

Retrieving Data from the SCT Database

A Java Graphical User Interface

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- Standalone application written in Java
- Runs on most platforms (eg Windows, Linux, Mac...)
- Fast, powerful and flexible report generator
- Developed to meet the needs of the SCT detector community and to provide a detector interface for the SCT modules communities
- Provides a GUI to define a query
 - submits SQL queries direct to SCT database
 - presentation of results depends on nature of query
 - spreadsheets (eg Excel or equivalent)
 - HTML reports
 - raw data lists
 - images
- Trivial to install and run
- Available now!

*This talk is available as a PDF file from www.hep.phy.cam.ac.uk/silicon
(menu item Talks/Presentations)*

A Simple Query

eg request a listing of all barrel detectors at RAL:

The screenshot shows a software window titled "Version 4" with a "Preferences" button in the top right. The main title is "Java SCT Database Interface". Below the title are several tabs: "Stocks", "Items", "Manufacturers", "ATLAS Tests", "Shipments", and "Selections for Modules". The "Selections for Modules" tab is active. The main area contains the instruction "Generate a Lookup table to contain the following devices:" followed by three dropdown menus: "Location" set to "RAL", "Manufacturer" set to "Hamamatsu", and "Device" set to "Barrel Outer". A "Submit Database Query" button is located below these fields. Below the form area, the text "Query Results (928 records):" is displayed above a table. The table has five columns: "Serial Number", "Mfr Serial No", "Type", "Current Location", and "Assembled?". The table contains eight rows of data, all with "Current Location" set to "RAL" and "Assembled?" set to "NO". A "Save this Result..." button is located below the table.

Version 4 Preferences

Java SCT Database Interface

Stocks Items Manufacturers ATLAS Tests Shipments Selections for Modules

Generate a Lookup table to contain the following devices:

Location: RAL

Manufacturer: Hamamatsu

Device: Barrel Outer

Submit Database Query

Query Results (928 records):

Serial Number	Mfr Serial No	Type	Current Location	Assembled?
20220900200088	STN39200-00088	bmSiDetectorOut	RAL	NO
20220900200089	STN39200-00089	bmSiDetectorOut	RAL	NO
20220900200090	STN39200-00090	bmSiDetectorOut	RAL	NO
20220900200091	STN39200-00091	bmSiDetectorOut	RAL	NO
20220900200155	STN39229-00155	bmSiDetectorOut	RAL	NO
20220900200156	STN39229-00156	bmSiDetectorOut	RAL	NO
20220900200157	STN39229-00157	bmSiDetectorOut	RAL	NO
20220900200158	STN39229-00158	bmSiDetectorOut	RAL	NO

Save this Result...

A more general 'Stocks' query:

List all detectors supplied by Hamamatsu

The screenshot shows a software window titled "Version 4" with a "Preferences" button in the top right. The main title is "Java SCT Database Interface". Below the title are several tabs: "Stocks", "Items", "Manufacturers", "ATLAS Tests", "Shipments", and "Selections for Modules". The "Stocks" tab is selected.

Inside the main area, there is a prompt: "Generate a Lookup table to contain the following devices:". Below this are three dropdown menus:

- Location: Anywhere
- Manufacturer: Hamamatsu
- Device: Large Detectors

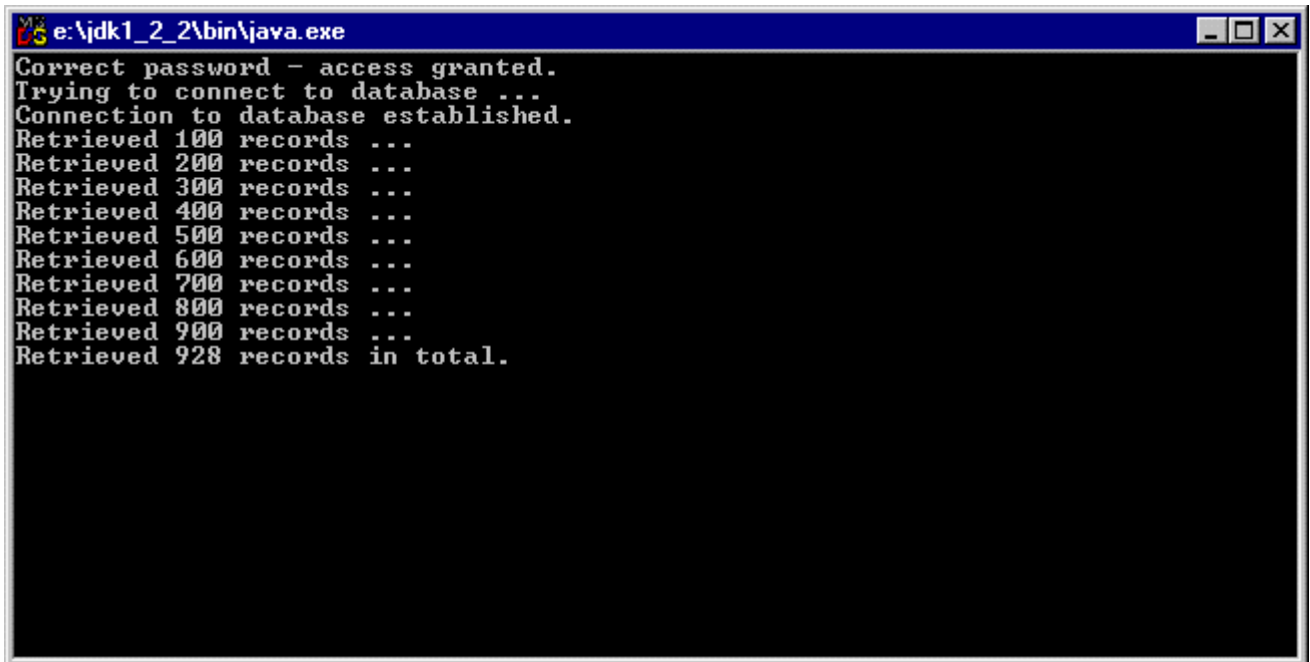
A "Submit Database Query" button is located below the dropdowns.

