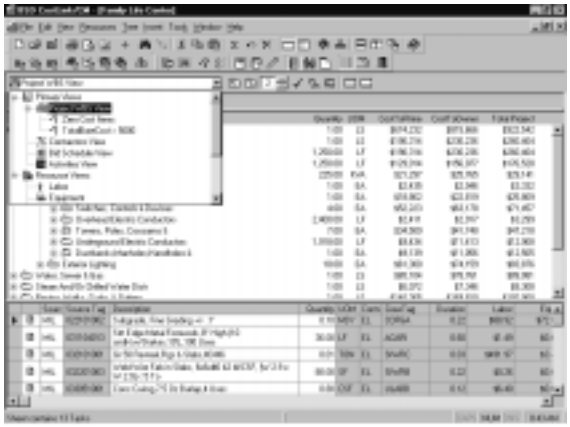
Building Systems Design
LinkLine
Fall 1999

BSD Announces CostLink/CM™

BSD announces immediate availability of BSD CostLink/CM™, our new flagship cost engineering system for facility design and construction. CM is a sophisticated tool for modeling and managing design and construction costs. It supports the gamut of construction resources, uses a non-proprietary, query-based data storage and access system, and has a familiar, Windows Explorer-style, drag-and-drop interface. CostLink/CM™ is BSD's strategic application for the year 2000, providing the foundation for development in the coming decade.



The View is Everything

Version 1.0 of CostLink/CM includes the capability to maintain multiple views on a cost estimate. Predefined views include a Bid Schedule View, Contractors Hierarchy View, a Schedule Activities View and a CSI MasterFormat View. The user can create additional hierarchical views—for example, to organize the cost estimate using a client-specific chart of accounts.

CM supports user-defined queries with an easy-to-use Query Dialog allowing you to retrieve information based on the contents of one or more fields in the Project Database. For example, you can query for all items with a total material cost greater than $100,000, or all items installed by a certain type of crew, or all items with a quantity of zero. CM allows you to store queries in the Views Selector and re-use them as needed during estimate development. You can also print a query as a list or export it to a spreadsheet format, as you can with any CostLink/CM report.

Reports, Reports, Reports

By way of reports, CM provides a wide variety of standard report formats. Like our previous CostLink 16-bit release (BSD CostLink), CostLink/CM provides reports for direct cost summary, indirect cost summary and owner cost summary, and supports easy selection of summary depth (levels of hierarchy to report). CM goes well beyond BSD CostLink. The report manager teams with the organizational interface, allowing the user to select the summarization hierarchy independent of other report selections. This combination provides enormous flexibility for reporting and analysis.

See CostLink/CM, page 2

Specifications for Design/Build

New Product - PerSpective™ - Is Now Available

Many BSD SpecLink subscribers may be interested in a brand-new product from CSI and DBIA. PerSpective is a performance-based specification system that was developed by BSD under contract to a Joint Venture formed by the Construction Specifications Institute (CSI) and the Design-Build Institute of America (DBIA).

How do you specify requirements for a building before it has been designed? That was the essential problem for BSD, the CSI/DBIA Steering Committee, and CSI's Project Manager, Linda Hartman. The design-build delivery process is gaining rapidly in popularity, but there were no specification tools on the market that could be applied readily to such projects in their early stages. Existing master specification systems like

See PerSpective, page 4

Table of Contents

CostLink/CM
continued from page 1

Better still, CM separates its computational engine from the report formatting and output vehicle. Using Crystal Report Writer by Seagate Software, you create your own output formats and reports and can even modify some aspects of the built-in reports. It's also possible to use your own choice of report writer to output data from CM's Microsoft Access-formatted Project summary tables.

Real World Dollars and Cents

CostLink/CM supports estimating using any combination of five predefined cost types (labor, equipment, material, shipping and other) and up to five user-defined unit cost types such as owner furnished equipment. CM is designed around the cost task concept. A cost task comprises user-selected cost types represented by columns in the cost estimate.

A task typically includes one or more materials, a crew reference and production rate for the task, and additional cost types that may be appropriate to the user's project. However, a cost task can be as simple as a single unit cost as well. Cost tasks can be combined into assemblies.

