Contents

Make Estimating Process Efficient

One of the most difficult challenges a small to medium-sized woodworking shop faces is turning over the job of estimating and bidding to an employee. The owner has learned the lessons of estimating the hard way; he has made mistakes and paid for them along the way. The “School of Hard Knocks” is no different from any other school of higher learning; it comes with a big price tag. Now the business has grown to a point where the owner/estimator can not do it all. If the business is to grow and if he expects to get any free time at all, he will have to train someone to take over the job of estimating. Naturally there is a reluctance to turn over the reins to someone else.

What if the business owner could take all of his knowledge, years of invaluable experience and put that knowledge into the hands of an employee? Sounds perfect – well that is exactly what happens with a computer software program for estimating. The chief estimator puts all his know how into a software program and makes this information available to the estimators.

At People Logic they recognized this problem from first hand experience. The president of People Logic, Brian Timothy, is also the president of Island Precision Cabinets a successful commercial millwork shop. Brian was confronted with the same problems all millwork shops face. He also recognized expansion would require that he get away from the day-to-day pressure of estimating and deadlines, away from the often repetitive nature of preparing an estimate. He wanted to spend more time managing and overseeing the company. With this in mind Brian and his partner Axel Wagner set out to find a solution. What they developed was a software program that took their method of estimating and provided the framework for Brian to impart all of his skills and expertise into the program. The software program also provided Brian with a means to train his staff and gave him the confidence that he has approved the methods, numbers and assumptions that his estimators were using.

Traditionally the wood working industry has looked to its manufacturing systems to make the company money and with that in mind companies have invested heavily in machinery that has made them more productive. But by being more productive there now is a demand to get more work to keep the machines running. Consequently there is now a problem in the front office to get more bids out and win more jobs and as owners and estimators have found out, they are not able to keep up with the demand. With all the money spent on equipment in the factory it is now becoming apparent that it is now time to revolutionize the office systems. By investing in a tool that will allow a company to train more estimators or allowing their current estimators the ability to bid more jobs companies are taking the first step to solid growth and better organization.

Once you start winning more jobs other problems are created. Purchasing has now become a bigger and more demanding job. Scheduling labor and machinery effectively has become another challenge. And as is the nature of this business the “dreaded” change orders keep coming in. All of the increases in productivity generate their own problems and now require that your organization be prepared to solve them.

But before we get ahead of ourselves let’s go back to the original estimate process. Now that you have introduced an estimating software program, you as owner/estimator have trained another member of your team to do the estimating. By delegating you are now able to avoid much of the repetitive nature of the estimate building process and have created some extra time for yourself to be a more effective manager of your business. Before that bid is submitted you will want to review, refine and approve your company’s submission. This is where your expertise and just plain *gut instinct* is required. With all the data in an easily readable and accessible form you can spend your time finalizing the bid; you will even be able to run *what if* scenarios to fine tune your bid.

Once your bid has been accepted now the challenges faced with project management now have to be solved. Once a job is in progress it becomes important that you have the ability to send all of the information down stream to the various departments. Your purchasing department will find the detailed reports provided by the estimate will make this department more efficient and allow purchasing to take place prior to engineering. The shop foreman will be keenly interested in what is coming his way and have the ability to schedule labor times and functions to get the most effective use of your shop labor.

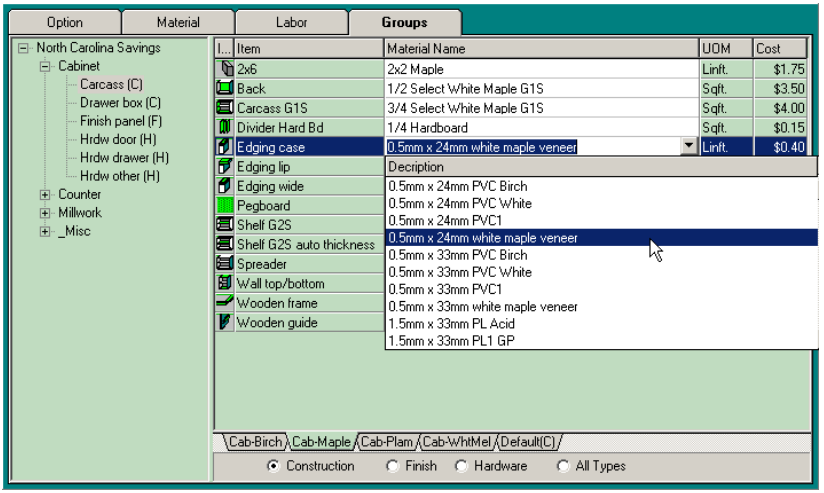
With detailed reports, the shop foreman will have a complete overview of the job with detailed labor times and will be able to head off potential problems and bottle necks by foreseeing the problem. This will give him the time to correct the situation before he is buried in the middle of it. The project manager requires a complete understanding of the job and if you are to make money he needs to keep a tight rein on the project. The detailed reports from the estimate and his ability to access this information directly in the software program keep him informed of the logic and assumptions that were made by the estimator and ensure he keeps the project on track. All change orders can be logged on the estimate which will automatically update all labor times and, if applicable, material lists for purchasing. With all of the information going with the job through to its completion all departments are kept in the loop.

