



Extensions Newsletter

Accubid's informative and educational newsletter for contractors

June, 2011

Editor's Message

Summertime and Extensions is...Changing

As many of you know, we do not publish our Extensions newsletter in July. This year, however, you will see a new face on our August newsletter. As we continue our integration into the larger Trimble family, Extensions will bring the QuickPen brand into the fold, providing you, our subscribers, with a larger offering of industry information and valuable tidbits. We are excited about this change and look forward to hearing your feedback when we return from our summer hiatus – refreshed and rebranded. We wish you all a safe and enjoyable summer.

Industry Insights

Finally an automated count that works well.

By Giovanni Marcelli, Founder

Finding ways to save time in estimating while retaining a high level of accuracy, has been one of the key focus of research for Accubid and arguably for any estimating system developer.

In the past, we have looked at Optical Character Recognition (OCR) technology to automate and expedite the counting process in estimating. The thought was that if the system could count and mark the symbols counted like fixtures and devices, it would decrease the amount of work that the estimator had to perform.

In theory, it sounded like a simple process: OCR would recognize the different symbols on the drawings and provide an accurate count. In reality, we discovered that the OCR

was and still is not 100% accurate, especially when we are dealing with poor quality drawings. Similar symbols that are not identical can still be viewed as identical and erroneously included in the same category.

Given that the margin for potential error was quite substantial (up to 20%) we felt that the technology and process needed to become more mature before we could present it to our clients as a reliable and true time saving tool.

When the count is 80% correct, how do we go about verifying the real quantities? If a manual recount is necessary, then the system would be useless because it would add cost and time in the process.

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The Specialist

Part 1: Making the Leap to a RDBMS Enterprise Calibre Solution Power By SQL Server

By Al Ricci, Director of Sales & Service

An RDBMS, or Relational Database Management System, is a database management system in which data and the relationships between that data are stored in tables. The data can be accessed or reorganized in many *continued on pg.2*

Trainer's Corner

Creating an Estimate Breakdown and Allocating Costs

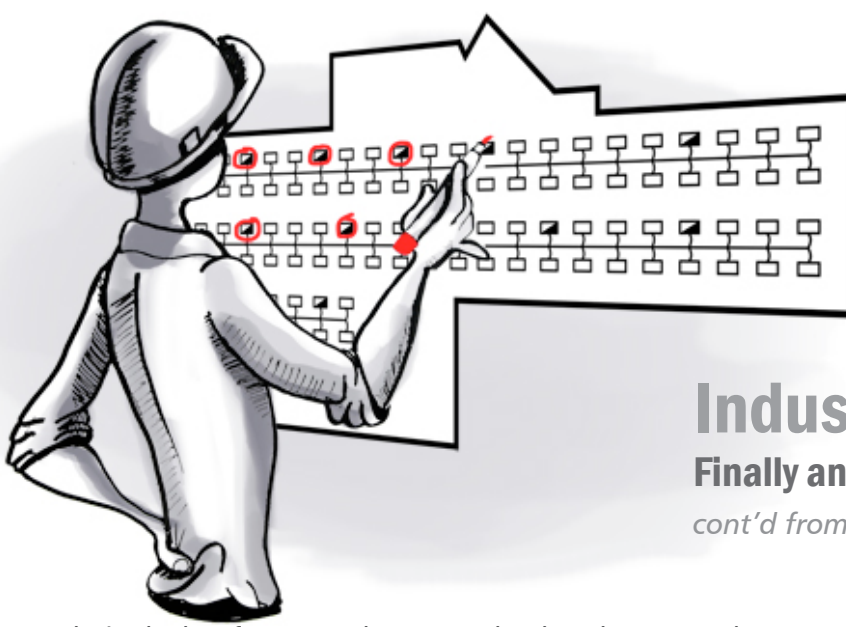
By Gary Rutledge, Instructor

In Accubid PRO you can break down an estimate; this breakdown would include all direct and indirect costs as well as any taxes, overhead or markups applied to the costs.

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Extensions is published monthly by Accubid Systems Inc. as a service to the contracting industry. For further information or assistance, please contact us:

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Industry Insights

Finally an automated count that works well.

