2014 AIA Fellowship

Entry 26958

Nominee	Robert Paul Dean
Organization	Building Systems Design, Inc.
Location	Atlanta, Georgia
Chapter	Georgia: AIA Atlanta
Sponsor	Kenneth A. Schwartz
Organization	Tulane University

Category of Nomination

Category Two: Education, Research, Literature, or Practice

Summary Statement

Robert Paul Dean has invented and developed many innovative software products that have helped thousands of architects nationwide produce accurate, up-to-date, and better coordinated construction documents more efficiently and economically than would otherwise be possible.

Nomination Signature Sheet

<u>Robert Paul Dean, AIA</u>

Candidate's Name

Component Nomination

Name of component organization   AIA Atlanta Chapter

Signature of chapter president or secretary   *Theresa Ridley, AIA*

Name of chapter president   Theresa Ridley, AIA

<u>or</u>

Nominated by any 10 AIA Members *or* any 5 Fellows in good standing:

1. Signature/date   _____

   Print/Type full name/chapter   _____

2. Signature/date   _____

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3. Signature/date   _____

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Note: It is the responsibility of the sponsor to notify the AIA component of a petition nomination.

ROBERT PAUL DEAN, AIA

Application for 2014 Fellowship

October 18, 2013

August 16, 2013

Craig Rafferty, FAIA
Jury of Fellows, College of Fellows
American Institute of Architects
1735 New York Avenue, NW
Washington, DC 20006

RE: Robert Paul Dean Nomination for Fellowship

Dear Mr. Rafferty and Members of the Jury:

It is my great pleasure and privilege to sponsor Robert Paul Dean for Fellowship in the American Institute of Architects. While I have written many letters in support of nominees and have sponsored a few as well, I have never seen a candidate with the same breadth and depth of national impact as Mr. Dean. He has literally revolutionized the practice of architecture through his leadership in advancing the role of digital applications in specifications, costs, performance of materials and systems and a whole host of related elements associated with the production of architecture. You will see in his package an exceedingly rare example of an architect who has contributed substantially to the paradigm shift we have seen over the past thirty-five years in our profession. His technical expertise, creative drive, and entrepreneurial skill have combined in ways that are virtually unprecedented in our field.

Rob Dean has been at the forefront of innovation for decades. If we were only looking at the development of his business since 1993, Building Systems Design, we would be witnessing a story that has supported tens of thousands of architectural projects by serving thousands of architects who use his software. Yet, in his case we see even more. He has been a teacher, prolific writer, and highly impactful lecturer on these and related topics spanning his entire career.

Mr. Dean is an engaged citizen of our profession in every respect. From his work as a central member of the AIA Documents Committee to his frequent roles in teaching, his involvement as a trusted advisor to me and as a generous supporter of his alma mater, and in his work as a mentor to many younger architects throughout his career, Rob Dean is truly a Renaissance man. This year, the Construction Specifications Institute will recognize him with election to Fellowship in their organization; it would be particularly timely and fitting for the College of Fellows of the AIA to do the same. While the role of specifications seldom receives the attention it deserves in the architectural press, surely we all recognize that our profession and the way architects serve society would be significantly diminished were it not for Mr. Dean's extraordinary contributions.

Sincerely,

Kenneth Schwartz, FAIA
Favrot Professor and Dean

ROBERT PAUL DEAN AIA

As a teacher, writer, lecturer, inventor, and 13-year member of the AIA Documents Committee, Robert Dean has made significant technical contributions to the profession with profound impact on the practice of architecture, affecting hundreds of thousands of building projects.

Robert Paul Dean has invented and developed many innovative software products that have helped thousands of architects nationwide produce accurate, up-to-date, and better coordinated construction documents more efficiently and economically than would otherwise be possible.

I. PIONEERING THE ADVANCEMENT OF CONSTRUCTION SOFTWARE TECHNOLOGY

The software products invented by Mr. Dean and developed at several different companies over the last thirty years have benefited thousands of architects, engineers, and other design professionals by improving and automating many of the steps involved in the preparation of construction documents. A pioneer in the development of architectural applications for the personal computer, he has invented unique software tools that contribute to more efficient editing and customization of documents, simplify the maintenance and enhancement of office master specifications, and facilitate construction administration through automated report generation. He has contributed to the development of design-build project delivery through his creation of software for generating design criteria, or performance specifications. His most recent work on interoperability tools has resulted in groundbreaking software connectivity between Building Information Models (BIM) and construction specifications.

II. IMPROVING THE CONTENT OF CONSTRUCTION DOCUMENTS

Mr. Dean has made substantial improvements to the overall quality of construction contract documents through his work on the content of virtually every major commercial guide specification system ever offered in the United States and through his dedicated work in the creation and updating of AIA contract forms. His work on these products has extended over thirty-four years and has benefited hundreds of thousands of construction projects. The content of his company's current specifications product comprises the most up-to-date database of master guide specifications available anywhere, due to the unique data structure and comprehensive updating schema invented by Mr. Dean. Through his work on the AIA Documents Committee, he has helped to improve the content of many contract forms that have been relied upon throughout the construction industry. Because of his efforts in the creation, development, and maintenance of guide specifications and contract forms, thousands of American design professionals have produced better contract documents and project specifications that have been more accurate and more current than would have been previously possible.

III. PROVIDING EDUCATION IN ARCHITECTURAL TECHNOLOGY

Mr. Dean has been a frequent speaker on architectural practice and software technology topics at many AIA events and at events sponsored by other construction industry organizations, such as the Construction Specifications Institute (CSI), the Design-Build Institute of America (DBIA), The Associated General Contractors of America (AGC), and the International Facility Management Association (IFMA). Many of his speaking engagements and articles have been offered for AIA continuing education credit. For well over a decade, he has provided schools of architecture with complimentary software for use in professional practice courses. He has taught for several years at the university level on numerous construction technology subjects, including architectural acoustics, building construction materials and systems, mechanical and electrical equipment, building energy conservation, and architectural lighting design. He is currently a member of the Tulane University School of Architecture Advisory Board, offering advice and support on behalf of the architectural profession.

"By bringing our specifica-
tion writing in house with
BSD SpecLink, we were able
to establish better coordi-
nation of the specification
content with the drawings."

James Goodman, AIA
*Principal; James Goodman
Architecture
San Juan Capistrano, California*

Introduction

Robert Paul Dean has devoted a significant portion of his career as an architect to research and development of software technology for improving the practice of architecture and especially to improvements in the production of construction specifications. He has also made major contributions to the architectural profession through his work on numerous AIA contract documents during the thirteen years he spent as a member of the AIA Documents Committee.

Mr. Dean formed Architectonics, Inc., his own specification writing company, in New Orleans in 1977 after working for several years as a specification writer for a number of small architecture firms. What made his experience at his own firm unusual was his experimentation with COMSPEC, an early attempt at an automated specification system offered by the Construction Sciences Research Foundation, Inc. (CSRF). It was this seminal exposure to the concept of electronic specifications production that led to his later groundbreaking work in developing specifications software for the personal computer.

Unique and transformative specification products and related systems he invented, developed and managed over a twenty-seven year period are as follows:

- SweetSpec: 1986-1991
- SPECSystem: 1991-1993
- BSD SpecLink: 1994-2000
- PerSpective: 1998-2004
- BSD SpecLink+: 1999-present
- AGC DocuBuilder: 2000-present
- BSD SpecLink-E: 2009-present
- BSD LinkMan-E: 2010-present
- Cloud-Based BSD SpecLink-E: currently in beta test

SweetSpec

While employed at Heery International, Inc. in Atlanta as its Materials Research Coordinator during the early 1980's, Mr. Dean conceived the idea of an "expert" specification writing program for the newly introduced personal computer. After he had developed a prototype with funding provided by Heery in 1983, the company presented the concept to McGraw-Hill, Inc. Over two years of testing the concept with focus groups and presentations at trade shows resulted in a decision in 1986 by Sweet's Catalog Division of McGraw-Hill to purchase the rights and hire Heery to develop the product, under the direction of Mr. Dean. After three years of development by Dean's team of 28 people, SweetSpec was introduced to the market in 1989 as the first automated specification system for the personal computer.

"SpecLink highlighted all LEED requirements throughout the project and was extremely helpful in identifying what we needed."

Joseph Slack, AIA
Vice President and Principal Architect; HGE, Inc.
Coos Bay, Oregon

SweetSpec was a Q&A system that presented questions to the design professional in a logical decision-making order, unrelated to the order of the text in the final output. Each question presented was determined by the user's previous answers, so the dialog with the computer imitated a conversation with an expert specification writer, avoiding any irrelevant questions. At the end of each dialog, the system produced a customized specification section tailored to the needs of the project and organized in CSI's standard 3-part format. In addition to being the first automated spec system for the PC, SweetSpec introduced a number of other innovations:

- It was the first software product for architects to be distributed on a CD-ROM, avoiding the need to deal with multiple floppy disks or hard copy
- It was the first "expert" system for specifications, emulating a human expert in a Q&A format instead of requiring the user to read and edit master guide specifications, thereby appealing to many inexperienced specification writers and streamlining the specifications production process
- It was a "split" system, which required the user's PC to connect by modem to a mainframe computer for "permission" to print the finished section—allowing McGraw-Hill to charge by usage—and making the system affordable to the smallest firms while charging larger firms appropriately for their greater use of the system

Although the master text was actually present on the user's CD-ROM, outdated text was automatically replaced by data downloaded from the mainframe for each section, resulting in specifications that were far more current than anything else on the market, before or since; the project specifications output was literally up to the minute with changes in the industry. This breakthrough was offered in 1989, at the very beginning of the personal computer era and long before the worldwide web was available.

SPECSystem

The SweetSpec product was an unqualified technical success but failed to gain enough market share for McGraw-Hill to continue with the project. After two years of unsatisfactory sales, McGraw-Hill granted the software rights to Heery. Mr. Dean and his team of software developers and specification writers revised and simplified the program to eliminate the connection to the mainframe computer, selling the renamed SPECSystem as an annual subscription, distributing it exclusively on CD-ROMs, and updating it quarterly. There were several hundred subscribers to the program when Heery transferred it to the American Institute of Architects in 1992, where it was subsequently renamed MasterSpec Q&A and was sold successfully and profitably by AIA for several more years. Innovations introduced with SPECSystem included the following:

- **Global Updating:** Updating sections paragraph by paragraph on an "as-needed" basis, instead of on a multi-year section replacement schedule, so specifications were far more current than competing master guide services, including MasterSpec
- **Obsolescence Protection:** The software required a unique access key that prevented continued use of the system after a subscription expired, thereby assuring that each user's specifications were as up-to-date as possible

"The time savings (of using BSD SpecLink) combined with the improvement in quality have given us twice the advantage by improving both our specification accuracy and our productivity—improving time savings by an amazing 70% on average."