Estimating software can allow shop owners to spend more time managing their businesses by allowing others to make estimates – without fearing those estimates will be poor.

Sample Project

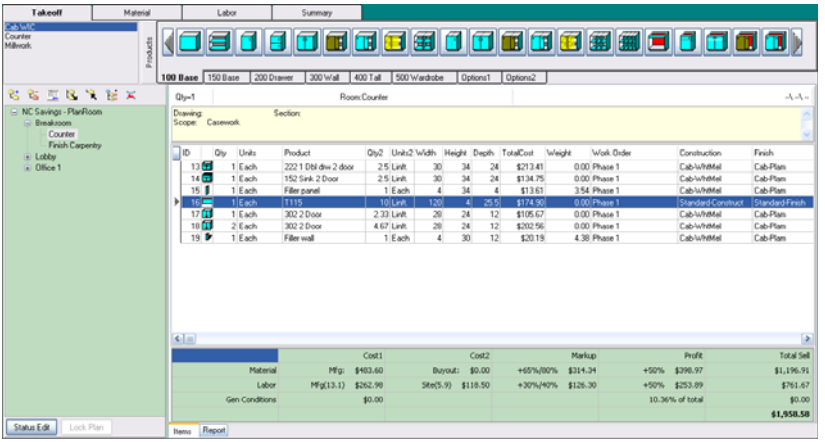
Setup Specification

Prior to doing the takeoff, a project specification needs to be setup if required. This will assign materials to various product components. Multiple specs are allowed such that each line item can be individually specified.



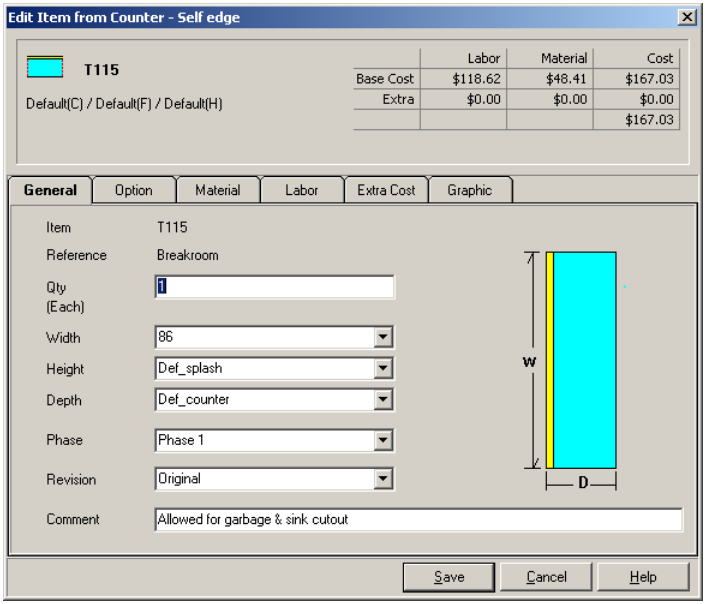
Takeoff Items

Items are organized by folders for common project locations such as Rooms and Elevation. This will allow for quick access and review. Once a Room has been selected then items are added from the above icon menu which contains anything from simple labor and material components to parts, assemblies and products.

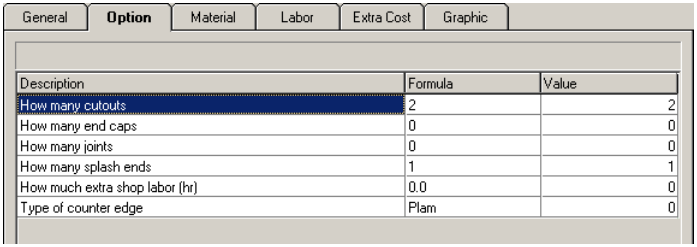


Edit Item

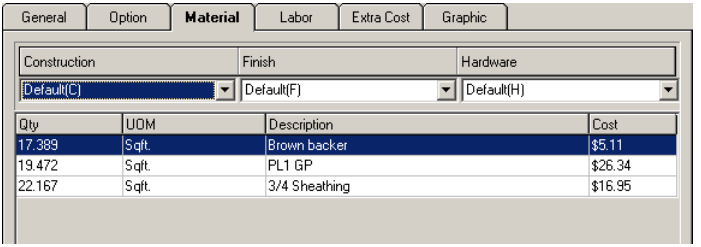
Each item may be individually customized.



