and repair actions.

II. User is allowed to change the defect names/actions on the list or add/delete the existing list.

III. However, this modification is only **limited to Engineer and Admin** entry level.

IV. To change the defect name/repair action, double click on the “defect name” or “repair action”, a dialog will pop up for editing, refer to Figure 100.

V. After editing the “defect name” or “repair action”, click “Update”, refer Figure 101.

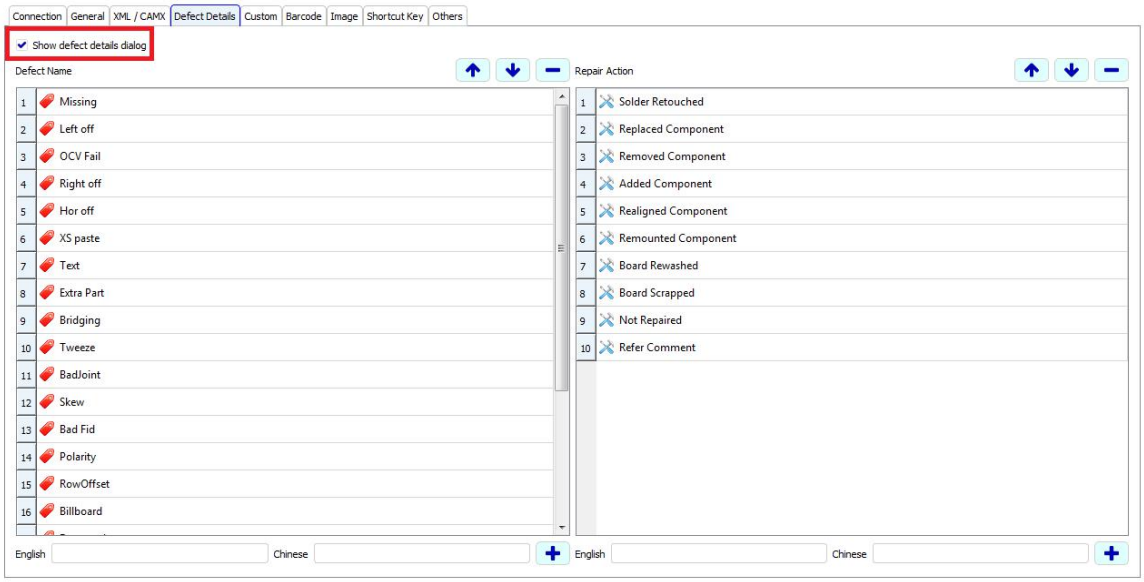


Figure 100: Defect details in VVTS

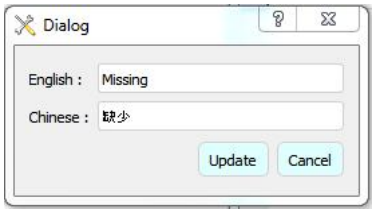


Figure 101: Update for defect details

Add Defect name/repair action

I. Enter the English and Chinese defect name/repair action respectively at the text-box.

II. Click **Plus**  icon button to include the new added defect name/repair action into the list.

Figure 102: Add defect name/repair action

Delete defect name/repair action

I. Select a defect name/repair action from the list at the left/right panel respectively.

II. Click minus icon button to remove the selected defect name/repair action from the list.

Figure 103: Delete defect name/repair action

Change sequence of defect name/repair action

I. Click on arrow up  or arrow down  button to change the sequence of the defect name/repair action in the dialog.

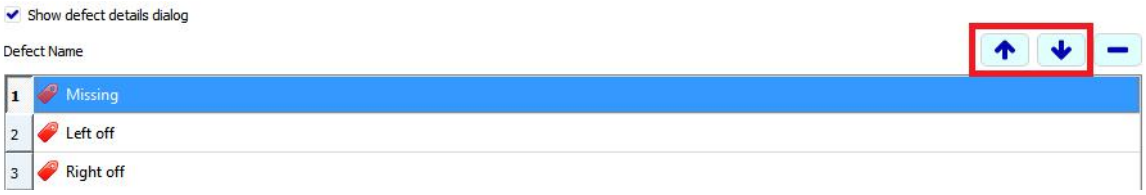


Figure 104: Change sequence of defect name/repair action (before)

Figure 105: Change sequence of defect name/repair action (after)

Custom:

VVTS allows user to apply the customize setting as Figure 106 during VVTS buy-off.

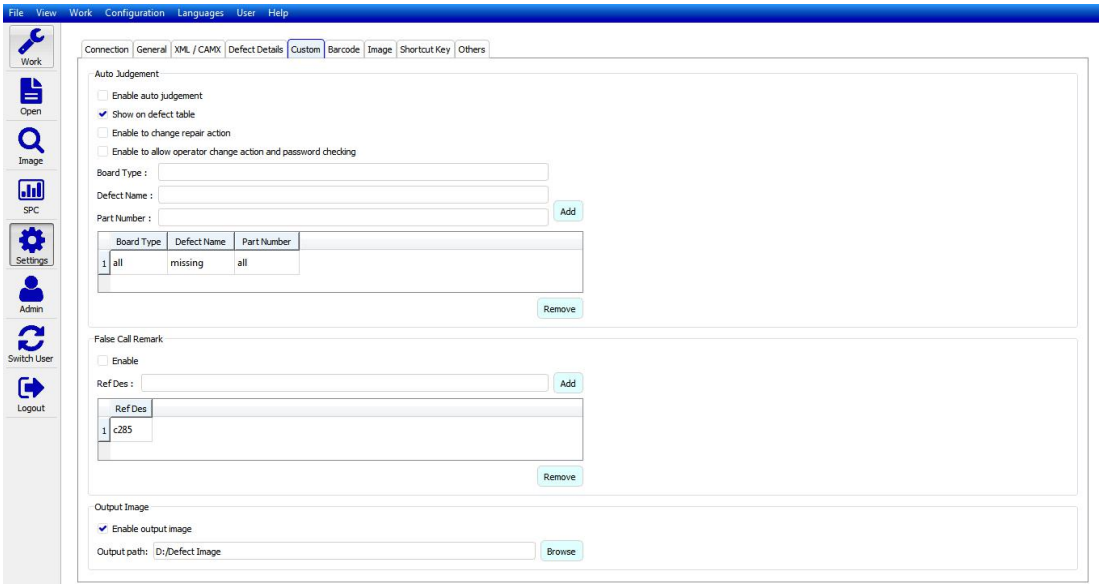


Figure 106: Custom in VVTS

Enable auto judgement

I. This auto judgement is able to implement by **board type, defect name and part number**. Once this auto judgement is turned on, operator is unable to change the result for those component already auto failed by VVTS.

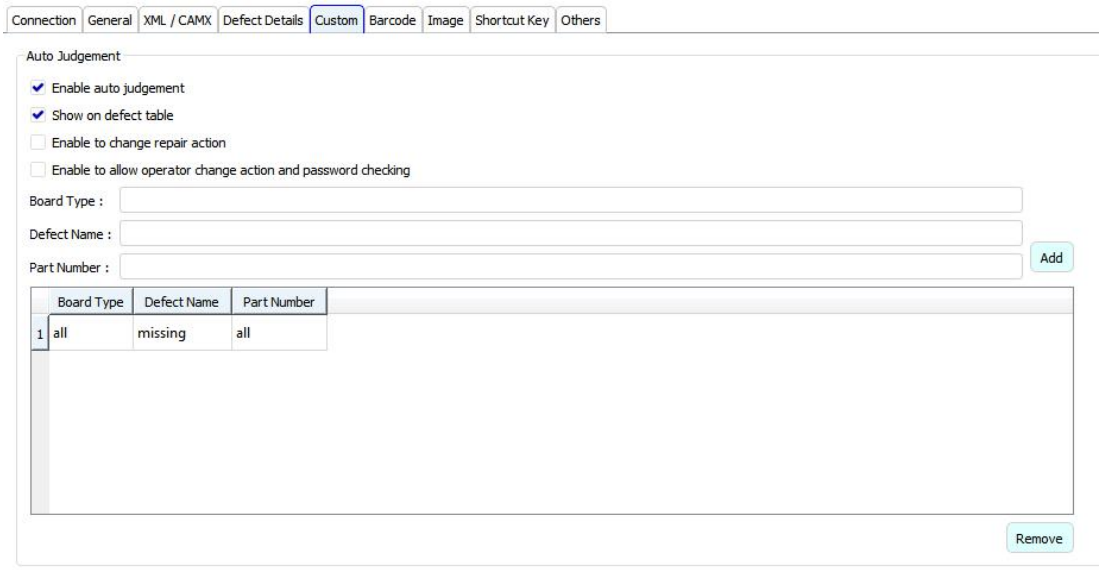


Figure 107: Auto Judgement

Show on defect table

I. User is able to configure whether to show the information which has been auto judged by VVTS on defect table.

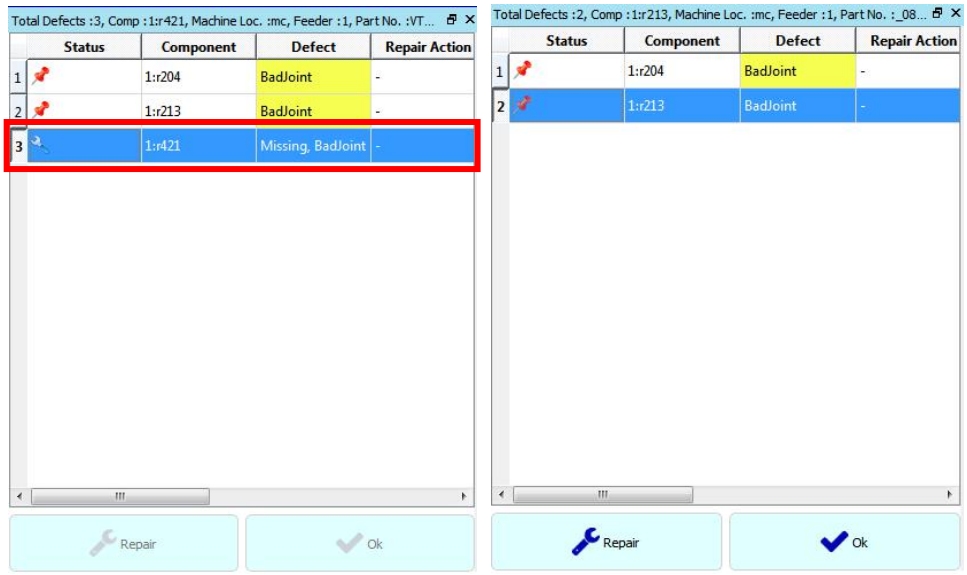


Figure 108: Show and Hide the defect on defect table

Enable to change repair action

I. Engineer/Admin is able to change the judgement which has been auto judged by VVTS on defect table.

II. Hit the action key as defined in “Action Key Settings” to change the auto judge defect from “Repair” to “Ok”.

*Action Key Settings refer to page 38.