Stephen Mangin
Project Architect
Pickering, Incorporated
Memphis, Tennessee

BSD SpecLink

After AIA moved SPECSystem to Washington, DC in 1993, Mr. Dean decided to develop a new and improved software product, building on his experience with Q&A systems. He developed the concept for a specification product that would be unlike anything else available. He attracted the attention of the Construction Sciences Research Foundation (CSRF) with a proposal for a computerized specification system that would be based on a relational database. In late 1993, Dean brought the concept for the new specifications product to Building Systems Design, Inc. (BSD) and joined the company as its new Vice President for Product Development.

CSRF signed a development contract with BSD in 1994 and provided the initial development funds for what ultimately became BSD SpecLink, which was introduced in the spring of 1996. SpecLink was a revolutionary new system for producing construction specifications, based on a Microsoft Access relational database. Unlike conventional systems that rely on word processing, SpecLink stored all information about a project in a single file. In addition, the user's project file did not interfere at all with the master guide text, which was encrypted and stored separately. The system emulated the concept of overlay drafting, in that the edited specifications comprised unique user edits in a "transparent" layer that sat on top of the master text and took precedence over the master data. Mr. Dean's innovations for BSD SpecLink were significant and numerous and include the following:

- **Edit by Selection:** It was the first (and still the only) system to employ editing by selection of needed text, instead of deletion of unneeded text, thereby preserving all options for later consideration or for reuse on subsequent projects—a perfectly safe procedure due to its comprehensive updating scheme

- **Intelligent Links:** The database included tens of thousands of "Intelligent links" that automatically included related text, excluded incompatible text, and highlighted relevant optional text, based on previous text selections made by the user, thereby speeding the editing process and helping to avoid inadvertent oversights

- **User-Added Intelligent Links:** Users were given the opportunity to add their own intelligent links to office master projects, thereby extending the improved editing efficiency to user-added text

- **Section Coordination:** Intelligent links between sections improved coordination by automatically highlighting cross referenced sections and selecting text required by decisions made in other sections

- **Intelligent Updating:** Automatic quarterly updates did not overwrite or otherwise change any decisions made by users on existing projects without the user's approval, because obsolete text was not discarded or replaced—merely marked as obsolete so it could be retained at the user's discretion

- **Embedded Choices:** Options within paragraphs were included in "pop-up" dialog boxes instead of as bracketed text within the paragraph that require deletion of unneeded text; the options not needed on one project were therefore always available for possible use on subsequent projects

"Before using SpecLink, it was difficult for us to maintain consistency from project to project. Now our SpecLink Office Master is a repository of valuable knowledge."

Michael Drewyor, P.E.
Hitch, Inc.
Houghton, Michigan

- **Specifier Notes:** Context-sensitive " Notes to the Specifier" were included in a separate window instead of being inserted within the guide text, making the master specifications easier to read and comprehend while making helpful information readily available; this innovation also prevented users' occasional inadvertent inclusion of notes in the finished specifications

- **Project Notes:** The ability to add a project note to any paragraph allowed firms to incorporate "corporate memory," or lessons learned from experience, into office master specifications for improved project specifications in firms with multiple users

- **Global Variables:** Global choices provided automatic substitution of a specific term such as "Owner" or "Contractor" throughout the entire project by means of a single entry and allowed automatic global replacement of inch-pound or metric units, allowing users to quickly adapt a copy of an office master project to the needs of a particular client

- **Dated Reference Standards:** Because of BSD's intelligent updating, it was possible to include publication dates for all cited reference standards; users were also given a global option to print or withhold publication dates—or to exclude full reference standard citations altogether

- **Universal Formatting:** Formatting of all specification sections in a project was accomplished in a single location by choosing from several standard formats or by customization of any format; not only did this allow almost instantaneous last-minute changes to a project manual, it also allowed rapid customization of an office master for different clients

- **Keywords:** Including keywords in global headers and footers allowed automatic insertion of variables such as section number, section title, name of project, etc. in all sections of a project, assuring consistency in the project manual while customizing each section to reflect its content

- **Reports:** By "tagging" paragraphs requiring various kinds of submittals, it became possible to automatically generate dozens of administrative reports that summarized requirements for the construction phase of a project by querying for particular tags on active paragraphs

- **TOC:** An automatically generated Table of Contents was available that included page counts, saving a significant amount of time in final assembly of the project manual

- **Submittals Table:** A separate view displayed the titles of all available sections and could be collapsed to show only the sections currently included in a project, together with all selected submittals, thus providing the project manager a unique overview of the project status prior to release of the specifications

"SpecLink provides a large number of ready-to-use specifications in an auto-mated, intelligent database."

Richard Robison, AIA
*Principal; Lord, Aeck & Sargent*
Atlanta, Georgia

BSD SpecLink+

The second generation of BSD SpecLink was initially released in December 2000. In addition to preserving and improving the features introduced in the first generation, SpecLink+ used 32- bit architecture to increase the operating speed and drastical-ly improve the appearance and operation of the program. Over the next few years, under Mr. Dean's leadership and direction, a number of additional capabilities were added, including the following:

- **Manufacturer Hyperlinks:** Thousands of hyperlinks to manufacturer websites were added, allowing users to quickly and easily obtain additional information about products that were of interest while avoiding the inclusion of unnecessary data within the software application

- **Interface Enhancements:** Icons were added or changed to reduce dependence on color cues, accommodating a signifi-cant minority of users who are color blind

- **Paragraph Tagging:** Users were given the ability to "tag" paragraphs they added with any of dozens of IDs, allowing rele-vant user-added data such as shop drawing submittals to be included in the software's automated administrative reports

- **Usage Data Collection:** The software was modified to automatically collect usage information from subscribers, allowing BSD to concentrate its updating activities in those sections that were used most frequently and providing manufacturers with information on how frequently they were being specified

- **Incorporation of MF04:** When CSI introduced MasterFormat 2004, BSD was the first specifications product to include all the new divisions, section numbers, and section titles

- **MasterFormat Switch:** A unique single click command was added that enabled users to automatically convert any proj-ect created under MasterFormat 95 to the new MasterFormat 2004, including all new section numbers and titles and all cross references within the specification text; this innovation was especially useful to engineering consultants, allowing them to quickly and easily adapt their master specifications to the needs of each architect client

- **Database Expansion:** The construction specifications database was expanded to include performance specifications for the programming phase of a project and short form specifications for use during schematic design and design develop-ment phases, with intelligent links connecting the three types of specifications to expedite specifications production in subsequent project phases by automatic selection of needed text

- **Meter Mode:** An option to purchase specifications by usage, instead of by subscription, was added in 2005; these "meter mode" accounts automatically deducted a specific amount from a pre-purchased meter each time the user printed a final specification section, providing smaller firms access to the advantages of BSD SpecLink+ at significantly lower cost

- **Project Data Collection:** Additional information about usage began to be collected in 2006, allowing manufacturers to see more specific data about the types and value of projects being specified with BSD SpecLink+; users were offered the option to withhold this data, so privacy concerns were always respected

- **Reference Standard Hyperlinks:** Thousands of additional hyperlinks were added to connect all instances of reference standards in the master guide text to specific websites with additional information about the standard and the opportu-nity to review or buy each document, assuring that users always had access to the latest edition of any standard refer-enced in the database
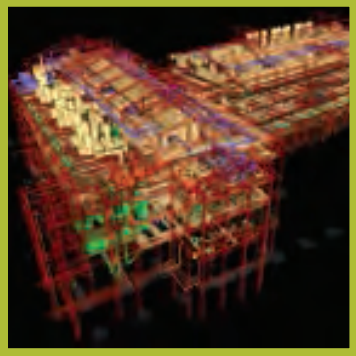
"SpecLink gave us the ability to seamlessly assimilate a tremendous amount of client-specific requirements, standards, procedures, and preferences."

Jamie Hewitt, AIA
Director of Technical Resources & Development Williams Blackstock Architects Birmingham, Alabama

BSD SpecLink-E

The third generation of BSD SpecLink was developed under Mr. Dean's leadership and was released in late 2009, after a year of Beta testing. Unlike the first two generations, which were based on Microsoft's Access relational database, SpecLink-E is client-server software that uses Microsoft's SQL Server database management system. This relational database software is far more robust and allows an almost unlimited number of concurrent users at each site or at multiple sites connected by a Wide Area Network, or WAN. Once an update is installed on the user's server, all client updates are handled automatically using Microsoft's ClickOnce technology. The software also includes translation capability that automatically imports projects created under the older BSD SpecLink+ product. Mr. Dean has directed the company to continue adding features and new capabilities to SpecLink-E on an ongoing basis, including the following:

- **Expanding/Collapsing Database:** A project database can now be expanded or collapsed to produce outline, short form, and full construction specifications without the need to start over at each phase of a project; decisions made early in a project can be further defined by making additional text selections as a project moves through schematic design into design development and then into construction documents. Conversely, a pre-defined office master project can be collapsed to produce simplified outline specifications and/or short form specifications without losing any data. Mr. Dean conceived and designed this revolutionary feature, and its development and implementation were accomplished under his direction and control

- **Green Hyperlinks:** Hundreds of context-sensitive hyperlinks were added to the database, connecting material choices in BSD SpecLink-E to appropriate pages on CSI's GreenFormat website; these links provide additional green information to users pursuing LEED certification or simply attempting to create more sustainable projects

- **Global Spell Check:** Replacing the necessity of spell checking section by section, the ability to check an entire project for correct spelling or to find-and-replace a particular term was added, saving users a great deal of time in what was formerly a more laborious process

- **User-Modified Choices:** The editing of master paragraphs with embedded choices was modified to permit changes to the embedded choices in a user copy of a master paragraph without losing any intelligent links, thus enabling maximum flexibility in setting up an office master project

- **Images:** The ability to insert images into both the specification text itself and into project notes was added; affording users maximum flexibility in establishing specification content and making office master specification notes more useful by accommodating graphic data

- **Hyperlinks:** The ability to insert hyperlinks into the text and into project notes was added, vastly expanding the usefulness of the specifications and the notes data for an office master project

- **Additional Export Formats:** In addition to permitting RTF and PDF output, exporting to MS Word, to HTML, and to plain text was added, greatly improving the output flexibility of the software and expanding the potential specifications audience

"As a result (of using SpecLink), we have reduced our RFI's by 60-70% and our spec production time by 50-70%, depending on the project type."