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Fortunately, in the last few years the OCR technology has made appreciable advancements in accuracy and that led Accubid to explore the possibility of integrating this technology in our LiveCount product.

In our recent analysis, we discovered that accuracy could still not be 100% in spite of the technological advancement of OCR, for many reasons. One of which is quality of drawings and another is the fact that very similar symbols get used to represent different items.

It was very clear to us since the beginning that we could not assume 100% accuracy under any circumstances. Since that was the case, we had to offer the user a simple and effective way to validate the selection and count of the items, instilling confidence that the system was providing correct information.

We focused on the verification task process with the idea of devising an expedient, reliable and simple process that would allow the user to validate the quantities with accuracy and comfort. This is where we made a quantum leap improvement which convinced me beyond any doubt that this system saves time and effort without compromising accuracy.

First of all, the counting process is very fast and second the symbols counted get grouped in continuous and successive order and therefore the estimator can very quickly and easily scan through them and reject the ones that are not identical.

Given that one can verify a list of one hundred symbols grouped in a couple of pages in a matter of seconds, and eliminate the erroneous ones with a click of the mouse, it becomes an expedient and congenial process to adopt.

In the past, I have been against OCR count because of the large margin of error, plus the verification process was cumbersome and time consuming. Not to mention that the automated counting process took a very long time and we needed very powerful computers.

Our latest release of LiveCount® Pro has solved all these problems and has become a time saving tool for our clients – giving them a competitive edge that is hard to ignore.

The Specialist

Part 1: Making the Leap to a RDBMS Enterprise Calibre Solution Power By SQL Server

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difference ways, without the need to have to change the various table forms or re-enter the same data somewhere else. Sounds simple enough right? Well, that's where the sophistication lies, if it's done right.

While RDBMS is a common form of data storage, the manipulation, management and performance of that data can vary greatly depending on the technology used to deliver it. A database really forms the backbone of a solid estimating solution. Sophisticated features and functions are really nothing without the data behind the scenes that drives them. In many cases, the sophistication really cannot be delivered without a powerful, robust database behind the scenes feeding the application and managing the transactions efficiently. When we began to look at a more robust engine for our next generational platform,

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Part 1: Making the Leap to a RDBMS Enterprise Calibre Solution Power By SQL Server

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Accubid Enterprise, it was vital for us to select the best, most flexible and scalable database solution possible to ensure we delivered a solution that would help our clients effectively transition to the next level as their businesses grew.

This was no small task.

When we began to review the various technologies that were available in the market some 6 years ago, we kept an eye to the future. We first looked at the Microsoft Jet Database Engine, later renamed Microsoft Desktop Engine and now referred to as the Microsoft Access Database Engine. Considered rather long in the tooth back then, the Access Database Engine was, and continues to be, widely used by many vendors delivering estimating productivity solutions. At the time, we really felt we had to do better; with the Access Database Engine's inherent size limitations of 2 GB, and researching indicating a lack of reliability in the database when it's grown to about half that size, this limitation and the potential of frequent crashes was something we really wanted to avoid. But doing better meant a greater investment and a longer time to get to market.

Having made that decision, we then looked at a significantly more sophisticated RDBMS solution named SQL or Structured Query Language. SQL was first developed by IBM in the early 1970's, and today, companies like Oracle, IBM and Microsoft all deliver a SQL type RDBMS. The lower end Access Database Engine would have allowed us to get to market significantly faster, but we didn't want to deliver a solution that would prove unreliable in the long-term. It was imperative that we deliver a product that met our core quality commitment.

Our attention then turned to determining which flavor of SQL we would leverage. Evaluating the major players at the time, Microsoft SQL Server really stood out. Given Microsoft's aggressive plans for SQL Server, its dominance in the Windows Desktop and Server markets, its continued impressive growth in those markets year over year, and its ability to deliver the Server Operating System infrastructure along with the RDBMS solution, we chose Microsoft SQL Server as the engine for Accubid Enterprise. We haven't been disappointed, and neither have the Accubid Enterprise adopters to date. As of 2010, Microsoft SQL Server not only claimed 18% of the RDBMS market, it's had the greatest growth of any RDBMS in that space.