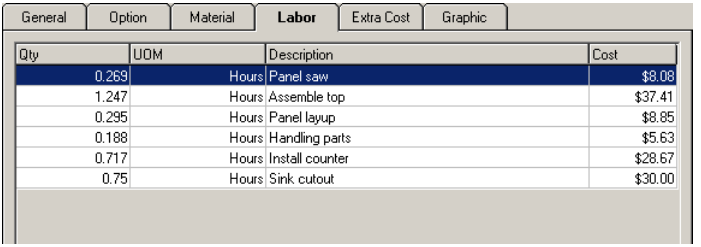
Each product may define as many options as required.



Mix and match material specifications for interior, exterior and hardware.

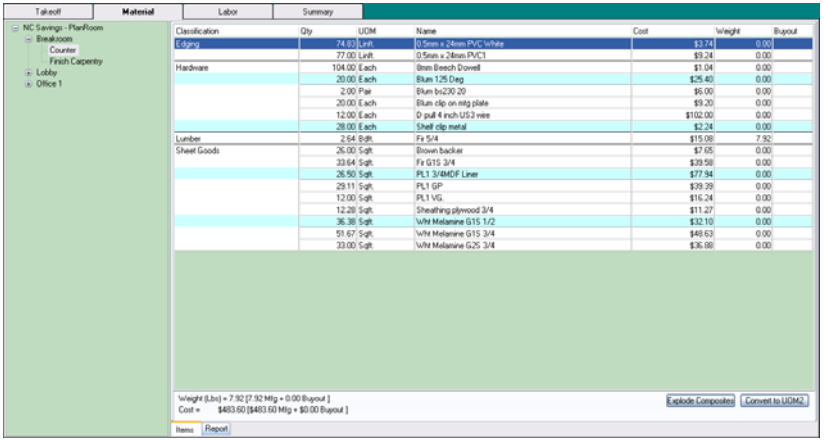


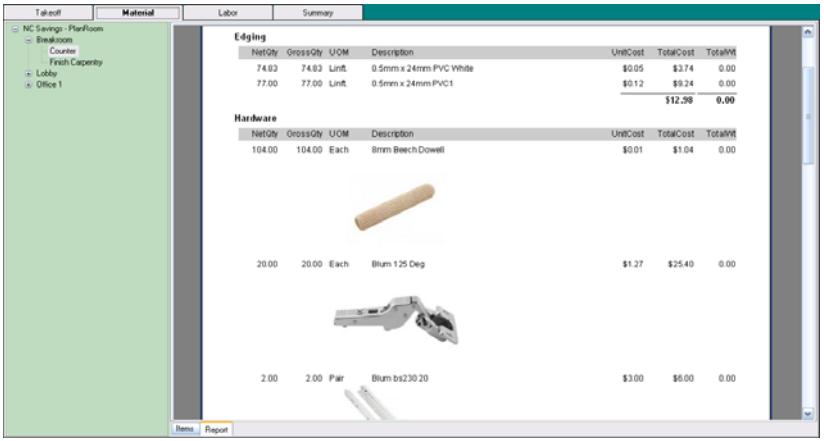
Labor is automatically calculated.



Material Summary

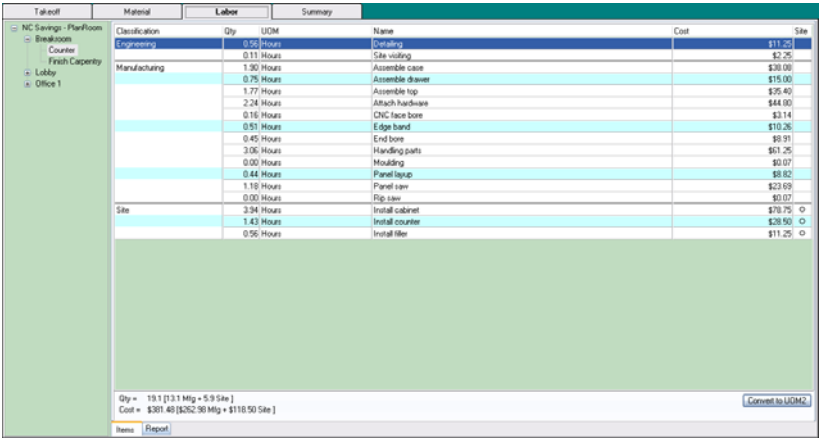
Each location will instantly provide running totals of materials.





Labor Summary

Each location will also provide running totals of labor.



Report Types

The key to useful information is extracting meaningful knowledge from data. Takeoff™ produces much more data than is normally available during manual estimating. In order to put the data to use and produce useful business decisions, a report writer is utilized. It's task is to consistently sort, group and total the same type of data for every report. This is normally a very tedious task. Fifty common report templates are available. The following are sample reports derived from the North Carolina estimating project.

