Examples of an Actual User's Work & Output

QueryCalc

RECENT PUBLICATIONS

Realizing the Dream

Converting your data into useful information with QueryCalc

A paper presented at the

10th Annual

JobScope

Users' Conference

Realizing the Dream

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"QueryCalc is a magnificent product — and your support is second to none. As you well know, QueryCalc has multiplied the value of our ***Jobscope*** *applications a hundred times over and has become absolutely central to the operation of our business. If I were ever to change jobs, purchasing QueryCalc would be a pre-requisite before I would consider moving."*

George Mudie, MIS, Airtite Corporation, Chicago
& long-time **Jobscope** user

The Core of a Simple Idea

At the heart of every HP3000 lies a very simple idea. The HP3000's database, IMAGE, was designed to be no more than an electronic filing cabinet, and it was orginally meant to be just as easy to use. The evolution of computing over the last decade has unfortunately made some simple techniques and ideas seem enormously more complicated than they should be. But there is no reason to accept this complexity as the "normal" condition. The ideal condition is to make the distance between the database and the piece of paper as short and simple as possible.

You originally bought your HP3000 and **Jobscope** applications to replace the paper records you held in steel filing cabinets with electronic ones. You should now be able to get the information out at least as easily as you would have from the filing cabinets. QueryCalc was designed to allow you to create management reports with ease, without fuss or memorization. QueryCalc combines the two most basic ideas of any office, spreadsheets and filing cabinets, into one, single powerful tool. The key to this simplicity and reliable ease of use lies in the fact that QueryCalc is wholly resident on the HP3000. It requires no use of auxiliary PCs or downloads.

However QueryCalc's ease of use doesn't mean that anything's hidden from you. Quite the opposite, in fact. If you're ever really going to understand what's going on, you must be able to see what's in your databases. We designed QueryCalc to open up your IMAGE databases and make that information maximally visible to you.

The success of spreadsheets on computers has been historic, especially on personal computers. A spreadsheet inherently encourages a *"What if..."* form of analysis. But this is not the primary

manner by which you are going to use QueryCalc. QueryCalc allows you to extract information directly from the databases resident on your HP3000 and to easily manipulate that information in the manner that you require. If the computer is ever going to pay for itself, at least in the way you imagined it would before you bought it, this is where it's going to happen.

Visible Calculation

The single feature that made the electronic spreadsheet a success was *visible calculation.* You can see the relationships between the numbers on the page and you can change them. This feature alone accounts for much of the popularity of spreadsheets on personal computers. But the idea of visible calculation is enormously more valuable when applied to a database.

QueryCalc is a 26-page, 3-dimensional true spreadsheet. And QueryCalc can be used simply as that. Operations may occur over individual cells scattered over multiple pages, columns, rows, or as complete cubes. QueryCalc has all of the features and behaviors you would expect from the very best of the personal computer spreadsheets. But QueryCalc is more than that.

A normal spreadsheet is a large, flat plane of rows and columns. If you wanted to enter the sales figures for January, February and March, you would have to go to a pre-existing report, add the sales receipts yourself and type the answers in. Or you might use some form of a program to get that same information out of your IMAGE databases and transfer it into your PC by downloading an HP3000 file to a PC. Doing either procedure is cumbersome, tedious work where nothing is immediately intuitive or transparent. And it will be just as much trouble to do it next month when a newly calculated, updated report is needed again.

Nonetheless, it's obvious that there is a strong pressure to do something exactly like this. Quite likely, someone in your organization is already using one or the other procedures, trying to get information out of your IMAGE databases into a form that he or she can understand and is familiar with on a personal computer.

QueryCalc is different. Where a normal spreadsheet is thin and flat, QueryCalc has depth. Every cell in QueryCalc can be a database inquiry question into any one of 10 IMAGE databases. Defining sums, comparisons, and trends among the information extracted from the databases is easily done because of the spreadsheet nature of the report. And text formatting and reorganization take on word processing-like attributes. QueryCalc is a "what-you-see-is-what-you-get" *(WYSIWYG)* report writer. No trial formats or trial compilations are necessary. You know what the output will look like before you print it because it's right there on the screen.

QueryCalc was designed so that everything is visible while you are putting a report together. The report you create, while you are creating it, is like putty. If you don't like what you've done, you can change it immediately. The data you retrieve from the IMAGE databases is completely open for your inspection. Users have consistently found that reports can be assembled 5 to 60 times faster than they could be using any other method — and yet the entire process is simple enough that you can learn to use it by mimicking someone else's report. But most important-

ly, QueryCalc reports can be converted into a batch job with just one command, gathering and building your standard reports, week after week, without any further operator intervention. And this becomes the essence of productivity.

A Sample Report

Consider the report on the following page. The text that fills the left hand column of the report is nothing more complicated than text labels, typed in by the person composing the report as he or she wished them to be.

But it is the right hand column of numbers that defines the power of QueryCalc. These numbers were not simply typed in or downloaded, as would normally be the case, but are the results of direct database query questions which reside in their respective cells. The displayed results came directly out of IMAGE database(s) into the spreadsheet, were summed and formatted all in one step and are now ready to be printed.

Creating the query questions is more easily done than you might imagine. A uniform but powerful English-like syntax was created to allow you to ask just about anything imaginable. A question for one cell in this report might be:

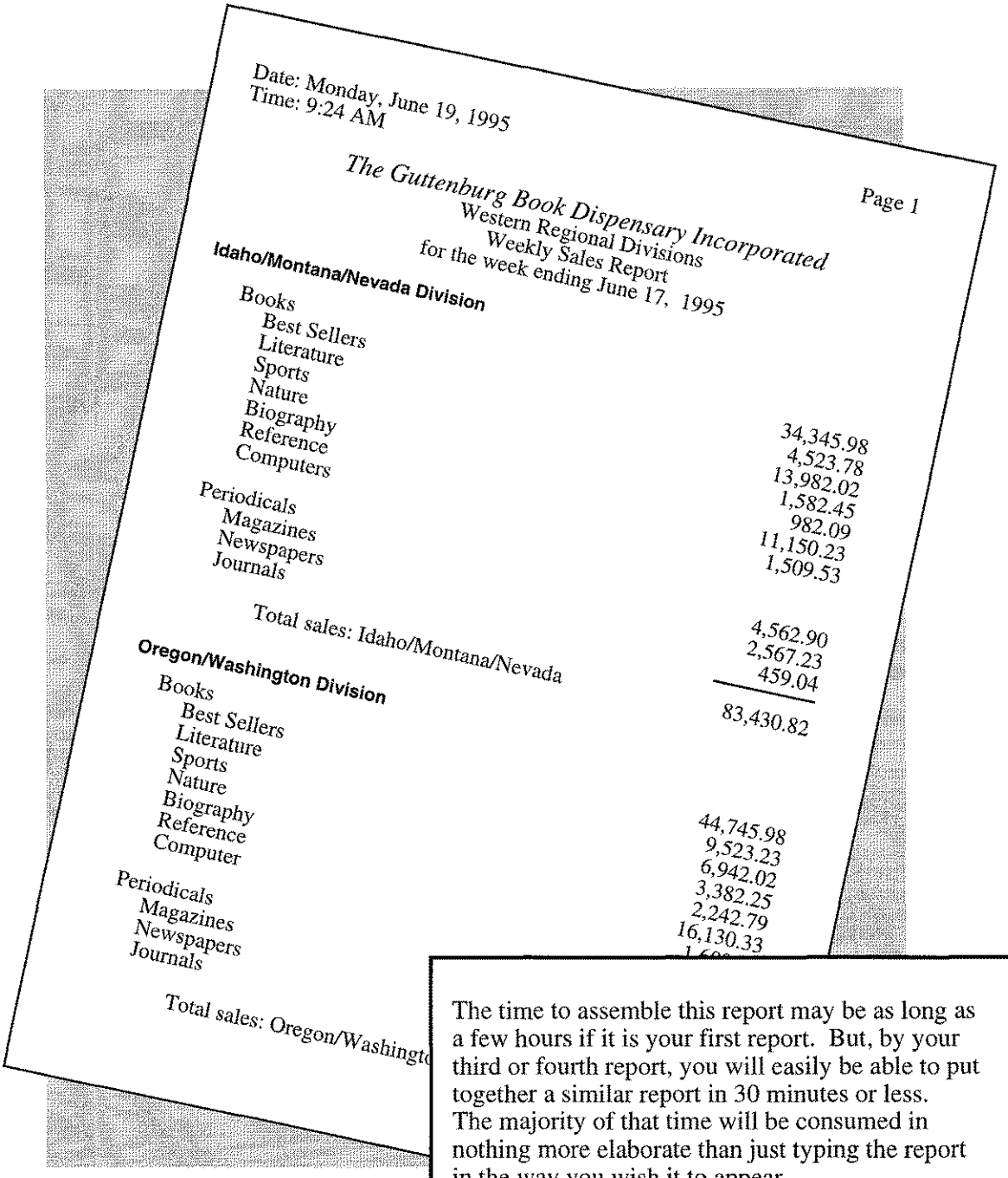
@sum of sales+receivables when date ib (is between) 19980611,19980617
and division is NW and category is 521".