Below the query area, the text "Query Results (7219 records):" is displayed above a table. The table has the following columns: "Serial Number", "Mfr Serial No", "Type", "Current Location", "Assembled?", and a small icon column. The first six rows of data are shown:

Serial Number	Mfr Serial No	Type	Current Location	Assembled?	
20220340000015	sxx37160-24	fmSiDetectorW12_1	Manchester	NO	▲
20220340000016	sdx37055-07	fmSiDetectorW12_1	Lancaster	NO	■
20220340000017	sdx37055-10	fmSiDetectorW12_1	Lancaster	NO	
20220900200001	STN39189-00001	bmSiDetectorOut	Cambridge	NO	
20220900200002	STN39189-00002	bmSiDetectorOut	Cambridge	NO	
20220900200003	STN39189-00003	bmSiDetectorOut	Cambridge	NO	
20220900200004	STN39189-00004	bmSiDetectorOut	RAL	NO	
20220900200005	STN39189-00005	bmSiDetectorOut	Cambridge	NO	▼

A "Save this Result..." button is located below the table.

During data retrieval the status of the SQL query can be viewed in the DOS window (or console if not running Windows):



```
e:\jdk1_2_2\bin\java.exe
Correct password - access granted.
Trying to connect to database ...
Connection to database established.
Retrieved 100 records ...
Retrieved 200 records ...
Retrieved 300 records ...
Retrieved 400 records ...
Retrieved 500 records ...
Retrieved 600 records ...
Retrieved 700 records ...
Retrieved 800 records ...
Retrieved 900 records ...
Retrieved 928 records in total.
```

Data retrieval is fast - typically 4-5 seconds to generate a simple spreadsheet (like this one) of nearly 1000 records.

In its present form the GUI provides five general categories of query:

- **Stocks**

Simple list of items at a given institute

- **Items**

Reports on a single device,

eg location, shipment history, test history, full test report

- **Manufacturers**

Reports of manufacturer's data, and raw data listings

- **ATLAS Tests**

Reports on ATLAS QA tests

Eg: test results, comparisons with manufacturer data, testing status, raw data listings, test images

- **Shipments**

Reports of shipments between any manufacturer or institute to another manufacturer/institute, *and for each shipment:*

lists of items, test status of items, test results, raw data, test images etc

- **Selections for Modules**

Lists of assembled devices available for assembly at a given institute, filtered according to requested level of detector quality. Assignments of detectors to modules, generation of assignment reports and database files

The GUI offers a high level of flexibility, and availability of reports follows a “tree-like” structure

Example of Items Query:

Shipment history of a detector

Version 4

Preferences

Java SCT Database Interface

Stocks | **Items** | Manufacturers | ATLAS Tests | Shipments | Selections for Modules

Serial Number:

Status

Test History

Shipment History

Full Report

Query Results (4 records):