Bid Results

People Logic Software

Takeoff **Bid Results**
NC Savings - PlanRoom

November 4, 2014
1:00:06PM

PROJECT NAME	AWINCS
PROJECT TITLE	NC Savings - PlanRoom
ESTIMATOR	Axel
CLASSIFICATION	Commercial *Supply and install millwork to Lobby, Ofiice and breakroom* *GLAZING OF DOORS & SIDELIGHTS BY OTHERS* *DOOR HARDWARE BY OTHERS* *PAINTING OF PRIMED MILLWORK BY OTHERS* *LAMINATE ITEMS TO HAVE MATCHING PVC BANDING* *WOOD ITEMS TO HAVE MATCHING VENEER BAND*
QUALITY GRADE	Premium
LATEST ADDENDUM	1
PLAN DATE	27-January-2013
BID STATUS	Pending

		COST	%MARK UP	$MARK UP	TOTAL	%MARGIN
MATERIAL		$3,351.33	65.0%	$2,178.37	$5,529.70	29.3%
	+indirect	$2,184.39	80.0%	$1,747.51	$3,931.90	20.8%
LABOR		$1,570.66	30.0%	$471.20	$2,041.85	10.8%
	+indirect	$782.80	40.0%	$313.12	$1,095.92	5.8%
	Sub Total	$7,889.18		$4,710.19	*$12,599.37*	
PROFIT(Material+Labor)			50.0%	$6,299.69	$6,299.69	33.3%
SUB CONTRACTS		$0.00	60.0%	$0.00	$0.00	0.0%
ALLOWANCES		$0.00			$0.00	0.0%
GENERAL CONDITIONS		$0.00			$0.00	0.00%
				Sub Total	$18,899.06	
TAX			0.00%		$0.00	
				TOTAL	**$18,899.06**	

SUBMITTED BID *$29,991.00*

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Scope

People Logic Software

Takeoff | Item Scope by Location | November 4, 2014
NC Savings - PlanRoom | 1:05:51PM

Breakroom\ Counter

Casework

Item	Qty	UOM	Description	Finish
14 :	1	Each	152 Sink 2 Door 30W x 34H x 24D	Cab-Plam
13 :	1	Each	222 1 Dbl drw 2 door 30W x 34H x 24D	Cab-Plam
17 :	1	Each	302 2 Door 28W x 24H x 12D	Cab-Plam
18 :	2	Each	302 2 Door 28W x 24H x 12D	Cab-Plam
15 :	1	Each	Filler panel 4W x 34H x 4D	Cab-Plam
19 :	1	Each	Filler wall 4W x 30H x 12D	Cab-Plam
16 :	1	Each	T115 120W x 4H x 26D	Standard-Fin

Breakroom\ Finish Carpentry

Door, frame window sill

Item	Qty	UOM	Description	Finish
20 :	1	Each	Frame 4 inch 36W x 84H x 0D	Standard-Fin
22 :	5	Linft.	Sill & apron 12W	Standard-Fin
21 :	1	Each	SR 3-0x7 Door 1 Lite 36W x 84H x 0D	Cab-Maple

Lobby

Running trim

Item	Qty	UOM	Description	Finish
23 :	70	Linft.	Base 5/4 8W	Standard-Fin
24 :	70	Linft.	Crown 5/4 6W	Standard-Fin

Lobby\ Check Desk

Check desdk c/w with stone top

Item	Qty	UOM	Description	Finish
26 :	2	Each	000 Base Column 30W x 34H x 24D - Lower pedestal	Cab-Maple
29 :	1	Each	000 Upper Column 30W x 12H x 14D - Upper pedestal	Cab-Maple
27 :	1	Each	101a 1 Door 18W x 34H x 24D	Cab-Maple
30 :	1	Each	Custom build - 3 Plexi tray	Cab-Maple
28 :	7	Linft.	Stone top	Standard-Fin
31 :	7	Linft.	Stone top 0W x 0H x 0D	Standard-Fin
25 :	1	Each	Wall 1 curved 84W x 42H x 24D	Standard-Fin

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Schedule of Values

People Logic Software

Takeoff +Schedule of Values
NC Savings - PlanRoom

November 4, 2014
1:05:08PM

Phase 1-Caseword & Tops 27-Jan-2013

Breakroom / Counter
Casework

LABOR	Cost	Sell	Total time
Engineering	$13.50	$26.33	0.7
Manufacturing	$249.48	$486.49	12.5
Site	$118.50	$248.85	5.9
MATERIAL	**Cost**	**Sell**	
Edging	$12.98	$32.13	
Hardware	$145.88	$361.05	
Lumber	$15.08	$37.32	
Sheet Goods	$309.66	$766.41	

Total cost: **$865.09**
Total sell : **$1,958.58**

Breakroom / Finish Carpentry
Door, frame window sill

LABOR	Cost	Sell	Total time
Manufacturing	$68.40	$133.38	3.4
Site	$47.50	$99.75	2.4
MATERIAL	**Cost**	**Sell**	
Buyout	$455.00	$1,228.50	
Lumber	$68.75	$170.16	
Miscellaneous	$23.49	$58.13	
Mouldings	$25.50	$63.11	