And while labor and equipment resources are normally grouped as a crew used to produce or install a cost task, labor and equipment can also participate directly as an estimate line item or assembly member.

Starter databases of cost tasks, assemblies, labor and equipment are provided with the software. Additional commercial databases are available from BSD, including the full range of R.S. Means cost databases.

Beyond the Direct Cost

To facilitate modeling of indirect costs, CostLink/CM supports hundreds of markup combinations, each of which can be selectively applied to individual line items, the whole project or anywhere in between. Markups can also be defined to apply to one, some, or all cost types (labor, equipment, material, etc). Markups can be as simple as a single percentage markup for all estimate items, or as simple as no markup at all.

Markup capabilities are defined in terms of three indirect cost groups: Adjustments and Taxes, Contractor Markups, and Owner Cost Markups. The Adjustments and Taxes (A & T) group is applied to bare costs and comprises Sales Tax, Escalation, and up to five user-defined markups on direct cost, any or none of which may be used in a given estimate.

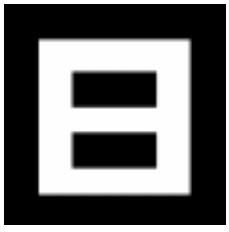
The Bottom Line

As in the predecessor BSD CostLink product, contractors can be defined in terms of their hierarchical relationship to each other. Each contractor's markup can be specified independent of other contractors. Markups are defined as any of up to five predefined indirect cost types (Overhead, Profit, Bond, PTI, and General Excise Tax) and five user-defined types. In CostLink/CM, contractors are created in a separate contractor's view that facilitates work assignment by drag and drop from other project work breakdown views.

CM also supports Owner markups on the total of direct and indirect costs using predefined types for Escalation and Contingency, and up to five user-defined owner cost markups. Like indirect cost markups, owner markups can be applied at individual line items, to the whole project, or anywhere in between.

More Information

For more information on CostLink/CM visit our web site at www.bsdsoftlink.com or call our sales group at 1-888-BSD-SOFT (273-7638).



Q&A

BSD SpecLink

Q I would like to email a draft section of my spec to a consultant for them to print, but they don't own SpecLink. Can I do this?

A Yes, by emailing a print file. From the Windows Start menu select Settings|Printers. Locate the icon for your default printer, right click, and select Properties. Go to the Details tab and use the pulldown under Print to the Following Port to select FILE (prints to file on disk). Make sure that the other person is using the same printer driver. The resulting file will have a .PRN ending and this file can then be attached to an email message. To print the PRN file, go to a DOS prompt and type >copy filename.prn lpt1 where LPT1 is the printer designation of a printer set to print in DOS..

Q What is the limit I can put in a fill-in-the-blank field? What about a new paragraph?

A You can input 254 characters in a fill-in-the-blank choice field and

CostLink/CM™: What Comes Next?

Version 1.1 of CostLink/CM is already in the works. CM 1.1 will add an enhanced scheduling interface, spreadsheet links, and additional export, import and reporting capabilities. Even better, all the additional features are free when you buy the Extended Support Plan for CM. An optional electronic drawing takeoff and digitizing component will also be offered.

The enhanced scheduling interface is expected to include tighter integration with Primavera Project Planner and Microsoft Project, supporting drag and drop association of estimate tasks with schedule activities. Schedule activities

64,000 characters in a new paragraph (that's a really long paragraph!)

Q What are the Repair and Compact options and why should I use them?

A The most common reason a repair is needed is when your project is closed abnormally, maybe after a system lockup. The next time you open your project you get a message to run repair. The software then goes through your project and fixes the underlying data.

After a repair, or before you archive your project, you might want to compact it. This process goes through your project rewriting all tables, queries, and indices, reorganizing the data for optimum performance and making the whole package as small as possible.

Q Can I print a table of contents of all sections without selecting them all?

A The SpecLink quarterly CD includes a file in the Pricing\SpecLink folder that has a complete section listing. It is called 99fallr.doc, or 99fall.rtf, depending on the quarter. It is in Word and RTF file formats. You can also print a Draft Copy of section 00010 - Table of Contents.