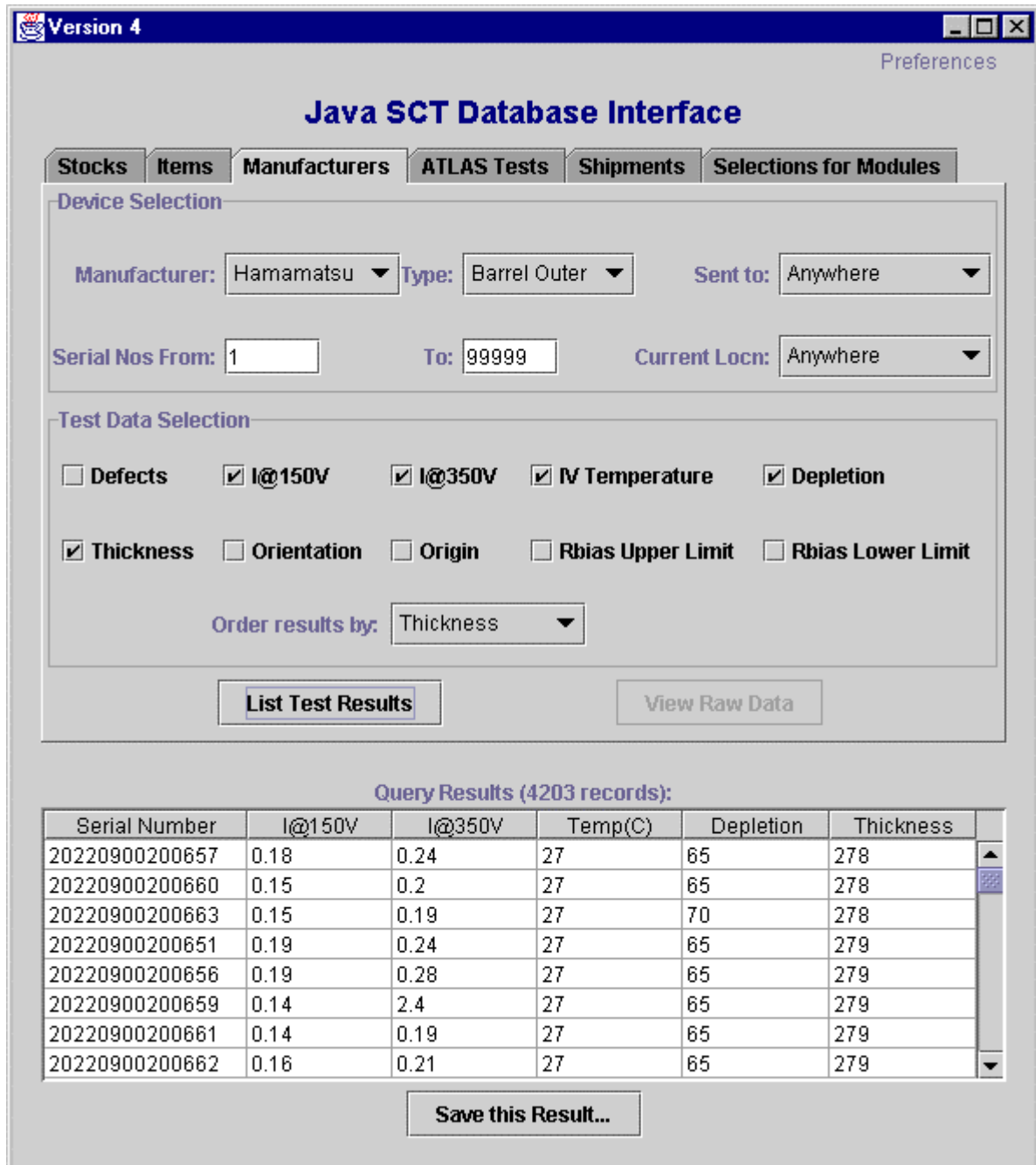
Serial Number	Shipment No	Sent from	Received By	Send Date	Received?
20220900200177	900000005	Hamamatsu	Cambridge	10MAY2000	YES
20220900200177	990000050	Cambridge	Sheffield	09JUN2000	YES
20220900200177	990000102	Sheffield	Cambridge	04AUG2000	YES
20220900200177	70000017	Cambridge	RAL	02APR2001	YES

This detector has been shipped 4 times

Hamamatsu->Cambridge->Sheffield->Cambridge->RAL

Example of Manufacturers Query:

List manufacturer data for all barrel detectors supplied by Hamamatsu, listed in order of wafer thickness (thinnest first):



The screenshot shows the 'Java SCT Database Interface' window. The 'Manufacturers' tab is selected. In the 'Device Selection' section, 'Manufacturer' is set to 'Hamamatsu', 'Type' is 'Barrel Outer', and 'Sent to' is 'Anywhere'. 'Serial Nos From' is 1 and 'To' is 99999. 'Current Locn' is 'Anywhere'. In the 'Test Data Selection' section, 'Defects' is unchecked, while 'I@150V', 'I@350V', 'IV Temperature', 'Depletion', 'Thickness', 'Orientation', 'Origin', 'Rbias Upper Limit', and 'Rbias Lower Limit' are all checked. 'Order results by' is set to 'Thickness'. There are buttons for 'List Test Results' and 'View Raw Data'. Below the interface, a table titled 'Query Results (4203 records):' displays the following data:

Serial Number	I@150V	I@350V	Temp(C)	Depletion	Thickness
20220900200657	0.18	0.24	27	65	278
20220900200660	0.15	0.2	27	65	278
20220900200663	0.15	0.19	27	70	278
20220900200651	0.19	0.24	27	65	279
20220900200656	0.19	0.28	27	65	279
20220900200659	0.14	2.4	27	65	279
20220900200661	0.14	0.19	27	65	279
20220900200662	0.16	0.21	27	65	279

Below the table is a button labeled 'Save this Result...'.

4203 barrels have been registered by Hamamatsu, the thinnest is 278 microns.

Example of ATLAS Tests Query

Eg List IV data of all W31 Hamamatsu devices currently at Geneva, regardless of where the IV test was performed.