Sam Austin
Senior Project Architect
C.M. Architecture, P.A.
Minneapolis, Minnesota

- **Submittals Log:** An automatic Excel report was created that includes the actual text of all submittals requirements, allowing users to generate a Submittals Log for use during the construction administration phase of a project; because the output is in Excel format, users can easily sort the results by section, by submittal category, or by other fields in their particular log format, such as phase of construction

- **Automatic Importing from Word:** The ability to automatically import and translate sections created in MS Word into SpecLink-E's relational database format was added, including the automatic insertion of notes and embedded choices through the use of embedded codes; this capability allows users to combine their own unique sections with BSD's master data, enabling consistently formatted output

- **User-Defined Tags:** Users were given the ability to create unique paragraph tags, attach them to any paragraph, and produce automatic reports for each tag category; these features allow users to perform functions such as highlighting incomplete paragraphs for later consideration

- **Project Templates:** Users were given the ability to create and save multiple templates to automatically format specifications for different clients or for unique sections within a project; these templates can be saved as office standards and applied to entire projects or to individual sections as needed

- **Two Editions:** BSD SpecLink-E was differentiated in 2010 into two versions—a Professional Edition for smaller firms that uses SQL Server Express—and a Corporate Edition for multi-user firms that employs a standard version of Microsoft's SQL Server database management software. The Corporate Edition has no limits on database size and can use multiple gigabytes of memory and servers with multiple processors to boost its processing speed and throughput; it can handle many users at the same time in the same project or in multiple projects

- **Corporate Features:** The Corporate edition of SpecLink-E has been enhanced with a number of features designed to assist in the management of specifications production in larger firms. These unique Corporate features include the following:

  - *User roles:* Up to four distinct roles can be assigned to specific users, ranging from Reviewer to Standard User, Expert User, and System Manager

  - *Audit Trail:* The software records each use of the program and can identify and report when each paragraph was last edited and by whom

  - *Protection for "Office Master" Projects:* The System Manager can designate any project as an office master project, allowing copies to be used on projects but preventing any edits to the office master text by anyone other than a System Manager

- **Interoperability:** The ability to connect to Autodesk's Revit product and to automatically modify the specifications based on data from the Building Information Model (BIM) was incorporated through a connection to BSD LinkMan-E, which is described below; providing this capability involved the addition of a new type of intelligent linking, in which selection of a lower level product paragraph in Part 2 of a section automatically activates, or "turns on" its parents, all the way up to the section title, e.g., a brick wall in Revit would ultimately activate not just the paragraph or paragraphs related to brick but would also activate its parentage paragraphs, up to and including the Unit Masonry section title itself

"LinkMan-E allowed us to take even greater advantage of the information available in our Revit models."

Lawrence S. Cohan, AIA
CEO, BC Architects, AIA, Inc.
Coral Gables, Florida

Cloud-Based BSD SpecLink-E

Mr. Dean has been directing the development of the latest innovation in BSD's specifications software, which is currently being successfully beta tested. In this configuration, both the server and client portions of the BSD SpecLink-E software reside on a remote server, and access to the software is browser-based. There are many advantages to this approach for architectural and consulting engineer customers, including the following:

- No costs for computer server hardware or software, equipment maintenance, or data backups
- No maintenance or updating of BSD software
- Access from all major computer platforms, including both Windows and Apple laptops and desktops, tablets, smart phones, and devices such as Blackberry and Chromebook, wherever an Internet connection is available
- Access for consultants who are not subscribers (via access keys provided by subscribers)
- Simple project collaboration between remotely located offices
- No VPN or firewall issues

BSD LinkMan®-E

Robert Dean has been working toward the goal of interoperability for over twenty years, and BSD LinkMan-E represents the culmination of that effort. Introduced to the market in 2010, LinkMan-E has been successful in achieving interoperability between Autodesk's Revit and BSD SpecLink-E, but the product has been designed to permit interoperability with other products in future.

Developed in parallel with SpecLink-E, LinkMan-E was conceived by Mr. Dean primarily as a coordination tool for project managers. Connected to a Revit model and the corresponding project specifications in SpecLink-E, LinkMan-E provides a series of dashboards that display the data from the two programs side-by-side, showing objects from Revit and the corresponding SpecLink-E specification text. The data can be collapsed to show active objects only and can be collapsed further to show only discrepancies—for example, objects in the BIM model that have not been specified, or specification text with no corresponding objects included in the Revit model. The project manager can then make decisions about correcting the discrepancies—even "turning on" missing text in SpecLink-E from within LinkMan-E. The text can be activated paragraph by paragraph, as the manager reviews the dashboards, or all missing text in SpecLink-E can be selected by clicking a single Synchronize command in LinkMan-E.

BSD LinkMan-E includes a very large master database of assemblies that are organized according to CSI's UniFormat and products that are organized according to CSI's MasterFormat. The assemblies are linked to the products included in each, e.g., an interior partition (assembly) might be linked to metal studs, gypsum wallboard, and sound batts (products) that are used to build the particular partition type. The products in the LinkMan-E database have been pre-linked to the corresponding text in BSD SpecLink-E, and the assemblies in the LinkMan-E database have been pre-linked to the corresponding standard objects in Revit. Users can also create their own links to custom objects they have created, using a simple drag-and-drop interface. Through "mapping" data in the two linked applications to the master database in LinkMan-E, the applications are effectively connected, and the dashboards can display and compare at any time the current project status of each.

Another important feature provided in BSD LinkMan-E is keynote management. Not every architecture firm uses keynotes, but for those who do, LinkMan-E provides absolutely the best keynote management system available. Users can import keynotes used in Revit, edit them in LinkMan, assign LinkMan keynotes to any objects without keynotes, and export the key-note file to Revit, where any active keynotes are automatically updated and all the other assigned keynotes are available for placement in Revit. The advantage in using the suggested LinkMan-E keynotes is that they are already linked to the correct specification text in BSD SpecLink-E.

PerSpective

A joint venture formed between CSI and the Design-Build Institute of America (DBIA) in January of 1998 signed an agree-ment with BSD for the development of the first master guide specifications for design-build. Under the leadership of Mr. Dean, BSD developed not only the software for delivery of the specifications, but also the unique master guide content. The product was introduced to the marketplace in late 1999, was transferred to BSD's control in 2001, and was subsequently purchased by BSD and incorporated into BSD SpecLink+ and later into BSD SpecLink-E.

The product was built on the same 32-bit architecture that was subsequently used for BSD SpecLink+, so the two products had many features in common, including the concept of editing by selection instead of by deletion, the automated updat-ing that did not overwrite any user-added or edited text, the use of intelligent linking, and global formatting of output. The unique features of the content will be discussed in Part II of this document, but there were also several unique software features, one of which was patented by CSI:

- **Global "Voice" Switch:** This patented feature was a global switch that allowed different users to change elements of the total project text from passive to active voice; the owner could state requirements that could subsequently be converted to assertions by the design-builder in a proposal, by a simple mouse click on the switch; the design-builder then had the opportunity to expand the description of what would be provided beyond the owner's stated requirements

- **Text Comparison:** An owner who had issued an RFP using PerSpective was able to compare the RFP document to proposals received from design-builders using an underlining and strike-through Compare feature that was far more accurate than that provided by the equivalent feature in MS Word, due to PerSpective's more precise relational database structure

Although PerSpective was created specifically for the design-build delivery process, allowing owners to state their whole building design criteria instead of specific requirements for materials and systems, the product has proven useful to design firms that offer programming services. As incorporated into BSD SpecLink-E, the design criteria catalog that originated as PerSpective is now available as a separate subscription or as part of a comprehensive library that includes conventional con-struction specifications.

AGC DocuBuilder

BSD signed a development agreement with the Associated General Contractors of America (AGC) in 2000 to deliver a software product that would allow users to produce edited versions of standard contract forms for specific projects while preventing unauthorized, unpaid use of the documents. Robert Dean conceived AGC DocuBuilder and directed its development at BSD to produce highly customized contracts and administrative documents for use on construction projects while protecting the underlying copyrighted documents comprising its database.

The first version of the software was released in 2001 and included many features that made its operation superior to competing products. By 2007, AGC had converted many of its documents to ConsensusDOCS documents, endorsed by a large number of other construction associations. DocuBuilder immediately began delivering the ConsensusDOCS documents, in addition to a relatively small number of AGC documents with copyrights retained by AGC. DocuBuilder has been upgraded and improved over a period of twelve years and is still in use by several hundred firms, although it will be officially discontinued at the end of 2013 in favor of an on-line service developed by AGC.

Some of the unique features designed by Mr. Dean and provided in AGC DocuBuilder are as follows:

- **Clean Document Switch:** Users have the ability to produce documents showing changes from the standard contract forms through underlining and strikeouts, or they can produce "clean" documents with an automatically applied cautionary footnote warning readers that changes from the standard forms have not been marked; this feature allows users the choice of showing clearly the changes from a standard form document or providing a more attractive document without markings that requires a more careful reading

- **Logo Switch:** Documents can be printed with or without the AGC or ConsensusDOCS logos, permitting users a choice between displaying the imprimatur of the sponsoring organizations or creating a more compact document without a visible "stamp of approval"

- **Intelligent Linking:** De-selection of article titles in a document's Table of Contents automatically excludes all the text of the corresponding article; de-selection of a lead paragraph automatically excludes any subparagraphs; selection of certain documents automatically selects additional required documents, such as exhibits, significantly speeding the editing process

- **Context-Sensitive Notes:** Instructions for fill-ins and background information designed to assist in document editing are provided in a separate window that does not interfere with the actual text of the document, making the documents easier and faster to edit

- **Global Term Replacement:** Certain terms such as "Contractor," "Owner," "Architect/Engineer" can be globally replaced in all documents related to a particular project by entries in one location, assuring consistency in the project and saving considerable editing time

"Rob is a rare professional; he was a critical contributor to the content of many major AIA standardized document families, then he shaped how standardized contract content was utilized through the development of software systems for specifications writing and document production. I can think of no other person who has made such singular contributions to shaping the risk environments for architects and contractors."

Mark H. McCallum, Esq.
Chief Executive Officer
National Association of Surety Bond Producers
Formerly Assistant Director of AIA Documents Program
American Institute of Architects

- **Flexibility in Subscriptions:** Users could subscribe to one or more catalogs for access to specific "families" of documents, or they could order a comprehensive subscription that included access to all documents; this flexibility feature allowed users to pay only for what they actually needed, instead of paying a flat fee for access to all documents

- **Meter Mode:** Users had the option to pay on the basis of usage, with particular dollar amounts automatically deducted from the user's meter each time a final document was printed; this new delivery mode was especially helpful to smaller firms that needed access to fewer documents or could not afford the cost of an annual subscription

Conclusion

These innovative and groundbreaking software products for the construction industry were all conceived by Robert Dean and developed under his direct control. Each of the products resulted from close teamwork and contributions by many individuals over a period of several decades, but none of them would have been developed and marketed without his vision and leadership. It is safe to say that Mr. Dean's notable contributions to the advancement of construction software technology—the software products he created—have directly benefited many hundreds of thousands of construction projects and will continue to benefit many more in the years ahead.
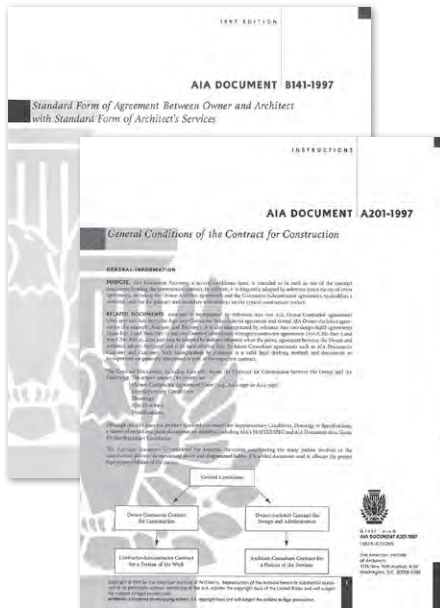
Introduction

Robert Paul Dean made significant contributions to the improvement of many AIA standard contract forms during his thirteen years as a member of the AIA Documents Committee. He has also worked over a thirty-four year period on the creation and maintenance of commercial master guide specifications that have been used by tens of thousands of design professionals—architects, engineers, interior designers, specifiers, and landscape architects—to produce better construction specifications. As Materials Research Coordinator and head of specifications at Heery International, Inc. for thirteen years, and by working with project architects and engineers to improve the quality of the specifications produced by Heery, he developed the concept for what ultimately became the first automated specifications production system for the personal computer. Subsequently, he conceived and managed the development of several software products that have also greatly contributed to the improvement of construction documents across the entire country.

