



"We selected Netformx because the company and its products met our needs in a number of vital areas. Not only did they have the most robust and detailed database and software tool set that represents the absolute 'best-of-breed' available in the market today, but the company was dedicated to making sure that all of our requirements were met. They have been dynamically and proactively involved in each phase of our implementation."

Howard Owens
Sr. Director, Engineering
SBC DataComm

SBC Ensures Network Design Accuracy

Industry

SBC Communications Inc. is one of the world's leading data, voice, and Internet services providers. A Fortune 27 company, SBC companies currently serve nearly 60 million access lines and 21 million wireless customers nationwide. SBC also holds investments in telecommunications businesses in 28 other countries. Subsidiary SBC DataComm provides network integration for companies around the globe.

Challenge

To strengthen competitiveness in the network integration market and maintain cost-effective operations, SBC DataComm needed to standardize on a network design system across a thousand design engineers worldwide. The company had been using network drawing tools that could not provide validation, but SBC DataComm was searching for a comprehensive network integration solution to ensure consistent and repeatable processes, while improving design accuracy and service quality.

Solution

SBC Enterprise Designer, the SBC edition of DesignXpert® from Netformx®, provides a complete network design environment empowering SBC design engineers to not only design networks quickly, but validate them with manufacturer's engineering rules to guarantee design accuracy. Netformx enables SBC to deliver zero-defect network designs and smooth implementation with reduced cycle times to guarantee customer satisfaction.

Overview

SBC Communications and its family of companies provide a full range of voice, data, networking, and e-business services. SBC DataComm, SBC's network integration unit, offers proven network solutions, multivendor integration expertise, and logistics capabilities. More than 1,000 skilled engineers — with more than 2,600 industry certifications including Cisco, Nortel Networks, and Microsoft — deliver customized solutions to meet the needs of SBC customers worldwide. With such a large network design staff, SBC DataComm required a comprehensive, unified design solution that could be used by all engineers, and provide design validation capabilities, ensuring the same level of accuracy across all SBC design groups. SBC found only one provider capable of delivering a global solution with the required accuracy — Netformx.

Addressing the Accuracy of Network Designs

Before deploying Netformx, SBC DataComm design engineers used an industry-standard drawing tool that did not provide for validation of a design. This meant that designs could have mistakes and inaccuracies. In addition, the development of the Bill of Material was a manual process, which was also inefficient and inaccurate.

SBC found they not only needed a new solution that would enable them to validate the design and automate the entire network design and implementation process more efficiently, but that it would have to be a unified system, standardized across all SBC DataComm engineering departments.

The company wanted to create an environment that would ensure the same high level of performance and product from their engineers, anywhere in the country. They knew that to achieve this consistency, they would need to find or develop an automated design process. With this in mind, SBC set out to find the best design tools available on the market.



Standardizing the Network Design Process with Netformx

After detailed evaluation of available products, SBC chose Netformx because DesignXpert met the company's needs and the Netformx team was dedicated to SBC's objectives. Since then, SBC has standardized nationwide on SBC Enterprise Designer, the SBC private-labeled version of Netformx's DesignXpert — an advanced network design and device configuration tool that enables users to quickly and efficiently design, validate, and price network solutions. Users can drag and drop components from 18 SBC Tier 1 parts suppliers into a completely validated device configuration. The system also prepares a network solution for proposal and purchase, complete with a Bill of Material (BOM) and graphical design representation.

"Netformx gives us a significant advantage in the field because the tool's unique validation and testing process shows our customers the network will work as designed," said Howard Owens, Sr. Director of Engineering for SBC DataComm.

In addition, the software translates the designs into requirements — automatically and without error. The Bill of Materials report is generated directly from the validated designs, ensuring that all of the right parts are in the right place, in the right configuration, at the right time.

SBC Enterprise Designer Delivers the Following Advantages:

- **Rapid Design Turnaround:** The Netformx tool allows SBC to produce designs quicker and more accurately. Internal SBC metrics show that SBC Enterprise Designer can save between 15% and 30% of normal design time when placed in the hands of someone who has been fully trained on the software.
- **Design Validation for High Accuracy:** The validation engine feature — which includes the DeviceXpert Validation Wizard to assist the Design Engineer in developing a valid device configuration — is a key feature for SBC. The design rigor provided by Netformx's validation wizard has helped SBC solve design accuracy issues that were experienced with previous network design tools.