Total cost: **$688.64**
Total sell : **$1,753.02**

Lobby
Running trim

LABOR	Cost	Sell	Total time
Manufacturing	$59.11	$115.27	3.0
Site	$210.00	$441.00	10.5
MATERIAL	**Cost**	**Sell**	
Lumber	$729.17	$1,804.69	

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Purchase

People Logic Millwork

NC Savings - PlanRoom

Purchase Order

** UNASSIGNED **

PO 001000

November 4, 2014

VENDOR

ACCOUNT
ADDERSS
CITY
STATE
COUNTRY
PHONE
FAX
Web

	QTY	UOM	SKU-ITEM	UNIT	TOTAL
Buyout					
	0.7	Sheets	Glass Float 6mm Clean Cut	$4.55	$95.55
	0.5	Sheets	Plexiglass Clear1/4 in.	$3.00	$50.00
Edging					
	74.8	Linft.	0.5mm x 24mm PVC White	$0.05	$3.74
	77.0	Linft.	0.5mm x 24mm PVC1	$0.12	$9.24
Hardware					
	6.0	Each	Bracket KV 180 ANO 12 inch	$1.26	$7.56
	2.0	Each	Elbow catch	$2.50	$5.00
	72.0	Each	Shelf clip metal	$0.08	$5.76
	6.0	Linft.	Stds KV 80 ANO	$0.85	$5.10
Lumber					
	149.6	Bdft.	Maple 5/4	$5.00	$748.02
Miscellaneous					
	9.5	Sheets	TR-0 Synthetic Penetrating Oil	$0.20	$60.82
	9.5	Sheets	TR-1/OP-1 Standard Lacquer	$0.30	$91.23
	7.3	Sheets	TR-2/OP-2 Catalized Lacquer	$0.32	$74.64
	7.3	Sheets	TR-4/OP-4 Conversion Varnish	$0.30	$69.98
	16.8	Sheets	TR-Seal Coat	$0.15	$80.60
Mouldings					
	142.0	Linft.	Casing maple	$0.75	$106.50
Sheet Goods					
	1.9	Sheets	Brown backer	$0.25	$15.29
	5.2	Sheets	Fir G1S 3/4	$1.00	$166.21

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Labor Summary

People Logic Software

Takeoff | Labor Cost Summary by Library | November 4, 2014
NC Savings - PlanRoom | 1:02:12PM

Engineering				
Manufacturing				
2.16 Hours	Detailing			$43.13
2.16	Total	Manufacturing		**$43.13**
Site				
0.43 Hours	Site visiting			$8.63
0.43	Total	Site		**$8.63**
2.59	*Total*	*Engineering*	**$51.75**	
Manufacturing				
Cabinet fab.				
5.08 Hours	Assemble case			$101.65
2.25 Hours	Assemble drawer			$45.00
5.78 Hours	Attach hardware			$115.60
0.42 Hours	CNC face bore			$8.38
0.20 Hours	CNC rout			$4.00
1.41 Hours	Edge band			$28.29
1.28 Hours	End bore			$25.68
3.90 Hours	Panel saw			$77.95
20.33	Total	Cabinet fab.		**$406.55**
Counter fab.				
3.54 Hours	Assemble top			$70.80
0.95 Hours	Panel layup			$18.97
4.49	Total	Counter fab.		**$89.77**
Finishing				
5.37 Hours	Finish Sanding			$107.47
10.75 Hours	Seal and laquer			$214.93
5.37 Hours	Staining			$107.47
21.49	Total	Finishing		**$429.87**
Millwork fab.				
14.44 Hours	Assemble Millwork			$288.75
1.30 Hours	Chop saw			$26.00
3.68 Hours	Panel bending			$73.50
0.86 Hours	Router			$17.20
0.50 Hours	Sanding			$10.00
20.77	Total	Millwork fab.		**$415.45**
Miscellaneous				

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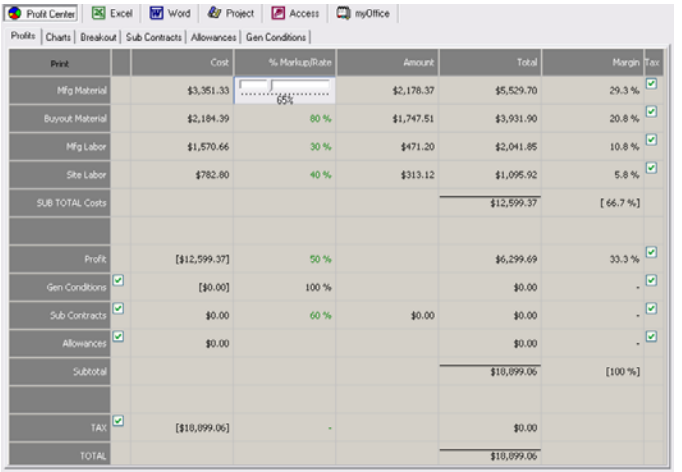
tkOffice

