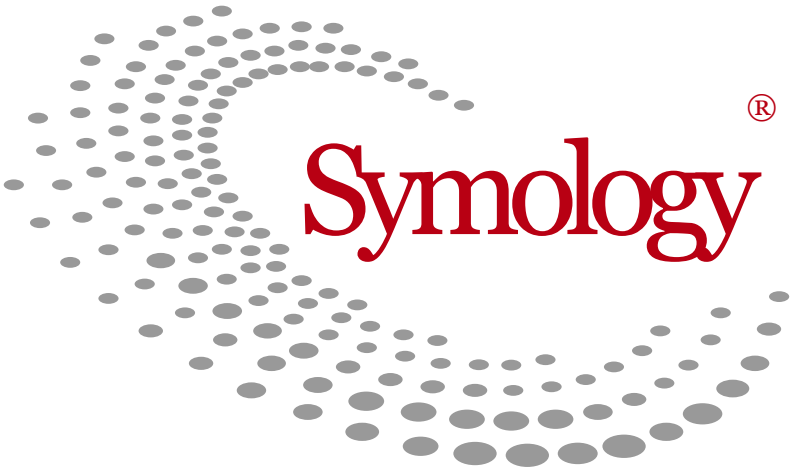

Street Lighting Management Solutions

Street Furniture, Asset Register and Inventory

An accurate inventory is critical for effective management of Street Furniture and Lighting assets. Insight provides a totally flexible map-based facility, with dynamic attribute definition. This guarantees the ability to reflect requirements as they change and evolve. There are many specialised street lighting features, including daisy-chained supplies, multi-header columns, and national energy coding. The inventory is fully integrated with all other Insight modules, allowing every life-cycle event to be referenced to an individual unit. This provides a comprehensive life history, which in turn provides the potential for accurate analysis of unit performance and costs, and improved strategic decision-making.

Insight smoothes the tasks of maintaining the inventory in up-to-date form, and extracting the information required. Bulk updating facilities may be invoked automatically, or by user prompting with a sophisticated set of selection criteria. There are inbuilt options for quantifying and producing statistics from the data. In addition, user-selected data may be exported directly to embedded reporting functions, or to other office system products for further data manipulation and presentation. For energy purposes, burning hours may be calculated and the relevant inventory information exported in industry-specific file formats. It is often necessary to operate these functions related to a specific geographic boundary or area. This is made easy using the unique multi-functional "area of interest" capability, which may be applied dynamically even to data which already exists.

Cyclic Activities

There are many examples of programmes which are operated on a cyclical basis, including cleaning, painting, bulk lamp changes, night scouting, and inspections for structural or electrical safety. A key benefit of the integrated solution is to automate the prompting of these actions. For routine maintenance tasks, bulk orders may be produced and completion data recorded with a minimum of administrative effort.

Inspections may be prompted in accordance with defined policy, and in route sequence if required. Where relevant, optimisation facilities are used to evaluate both cyclic and ad-hoc requirements, and minimise the overall workload. As an alternative to printed lists, prompts may be downloaded to mobile devices. Results can then be recorded using sophisticated software with guaranteed central system compatibility, which also allows inventory updating at the same time. Satellite-based positioning, mapping display and plot functions, and digital photography may be employed. Web access is used to communicate with base whilst out in the field, at work or at home.

Recording Faults and Work Requirements

All types of work are accommodated, from routine faults to major schemes. Simple user-defined defect codes are employed for priority-based routine works. These may be collected on mobile devices, entered into specially-tailored bulk-entry screens, or sourced from a sophisticated front-desk Customer Service system. The integrated system ensures minimum risk of duplicate recording, whatever the source of the data. Warranty claims for equipment failures are made easy. Full bill of quantity facilities are available for estimating complex schemes, which may be recorded in advance, then released and committed in accordance with an overall strategic programme.

INSIGHT FOR STREET LIGHTING

Insight for Street Lighting is a computer system designed specifically to provide a solution for the management of street lighting and furniture assets. It may be operated as a stand-alone system, or as part of an integrated system with highways management.