SBC also appreciates Netformx's ability to create valid links between devices, ensuring that the end devices have the proper hardware and software to enable the link. This is critical to verify that all the ordered devices will actually connect properly within the design.

- **Design Rules for High Confidence:** Netformx's incorporation of design rules direct from the part manufacturer enables SBC to guarantee customers that designs are accurate. SBC's confidence in designs validated by Netformx is very high, since most of their designs are Cisco based and DesignXpert incorporates the same configuration information that Cisco uses.
- **Flexibility to Explore Design Alternatives:** Netformx also enables SBC to rapidly develop several different versions of the same design, all the while ensuring that each is valid. SBC feels that the ability to rapidly change out multiple devices in a design is very useful, especially for customers who may change their mind several times just prior to contracting. Documenting a variety of different, validated, and tested scenarios is quite expensive and time consuming without Netformx.

"Using Netformx helps me give our clients detailed information much faster," added Nathan Kochly, a systems engineer with SBC DataComm in California. "For example, if the client wants to look at alternative scenarios, I have the ability to validate and price changes in equipment and configuration such as switches, routers, or blades on the fly in just a couple of minutes. In the past, these kinds of changes could take up to two hours, or more on really large projects, to get the same information."



- **Quick and Efficient BOM Generation:** The ability to rapidly export an accurate Bill of Material — sorted in several different ways such as by vendor or site — is a tremendous improvement over creating that document manually. This saves a lot of time when SBC has to present the BOM to the customer one way, but sort it by vendor for ordering.
- **In-Depth Design Representation:** SBC takes advantage of DesignXpert's ability to create design drawings with imbedded component information. Instead of simply viewing a picture of a device, SBC can click on that picture and see exactly what hardware and software components are included. The ability to show various views of devices is another useful feature, allowing SBC to display the ports on the back of devices.
- **Additional Sales Opportunities:** The ability to show end-of-life (EOL) devices, which were discovered during SNMP discovery, creates an excellent sales opportunity, especially since most SBC customers are unaware of which devices are EOL and which are not.

Secure and Manageable Storage with Design Central

To augment the capabilities of SBC Enterprise Designer, SBC has also deployed Design Central, a Netformx storage server application that allows SBC to upload designs directly from the Netformx design tool. SBC design engineers use Design Central to store designs once the sale is complete.

Before SBC started using Design Central, designs and associated materials were stored in a number of locations, ranging from local servers to each individual design engineer's hard drive. SBC had no central control over this information and there was no security, no backup, and no access to other users nationwide.

Design Central now provides a secure, managed storage location for SBC's engineering designs and associated documents. *It provides a central location for sharing designs*, and is accessible to the appropriate managers and other team members so they can quickly build upon the collective knowledge about a customer's network to deliver superior solutions quickly.

SBC deployed an Oracle database with a Panagon front end as their storage solution. Netformx's Design Central was integrated with the Panagon application to make storage more manageable from the user's perspective.

In addition, Design Central enforces the process by using a workflow metaphor to guarantee adherence to SBC processes and the latest validation rules. Design Central also allows SBC to:

- Enforce management controls — such as design review, pricing, and engineering approvals — to meet corporate standards;
- Incorporate the most up-to-date product information in each proposal;
- Collaborate between geographically distributed offices, replicating solutions regardless of the sales team.

The Bottom Line: Validated Designs Guarantee Design Confidence

SBC chose Netformx because of the performance of the DesignXpert system and the dedication of the Netformx team. By improving accuracy and design confidence through the Netformx system, SBC has been able to increase customer satisfaction, while boosting productivity and streamlining operations.

"Netformx has proven that they are a reliable partner who can be depended on to deliver on their requirements," Owens concluded. "No one else in the business can guarantee my customers the same level of confidence in their designs."



20454 Blauer Drive, Suite 150
Saratoga, CA 95070
Tel: 408.741.7900
Fax: 408.741.0299

www.netformx.com