! **Did you know?** You don't have to pay extra for a network version of SpecLink, and installing on a network gives you more usage options. Say you have a single user Architectural catalog but more than one person in the office works on specs. Many people designate a work station as the "spec station" and make people move to that machine to work. The easier option is to install SpecLink on the network connecting multiple users to the program. Speclink has a built-in counter that allows one user (or however many are licensed) to access the software at a time. If you think this will help in your office, call tech support to help you change your setup.

BSD CostLink

Q I have dragged a line item from the Unit Price database, but now the unit labor and equipment unit costs are different from what was in the UPB.

A The unit costs displayed in the Unit Price Book reflect the last time the UPB was repriced using selected Labor and Equipment Rates databases. If you later select different Labor and Equipment Rates databases, the unit costs are not automatically changed in the UPB unless you choose the reprice option. Your project however has two modes, Crew with Auto Reprice and Crews with Reprice Key (Manual). If your estimate was set to Auto Reprice, then the line items you drag from the UPB are automatically repriced when you bring them into your estimate.

Q I have itemized the Prime Contractor's overhead costs under the Overhead Items title, but the costs are not being included in my estimate.

A Each time you add a new contractor, a title called Overhead Items is created. However the calculation method for Overhead and the other Indirect Cost columns is set to Percentage of Running Total by default. In order for the itemized costs to be included in the estimate, the calculation method on the Contractor dialog must be changed to Compute.

Q How do I create a shortcut to the BSD CostLink software on my desktop?

A Click the right mouse button anywhere on your desktop, go down to New.., and then select Shortcut from the submenu. Enter the path and program file name (example: c:\costlink\costlink.exe) or use the Browse button to find the location. Click the Next button and then enter the name you want to call the shortcut. When you

See Q & A, page 4

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are created as independent containers of estimate line items (assemblies, cost tasks, and labor and equipment resources). CM will include a capability to establish links (activity relationships), and produce and display a simple "forward pass" schedule independent of external scheduling software.

Spreadsheet support in CM 1.1 includes the capability to import an Excel 4, 5 or 7 compatible workbook, and link to and from worksheet cells. Any quantity, production rate, or duration field in CM can be designated to receive the value of an imported worksheet cell or to provide the value of a cell. Workbook formulas can be created, modified or deleted using over 150 spreadsheet functions.

Electronic drawing takeoff is supported via Bentley Systems' MicroStation PowerScope product. CM 1.1 supports opening drawings from CM as a PowerScope window. The user can then create takeoffs using area, length and count tools in PowerScope and automatically insert results in sequential cells of an open CM spreadsheet. Using the CM 1.1 worksheet capability, takeoff summary cells can be directly referenced by the estimate as described above.

CostLink/CM 1.1 will also include a user-formatted report setup for creating special summaries that compare projects and/or display percentage relationships between project elements. A more robust export allowing users to select and order fields for tabular export to text and spreadsheet formats will also be provided.

LinkLine

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Get the latest on BSD by visiting our Web Page at www.bsdsoftlink.com.

Q & A
continued from page 3

are done, click on the Finish button. If there is an icon associated with the program file it will be used automatically. If you want to change the icon, right click on the shortcut and select Properties. Click on the Shortcut tab and then click on the Change Icon button.

Note: Anytime you crash in BSD CostLink or Mcaces for Windows, you should make sure that you recreate new indices for any databases, including projects, that you had open at that time. The indices are used to help you navigate and find data in the databases, and you could find errors if the indices are corrupted. Select Reset Index from the File Menu before you reopen the project.

Q I have a project with two identical buildings. I know that I can estimate one and then copy it, but how can I do it to save room in my estimate?

A Rather than duplicating the line items for the second building, you can create a title for the second building and use the Cost Override field to enter the total costs for the second building. Another advantage of using this method is that if the building design changes, you can change the detail estimate for the first building and then just change the total cost for the second.

Q I have just loaded NT on my machine and CostLink works fine, except when I do Print Preview, I can't read the numbers on screen even with zoom.

A Print Preview uses a Postscript printer driver to display on screen, so if you did not load this driver on your new system, you need to do this, even if you won't be actually printing to a Postscript printer.

Q How come I am not able to print out the Labor, Equipment, and Crew Summary Reports for my project, even though I used crews to calculate my unit labor and equipment rates? The options are greyed out on my screen.

