Envista
Air Resources Manager

Envista ARM is a Windows 10/8/7 Pro., client-server application for supervisory control, management and analysis of data from Environmental, Meteorological and Hydrological monitoring networks.

Envista ARM allows users to view, analyze, report and distribute environmental quality data across the full range of media.

The Envista ARM client application runs under Windows 10/8/7 Pro, either locally or remotely. It provides comprehensive access to information collected by the CommCENTER communication application and stored in a SQL or ORACLE Server database on an Windows 2016 or Linux Server. Database information is available via standard reports and displays, Envista ad-hoc custom reporting software and various third party applications.

MAIN SOFTWARE FEATURES

- Microsoft .NET C# programs for Windows 10 Pro.
- Windows 2016, Linux and Solaris database servers. Client-Server, Smart Client and Web applications.
- SQL Server 2014/16 or Oracle9i/10/11g
- Maintain Historical Data without limitation.
- Multi-threaded communication with data loggers and instruments.
- Internet and intranet networking support.
- Open DB/system architecture & Connectivity.
- Multi-lingual design.
- Multi-document interface.
- Multi Level Access authorization.
- Multi Users access at the same time.
- Interface entirely menu-driven.
- Alert/Alarm transmission via SMS & email.
- Collects data from remote stations at scheduled times or upon request.
- Manages up to 999 remote stations (Unlimited remote stations optional).
- Dynamic displays.
- GIS dynamic map (SHP Format) viewer.
- Ad-hoc report designer.
- On the fly QA.
- Automatic data backups.
- Data analysis and reporting.
- Optional equipment inventory and maintenance system.
- Optional voice information system.
- Optional Billboards and Large Information Display's data transfer and Displays Control.

DYNAMIC DISPLAYS

The following *Dynamic* displays are available:

- Tabular: Displays current data for one or more stations.
- Last Received: Date/Time of last data and calibration received from each station
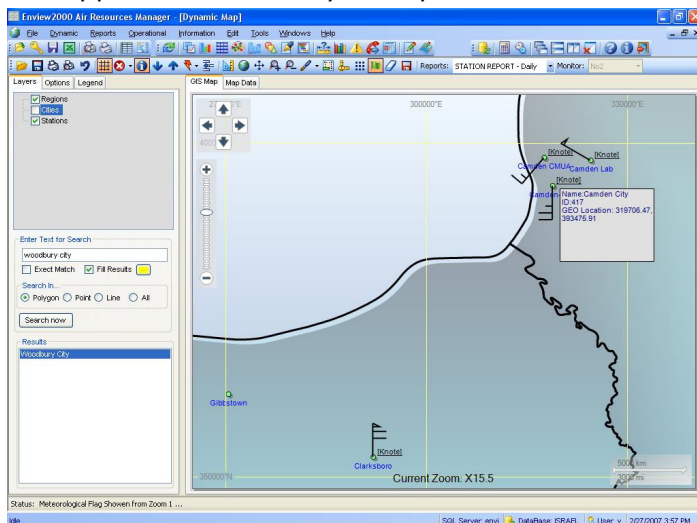- Dynamic GIS Map Viewer: GIS Viewer interface for data display on user supplied base GIS layer map.

Figure 2 – GIS Viewer Dynamic Display

REPORTS & ANALYSIS

By using this feature, the user can produce, print and export textual and graphical reports.

- Station Data Report –Standard tabular and graphical reports for Station values. Day, week, month and user defined (periodic) report intervals are supported. Stored data values may be averaged before being reported. Values reported may be filtered.
- Multi-Station – Similar in function to the "Station Data Report," only designed for more than one station. Also supports multiple parameters.
- Group - Report that reflects a user defined group of monitors related to one or more stations.
- Histogram - The frequency of occurrence of various ranges of a monitor's value.
- Index - Performance of the Air Quality Index value for a station or several stations.
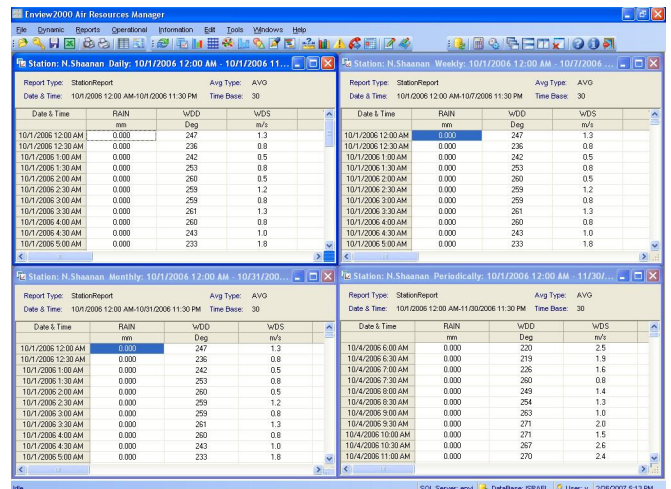- 2Y Time Plot - Two parameters plotted against time.