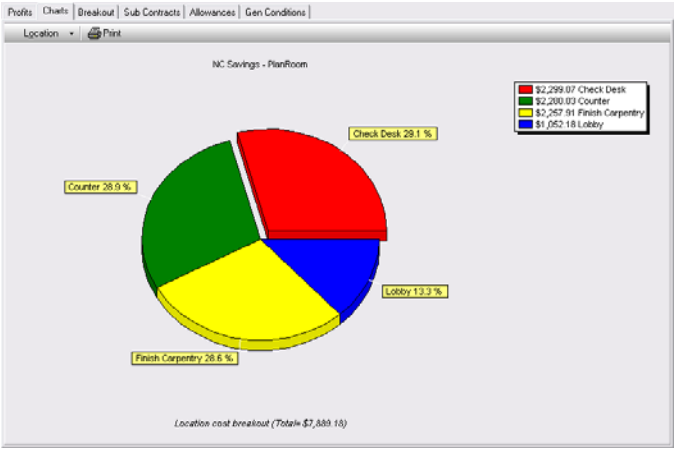
Information from takeoff may easily be transfered to MS Office Excel, Word, Access and Project.

Profit Center

Dial in the markups you need before you bid.

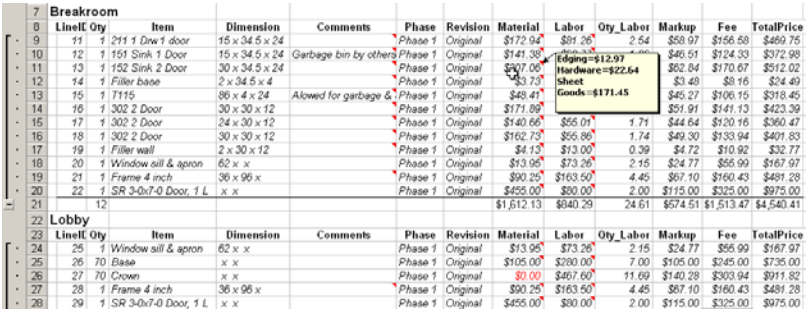


Charts



Excel

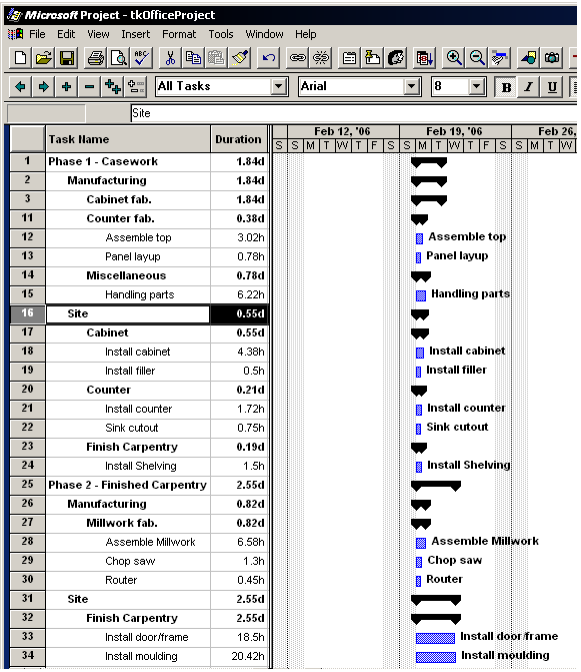
Transfer to multiple Excel sheets complete with outlines, formulas and popups. Even project managers will need this.



		LineIt	Qty	Item	Dimension	Comments	Phase	Revision	Material	Labor	Qty_Labor	Markup	Fee	TotalPrice
7	Breakroom													
8		LineIt	Qty	Item	Dimension	Comments	Phase	Revision	Material	Labor	Qty_Labor	Markup	Fee	TotalPrice
9		11	1	211 1 Drw 1 door	15 x 34.5 x 24		Phase 1	Original	$172.94	$91.26	2.54	$58.97	$156.68	$469.75
10		12	1	151 Sink 1 Door	15 x 34.5 x 24	Garbage bin by others	Phase 1	Original	$141.36					$372.98
11		13	1	152 Sink 2 Door	30 x 34.5 x 24		Phase 1	Original	$167.06					$512.02
12		14	1	Filler base	2 x 34.5 x 4		Phase 1	Original	$3.73					$24.49
13		15	1	T115	96 x 4 x 24	Alowed for garbage &	Phase 1	Original	$48.47					$318.45
14		16	1	302 2 Door	30 x 30 x 12		Phase 1	Original	$171.89					$423.39
15		17	1	302 2 Door	24 x 30 x 12		Phase 1	Original	$140.66	$55.01	1.71	$44.64	$120.16	$360.47
16		18	1	302 2 Door	30 x 30 x 12		Phase 1	Original	$162.73	$55.86	1.74	$49.30	$133.94	$401.83
17		19	1	Filler wall	2 x 30 x 12		Phase 1	Original	$4.13	$13.00	0.39	$4.72	$10.92	$32.77
18		20	1	Window sill & apron	62 x x		Phase 1	Original	$13.95	$73.26	2.15	$24.77	$55.99	$167.97
19		21	1	Frame 4 inch	96 x 96 x		Phase 1	Original	$90.25	$163.50	4.45	$67.10	$160.43	$481.28
20		22	1	SR 3-0x7-0 Door, 1 L	x x		Phase 1	Original	$455.00	$80.00	2.00	$115.00	$325.00	$975.00
21			12						$1,612.13	$840.29	24.61	$574.51	$1,513.47	$4,540.41
22	Lobby													
23		LineIt	Qty	Item	Dimension	Comments	Phase	Revision	Material	Labor	Qty_Labor	Markup	Fee	TotalPrice
24		25	1	Window sill & apron	62 x x		Phase 1	Original	$13.95	$73.26	2.15	$24.77	$55.99	$167.97
25		26	70	Base	x x		Phase 1	Original	$105.00	$280.00	7.00	$105.00	$245.00	$735.00
26		27	70	Crown	x x		Phase 1	Original	$0.00	$467.60	11.69	$140.28	$303.94	$911.82
27		28	1	Frame 4 inch	96 x 96 x		Phase 1	Original	$90.25	$163.50	4.45	$67.10	$160.43	$481.28
28		29	1	SR 3-0x7-0 Door, 1 L	x x		Phase 1	Original	$455.00	$80.00	2.00	$115.00	$325.00	$975.00

