

Retrieving Data from the SCT Database

A Java Graphical User Interface

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ATLAS SCT Week 30th Sep 2002

- Why use a Java Standalone application?
- Current features/capabilities of the java GUI
- Developing your own application

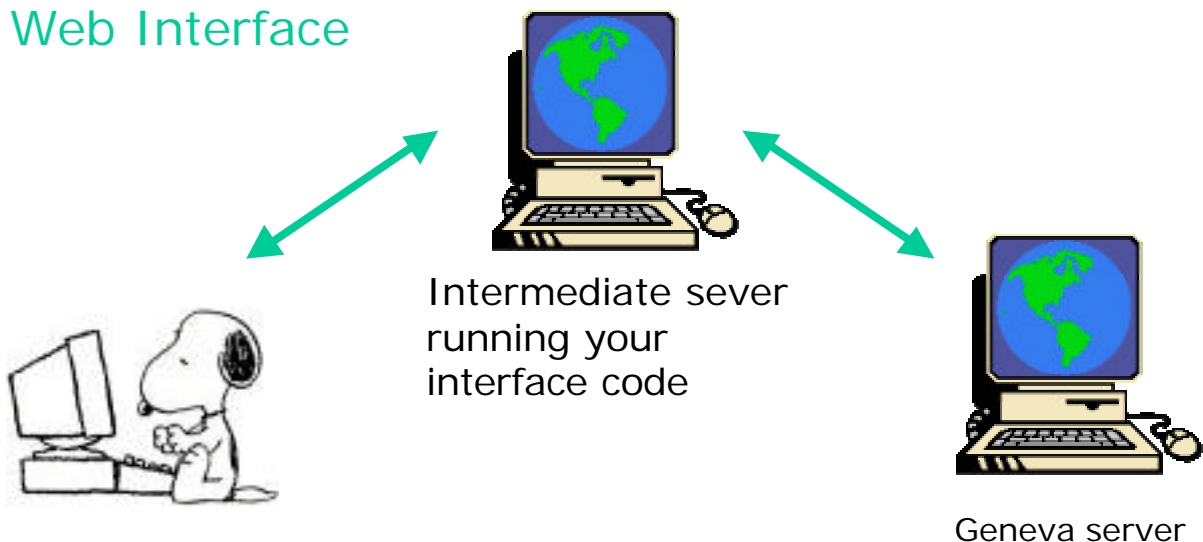
*This talk is available as a PDF file from www.hep.phy.cam.ac.uk/silicon
(menu item Talks/Presentations)*

Interacting with the SCT Database

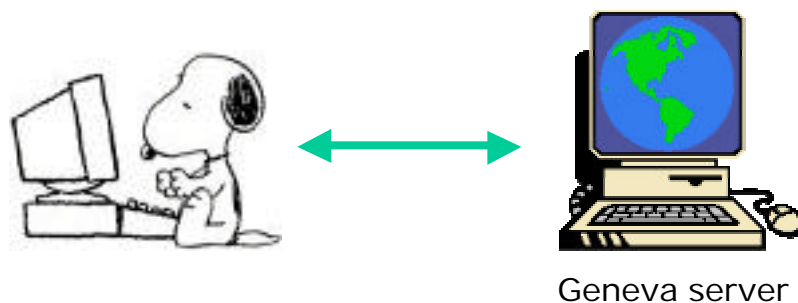
Web Interface or Standalone Application?

A web interface (eg CGI script) will not be an efficient use of the network, unless it runs directly on the Geneva web server. Also note applets are ruled out due to fundamental security restrictions.