The next query question down the right hand column is quite likely to be very similar to the one above it, except that now perhaps the category is 522 instead of 521. Because of the spreadsheet nature of QueryCalc, a single query question may be replicated down a column. The query questions may then be modified using QueryCalc's on-line cell editor, or more sweeping changes can be as easily accomodated with the search and replace function.

And QueryCalc is intelligent. If you do not specify the dataset or database, QueryCalc will determine the proper database and dataset to get this information on its own. And it's fast. Every query is optimized to perform amazingly fast retrievals. QueryCalc automatically optimizes every query question to search down the shortest possible path.

To complete the report, only the column totals remain. Subtotals are created as column sums of the cells directly above [e.g., "SUM(E15:E21)"]. Displaying a grand total is no more difficult than composing a statement summing the subtotal cells, such as "E23+E34".

The report is now done; putting an actual QueryCalc report together is no more difficult than it appears to be here.



Date: Monday, June 19, 1995
Time: 9:24 AM

The Guttenburg Book Dispensary Incorporated
Western Regional Divisions
Weekly Sales Report
for the week ending June 17, 1995

Page 1

Idaho/Montana/Nevada Division

Books	
Best Sellers	34,345.98
Literature	4,523.78
Sports	13,982.02
Nature	1,582.45
Biography	982.09
Reference	11,150.23
Computers	1,509.53
Periodicals	
Magazines	4,562.90
Newspapers	2,567.23
Journals	459.04
Total sales: Idaho/Montana/Nevada	83,430.82

Oregon/Washington Division

Books	
Best Sellers	44,745.98
Literature	9,523.23
Sports	6,942.02
Nature	3,382.25
Biography	2,242.79
Reference	16,130.33
Computer	
Periodicals	
Magazines	
Newspapers	
Journals	
Total sales: Oregon/Washingt	

The time to assemble this report may be as long as a few hours if it is your first report. But, by your third or fourth report, you will easily be able to put together a similar report in 30 minutes or less. The majority of that time will be consumed in nothing more elaborate than just typing the report in the way you wish it to appear.

Business Management on the HP3000

It doesn't take a good manager long to realize that the information being accumulated in the corporation's databases can tell him much about his company, especially about what's making money, what's costing money, and who the customers are. This is the most important information that any manager ever gets. These are the reports that tell you things such as shipping cost analyses, inventory turn-around times, and marketing demographics. These reports weren't initially planned when the system software was put together, but they would now be eminently informative.

QueryCalc was designed from its inception to provide a mechanism so that members of the management staff could go to lunch, talk about what information they need, go back to the office and have the reports ready, with graphics, by about three in the afternoon. The report may be written by either a member of the programming staff or, even more likely, by one of the people at lunch. QueryCalc reports can be assembled so quickly that the final report can be put together while it is still being discussed.

But a spur-of-the-moment report is generally more valuable than just as a one-shot query. Quite likely, more than 70% of the *ad hoc* reports that were designed because of an afternoon needs will prove to have lasting value when regularly updated with new data, and will be used again and again. QueryCalc was designed to produce such reports: efficient, self-optimizing and capable of being run as regularly scheduled production reports.

QueryCalc's Primitive Construction

In order to make reports as fast and easy to assemble and intuitively understandable as possible, there are only four types of cells in QueryCalc:

- numeric equations
- text labels
- text equations
- query questions

Each of these cell types return information in exactly the same form, thus you can string the cells together like tinker-toys. Everything in QueryCalc is built around these few *primitives*, so it's not only possible but quite likely that you will have a query questions that use information extracted from a text equations or numeric equations use values retrieved from query questions. What this means is that if you know how to do a simple procedure in QueryCalc, you'll intuitively have a very good idea how to do something greatly more complex.

Indeed, this simple technique is so powerful in allowing you the capacity to write truly complex reports that you may not realize its power unless you have previously struggled with some other method first. **Susan Putnam** of Cardinal Aluminum, Louisville, another long-time **Jobscope** user, has said that this one attribute alone has been a great blessing.

The Rules Associated with QueryCalc Programming

QueryCalc was designed so that a report may be re-used and mimicked many times over. And that is one of the three basic "tricks" known to every successful programmer. There are are just these three items worth remembering, and they are especially applicable to QueryCalc:

1. ***Be aggressive.*** This is the most important trick of QueryCalc programming you'll ever learn. QueryCalc was designed precisely so that you can be exceptionally aggressive without fear of harming anything. QueryCalc opens your IMAGE, KSAM or MPE databases in a read-only mode without locking the datafiles. Because you can't modify, create or delete any information in the database, you can do no harm to the database or to the HP3000. QueryCalc opens your databases with such a light touch that system backups can proceed while you are executing your reports.

   The worst harm that you can do ever do is to destroy your own work. But if sufficient time has elapsed since the report was first created, quite likely an earlier (if not identical) version of the report has been stored on a backup tape. If you work in a large organization and do not know your system managers well, such times are excellent opportunities to get to know them better.

   QueryCalc was designed to automatically generate efficiently executed reports and will guide you towards the creation of a well thought-out construction. How can you tell if your report is efficient? Generally, just by the time it takes to execute. If you have done something that is quite slow (which may imply some sort of inefficiency), you will especially notice it in session mode. Execution that is taking some time can always be stopped in mid-process by pressing the CNTL-Y keys. You may then examine the cells that are taking so much time. By the time you are ready to job-stream your reports, your reports will almost always be quite well-constructed and efficient.