Corresponding offerings from the Insight range are equally effective for other infrastructure assets, including Property, Structures and Grounds.

Works Order Management

Unlike many other systems, Insight handles the unique features of lighting contracts with ease. Routine maintenance may be on the basis of individual fault ordering within a term contract, or using a lump-sum performance contract with required service levels. The contract terms, including priorities, turn-round times, financial retentions, and penalties, are defined for each individual contract. Day-rate, schedule of rates and lump sum charging may be used in any combination. Increments to rates, such as cost index updating, are allowed at break points within a contract period.

Orders may be sent electronically to a contractor system, or printed in the format required using embedded "layout design" tools. Contractor claims may be matched with orders, and checked automatically for accuracy. Inbuilt exception reporting may be employed, based on specified tolerance levels, to hold selected claims for investigation. Claims for individual works may be reviewed, and at an appropriate time those which have been approved may be bulked into a single certified payment. Sample inspection facilities for checking work are also available.

Performance Management

Standard performance indicators can be produced, as well as analyses of contractors' operations over given time periods. A key feature of Insight is the ease with which data can be extracted and analysed without technical assistance; the carefully crafted design of the database provides instantaneous output. A range of flexible, inbuilt enquiries and reports, ideal for the professional manager, provide instant access to information, and enable effective dynamic performance monitoring.

Reporting may be based on geographic areas. For example, an Area Supervisor can demand information such as "list all the recorded faults in my patch, which should have been done by last Friday, but are not yet recorded as complete". Producing this is as simple as entering the supervisor's identity and the date of "last Friday" into a standard enquiry facility.

Financial Management

Insight provides instantaneous expenditure position statements. A three-level commitment system handles progression from initial allocation of funds through to works completion and approval, including automatic handling of retentions where required. Any changes resulting from work confirmation, variations or extras, are immediately calculated and reflected in the financial tables, and full audit trails are maintained throughout.

Automated year-end close down facilities including parallel phase-over of years, budget profiling and monitoring, and expenditure journals, are amongst the advanced features provided as standard. Expenditure code grouping facilities may be used to restrict access to expenditure codes, and financial authority levels may be set for individuals to ensure appropriate security. The production of electronic files for interfacing with Corporate Financial systems is also a standard facility.

Integrated GIS

Advanced Windows ActiveX technology is used to provide sophisticated embedded mapping functionality, including the ability to plot inventory, works or any other items. Transfer between the database and the map, in context, is instantaneous, effected by a simple button-push, and all without the costs and overhead of providing a full GIS system on each user's computer.

Insight into Advanced Technologies

New technologies are not just implemented in the easiest possible way - that would simply be "technology for technology's sake". Symology carefully research and analyse the possibilities for maximising benefits, Performance, practicality and value for money, are ensured before applying the technology.

The system supports and utilises many leading edge technologies and standards, including ODBC, ActiveX, COM, CORBA, .NET, and XML. These technologies, embedded within the Insight product, provide phenomenally powerful and seamless facilities for GIS, mobile data collection, quality reporting, and document production.

Integrated GIS is particularly important for Street Lighting. With quick and accessible mapping, it is virtually always possible to identify a specific lighting unit from a customer telephone report, even when imprecise details are provided. It can also be seen at a glance whether the unit is "out of service". The embedded mapping functions, provided using ActiveX technology, are ideal, and these benefits alone justify their use.

Another example of applied technology is related to information extraction and analysis. On-line enquiry output may be displayed graphically in a grid, with dynamic selection of the precise columns required. The data may then be exported to Microsoft Word for automatic printing, or to Excel or other office product. An XML option also enables a style sheet to be generated so that the data can be viewed in any modern web browser. The embedded report layout designer provides seamless access to further filter the grid results, format the display, introduce graphics, produce totals and sub-totals, and collate/sort the data in any way required.