Web Interface



Standalone Application

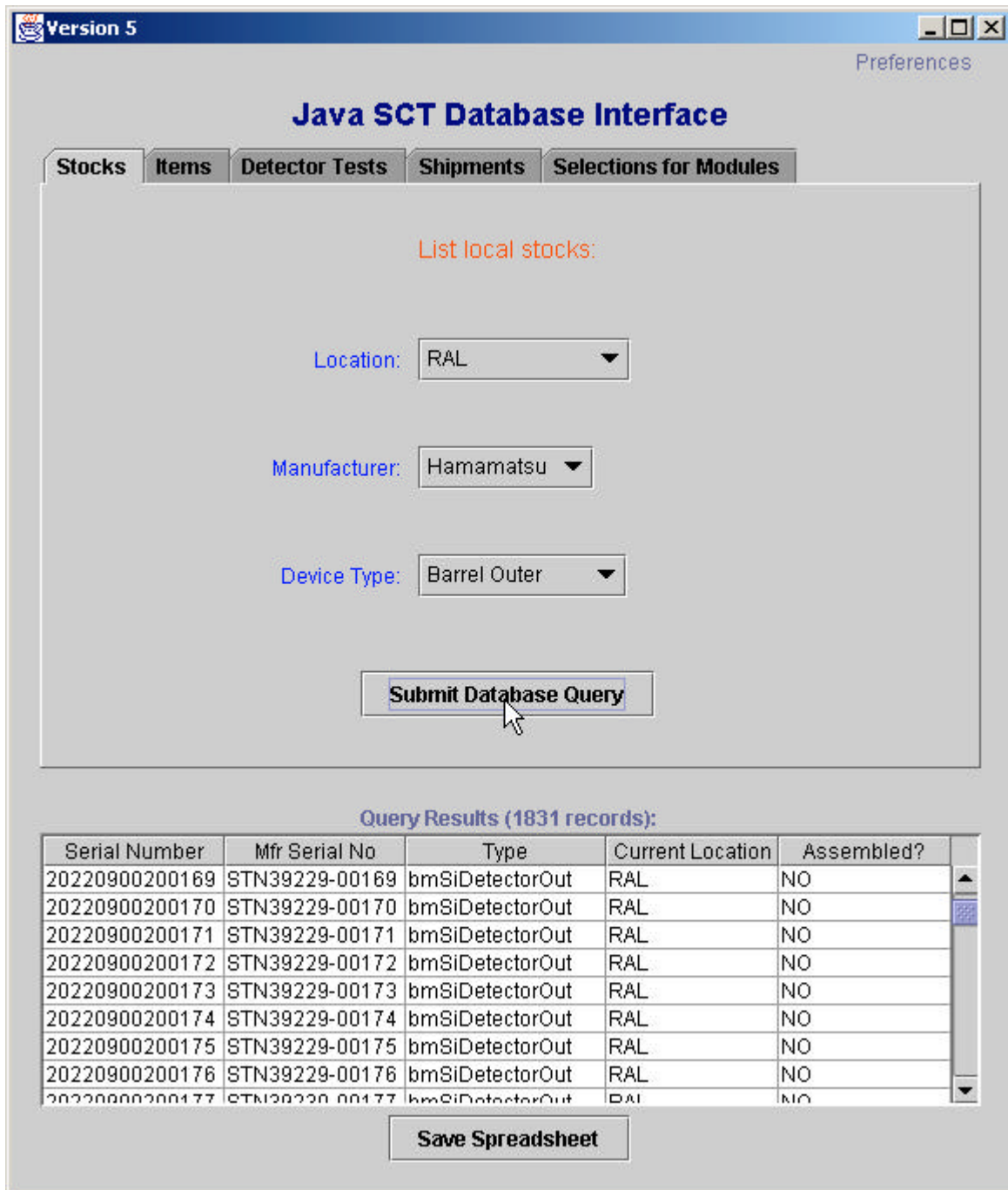


Why choose a Java Standalone Application?

- The users of your database interface will want to use it on a variety of platforms (windows, Linux, Mac..)
- Java is superb for networking applications, but an applet is not suitable (need access to local file system, and an applet will only work if on the Geneva server)
- Java is relatively easy to learn, with excellent tutorials on the java language and jdbc classes at Sun's website www.javasoft.com
- Writing a java application is easy:
 - download and install the latest JDK from www.javasoft.com
 - write your code using your favorite text editor ('notepad' will suffice)
 - Compile and Run it!

Example of A Simple Query

request a listing of all barrel detectors at RAL:



The screenshot shows a software window titled "Version 5" with a "Preferences" link in the top right. The main title is "Java SCT Database Interface". Below the title are five tabs: "Stocks", "Items", "Detector Tests", "Shipments", and "Selections for Modules". The "Stocks" tab is active, displaying the text "List local stocks:". Below this are three dropdown menus: "Location:" set to "RAL", "Manufacturer:" set to "Hamamatsu", and "Device Type:" set to "Barrel Outer". A "Submit Database Query" button is centered below the filters. Below the button, the text "Query Results (1831 records):" is displayed above a table. The table has five columns: "Serial Number", "Mfr Serial No", "Type", "Current Location", and "Assembled?". The first seven rows of data are visible, showing serial numbers from 20220900200169 to 20220900200176, all with "Type" "bmSiDetectorOut", "Current Location" "RAL", and "Assembled?" "NO". A "Save Spreadsheet" button is located at the bottom of the window.

Serial Number	Mfr Serial No	Type	Current Location	Assembled?
20220900200169	STN39229-00169	bmSiDetectorOut	RAL	NO
20220900200170	STN39229-00170	bmSiDetectorOut	RAL	NO
20220900200171	STN39229-00171	bmSiDetectorOut	RAL	NO
20220900200172	STN39229-00172	bmSiDetectorOut	RAL	NO
20220900200173	STN39229-00173	bmSiDetectorOut	RAL	NO
20220900200174	STN39229-00174	bmSiDetectorOut	RAL	NO
20220900200175	STN39229-00175	bmSiDetectorOut	RAL	NO
20220900200176	STN39229-00176	bmSiDetectorOut	RAL	NO