   The bottom line moral remains: *be agressive.* You can do no harm to the databases, to the HP3000, or generally do anything that is all that inefficient. Being agressive is the only way you will learn.

2. ***Program by imitation.*** The second great trick of programming is called *"ditto programming"*. Every good programmer knows the trick. When you look at someone else's reports, think abstractly. The report you see won't be precisely the same one you need, but it is probably more similar than different. You already know a great

deal of information about your own databases. Even if you don't know what the databases are called or where they are, you have a very good idea of what's in them and how important that information is to you. And you know what information you need to see. Search through QueryCalc's *Applications Guide* and find reports which generate report structures similar to those which would be useful to you. You should be able to write comparable reports using your own databases in 2 or 3 days.

3. ***Know your databases.*** This third bit of advice is critical. There is a growing tendency to isolate the user from the database, to relieve him of the requirement of intimately knowing the databases from which he is extracting his information. If that is not an easy recipe for disaster, it is at least a quick recipe for confusion and error.

   A database is meant to be the *image* of a steel filing cabinet, filled with paper records. Nothing more. If you could have found the information you needed in a standard filing cabinet, you can find it in your databases. This is especially true of IMAGE on the HP3000. Almost all of the difficulty you'll have in using databases will come from determining what someone else called the items and finding out where they're located. But that's much the same problem you'd have when using someone else's standard filing cabinets for the first time.

Appendix I

Examples of QueryCalc/Jobscope Summary Reports

Four **Jobscope** summary (spreadsheet) reports developed by **George Mudie** of Airtite Contractors, Inc., Chicago, are presented in the next four pages.

QueryCalc can generate three distinctly different forms of report:

- summary (spreadsheet) reports
- detail list reports
- graphical summaries

These various report forms can mixed in almost any order. The spreadsheet is the default report type. The other two report types are built by typing **/REPORT** or **/GRAPH** at the command line.

The following four pages are summary reports. In the combined profit & loss and the aging summary reports, the light numbers are the results of direct query questions extracting information directly from the **Jobscope** database(s). The dark numbers are simple spreadsheet summaries.

George's form letter is also a simple spreadsheet page—it merely looks like a letter—but it extracts the vendor's name directly from the database through the use of a series of query questions, as well as all other relevant financial information. Lines, logo, and a signature are added to the spreadsheet to give if a fully polished appearance.

The exposed grid estimate form sheet is similarly a spreadsheet, but one composed of only lines, boxes, logo, and a bit of text.

QueryCalc runs on the smallest of HP3000s with efficiency, and indeed, in George's case, are executed on a Micro3000 in a matter of only a few minutes (which would be only seconds on a larger PA-RISC HP3000).

COMBINED PROFIT & LOSS — **THRU PERIOD ENDING 9/30/94**

[Page One of Two]

	LOCAL	DIV #1	DIV #2	TOTAL ALL DIVISIONS
SALES	**9,221,031.36**	**1,685,567.53**	**1,593,085.38**	**12,499,684.27**
DIRECT COSTS				
SUBCONTRACTING	433,847.01	251,549.98	108,805.08	794,202.07
MATERIAL	3,444,637.76	401,862.52	507,626.10	4,354,126.38
FREIGHT - JOB ONLY	96,754.70	5,749.30	22,641.06	125,145.06
BURDEN EXPENSE	937,562.27	289,634.36	77,300.86	1,304,497.49
LABOR	1,061,720.50	273,458.76	103,931.20	1,439,110.46
TRUCKING LABOR	138,854.64	17,497.61	1,083.63	157,435.88
TRAVEL EXPENSE	19,653.67	1,410.00	33,589.57	54,653.24
PENSION AND WELFARE	0.00	0.00	0.00	0.00
SHOP DRAWINGS	16,715.53		279.10	16,994.63
ENGINEERING	31,407.97			31,407.97
SALES TAX	151,097.64	10,912.23	5,184.68	167,194.55
COMMISSION EXPENSE	0.00		0.00	0.00
TOTAL DIRECT COSTS	**6,332,251.69**	**1,252,074.76**	**860,441.28**	**8,444,767.73**
ADJUSTED REVENUE	***2,888,779.67***	***433,492.77***	***732,644.10***	***4,054,916.54***
DIRECT COSTS - LABOR RELATED				
WORKMENS'COMP.INSURANCE	225,227.70	11,541.75	24,615.36	261,384.81
FEDERAL U.C. TAX	3,413.19	1,220.00	512.80	5,145.99
STATE U.C. TAX	44,713.37	15,899.92	5,100.99	65,714.28
FICA	97,747.71	27,813.49	8,825.31	134,386.51
LABOR	282.00	0.00	-0.64	281.36
NO CHARGE LABOR	0.00	0.00	0.00	0.00
PENSION AND WELFARE	311,818.44	143,154.71	42,415.95	497,389.10
PENSION AND WELFARE ABSORBED	0.00	0.00	0.00	0.00
BURDEN APPLIED ON LABOR RELATED EXP	-459,024.74	-134,866.30	-27,746.05	-621,637.09
TOTAL DIRECT LABOR RELATED COSTS	**224,177.67**	**64,763.57**	**53,723.72**	**342,664.96**
ADJUSTED REVENUE	***2,664,602.00***	***368,729.20***	***678,920.38***	***3,712,251.58***
OTHER INDIRECT COSTS				
INCOME ON PRIOR YEAR CONTRACTS	0.00	0.00	0.00	0.00
PURCHASE DISCOUNTS	-15,347.55	-4,299.68	-633.01	-20,280.24
NO CHARGE MATERIAL	0.00	0.00	0.00	0.00
FREIGHT	32,328.29	726.59	1,621.06	34,675.94
PURCHASE VARIANCE	2,305.78	0.00	0.00	2,305.78
INVENTORY VARIANCE	-16,351.90	-5,061.61	5,304.25	-16,109.26
OBSOLETE INVENTORY	-557.50	2,070.74	0.00	1,513.24
CHARGES ON PRIOR YEAR CONTRACTS	27,303.25	0.00	1,284.36	28,587.61
UNABSORBED DIFFERENCES	0.00	0.00	0.00	0.00
TRUCKING LABOR	-60,322.35	6,704.43	-1,083.63	-54,701.55
TRUCKING LABOR ABSORBED	0.00	0.00	0.00	0.00
TRAVEL EXPENSE	1,635.92	50.00	876.93	2,562.85
TRAVEL EXPENSE ABSORBED	0.00	0.00	0.00	0.00
PENSION AND WELFARE - TRUCK DRIVERS	15,522.44	-1,542.19	0.00	13,980.25
TRUCK EXPENSE	17,611.81	20,727.15	3,031.95	41,370.91
SMALL TOOLS	29,118.43	9,187.36	2,330.58	40,636.37
WAREHOUSE EXPENSE	109,205.14	9,703.77	13,183.99	132,092.90
SUPERVISION	78,396.00	28,626.00	32,440.00	139,462.00
DEPRECIATION EXPENSE - TRUCKS	9,400.00	1,200.00	900.00	11,500.00
DEPRECIATION EXPENSE - EQUIPMENT	300.00	2,100.00	0.00	2,400.00
SHOP DRAWINGS	11,755.70	0.00	16,187.41	27,943.11
TAXES PERS. PROPERTY - TOLEDO			6,000.00	6,000.00
SALES TAX	0.00	0.00	0.00	0.00
SALES TAX ABSORBED	0.00	0.00	0.00	0.00
BURDEN APPLIED-NON-LABOR RELATED EX	-478,537.53	-154,768.06	-49,554.81	-682,860.40
TOTAL OTHER INDIRECT COSTS	**-236,234.07**	**-84,575.50**	**31,889.08**	**-288,920.49**
ADJUSTED REVENUE	***2,900,836.07***	***453,304.70***	***647,031.30***	***4,001,172.07***