Ordered by current at 150V (lowest currents first):

The screenshot shows the 'Java SCT Database Interface' window. The 'ATLAS Tests' tab is selected. Under 'Device Selection', the filters are: Manufacturer: Hamamatsu, Type: Wedge W31, Tested at: Anywhere, Serial Nos From: 1, To: 99999, Current Locn: Geneva. Under 'Test Data Selection', the 'IV' radio button is selected. The 'Order results by' dropdown is set to 'I@150V'. Below the filters are buttons for 'Test Results', 'Overall Test Status', 'View Images', and 'View Raw Data'. The 'Query Results (353 records):' section displays a table with the following data:

Serial Number	Date	Location	I@150V	I@350V	Temper...	Status	Remarks
20220900600069	07JUN2000	Geneva	0.05	0.08	20	Ok	
20220900600094	07JUN2000	Geneva	0.05	0.08	20	Ok	
20220900600038	07JUN2000	Geneva	0.06	0.1	20	Ok	
20220900600495	17JUL2001	Prague ...	0.06	0.1	20	Ok	
20220900600531	19JUL2001	Prague ...	0.06	0.1	20	Ok	
20220900600535	19JUL2001	Prague ...	0.06	0.09	20	Ok	
20220900600545	19JUL2001	Prague ...	0.06	0.09	20	Ok	
20220900600656	08AUG2001	Prague ...	0.06	0.11	20	Ok	

Below the table is a 'Save this Result...' button.

There are 353 records of IV measurements for Geneva's W31 detectors, the lowest was 50nA@150V measured on 7th June 2000 at Geneva.

Example of Shipments Query

List of shipments from Cambridge to RAL, between January 2001 to the present day:

The screenshot shows a software window titled "Version 4" with a "Preferences" button in the top right. The main title is "Java SCT Database Interface". Below the title are several tabs: "Stocks", "Items", "Manufacturers", "ATLAS Tests", "Shipments", and "Selections for Modules". The "Shipments" tab is selected.

The "Shipment Selection" section contains the following fields:
- "Shipments from:" dropdown menu with "Cambridge" selected.
- "To:" dropdown menu with "RAL" selected.
- "Since:" dropdown menu with "JAN" selected and a year dropdown with "2001" selected.
- "Up To:" dropdown menu with "DEC" selected and a year dropdown with "2001" selected.

The "Test Data Selection" section contains the following options:
- Radio buttons for "Summary", "IV" (selected), "Visual", and "Defects".
- Radio buttons for "Depletion", "I Stability", "Coupling Cap", and "Bias Resistance".
- Radio button for "Metal Resistance".
- Radio button for "Interstrip Cap".
- A checkbox for "Include manufacturer data if possible?".
- "Order results by:" dropdown menu with "Serial Number" selected.

Below the selection fields are four buttons: "List Shipments" (highlighted), "Test Results", "Test Status", and "Items".

The "Query Results (15 records):" section displays a table with the following data:

Shipment No	Sent By	Received By	Sent	Received	# Devices	Content
990000801	Cambridge	RAL	28SEP2001	01NOV2001	76	B2
990000802	Cambridge	RAL	28SEP2001	02NOV2001	100	B2
990000803	Cambridge	RAL	28SEP2001	01NOV2001	56	B2
990000804	Cambridge	RAL	28SEP2001	02NOV2001	118	B2
990000805	Cambridge	RAL	28SEP2001	01NOV2001	119	B2
990000806	Cambridge	RAL	28SEP2001	01NOV2001	119	B2
990000913	Cambridge	RAL	12NOV2001	14NOV2001	120	B2
990000914	Cambridge	RAL	12NOV2001	14NOV2001	118	B2

At the bottom of the window is a button labeled "Save this Result..."

Test Results, Test Status, and Items queries become available for a shipment if you select the row:

Version 4 Preferences

Java SCT Database Interface

Stocks | **Items** | Manufacturers | ATLAS Tests | Shipments | Selections for Modules

Shipment Selection

Shipments from: Cambridge To: RAL

Since: JAN 2001 Up To: DEC 2001

Test Data Selection

Summary
 IV
 Visual
 Defects
 Depletion
 I Stability
 Coupling Cap
 Bias Resistance
 Metal Resistance
 Interstrip Cap
 Include manufacturer data if possible?

Order results by: Serial Number

Query Results (15 records):

Shipment No	Sent By	Received By	Sent	Received	# Devices	Content
990000801	Cambridge	RAL	28SEP2001	01NOV2001	76	B2
990000802	Cambridge	RAL	28SEP2001	02NOV2001	100	B2
990000803	Cambridge	RAL	28SEP2001	01NOV2001	56	B2
990000804	Cambridge	RAL	28SEP2001	02NOV2001	118	B2
990000805	Cambridge	RAL	28SEP2001	01NOV2001	119	B2
990000806	Cambridge	RAL	28SEP2001	01NOV2001	119	B2
990000913	Cambridge	RAL	12NOV2001	14NOV2001	120	B2
990000914	Cambridge	RAL	12NOV2001	14NOV2001	118	B2

Eg to list the IV data for all items in this shipment, select “IV” in Test Data Selection panel, and click on “Test Results” button