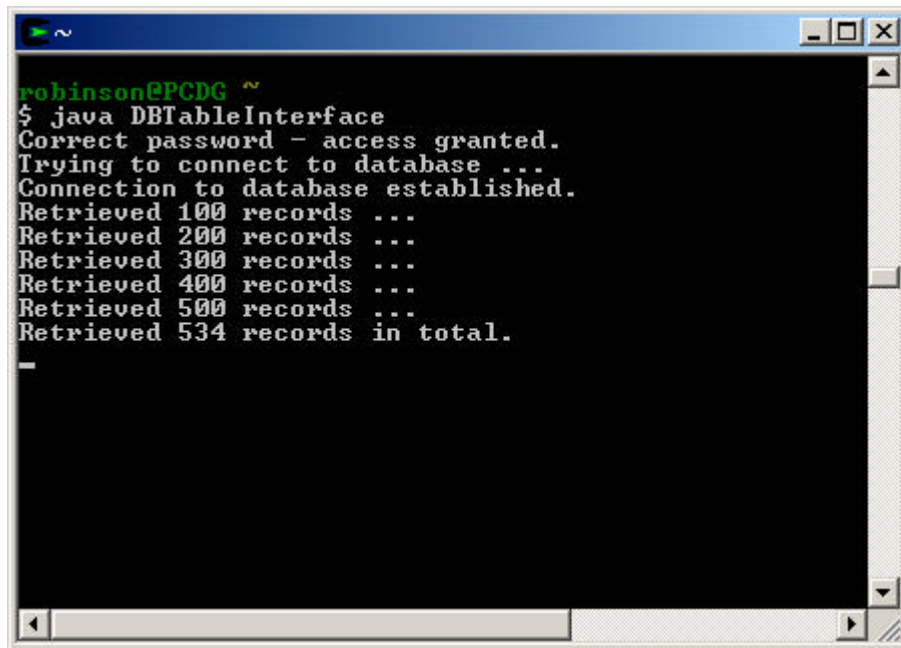
A more general 'Stocks' query:

List all detectors supplied to the SCT by [Hamamatsu](#)

The screenshot shows a web application window titled "Version 5" with a "Preferences" link in the top right. The main heading is "Java SCT Database Interface". Below this are five tabs: "Stocks", "Items", "Detector Tests", "Shipments", and "Selections for Modules". The "Stocks" tab is active. The interface prompts the user to "List local stocks:" and provides three dropdown menus: "Location" set to "Anywhere", "Manufacturer" set to "Hamamatsu", and "Device Type" set to "Large Detectors". A "Submit Database Query" button is located below these filters. The results section, titled "Query Results (14611 records):", displays a table with the following columns: "Serial Number", "Mfr Serial No", "Type", "Current Location", and "Assembled?". The table contains several rows of data, with the first row highlighted in blue. A "Save Spreadsheet" button is positioned below the table.

Serial Number	Mfr Serial No	Type	Current Location	Assembled?
20220900204096	STN11631-04096	bmSiDetectorOut	RAL	NO
20220900204097	STN11631-04097	bmSiDetectorOut	RAL	NO
20220900204098	STN11631-04098	bmSiDetectorOut	RAL	NO
20220900204099	STN11632-04099	bmSiDetectorOut	KEK	NO
20220900204100	STN11632-04100	bmSiDetectorOut	KEK	NO
20220900204101	STN11632-04101	bmSiDetectorOut	KEK	NO
20220900204103	STN11632-04103	bmSiDetectorOut	KEK	NO
20220900204104	STN11632-04104	bmSiDetectorOut	KEK	NO

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

A screenshot of a DOS window titled "robinson@PCDG ~". The window contains the following text:

```
robinson@PCDG ~  
$ java DBTableInterface  
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 534 records in total.  
-
```

Data retrieval is fast - typically a few seconds to generate a simple spreadsheet (like this one) of several hundred 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 status and location, shipment history, test history, full test report

- **Detector Tests**

Retrieves any test data from manufacturer and ATLAS institute *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, for any type of component, *and for each shipment: lists of items, test status of items, test results, raw data, test images etc*

- **Selections for Modules**

Lists of 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

Example of Items Query:

Shipment history of a detector

Version 5

Preferences

Java SCT Database Interface

Stocks Items **Detector Tests** Shipments Selections for Modules

Retrieve Single Item Information

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

The screenshot shows the 'Java SCT Database Interface' window. The 'Detector Tests' tab is active. The 'Detector Type Selection' section is configured with Manufacturer: Hamamatsu, Type: Barrel Outer, and Institute: Cambridge. The 'Serial Nos From' is 1 and 'To' is 99999. The 'Current Locn' is set to 'Anywhere'. The 'Manufacturer Data' tab is selected, and the 'Select Manufacturer Test Data' section has checkboxes for Defects, I@150V, I@350V, IV Temperature, Depletion, Thickness, Orientation, Origin, Rbias Upper Limit, and Rbias Lower Limit. The 'Order results by' dropdown is set to 'Thickness'. The 'View Data' button is highlighted with a mouse cursor. Below the interface, a table displays the query results for 2460 records, showing the Serial Number, I@150V, I@350V, Temp(C), Depletion, and Thickness for each detector.

Query Results (2460 records):

Serial Number	I@150V	I@350V	Temp(C)	Depletion	Thickness
20220900204014	0.16	0.26	26	60	280
20220900200209	0.14	0.21	27	80	284
20220900200210	0.13	0.2	27	80	284
20220900200211	0.13	0.2	27	80	284
20220900200212	0.13	0.2	27	80	284
20220900200213	0.12	0.18	27	80	284
20220900206845	0.08	0.12	27	80	284
20220900200066	0.13	0.19	27	80	285
20220900200071	0.12	0.17	26	80	285

Save Spreadsheet

2460 barrels have been delivered to Cambridge
 by Hamamatsu, the thinnest is 280 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):

The screenshot shows the 'Java SCT Database Interface' window. The 'Detector Tests' tab is active. Under 'Detector Type Selection', the filters are: Manufacturer: Hamamatsu, Type: Wedge W31, Institute: Anywhere, Serial Nos From: 1, To: 99999, Current Locn: Geneva. Under 'Select ATLAS Test Data', the 'IV' radio button is selected. The 'Order results by' dropdown is set to 'I@150V'. The 'View Data' button is highlighted with a mouse cursor. Below the interface, a table displays the query results.