Printed March 19, 1995

Interested Party

POINT IN TIME AGING SUMMARY FOR REVENUE FORECAST WORKSHEET

Invoices and Payments Booked/Received before February 1, 1995

Aging spread reference date is January 31, 1995

	TOTAL BILLINGS	TOTAL DUE	UNDER 31 DAYS	31 TO 60 DAYS	61 TO 90 DAYS	91 TO 120 DAYS	OVER 120 DAYS	RETENTION DUE
LOCAL CONTRACTS	10,671,342.34	2,565,926.16	549,912.64	1,349,846.44	296,880.28	56,282.35	313,004.45	820,176.89
LOCAL MATERIAL SALES	179,461.25	118,574.67	37,995.14	72,231.18	10,587.95	587.00	-2,826.60	
LOCAL TOTAL	***10,850,803.59***	***2,684,500.83***	***587,907.78***	***1,422,077.62***	***307,468.23***	***56,869.35***	***310,177.85***	***820,176.89***
BRANCH #1 CONTRACTS	471,710.00	188,252.65	98,333.00	47,179.15	7,103.00	14,865.00	20,772.50	19,998.28
BRANCH #1 MATERIAL SALES	5,606.83	2,597.10	1,844.19	1,969.29	77.10		-1,293.48	17.34
BRANCH #1 TOTAL	***477,316.83***	***190,849.75***	***100,177.19***	***49,148.44***	***7,180.10***	***14,865.00***	***19,479.02***	***20,015.62***
BRANCH #2 CONTRACTS	1,073,973.95	446,142.77	55,414.87	193,020.70	166,511.90	5,062.00	26,133.30	58,291.94
BRANCH #2 MATERIAL SALES	39,960.09	16,855.27		12,982.39			3,872.88	
BRANCH # 2 TOTALS	***1,113,934.04***	***462,998.04***	***55,414.87***	***206,003.09***	***166,511.90***	***5,062.00***	***30,006.18***	***58,291.94***
OTHER CONTRACTS	128,550.00	-5,015.80					-5,015.80	8,738.10
OTHER MATERIAL SALES								
OTHER TOTAL	***128,550.00***	***-5,015.80***					***-5,015.80***	***8,738.10***
BRANCH #2 & OTHER TOTALS	***1,242,484.04***	***457,982.24***	***55,414.87***	***206,003.09***	***166,511.90***	***5,062.00***	***24,990.38***	***67,030.04***
PLANT MATERIAL SALES	***469,374.82***	***382,737.45***	***201,933.38***	***82,525.57***	***43,309.86***	***6,692.14***	***48,276.50***	
COMPANY TOTAL	***13,039,979.28***	***3,716,070.27***	***945,433.22***	***1,759,754.72***	***524,470.09***	***83,488.49***	***402,923.75***	***907,222.55***

AIRTITE
Contractors Inc.
2900 North Western Avenue
Chicago, Illinois 60618
Phone: 312/463-2500 Fax: 312/463-0549

March 19, 1995

SOME CONTRACTORS INC.
200 EAST CHICAGO AVE.
SUITE 2189
NAPERVILLE, IL 60540

SUBJECT: RECENT PROJECT

Gentlemen:

Our independent auditors, Grant Thornton, are engaged in an examination of our financial statements. For verification purposes only, would you kindly respond to them directly about the accuracy of the following information as of **December 31, 1994.**

1.	Original contract price:	$481,721.00
2.	Total approved change orders:	$2,938.00
3.	Total billings:	$507,695.40
4.	Total payments:	$474,098.80
5.	Total unpaid balance:	$33,596.60
	Including retention of:	$21,862.60
6.	Details of any claims, back charges or disputes concerning this contract. (Attach seperate sheet if necessary).	
7.	Estimated completion date:	SEP 26 94

Enclosed is a self-addressed, stamped envelope for your convenience in replying directly to our auditors. Your prompt response will be greatly appreciated.

Very truly yours,

Dedra Reeves

Dedra Reeves
Financials

DR/aec

The above information is:

[ ] Correct
[ ] Incorrect (please submit details of any differences)

By: _____ Date: _____
Signature Title

PURCHASE QUANTITY, UNITS & UNIT COST MUST BE CONSISTENT.
X=(S=Stock; P=Purchase; M=Misc, Old Job Material)

AIRTITE

EXPOSED GRID ESTIMATE SHEET

SHOW UNITS FOR ALL ITEMS

ITEM/ VENDOR	PART NUMBER	X X	DESCRIPTION(If NOT Stock) PO#, PO item & Ship# for N/C Material	WHSE PIECES	PURCHASE QUANTITY / UNITS	PURCHASE UNIT COST	EXTENDED COST	LABOR
SHOTS - TOGGLES TAPCON - EYELAGS								GRID
HANGER WIRE	12 GAUGE RAYHW12-?							MD:
MAIN TEES								
CROSS TEES								BOARD
CROSS TEES								MD:
MOLDINGS								
CEILING BOARD								MISC
CEILING BOARD								MD:
BRIDGING								
INSULATION								NOTES
ACOUSTICAL SEALANT								
MISCELLANEOUS								

GROSS _____

NET _____

MISC _____

PER. RATIO _____

JOB# _____

NAME _____

SALESMAN _____

MATERIAL COST _____

ESCALATION _____

TOTAL MATERIAL COST _____

TOTAL LABOR

Appendix II

Examples of QueryCalc/Jobscope Detail List Reports

Three **Jobscope** detail list reports developed by **George Mudie** of Airtite Contractors, Inc., Chicago, are presented in the next three pages.

The first two reports are multi-group reports. That is, they contain both a header group and a listing of the appropriate detail information below the header. In the case of the fax purchase order, the header information causes a new page to print with each change in the header group. The material ticket is a three group report (the customer, the ticket number, and the items on the ticket), where again each change of customer header information causes a new page to print.

The first two detail list reports merge their printing into a form developed on a standard spreadsheet page. The form and the detail list report are independent QueryCalc pages but are wedded at the time of printing through the use of a simple command:

```
/PRINT A S FORMB
```

which is translated as: print the report located on Page A to the system printer, using the form found on Page B.

A detail list report employs exactly the same cell types as found on a spreadsheet page, but there are differences. On a spreadsheet page, the cells only calculate once as the processor moves on to the next cell. Unless you command QueryCalc to do otherwise, every cell is visited only once. But on the detail list report page, the cells are repetitively recalculated in a loop. No reason exists to compile the cells on the spreadsheet because of their one-time nature, but complilation is of significant value on the detail list report. The cells that are entered onto a detail list report page are automatically compiled before execution begins.