Microsoft SQL Server - The Power of a Full RDBMS

So what are the benefits of a full RDBMS SQL Server, and why should you care that one of your most important business systems is using this technology?

To start, SQL Server easily integrates with Microsoft's family of Desktop and Server Operating Systems. As business owners, this means you're able to get more out of that investment by leveraging the complimentary technology. One of these benefits, for example, is the integrated security between Windows Server and SQL Server. Once a network account is created, and based on the permissions you establish, complimentary access can also be provided to SQL Server. Accubid Enterprise takes advantage of this functionality, not requiring you to have to create separate user accounts, and potentially introduce an area for compromise. Once the network accounts are built, using the Enterprise Manager, you can define who has access to Accubid Enterprise at not just an overall level, but at a more detailed granular one. For example, let's say you don't want to have your more junior staff access various projects or areas of the

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Part 1: Making the Leap to a RDBMS Enterprise Calibre Solution Power By SQL Server

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application, like the bid summary or materials database, simply enable or disable that access accordingly, and feel secure that it's all managed for you because of that tight integration. Backing up SQL Server is very straight forward, and in the unlikely event of a disaster, very simple to recover. It doesn't have special hardware needs, and is designed to grow with your organization. This is a key factor, as your business grows, SQL Server can scale up (support additional memory and processors on your server) or scale out (support multiple servers in multiple locations) depending on your needs. SQL Server's maximum database size is 524,258 terabytes, that means it's capable of holding 52,426 copies of the entire Library of Congress. If that's doesn't fully put into context the depths of SQL Server, the Microsoft Access Database Engine's 2 gigabyte limit is only capable of storing the contents of a 20 yard bookshelf.

As an end user, this means you're able to use tools like Microsoft Excel or Crystal Reports to connect to SQL Server should you wish to get a different perspective on your data. It also means that leveraging a solution like Accubid Enterprise with the power of SQL Server, the user now manages less data, or more importantly, less iteration of data, but can accomplish more within takeoffs. The power driven by SQL Server results in the organization of material in a more logical order, based on relationships between material information. As an example, once you've defined the material type (for example, wire, conduit or pipe), the size and manufacturer information is managed by way of a relationship within the database. Those relationships are then tapped into by the specification you've defined for takeoff, the audit trail results are then dynamically built by having the correct information pulled from the database. As a result, instead of having to manage hundreds, if not thousands of different material iterations, you manage less than a dozen in some cases; with the intelligence you've defined doing the work for you at time of takeoff, all powered by the SQL Server back-end.

But My Vendor Will "Upgrade Me to SQL" - The Infinite Monkey Theory

I often hear from clients who have switched to Accubid Enterprise that their previous vendor had committed to delivering a SQL-based solution by upgrading or up-sizing their existing Microsoft Access Database Engine. When I think that one of these clients could have taken that route to manage one of their most important business processes, I cringe. When I think of this type of "upgrade", the following metaphor comes to mind: an infinite number of monkeys hitting keys at random on a keyboard for an infinite amount of time could almost surely complete the works of William Shakespeare. However, that doesn't make the end result one and the same. Upgrading this type of legacy technology doesn't inherently deliver a solution that takes advantage of the true power of SQL Server. Be wary of any vendor claiming they have an infinite amount of programmers locked in a room somewhere that can deliver this "upgraded" solution to you. The "new" end product will be built on a fundamentally weak foundation that just might collapse on itself when you least expect it. If it does, the cost savings you may have seen when "upgrading" your system won't compare to the significant costs you will incur when one of your core business systems doesn't function properly. A true SQL-based solution isn't about grabbing all your legacy data and throwing it into a bigger engine. After all, you could drop that Pinto engine into that nice Ferrari frame, and some talented mechanic could get it to run, but you're still getting that Pinto performance. A true SQL-based solution is about doing the right things with that technology when designing the solution that will make the difference.