AIA Documents Committee

Mr. Dean's responsibilities at Heery International, Inc. in the early 1980's included the maintenance of Heery's General Conditions of the Contact for Construction, which was a specially authorized version of AIA Document A201. Through his involvement with this document, he became interested in AIA's process for reviewing and editing the organization's standard contract forms and ultimately became a member of the AIA Documents Committee. He served on the committee for 13 years over a span of 14 years—from 1984 to 1987 and again from 1989 to 1997. During his tenure on the committee, he participated on several subcommittees and made major contributions to several document families, including key AIA documents such as A201 and B141 and the first family of AIA design-build documents. He participated in the drafting and editing of numerous documents, including the following:

1997 Editions:

- AIA Document A201-1997; General Conditions of the Contract for Construction
- AIA Document A401-1997; Standard Form of Agreement Between Contractor and Subcontractor
- AIA Document B141-1997; Standard Form of Agreement Between Owner and Architect with Standard Form of Architect's Services
- AIA Document B151-1997; Abbreviated Standard Form of Agreement Between Owner and Architect
- AIA Document C141-1997; Standard Form of Agreement Between Architect and Consultant
- AIA Document C142-1997; Abbreviated Standard Form of Agreement Between Architect and Consultant

1996 Editions:

- AIA Document A191; Standard Form of Agreements Between Owner and Design/Builder—1996 Edition

1994 Editions:

- AIA Document A131/CMc—AGC Document 566; Standard Form of Agreement Between Owner and Construction Manager Where the Construction Manager Is Also the Constructor and Where the Basis of Payment Is the Cost of the Work Plus a Fee and There Is No Guarantee of Cost—1994 Edition
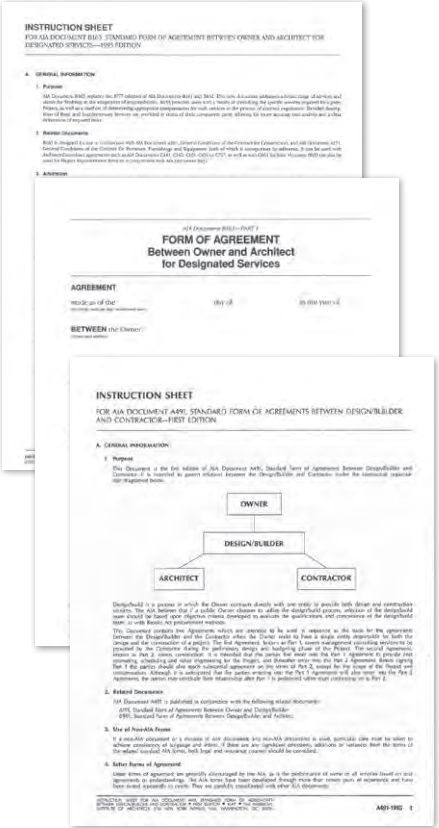
IMPROVING THE CONTENT OF CONSTRUCTION DOCUMENTS

1993 Editions:

- AIA Document B163; Standard Form of Agreement Between Owner and Architect for Designated Services—1993 Edition
- AIA Document B352; Duties, Responsibilities and Limitations of Authority of the Architect's Project Representative—1993 Edition

1991 Editions:

- AIA Document A121/CMc—AGC Document 565; Standard Form of Agreement Between Owner and Construction Manager Where the Construction Manager Is Also the Constructor—1991 Edition

1987 Editions:

- AIA Document A201; General Conditions of the Contract for Construction—1987 Edition
- AIA Document B141; Standard Form of Agreement Between Owner and Architect—1987 Edition

1985 Editions:

- AIA Document A491; Standard Form of Agreements Between Design/Builder and Contractor—First Edition
- AIA Document B901; Standard Form of Agreements Between Design/Builder and Architect—First Edition

Master Guide Specifications

Mr. Dean has worked on virtually every major commercial guide specification product ever offered in the United States. Today he continues to work on improvements to BSD SpecLink-E, the specifications software product currently offered by his firm, Building Systems Design, Inc. The products and approximate dates of his employment on these major commercial guide specification systems are as follows:

- **MasterSpec, 1979-1980:** Mr. Dean worked at AIA headquarters in Washington D.C. for Professional Systems for Architects and Engineers, Inc. (PSAE), a corporation established by AIA to manage the for-profit MasterSpec business. Mr. Dean worked on a major revision to MasterSpec, initially called MASTERSPEC 2, and personally wrote approximately thirty percent of the master guide specification sections in the Architectural Library.

- **SweetSpec, 1986-1990:** As an employee and principal at Heery International, Inc., Mr. Dean worked on development and maintenance of the SweetSpec database for McGraw-Hill, Inc. The SweetSpec database was derived from Master-Spec, under a license from AIA, but it was modified and streamlined to fit the format of the first automated specification system offered in the United States. Under Mr. Dean's direction and guidance, the daily updating of SweetSpec was also decoupled from the MasterSpec updating scheme, which relied on quarterly replacement of entire specification sections.

"In addition to Rob Dean's stellar work in developing PerSpective, for the last twenty years at BSD he has coaxed into existence a suite of software products designed to pull the disparate elements of the design and construction processes into closer coordination."
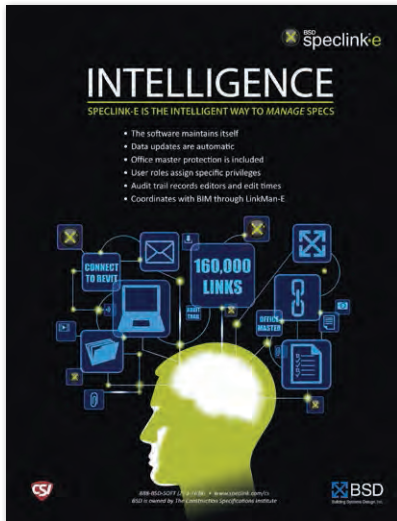
Linda Hartman, Esq., AIA Emeritus
Architect and Attorney Formerly Project Manager for PerSpective; Construction Specifications Institute

- **SPECSystem, 1990-1993:** When Heery International, Inc. took control of the SweetSpec product from McGraw-Hill, Mr. Dean and his team undertook the complete replacement of the master guide specification content, which had originally been based on MasterSpec. The content was a totally new master guide specification that used most of the underlying software features originally developed for SweetSpec. Mr. Dean left the project after AIA acquired the product and moved its production to Washington, D.C.

- **SPECTEXT, 1994-1996:** The Construction Sciences Research Foundation (CSRF) hired BSD to manage the ongoing maintenance of its master guide specification system, under the direction of Mr. Dean. Working with consultants hired by CSRF and coordinating with a review committee appointed by the Construction Specifications Institute (CSI), Robert Dean and Susan McClendon managed the actual updating and distribution of the SPECTEXT product until CSI and CSRF severed the working relationship between the organizations in 1996.

- **PerSpective, 1998-2004:** A joint venture formed by CSI and DBIA initially hired BSD to develop software for the distribution of what would become the world's first master guide specifications written especially for the design-build process. Subsequently BSD's contract was expanded to include the development of the content. Mr. Dean and Susan McClendon worked jointly on development of whole building design criteria—or performance specifications—that could be used by an owner to describe a building's ultimate performance needs without dictating the materials and systems required for fulfillment. The same content could be used by a design-builder in responding to an RFP. The unique master guide specifications developed by Dean and McClendon were unprecedented in their structure and specificity. The performance requirements included in each major category were hierarchical and could be specified in more or less detail, depending on an owner's needs and the design-builder's required response. Although intended initially for design-build exclusively, the content was subsequently discovered to be equally useful during the programming stage for conventional design-bid-build projects.

- **BSD SpecLink, BSD SpecLink+, BSD SpecLink-E, and Cloud-Based BSD SpecLink-E, 1996-present:** For seventeen years, Mr. Dean has been involved in the ongoing development and maintenance of the content of BSD's master guide specification products. Not only has he personally researched and written the content of many sections, he also has participated in their upkeep, expansion, and improvement. Working closely with Susan McClendon, SpecLink's project manager, his overarching goal has been the continuous improvement of the product.

- **ARCAT, 1997-2001:** Mr. Dean and Susan McClendon jointly wrote hundreds of proprietary master guide specifications for The Architect's Catalog, Inc. (ARCAT). These master guide sections were not only provided as Word files for conventional distribution via periodic CD-ROM updates, they were also integrated into the BSD SpecLink product, clearly marked and identified as proprietary sections. Created in strict conformance with CSI's MasterFormat, SectionFormat, and PageFormat, they also incorporated useful specifier notes designed to help users edit the sections appropriately for their specific project conditions

Notable Improvements

Mr. Dean has consistently sought to make improvements to the specifying experience in all of the master guide specification products he has worked on. The underlying goals have always been to provide a reasonable range of options and to assist the user in making appropriate choices for the specific project conditions and circumstances, resulting in documents that are better coordinated and more up to date than would be typically achieved through conventional means. The major improvements invented by Mr. Dean typically involve the addition of software intelligence and can be summarized as follows:

- **Q&A Dialog:** Mr. Dean originated the concept of a dialog that changed in response to a user's answers—automatically eliminating any questions about unnecessary topics. The answers also determined which text from the master database would be included in the final document. This innovation led directly to the concepts of intelligent linking and intelligent checklists in BSD's database products several years later.

- **Intelligent Linking:** Many specification decisions have other direct consequences: ruling out some options, making a specific range of options possible, or making others mandatory. Mr. Dean originated the concept of linking such text in a master guide specification to speed the editing process. Implementing the concept only became possible with the decision to develop a product using relational database technology, because this type of software allows direct access to individual records, which can include single paragraphs and even choices within paragraphs.