AIRTITE Contractors Inc.
2900 North Western Avenue
Chicago, Illinois 60618
Phone: 312/463-2500 Fax: 312/463-4948

FAX PURCHASE ORDER

JOB
FIRST CARD
FIRST CARD
3 FLOORS - WESTFIELD III
2500 WESTFIELD DR.
ELGIN

ILLINOIS RESALE NUMBER: 1041-9233
TRUCKER TO CALL 312/463-2500 24 HOURS BEFORE DELIVERY

VENDOR: TATE **SHIP TO:** AIRTITE WAREHOUSE **CARRIER:** BEST WAY

JOB/WO	WO TYPE	MULT	DISCOUNT	PO NUMBER	PO DATE	BUYER	SPECIAL INSTRUCTIONS
F9400079 0002	JOBMAT	1.0000	.9	004250	03/14/95	BESSERT	

BOM#	PART# NUMBER	DESCRIPTION	QUANTITY	UM	DATE NEEDED	UNIT COST	TOTAL COST
001	TAT4411	CC1250/24" 5D BARE 924 CRS BARE STANDARD	33,113	EA	08/26/94	10.93	362,011.18
002	TAT4305	CC1500/24" 5D BARE 924 CRH BARE STD	3,182	EA	08/26/94	13.56	43,153.65
003	TAT3698	BASE, 4-1/2" TUBE 7" FFH, REPLACES418922	26,477	EA	08/26/94	0.92	24,358.84
004	TAT3712	BASE, 11-1/2" TUBE, REPLACES 419423	135	EA	08/26/94	0.00	0.00
005	TAT3727	BASE, 18-1/2" TUBE FFH,REPLACES 419731	120	EA	08/26/94	1.42	170.82
006	TAT3736	BASE, 25-1/2" TUBE FFH,REPLACES 419839	80	EA	08/26/94	1.71	136.66
007	TAT3779	BASE, 3-1/4" TUBE, REPLACES 418914	2,988	EA	08/26/94	1.80	5,378.40
008	TAT3752	BASE, 10-1/4" TUBE, REPLACES 419415	76	EA	08/26/94	0.00	0.00
009	TAT3760	BASE, 17-1/2"TUBE FFH,REPLACES 419723	85	EA	08/26/94	1.42	121.00
010	TAT3768	BASE, 24-1/2" TUBE FFH,REPLACES 419831	45	EA	08/26/94	1.71	76.87
011	TAT3893	P902 PERIMETER TUBE (2) #10-24HL	5,296	EA	08/26/94	0.31	1,654.47
012	TAT2394	SCREW, F-715 FOR STRINGERS	12,210	EA	08/26/94	0.04	472.53
013	TAT7379	HEAD, P902 TUBULTD 4" STUD NUT & DTNT OR REVERSED P902 W/4" STUD,REPLACED TAT	46,314	EA	08/26/94	1.27	58,740.05
014	TAT4166	SCREW, F-912 CORNERLOCK 1"	140,300	EA	08/26/94	0.04	5,022.74
015	TAT303	ADHESIVE, PEDESTAL PA-1G #282 STD GAL	234	EA	08/26/94	8.19	1,917.21
016	TAT427680	AS1250/24" 5D 125N MR65 BLK	4,660	EA	09/02/94	0.00	0.00
017	TAT558780	724AFHD 5D 25% 125N MR65 BLK	527	EA	09/02/94	0.00	0.00
018	TAT427464	CC1500 .125 MR-6-1 BLK TRIM 924 CRH .125 MR-6-1 BLK TRIM	800	EA	09/02/94	21.85	17,479.84
019	TAT3765	BASE, 21-1/4 TUBE, REPLACES TAT601455	5,820	EA	09/02/94	2.95	17,169.00
020	TAT3732	BASE, BS 21-1/2 TUBE 24FFH REPLACES TAT419755	8,086	EA	10/14/94	1.32	10,650.07
021	TAT3763	BASE, 24" FFH 20-1/4" TUBE REPLACES TAT419747	2,102	EA	09/02/94	3.25	6,831.50
022	TAT3689	STRINGER, SNAP-ON S902 24", REPLACES9579	11,650	EA	09/02/94	0.73	8,524.30

