



GSPC Historical File Utility

Graphic Statistical Process Control

by MeltLab Systems

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Fast • Accurate • Comprehensive

GSPC Historical File (Data Base)

- The data base consists of multiple files. The principle ones are the main data base and it's pointer file. For example, if the database was named Iron, then the pointer file would be named Iron.pt.
- Other files can optionally be used mostly to store text. Iron.St1 through St8 for shorter remarks, Iron.Cm1 through 4 for long comments.
- This program can reform the pointer file or optionally sort both the data file and the pointer file into date order.
- You can also change a date on a group of records of the same date. Say you incorrectly entered a day a year from now. This function can change all of those dates to a new date that you select.
- And finally, you can delete a date from the data base if needed. It is not easy, but after warnings, and confirming it a few times, it can be done.

Historical Information Panel

- Different Data bases can be sorted and reorganized.
- Increase the maximum records and Reform file to place the most recent data at the end.
- Remove a date.
- Redate a date (Change to another date)
- Export Data to an archive.

The screenshot shows a software interface with a menu bar (File, Show, Security, Debugging) and a date/time display (6/23/2014, 21:02:15). The main panel is divided into several sections:

- Data Base:** Includes a 'Reform' button, a dropdown menu, and a 'Choose by Specification' dropdown menu set to '24. Green Sand'.
- Data Base Status:** A table of values:

Records found	30000
Maximum Records	30000
Next Record	2705
Last Date	8/15/2012
Unused records	Full
Reusing Recs From	7/16/2012
- Date Pointer File Index:** A table of values:

Maximum Dates	720
Current Date #	320
Current Date	8/15/2012
Remaining Dates	400
- Selected Date:** A table of values:

Current Date	8/15/2012
First Record	2696
Last Record	2704
Record Span	9
- Fix Common Problems:** A list of radio buttons:
 - Reform and sort dates
 - Remove selected date
 - Change date to another
 - Sort Data BaseA 'Fix Now' button is visible next to the 'Reform and sort dates' option.
- Checkboxes:** A list of unchecked checkboxes:
 - Read Date Index
 - Form Date Index
 - Read in all Data
 - Write sorted Data to Disk
 - Reform Date Index

Data base usage and recycling

- Our requirements were that the data base be fast, be indexed, and require no user knowledge to keep it going.
- When the maximum number of dates were used, the dates would wrap around and reuse the oldest date position for the next date.
- When the maximum number of records were used, the records would wrap around and reuse the oldest positions.
- A knowledgeable user could export the data before storage was reused, but in foundries where this wasn't important, the data base would keep running without maintenance and recycle old data storage.

Dates and info

Dates	Recs	Dates	Recs	Dates	Recs	Dates	Recs
3/15/2011	1	6/15/2011	6	9/28/2011	9	1/6/2012	11
3/16/2011	8	6/16/2011	3	9/29/2011	8	1/9/2012	8
3/17/2011	9	6/17/2011	8	10/3/2011	9	1/10/2012	9
3/18/2011	8	6/20/2011	6	10/4/2011	3	1/11/2012	11
3/21/2011	8	6/21/2011	7	10/5/2011	7	1/12/2012	8
3/22/2011	8	6/22/2011	7	10/6/2011	6	1/13/2012	7
3/23/2011	8	6/23/2011	8	10/7/2011	9	1/16/2012	6
3/24/2011	8	6/24/2011	9	10/10/2011	6	1/17/2012	13
3/25/2011	8	6/27/2011	7	10/11/2011	9	1/18/2012	9
3/29/2011	8	6/28/2011	7	10/12/2011	10	1/19/2012	11
3/30/2011	8	6/29/2011	1	10/13/2011	5	1/23/2012	9

- The number of records is the last record – first record + 1.
- Sometimes dates can overlap due to the way samples are delivered to a spectrometer lab.
- So it is not the actual number of records but information on where to start and stop a search for a given date.

Individual Records

- Individual records can also be examined from the drop down **Show** menu. Pick a date, a time and see the record.

The screenshot shows a software interface with a 'Get Record' field containing '41' and a green checkmark. Below it are three tables. The first table lists dates and record counts. The second table lists individual records with their dates and times. The third table shows the details for the selected record (41), including its description and various values.