- **Context-Sensitive Notes:** Instead of cluttering master guide text with instructions or related information that is not intended to be part of a final document, Mr. Dean has always sought to include such information outside the text, but related to it in such a way that it does not interfere with comprehension of the specification content. Separate windows that can be resized, moved, or closed altogether accomplish the goal of providing context-sensitive editing assistance.

- **Context-Sensitive Hyperlinks:** Augmenting context-sensitive notes by the addition of hyperlinks to related websites—and especially to particular pages on those websites—has led to a vastly expanded storehouse of information that is instantly available to specifiers as needed.

- **Automated Updating:** Mr. Dean's early experience with maintenance of office master specifications at his own firm and later at Heery International, Inc. taught him that keeping the data up to date was not only critical but also nearly impossible. Even with a subscription to a commercial master guide specification and a separate subscription to a service for maintenance of reference standards, the updating process was unwieldy and difficult to implement. In all his subsequent work on commercial guide specification products, the goal of achieving automated updating of the data has been uppermost and has so far been best achieved in the latest group of BSD products. Instead of deleting obsolete information from the database, it is simply marked as obsolete. New data is added to the database and is automatically inserted into new projects. Existing projects can be updated or not, depending on need, because the old data is still available and can be retained or replaced at the user's option.

"Rob Dean made many notable contributions to the AIA documents during the thirteen years he served on the AIA Documents Com-mittee."

Dale R. Ellickson, Esq., FAIA
President & CEO, Ellickson & Associates; Formerly Director of AIA Documents Program American Institute of Architects

Conclusion

Robert Paul Dean has been responsible for numerous improvements to the content of guide documents that have affected hundreds of thousands of building projects across the United States over a period of several decades. His work on the AIA Documents Committee included seminal work on design-build documents, key contributions to AIA's most frequently used documents—A201 and B141—and specialized work on important documents such as B163— Standard Form of Agreement Between Owner and Architect for Designated Services. He has helped to improve the content of countless project manuals through his work on virtually every major commercial guide specification system ever offered in the United States. The qual-ity of the content in these master guide specifications has been augmented by his software innovations discussed more fully in the first part of this section. His work on these guide documents has extended over thirty-four years and has benefited construction projects in every state as well as several foreign countries. Last year alone, for example, over 32,000 construc-tion projects were specified using BSD SpecLink+ and BSD SpecLink-E, the latest specifications software products invented by Mr. Dean and produced by his company.

Introduction

Robert Paul Dean has made many contributions to the education of architecture students and to the continuing education of design professionals over his forty-five years as a registered architect. He has been a featured speaker at many AIA events and at events sponsored by other construction industry organizations such as the Construction Specifications Institute (CSI), the Design-Build Institute of America (DBIA), the Associated General Contractors of America (AGC), and the International Facility Management Association (IFMA). He has also authored many published articles, including several that were offered for continuing education credit. And he has taught at the university level for a number of years, offering courses as varied as architectural acoustics, building construction, building energy conservation, and architectural lighting design. In addition, under Mr. Dean's direction his firm has provided many schools of architecture complimentary subscriptions to BSD's software products for use in classes related to construction documents and professional practice.

Speaking Engagements

Mr. Dean has been a frequent speaker for several decades at construction industry events. Detailed records of his many speaking occasions were not retained by him and are therefore not available, so the following list is necessarily incomplete. Nevertheless, the examples offered below illustrate the scope and variety of topics he has addressed over a period of many years and in many venues:

AIA EVENTS

2013   **AIA TAP Webinar:** "The Future of Specifications;" 1-hour AIA/CES program jointly presented with Michael Brennan and Mark Kalin, moderated by Andy Smith; 972 attendees; February 19, 2013.

2003   **AIA South Atlantic Regional Conference:** "Establishing Building Performance Criteria at the Programming Phase"; Savannah, Georgia; October 9, 2003.

2000   **Combined Meeting of AIA and CSI Chapters:** "The Future of Construction Contract Documents Using BSD SoftLink Product Suite"; Speaker; New Jersey Chapters.

1998   **Combined Meeting of AIA and CSI Chapters:** "Automating Specification Writing and Management"; Speaker; Madison, Wisconsin.

 AIA National Convention: "The Future of Specifications"; Speaker at seminar sponsored by AIA Specifications & Building Technology PIA: How Specifications Are Getting Smarter; San Francisco, California.

1997   **AIA Atlanta Chapter:** "AIA Documents & Forms" (A discussion of the AIA Documents Program and the new A201 and B141 contract forms to be published in Fall 1997); August 26, 1997.

 AIA Atlanta Chapter: "Creating and Maintaining an Automated Office Master"; One-hour PowerPoint and computer demonstration.

1996   **AIA Atlanta:** "Linking Words, Numbers, and Drawings"; Slide Presentation and Lecture at monthly AIA chapter meeting.

1993   **AIA National Convention:** Consultations on Roofing and Linking CADD and Specs; Chicago, Illinois.

1992   **AIA National Convention:** "An Introduction to AIA SPECSystem"; Speaker, demonstration and slide presentation; Boston, Massachusetts.

1987   **AIA Florida Association:** "What's New with AIA Documents"; Speaker, annual convention.

CSI EVENTS

2012   **CSI Master Specifiers Retreat:** "BIM and Specifications"; Joint presentation with Mark Kalin at first annual CSI Master Specifiers Retreat; Tucson, Arizona; March 9, 2012.

2011   **Construct 2011:** "Relational Databases and Their Role in the Design Process"; 1-1/2 hour AIA/CES presentation at CSI National Convention; Chicago, Illinois; September 13, 2011.

2009   **Construct 2009:** "Better Lighting for Less Energy" (contributor); CES presentation at annual CSI National Convention; Indianapolis, Indiana; June 17, 2009.

2008   **Construct 2008:** "Green Lighting"; Speaker at annual CSI National Convention; Las Vegas, Nevada; June 6, 2008.

2007   **CSI and SCIP Meeting:** "Specifications in BIM"; panelist and speaker at annual CSI Show and Convention; Baltimore, Maryland; June 19, 2007.

2006   **CSI Academies:** "Electronic Specifications Production for the 21st Century"; presentation to Specifiers Track at Annual CSI Academies; Snowbird, Utah; October 17, 2006.

        50th Annual CSI Show and Convention: "Specification Strategies for Green Building"; Presentation at annual CSI Convention; Las Vegas, Nevada; March 29, 2006.

2005   **CSI Regional Meeting:** "Automating Specifications Using a Relational Database Approach"; Presentation to the CSI North Central Region; Des Moines, Iowa; July 29, 2005.

        CSI Chapter Meeting: "Transitioning to the New MasterFormat 2004"; Presentation to CSI Chapter; Birmingham, Alabama; March 3, 2005.

        CSI Chapter Meeting: "Meet MasterFormat 2004: An Introduction for CSI/CCS Members and Other MasterFormat Stakeholders;" Atlanta Chapter of CSI; February 7, 2005.

PROVIDING EDUCATION IN ARCHITECTURAL TECHNOLOGY

2002   **CSI Chapter Meetings:** "Linking Software Applications for the A/E/C Community"; Speaker at monthly CSI chapter meetings in the following locations:

- Houston, Texas
- Little Rock, Arkansas

CSI Chapter Meeting: "The Future of Specifications Using Databases"; Speaker at monthly CSI chapter meeting in Montgomery, Alabama.

2001   **CSI Chapter Meeting:** "Specifications. . . The Purpose, the Value, the Future Trends and the Opportunities"; Speaker at half-day seminar sponsored by New Hampshire Chapter of CSI.

CSI Chapter Meeting: "The Future of Construction Documents Using Databases"; Speaker at one-day seminar The Future of Specifications – What Do the Experts Think?; sponsored by Minneapolis Chapter of CSI.

CSI Chapter Meeting: "The Future of Construction Documents"; Speaker at monthly CSI chapter meeting in Chicago, Illinois.

2000   **CSI Chapter Meeting:** "Construction Specifications for the 21st Century"; Speaker at monthly chapter meeting in Knoxville, Tennessee.

1999   **CSI Chapter Meeting:** "The Future of Specifications"; Speaker at monthly CSI chapter meeting in Washington, D.C.

CSI Convention: "Automating Specification Writing and Management Using BSD SpecLink"; One-hour seminar presentation at annual CSI Convention; Denver, Colorado

1997   **CSI Chapter Meetings:** "Building Automated Office Specifications"; Slide presentation and computer demon-strations conducted at monthly meetings of the following chapters:

- Redwood Empire Chapter, California
- Tidewater Chapter, Virginia
- Des Moines, Iowa
- Metropolitan New York Chapter, New York
- Central Pennsylvania Chapter; Pennsylvania
- Miami Chapter, Florida

1996   **CSI Chapter Meetings:** "Automated Specifications"; Slide Presentation and Computer Demonstrations at CSI monthly meetings of the following chapters:

- Baton Rouge, Louisiana
- Lafayette, Louisiana
- Crandic Chapter in Grand Rapids, Iowa

1991   **CSI Convention:** "Automation and the Specifier"; Speaker, Pre-Convention Seminar Program at CSI National Convention; San Diego, California.

1990   **West Coast CSI:** "Computerized Specifications for the Design Team"; Speaker at West Coast CSI Conference; San Francisco 2012

Tulane University School of Architecture: "Construction Communications for the 21st Century;" PowerPoint presentation to 4th and 5th year students on specifications and alternative careers in architecture; May 23, 2012.

SPEAKING EVENTS AT OTHER ORGANIZATIONS

2013   **College of Architecture; Georgia Institute of Technology:** "Construction Specifications: Today and Tomorrow"; lecture to graduate students in Practice 2; September 10, 2013.

2011   **IFMA World Workplace:** "Are You Getting the BIM Information You Need from Today's Design/Construction Team?"; Panel presentation at annual convention of International Facility Management Association; Phoenix, Arizona; October 27, 2011.

2006   **Heery International, Inc.:** "Specifications and Corporate Memory"; invited speaker at annual company assembly; Atlanta, Georgia; May 12, 2006.

2003   **AGC Annual Convention:** "An Update on DocuBuilder and AGC's State Law Matrix"; Speaker at annual convention of the Associated General Contractors of America; Honolulu; Hawaii.

DBIA Seminar: "Writing Great Performance Specs for Design-Build Projects"; Co-presenter at one-day seminar sponsored by the Design-Build Institute of America; Miami, Florida.

2002   **DBIA Seminar:** "Writing Great Performance Specs for Design-Build Projects"; Presentation at seminar sponsored by the Design-Build Institute of America; Houston, Texas.

2001   **DBIA Conference:** "Performance-Based Specifying"; Speaker at 3-day conference Integrated Project Solutions—Uniting the Stakeholders; sponsored by the Design-Build Institute of America; Boston.

1999   **National Glass Association Convention:** "AIA Contract Documents"; Speaker, national convention of NGA; Atlanta, Georgia.