AUTHORIZED SIGNATURE

DATE

Customer & Jobsite
FIRST CARD

3 FLOORS - WESTFIELD III
2500 WESTFIELD DR.
ELGIN, IL

FIRST CARD

MATERIAL TICKET

March 14, 1995

F9400079 BESSERT

Processed by: _____

Process Date: _____

BOM ITM	PART NUMBER	PART DESCRIPTION	PO NUM	ISSUED TO DATE	ACCTNG NEEDED	WHSE NEEDED	SHIPPED THIS TICK
	F9400079 0002	***CHICAGO PURCHASED FOR JOB MATERIALS***	TICKET: 02-950314-17:23		***LAST ISSUE: 950310***		
001	TAT4411	CC1250/24" 5D BARE 924 CRS BARE STANDARD	004250	33,113.0	EA	0.0 EA	
002	TAT4305	CC1500/24" 5D BARE 924 CRH BARE STD	004250	3,182.0	EA	0.0 EA	
003	TAT3698	BASE, 4-1/2" TUBE 7" FFH, REPLACES418922	004250	26,477.0	EA	0.0 EA	
004	TAT3712	BASE, 11-1/2" TUBE, REPLACES 419423	004250	135.0	EA	0.0 EA	
005	TAT3727	BASE, 18-1/2" TUBE FFH,REPLACES 419731	004250	120.0	EA	0.0 EA	
006	TAT3736	BASE, 25-1/2" TUBE FFH,REPLACES 419839	004250	80.0	EA	0.0 EA	
007	TAT3779	BASE, 3-1/4" TUBE, REPLACES 418914	004250	2,986.0	EA	0.0 EA	
008	TAT3752	BASE, 10-1/4" TUBE, REPLACES 419415	004250	84.0	EA	0.0 EA	
009	TAT3760	BASE, 17-1/2"TUBE FFH,REPLACES 419723	004250	85.0	EA	0.0 EA	
010	TAT3768	BASE, 24-1/2" TUBE FFH,REPLACES 419831	004250	49.0	EA	0.0 EA	
011	TAT3893	P902 PERIMETER TUBE (2) #10-24HL	004250	5,296.0	EA	0.0 EA	
012	TAT2394	SCREW, F-715 FOR STRINGERS	004250	12,210.0	EA	0.0 EA	
013	TAT7379	HEAD, P902 TUBULTD 4" STUD NUT & DTNT OR REVERSED P902 W/4" STUD,REPLACED TAT2685	004250	46,314.0	EA	0.0 EA	
014	TAT4166	SCREW, F-912 CORNERLOCK 1"	004250	140,300.0	EA	0.0 EA	
015	TAT303	ADHESIVE, PEDESTAL PA-1G #282 STD GAL	004250	234.0	EA	0.0 EA	
016	TAT427680	AS1250/24" 5D 125N MR65 BLK	004250	4,680.0	EA	0.0 EA	
017	TAT558780	724AFHD 5D 25% 125N MR65 BLK	004250	527.0	EA	0.0 EA	
018	TAT427464	CC1500 .125 MR-6-1 BLK TRIM 924 CRH .125 MR-6-1 BLK TRIM	004250	800.0	EA	0.0 EA	
019	TAT3765	BASE, 21-1/4 TUBE, REPLACES TAT601455	004250	5,820.0	EA	0.0 EA	
020	TAT3732	BASE, BS 21-1/2 TUBE 24FFH REPLACES TAT419755	004250	8,086.0	EA	0.0 EA	
021	TAT3763	BASE, 24" FFH 20-1/4" TUBE REPLACES REPLACES TAT419747	004250	2,102.0	EA	0.0 EA	
022	TAT3689	STRINGER, SNAP-ON S902 24", REPLACES9579	004250	11,650.0	EA	0.0 EA	
023	TAT6868	P902 RAMP 21 7/8" TUBE 24" FFH	A04250	153.0	EA	0.0 EA	
024	TAT6855	P902 RAMP 15 7/8" TUBE 18" FFH	A04250	97.0	PC	0.0 PC	
025	TAT3462	CS-716 4' BOLTED STRINGER W/ GASKET	A04250	180.0	EA	0.0 EA	
026	TAT3499	STRINGER, CS-716 2' BOLTED W/ GASKET	A04250	315.0	EA	0.0 EA	
027	TAT7243	SCREW, COMBO F912 EX. 2000/BOX	A04250	1,360.0	EA	0.0 EA	
028	AER1PPO	GASKET, 1/2"X 1" PSA SOFT SPONGE RUBBER #P501003S13A	004456	200.0	LF	0.0 LF	
029	PLENUM-DIVIDEDASSY	PLENUM DIVIDED ASSEMBLY 24" FFH	004458	200.0	LF	0.0 LF	
030	LOT-ILLINISPL-FLOOR	LOT CHG FOR 394 LF OF C/S #GFPS-200 RE-	004575	4,256.0	LT	0.0 LT	
031	TAT3692	P902 RAMP 4" STUD W/NUT	A04250	396.0	EA	0.0 EA	
032	TAT3688	ADAPTOR P902 SNAP-ON STRINGER	004250	5,820.0	EA	0.0 EA	
033	TAT7385	GROMMET, GR-5 BLACK FOR 5" HOLE,3FIN.LID	004825	1,300.0	700.0 EA	700.0 EA	
034	PEDEXT	PEDESTAL EXTENSIONS	004898	150.0	EA	0.0 EA	
	F9400079 0003	***STOCK INVENTORY FOR JOBS***	TICKET: 03-950314-17:26				
	F9400079 0004	***MISCELLANEOUS NON STOCK MATERIAL***	TICKET: 04-950314-17:27		***LAST ISSUE: 950131***		
001	TAN2X2ANGLE	ANGLE, 2" X 2" X 3/16" STEEL ANGLE, PRIM	004576		180.0 LF	180.0 LF	
002	TAN21/4X11/4L-BRACKE	BRACKET, "L" 2 1/4" X 1 1/4" 20 GA. GALV	004576	360.0	LF	0.0 LF	
003	PLYWOOD4X8X1/2	CDX PLYWOOD 4' X 8' X 1/2" - 15 PCS.	CL0394	15.0	PC	0.0 PC	
004	ASB10X1SCREW	SCREW, 10 X 1 PHIL FLAT A ZP #PFA10-1Z	AS0195	500.0	EA	0.0 EA	
005	ASBSCREW10X11/2	SCREW, 10 1 1/2 PHIL FLAT A ZP #PFA10-11	AS0195	100.0	EA	0.0 EA	
006	PLYWOOD4X8X3/4	A/C PLYWOOD 4 X 8 X 3/4	CL0195	6.0	PC	0.0 PC	
	F9400079 0005	***CHICAGO PURCHASES FOR JOBS***	TICKET: 05-950314-17:27		***LAST ISSUE: 950307***		
002	TAT255	POP RIVETS AD44BS LF AT N/C	T00450	5,300.0	EA	0.0 EA	
003	TAT9003	DAMPER KIT TOP PERF CONVERSION/THESE N/C	T00450	530.0	EA	0.0 EA	
004	SCREW8-18	TEK SCREW 8-18 1/2 PH RD WASHERS	AS0195	2,000.0	3,000.0 EA	3,000.0 EA	

LIEN STATUS REPORT - DAYS LEFT TO LIEN JOB

CHICAGO

ASSUMES RIGHTS EXPIRE 90 DAYS FROM LAST LABOR

Only jobs with unpaid invoices are included on this report

IF BILLING IS INCOMPLETE LIEN RIGHTS MAY STILL EXPIRE!

JOB NUMBER	JOB NAME	CUSTOMER	SALESMAN	PRICE	DATE PO	LAST LABOR	DATE CLOSED	JB ST	TOTAL BILLED	TOTAL DUE	RETENT DUE	DAYS LEFT
F9400186	SEARLE	J. L. BURKE CONTRACTING	QUINN	2,150	12/12/94	12/19/94	12/31/94	IL	2,150.00	2,150.00		0
A9400096	A.C.NIELSEN-ADD	LASALLE CONSTRUCTION LTD.	POLOWYD	54,555	10/28/94	12/21/94	12/31/94		55,299.00	2,727.75	2,727.75	2
FC940187	LASALLE BANK	BEN A BORNSTEIN & COMPANY	BESSERT	1,635	12/19/94	12/23/94	12/31/94		1,635.00	82.00	82.00	4
A9400082	A.C. NIELSEN	LASALLE CONSTRUCTION LTD.	POLOWYD	243,000	09/16/94	12/30/94	12/31/94		219,060.00	10,991.25	10,991.25	11
FC950008	LDDS COMMUNICATN	LDDS COMMUNICATION	CIKESH		01/11/95	01/13/95	000000		1,435.00	1,435.00		25
F9400191	ADP	TRANPANI CONST. CO.	QUINN	9,198	12/28/94	01/16/95	000000		9,408.00	9,408.00		28
FC940177	LLADRO SHOWROOM	TURNER CONST. CO.	CIKESH	11,075	11/10/94	01/16/95	000000		11,075.00	11,075.00		28
F9500009	INFORMATION RESO	INFORMATION RESOURCES, INC.	BESSERT		01/16/95	01/18/95	000000		910.00	910.00		30
RH940048	MERCY CENTER	ARRIGO ENTERPRISES INC.	NIERZWIC	6,510	09/22/94	01/19/95			6,744.00	3,489.00		31
F9400172	ANDREW CORP BASE	ANDREW CORP.	QUINN	22,876	11/07/94	01/22/95	000000		25,662.00	25,662.00		34
RHC95002	RESURRECTION MED	L.C. KOHLMAN, INC.	NIERZWIC	8,626	01/19/95	01/25/95			8,626.00	8,626.00		37
RHC94051	WEISS MEM HOSPIT	L.C. KOHLMAN, INC.	NIERZWIC	60,000	10/24/94	01/26/95			59,000.00	59,000.00		38
F9500004	ENESCO COMPUTER	ENESCO CORP.	QUINN		01/05/95	01/31/95	000000		1,285.00	1,285.00		43
A9400033	GRACE MISSIONARY	SHARE CONST.INC.	POLOWYD	8,660	04/20/94	02/01/95			9,615.00	9,615.00		44
A9500006	NWU-DYCHE STADIU	NORTHWESTERN UNIVERSITY	POLOWYD	3,850	01/23/95	02/01/95			3,350.00	3,350.00		44
AC950008	CHGO TRIB-FIRE P	(CHICAGO TRIBUNE)	POLOWYD	660	01/31/95	02/03/95			660.00	660.00		46
RH950001	LAKE FOREST HOSP	KOETZ & BARTON CO.	NIERZWIC	1,200	01/17/95	02/07/95			1,200.00	1,200.00		50
AC940094	SONNENSCHEIN, NA	TURNER CONST. CO.	WILP	10,123	10/21/94	02/07/95			10,723.00	1,072.00		50
RHC93042	CHILDRENS MEM HP	MIDWESCO MECHANICAL, DIV. OF	NIERZWIC	32,424	10/28/93	02/08/95			32,424.00	12,424.00		51
F9500002	FIRSTAR	WILSON CONTRACTORS, INC.	QUINN	12,500	01/03/95	02/09/95			12,839.00	12,839.00		52
A9500012	LEANER ROSSI CO	LEANDER ROSSI CORP.	POLOWYD		02/07/95	02/09/95			810.00	810.00		52
AC950004	NATIONS BANC-CRT	LASALLE CONSTRUCTION LTD.	WILP		01/11/94	02/13/95			1,992.00	1,992.00		56
AC950014	CBS TV	C.B.S. TELEVISION STATION	POLOWYD		02/14/95	02/16/95			355.00	355.00		59
AC940110	BANK OF MONTREAL	EXECUTIVE CONSTRUCTION, INC.	POLOWYD	28,000	12/16/94	02/24/95			28,000.00	28,000.00		67
FC950027	WFLD	W.F.L.D. TV	CIKESH		02/24/95	02/24/95			249.00	249.00		67
F9500023	ELMHURST HOSP AD	FCL STAVA	BESSERT		02/15/95	02/25/95			284.40	284.40		68
F9500018	ABBOTT LABS	ABBOTT LABORATORIES	QUINN	955	02/06/95	02/28/95			955.00	955.00		71
RHC94061	RAVENSWOOD HOSP	MID/RES, INC.	NIERZWIC	3,310	11/14/94	02/28/95			3,310.00	3,310.00		71