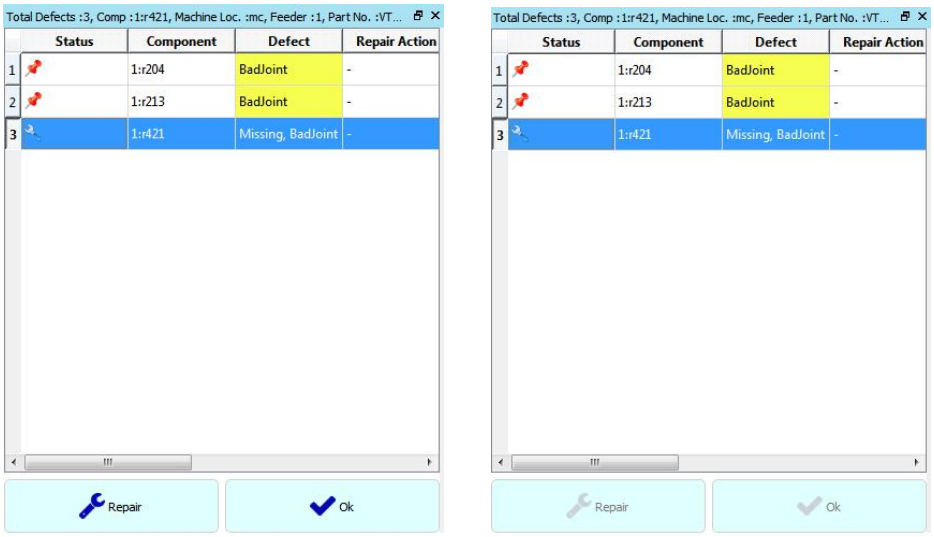


Figure 109: With/ without press the "Hot Key"

Enable to allow operator change action and password checking

I. Allows operator to change the judgement which has been auto judged by VVTS on defect table.

II. Operator needs to key in the password of Engineer/Admin level to change the auto judge defect from "Repair" to "Ok".

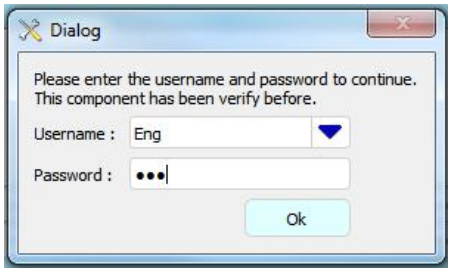


Figure 110: Password Dialog

False call remark

I. This feature is let the user to key in the remark for those components are judged as false call. User able to configure which component need to key in the remark is by adding on the reference designator. A window will prompt up as below once user judged as false call.

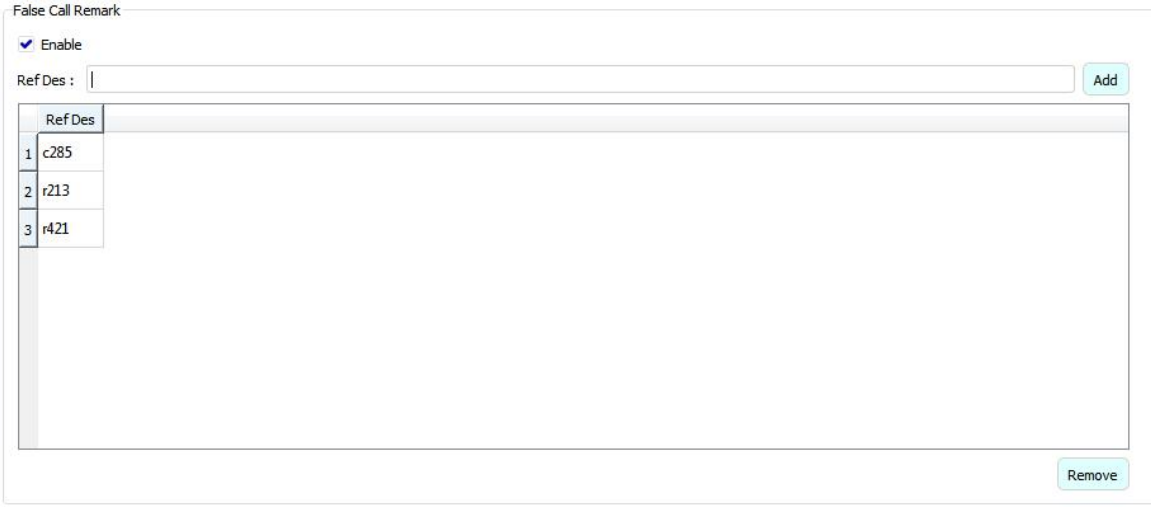


Figure 111: False call remark

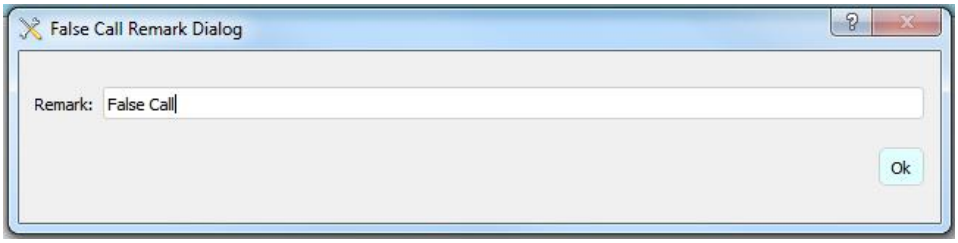


Figure 112: False call remark dialog

Barcode:

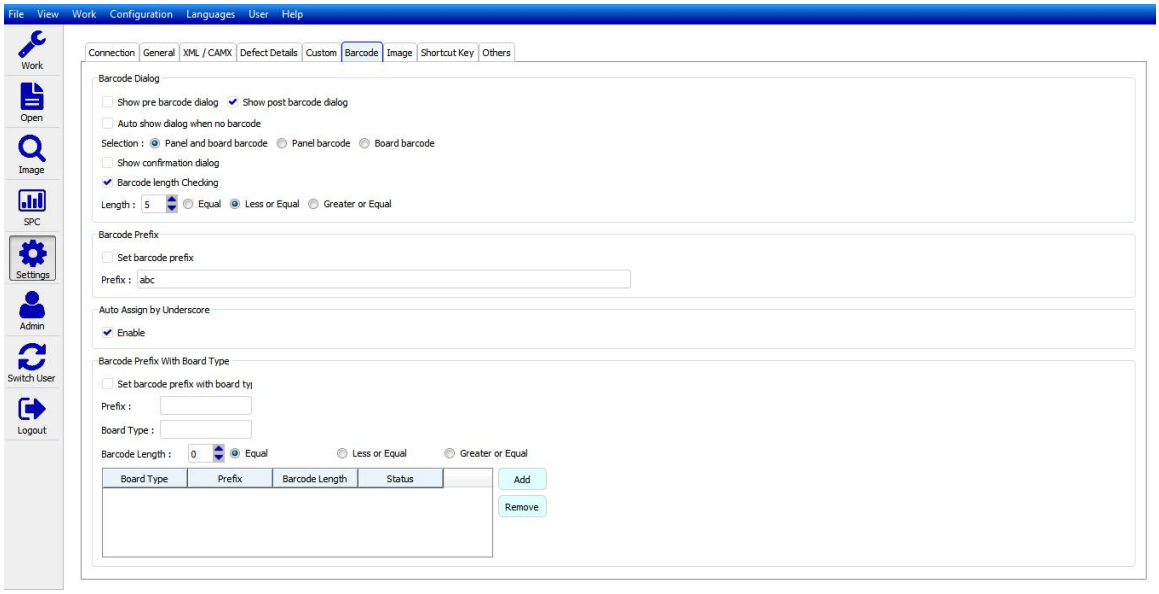


Figure 113: Barcode in VVTS

Show pre barcode dialog

I. Pre barcode dialog will show after user open the board. This is for user to key in the barcode before judge the board.

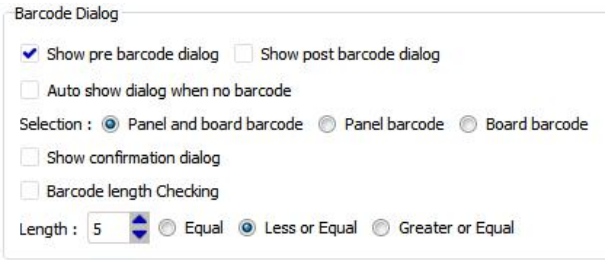


Figure 114: Pre barcode dialog

Show post barcode dialog

I. Post barcode dialog will show after user finish verified the board. This is for user to key in the barcode after judge the board.

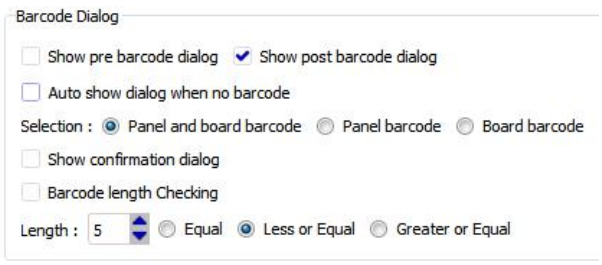


Figure 115: Post barcode dialog

Auto show dialog when no barcode

I. This feature will only show barcode dialog for barcode that contains “barcode”.

II. The barcode dialog will appear before operator buy-off if “Show pre barcode dialog” is selected.

III. The barcode dialog will appear after operator buy-off if “Show post barcode dialog” is selected.

Figure 116: Auto show barcode dialog

Barcode selection

I. This feature display the panel or board barcode field, panel barcode field or board barcode field at post barcode dialog or pre barcode dialog.

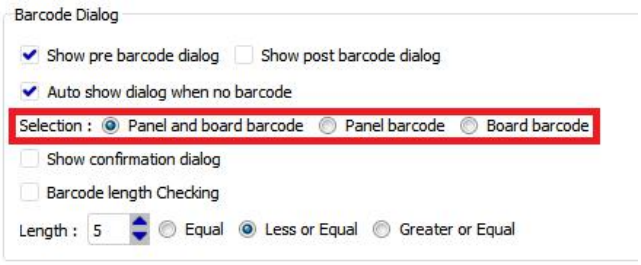


Figure 117: Barcode field selection

Figure 118: Panel and board barcode field

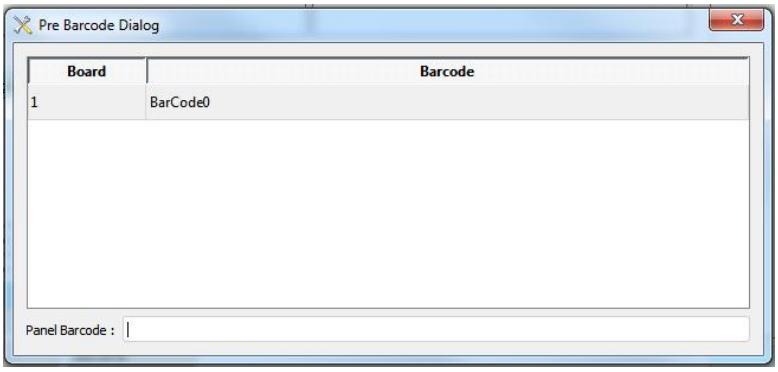


Figure 119: Panel barcode field

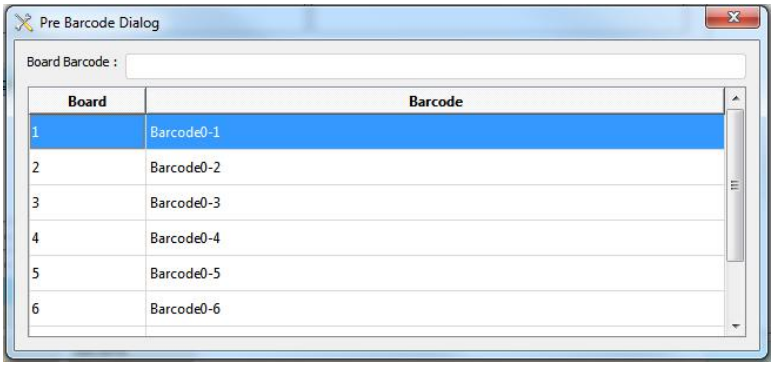


Figure 120: Board barcode field

Barcode Confirmation Dialog

I. Show barcode confirmation dialog after scan barcode.

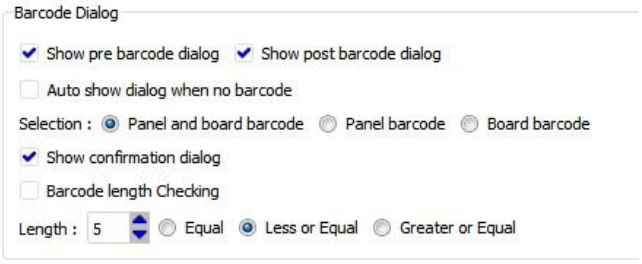


Figure 121: Show confirmation Dialog

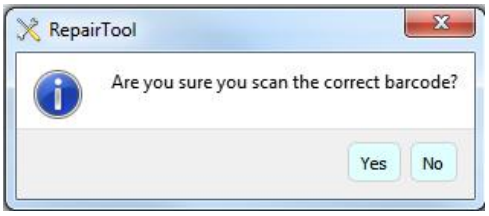


Figure 122: Barcode confirmation Dialog

Barcode length checking

I. This feature will check for the barcode length when user key in barcode at pre or post barcode dialog. A message box will prompt up as below.