1997   **American Bar Association:** "Process of Change: Conceptual Changes to AIA Document B141 and Beyond"; Speaker at American Bar Association Forum on the Construction Industry: AIA Contract Documents: Generation Next; Atlanta, Georgia.

1992   **A/E/C Systems '92:** "Linking CAD and Specifications"; Slide Presentation and Panel Discussion; Dallas, Texas.

1991   **A/E/C Systems '91:** "Integrating Computer-Aided Specifying with Office Master Specifications"; Speaker, Computer-Assisted Specifying Concurrent Conference; Washington, D.C.

1990   **A/E/C Systems '90:** "Spec Update: 25 Changes You Must Make to Keep Your Specs Current"; Speaker, Computer-Assisted Specifying Concurrent Conference; Atlanta, Georgia.

1989   **Roundtable Discussion:** "Computerized Building Specifications"; Participant in one-day roundtable sponsored by McGraw-Hill, Inc.; New York; Results published in June and August 1989 issues of Architectural Record.

1988   **SCIP Annual Meeting:** "The Development of SweetSpec"; Speaker at meeting of Specification Consultants in Private Practice (SCIP); Washington, D.C.

        A/E/C Systems '88: "Development of an Expert System"; Speaker, Coordinating Council for Computers in Construction; Chicago, Illinois.

Teaching Experience

Mr. Dean has taught architecture courses at the university level, both as a graduate student and later as an assistant professor of architecture and as a lecturer. In his various teaching roles, the emphasis has always been on the practical and technical aspects of architecture, even when he was conducting design studios. In his lecture courses, class size was typically fifty to seventy students, so his teaching career affected hundreds of students, many of whom went on to apply their lessons as practicing design professionals. An outline of Mr. Dean's formal teaching experience follows:

1982   **Georgia Institute of Technology**
College of Architecture
Atlanta, Georgia
Lecturer: Developed and co-taught undergraduate course in building materials technology

1973–1979   **Tulane University**
School of Architecture
New Orleans, Louisiana

Assistant Professor: Developed and taught lecture courses each semester in a variety of building technology areas. Also taught several design studios and conducted seminars in energy-related issues at both graduate and undergraduate levels. He declined an offer of tenure from Tulane in 1980.
Lecture courses taught by Mr. Dean include the following:

- Architectural Lighting Design
- Architectural Acoustics
- Building Construction Technology
- Energy Conservation in Buildings
- Mechanical and Electrical Equipment of Buildings

1970–1973   University of California at Berkeley
College of Environmental Design
Berkeley, California
Associate: Assisted professors in lecture courses; developed and taught undergraduate courses in architectural acoustics and environmental control systems.

1968–1969   University of Washington
Department of Architecture
Seattle, Washington
Teaching Assistant: Assisted professors in lecture courses; developed and taught undergraduate courses in freehand drawing and creative design.

Tulane University School of Architecture Advisory Board
Mr. Dean is currently a member of the TSA Advisory Board and has been on the board since 2008. The 40-person board includes non-alumni as well as Tulane graduates and was formed to support the School of Architecture in achieving its goals and providing advice and support for its programs on behalf of the profession. He has been actively involved as a member of both the Industry Partnerships Committee and the Advocacy Committee. He is currently the board representative on a panel to select architects for a major renovation and additions to Richardson Memorial Hall, the historic building that houses the Tulane School of Architecture.

Complimentary Educational Subscriptions
Ever since the development of BSD SpecLink, under Robert Dean's direction Building Systems Design, Inc. has offered complimentary subscriptions to accredited schools of architecture and technical colleges across the United States. The schools using the subscriptions typically employ them in courses on professional practice or the development of construction documents. The only requirement imposed by BSD is a signed letter agreement that the subscription will be used solely for educational purposes. The number of schools using the subscriptions has varied over the years as the curricula have changed. Schools making use of the complimentary subscriptions at present include the following:

- California Polytechnic State University, Pomona
- California Polytechnic State University, San Luis Obispo
- The Catholic University of America, School of Architecture and Planning
- Drexel University Department of Architecture + Interiors
- Farmingdale State College, State University of New York
- Iowa State University, College of Design
- Louisiana Tech University, College of Liberal Arts
- Southern Polytechnic State University, School of Architecture and Construction Management
- Stephens College
- Tulane University School of Architecture
- University of Texas at Arlington, School of Architecture
- University of Toledo Department of Civil Engineering

Conclusion

Robert Paul Dean has been and continues to be an educator. In addition to his formal positions at several schools of architecture and his current membership on the Tulane University School of Architecture Advisory Board, he has spoken at numerous venues on a variety of educational topics ranging from the automation of specifications to green specifications to architectural lighting design to standardized construction contracts. He has also written and edited many articles intended to inform and educate, including several that have been offered for continuing education credit. He has also made it a point to offer his company's software at no cost to schools of architecture for use in their coursework on professional practice and the development of construction documents. His contributions to education are noteworthy for both their breadth and the span of time they encompass.

"Rob Dean was, and is, a deeply kind and sympathetic teacher. When I taught with him at Tulane, he was highly respected as a colleague. His evolution into a savvy, creative businessman and corporate leader is proof that good people can make it to the top—that you can succeed in business and in the creative world and still be respected as a fine person."

C. Errol Barron, FAIA
*Richard Koch Chair of Architecture, Professor of Architecture
Tulane University*

The American Institute of Architects

1997
Certificate of Appreciation
to Robert P. Dean, AIA
*In recognition of service on the 1984-1987
and 1989-1997 AIA Documents Committee*

The Construction Specifications Institute

2013
CSI Fellowship
to Robert Paul Dean, FCSI
*For groundbreaking and extraordinary contributions to
construction technology...and for passion, persistence and
idealism in pioneering information modeling systems to
benefit the entire construction industry*

2007
Construction Technology Award
to Building Systems Design, Inc.
For Innovative Specifications Technology

CSI Atlanta Chapter

2005
Organizational Certificate of Appreciation
to Building Systems Design, Inc.
*For improvement of specifications and assistance in
MasterFormat implementation*

2006
Organizational Certificate of Appreciation
to Building Systems Design, Inc.
*For being a major sponsor of the Chapter, Southeast
Region, and Institute*

2010
Bodin-Wells Memorial Award
to Robert Paul Dean, CSI. CCS, AIA
*For special proficiency and outstanding stature as a
practicing specification writer*

Academic Awards

1968
Tau Sigma Delta
Initiated into the Honor Society in Architecture and Allied
Arts upon graduation with a Bachelor of Architecture
degree from Tulane University

1968
AIA Medal for Academic Excellence
Awarded AIA medal for graduating with highest GPA in
Tulane School of Architecture Class of 1968
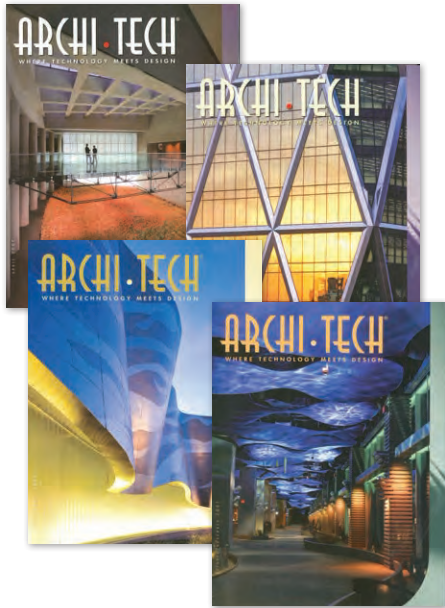
ROBERT PAUL DEAN AS AUTHOR

The following publications are a sampling of articles written, co-written, or edited by Robert Paul Dean.

2012 *ICIS Newsletter:* "BSD LinkMan-E Enhanced with Keynote Management Feature"; International Construction Information Society; February 2012.

2011 *Architectural Record:* "BIM Interoperability and Relational Databases: Intelligently Linking Drawings and Data" (editor); The McGraw-Hill Companies; 1.0 AIA/CES LU; November 2011.

2008 *Archi-Tech:* Gypsum Board for the 21st Century (with Susan McClendon); Stamats Business Media Inc.; 1.0 AIA/CES LU; April 2008.

  Archi-Tech: "Standard Construction Contracts: New Forms from Three Sources" (with Susan McClendon); Stamats Business Media Inc.; 1.0 AIA/CES LU; January/Feb 2008.

2007 *Archi-Tech:* "Lighting Green Buildings" (with Susan McClendon); Stamats Business Media Inc.; 1.0 AIA/CES LU; October/November 2007.

  Archi-Tech: "What Is MasterFormat 2004 and Why Should I Care?"; Stamats Business Media Inc.; 1.0 AIA/CES LU; July/August 2007.

2007 *Archi-Tech:* "Specifying and Cost Estimating with BIM" (with Susan McClendon); Stamats Business Media Inc.; 1.0 AIA/CES LU; April 2007.

  Georgia Architect: "Green Building Strategies"; A Journal of AIA Georgia; Atlantic Publication Group LLC.; 2007 (annual).

2005 *Design-Build Dateline:* "Global MasterFormat Switch: Eases Transition for Subscribers to One Electronic Specification System"; Journal of the Design-Build Institute of America; March 2005.

  Architectural Record: "Unveiling the New MasterFormat 2004 Edition" (contributor); The McGraw-Hill Companies; 1.0 AIA/CES LU; March 2005.

2002 *Constructor:* "Toe-to-Toe: AGC's DocuBuilder vs. AIA's Document Software" (contributor); The Associated General Contractors of America; February 2002.

1994 *A/E/C Systems Computer Solutions:* "Getting It Together: Linking Drawings with Words and Numbers"; A/E/C Systems, Inc.; May-June, 1994.

  The Construction Specifier: "Making the Link" (with Miriam S. Eldar); The Construction Specifications Institute; January, 1994.

1993 *Documents Coordinator Newsletter:* "AIA's PSD Offers Specification Tools for Small Firms, Small Projects"; The American Institute of Architects; Summer 1993.

ROBERT PAUL DEAN AS AUTHOR
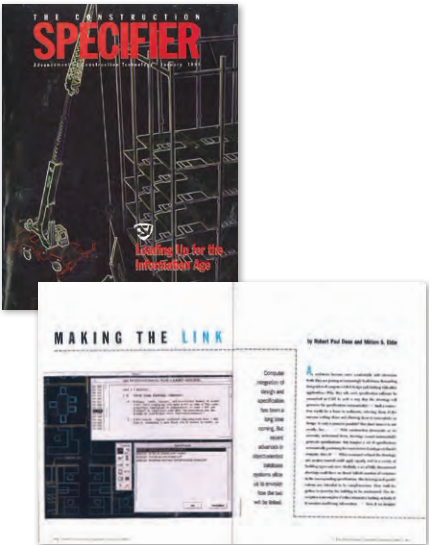
1992   *CCB Bulletin:* "CD Sampler: Automatic Spec Updating with New CD-ROM Tool"; National Institute of Building Sciences; 4th Quarter 1992.