A new window opens with a spreadsheet of all IV measurements:

Result Table

ATLAS IV results of items in shipment 990000913

No of records = 120

Serial Number	Date	Location	I@150V	I@350V	Temperature	Status	Remarks
20220900203998	22AUG2001	Cambridge	0.11	0.19	22.68	Ok	
20220900203999	22AUG2001	Cambridge	0.11	0.19	22.6	PROBLEM	Abnormal readings on IV scan over 420V
20220900204000	22AUG2001	Cambridge	0.11	0.18	22.6	Ok	
20220900204001	22AUG2001	Cambridge	0.12	0.21	22.47	Ok	
20220900204002	22AUG2001	Cambridge	0.11	0.18	22.03	Ok	
20220900204003	22AUG2001	Cambridge	0.11	0.19	22	Ok	
20220900204004	22AUG2001	Cambridge	0.11	0.19	22.1	Ok	
20220900204005	22AUG2001	Cambridge	0.11	0.18	22.18	Ok	

Buttons: Save to File, View Images, View Raw Data, Create Report

Then select a row to extract even more information:

Result Table

ATLAS IV results of items in shipment 990000913

No of records = 120

Serial Number	Date	Location	I@150V	I@350V	Temperature	Status	Remarks
20220900203998	22AUG2001	Cambridge	0.11	0.19	22.68	Ok	
20220900203999	22AUG2001	Cambridge	0.11	0.19	22.6	PROBLEM	Abnormal readings on IV scan over 420V
20220900204000	22AUG2001	Cambridge	0.11	0.18	22.6	Ok	
20220900204001	22AUG2001	Cambridge	0.12	0.21	22.47	Ok	
20220900204002	22AUG2001	Cambridge	0.11	0.18	22.03	Ok	
20220900204003	22AUG2001	Cambridge	0.11	0.19	22	Ok	
20220900204004	22AUG2001	Cambridge	0.11	0.19	22.1	Ok	
20220900204005	22AUG2001	Cambridge	0.11	0.18	22.18	Ok	

Buttons: Save to File, View Images, View Raw Data, Create Report

Data Viewer

IVscan Raw Data for 20220900203999

Measured by Cambridge on 22AUG2001, temp: 22.6C

0000.000	0000.000
0010.000	0000.031
0020.000	0000.042
0030.000	0000.049
0040.000	0000.055
0050.000	0000.061
0060.000	0000.066
0070.000	0000.072
0080.000	0000.079
0090.000	0000.084
0100.000	0000.089
0110.000	0000.094
0120.000	0000.099
0130.000	0000.104
0140.000	0000.108
0150.000	0000.112
0160.000	0000.117
0170.000	0000.122

Buttons: Save to File

View the raw data

Generate full test report on this device

Full Test Report option generates an HTML file, and opens a java-equivalent web browser:

Report

Detector Re...
Report saved as Z:\tmp\20220900203999.html

Detector Report

Detector(s): 20220900203999

General Wafer Properties

Serial Number	Orientation	Origin	Thickness(um)
20220900203999	111	113	291

IV Data

Serial Number	Location	Date	I@150V	I@350V	Temp(C)	Status	Remarks
20220900203999	Hamamatsu	27JUL2001	0.18	0.28	25	Pass	None.
20220900203999	Cambridge	22AUG2001	0.11	0.19	22.6	PROBLEM	Abnormal readings on IV scan over 420V

Depletion Voltages

Serial Number	Location	Date	Depletion	Status	Remarks
20220900203999	Hamamatsu	27JUL2001	60	Pass	None.

Defects Summary


Serial Number	Location	Date	#Defects	Pinhole	Oxide-PT	Short	Open	Implant-O	Implant-S	Resistor
20220900203999	Hamamatsu	27JUL2001	0	0	0	0	0	0	0	0

Visual Inspection Results

Serial Number	Location	Date	Status	Remarks	Pictures
20220900203999	Cambridge	22AUG2001	Pass		Process defect on strips 679-687/5.6mm from resistor

Image List:

Process defect on strips 679-687/5.6mm from resistor.



Report can be viewed by any web browser (IE, netscape...) and over the web if GUI is configured appropriately.

Visual inspection results for all items in a shipment:

Result Table

ATLAS Visual Inspection results of items in shipment 990000913

No of records = 126

Serial Number	Date	Location	Status	Remarks	Pictures
20220900204021	23AUG2001	Cambridge	Ok		
20220900204066	23AUG2001	Cambridge	Ok		
20220900204067	23AUG2001	Cambridge	Ok		
20220900204068	23AUG2001	Cambridge	Ok	Process defect on strip 173/11.8mm from resistor	
20220900204068	"	"	"	"	Process defect top left hand edge
20220900204069	23AUG2001	Cambridge	Ok		
20220900204070	23AUG2001	Cambridge	Ok		
20220900204071	24AUG2001	Cambridge	Ok		

Buttons: Save to File, View Images, View Raw Data, Create Report

To view any images, select the row and click on “View Images”, to launch an “image viewer”:



Test Status Reports

ATLAS test status of items in shipment 990000913

No of records = 120

Serial Number	IVscan	Visual	Depletion	I Stability	Strips	R Bias	Coupling ...	Metal Res	Interstrip ...	Overall St...
20220900204092	Pass	Pass								Pass
20220900204094	Pass	Pass								Pass
20220900204095	Pass	Pass	Pass							Pass
20220900204096	Pass	Pass								Pass
20220900204097	Pass	Pass								Pass
20220900204098	Problem	Pass								Problem
Totals:	120	120	13	5	6	6	6	0	0	115/120
Totals(%):	100.0	100.0	10.8	4.1	5.0	5.0	5.0	0.0	0.0	95.8

Buttons: Save to File, View Images, View Raw Data, Create Report

Lists what tests have been performed on each detector, and the status of that test (“Pass”, “Problem” or “FAIL”), together with overall statistics.

Overall status flag:

- “Pass” if all tests were good, AND both and IVscan and a visual inspection have been performed
- “Problem” if one or more tests showed a problem, AND both an IVscan and visual inspection have been performed
- “FAIL” if any test failed
- “Pending” if either an IVscan or visual examination is still pending

Selections for Modules

You need a list of all non-assembled devices at your institute, of a specified manufacturer, shape, quality and satisfying a specified range of parameters:

The screenshot shows the 'Java SCT Database Interface' software window. It has a title bar with 'Version 4' and standard window controls. The main window has a 'Preferences' button in the top right. Below the title is a navigation bar with tabs: 'Stocks', 'Items', 'Manufacturers', 'ATLAS Tests', 'Shipments', and 'Selections for Modules'. The 'Selections for Modules' tab is active.

Under the 'Selections for Modules' tab, there are two main sections:

- Device Selection:** Contains three dropdown menus: 'Manufacturer: Hamamatsu', 'Type: Barrel Outer', and 'Location: RAL'.
- Detector Parameter Filters:** Contains several input fields:
 - 'Quality: Good' (dropdown)
 - 'Thickness Range: From: 270 To: 300' (text boxes)
 - 'Depletion Range: From: 40 To: 150' (text boxes)
 - '# Defects: From: 0 To: 15' (text boxes)

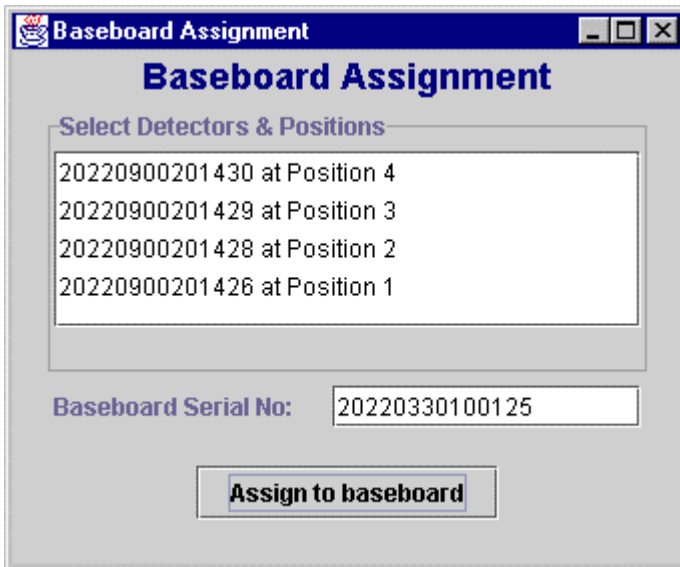
Below the filters are three buttons: 'List Detectors', 'Generate Report', and 'Add to Selection'.

At the bottom, there is a section titled 'Query Results (880 records):' containing a table with 8 columns: 'Serial Number', 'Status', 'Thickness', 'I@150V', 'I@350V', 'Tempera...', 'Depletion', and 'Defects'. The table shows 8 rows of data. Below the table is a 'Save this Result...' button.

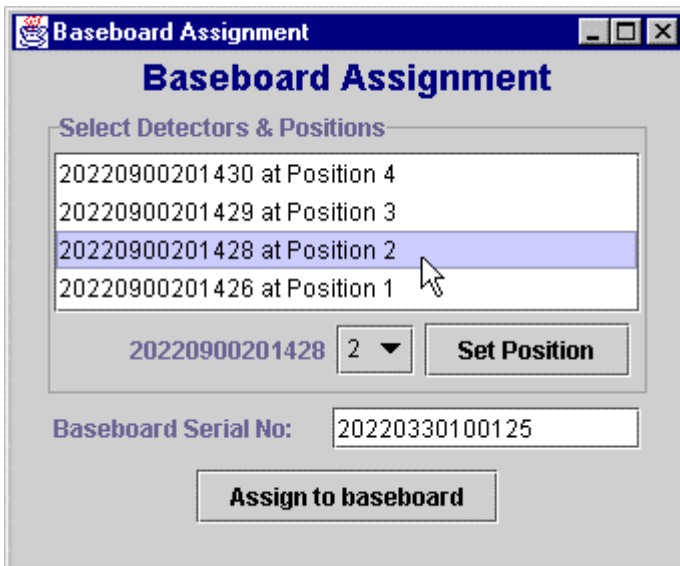
Serial Number	Status	Thickness	I@150V	I@350V	Tempera...	Depletion	Defects
20220900201423	Pass	292	0.1	0.17	21.76	+65	+0
20220900201424	Pass	292	0.1	0.17	22.79	+65	+0
20220900201425	Pass	293	0.09	0.14	22.16	+65	+0
20220900201426	Pass	294	0.1	0.17	21.75	57.6	1(108)
20220900201428	Pass	292	0.08	0.14	21.93	+65	+0
20220900201429	Pass	292	0.09	0.16	22.26	+65	+1(409)
20220900201430	Pass	292	0.09	0.15	22.76	+65	+1(351)
20220900201431	Pass	293	0.14	0.25	23.18	+65	+0