Query Results (631 records):

Serial Number	Date	Location	I@150V	I@350V	Temper...	Status	Rem...
20220900601240	14DEC2001	Prague Acad Sci	0.04	0.06	20	Ok	
20220900601241	14DEC2001	Prague Acad Sci	0.04	0.07	20	Ok	
20220900601242	14DEC2001	Prague Acad Sci	0.04	0.07	20	Ok	
20220900600069	07JUN2000	Geneva	0.05	0.08	20	Ok	
20220900600094	07JUN2000	Geneva	0.05	0.08	20	Ok	
20220900601050	29JAN2002	Prague Acad Sci	0.05	0.08	20	Ok	
20220900601078	22NOV2001	Prague Acad Sci	0.05	0.08	20	Ok	
20220900601080	22NOV2001	Prague Acad Sci	0.05	0.08	20	Ok	
20220900601081	22NOV2001	Prague Acad Sci	0.05	0.08	20	Ok	

Save Spreadsheet

There are 631 records of IV measurements for Geneva's W31 detectors

Creating a New Shipment

Eg, I want to ship all barrels from #10000 to #10200 from Cambridge to RAL

Register a new Shipment from **Cambridge** to **RAL**

Your Initials: DR

Your Reference: For modules

Recipient's Initials: PWP

Carrier: DHL

Carrier's Reference: 123

Shipment Date: 18 SEP 2002

Define the Range of Serial Numbers to Ship (Enter full 14-digit numbers):

From: 20220900210000 To: 20220900210200 **Add to List**

#items in shipment: 29

Serial Number	Mfr Serial No	Type	Assembled?
20220900210114	STN12919-10114	bmSiDetectorOut	NO
20220900210115	STN12919-10115	bmSiDetectorOut	NO
20220900210116	STN12919-10116	bmSiDetectorOut	NO
20220900210117	STN12919-10117	bmSiDetectorOut	NO

Register Shipment

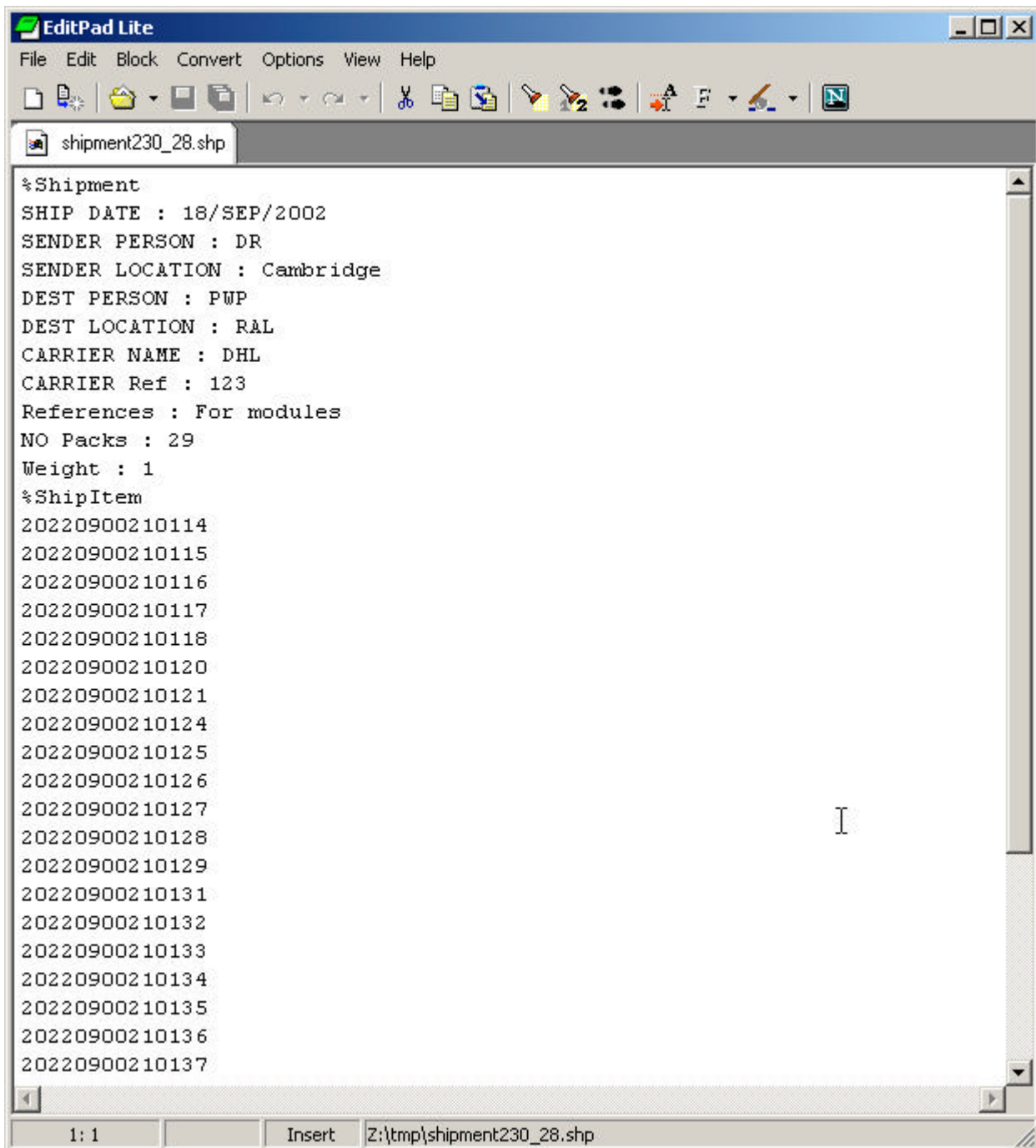
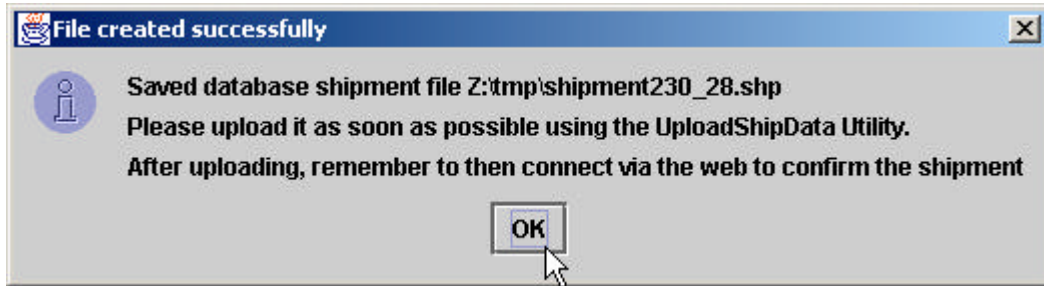
Click on 'Register Shipment' after all the devices that you want to ship are listed, and confirm your request:

Query Confirmation

Are you sure you want to register the shipment of these 29 items?

Yes **No**

Creation of Database Shipment file



Example of Shipments Query

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

The screenshot shows the 'Java SCT Database Interface' software window. The 'Shipments' tab is selected. The 'View Existing Shipments' section has the following settings: 'Shipments from: Cambridge', 'To: RAL', 'Since: JAN 2001', 'Up To: SEP 2002', and 'Containing: Anything'. The 'List Shipments' button is highlighted with a mouse cursor. Below the query settings are buttons for 'Test Results', 'Test Status', and 'Items'. The 'Query Results (19 records):' section displays a table with the following data:

Shipment No	Sent By	Received By	Sent	Received	# Devices	Content
70000013	Cambridge	RAL	22JAN2001	26FEB2001	16	Barrel Outer
70000015	Cambridge	RAL	07MAR2001	21MAR2001	6	Barrel Outer
70000016	Cambridge	RAL	26MAR2001	27MAR2001	2	Barrel Outer
70000017	Cambridge	RAL	02APR2001	14JUN2001	16	Barrel Outer
990000609	Cambridge	RAL	01MAY2001	14MAY2001	56	Barrel Outer
990000731	Cambridge	RAL	10JUL2001	17JUL2001	3	Barrel Outer
990000800	Cambridge	RAL	28SEP2001	01NOV2001	43	Barrel Outer
990000801	Cambridge	RAL	28SEP2001	01NOV2001	76	Barrel Outer
990000802	Cambridge	RAL	28SEP2001	02NOV2001	100	Barrel Outer

At the bottom of the window is a 'Save Spreadsheet' button.

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

The screenshot shows the 'Java SCT Database Interface' window. It has a title bar with 'Version 5' and 'Preferences'. The main area has several tabs: 'Stocks', 'Items', 'Detector Tests', 'Shipments', and 'Selections for Modules'. The 'Shipments' tab is active.

Under 'Shipments', there are two sections:

- Create a New Shipment:** Includes 'From:' (Cambridge), 'To:' (Hamamatsu), and a 'New ...' button.
- View Existing Shipments:** Includes filters for 'Shipments from:' (Cambridge), 'To:' (RAL), 'Since:' (JAN 2001), 'Up To:' (SEP 2002), and 'Containing:' (Anything). There is a 'List Shipments' button and three buttons below: 'Test Results', 'Test Status', and 'Items'.

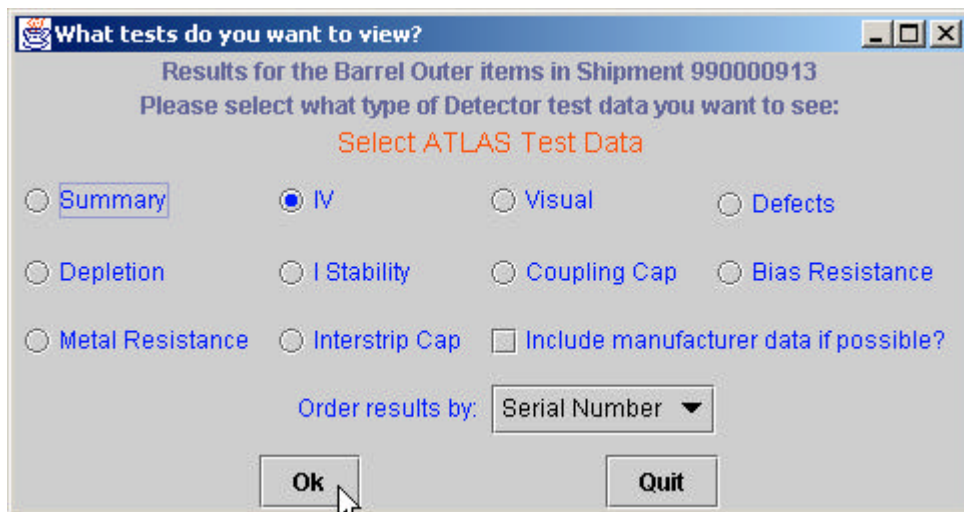
At the bottom, there is a table titled 'Query Results (19 records):' with the following data:

Shipment No	Sent By	Received By	Sent	Received	# Devices	Content
990000802	Cambridge	RAL	28SEP2001	02NOV2001	100	Barrel Outer
990000803	Cambridge	RAL	28SEP2001	01NOV2001	56	Barrel Outer
990000804	Cambridge	RAL	28SEP2001	02NOV2001	118	Barrel Outer
990000805	Cambridge	RAL	28SEP2001	01NOV2001	119	Barrel Outer
990000806	Cambridge	RAL	28SEP2001	01NOV2001	119	Barrel Outer
990000913	Cambridge	RAL	12NOV2001	14NOV2001	120	Barrel Outer
990000914	Cambridge	RAL	12NOV2001	14NOV2001	118	Barrel Outer
990001037	Cambridge	RAL	17JAN2002	18JAN2002	28	Barrel Outer
990001067	Cambridge	RAL	11FEB2002	10FEB2002	250	Barrel Outer

Below the table is a 'Save Spreadsheet' button. The row for shipment 990000913 is highlighted in blue, and a mouse cursor is pointing at it.

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

To view any test results, click on 'Test Results', and then select which test results you want to view in the popup dialogue box



Clickin on 'Ok' will open a new window containing all the data in a spreadsheet:

The "Result Table" window displays the following data:

ATLAS IV results of items in shipment 990000913

No of records = 120

Serial Number	Date	Location	I@150V	I@350V	Temperature	Status	Remarks
20220900203775	13AUG2001	Cambridge	0.09	0.14	21.71	Ok	
20220900203776	13AUG2001	Cambridge	0.09	0.15	21.9	Ok	
20220900203777	13AUG2001	Cambridge	0.09	0.15	21.87	Ok	
20220900203778	13AUG2001	Cambridge	0.09	0.15	21.95	Ok	
20220900203779	13AUG2001	Cambridge	0.09	0.15	21.97	Ok	
20220900203780	13AUG2001	Cambridge	0.09	0.15	22.21	Ok	
20220900203781	13AUG2001	Cambridge	0.1	0.15	22.16	Ok	
20220900203782	16AUG2001	Cambridge	0.09	0.14	19.92	Ok	

Buttons at the bottom: "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

Button: 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:

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

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

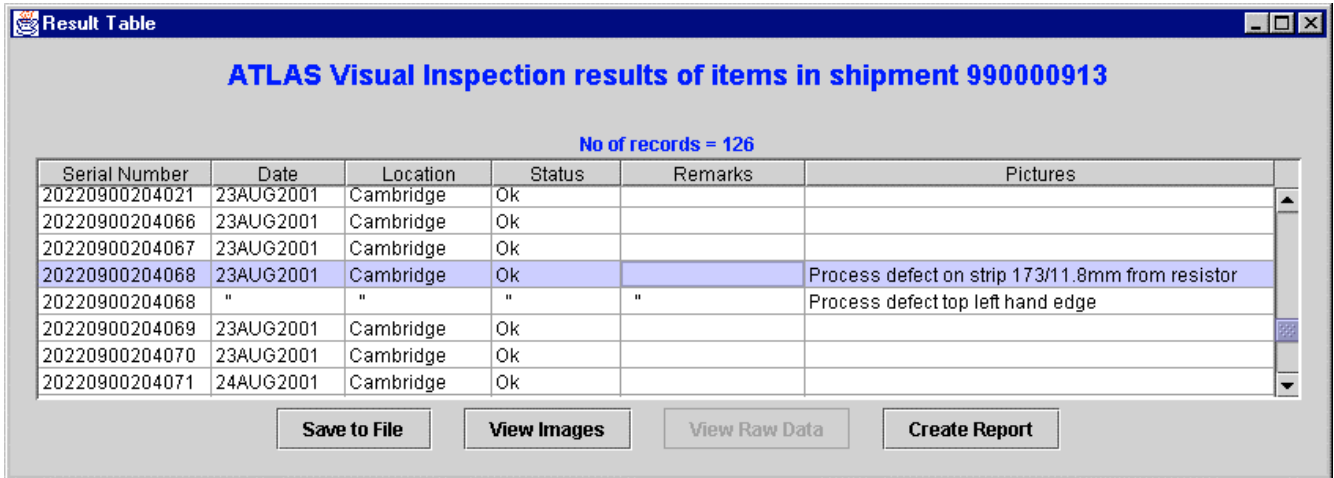
Visual Inspection Results

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

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

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 an 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