System-wide facilities are provided to store multimedia files such as video footage, digital photographs, and scanned documents. Interfaces are provided to produce rich text documents in Microsoft Word.

Insight is transferable (both technically and in licence terms) across all open platforms, both Microsoft and Unix/Linux systems, covering a full range of thick-client and thin-client (including browser-based) options.

INSIGHT FOR STREET LIGHTING

Functional Overview

Asset Register

- Nationally compliant street gazetteer
- Gazetteer Import/Export
- Additional user-defined street data
- Street Lighting and Furniture
- Bollards and Signs
- Safety Barriers & Guardrails
- Asset-based life history

Advanced Inventory Features

- User-defined Unit Types
- User-defined attribute dictionary
- Sophisticated bulk updating facilities
- Full historical audit trail
- Easy access to attached furniture items
- National energy coding
- Slick multi-header definitions
- Daisy chained supply links
- Quantification and summarised reporting
- Automatic updating from completed works
- Comprehensive analysis tools

Energy Usage Monitoring

- Inventory export in standard file format
- Annual burning hours calculations
- Energy bill checking

Location Referencing

- Textual location descriptions
- Gazetteer referencing
- Section referencing
- Map co-ordinates
- Chainage-based
- Cross-Sectional Positions

Inspections

- Cyclic prompting and monitoring
- Night Scouting
- Routine Safety Checks
- Statutory electrical testing
- Customer Service requests
- Post-work quality checks

Mobile devices

- Latest technologies
- Multi-function devices
- Map-based functions
- Satellite positioning
- Digital photography
- Remote Web Services connection
- Symology-developed software
- Automatic server compatibility

Contract Management

- Tendering processes
- Tender response evaluation
- "Term" and "Special" Contracts
- Defining Contract Terms
- Monitoring Contract finances
- Penalty enforcement
- Liquidated damages
- Performance Indicators

Works Management

- Job Ticket production
- Priority/date required options
- Resource requirement estimating
- Job Completion recording
- Electronic ordering

Schedules of Rates

- Rates for multiple contractors
- Quantity-based rate banding
- Percentage add-ons
- Priority supplements
- Minimum callout charges
- Phase-over of price changes
- Cost Index updating

Ad-hoc and Cyclic Works

- Ad-hoc fault recording
- Efficient night scout recording
- Avoidance of duplicate orders
- Bulk ordering for minor works
- Bulk change & clean
- Painting programmes
- Cyclic order generation
- Completion monitoring

Contractor Claims Processing

- Electronic claims processing
- Order/Invoice matching
- Automatic hold/approval tolerances
- Review and approval of invoice claims
- Certificate of payment production
- Supplementary invoice and credit notes
- Optional contract retentions
- Bulk and automated retention release
- Multiple orders/single claim option
- Unallocated claims processing
- Warranty claims

Areas of Interest

- Polygon plotting on the map
- Geographic view/update security
- Work allocation areas
- Political boundaries
- Inspector Patches
- Divisional Office areas

Financial Monitoring

- Automated expenditure code selection
- Expenditure code security
- Three-level commitment system
- Real-time Budget Statement updating
- Automatic on-line posting
- Individual authority levels
- Full audit trail
- Period expenditure profiling
- Expenditure journals
- Monitoring of variations
- Automatic contract retentions
- Year-end processes
- Interface with corporate system

Customer Service

- Telephone/Letter/Web requests
- Avoids duplicate recording
- Action-tracking and monitoring
- Dynamic escalation process
- Direct Works module interface
- Direct Inspections interface
- Service/Action scheduling

Universal Facilities

- Interactive map links
- Spatial Analysis
- Full module integration
- Load-and-go functionality
- Inbuilt customisation options
- Intuitive user dialogue
- Customisable data display
- Office Products interface
- Access security
- Simple system administration
- Historical audit trails
- Working Days Calendar
- Performance Indicators

G.I.S

- Inventory maintenance
- "Area of Interest" definition
- Viewing/Plotting facilities
- In/out of lighting display
- Seamless "in context" interface

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