Capital

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Digitizing Electrical Systems Engineering
Capital is a comprehensive software suite for electrical systems engineering of large platforms such as cars, aircraft, and sophisticated machines. These platforms have substantial electronic content, so the electrical distribution systems within them are complex. Trends such as powertrain electrification and increased autonomy compound the challenges.

Capital delivers advanced automation across a flow extending from electrified architectural definition, through detailed electrical design and wire harness manufacturing, to documentation & diagnostics. Powerful functionality of particular importance to the electrical domain is available: examples include functional verification, manufacturing process generation, and configuration & design change management.

Rich data modeling and data management are central to Capital, complementing the Model Based Engineering philosophy. Architected for enterprise deployments, Capital is built to integrate with adjacent domains such as requirements capture, mechanical CAD, and manufacturing execution. It is scalable, secure, and meets modern computing environments supported. Capital can be deployed into an Oracle RDBMS environment or with its own embedded database.

Capital tools are in use globally by many of the world’s largest engineering companies.

Define
Optimize Electrical/Electronic Architecture vs Targets
Capital’s define tools help optimize electrical/electronic architectures against targets such as cost, weight, or bandwidth headroom. While architectures have significant long term impacts, the pace of new feature development means implementation decisions are now made throughout a platform’s life.

Design
Maximize Development Process Productivity & Data Quality
Capital’s Design tools maximize electrical system and wire harness development efficiency and data quality. They provide a comprehensive environment spanning signal connectivity capture, system based and platform level wiring design, and harness design & engineering. Multiple powerful technologies are available, including rules based composite & modular wiring synthesis, electrical simulation & component sizing, and automatic component selection.

Produce
Improve Manufacturing Efficiency
Capital’s Produce tools improve the efficiency of harness manufacturers. Dedicated specifically to this industry, the tools act directly on pre- checked harness design data to dramatically streamline manufacturing engineering tasks. This frees engineers to explore alternatives in order to find the most efficient manufacturing process, and reduces response times to new or changed designs.

Maintain
Speed Documentation Creation & Fault Diagnosis
Capital Maintain tools reduce the cost and improve the accuracy & timeliness of service publications by creating formatted documentation directly from data. These powerful applications automatically combine electrical and other data sources (such as diagnostic codes, location views, and repair procedures) into interactive technical publications. As-built and as-maintained data can augment the publications packages.

Manage
Manage and Integrate Data
Capital is a data-centric suite delivering benefits such as managed supplier data exchange, data re-purposing, and process control. Capabilities such as user, library, and release management are inherent to all Capital products.

Capital’s Enterprise tools augment these. Sophisticated integrations are available with common MCAD and PLM platforms, creating a digital thread with these adjacent applications. Capital is able to publish and consume web services (SOA), and uses OSLC for integrations with requirements capture and test case management tools. A robust API is available enabling the creation of forward-compatible extensions such as custom checks or rule decks, using Java or JavaScript plug-ins. Library and design data can be automatically synchronized between multiple databases, and IT health monitoring is available. A configurable, web-based tool complements in-application data reporting.

Training and Services
Multiple levels of training and services are available to provide essential tools, expertise, and knowledge to get maximum value from your investment in Capital technology. These include support services, consulting, instructor-led and web-based on-demand training, and an extensive customer support – 24/7 custom support is provided, including a rich library of on-line resources.

With expertise in process re-engineering, Capital environment set-up and tool-flow integration, Mentor’s Capital Consulting Practice works with Mi-Aero, Automotive and Industrial customers to realize optimized time-to-productivity and on-budget deployment of Capital. In accelerating the de-risked deployment, adoption and environment optimization of Capital, our experts provide legacy data migration services enabling customers to move into the Capital environment and decommission legacy systems while preserving their investment in existing design data.

Training services are also available led by experienced technology trainers. From entry-level and getting started, through advanced topics for experienced users, our training classes and on-demand libraries contain everything you need to get the most out of Capital products.
About Mentor

Mentor Graphics Corporation, a Siemens business, is a world leader in electronic hardware and software design solutions, providing products, consulting services, and award-winning support for the world's most successful electronic, semiconductor, and systems companies.

Corporate headquarters are located at 8005 S.W. Boeckman Road, Wilsonville, Oregon 97070-7777.

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