II. User can define whether the detected barcode length shall be either “Equal”, “Less or Equal” or “Greater or Equal” as the expected length.

III. A message box will prompt up as below.

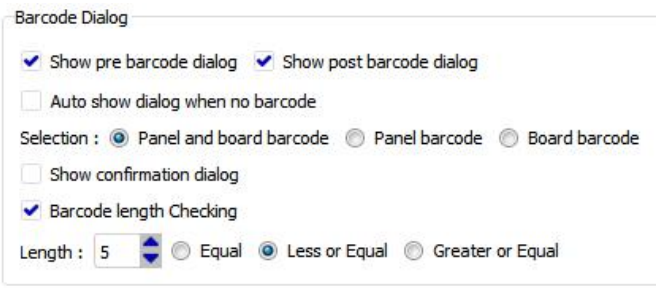


Figure 123: Barcode length checking

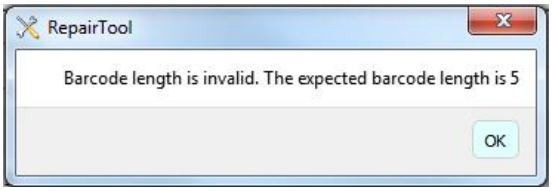


Figure 124: Barcode length checking message box

Barcode Prefix

I. The feature will check for the barcode prefix when user key in barcode at pre or post barcode dialog. If there is invalid barcode key in, a message box prompts up as below.

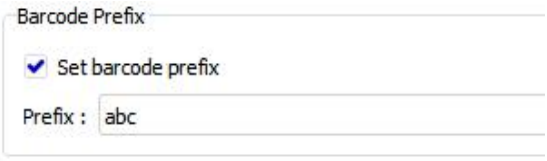


Figure 125: Set Barcode Prefix

Figure 126: Barcode Prefix error message

Auto Assign by Underscore (auto convert dash to underscore)

I. Panel barcode key in at pre or post barcode dialog will auto assign to barcode-1, barcode-2 and etc for the board barcode. It will convert the barcode-1 to barcode_1, barcode-2 to barcode_2 and etc.

Figure 127: Auto assign by underscore setting

Barcode prefix by board type

I. This feature will check for the barcode by *board type (case sensitive), prefix and barcode length* when user key in barcode at pre or post barcode dialog. If there is invalid barcode key in, a message box prompts up as below.

Figure 128: Barcode prefix by board type

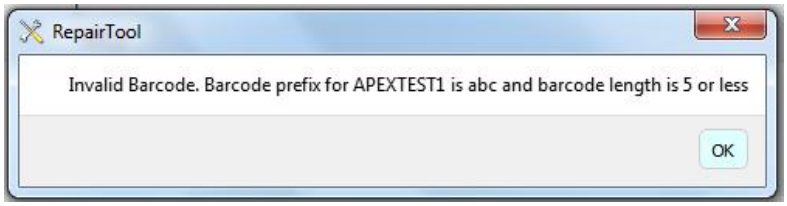


Figure 129: Barcode prefix by board type message box

Image:

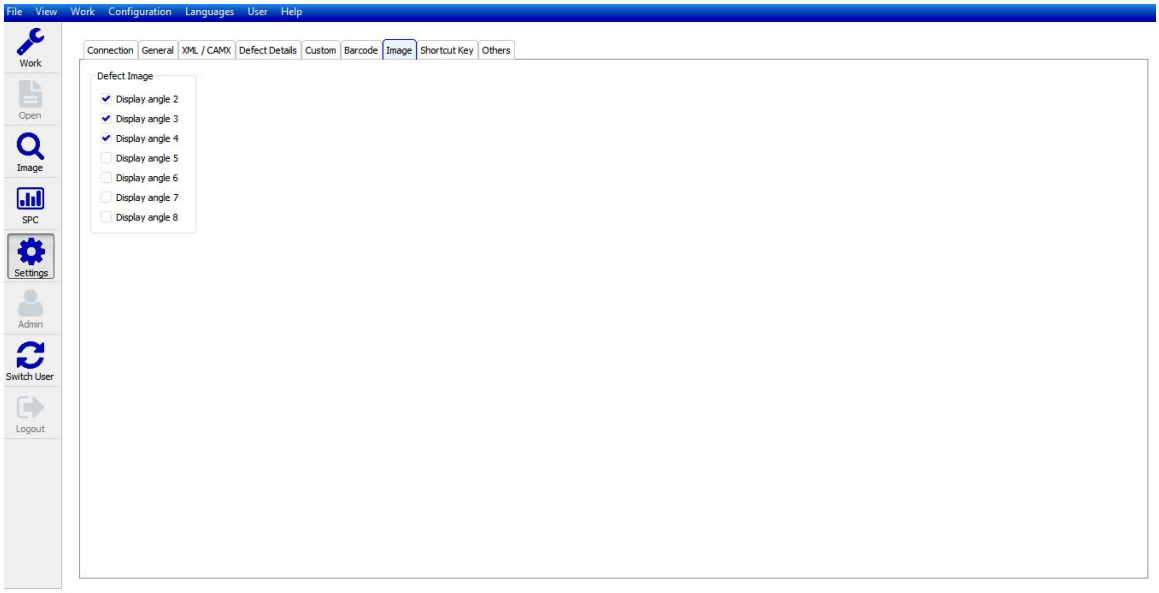


Figure 130: Multiple angle display selections when fail as OCV/Polarity

Defect Image

I. To view the defect component image in multiple angles. (only applicable for *OCV Fail* and *Polarity)*

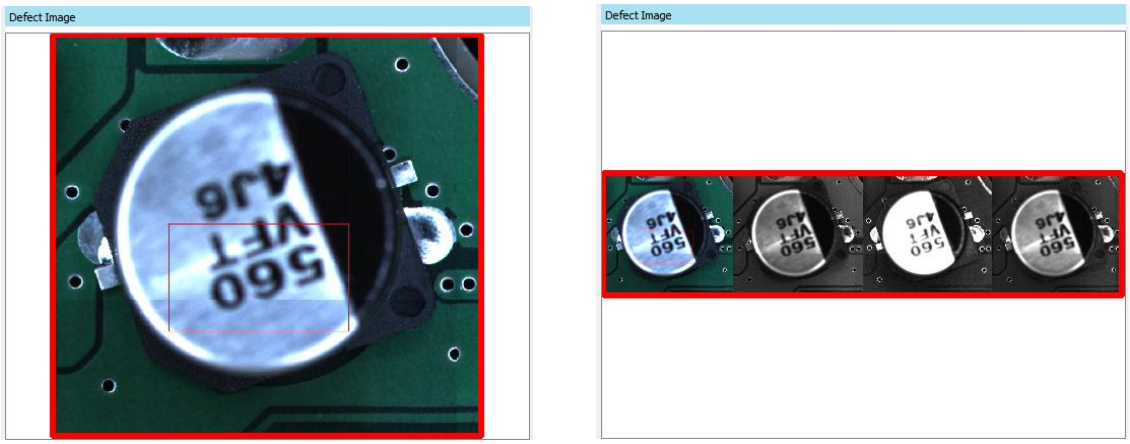


Figure 131: Single/Multiple angles for defect image when failing as OCV/Polarity

Shortcut Key:

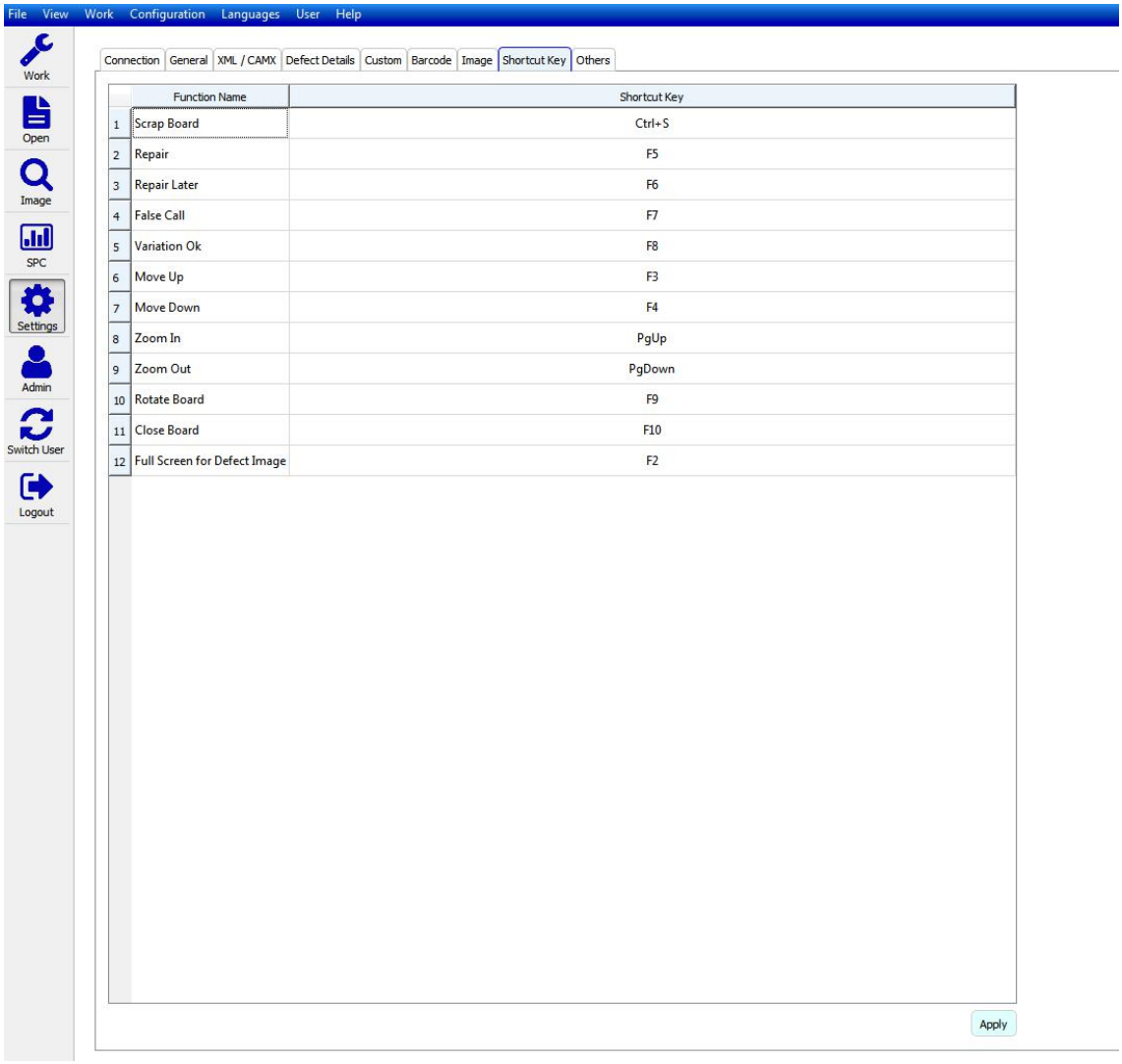


Figure 132: Function Name and Shortcut Key

Shortcut Key

I. User can configure the shortcut key for all the action of “Work” by double click on entire selection.

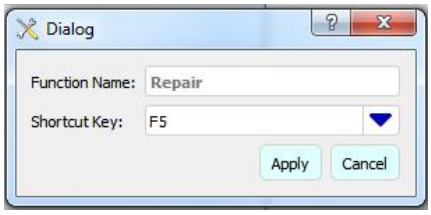


Figure 133: Changing Shortcut Key Dialog

Others:

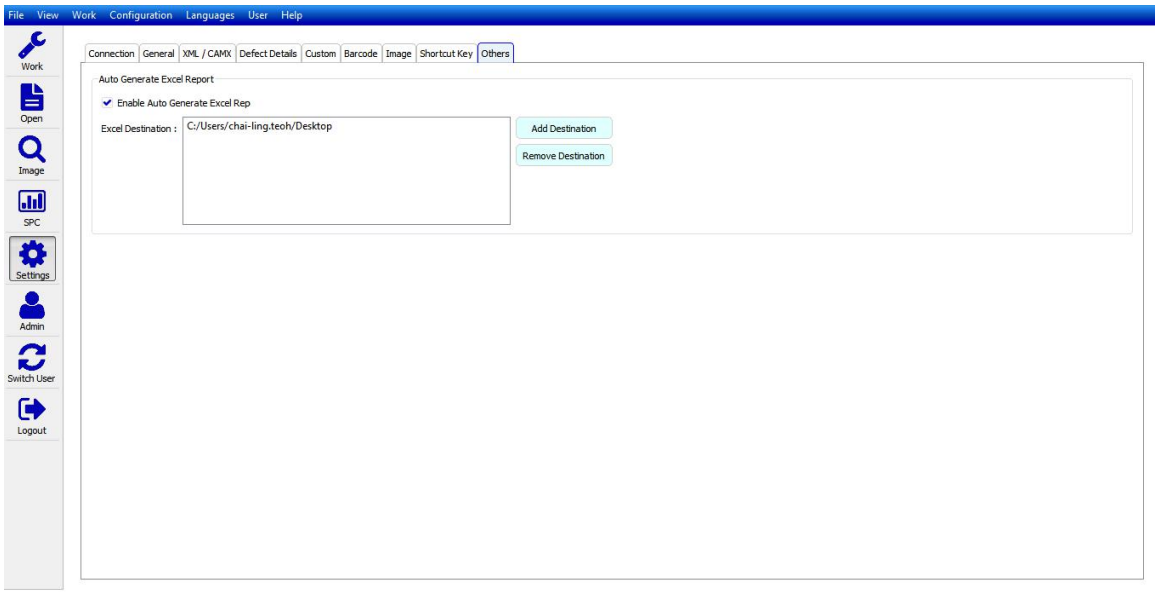


Figure 134: Auto Generate Excel Report

Auto Generate Excel Report

I. This feature is to enable auto-generate the excel report after finish buy-off entire panel board.

*Only support Microsoft Excel.

Open Board

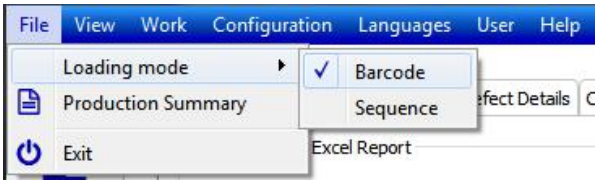


Figure 135: Open board

There are 3 options to open a board: by barcode, by sequence and manually

- Open a board by barcode:
  I. Go to menu bar, **File**>**Loading mode**, click on **Barcode**. This is the default-loading mode.
  II. Click on **Work** page, enter or scan the serial number.
  III. For multiple board panels, choose to open by panel/board, press **OK** button to open board button.

- Open a board by sequence:
  I. Go to menu bar, **File**>**Loading mode**, click on **Sequence**.
  II. Click on **Work** page, enter board type or choose from the drop down list, select loading order by first in first out/first in last out, click on “Play” button.
  III. Board will be loaded automatically.

- Open a board manually:
  I. Click on the **Open** page, choose to load active/archive board, select board type at the left pane and double click it.
  II. Select the panel/board (board can be accessed by expand the panel item) at the right pane and double click it.

Delete Unwanted Data

Admin and engineer are able to delete unwanted data from the board list.

I. Tick **Delete Action** checkbox.

II. Click **Delete** button.

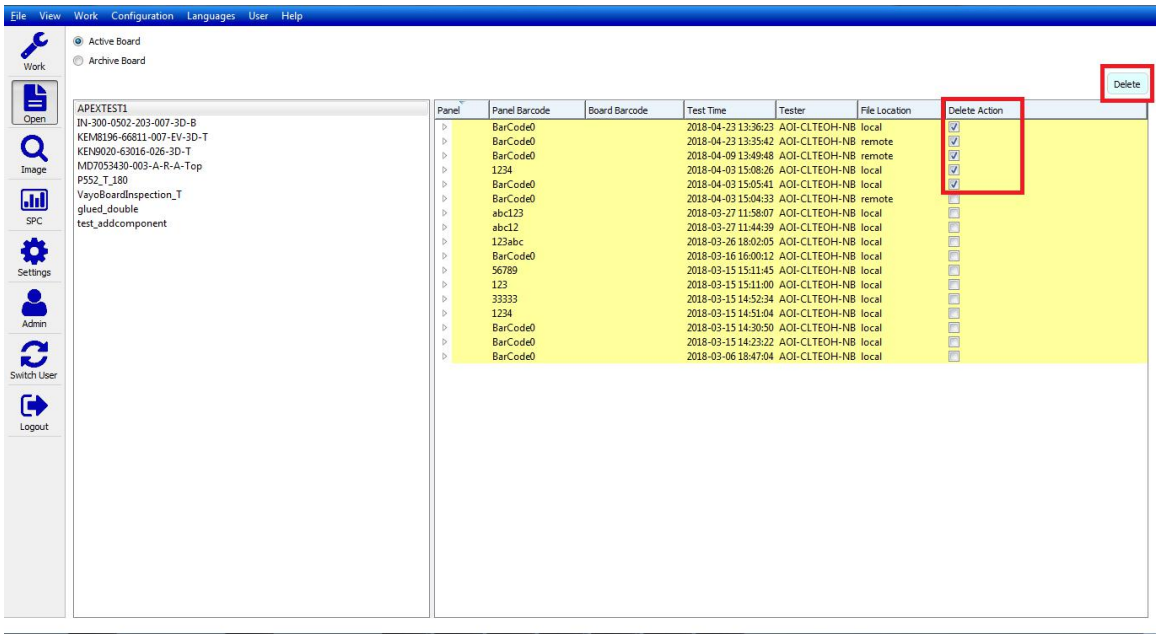


Figure 136: Delete unwanted data

Processing Defects

Buyoff a Board

I. Once a board/panel is opened, the defect table will list the inspection calls of machine.

II. Locate the inspection call which will be highlighted in the panel view.

III. Good image is use as a reference to judge the defects.

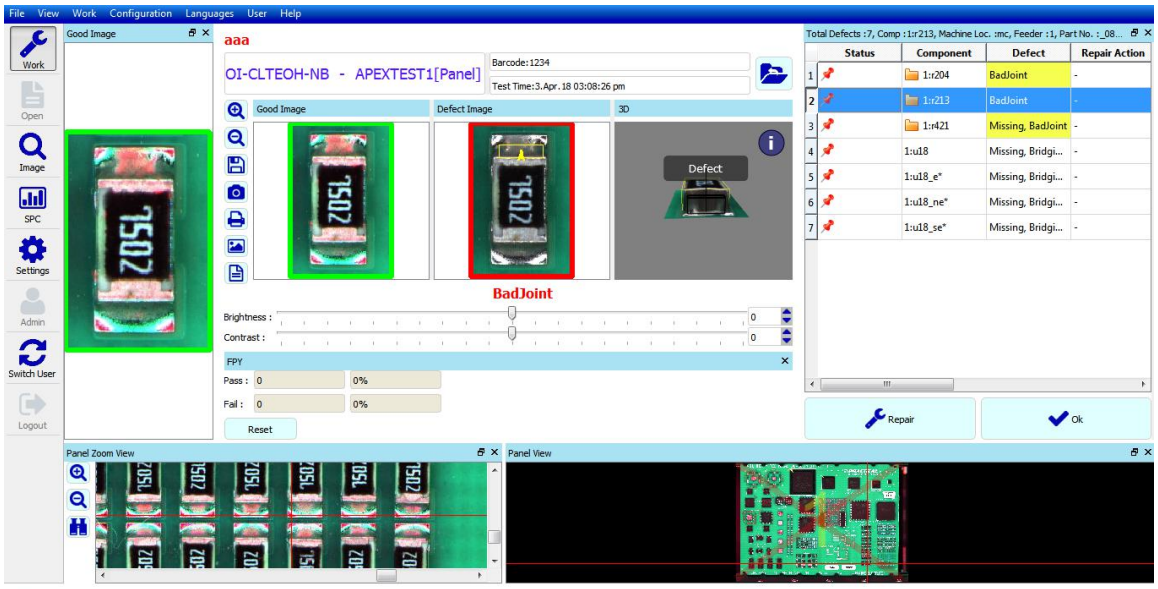


Figure 137: Repairing a board

IV. Take the appropriate action as described below.

Review and Determine:	**Then Do This:**
Defective component	1. Click **Repair**. 2. Show defect details dialog: (refer page 59) a) Untick: Proceed to next component. b) Tick: A Defect Details dialog box appears, enter details about the defect and repair action. An example of a Defect Details dialog box is shown in Figure 138. c) Rework the component after completely buyoff entire panel board.
Good component	False Call. Click **Ok**.

V. Repeat the above steps to address all the defects listed.

VI. If “Post Barcode” is enabled, the Post Barcode dialog box will appear after finish repairing/reviewing all the defects. Enter the barcode and press Enter.

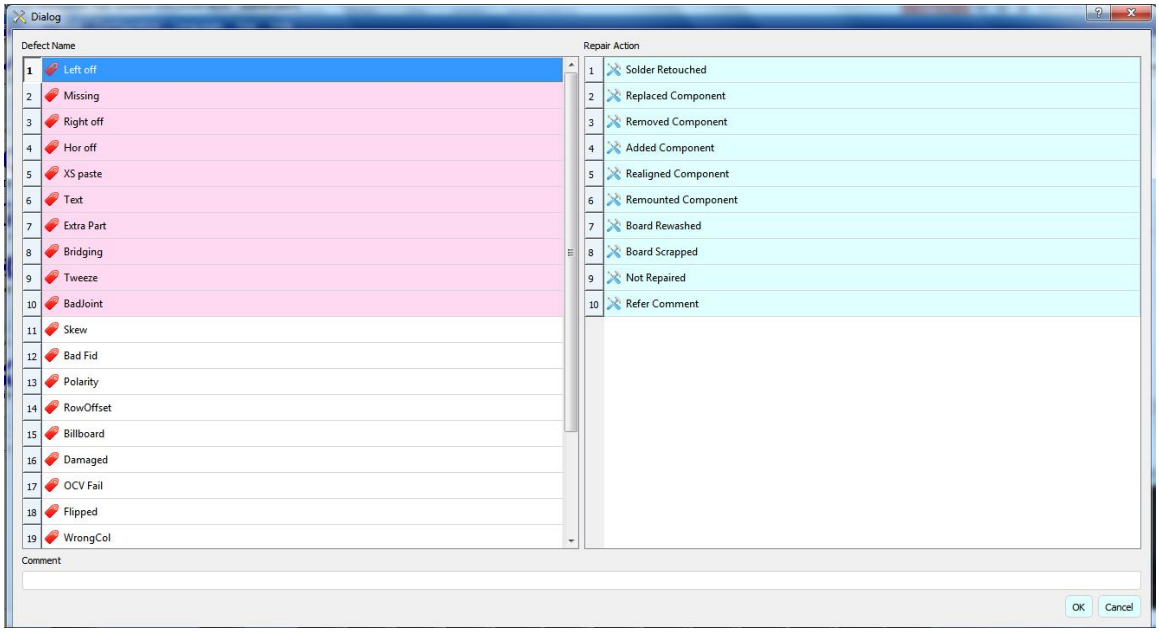


Figure 138: Defect details dialog

Customize defect naming

I. User is able to change the defect name in **errorCode.txt** file and add the customize defect name in **multipleDefectPriority.txt** file at C:\Program Files\DefectPackager, refer figure below.