Edging=$12.97
Hardware=$22.64
Sheet Goods=$171.45

Project



Takeoff Program

Why do I need parametrics

Parametrics gives you the ability to price many many similar items each with different attributes {*parameters*}. Ask youself how many times you have priced the same item over and over with only minimal differences. Now imagine describing the same item only once and then having a machine automatically calculate the differences for you. The following are examples of typical attributes which make products different from a pricing and production perspective.

- Size

- Options (shelves, finished ends, locks)

- Materials (hardware, sheet goods, finishing)

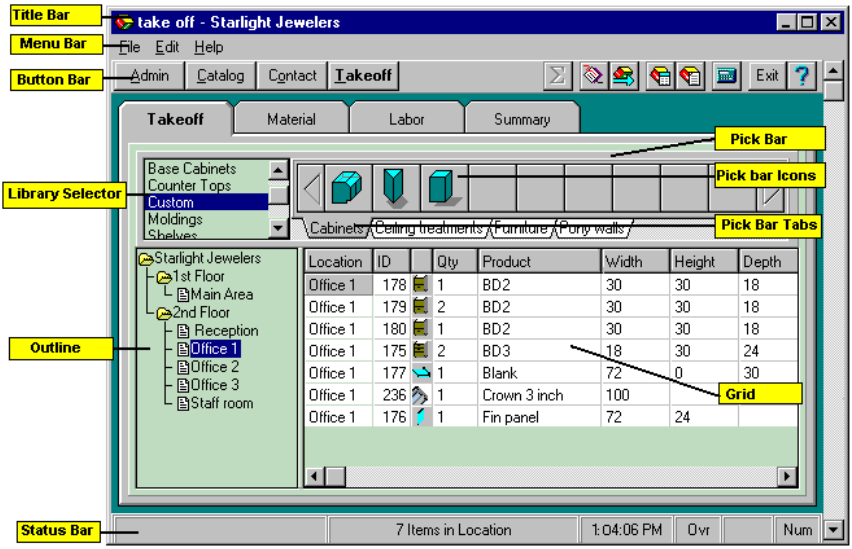
- Labor rates

- Machine process times

Using a *parametric,* model you need only design one product which can span all of the above permutations. The net result is that the library is much small than the traditional size specific libraries and immensly more flexible.

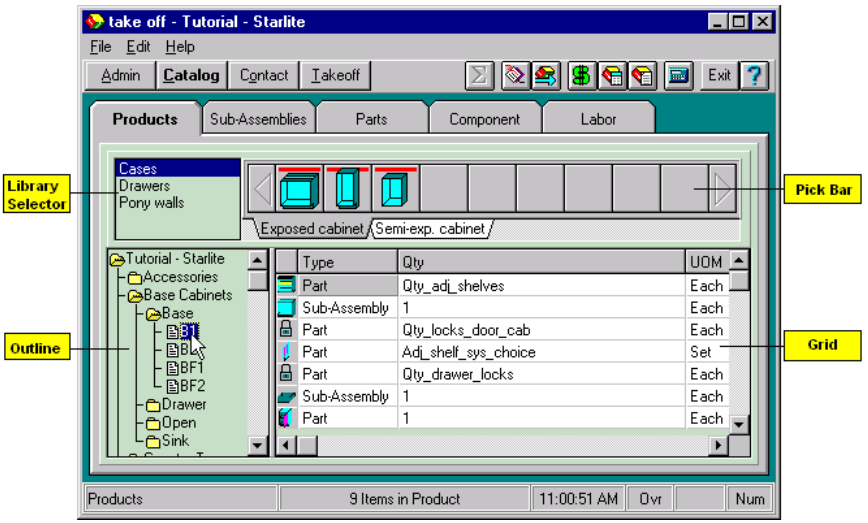
Takeoff Section

The most important section is where estimators actually do the take off. Estimates can be as simple as one item or as complex as hundreds. Takeoff™ can handle them all with ease. As in any take off, the starting point for the estimate is to lay out the project in the Outline section. To do a take off, you simply select the room you are working in, select from the pick bar tab and drag the product onto the grid. Then one customizes the product for size, optional items and material type. Thus each takeoff item is individually customizable and *parametric*. Windows drag and drop technology makes it fast and easy for you and your estimators.