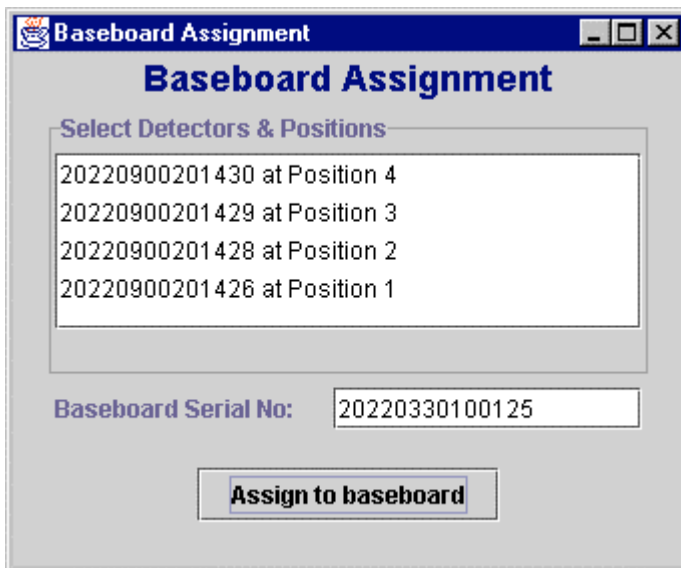
You need a list of all non-assembled devices at your institute, of a specified manufacturer, shape, quality and satisfying a specified range of parameters:

The screenshot shows the 'Java SCT Database Interface' window, version 4. The 'Selections for Modules' tab is active. Under 'Device Selection', the filters are: Manufacturer: Hamamatsu, Type: Barrel Outer, Location: RAL. Under 'Detector Parameter Filters', the filters are: Quality: Good, Thickness Range: From 270 to 300, Depletion Range: From 40 to 150, and # Defects: From 0 to 15. Buttons for 'List Detectors', 'Generate Report', and 'Add to Selection' are visible. Below the filters is a table of 'Query Results (880 records):' with columns for Serial Number, Status, Thickness, I@150V, I@350V, Tempera..., Depletion, and Defects. A 'Save this Result...' button is located below the table.

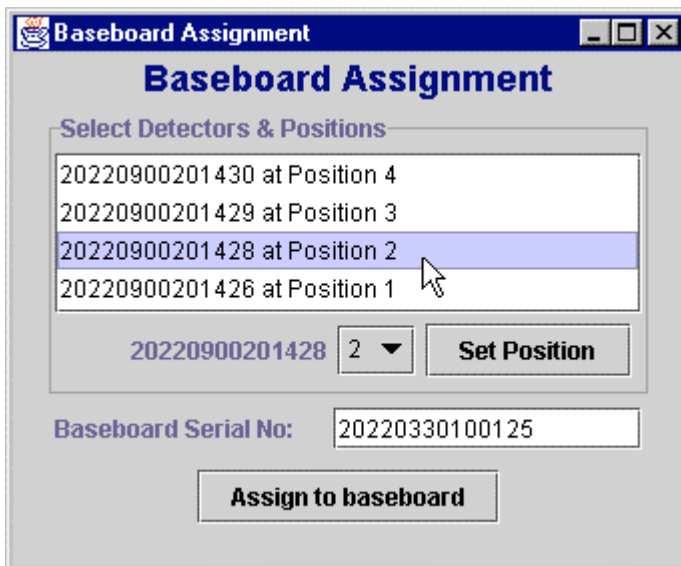
Serial Number	Status	Thickness	I@150V	I@350V	Tempera...	Depletion	Defects
20220900201423	Pass	292	0.1	0.17	21.76	+65	+0
20220900201424	Pass	292	0.1	0.17	22.79	+65	+0
20220900201425	Pass	293	0.09	0.14	22.16	+65	+0
20220900201426	Pass	294	0.1	0.17	21.75	57.6	1(108)
20220900201428	Pass	292	0.08	0.14	21.93	+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

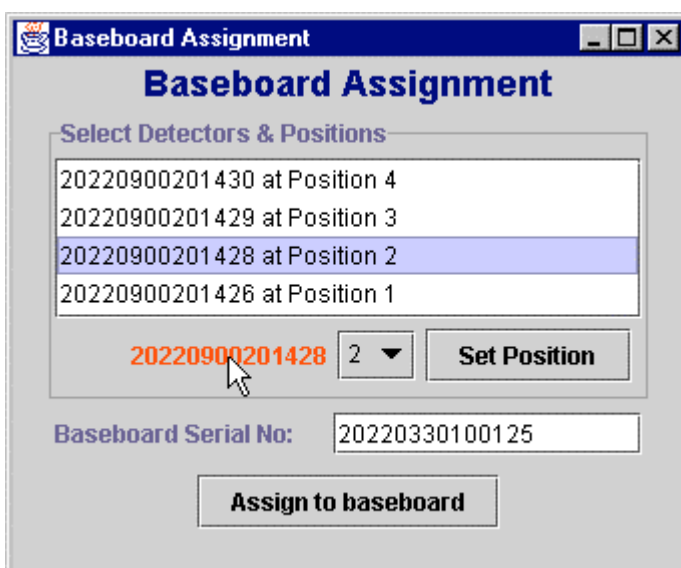


The software automatically assigns positions as you assign detectors to the baseboard.



