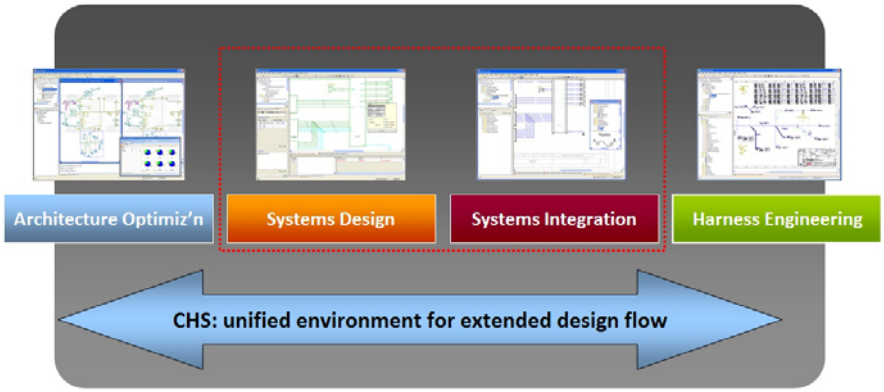
Mentor Consulting
Logical Cable to CHS Migration Services

D A T A S H E E T



Taking the step from schematic based documentation to the full functionality of a data-centric CHS flow can reap great benefits. But the transition stage requires close attention to maximize these benefits. Mentor Consulting has developed a proven service that efficiently migrates existing Logical Cable documentation to the CHS flow with minimum risk and schedule impact.

Major Service Benefits and Features

- Proven process extends existing schematics and data for use in the harness engineering and manufacturing domain
  - Preserves legacy data investment
  - Eliminates risk of errors from manual data re-entry
  - Simplifies legacy data preparation and cleanup
  - Accelerates start-to-finish time of migration
- Knowledge transfer allows continued work to be internally managed

Electrical System Design's New Level

Designing modern electrical systems and their associated harnesses has become an incredibly complex task. This complexity can only be addressed with new tools and technologies.

Consequently it has become imperative to have a complete ECAD tool flow that addresses the complexities both within and across multiple domains; even to the extended supply chain. Mentor Graphics CHS tools can improve design process efficiency, enhance design quality and reduce end product costs significantly.

The Challenge of Transition

Maintaining legacy documentation of past projects may be business-critical, but moving to a new flow can put it at risk. Traditionally, the information must be painstakingly transferred to the new tools.

Because CHS supplies a higher level of data driven design automation, complete and robust data population is mandatory. This data may be missing from existing projects.

Mentor Consulting has addressed this challenge with a team of skilled consultants and proprietary technology. Logical Cable to CHS Migration Services brings all of these resources together in a carefully crafted process that has been used successfully by many large automotive and aerospace companies.

Our consultants are experienced with process change management, adapting to customer specific environments (including PLM and 3D CAD products) as well as in-depth knowledge of both the Logical Cable product and the CHS flows.

For parts of the data migration process that can be automated, proprietary translation tools are used. These are modified to address your legacy design styles, incorporating intelligent error handling and warnings. The translator is architected such that any time customers have deviated from standard Logical Cable design capture methods, customer-specific software can be written and plugged directly into the translator to handle those cases.

Because Logical Cable only addressed only a portion of the CHS flow, Mentor Consulting experts can recommend strategies to extend existing projects to add support for complete harness engineering and manufacturing.

Before translation begins, Mentor Consultants perform a thorough assessment of the customer's current process at a high level and map it to a new flow based upon CHS products. New features and existing requirements are fully considered before the engagement begins.

The process follows these steps:

Step 1: Install the CHS Environment
Consultants build a well-planned IT infrastructure for data, projects, libraries and user management. A well-planned structure provides a solid foundation that will improve the migration results and deliver value for years to come.

Step 2: Install the selected CHS Design Authoring Tools
This establishes a production-ready environment for the actual CHS tools.

Step 3: Translate existing data to CHS
Using proprietary translation tools, the consulting team executes data translation, loading a test set of data into CHS and validating it before moving full production data into the flow.

- **Setup/Configuration of**
  - Symbols
  - Library Parts
  - Schematics
- **Translation**
- **Validation/Cleanup**
  - Modifying results to cosmetically match existing project documentation

Step 4: Knowledge Transfer
Mentor Consulting transfers knowledge of all processes to the customer. Included are Configuration and Control Workshops to teach how to configure users, access permissions, and release level transitions in CHS.

Modular Structure Allows Variation
The structured process also allows translation from other systems to CHS, including customer developed solutions.

About Mentor Consulting

Mentor Consulting provides customers with excellence and expertise in electronic design automation infrastructure and methodology. We are the only service partner in the industry that invests in the transfer of knowledge to customers to ensure a smooth deployment and integration of new tools and methods.

Mentor Consulting solutions for silicon yield enhancement, IC place and route, 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.

Switching from Logical Cable to CHS?

Logical Cable was a great product. At its launch, it was far ahead of its time. Even 17 years later it can still be used for design capture. However, design and manufacturing complexity have rapidly grown and the data being processed has increased dramatically.

To facilitate global design teams and cross-organizational projects, a different solution is needed. A full CHS deployment can be an enterprise-wide design solution spanning from logical capture, through wiring creation, to harness design, onto manufacturing and finally documentation and export for other purposes. This requires dealing with connectivity and design data rather than schematics.

CHS has a **modern IT architecture** - which is both flexible in supporting multiple deployment configurations and also allowing access to remote design groups. A modern API allows robust, easily maintained software extensions to be developed.

A typical enterprise will consist of numerous 3rd party tools that operate in different solution spaces. Being able to share design data with them brings distinct benefit. CHS allows data and notifications to be sent via a central infrastructure which can be customised to interface with chosen tools. For example, CHS has class-leading **MCAD/PDM integration**, allowing it to interface directly to the likes of CATIA V5 and Teamcenter.

Because each user can access the same data from a central database there is no need to synchronise files or manage who is working on what - the database allows a tight locking mechanism to ensure data is never duplicated or inadvertently overwritten.

And because the design data is shared it can be used by any of the design tools. No need to manually re-enter data when moving from one phase of design to another - it is fundamentally THE same data. Less manual re-entry means less chance of introducing human error which in turn means the quality of data will be far higher.

Less time fixing design problems equals shorter development cycles, meaning quicker time to market and potential cost savings.

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