Part 2: Making Use of All That Data - Reporting Comes of Age

Now that you have a better appreciation for the various technologies in the market, and the benefits that a full RDBMS based solution can bring to your organization, stay tuned for part 2 in this series "Making Use of All That Data - Reporting Comes of Age" coming to Extensions in October.

Trainer's Corner

Creating an Estimate Breakdown and Allocating Costs

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Price Summary	Value
Database Material	192,022.86
Quoted Material	95,450.00
Material Tax	13,329.42
Material Total	210,802.28
Direct Labor	116,402.96
Direct Labor Burden & Fringes	46,561.18
Indirect Labor	
Indirect Labor Burden & Fringes	
Labor Tax	
Labor Total	162,964.14
Subcontractors	10,289.00
General Expenses	12,993.73
Equipment	
Prime Cost	397,049.15
Total Overhead	53,647.67
Net Cost	450,696.82
Total Profit	35,153.18
BOND	
Selling Price	485,850.00

Figure 1 - Left 001 [Price Summary] + Right 002 [Breakdown View drop-down]

To prepare a breakdown, go to the Breakdown Screen, select the breakdown you would like to display from the Breakdown View drop-down box.

After selecting the desired Breakdown, click the Reload button.



Figure 2 – 003 [Cursor at the Reload button]

System	Total
LIGHTING	55,738.37
DISTRIBUTION	24,887.30
FEEDERS	58,657.61
DUCTS & TRAYS	16,792.11
GROUNDING	2,025.00
WIRING DEVICES	48,245.60
PHONE & COMPUTER	13,827.30
FIRE ALARM	37,886.80
MECHANICAL EQUIPMENT and CONTROLS	27,311.50
LIGHTING BRANCH WIRING	40,162.70
POWER BRANCH WIRING	28,005.20
Revised Totals	353,539.80

Figure 3 – 004 [System Breakdown after reload with un-allocated costs]

The software will sum the values for each System based on which System the takeoff was assigned to. Any hours added on the Incidental, Labor Factoring and Indirect Labor screens will be assigned to each System based on the labor ratios calculated on the Extension screen. Any Labor Escalation costs would be distributed in a similar manner.

The software will not distribute the Subcontractor, General Expense, Equipment or Quoted Material costs until the user assigns these allocations as they deem appropriate. The Revised Total value shown in red indicates that costs have not been allocated. The allocation of each cost is done on the screen where it was entered.

Go to the screen where a cost was entered. On the right side of the description field for the cost, click the ellipses button. The cost allocation dialog will open.



Figure 4 – 007 [Ellipsis button on the Subcontractor Screen]

Displayed at the top of the dialog will be the description of the cost selected and the amount to be allocated. Select the breakdown where the costs will be allocated by clicking the appropriate tab in the dialog. The costs can be allocated by a percentage or a specific dollar assignment.

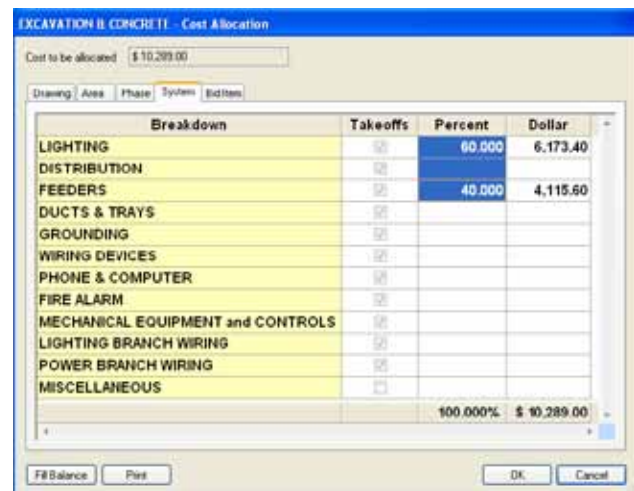


Figure 5 – 008 [Allocating costs by percentage]

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Trainer's Corner

Creating an Estimate Breakdown and Allocating Costs

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Costs can be allocated to another breakdown without leaving the dialog by clicking on another tab.

