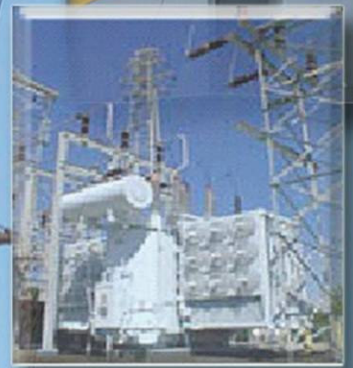


# ASD

Automation Systems & Diagnostics



**UTILITY**  
**Mapping Software**

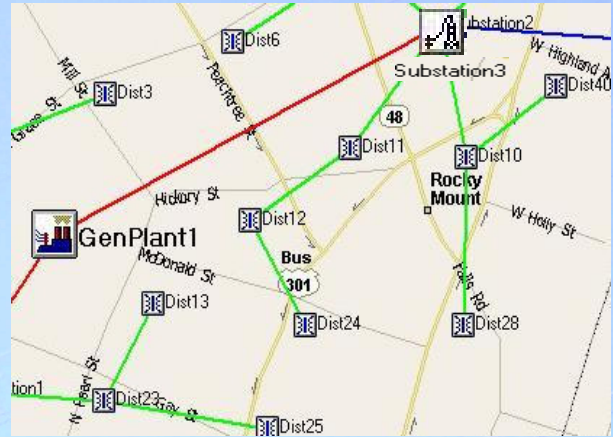


Various sources of losses and unexpected failures over utility networks often cause huge expenses. On the other hand, the impact of energy efficiency on nations' economies is obvious. The fact that makes preventive maintenance and automated control over networks, a real must. Motors, transformers, buses, switches, generators, capacitor banks, meters, protection relays and all other network equipments need to be catalogued in a database with all parameters and item histories. Such database should be adaptable to the needs of the operator. To that end, ASD introduces a Mapping System.

ASD's Mapping System depends in the first place on a large network database. The database keeps track of substations, generation plants, distribution stations, and transmission lines of utility networks. It records all information and specifications of the main networks' components, mentioned before. Adding to that, it also holds data about the substations' and generation plants' equipments as transformers, breakers, capacitor banks, busses, switches...The software displays the main utility network components on the corresponding country's map taking notice of GPS coordinates and surrounding conditions. The software reveals on the map any changes detected in the database.

As ASD establishes a database for your utility network, the software can reveal an interactive map as it runs. You can spot the desired area on the map and also, view the desired components. The software displays the following:

- Generation Plants
- Substations
- Distribution Stations
- Transmission Lines
- Underground Cables
- Power Load Flow



By right clicking the map, the software allows viewing one or multiple of the listed components. Regarding transmission lines, operators shall decide which lines to view through a transmission line form that permits displaying all lines, hiding all lines, showing specific links between generation plants and substations or specific lines with certain voltages.

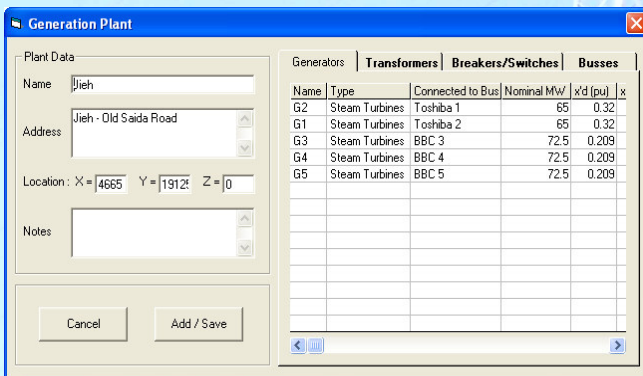
The software reveals on the map any detected changes in the database. It distinguishes between energized and un-energized transmission lines, and displays load flow on the map. The user is capable of adding, altering or deleting data to any of the network components. Any addenda or alteration will be directly saved to the original database.



When you decide to add a generation plant for instance, a relative window appears. The name, address and location of the plant

shall be specified. Three dimensional coordinates defining the exact location, are logged from any global positioning system (GPS). Any tab in this window, sets you free to add, edit or delete to any of the corresponding stated equipment.

Add option encounters new data to the existing database. The next time you access the same data window; you can alter the specifications using *Edit* or even cancel it using *Delete* option. The software automatically assumes the next step to be taken, So if data is logged for the first time, a save button appears otherwise it's replaced by an update button.



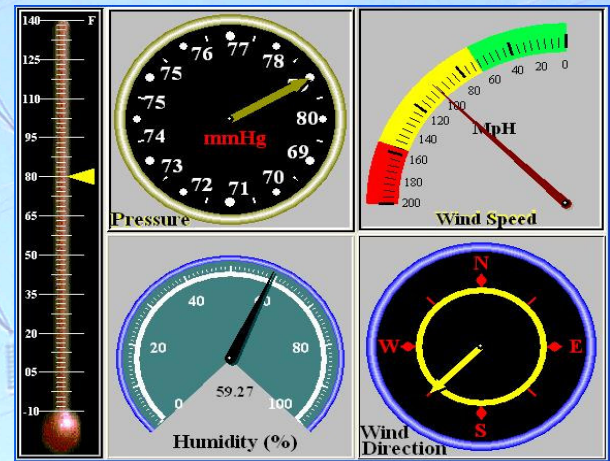
Right click any of the utility network components on the map; this is what you will get. You are able to read or write to the specification windows.



From the substation specification window; you can read/write to the transformers' name plate, busses, ratings and

connections. The lines specification database calculates technical losses in the transmission system, showing transmission line connections. The distribution station database is necessary to keep data as power, primary/secondary voltages, load and no load losses.....

The further information about position and weather reflects a precise view of the external surrounding conditions that might influence proper operation.



*We note that all ASD products can encounter changes upon customer's requests. Our products are continuously subjected to updates that add value, feasibility and reliability to operation.*

### CONTACT INFORMATION

Automation Systems & Diagnostics, Inc.  
1021 Davis Drive  
Apex, NC 27523

Phone: 919-842-2613

Fax: 919-380-1054

Email: [ASD@ASDpower.com](mailto:ASD@ASDpower.com)

Web: [www.ASDPOWER.COM](http://www.ASDPOWER.COM)