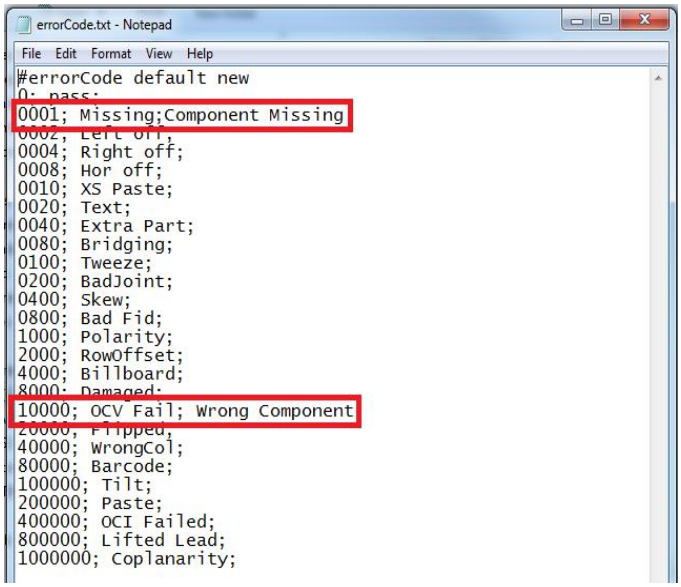


Figure 139: errorCode.txt

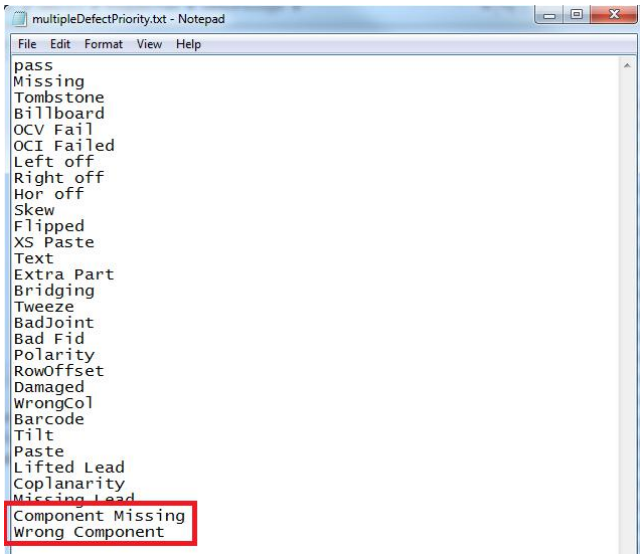


Figure 140: multipleDefectPriority.txt

II. Example: User can set the error code “0001; Missing; Component missing” in errorCode.txt file, defect packager will pack the defect as “Component missing” replacing “Missing” defect name, refer figure below.

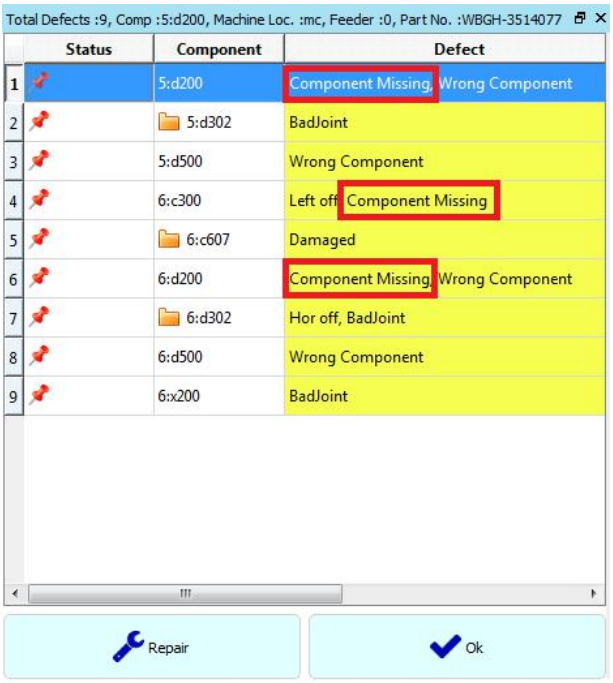


Figure 141: Defect packager packs the defect as "Component missing" which replaces "Missing" defect name

Mini Keypad

Mini keypad is a new feature to ease user to change the defect name during buy off process in VVTS. To enable the mini keypad, user needs to drag the splitter beside the defect table to the left, referring figure below.

Example: In Figure below, if user wants to change the defect name for “6:d500” from “Wrong Component” to “OCV Fail”, user can enable the mini keypad then click on the defect name of “OCV Fail'. Defect name will be changed as the next figure.

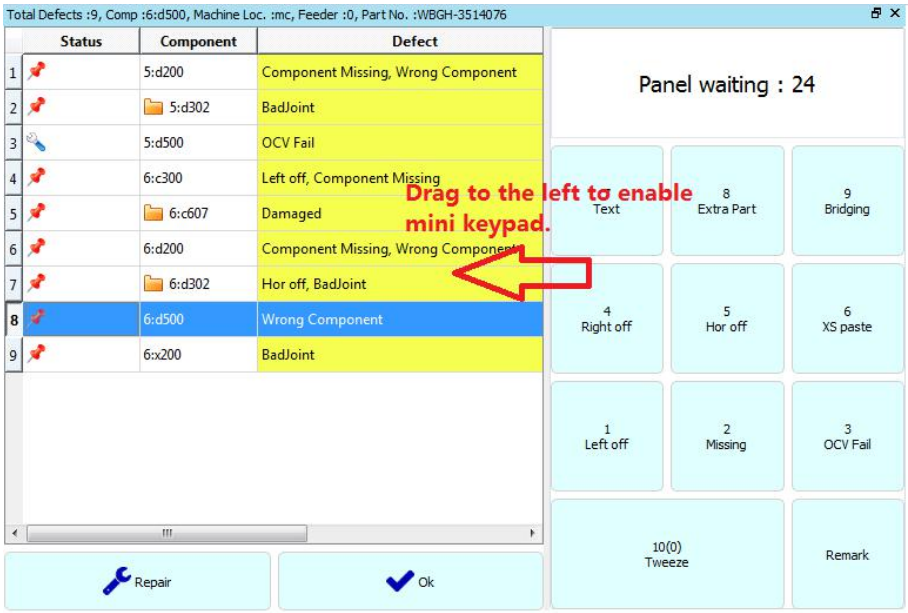


Figure 142: Mini keypad

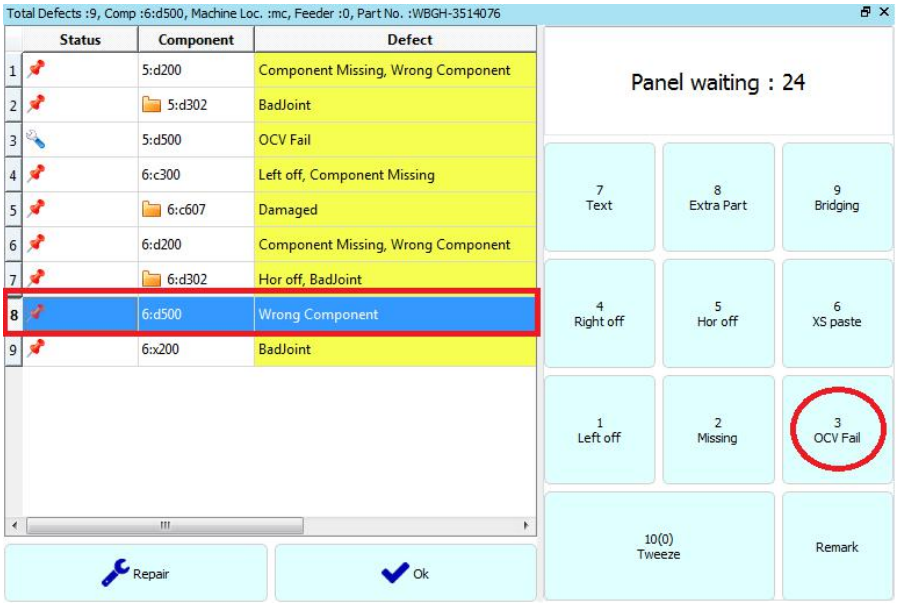


Figure 143: Defect table shows the original defect name as “Wrong Component” for “6:d500”

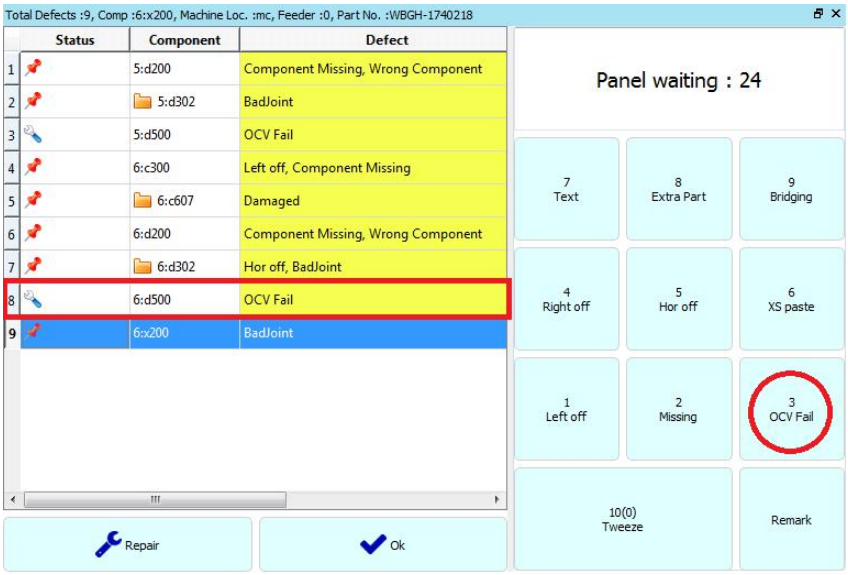


Figure 144: Defect table shows the original defect name "Wrong Component" was changed to "OCV Fail"

Good Reference Image

Good image is use as a reference to judge the defects.

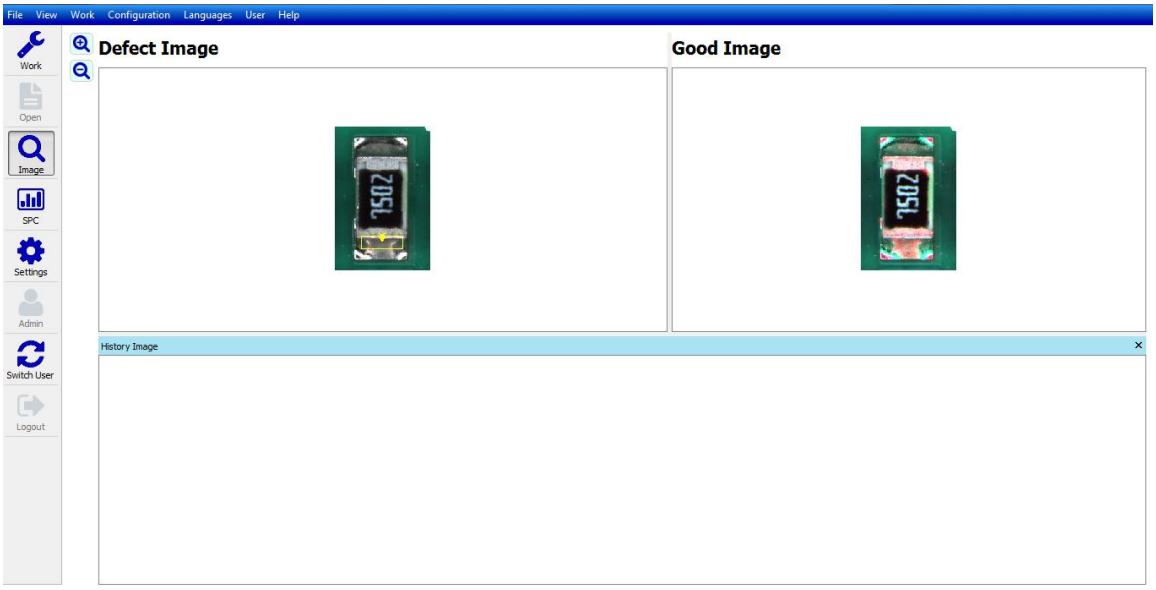


Figure 145: Good Reference Image

View Larger Image

While verifying the defects, user can magnify the detected defect, good reference as well as history images by entering **Space** key. Press **Esc** key to return to the **Work** page.