PC AI: "SPECSystem: A Knowledge-Based System on CD-ROM"; Knowledge Technology, Inc.; November/December 1992.

Master Systems News: "SPECSystem Plans Additional Services in 1992"; AIA Professional Systems Division; February 1992.

1991   *Sun-Coast/Architect-Builder:* "Electronic Building Tools: Computerized Spec Writing"; May 1991.

1989   *CSI Newsdigest:* "New Tools for CSI Members"; The Construction Specifications Institute; December 1989.

Architecture: "Casting the Microcomputer in the Role of Specifications Expert"; The American Institute of Architects; April 1989.

Technology in Action: "A Revolutionary Approach to Architectural Specifications"; BICC plc; London; January 1989.

1985   *INFO*, Monthly Publication of the Georgia Association, AIA:
December: "The New A201: AIA's Keystone Document."
October: "Design/Build Documents and the AIA."
June: "The AIA Documents."

ROBERT PAUL DEAN AS SUBJECT

The following publications were written about or including information from Robert Paul Dean

2013   *Architect:* "BSD Launches Free Revit Objects Library"; Wanda Lau; September 2013.

Article describes Mr. Dean's creation of a free library of "intelligent" Revit objects that are pre-linked to BSD SpecLink-E, BSD's automated specifications software.

Architect Newswire: "Not Enough Choices? BSD to Release a Free Catalog of Autodesk Revit 2013 Objects"; Wanda Lau; August 20, 2013.

Article focuses on BSD's creation of Revit materials library and object catalog that are pre-linked to appropriate specifications in BSD SpecLink-E, with quotes from Mr. Dean.

1989   *Architectural Record:* "Expert Panel Explores the Pros and Cons of Computerized Building Specifications"; Charles K. Hoyt; Part I—June 1989; Part II—August 1989.

Articles documenting roundtable discussion held at McGraw-Hill headquarters in New York and focusing on issues related to SweetSpec. Robert Dean was one panelist identified as vice president (and director of SweetSpec development), Heery International, Inc.

1988   *The Atlanta Journal-Constitution:* "From a Great Idea to a Great Building by Way of Computer Disk: Invention Trims Tedium from Design"; Hank Ezell; November 28, 1988.

Article with photographs in Atlanta newspaper about Robert Dean's invention of SweetSpec and the benefits of computerization of architectural specifications.

1978   *AIA New Orleans:* "Computer Specs"; February-March 1978.

Article in AIA bi-monthly publication describing establishment of Mr. Dean's specification writing firm, Architectonics, Inc. and its reliance on COMSPEC, an early attempt at specifications automation.

The New Orleans Courier: "Cityscape: Computers—Architectonics, Inc."; Bill Rushton; January 12-18, 1978.

Article describing Architectonics, Inc. and Robert Dean's interest in improving specifications through computerization and automation.

1977   *The Times-Picayune:* "Costs Prohibit Solar Use – Architect"; December 11, 1977.

Article in New Orleans Sunday paper quoting Robert Dean on the economics of solar energy and concluding with his prediction that "Solar energy will become very attractive when costs of fuel alternatives rise to a point when its price is competitive."

1968   *New Orleans States-Item:* "Model for Parish Prison Unveiled – Tentative Plan for Architects"; June 22, 1968.

Article in Saturday newspaper about Robert Dean's architectural thesis project for a new urban prison for Orleans Parish, which was developed after consultations with parish officials and which featured rooftop athletic facilities as well as an auditorium and medical clinic.

3 EXHIBITS

List of Exhibits

B163 is one of the many AIA documents Mr. Dean helped to develop as a member of the AIA Documents Committee over a span of fourteen years. This particular compressed Schedule of Designated Services was an innovation suggested and developed by Mr. Dean, graphically illustrating in compact form the relationship between the particular services offered and the project phases, from Pre-Design through Post-Contract.

The space for each Designated Service is divided into an "R" and an "M" column, for indicating the Responsible Party and the Method of Compensation.

The instructions for this document indicate that this edition is "essentially a new document, reflecting a compilation and revision of its two direct predecessors, B161 and B162." It goes on to say, "The former schedule of services found in the previous edition of AIA Document B162 has been condensed to two pages and is found in Part 1 of B163." AIA has also called B163 a "significant evolutionary step in defining—and more precisely documenting—the scope of architects' services and compensation." The document was retired in 2009.

Declaration of Responsibility

I have personal knowledge that the nominee was responsible for the work described on the project listed and shown here.

_____

DALE ELLICKSON, FAIA
CEO, ELLICKSON & ASSOCIATES
FORMER DIRECTOR OF AIA DOCUMENTS

This diagrammatic explanation of the unique updating scheme invented for the original BSD SpecLink in 1996 remains applicable today in the latest generation of the software, BSD SpecLink-E. The schematic was developed conceptually by Mr. Dean and was developed as a marketing piece for BSD by Peter Drey, AIA, under contract to BSD.

An explanation of the graphic follows:

Because BSD SpecLink is based on a relational database instead of word processing files, the entire text content of all 600+ specification sections is saved in a single table. Each paragraph is part of a separate record in the table, with other fields recording related data such as text hierarchy, presence of a master note, paragraph category tag, intelligent links to other paragraphs, etc.

All data related to a given project is contained in a totally separate file that can be conceptualized as a transparency that overlays the master data and takes precedence over it. The project file is stored separately from the master data and never touches it or changes it in any way. When a SpecLink project is viewed in the computer or its specifications are printed, the relevant master data and the project data are electronically merged to create edited documents, with modified versions of master paragraphs overlaying and concealing the corresponding original master data.

The edited text is then formatted automatically by the selected formatting template, which applies margins, fonts, paragraph numbering scheme, headers and footers, etc.

Quarterly updates in BSD SpecLink include new and revised paragraphs to many sections, in addition to totally new sections. New proj-ects automatically use the most current data. Existing projects can be automatically updated, or users may choose to retain obsolete data, because the old data is not discarded from the master data table, it is merely marked as obsolete. If users choose not to update, paragraphs that would be affected by the update are marked so they can be reviewed individually and updated one by one.

Accepting automatic master updates never affects any customized text added by the user, because edited paragraphs in the project overlay continue to take precedence over master text.

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PETER DREY, AIA
PETER DREY ARCHITECTS
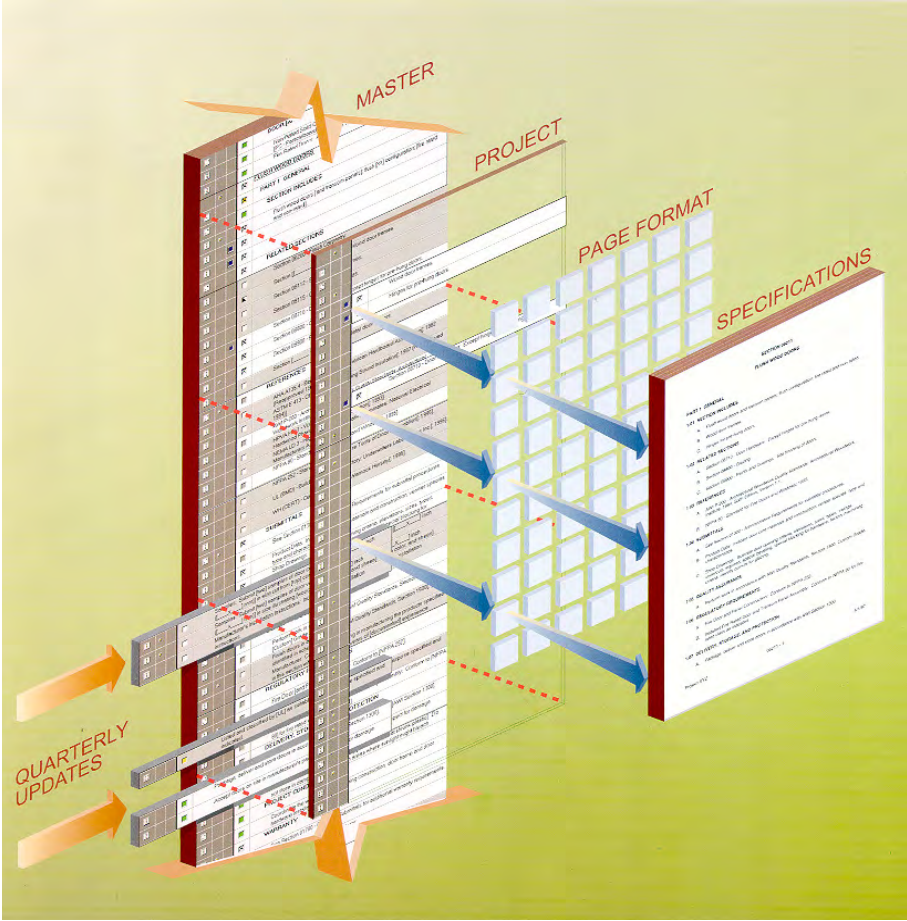
This diagram was conceptualized by Mr. Dean to illustrate the relationship of the various BSD products to the phases of standard architectural services as described in AIA Document B141–Standard Form of Agreement Between Owner and Architect, 1997 edition. The graphic was prepared as a marketing piece under the direction of Mr. Dean by Patrick Carlson, an independent graphic designer.

Three separate products are described, with the functionality of each arrayed with respect to the standard services described by phase in AIA Document B141.