A In order to print those backup reports, you must have an A - Crews with Auto Reprice type estimate. This type of estimate reprices your total labor and equipment costs each time you run a report, verifying that these costs are correct and up to date. Go to the Summary Info dialog, move to the Calculations tab, and change the Estimate Type. Then when you go to the Report Setup dialogs, the Labor, Equipment, and Crew Summary Reports will be available.

Q I wanted to copy an extensive list of Labor items into my project as line items for general conditions. I did it by selecting the whole page of Field Management labor items and dragging them into the project then deleting the ones I didn't want. Was there an easier way?

A Yes, by holding down the Ctrl key you can select a list of non-contiguous items. Better yet, you could create an assembly of typical line items for general conditions and then link them together using the Link as Assembly function on the Options Tab of the lowest title Item Form. That way all you have to do is copy in the assembly and change the title quantity to the duration of the job.

PerSpective
continued from page 1

MASTERSPEC® and BSD SpecLink® are intended for producing construction contract documents. An owner who tried to use them in producing an RFP would end up prescribing materials and systems that might not be the most appropriate for the project. Also, by predetermining major subsystems the owner would be failing to take best advantage of the collaborative nature of design-build. PerSpective was conceived by CSI and DBIA as a tool for owners to use in specifying how they want the finished building to perform, without dictating exactly what materials and systems must be used to achieve the required level of performance.

PerSpective is also designed to be used by design-builders in preparing a proposal that leaves open the precise means of achieving the proposed performance goals. In addition, design-builders can use PerSpective to solicit proposals from subcontractors and to communicate with them on specific materials and subsystems that may or may not be included in the project. A unique global switch in PerSpective changes the voice used throughout the database, depending on the document function. If PerSpective is used by an owner, the voice is active (Design and provide exterior enclosure that. . .). If used by the design-builder, the voice is passive (The building will be designed and constructed to provide exterior enclosure that. . .). This switch operates much like the one in BSD SpecLink that changes units of measure throughout the project.

PerSpective should also be useful to architects and engineers for producing schematic design specifications and even design development specifications for projects delivered conventionally, in a design-bid-build process. Especially at the earliest stages of design, definitive decisions have not been made about the specific materials and systems that will be used. PerSpective allows those elements of the building to be specified in performance terms, without naming specific materials.

Although PerSpective looks a bit different from BSD SpecLink, its operation will be familiar to SpecLink subscribers. Like SpecLink, it is an edit by selection system, and 25,000 links result in greater productivity. Its notes window can be moved and resized, and users can insert graphic files into their project notes, in addition to text. PerSpective is a 32-bit Windows software program, which means that it will not work with Windows 3.1 or Windows 3.11 for Workstations. It also requires a more powerful computer. Recommended hardware includes a Pentium II 266 mHz CPU, a 19-inch Super VGA monitor, and a 32X CD-ROM reader.

Are you interested in learning more about PerSpective? Visit the website at www.perspectivenet.com, or request a free CD-ROM demo and trial copy of PerSpective by calling toll free: 877-893-0896.

About your SpecLink Quarterly Update

BSD SpecLink Statistics:

- 693 sections total
- 425 non-proprietary sections
- 268 proprietary sections
- 4 new sections
- 1,446 external documents referenced, by 143 standards organizations
- 109,866 links

Data activities since last issue:

- 71 standards organizations verified
- 1,136 external documents verified
- 453 sections updated - 65 % of total
- 335 sections affected by ASTM updates

Sometimes subscribers wonder what they really get for their annual renewal fee.

Besides continued productive use of the SpecLink software and data, subscribers get the benefit of a considerable amount of research – research that would be very expensive to conduct for themselves. For instance, the 425 generic sections in SpecLink include references to 1,446 external documents ranging from building codes to standards of engineering societies to voluntary standards of product manufacturer trade organizations.

The use of these documents, usually referred to as "referenced documents", makes the job of writing specs enormously easier, since it is unnecessary to repeat all those requirements in the actual project specification. On the other hand, the organizations that author these documents conduct their own review and updating processes at their own discretion. At any one time, a considerable number of the documents referenced could be superceded by a later edition, withdrawn or cancelled by the author, or replaced by a completely different document.