Figure 146: View bigger images

History Viewer

During repairing a board, the history images will be shown if the same board type and same component were repaired previously. A **green box** will be shown on the image which was verified 'OK' and a **red box** will be shown on the image which was verified as true defect previously.

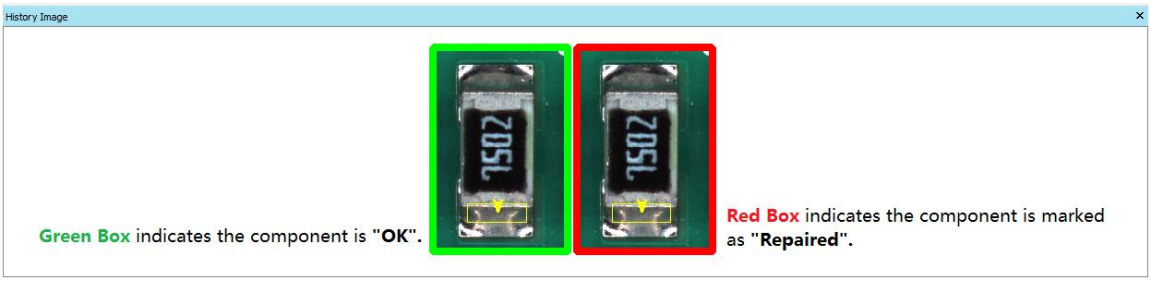


Figure 147: History viewer

Cross/SKIP marking for fail/skip board on Panel View

Red Cross marking will display on cad if the board is failed. “SKIP” marking will display on cad if the board is skipped.

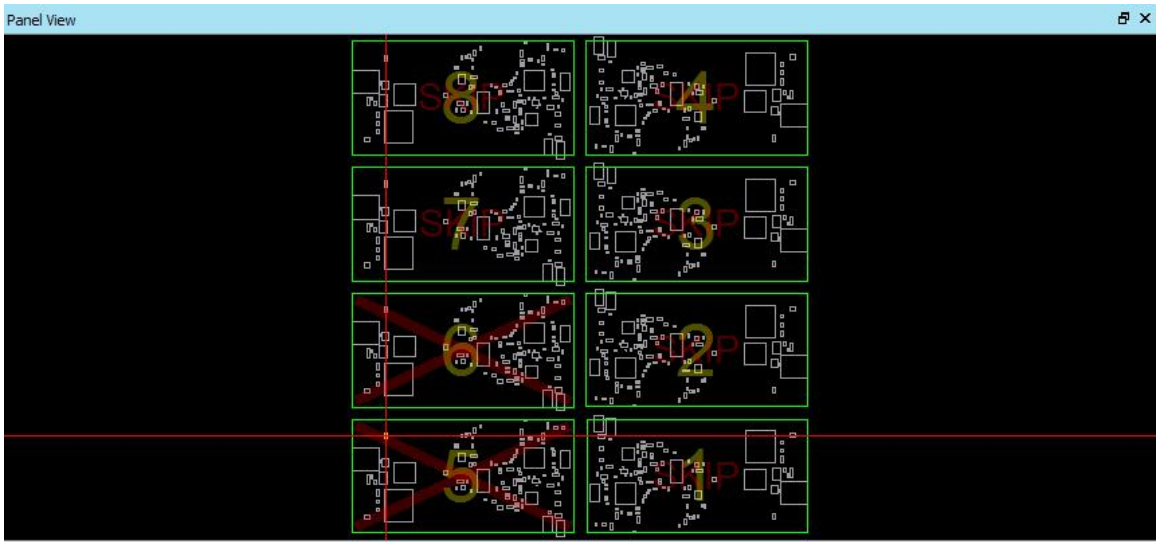


Figure 148: Red cross and SKIP marking on cad view

Close Board

There are 2 options to close a board.

- Auto close
- Manual close

To open a new board, existing board need to be closed first. When close board happen, post repair information is created.

Auto close

VVTS will close the board after finish the buy off process.

Manual close

Force VVTS to close board when defect table still consist active defect, this can be done by the following step:

I. Go to menu bar, **Work**>**Close board** and click **Yes** (refer Figure 149) or

II. Press **F10** (Shortcut key or any shortcut key that user-defined) or

III. Click close board icon button  and click **Yes** to close (refer Figure 150).

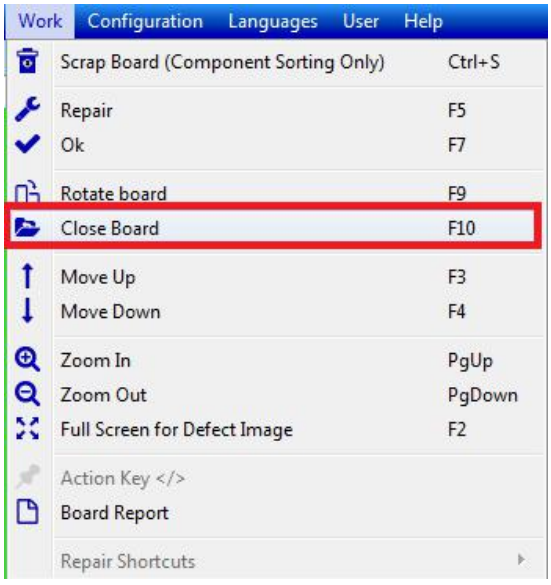


Figure 149 Close board using menu bar

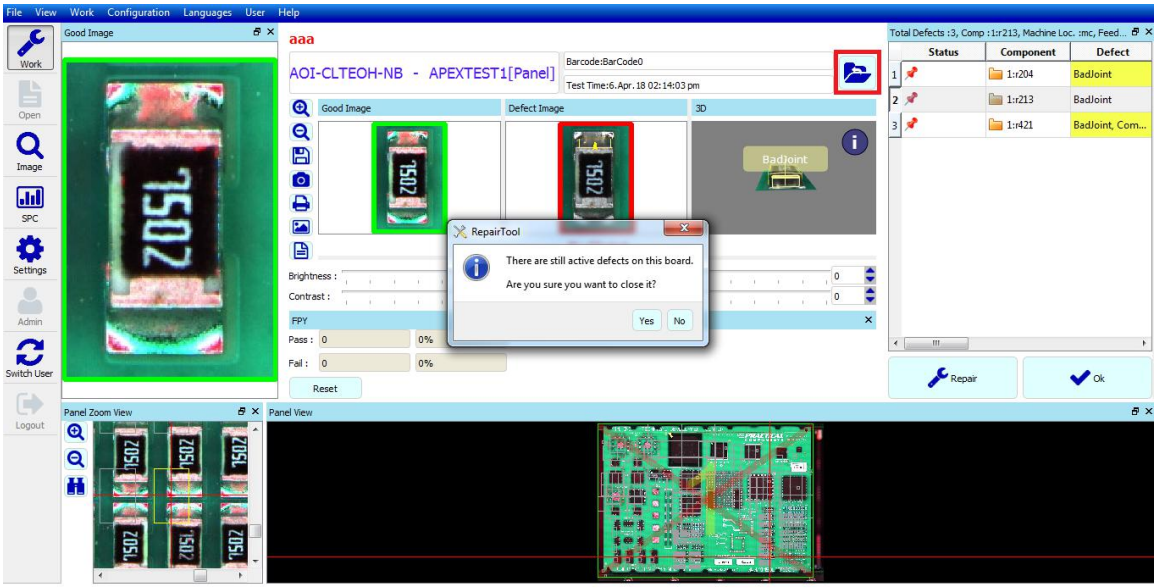


Figure 150: Close board by using close icon

Generate Reports

❖ Generate Production Summary

I. Click **File** → **Production Summary,** refer Figure 151. Generate production summary page is shown in Figure 152.

II. Select board type, date to and date from to generate summary.

III. Click **Generate Summary** button to generate report. The summary report will be generated at C:\ClassifiedDefects\report (in .csv format).

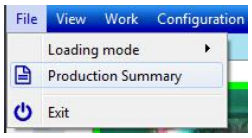


Figure 151: Production Summary

Figure 152: Production summary page

❖ Generate Board Report

During buyoff a board, click **Work** → **Board Report**. Board report generated at (C:\ClassifiedDefects\boardReport) location.

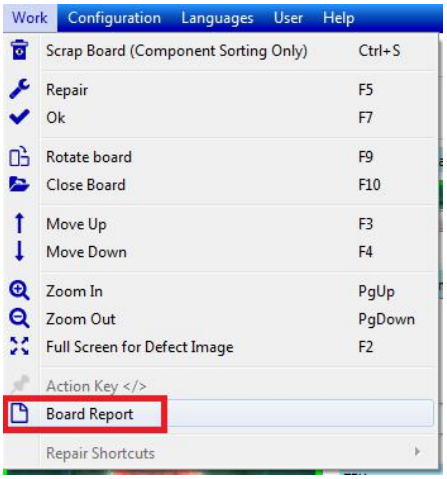


Figure 153: Generate board report

First Pass Yield (FPY)

After complete justifying a board, the FPY will be updated. Click the **Reset** button to reset the FPY.

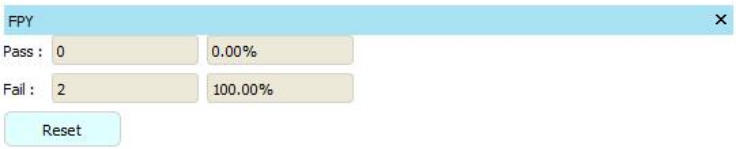


Figure 154: FPY

SPC

VVTS provides various SPC real time chart for process monitoring.

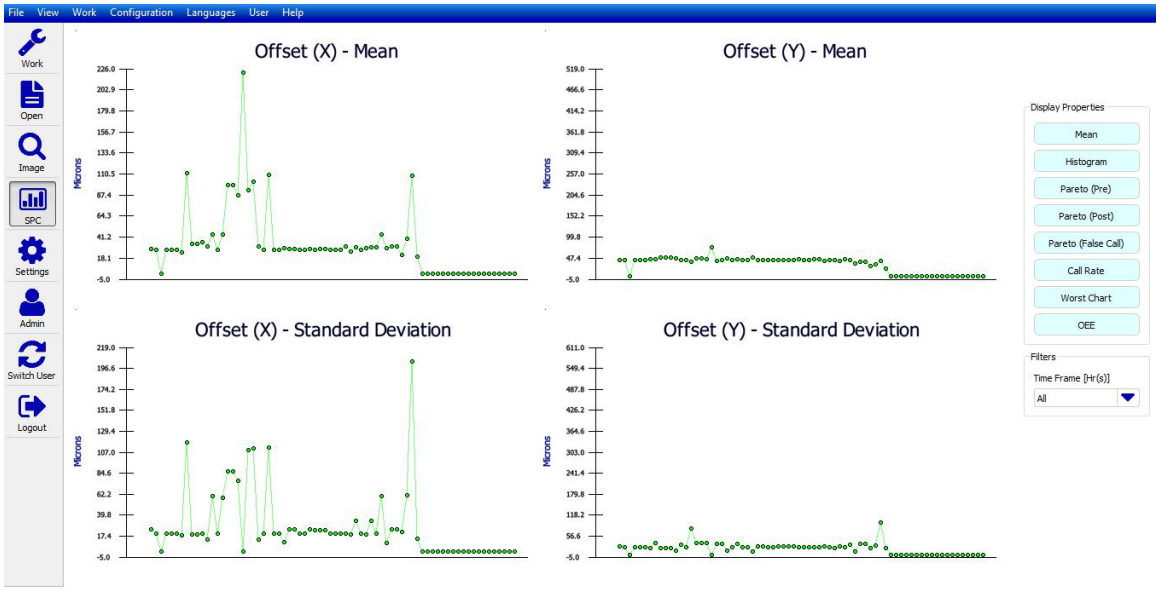


Figure 155: SPC

Time Frame Settings

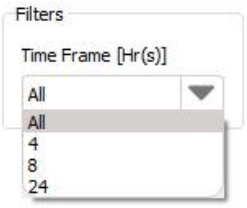


Figure 156: Time frame

There are 4 types of time frame:

- All
- 4 hours
- 8 hours
- 24 hours

Display Properties

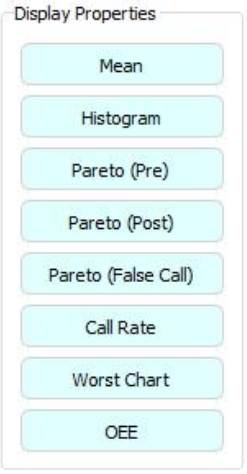


Figure 157: Display properties

There are 6 types of charts for selection which includes:

- Mean Chart - Show the mean and standard deviation for X and Y.
  - Click **Mean** button to display Mean chart.
- Histogram - Histogram distribution of measurement data (XY/Theta).
  - Click **Histogram** button to display Histogram.
- Pareto Chart - Histogram of attribute or measurements.
  - Click **Pareto (Pre)** button to display Pareto for pre.
  - Click **Pareto (Post)** button to display Pareto for post.
  - Click **Pareto (False Call)** button to display Pareto for post.
- Call Rate Chart - Show Call Rate for True Call and Call Rate for False Call.
  - Click **Call Rate** button to display Call Rate chart.
- Worst Equipment Chart - Show the Worst Machine, Worst Feeder and Worst Nozzle.
  - Click Worst Chart button to display Worst chart.
- Overall Equipment Efficiency (OEE)
  - Click OEE button to display OEE chart.

Admin

To Add User:

I. Click on **Admin** icon.

II. Click on **New** button then enter “user name” and “password”, refer to Figure 158.

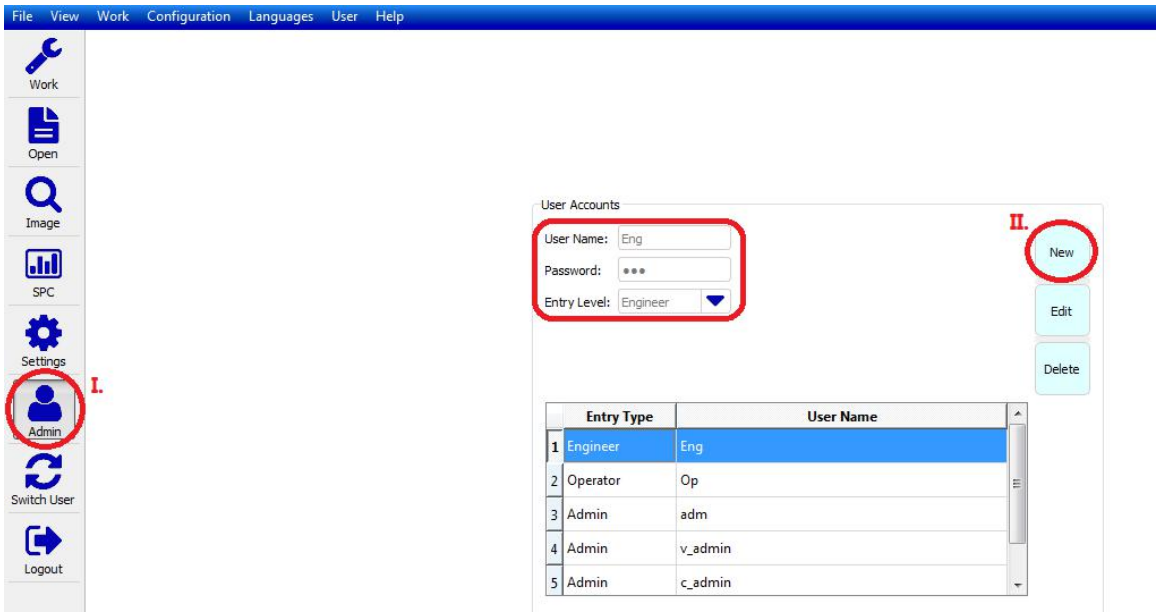


Figure 158: Add new user

III. Next, click on the drop-down menu of “Entry Level” and select the desired entry level. Click **Add** after this.

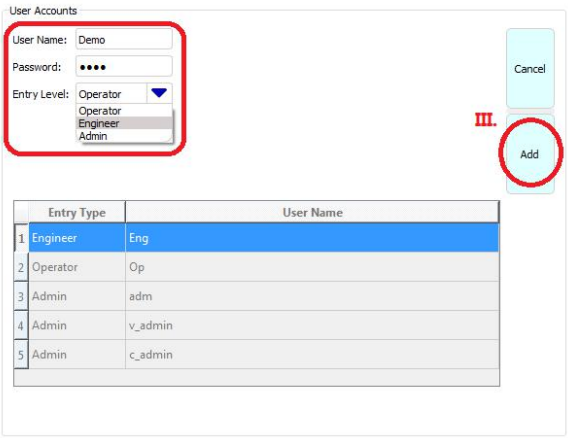


Figure 159: Enter entry level

IV. Verify that the entry is entered successfully and correctly.

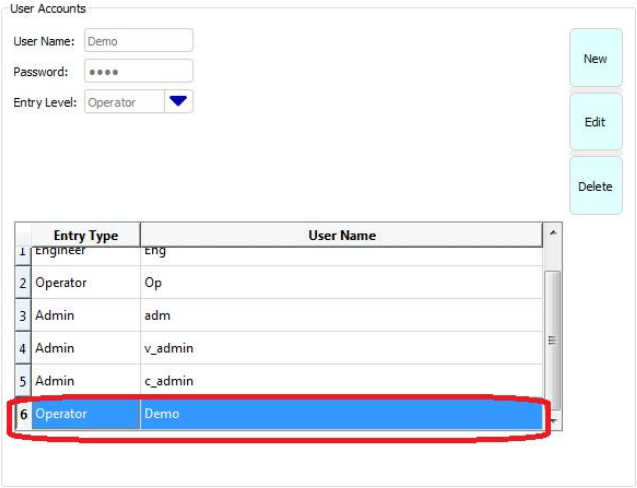


Figure 160: Verify entry

*Note:

User Entry Level:

Admin – Can access to all tools/features.

Engineer – Can access to all tools/features except cannot add user account.

Operator – Can access to main tools/features except Settings page and cannot add user account.

To Modify User:

I. To edit (only on Password and Entry level), simply click on **Edit** button then enter new password and/or entry level, followed by click on **Update** button.

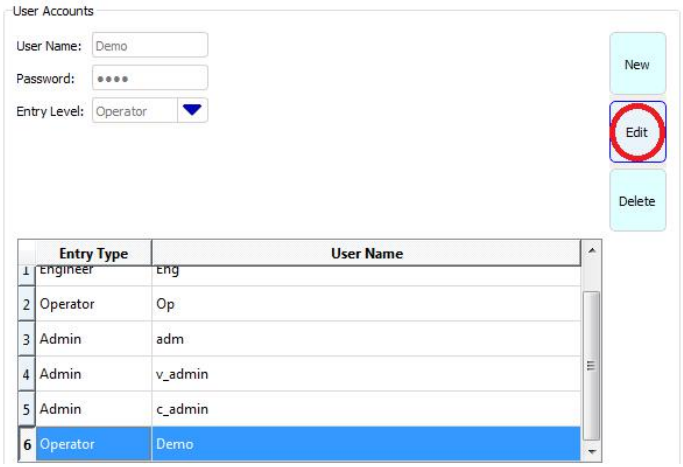


Figure 161: Edit password and entry level

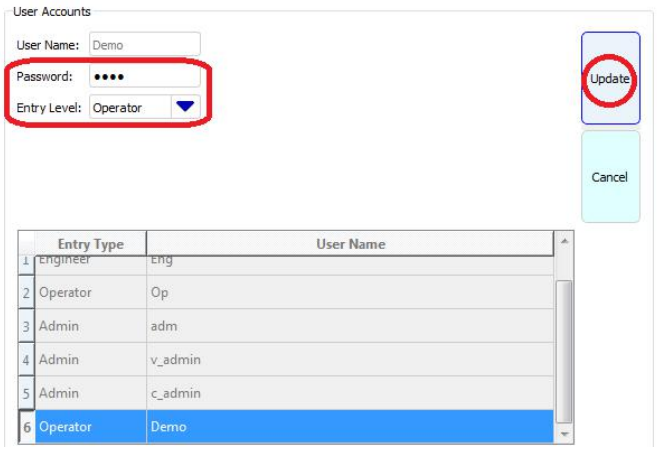


Figure 162: Update the changes

II. After modifying user, user's information will be shown in the table as figure below.

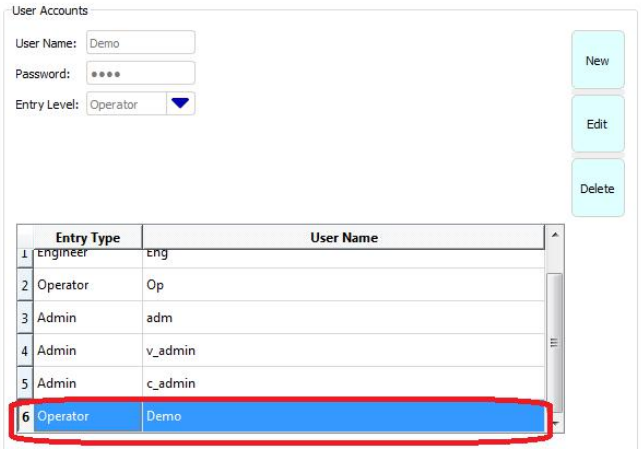


Figure 163: User latest Information

To Delete User:

I. To remove/delete user, simply click on the row and click on **Delete** button.

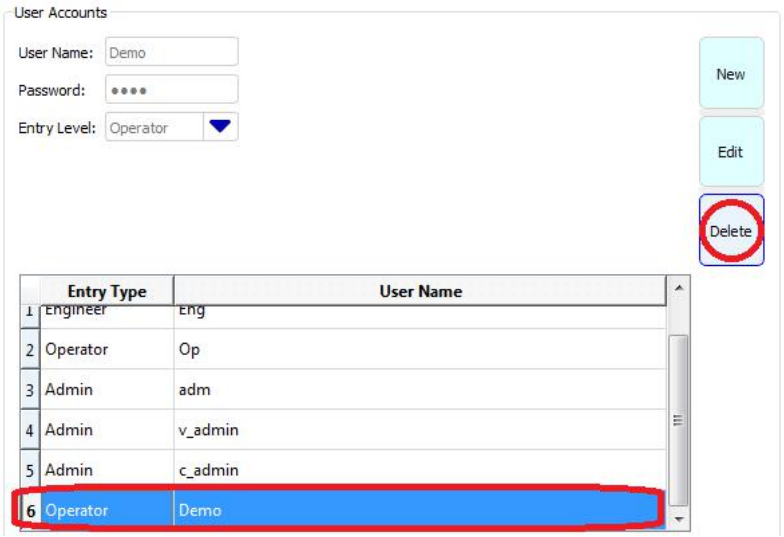


Figure 164: To delete user

Change Password:

I. To change your password, click the **Admin** button.

II. Enter old password, new password and confirm password and click **Confirm**.

Figure 165: To change password

To Switch User:

I. During verification, user is able to switch to another user by clicking on **switch user** icon.

II. User needs to select “username” and key in “password”.

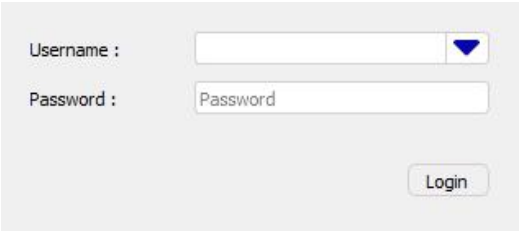
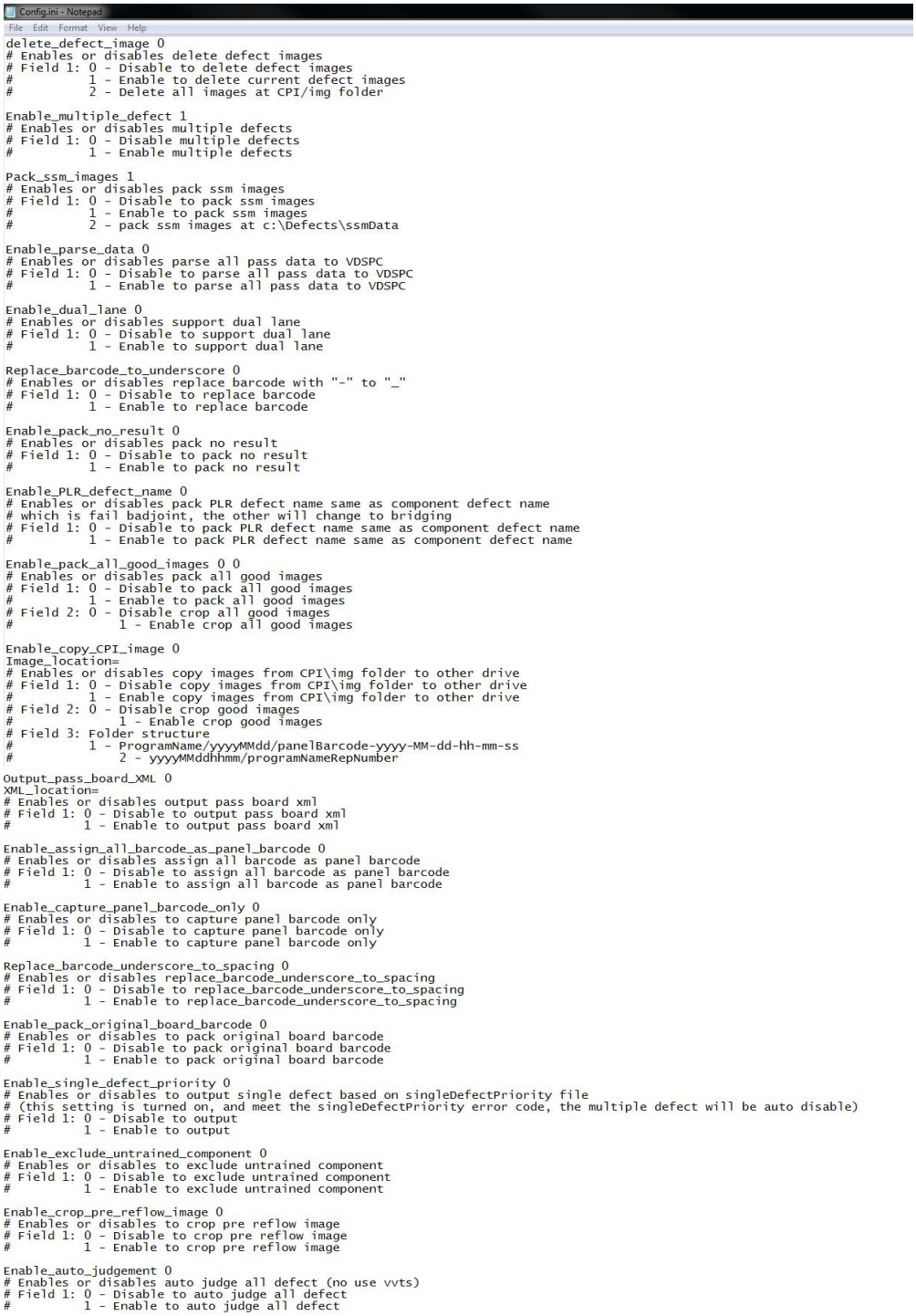


Figure 166: Switch user

Defect Packager Configuration

Defect Packager works as a tool to pack the inspection result files for Repair Tool. Setting for config.ini in C:\Program Files\DefectPackager is as below.



Config.ini - Notepad

File Edit Format View Help

```
delete_defect_image 0
# Enables or disables delete defect images
# Field 1: 0 - Disable to delete defect images
#          1 - Enable to delete current defect images
#          2 - Delete all images at CPI/img folder

Enable_multiple_defect 1
# Enables or disables multiple defects
# Field 1: 0 - Disable multiple defects
#          1 - Enable multiple defects

Pack_ssm_images 1
# Enables or disables pack ssm images
# Field 1: 0 - Disable to pack ssm images
#          1 - Enable to pack ssm images
#          2 - pack ssm images at c:\Defects\ssmData

Enable_parse_data 0
# Enables or disables parse all pass data to VDSPC
# Field 1: 0 - Disable to parse all pass data to VDSPC
#          1 - Enable to parse all pass data to VDSPC

Enable_dual_lane 0
# Enables or disables support dual lane
# Field 1: 0 - Disable to support dual lane
#          1 - Enable to support dual lane

Replace_barcode_to_underscore 0
# Enables or disables replace barcode with "-" to "_"
# Field 1: 0 - Disable to replace barcode
#          1 - Enable to replace barcode

Enable_pack_no_result 0
# Enables or disables pack no result
# Field 1: 0 - Disable to pack no result
#          1 - Enable to pack no result

Enable_PLR_defect_name 0
# Enables or disables pack PLR defect name same as component defect name
# which is fail badjoint, the other will change to bridging
# Field 1: 0 - Disable to pack PLR defect name same as component defect name
#          1 - Enable to pack PLR defect name same as component defect name

Enable_pack_all_good_images 0 0
# Enables or disables pack all good images
# Field 1: 0 - Disable to pack all good images
#          1 - Enable to pack all good images
# Field 2: 0 - Disable crop all good images
#             1 - Enable crop all good images

Enable_copy_CPI_image 0
Image_location=
# Enables or disables copy images from CPI\img folder to other drive
# Field 1: 0 - Disable copy images from CPI\img folder to other drive
#          1 - Enable copy images from CPI\img folder to other drive
# Field 2: 0 - Disable crop good images
#             1 - Enable crop good images
# Field 3: Folder structure
#          1 - ProgramName/yyyyMMdd/panelBarcode-yyyy-MM-dd-hh-mm-ss
#              2 - yyyyMMddhhmm/programNameRepNumber

Output_pass_board_XML 0
XML_location=
# Enables or disables output pass board xml
# Field 1: 0 - Disable to output pass board xml
#          1 - Enable to output pass board xml

Enable_assign_all_barcode_as_panel_barcode 0
# Enables or disables assign all barcode as panel barcode
# Field 1: 0 - Disable to assign all barcode as panel barcode
#          1 - Enable to assign all barcode as panel barcode

Enable_capture_panel_barcode_only 0
# Enables or disables to capture panel barcode only
# Field 1: 0 - Disable to capture panel barcode only
#          1 - Enable to capture panel barcode only

Replace_barcode_underscore_to_spacing 0
# Enables or disables replace_barcode_underscore_to_spacing
# Field 1: 0 - Disable to replace_barcode_underscore_to_spacing
#          1 - Enable to replace_barcode_underscore_to_spacing

Enable_pack_original_board_barcode 0
# Enables or disables to pack original board barcode
# Field 1: 0 - Disable to pack original board barcode
#          1 - Enable to pack original board barcode

Enable_single_defect_priority 0
# Enables or disables to output single defect based on singleDefectPriority file
# (this setting is turned on, and meet the singleDefectPriority error code, the multiple defect will be auto disable)
# Field 1: 0 - Disable to output
#          1 - Enable to output

Enable_exclude_untrained_component 0
# Enables or disables to exclude untrained component
# Field 1: 0 - Disable to exclude untrained component
#          1 - Enable to exclude untrained component

Enable_crop_pre_reflow_image 0
# Enables or disables to crop pre reflow image
# Field 1: 0 - Disable to crop pre reflow image
#          1 - Enable to crop pre reflow image

Enable_auto_judgement 0
# Enables or disables auto judge all defect (no use vvts)
# Field 1: 0 - Disable to auto judge all defect
#          1 - Enable to auto judge all defect
```

Figure 167: Config.ini

Delete_defect_image

To delete or keep defect images in C:\CPI\img.

Enable_multiple_defect

To enable or disable multi defect reporting in VVTS.

Pack_ssm_images

To set whether to enable to pack ssm images to VVTS for NOLP usage purpose.

Enable_parse_data

To enable all pass data to direct transfer to VDSPC from V510 AOI machine. The VDSPC server IP address can be configured in VDSPCIpAddress.txt in C:\Program Files\DefectPackager.

Enable_dual_lane

To enable or disable to support inspection data for dual lane system.

Replace_barcode_to_underscore

To replace barcode with dash '-' to underscore '_'.

Enable_pack_no_result

To set whether to pack inspection result when there is no result (rep file does not contain any device).

Enable_PLR_defect_name

To enable pack PLR defect name same as component defect name.

Enable_long_board

To enable or disable support long board.

Enable_pack_all_good_images

To enable or disable defect packager to pack all good images.

Enable_copy_CPI_image

To enable copy image from C:\CPI\Img folder to specific location. The location is configurable by user.

Output_pass_board_XML

User can configurable to direct output xml file for pass board to the location. The pass board info will not transfer to VVTS once this setting is turned on.

Enable_assign_all_barcode_as_panel_barcode

To enable assign the board barcode as “panel barcode-board number”.

Enable_capture_panel_barcode_only

To enable capture panel barcode only even board barcode had captured by machine.

Replace_barcode_underscore_to_spacing

To replace the board barcode which is auto assign by defect packager contains underscore to spacing character.

Enable_pack_original_board_barcode

To enable or disable pack original board barcode which is output by V510 machine and display at VVTS.

Enable_single_defect_priority

To output single defect base on singleDefectPriority file. Multiple defect will be auto disable when meet singleDefectPriority error code.

Enable_exclude_untrained_component

To filter untrained components output in repair ticket.

Enable_crop_pre_reflow_image

To enable to crop pre reflow images (E-images) to single image.

Enable_auto_judgement

To enable V510 result to auto judge as true call and send to VDSCP without going through VVTS.

Enable_auto_judgement and Enable_parse_data must be enabled for this feature.

Appendix

Color Code

User can go to http://www.computerhope.com/htmcolor.htm for more color code choices.

Color Name	Color Code	Color Name	Color Code
Red	#FF0000	White	#FFFFFF
Cyan	#00FFFF	Silver	#C0C0C0
Blue	#0000FF	Gray or Grey	#808080
DarkBlue	#0000A0	Black	#000000
LightBlue	#ADD8E6	Orange	#FFA500
Purple	#800080	Brown	#A52A2A
Yellow	#FFFF00	Maroon	#800000
Lime	#00FF00	Green	#008000
Magenta	#FF00FF	Olive	#808000

Technical Support

If after going through the user guide and the problem still persists or if you are still unable to find solution to the problem you are facing, please contact our technical support. Get ready with the following information to help us identify your problem:

I. The product serial number

II. A clear description of the problem faced. If possible, describe the situation that the problem occurs.

III. Capture the image of the unit that shows the problem.

IV. The settings file that you used and the template image used for teaching.

V. If possible, burn the files into a CDR and courier it to us.

Send these to:

Technical Support

Vitrox Technologies Sdn. Bhd.

85-A, Lintang Bayan Lepas 11,

Bayan Lepas Industrial Park, Phase 4

11900 Bayan Lepas, Penang

Malaysia.

Tel: +60-4 646 6227 / 646 9227

Or fax to: +60-4 646 6327

Or email to: aoi-sns@vitrox.com

FUTURE UPGRADES

For future system upgrades or enhancements, please contact the above location, providing the following information: -

I. The product serial number.

II. States upgrade requirements.

The updated version will be sent to you, via Internet or conventional mail.