The first product, BSD SpecLink, had three separate tabs, identified as PerSpective Performance specs, PerSpective Short Form Specs, and BSD SpecLink Construction Specs.
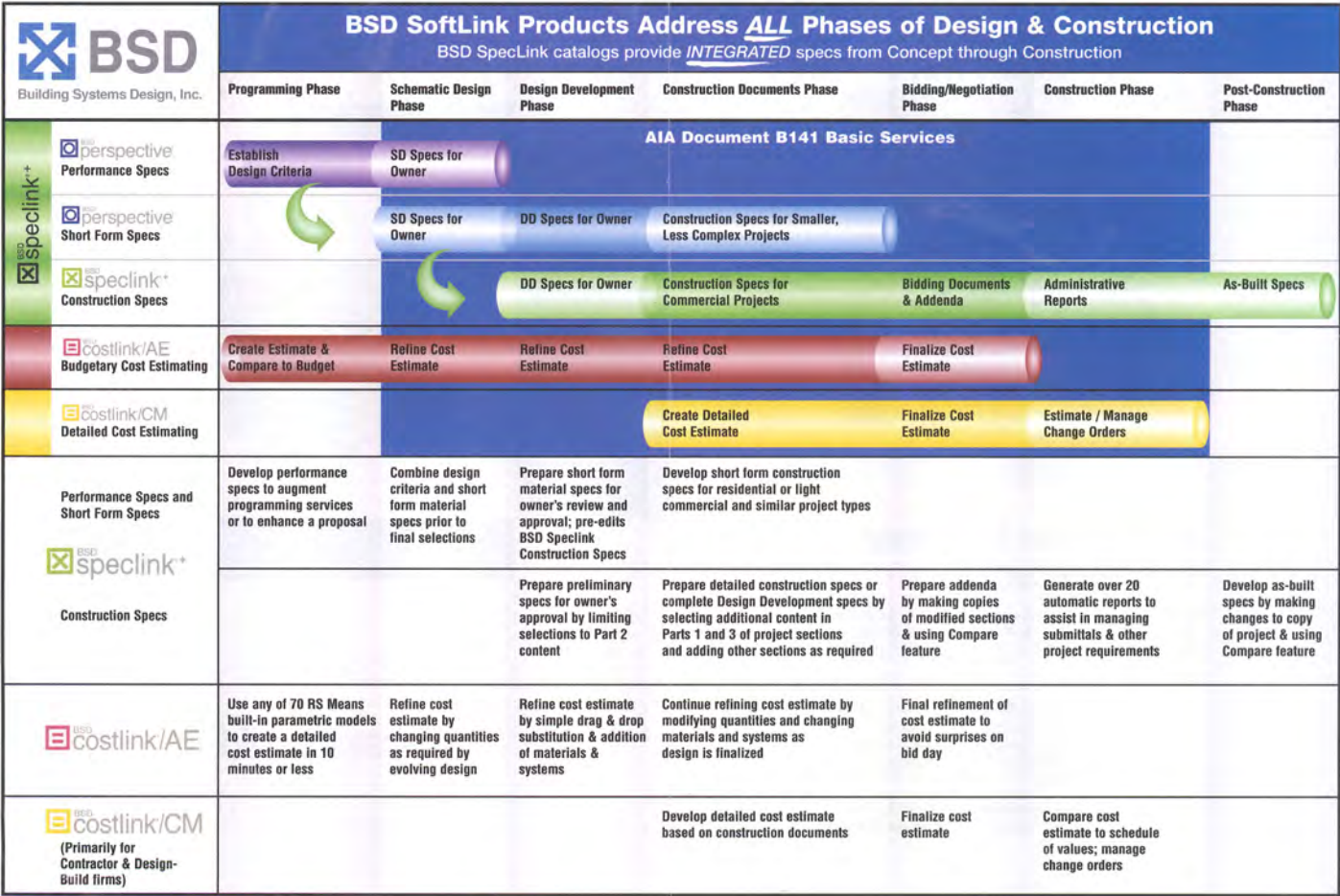
The data in each of the three tabs were linked, so that relevant choices made on one tab automatically selected, or "turned on" related information on the next tab.

As shown, the PerSpective Performance Specs tab could be used at the Programming Phase, which fell outside the standard services described in B141.

Color coding of the three tabs is further modified by shading to indicate primary and secondary use by project phase.

The second product, BSD CostLink/AE, is a budgetary cost estimating product developed for design professionals. It can be used during the programing phase to compare a parametric, model-driven cost estimate to the owner's budget, testing for feasibility

The final product, BSD CostLink/CM, was used to prepare detailed cost estimates during the construction documents phase of a project.

BSD SoftLink Products Address ALL Phases of Design & Construction
BSD SpecLink catalogs provide INTEGRATED specs from Concept through Construction

BSD — Building Systems Design, Inc.

	Programming Phase	Schematic Design Phase	Design Development Phase	Construction Documents Phase	Bidding/Negotiation Phase	Construction Phase	Post-Construction Phase
perspective Performance Specs	Establish Design Criteria	SD Specs for Owner					
perspective Short Form Specs		SD Specs for Owner	DD Specs for Owner	Construction Specs for Smaller, Less Complex Projects			
speclink Construction Specs			DD Specs for Owner	Construction Specs for Commercial Projects	Bidding Documents & Addenda	Administrative Reports	As-Built Specs
costlink/AE Budgetary Cost Estimating	Create Estimate & Compare to Budget	Refine Cost Estimate	Refine Cost Estimate	Refine Cost Estimate	Finalize Cost Estimate		
costlink/CM Detailed Cost Estimating				Create Detailed Cost Estimate	Finalize Cost Estimate	Estimate / Manage Change Orders	

AIA Document B141 Basic Services

	Programming Phase	Schematic Design Phase	Design Development Phase	Construction Documents Phase	Bidding/Negotiation Phase	Construction Phase	Post-Construction Phase
Performance Specs and Short Form Specs	Develop performance specs to augment programming services or to enhance a proposal	Combine design criteria and short form material specs prior to final selections	Prepare short form material specs for owner's review and approval; pre-edits BSD Speclink Construction Specs	Develop short form construction specs for residential or light commercial and similar project types			
speclink Construction Specs			Prepare preliminary specs for owner's approval by limiting selections to Part 2 content	Prepare detailed construction specs or complete Design Development specs by selecting additional content in Parts 1 and 3 of project sections and adding other sections as required	Prepare addenda by making copies of modified sections & using Compare feature	Generate over 20 automatic reports to assist in managing submittals & other project requirements	Develop as-built specs by making changes to copy of project & using Compare feature
costlink/AE	Use any of 70 RS Means built-in parametric models to create a detailed cost estimate in 10 minutes or less	Refine cost estimate by changing quantities as required by evolving design	Refine cost estimate by simple drag & drop substitution & addition of materials & systems	Continue refining cost estimate by modifying quantities and changing materials and systems as design is finalized	Final refinement of cost estimate to avoid surprises on bid day		
costlink/CM (Primarily for Contractor & Design-Build firms)				Develop detailed cost estimate based on construction documents	Finalize cost estimate	Compare cost estimate to schedule of values; manage change orders	

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PATRICK CARLSON
CEO, BULLS-EYE CREATIVE COMMUNICATIONS

This graphic was developed personally by Mr. Dean to illustrate one of the foremost features of the third generation BSD SpecLink-E. The current edition of BSD SpecLink incorporates a feature conceptualized by Mr. Dean that allows the creation of Outline, Short Form, and full Construction Specifications using the same database and without the need to start over at each phase of a project.

Paragraphs in the master database are tagged to indicate when they will appear as the database is collapsed or expanded.

- Outline text is the most basic and consists primarily of Part 2 text dealing with products. The text is organized by division, with section content typically limited to a few paragraphs, and paragraphs are not numbered.

- The database can be expanded to show additional text for producing Short Form Specifications. On this tab, paragraphs tagged as SF appear, in addition to those tagged OL. Specifications on this tab are organized into short, three-part sections that include paragraph numbers.

- The database can be expanded further to show all text, which is used to produce final specifications during the construction documents phase.

- At each phase, all decisions made earlier remain selected, so preparation of documents at each succeeding phase involves the addition of more detailed requirements instead of preparation of entirely new documents.

The graphic shows how text from earlier phases is retained but moved downward as additional provisions are included.

E Unique Expanding/Collapsing Database

OL Tags reveal outline text only
OL & SF Tags reveal additional text

All text revealed in Full Spec View

Outline Specifications
organized by division, no paragraph nos.

Short Form Specifications
organized into brief 3-part sections

Full Construction Specifications

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ROBERT EPSTEIN
DIRECTOR OF SALES & MARKETING
BUILDING SYSTEMS DESIGN, INC.

This graphic was prepared under the direction of Mr. Dean to illustrate the basic organization of the BSD LinkMan-E product and the manner in which the software connects objects in Autodesk's Revit product to corresponding specification provisions in BSD SpecLink-E.

LinkMan-E can be envisioned as a connector that displays data received from Revit and from SpecLink for the same project, comparing the information and collapsing it to focus on discrepancies. A project manager, looking at this data, can make decisions about what corrective actions need to be taken, if any — and in which software. If the BIM data from Revit is correct, the project manager can also remotely "turn on" any specifications missing from the project from within LinkMan.

The four main tabs are illustrated: Revit Project View, SpecLink-E Project View, Assemblies Dashboard, and Products Dashboard. The LinkMan-E master database, in the center of the illustration, is mapped to the assemblies in Revit at the top of the database and to the SpecLink products at the bottom. In addition, the LinkMan assemblies are linked internally to the products that make up each assembly. Through this interconnection, assemblies from Revit can be compared to the products in SpecLink that comprise the assemblies in the two dashboard views. It is even possible to pre-populate the specifications in SpecLink by reviewing the Revit data and clicking on a "Synchronize" button in LinkMan.

3-D CADD Project

3-D CADD Project View

Assemblies Database in UniFormat Organization

Products Database in MasterFormat

Assemblies Dashboard

Exterior-Brick on CMU

Generic - 12" Masonry

Concrete Block

Facing brick

Multiple Wythe Joint Reinfo

Assemblies mapped to UniFormat data; products mapped to MasterFormat data

Spec Project View

Product Dashboard

Central taxonomy is used to "translate" between applications

Optional Auto-Select Specs

Specifications

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ROBERT MCGOLDRICK
CEO, GOLD MARKETING, INC.

This series of advertisements was developed under Mr. Dean's direction to inform architects and engineers about some of the productivity benefits of the SpecLink-E software. The concept of the ad series was to repeat a striking image to establish familiarity and to limit the text on each ad to a different set of features.

The series included:

- Brilliance
- Control
- Efficiency
- Expertise
- Ingenuity
- Knowledge
- Intelligence

The advertisements appeared in a number of locations and in several publications, in addition to BSD's website. Publications running the ads in 2012 and 2013 included multiple issues of:

- Architect
- Architectural Products
- The Construction Specifier

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ROBERT MCGOLDRICK
CEO, GOLD MARKETING, INC.

These illustrations are from Autodesk's Revit 2013 and illustrate a new concept developed by Mr. Dean to achieve interoperability between BIM and specifications.

The basic idea was to provide architects with useful, non-proprietary BIM objects that would be pre-linked to the appropriate specifications in BSD SpecLink-E. This has been accomplished in two ways: 1) by a naming convention that links each unique object name to appropriate text in the specifications, and 2) by applying unique pre-linked BSD "materials," as defined in Revit, to the objects.

As shown in these illustrations, the objects are organized into Revit projects, allowing them to be sorted for desirable properties using Revit's scheduling feature. Once a user has sorted walls by fire rating, for example, he or she can select a wall or wall with other desirable attributes and copy it to the clipboard for pasting into an office master template or directly into a project. Once one of these objects has been used in a project, it automatically shows up in LinkMan-E as pre-linked to BSD SpecLink-E. A Revit project populated exclusively by these objects could automatically activate all the appropriate specifications in BSD SpecLink-E by using the "Synchronize" command in Link-Man-E.

These illustrations were used in an article by Wanda Lau for the on-line version of *Architect,* first issued on August 20, 2013. The title of the article is "Not Enough Choices? BSD to Release a Free Catalog of Autodesk Revit 2013 Objects."

Declaration of Responsibility

I have personal knowledge that the nominee was responsible
for the work described on the project listed and shown here.

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