28 CANDIDATES FOR THE STATE OF **IL**

F9400159	WHITECO CARPET	WHITECO DATA SYSTEM	CIKESH	4,788	10/13/94	02/10/95		IN	4,400.00	4,400.00		53

1 CANDIDATES FOR THE STATE OF **IN**

RUN & PRINTED: March 19, 1995

Appendix III

Examples of QueryCalc Graphics

Two sample graphics are presented in the following two pages. The first is a summary year-to-date of indirect costs with pie charts. The pie charts take their information directly off of the spreadsheet.

The second graph is simply a demonstration of line, bar, and area charts. These charts may be presented in either 3D or 2D fashion, with up to 12 rows of variables and 75 instances of each variable.

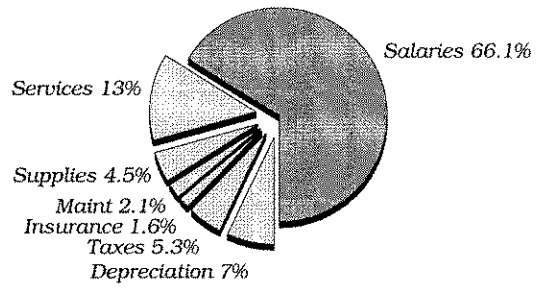
All graph types may take their data off of the current spreadsheet, extract it from another, non-active spreadsheet, extract it from the databases using query questions, or it may simply be typed in manually.

Although the user has a great range of graphical styles to choose from, all of the graphics are completely self-assembling. This attribute is necessary to the philosophy of QueryCalc. These reports, along with their graphs, are meant to be capable of being run completely automatically, in batch, night after night, with no further human intervention—and yet producing graphics of the highest possible quality.

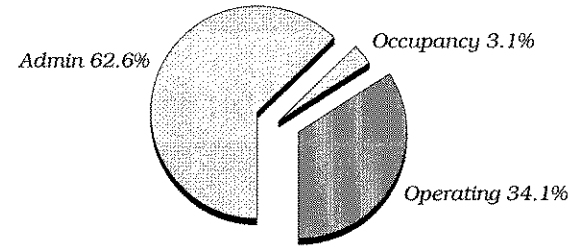
SCHEDULE OF INDIRECT COSTS
For the Year Ending Today

Operating Expenses:		
Salaries - officers	105,400.00	
Salaries - supervisor	3,629.25	
Payroll taxes	12,738.06	
Supplies and tools	5,458.55	
Gas and oil	13,395.08	
Truck maintenance	8,850.92	
Truck rental	0.00	
Truck insurance	4,409.95	
Equipment maintenance	2,645.66	
Equipment insurance	1,714.30	
Telephone	8,352.17	
Taxes and licenses	705.64	
Truck depreciation	21,546.65	
Equipment depreciation	15,417.14	
		204,263.37
Occupancy Expenses:		
Rent	12,791.08	
Utilities	2,380.27	
Cleaning service	1,482.14	
Property insurance	532.75	
Building maintenance	1,401.97	
Improvements depreciation	389.73	
		18,977.94
Administrative Expenses:		
Salaries - officers	210,800.00	
Salaries - office	50,834.76	
Payroll taxes	17,706.76	
Employee benefits -- health/accident	23,468.80	
Employee benefits -- other	1,270.97	
Computer expenses	10,826.90	
Office supplies	8,505.14	
Bidding expenses	2,357.58	
Travel and entertainment	8,360.08	
Advertising and promotion	11,907.38	
Insurance	1,788.67	
Dues and subscriptions	6,470.76	
Legal and accounting	8,886.04	
Contributions	3,396.12	
Taxes and licenses	623.00	
Miscellaneous administrative	867.91	
Life insurance	1,377.50	
Office equipment depreciation	4,719.46	
		374,167.83
Total Indirect Expenses:		**597,409.14**

