



Highways : Roads : Railways : Airports : Bridges : Culverts : Fords : Irrigation :  
3Ws (Stormwater, Water Supply & Wastewater) : Buildings



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## OVERVIEW

### HIMS Asset Management System (HIMS)

is a powerful and flexible database management and analytical system designed to meet the needs of asset owners, asset managers and their consultants. HIMS is capable of storing and analyzing data on any type of asset with a particular emphasis on linearly referenced assets such as pavements, bridges, culverts and fords etc.

HIMS was developed based on the "zero coding by the end user" principle. HIMS offers most of its functionality to be configured by the end users more than any other Commercially Off the Shelf (COTS) systems of similar kind available in the market.

HIMS is built around the concept of varying "user levels", each level having different functional accessibility and privileges. This routine can also be used to define a separate "access network" for each user.

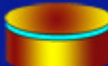
### Integrated & Comprehensive Asset Management & Maintenance System

#### Data Collection



Inventory, Condition, Costs, Traffic, Users, etc.

#### Data Storage



Relational Database based on Linear & Spatial referencing system

#### Data Management



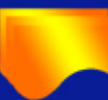
Current Level of Service (LoS), homogeneous sectioning, strip maps for sections, dash board analysis, data aggregations & transformations etc.

#### Analysis



Capital and recurrent investment analysis, economic analysis, multi-criteria analysis, interfacing with other analysis engines such as HDM-4 etc.

#### Reporting



Statistics, economic indicators, longterm plan, short-term programme, thematic maps etc.

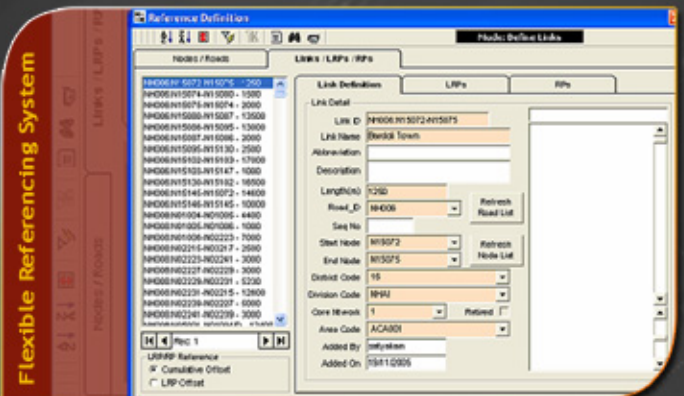
HIMS

## MAIN FEATURES

### Flexible Referencing System

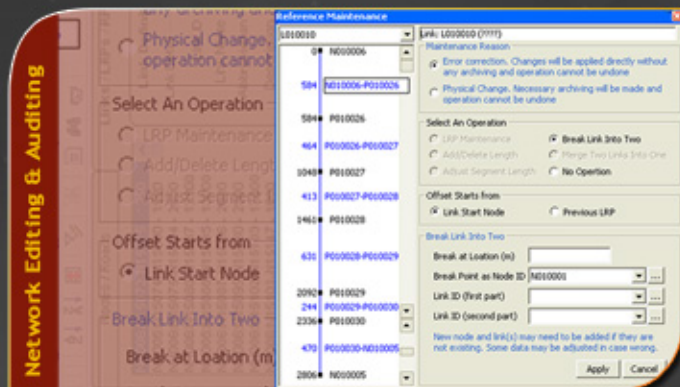
- HIMS was built on the advanced and best practice location referencing principles for linearly referenced assets. It can store data in multiple referencing systems and then can convert data from one referencing system to another. This routine of HIMS is one of the best available in the industry. User definable linear referencing system is linked to spatial GIS referencing system.

### Flexible Referencing System



**Network Editing and Auditing** - HIMS has an in-built Network Management Module (NMM) which is specifically designed for this purpose. This allows users to track the historical changes in the road network. This module also facilitates to manage (break or merge) attribute data following the changes in the location referencing (or road network).

### Network Editing & Auditing



## HIGHLIGHTS

**User Friendly : Multi Lingual : Flexible Location Reference : Geographical Information System : HDM-4 Interface : User Defined Reports : Web Enabled : Data Management : Multi User : Easy Configuration : Role & Area based Access**



**User Definable Objects** - The user can import or define various objects such as tables, queries and forms to store and edit the data. The system has the default templates that facilitate rapid creation of new databases and data-entry facilities.