Obviously, it is possible to reference out-of-date documents but, just as obviously, doing so can introduce errors into project specifications. The magnitude of such an error depends on the function of the

See Update, page 6

AAMA	American Architectural Manufacturers Association	23
AASHTO	American Asso. of State Highway and Transportation Officials	7
AATCC	American Association of Textile Chemists & Colorists	4
ACGIH	American Council of Governmental Industrial Hygienists	1
ACI	American Concrete Institute International	18
AFPA	American Forest and Paper Association	3
AGC	Associated General Contractors of America	1
AHA	American Hardboard Association	1
AISI	American Iron and Steel Institute	2
AMCA	Air Movement and Control Association International, Inc.	10
ANSI	American National Standards Institute	67
APA	APA - The Engineered Wood Association	4
ARI	Air-Conditioning and Refrigeration Institute	19
ASCE	American Society of Civil Engineers	1
ASHRAE	Amer. Society of Heating, Refrig. and Air-Cond. Engineers, Inc.	14
ASME	The American Society of Mechanical Engineers	42
ASSE	American Society of Sanitary Engineering	6
ASTM	American Society for Testing and Materials	655
AWI	Architectural Woodwork Institute	1
AWPA	American Wood-Preservers' Association	12
AWS	American Welding Society	8
BHMA	Builders Hardware Manufacturers Association	22
CISPI	Cast Iron Soil Pipe Institute	2
CRA	California Redwood Association	1
CRI	Carpet and Rug Institute	1
CSSB	Cedar Shake and Shingle Bureau	2
HPVA	Hardwood Plywood & Veneer Association	1
ICBO	International Conference of Building Officials	4
ICC	International Code Council, Inc.	2
IEEE	Institute of Electrical and Electronic Engineers	34
IESNA	Illuminating Engineering Society of North America	2
IGCC	Insulating Glass Certification Council	1
ITS	Intertek Testing Services NA, Inc.	1
KCMA	Kitchen Cabinet Manufacturers Association	2
MIA	Marble Institute of America, Inc.	1
MSS	Manf. Standardization So. of the Valve and Fittings Industry, Inc.	11
NAA	National Arborist Association	1
NAAMM	The National Association of Architectural Metal Manufacturers	13
NACE	NACE International	3
NBGQA	National Building Granite Quarries Association, Inc.	1
NFPA	National Fire Protection Association	36
NHLA	National Hardwood Lumber Association	1
NTMA	The National Terrazzo and Mosaic Association, Inc.	1
PCI	Precast/Prestressed Concrete Institute	9
PIMA	Polyisocyanurate Insulation Manufacturers Association	1
SDI	Steel Door Institute	5
SDI	Steel Deck Institute	3
SJI	Steel Joist Institute	2
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association	7
SPRI	Single Ply Roofing Institute	1
TCA	Tile Council of America, Inc.	1
TIA	Telecommunications Industry Association	2
UL Dirs	Underwriters Laboratories Inc.	7
UL Stds	Underwriters Laboratories Inc.	62

Figure 1: Standards Verified by BSD Staff in the Last 3 Months

document. Standards that specify minimum requirements for materials either reflect the prevailing manufacturing practices or are voluntary standards promulgated by industry groups — it would be foolhardy to specify a standard for quality that was not in current manufacture. It is just as important to verify that a new standard can be met as it is to eliminate obsolete requirements. Other standards specify test methods or procedures. These are often in continuous refinement by their authors, to improve repeatability, accuracy and fairness.

BSD monitors all documents referenced in SpecLink, to verify that existing references are still correct, to obtain new editions and updates, and to identify new or emerging standards that could be of use in the specifications. For example, Figure 1 is a list of standards developing organizations whose standards were verified by BSD staff in the last 3 months, each with the number of referenced documents indicated.