Select one or several detectors from the list, to assign to a baseboard or simply to generate more test information.

Baseboard assignment dialog

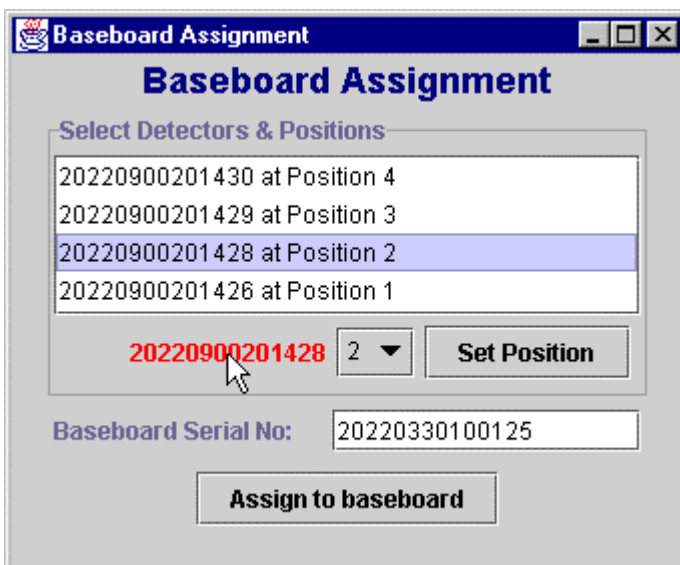


The software automatically assigns positions as you assign detectors to the baseboard.



But you can change the position on the baseboard by:

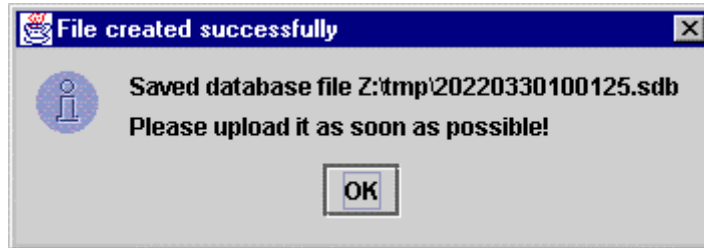
- 1 selecting a row
- 2 use menu to assign new position
- 3 Click on 'Set Position'



Alternatively you can remove a detector from the list, by

- 1 selecting a row
- 2 click on the detector serial number next to the menu

If you wish to proceed with the assignment, the appropriate database file is generated:



Together with a full report as an HTML document:

Report

Baseboard Assignment Report
Report saved as Z:\tmp\20220330100125.html

Assignment Report for Baseboard 20220330100125

Baseboard: 20220330100125

Detector(s): 20220900201430 at Position 4
20220900201429 at Position 3
20220900201428 at Position 2
20220900201426 at Position 1

General Wafer Properties

Serial Number	Orientation	Origin	Thickness(um)
20220900201426	111	056	294
20220900201428	111	056	292
20220900201429	111	056	292
20220900201430	111	056	292

IV Data

Serial Number	Location	Date	I@150V	I@350V	Temp(C)	Status	Remarks
20220900201426	Hamamatsu	01MAR2001	0.09	0.13	27	Pass	None.
20220900201426	Cambridge	09APR2001	0.1	0.17	21.75	Pass	None.
20220900201428	Hamamatsu	01MAR2001	0.09	0.13	26	Pass	None.
20220900201428	Cambridge	09APR2001	0.08	0.14	21.93	Pass	None.
20220900201429	Hamamatsu	01MAR2001	0.09	0.14	26	Pass	None.
20220900201429	Cambridge	09APR2001	0.09	0.16	22.26	Pass	None.
20220900201430	Hamamatsu	01MAR2001	0.09	0.13	26	Pass	None.
20220900201430	Cambridge	09APR2001	0.09	0.15	22.76	Pass	None.

(continuation of assignment report, showing inclusion of test images as well as result tables:)

Report

Baseboard Assignment Report

Report saved as Z:\tmp\20220330100125.html

Serial Number	Location	Date	Depletion	Status	Remarks
20220900201426	Hamamatsu	01MAR2001	65	Pass	None.
20220900201426	Cambridge	09APR2001	57.6	Pass	None.
20220900201428	Hamamatsu	01MAR2001	65	Pass	None.
20220900201429	Hamamatsu	01MAR2001	65	Pass	None.
20220900201430	Hamamatsu	01MAR2001	65	Pass	None.