But you can change the position on the baseboard by:

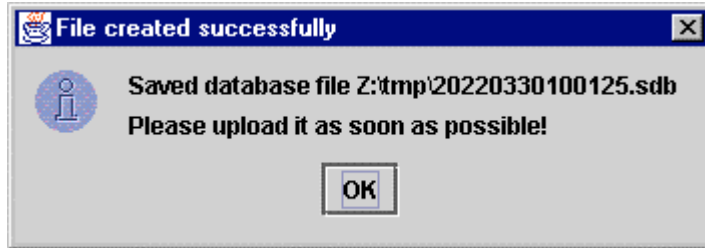
- 1 selecting a row
- 2 use menu to assign new position
- 3 Click on 'Set Position'



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

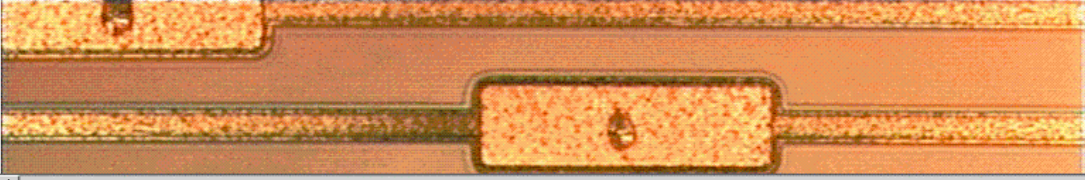
Serial Number	Location	Date	#Defects	Pinhole	Oxide-PT	Short	Open	Implant-O	Implant-S	Resistor
20220900201426	Hamamatsu	01MAR2001	1	1 (108)	0	0	0	0	0	0
20220900201426	Cambridge	17APR2001	1	1 (108)	0	0	0	0	0	0
20220900201428	Hamamatsu	01MAR2001	0	0	0	0	0	0	0	0
20220900201429	Hamamatsu	01MAR2001	1	1 (409)	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 between the 750 and 760 marks.

Installation and User Guide

www.hep.phy.cam.ac.uk/silicon

- 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

The screenshot shows a Microsoft Internet Explorer browser window. The title bar reads "Silicon Detector Development in the Cambridge HEP Group - Microsoft Internet Explorer". The address bar contains "http://www.hep.phy.cam.ac.uk/silicon/". The page header features the University of Cambridge crest and the text "UNIVERSITY OF CAMBRIDGE" on the left, and "Silicon Development in the HEP Group" on the right. Below the header is a navigation menu with a dropdown menu set to "Please select a Topic" and a link to "Contact the author of this website". The main content area has a heading "A Java Graphical User Interface to the SCT Database" and a paragraph stating "Version 5.0 is available since 12-07-2002. Author: [Dave Robinson](#)". It describes the software as a graphical user interface for submitting SQL queries to the SCT database in Geneva. A list of five database query categories is provided: Stocks, Items, Detector Tests, Shipments, and Selections for Modules. At the bottom, a "User Guide" section lists links for "Installation", "General Introduction" (with sub-links for starting, configuring, and monitoring the application), and "Stocks Tab".

Silicon Detector Development in the Cambridge HEP Group

UNIVERSITY OF CAMBRIDGE

Silicon Development in the HEP Group

— Please select a Topic —

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

A Java Graphical User Interface to the SCT Database

Version 5.0 is available since 12-07-2002. Author: [Dave Robinson](#)

This software is an easy-to-use graphical user interface that enables you to submit SQL queries to the SCT database located in Geneva. Its written in pure Java, and therefore runs on virtually anything (Windows, Linux, Mac, Sun etc). In its current form, the program generates reports in either spreadsheet or html format, and displays test images and lists of raw data. The GUI provides very comprehensive reporting for detectors in the SCT, but I'm expanding its functionality to cover some non-detector components. If you have any special requests for new features, then [let me know](#).

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.
- **Detector Tests** You can retrieve *any* test data for any SCT detectors, whether originating from the manufacturer or an ATLAS institute, including summaries, images, raw data listings etc. Your options range from the retrieval of specific data for a particular detector, to spreadsheets of data from all detectors in the SCT.
- **Shipments** Retrieve shipment information from any institute or manufacturer to any another institute or manufacturer, for shipments containing any type of component you specify. You can also retrieve comprehensive reports of all the items in any shipment (eg test results, test status and item status).
You can also easily create a new shipment for any number of items.
- **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 barrel module baseboard or forward module spline for assembly.

User Guide

1. [Installation](#)
2. [General Introduction](#)
 - [Starting the Application](#)
 - [Configuring the Application](#)
 - [Introduction to the GUI](#)
 - [How to Quit the Application](#)
 - [Monitoring the Progress of your database Query](#)
3. [Stocks Tab](#)

Developing your own Application

There are 3 options:

- write your own application, using your favorite programming language (eg java, perl, C++ etc or even Excel). If you use java, I or Didier can provide a simple template upon which you can build your application.
- Use existing java GUI as a template for your own GUI (you can download all the source code from the Cambridge silicon website)
- I could perhaps extend functionality of existing GUI to cover your needs, if you tell me what you want