



EDAMS Network Asset Management Zoning Manager Module

Automated solution for the effective Modelling, Managing and Monitoring of Zones



Unplanned expansion to meet changing demands as well as inappropriate zoning are the main causes of networks operating in a non-optimal manner, resulting in unnecessarily high pressures, high pressure variations within short time periods, uneven flow distributions within the network and often unnecessary pumping and associated electricity costs.

Improper zoning is one of the biggest culprits. Utilities tend to zone their systems for mass balancing purposes without due regard to head (pressure)

zones and hydraulic zones. Head zones are zones of the same static head and when designed should take into account elevation differences in the system. Hydraulic zoning separates the bulk supply from district networks. This separation is necessary in order to study network behaviour under different load conditions. Revisiting both zoning and flow distribution is not an expensive exercise and is necessary both to define an appropriate remedial program that will address the current inefficiencies in the system and to define a future upgrading

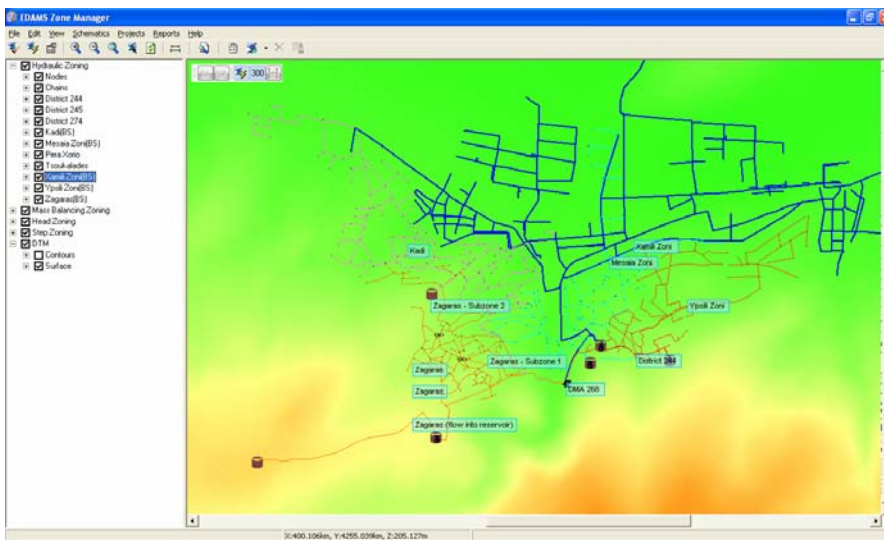
program.

The EDAMS Network Asset Management-Zoning Manager is a tool that as part of an effective Asset Management program can assist the Utility in modelling, managing, monitoring and controlling their zones

Zone Management & EDAMS Asset Management

EDAMS Network Asset Management has built-in topology for all its elements. It can, in fact, reproduce the entire network graphically when linked to GIS. Intelligence is also built in for every member in terms of connectivity, positioning and belonging, facilitating easy data evaluation and validation

The methodology recommended includes the implementation of EDAMS- Network Asset Management information system with integrated Zoning capabilities as a dynamic business solution, to empower the Utility to improve its overall operational efficiency.

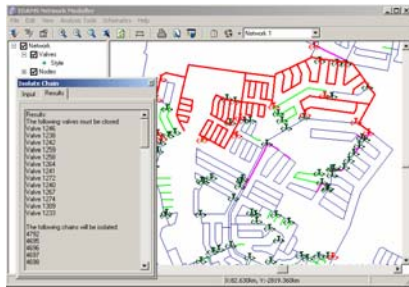


EDAMS Technology
Redefining Utility Management

Multiple zoning concept

Zoning is a set of rules for grouping elements into connected parts of the network. Different zoning types have different sets of rules according to the purpose of the grouping, for example, for mass balancing.

The EDAMS Zoning Manager automatically generates engineering, mass balancing and pressure zones. The automatic zoning function is a unique feature in which zoning is performed automatically, with the system identifying zones through preset boundary conditions and by allocating network components to these zones.



Hydraulic zones are important for network optimisation and rehabilitation. It refers to the separation of bulk supply (trunk mains) with districts (reticulation network). Such zoning can assist in identifying problem areas in terms of connectivity, zone isolation and data

inaccuracies. The zones are identified by using predefined district junctions (separating bulk from district) and flow control points (separating districts) as boundary conditions.

Mass balancing zones are used for leakage management per district meter area. It is identified through using bulk meter chambers as boundary conditions. Zoning history is used by the EDAMS Demand Management system when producing unaccounted for water reports for the various districts.

Head zones are necessary for pressure management, and are defined as zones with identical static head, with head control points such as reservoirs, towers and pressure reducing valves, serving as boundary conditions and defining the head in the pressure zone.

System Component zones

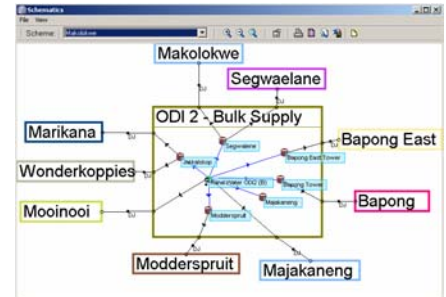
The definition of system component zones in EDAMS Network Assets Management system enables systems like EDAMS Demand Management to perform component sizing. Component sizing refers to the comparison of the capacity of specific network elements with current and future demand of the area of influence by taking into account different design standards.

System Component Zone is a group of

regular zones of a certain type, created by the user. Each system component zone has a certain type that defines the kind of regular zones that can be included into the system component zone, i.e. Reservoir System Component Zones can be made out of Head Zones where the main element is Reservoir Site.

Schematics Modeller

Geographical representation of networks may not allow the engineer to understand cluttered networks, especially near reservoir sites and pump stations. In such cases EDAMS Network Asset Management employs a powerful schematics modeller that rearranges the network in an orthogonal layout and identifies schematic elements such as branches, loops, leafs, and bridges.



Employing the latest Boost and graph layout algorithms, the system gives the engineer a completely different perspective of the network data.

System Implementation

System implementation uses a structured methodology and full operator and management training. Our consulting services, based on over twenty years of industry experience, ranges from data capturing and field validation to network optimisation and the reduction and control of non-revenue water.

Contact us for more information on our products, services or Partnership Program



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