Wiring Illuminator™

Data Renaissance Suite™ (DRS) is a comprehensive suite of commercial software tools that significantly lower maintenance costs for complex critical equipment. The DRS tools were developed to support the stringent maintenance requirements of critical systems such as the United States Navy's F/A-18 aircraft. The tools are ideally suited for the maintenance challenges of the the aerospace, chemical, nuclear and transportation industries.

Wiring Illuminator, a key component of DRS, is a computerized wiring data system that reduces the time, effort and associated cost of troubleshooting complex wiring. *Wiring Illuminator* captures a wide variety of information from wiring diagrams and wiring repair manuals, and provides a single integrated source of wiring data that is displayed on a computer. *Wiring Illuminator* is currently supporting the wiring troubleshooting needs of a number of major systems, including the F/A-18 C/D and E/F fighter aircraft and the Apache Longbow helicopter.

WIRING ILLUMINATOR FEATURES

- Dynamic display of a wide variety of wiring data

- Data filtered by equipment configuration

- User selectable screen layout

- Processes and XML DTD for import of legacy data

- Print Preview and Print capabilities

- Online Help function

- Support for MS Windows 98, NT, 2000 and XP

- Support for Oracle, MS Access, MS SQL Server and Sybase databases

Dynamic Data Display - *Wiring Illuminator* dynamically displays wiring information that is filtered by configuration - the technician sees only the wiring data that is applicable to the specific unit that is being worked on. This is a significant improvement over paper-based systems that show wiring data for multiple possible configurations, and leave it up to the technician to decipher notes and annotations on the drawings to determine which wiring is correct for the unit under test. Wiring diagrams are generated

"on-the-fly" from a database to ensure that technicians always have access to high-quality, up-to-date, legible diagrams, unlike paper or scanned diagrams, which may deteriorate over time or be hard to read.

Intelligent Graphics - Intelligent Graphics are interactive schematics or wiring diagrams created by mining information from static wiring diagrams to produce intelligent vector graphics linked to the wiring database. Circuit tracing is provided, such that clicking on a wire or other component in the graphic causes its entire signal path to be visually highlighted. Active components, such as switches and circuit breakers, operate just like the physical components they represent. Selecting a wire, or other component in the intelligent graphic also causes *Wiring Illuminator's* other data views to reflect this selection.

Wiring Illuminator Intelligent Graphics

Interface to External Systems - *Wiring Illuminator* includes a flexible external interface capability that supports integrations with other systems in the maintenance environment. For example, *Wiring Illuminator* can be launched from an Interactive Electronic Technical Manual (IETM), or it can obtain configuration information from a centralized maintenance management system.

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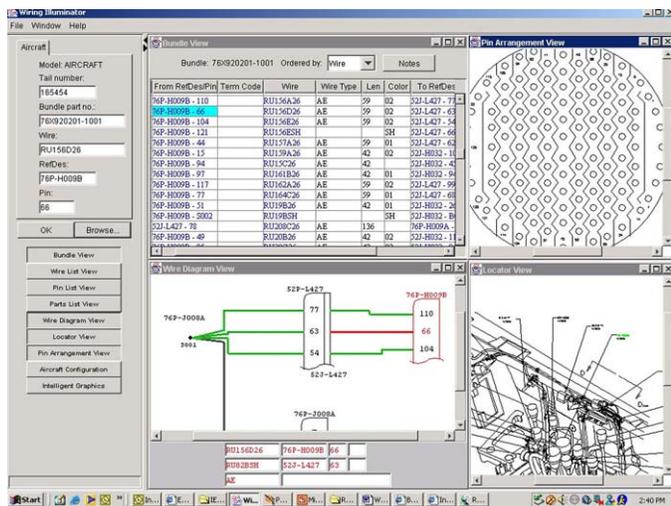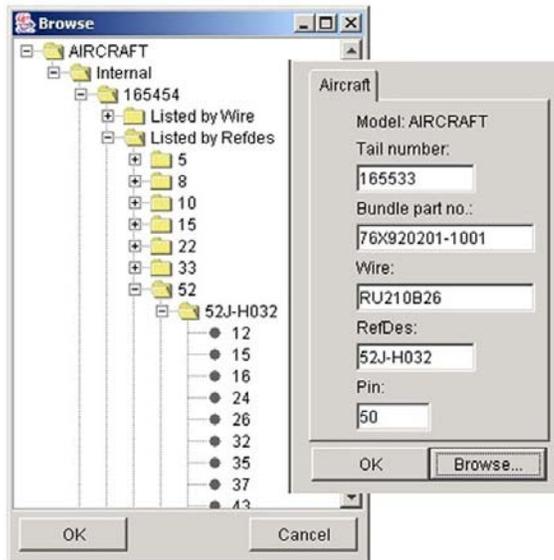(310) 662-2300 - (310) 662-2310 FAX

Data Renaissance Suite

Wiring data is formatted and displayed by *Wiring Illuminator™* in a set of of data "views." The user selects which views are displayed, and controls the layout of the views on the screen. All views are correlated so that selecting a new focus in any of the views (by clicking on a wire or connector in the wire diagram, or a cell in a tabular view) causes all other views to be updated appropriately. For example, clicking on a connector in the "Wire Diagram" view will cause all of the other views to be updated to reflect the wiring that is attached to the connector. The data views that can be provided by *Wiring Illuminator* (assuming the appropriate source data is available) include:

- **Wire Diagram -** Wiring diagram generated "on-the-fly" for the circuit or wire run

- **Intelligent Graphics -** Interactive behavior-enriched wiring diagram or functional schematic

- **Wire List -** Tabular list detailing every connector, pin and wire in the current circuit or wire run

- **Bundle -** Tabular list detailing all wires in the current bundle (harness)

- **Parts List -** Tabular list of all parts for the current connector or wire bundle

- **Pin List -** Tabular list detailing all pins and connecting wires for the current connector

- **Locator -** Graphic of the location of the current connector on the equipment under test

- **Pin Arrangement -** Graphic of the pin arrangement of the current connector

- **Equipment Configuration -** List of equipment modifications and optional equipment. User selects those that are applicable to the unit of equipment under test.

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Tedious page flipping and searching across multiple wiring manuals, and large, often difficult to read schematic foldouts, is replaced by the ability to search and browse for wiring data via Wiring Illuminator's easy to use search form and hierarchical navigation control.

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