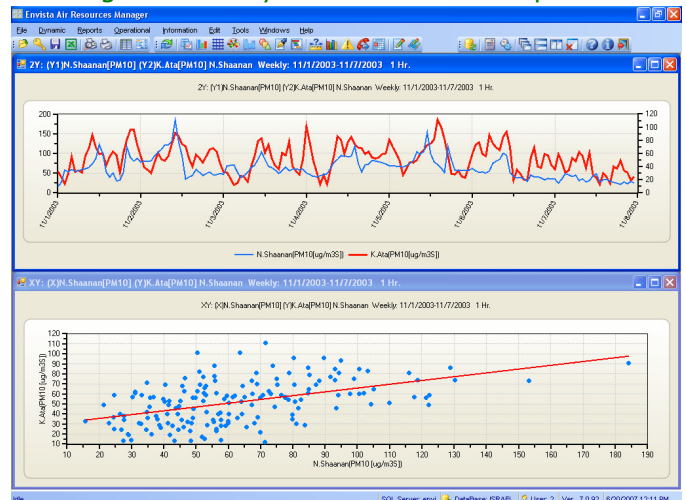Figure 3- Daily Station Textual Report

Figure 4 – Graphical Results

The user has available to them the following *analysis* features:

- Analysis period of day, week, month, or year.
- Average Types: Mean, Running, Running Forward, Maximum and Minimum.
- Data Average Intervals: 1min, 5min, 6min, 10min, 15min,30min,1hr,3hr,6hr,8hr,12hr, or 24hr.
- Output to display, printer, or file (XLS, WMF, JPG and BMP format).

Figure 5 – Example of Analyses Results

- Wind Polar – Joined wind direction with average or percent of wind speed or pollution in each direction.
- Wind & Pollution Rose - Joined pollution concentration, wind direction and wind speed relative frequency.
- Wind Polar Time –Wind direction against time.
- XY Time Plot – Correlation between two parameters.
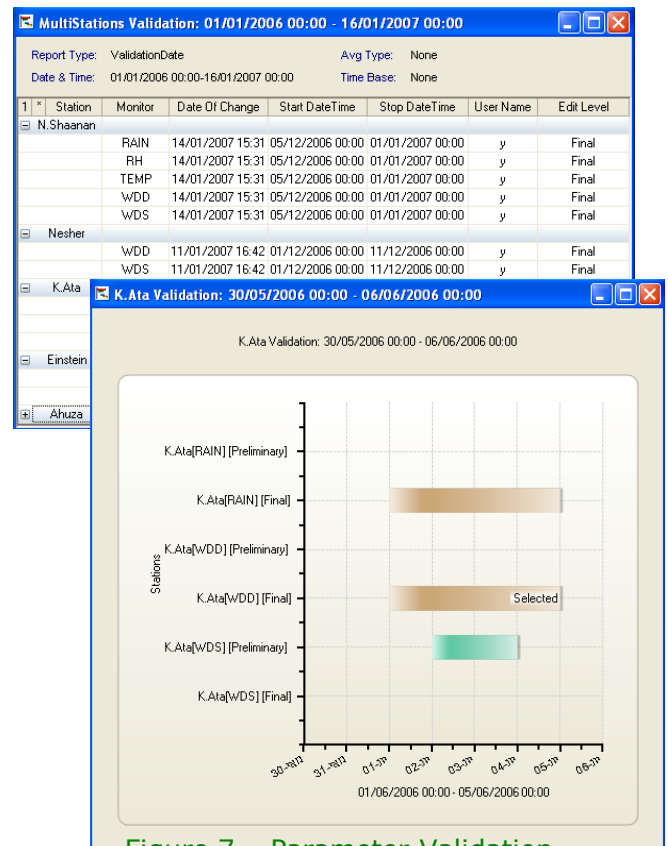- Events - Creation of an event (over value) report by scanning pre-defined period.