Specific Expenses

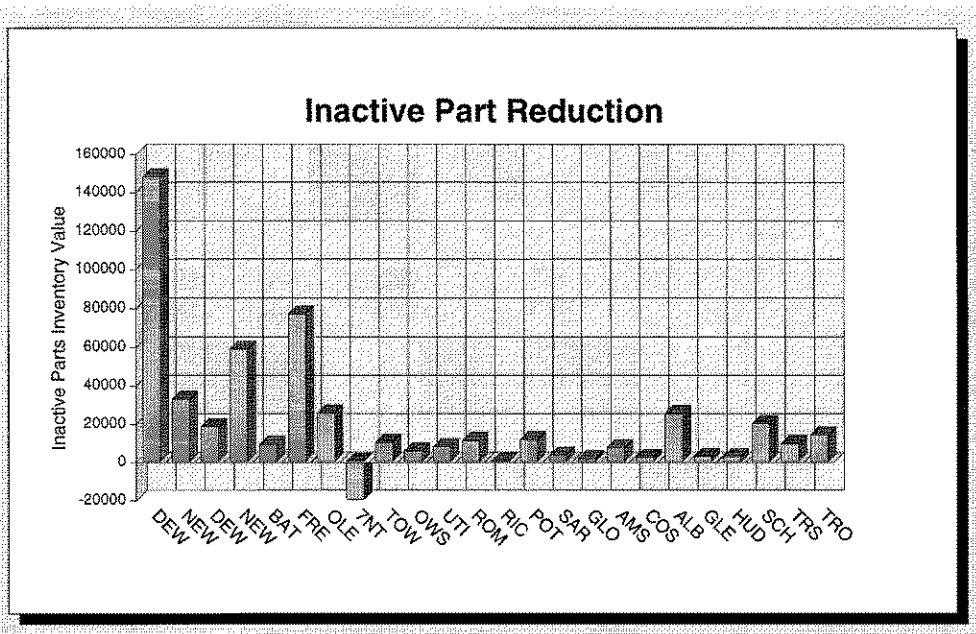


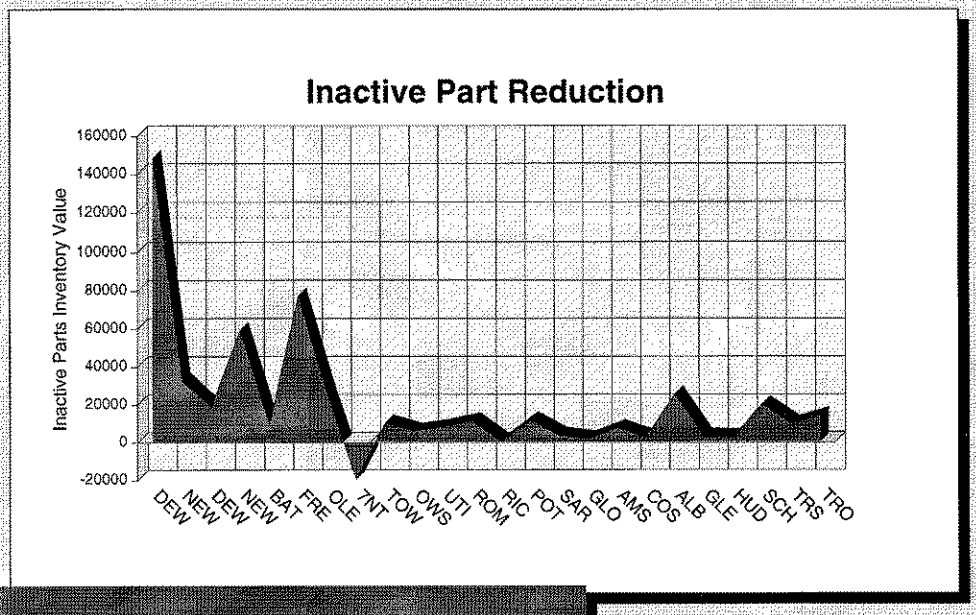
General Expenses



SAMPLE GRAPHICS

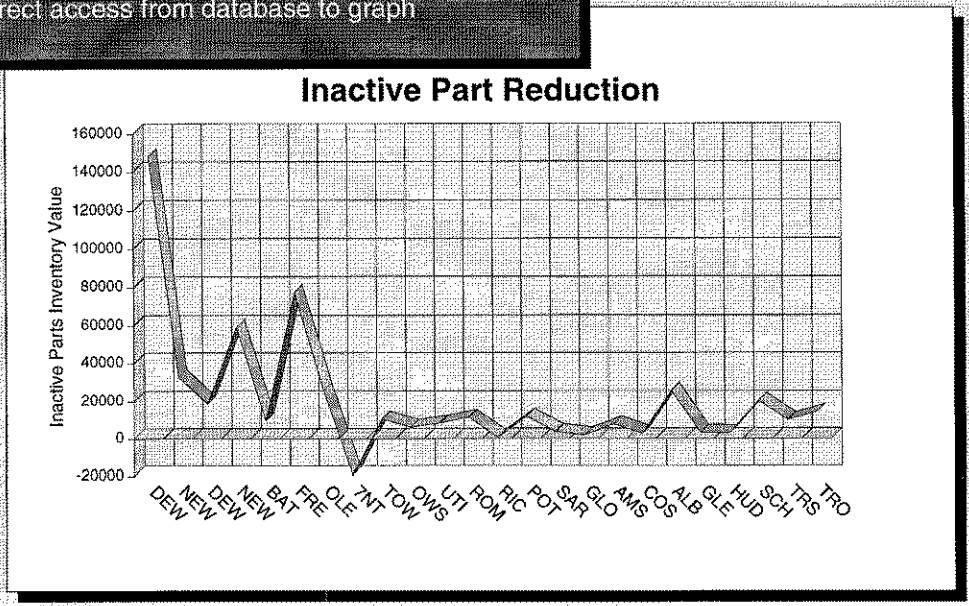
GenCon
General Contractors





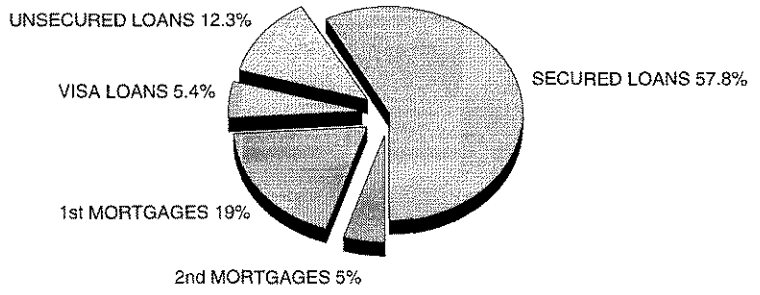
SAMPLE QUERYCALC GRAPHICS

direct access from database to graph

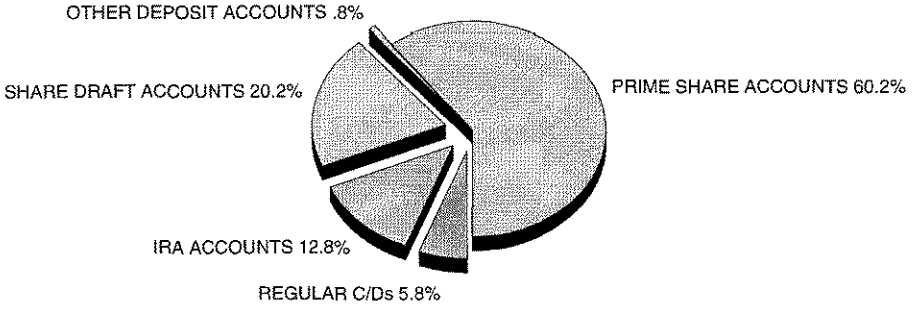


MIZZOU CREDIT UNION

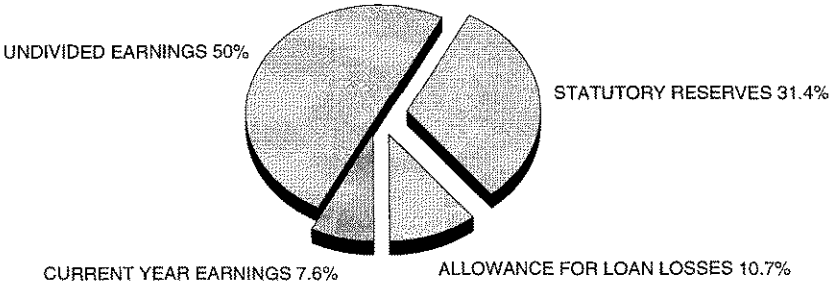
FINANCIAL STATEMENT ANALYSIS



LOAN PORTFOLIO COMPOSITION



DEPOSIT PORTFOLIO COMPOSITION



CAPITAL COMPOSITION