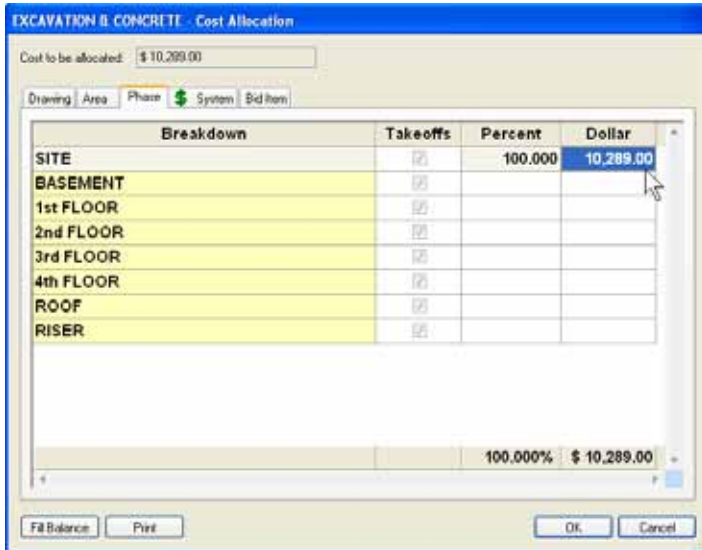
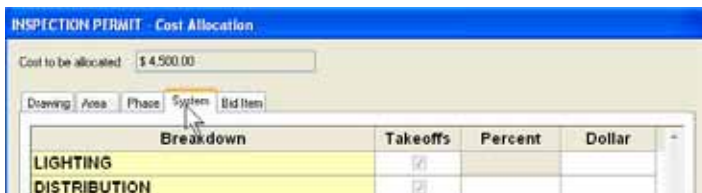


Figure 6 – 009 [Cost being allocated by a specific dollar value]

To continue entering cost allocations, click the appropriate tab at the bottom of the application; select the cost to allocate and enter appropriate percentages or dollar amounts.

Figure 7 – 010 [Inspection Permit costs to be allocated on the General Expense Screen]



If costs are to be allocated evenly across multiple breakdowns the Fill Balance button will do this. Select the breakdowns where the costs are to be distributed and then click the Fill Balance button. Holding the Ctrl button down allows non-contiguous fields to be selected.

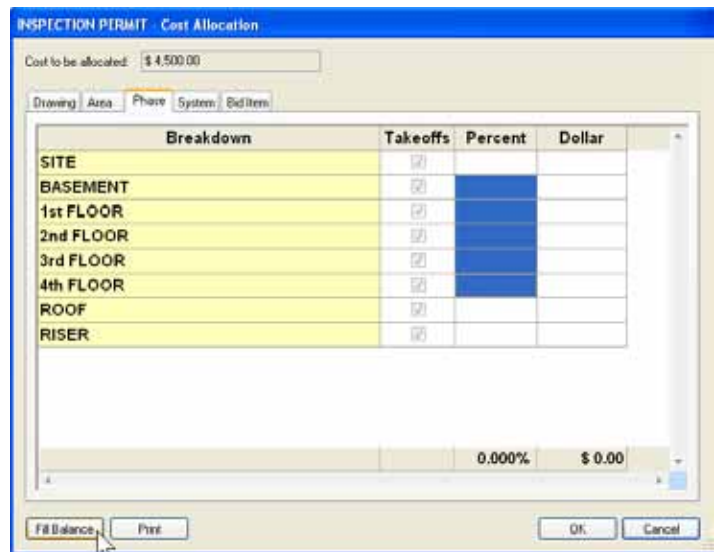


Figure 8 – 011 [Selecting multiple Phases for even allocation using Fill Balance]

