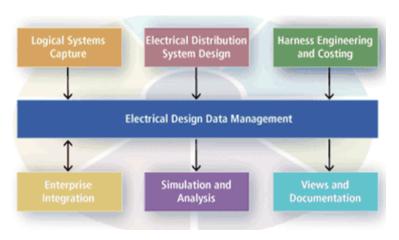
# Mentor Consulting: Capital Harness System (CHS) Services

DATASHEET



Wire harness design, by definition, is a multi-dimensional challenge. Architectural choices will influence the cost of the system throughout the entire product development cycle as well as the life of the platform. Mentor Consulting Cabling consultants can help transportation companies with structured solutions to complex wire harness challenges, improving processes, and providing direction and support for quick adoption of standards and best practices across the enterprise.

# **Major Services and Benefits**

- Faster time to CHS productivity
- Improve efficiency and implement industry best practices
- Integrate with existing design and enterprise systems
- Reuse of legacy data
- Knowledge transfer of technologies and methodologies

### Flexible Service Portfolio

- CHS Enterprise-Level Deployment Customize CHS environment to meet design process and business needs
- CHS Guided Pilot
   Comprehensive evaluation and minideployment of CHS to determine level of design and enterprise needs
- CHS FastTrack Services
   Deployment planning, installation,
   configuration, and knowledge transfer
- CHS Legacy Data Migration
   Preserve library and design data investment for reuse

# **The Wire Harness Design Process**

Modern transportation electrical systems are experiencing an explosion of content. The increased availability of affordable electronic technology has contributed to rapid growth in consumer demand for more convenience, greater safety and increased reliability. While companies face challenges in providing consumers with a wide variety of feature choices, the overall development cycle time available to do that is decreasing.

Architectural choices will fundamentally influence the cost of the system throughout the product development cycle as well as throughout the lifetime of the entire platform. This creates a powerful motivation for architectural optimization and informed cost containment choices. To address these tough challenges, Mentor Graphics has developed an advanced suite of design tools, known collectively as Capital Harness Systems <sup>TM</sup> (CHS). CHS supports wire harness design flows ranging from logical sub-system design through sub-system integration and wire harness engineering, to harness manufacturing and, eventually, the provision of after-sales service documentation and diagnosis.

# **Optimizing Wire Harness Design**

Mentor Consulting has extensive experience in wire harness design technology, with direct industry experience in aerospace, automotive, and other transportation industries and suppliers. Mentor Consulting works shoulder-to-shoulder with customers to create wire harness solutions, helping them overcome problems, improve design processes and gain the most from their CHS software investment.

Mentor Consulting offers a comprehensive portfolio of services for the Mentor Graphics Capital Harness System family of products. These services seek to optimize wire harness designs and achieve cost reductions throughout the product life cycle, from development through warranty and service. Our portfolio includes:

# **CHS Enterprise-Level Deployment**

When a customer is ready to deploy CHS in their production environment, Mentor Consulting can help with deployment and integration of CHS with other tools within the work flow and across the enterprise. Consultants work directly with the customer team to develop add-on technology, and to solve critical business and/or engineering issues. Engagements can vary in length depending on customer needs, and includes extensive knowledge transfer of technology and methodology.

#### **CHS Guided Pilot**

A guided pilot provides customers with a comprehensive evaluation and mini-deployment of CHS software to determine the level of design and business



needs. Consultants work closely with managers and engineering teams during the evaluation period in order to provide the customer with a complete report of the assessment and recommended solutions. From this report, customers can evaluate CHS for larger scale purchase and deployment.

#### **CHS FastTrack Services**

FastTrack services reduce a customer's time to productivity with Mentor Graphics CHS software, helping identify issues and provide solutions. This service can be as short as 1-2 weeks or as long as several months, depending on the variety of tools involved and the needs of the customer. During a FastTrack engagement, Mentor Consulting leads the customer through a proven, multi-step process:

- Initial CHS software installed on site
- Primary core-user knowledge transfer, with instructional sessions on tool features and use cases
- On-site Pilot Project support for methods used in realworld environment, with emphasis on best practices
- Deployment planning of design methodology, data management requirements, auxiliary business processes and supplier relationships
- Legacy data migration planning for translating library and design data for use in the CHS toolset.

This process ensures that CHS is correctly installed in the customer's environment and that a core set of users is trained in proper use of CHS tools. CHS consultants work to understand the customer's design process and any issues that exist. Recommendations are made on the best way to deploy CHS throughout the organization. Issues surrounding legacy library and design data migration are also addressed.

#### **CHS Legacy Data Migration**

Mentor Consulting offers expertise to those customers needing to migrate existing library and design data to their new CHS environment. This helps preserve previous investments by enabling design reuse in the new wire harness design environment.

Our consultants assess existing customer data and recommend a migration strategy. We then work with the customer throughout the process to ensure that the migrated data meets all standards while also being fully compatible with the new CHS environment.

# **About Mentor Consulting**

Mentor Consulting provides customers with excellence and expertise in electronic design automation infrastructure and methodology. It is the only service partner in the industry that invests in the transfer of knowledge to its customers to ensure a smooth deployment and integration of new tools and methods. Mentor Consulting solutions for silicon yield

# Case Study: Taking to the Skies with Capital Harness System

A large North American aircraft manufacturer and supplier recently embarked on daunting yet exciting challenge: to remake their passenger jet design from nose to tail. Among the many areas under the design microscope is the revamping of the aircraft's complete wire harness design. This one aspect will affect every electrical system on the plane, from navigation to air conditioning—dozens of systems in all.

Mentor Consulting Cabling Services, having real-world experience with leading aerospace companies, evaluated the project goals, and approached the task with a comprehensive, datacentric focus. After interviewing the customer's core team, reviewing the current systems design, and considering both the company's objectives and FAA requirements, Mentor Consulting proposed a "swim lane" solution. This solution provides for phases of system design, wiring integration, fabrication, installation, documentation and knowledge transfer. Phases are being assessed throughout the development of the new aircraft design, with Mentor Consulting providing wire harness guidance to the aircraft team as they solve critical issues.

This on-going and successful experience with the manufacturer's leap forward in jet aircraft design has drawn the enthusiastic interest of other work groups within the company. This has led to further consideration of employing the Mentor Consulting Capital Harness System solution as a standard for best practices across all product lines. This will give the aircraft manufacturer a way to eliminate costs associated with future design mock-ups, and a method for collaborating more effectively with suppliers.

For Mentor Consulting, the thrill will be to see the new jet aircraft design take to the skies. The solution offered is one that can be repeated across systems, with the results of improved data quality, reduced cycle time, and all systems upgraded to the most advanced technologies.

enhancement, verification, cabling, and data management are engaged worldwide by forward-looking electronics companies to optimize design productivity and advance adoption of the latest industry design best practices. For more information, contact mentor\_consulting@mentor.com or visit www.mentor.com/consulting.

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