Figure 6 – Example of Wind Roses

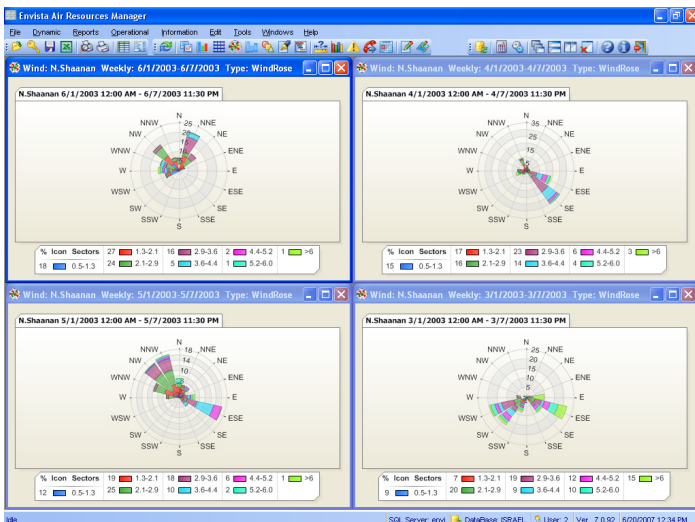## OPERATIONAL REPORTS

By using this feature, the user can view the operational quality of the network.

- Calibration –Analyzers 2 Point, 3 Point and Multi-Points Calibration reports.
- Status- Displays the % of a selected data set with various status codes.
- Diagnostic - Reports Diagnostic information collected from smart analyzers.
- Digital Monitor - Reports on monitor status alarms based on the digital status information retrieved from smart analyzers with serial interfaces.
- Digital I/O– Reports on digital I/O changes based on the digital input information retrieved from the digital I/O of data loggers
- Communications - Displays the errors that occur during the data acquisition process by date, station and port according the relevant communication type.
- Power Off – Station power failure report
- Missing Data – Displays time periods that a selected monitor has not received data.
- Log Book – Displays technician entered notes related to analyzer service, and allows the user view these notes as a report.
- Edit History - Reports the edits that have been made to raw station data values and/or statuses.
- Validity - Reports validations performed on monitors in two levels; editor or supervisor.

Figure 7 – Parameter Validation Report

COMMUNICATION CENTER

The Envista CommCENTER module is an intelligent communication controller that can manage large state and regional monitoring networks. It can communicate over a maximum of 128 RS232C ports in parallel as well as via TCP/IP. CommCENTER can simultaneously poll, receive incoming calls from other central systems and log/process event driven incoming messages from remote stations.

CommCENTER can communicate with the following data loggers:

- EnviDAS for Windows & EnviDAS Ultimate
- Campbell Scientific CR 10X, 21X, 23X, 1000
- ESC, EMC, ODESSA & DASIBI
- Met One 455, 456, 457, BAM models
- TAPI, TEI and ME Analyzers
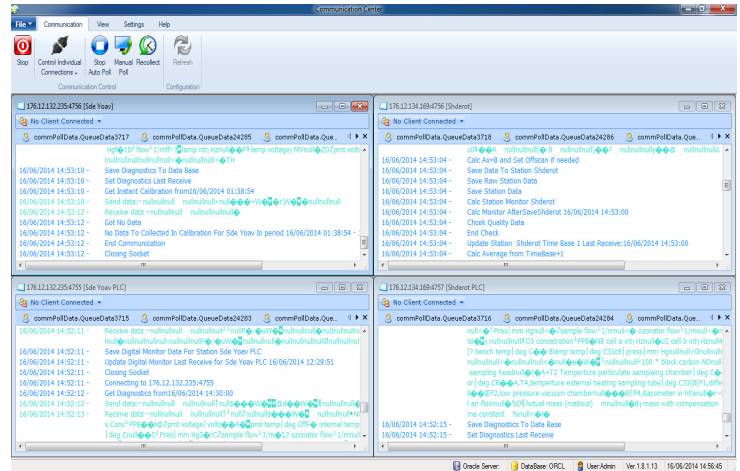- Thermo/R&P FRM 2025 Partisol Devices
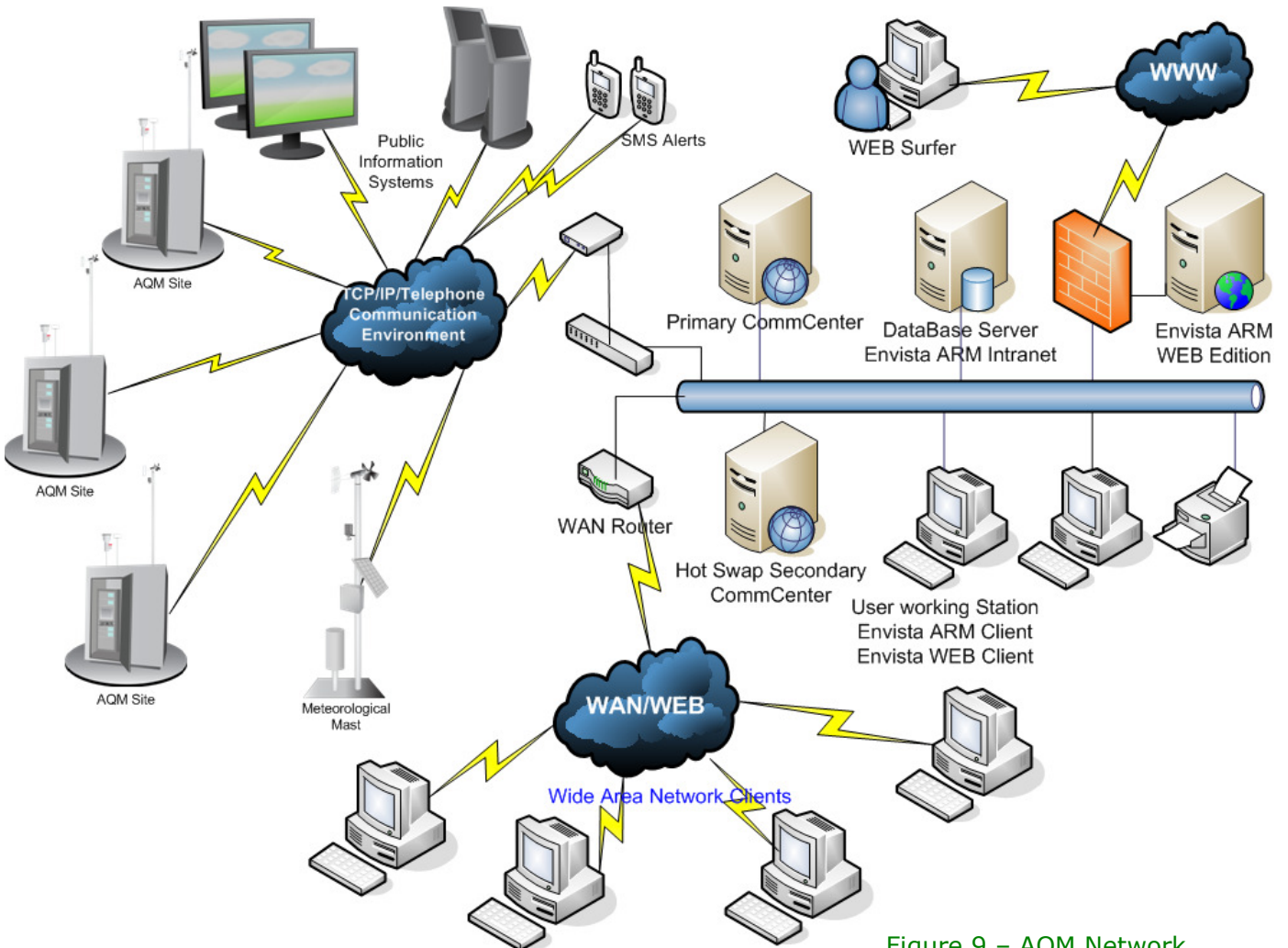

Figure 8 – CommCENTER Trace Display

Figure 9 – AQM Network Structure

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