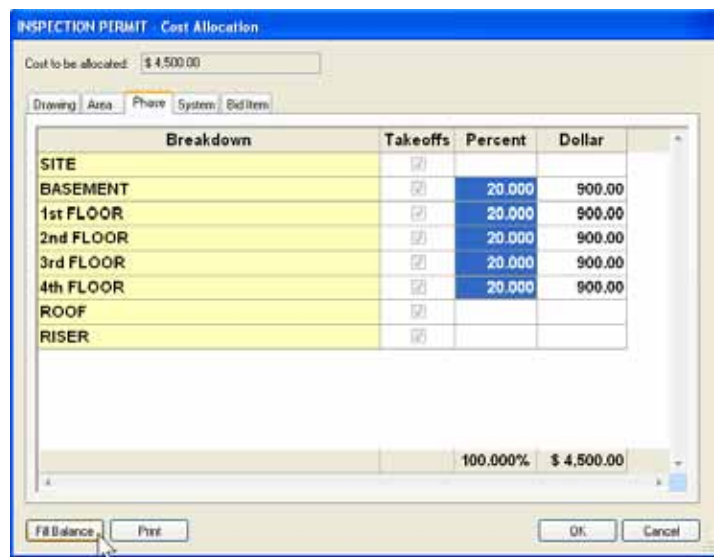


Figure 9 – 012 [After Fill Balance has been applied]

If costs have been allocated for one expense and you want to allocate the costs of another expense using the same percentages, select the established values, then right-click and copy these values. Choose another cost. Right-click in the first applicable field and paste the values. If there is any imbalance displayed, clear any one of the values and use the Fill Balance button.

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Trainer's Corner

Creating an Estimate Breakdown and Allocating Costs

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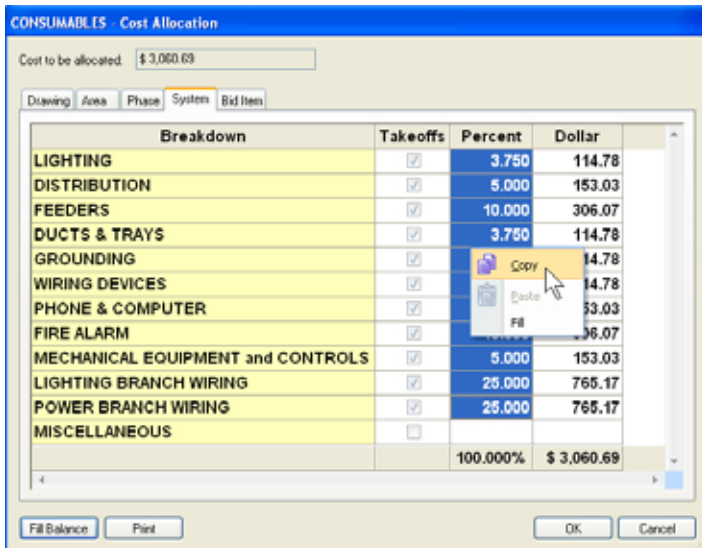


Figure 10 – 013 [Copying established percentages from the Consumables cost]

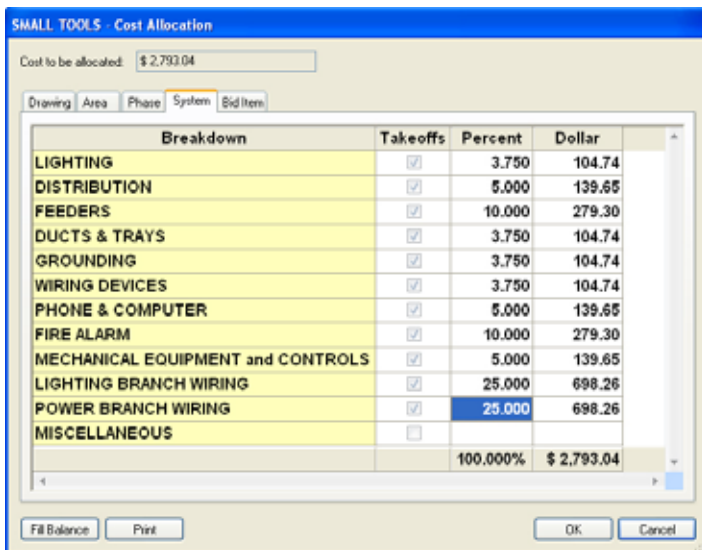


Figure 11 – 014 [Pasting the values to the Small Tools cost]

Once all the costs have been allocated, return to the Breakdown Screen and click the reload button. The software will distribute all costs as they have been assigned by the user. If any costs have not been allocated, the software will advise the user of this fact.