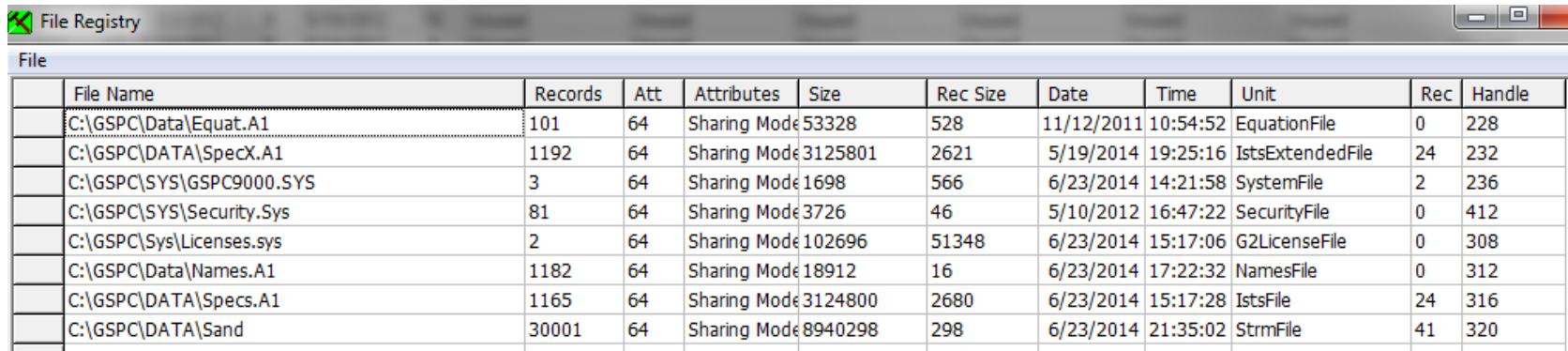
Dates	Start	Stop	Recs
1. 3/15/2011	1	1	1
2. 3/16/2011	2	9	8
3. 3/17/2011	10	18	9
4. 3/18/2011	19	26	8
5. 3/21/2011	27	34	8
6. 3/22/2011	35	42	8
7. 3/23/2011	43	50	8
8. 3/24/2011	51	58	8
9. 3/25/2011	59	66	8

Rec	Date	Time
35	3/22/2011	05:31
36	3/22/2011	08:51
37	3/22/2011	09:40
38	3/22/2011	10:52
39	3/22/2011	12:16
40	3/22/2011	15:50
41	3/22/2011	17:45
42	3/22/2011	19:30

Desc	Value	Note
Record	41	
Date	3/22/2011	
Time	17:45	
Spec	Green Sand	
MB Clay	9.3	
Moisture	4.1	
Compactability	42	
Hartley Comp	52	
Green Strength	20.4	

Files Open (every program)

- The File Registry is used to debug programs and find out which files are being used.
- The first record is often record zero because computers start counting with zero, not one.
- But some files use the zero record for version numbers and other things.



The screenshot shows a window titled "File Registry" with a table of open files. The table has 11 columns: File Name, Records, Att, Attributes, Size, Rec Size, Date, Time, Unit, Rec, and Handle. The data is as follows:

File Name	Records	Att	Attributes	Size	Rec Size	Date	Time	Unit	Rec	Handle
C:\GSPC\Data\Equat.A1	101	64	Sharing Mode	53328	528	11/12/2011	10:54:52	EquationFile	0	228
C:\GSPC\DATA\SpecX.A1	1192	64	Sharing Mode	3125801	2621	5/19/2014	19:25:16	IstsExtendedFile	24	232
C:\GSPC\SYS\GSPC9000.SYS	3	64	Sharing Mode	1698	566	6/23/2014	14:21:58	SystemFile	2	236
C:\GSPC\SYS\Security.Sys	81	64	Sharing Mode	3726	46	5/10/2012	16:47:22	SecurityFile	0	412
C:\GSPC\Sys\Licenses.sys	2	64	Sharing Mode	102696	51348	6/23/2014	15:17:06	G2LicenseFile	0	308
C:\GSPC\Data\Names.A1	1182	64	Sharing Mode	18912	16	6/23/2014	17:22:32	NamesFile	0	312
C:\GSPC\DATA\Specs.A1	1165	64	Sharing Mode	3124800	2680	6/23/2014	15:17:28	IstsFile	24	316
C:\GSPC\DATA\Sand	30001	64	Sharing Mode	8940298	298	6/23/2014	21:35:02	StrmFile	41	320

File Errors (every program)

- What you don't want to see is I/O Errors (Input Output errors)
- Errors can come from server errors, switch errors, and slow response times.
- When a program is having problems, check the errors in the file registry.

	I/O Error	I/O Desc	I/O Time	File Name and Path	Extended Description of error
1					
2					
3					
4					