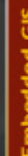
**Analysis Engine** - HIMS has in-built "Analysis Engine" offering a platform for various analyses including predictive modeling, life cycle costing, optimization, multi-criteria analysis, programming and scheduling and asset valuation. This engine is very flexible, completely configurable and can be applied to any infrastructure asset.

**HDM 4 Interface** - HIMS has an in-built HDM-4 Interface, which can prepare network and traffic data for HDM-4 analysis. Results of HDM-4 analyses can be imported back into HIMS database to prepare customized reports and display data in thematic maps.



**Sectioning** - Based on the user defined criteria, HIMS can automatically create "homogeneous sections" of road data that can be used for analysis. Various methods are available for determining homogeneous sections, such as fixed length, value change, value range, cumulative deviation method etc. HIMS also allows the manual refinement of the automatically generated sections.

**Embedded GIS** - HIMS was built on embedded GIS principles. A royalty free distribution GIS component in the HIMS system means the end user is not required to purchase or subscribe to any other external GIS application. Once the line work has been completed (using other software such as MapInfo or ESRI ArcGIS etc) then HIMS can read or import any industry standard or data exchange files for displaying maps within HIMS software. GIS data can be imported and exported to other external GIS applications very easily. It is also possible to generate Dynamic Segments in HIMS-GIS using attribute data, such as pavement type, roughness level, traffic level etc.





**Multi Language Support** - HIMS is built considering the need for multi-language support facilities. HIMS was successfully used and implemented in Chinese and Serbian languages.

**Application** - HIMS was programmed using Visual Basic as the front end. HIMS System can work in LAN/WAN networks and also as a disconnected (or stand alone) database when LAN/WAN is not available.



#### HIMS is available in three versions:

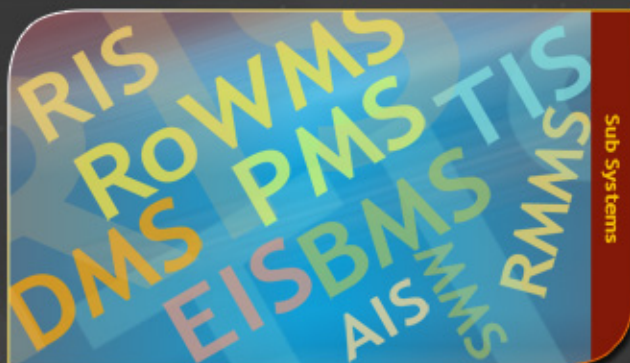
**Desktop Version** - This version is based on the MS SQL Express database and is ideal for small Councils (road networks) or low on IT infrastructure.

**Enterprise Version** - This version is more suitable for agencies having huge data management; client server environment and well developed computer network. This version is based on SQL Server backend.

**Web Version** - This version is based on Enterprise with data uploading and retrieval using web interface. System can be hosted on an internal or external server.

**Data View** - Integrates video and other attribute data, thereby allowing users to 'drive' down the road to visualise the condition. With flexible navigator, the data view is very simple and easy to operate.

**Reports** - HIMS has another royalty free distribution embedded engine to design reports, charts and other graphs. With this engine, existing reports can be modified or new reports can be developed by the end user (with enough user privileges) at any time without requiring any additional software.



#### Sub Systems - Road Information System

- Pavement Management System (HDM Models)
- Simple Pavement Management System (Decision tree based)
- Bridge Management System
- Routine Maintenance Management System
- Traffic Information System
- Accident Information System
- Environment and Social Information System
- Maintenance Management System
- Right of Way Management System and
- Document Management System

**Implementation** - Some major (World Bank / Asian Development Bank / European Bank funded) projects on which HIMS was successfully implemented:

- Road Asset Management System, Samoa
- Road Management and Decision Support System, Cambodia
- Gujarat Road Management System, India
- Bridge Management System, Papua New Guinea
- Road Management System, Sri Lanka
- Urumqi Road Management System, China
- Wuhan Road Management System, China
- Road Asset Management System, Zambia and
- Road Database, Republic of Serbia.