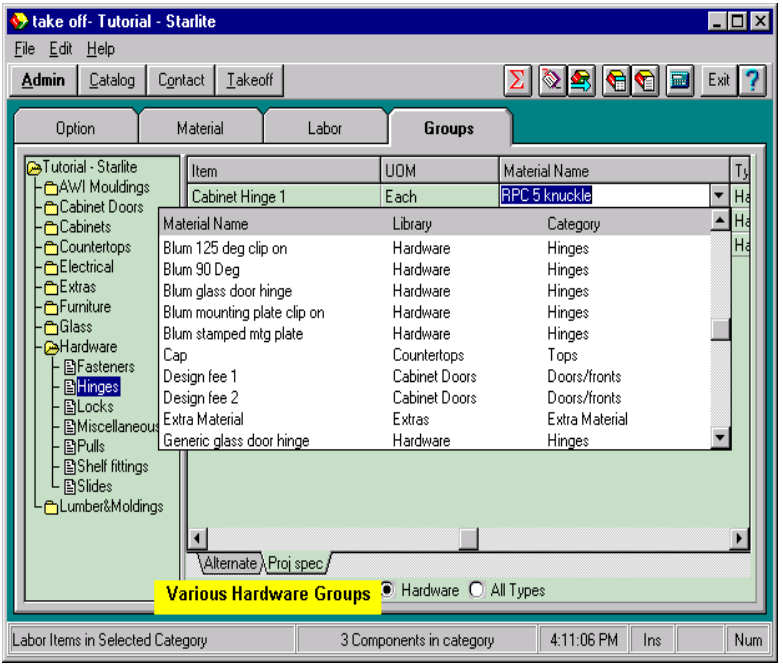
Catalog Section

The Catalog Section of takeoff™ is used for adding items to the pickbar. Products, Sub-Assemblies, Parts, Components and Labor make up this section of the program and each of these has their own tab. Products are usually created for items you use on a regular basis. Any product may be renamed or reconfigured as per individual requirements. This includes any processes, optional items, icon or assemblies. The final product is fully *parameteric*, material independent and ready for the takeoff™ pickbar.



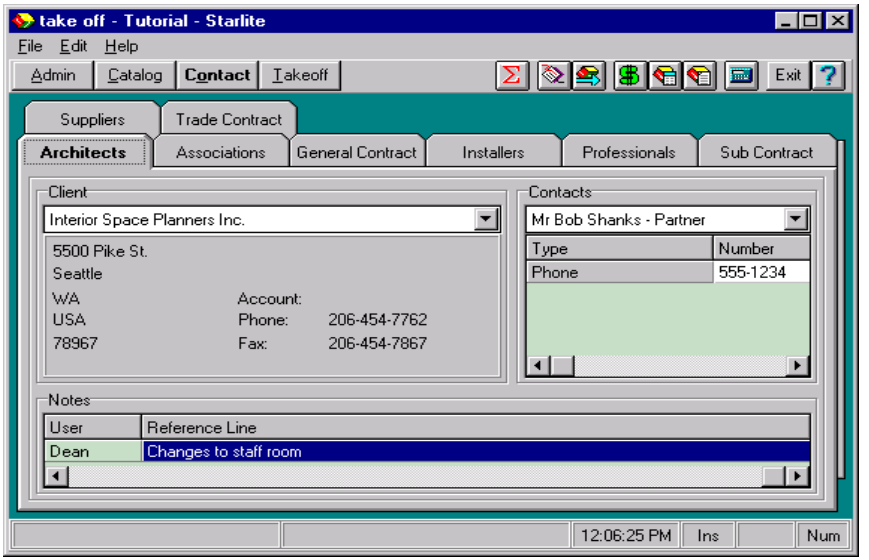
Admin Section

The Admin Section is generally used for project setup tasks. It is divided into four tabs as shown below. The groups tab contains the most powerful feature of the software which allows grouping different sets of materials together which form the project specification. This enables the user to change a product to a different material group with one easy selection, and have all of the related costs follow along with the change.



Contact Section

The Contact Manager is a convenient tool for storing information about the companies and people within a particular project. The Contact Manager also helps you keep track of events within a project as they occur by attaching notes to clients. A date stamp, the user who wrote the note and the subject are all recorded with the note for future reference.



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