Figure 13 – 016 [Allocated costs after reload]

If it is necessary to create a view using multiple breakdowns click the Add button to the right of the Breakdown View drop-down. In the Bid Breakdown View dialog, select the required breakdown and then click the Add button for each level of breakdown required. Click OK and then click the Reload button to refresh the new view.



Figure 14 - Left 017 [Add button] - Right 018 [Selecting multiple breakdowns]

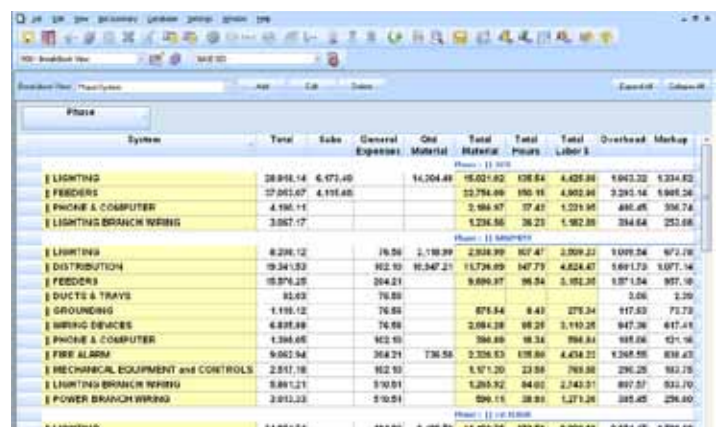


Figure 15 – 019 [Multi-level Breakdown after reload]

Using the Breakdown Screen simplifies the task of providing detailed information of the bid based on the Takeoff Breakdowns you established.

Professional Development

Accubid offers a wide range of courses that teach the novice or seasoned estimator or project manager the principles and methodology of estimating with the aid of a computer.

Faced with the on-going shortage of qualified estimators, many contractors are increasingly choosing to train their own employees to become estimators. Many companies are also opting to send their entire estimating departments to our courses as a means of standardizing their estimating practices. This translates into efficiency, productivity and profitability.

If you're considering either of these options, we can help. Accubid's Education division offers a 5-day estimating course, specifically designed to teach estimators the principles and methodologies of modern day estimating. You can take this course on its own or as part of the 3-course Computerized Estimating Certification program, Accubid's accreditation program for estimators. For information on this and other courses, visit our website at www.accubid.com.

If you register early for any Level 100 Estimating course, you'll receive \$100 (US) off the price of the course. To qualify, you must register at least 30 days prior to the scheduled date.

Upcoming Courses

September 13-September 16
Mechanical Computerized Estimating Level 100 Course
Toronto, ON

Product Training

Accubid software training labs have proven to be one of the more cost-effective ways to improve the efficiency and productivity of your staff. And private labs—conducted in-house or at a location of your choice—have proven to be a popular method of conducting training labs because of savings in travel costs and time, and the possibility of customizing the lab.

In addition to our private labs, we also offer training in classroom facilities across North America and over the Internet via our Web-based labs. Accubid's estimating software labs are available at both beginner and advanced levels.

Upcoming Labs

June 21-June 22
AEE Mechanical Enterprise Application - Fundamentals
Toronto, ON

June 23-June 23
AEE Mechanical Enterprise Database Manager - Fundamentals
Toronto, ON

July 18-July 19
Mechanical Classic Estimating - Fundamentals - 2 Day
Toronto, ON

July 20-July 21
AEE Mechanical Enterprise Application - Fundamentals
Toronto, ON

July 22-July 22
AEE Mechanical Enterprise Database Manager - Fundamentals
Toronto, ON

August 22-August 23
Mechanical Classic Estimating - Fundamentals - 2 Day
Toronto, ON

August 24-August 25
AEE Mechanical Enterprise Application - Fundamentals
Toronto, ON

For pricing, or to sign up, call: 1-800-222-8243
or e-mail: education@accubid.com

For further information and course details, please visit the education section of the Accubid web site www.accubid.com or call us at 1-800-222-8243