Of particular note are the 655 ASTM standards that are referenced in SpecLink sections, 45 % of all referenced documents. Although many of these are important material and test standards that design professionals should understand, obtaining and studying them is both expensive and time-consuming. Therefore, we try very hard to make the references to them in the specification accurate and self-explanatory. We also include notes to the specifier to explain choices or options that may not be obvious. Each time an ASTM standard (or any referenced document) is updated, we review it for changes from the previous edition, examine the SpecLink text to see whether any changes are needed, and add any clarifying notes required. If a standard is withdrawn, as they occasionally are, we identify a replacement document if possible and change the text appropriately.

ASTM has thousands of standards and no fixed updating schedule. To reduce the problem of review of ASTMs, several years ago we analyzed the frequency of updating versus the availability and cost of replacement documents.

1999 Software Training Schedule

BSD SpecLink
1-1/2 day $395
September 27 - 28
October 25 - 26
November 30 - Dec. 1
December 20 - 21

Class attendees earn 12 Continuing Education Hours. AIA Members earn 36 Learning Units.

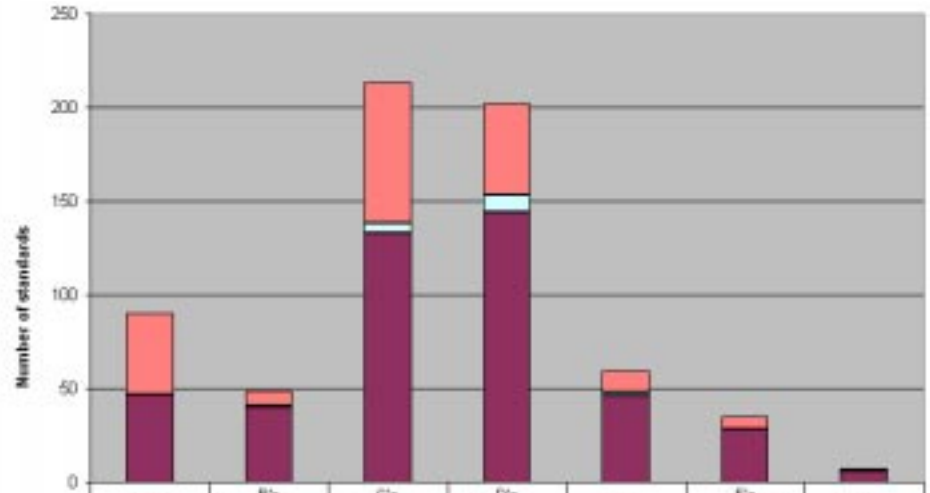
BSD CostLink (MFW)
3-1/2 days $895
September 20 - 23
November 15 - 18

BSD CostLink/CM (M32)
4-1/2 days $1195
October 4 - 8
December 6 - 10

Government Contractors earn Mcaces Certification.

You can now look for BSD class schedules on our internet site. Just go to www.bsdsoftlink.com and go to the training page. You will find schedules, maps, hotel information, and information about Atlanta.

For example, 194 of the 655 referenced ASTMs have been changed since we last verified them a year ago. If we purchased all 194 of these at ASTM's single standard prices, the cost would be at least $2900 — a price not economical for us and certainly impossible for the vast majority of design professionals. Therefore, we decided that ASTM standards would be verified and updated only once a year and the edition date referenced would be based on the edition published by ASTM in their compilation entitled "ASTMs in Building Codes." For Fall 1999, all the references to any updated ASTM in any SpecLink section have been changed to show the edition date in the recently published set. This 4-volume set is published in June-July each year and contains the full text of all ASTM standards referenced in the 3 model building codes (ICBO, BOCA, and SBC), and in BSD SpecLink, MASTERSPEC, SPECTEXT, NAVFAC specs, COE specs, HUD standards, IAPMO Uniform Plumbing Code, and the National Building Code of Canada. At $795 (or $995 for CD-ROM), this set is an outstanding value. BSD cooperates with ASTM to ensure that this set includes virtually all ASTM's referenced in the BSD SpecLink sections. For information, call (610) 832-9585 or see www.astm.org.



	A's Iron and Steel	B's Non-Ferrous Metals	C's Concrete, Gypsum, Wood	D's Plastics, Rubber, etc.	E's Test Methods	F's Non-Metallic Pipe, Misc.	G's Test Methods
Updated	43	8	75	49	11	7	1
Reapproved		1	5	9	2		
No change	47	40	133	144	46	28	6