Defects Summary

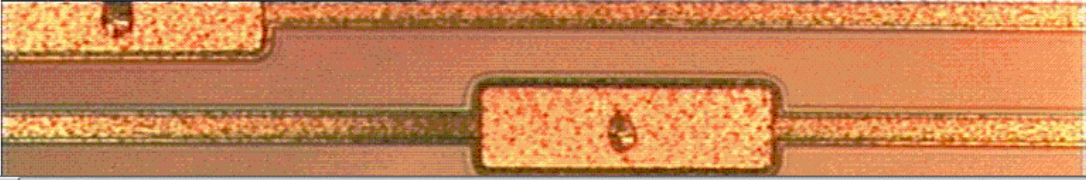
Serial Number	Location	Date	#Defects	Pinhole	Oxide-PT	Short	Open	Implant-O	Implant-S	Resistor
20220900201426	Hamamatsu	01MAR2001	1	1 (108)	0	0	0	0	0	0
20220900201426	Cambridge	17APR2001	1	1 (108)	0	0	0	0	0	0
20220900201428	Hamamatsu	01MAR2001	0	0	0	0	0	0	0	0
20220900201429	Hamamatsu	01MAR2001	1	1 (409)	0	0	0	0	0	0
20220900201430	Hamamatsu	01MAR2001	1	1 (351)	0	0	0	0	0	0

Visual Inspection Results

Serial Number	Location	Date	Status	Remarks	Pictures
20220900201426	Cambridge	09APR2001	Pass		
20220900201428	Cambridge	09APR2001	Pass		
20220900201429	Cambridge	09APR2001	Pass		
20220900201430	Cambridge	09APR2001	Pass		Blemish/discolourisation across strips 750-760

Image List:

Blemish/discolourisation across strips 750-760:



The image shows a close-up of a baseboard strip with a central rectangular component. There is a visible blemish or discoloration on the strip, specifically in the area corresponding to strips 750-760 as mentioned in the table above.

The GUI is available NOW

- You need Java 1.2 or later (either JDK or JRE)
- Single file from Geneva database web page - contains JDBC classes
- Single file from Cambridge

Links, and user guide, available from www.hep.phy.cam.ac.uk/silicon (select menu item 'Software Downloads')

Cambridge Silicon HomePage - Microsoft Internet Explorer

Address <http://www.hep.phy.cam.ac.uk/silicon/>

UNIVERSITY OF CAMBRIDGE **Silicon Development in the HEP Group**

Software Downloads
[Contact the author of this website.](#)

DataBase Reporting using Java Graphical User Interface

Version 4.0 is available since 30-11-2001. Author: [Dave Robinson](#)

In its current form, the program generates reports in either spreadsheet or html format, and displays test images and lists of raw data. It provides tools to help choose which detectors to assign to a module, and then create the database file which defines that assignment. There are basically 5 categories of database queries:

- **Stocks** - details of devices that are stored at a given location, or devices that have been produced by a given manufacturer.
- **Items** - retrieve information about a particular device, eg its current location and assembly status, its shipment history, and the test results.
- **Manufacturers** - Manufacturer's supplied data for the specified detector, or for a range of detector serial numbers, and optionally restricted to devices sent to a particular institute.
- **ATLAS Tests** Test results from ATLAS institutes, for detectors from a given manufacturer or from a range of serial numbers. For strip defect reports, you can mix manufacturer data in with ATLAS data for a direct comparison of results.
- **Shipments** Summaries of shipments from one institute or manufacturer to another institute or manufacturer. You can also list ATLAS test results, test status or simple lists of all items in a given shipment.
- **Selections for Modules** You can list devices stored at your institute, according to various selection criteria, eg thickness, depletion etc, and generate detailed web reports for those detectors. You can then opt to assign detectors to a baseboard for assembly.

1. [Installation](#)
2. [User guide - Introduction](#)
3. [Configuration](#)
4. [Stocks](#)
5. [Items](#)
6. [Manufacturer Data](#)
7. [ATLAS Test Reports](#)
8. [ATLAS shipment Reports, and tests on shipped detectors](#)
9. [Selections for Modules, and assignments to baseboards](#)
10. [Version and updates list](#)
11. [To-Do List \(or wish-list\)](#)
12. [Some common problems \(and their solutions?\)](#)

Done Local intranet zone

Summary

- There is now a vast amount of detector data in the SCT database from both manufacturers and ATLAS QA institutes, and further significant data entries are foreseen from the module and ASICs communities.
- It is important for the SCT community to be able to fully exploit this data, and there is therefore a strong need for the development of new tools to achieve this.
- The java GUI presented in this talk has been developed primarily for the needs of the SCT detector community and to provide a detector interface for the modules community.
- It *could* potentially be expanded or duplicated to provide other reports more specific to modules, ASICs and assembly.

But reports need to be optimised to really meet people's needs, and this requires representative members of the different SCT communities to be actively involved