



Stock Exchanges and Regulators constantly strive to meet one of the most difficult challenges - effective supervision of today's capital markets. Any transaction or behaviour – buying, selling or instigating in a manner to wilfully produce an abnormal effect on prices, goes against the very fundamental objective of the Exchange of ensuring a fair marketplace.

As Markets become vulnerable to manipulation and price distortions, no Exchange can exist without a Surveillance Mechanism. The need to constantly monitor and control manipulation, price distortion and other market abuses arises from the fact that these

- Adversely impact the economic purpose of the Exchange by undermining the integrity and credibility of the marketplace. The economic harm caused is broad and extends beyond the Exchange.
- Erodes public confidence and threatens the very viability of the Exchange

Our flagship product, SDG -AWACS – Advanced Warning and Control System handles all the critical elements of the Surveillance process and provides a robust monitoring and warning mechanism. **SDG-AWACS** is a surveillance engine designed to protect the integrity of the capital market from fraud,

manipulation and abusive practices and to foster open, competitive, and financially sound markets. AWACS provides an astounding set of features and functions to ensure strict market vigilance and quick access to historical information, which is essential to the user in decision-making.

- Detects and alerts violations
- Analyses patterns in trading activity
- Projects cartelisation
- Comprehensive investigation management
- Real-time multi-exchange and multi-segment analyses

The important features of AWACS are outlined here to give you an insight into its Surveillance capabilities:

MULTI EXCHANGE AND MULTI SEGMENT SURVEILLANCE

AWACS is geared to address the needs of the monitoring entity by its capacity to analyse multi-Exchange and multi-Segment information. It gives you the flexibility to switch to any exchange and/ or segment, with just a click of the mouse. You can also configure settings for a real-time comparison of Exchanges and/ or segments, thus enabling a relative assessment of activity within the market

ALERT CREATION & MANAGEMENT

Early Warning Signals or Alerts are rightly called the First Line of Defence against manipulation in all its forms. The Alerting mechanism is at the core of AWACS. You can configure Alerts to trigger real time or offline, i.e., during the trading hours or end-of-day. You can effectively track and monitor the Alerts, from the time they are triggered until such time an appropriate action is taken.

SDG - AWACS

(Advance Warning and Control System)

A Surveillance engine which is used to protect the integrity of the market from fraud, manipulation, and abusive practices related to the trading in financial markets and to foster open, competitive, and financially sound markets.

GOAL

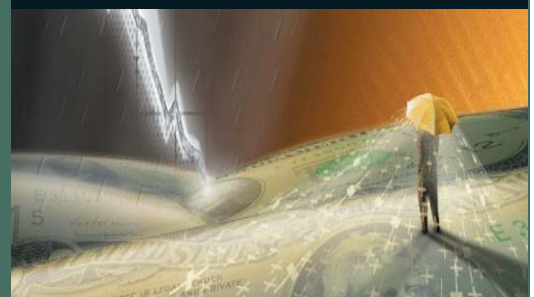
The goal of AWACS is to protect the integrity of the market by monitoring trading activity, scotching for rumours instantly, to detect and prevent manipulation or abusive practices.

MISSION

The mission of AWACS is to identify situations that could pose a threat of manipulation and to initiate appropriate preventive actions. It monitors the daily activities of large traders, key price relationships, and supply and demand factors for potential market problems.

RESPONSIBILITIES

AWACS' responsibilities encompass monitoring the financial markets. It oversees the protection of market users and financial intermediaries and the safeguarding of customer funds. It stays abreast of the rapidly changing and expanding global trading environment by way of adapting to market conditions through the explosive growth of technology.



The User may define a benchmark that could be configured as default - **Default Benchmark** – or applicable to a specific security – **Specific Benchmark**.

Alternately, benchmarks could be '**System Generated**' by use of a statistical algorithm.

The benchmarking capability of AWACS ensures that Benchmark determination is no longer a tedious task! Benchmarks can be altered real-time. The interplay of various real-time and non real-time alerts enhance the robustness of Market Surveillance. Alert classification, Time-sensitive benchmarks, Entity Weightage and Advanced Filter capabilities yield enviable credibility to AWACS.

VISUAL EVENT RESPONSE BUILDER (VERB)

VERB provides for Event-based meta alert generation. Based on User-defined logic and parameters, Alerts can be set to trigger at specific times or Event occurrences.

MULTIDIMENSIONAL ANALYSIS – AT YOUR FINGERTIPS

This unique interface delivers substantial and multidimensional insight into real-time Member, Instrument, Investor and Counterparty information, which is dynamically updated by way of powerful cross-referencing facility. Easy screen-to-screen navigation capability helps instantaneous and parallel analysis of inter-related information. A wide range of Sort, Search and Filter options enable you to access specific data. Colour logic can be set to reflect potentially alarming situations.

POST TRADE AND ORDER ANALYSIS (PTA/POA)

You can analyse Trades and Orders using tabular as well as graphical formats, to compare peers, profile entities and analyse trade activity concentration on a wide range of filters. This feature allows you to extensively drill-down and capture the end entity potentially responsible for the abnormality. You can also export or print the reports/graphs.

IDENTIFY PEOPLE ACTING IN CONCERT

Acting in concert has been a long standing and often repeated crime in the Securities Market. AWACS, has dedicated a whole set of features to help Officers identify such conduct among its members.

AWACS provides a heuristic algorithm to detect possible instances of Circular Trading among Member Groups (Investor level drill-down facility available), across transaction chains of any level of complexity.

The **Circular Trading Matrix** captures what has transacted between Members or Cartels with regard to specific Instruments. You can also view this graphically. You can export these to the Case Management Module.

MARKET REPLAY

This is the most vital and intuitive feature of AWACS. With Market Reconstruction, you can revisit any day's trade activity sequentially 'tick-by-tick'. You can *freeze* a moment in time, forward/ reverse the data stream and enable/disable specific transaction streams. Market Replay also allows to back test benchmarks.



SALIENT FEATURES

MULTIPLE SEGMENT SUPPORT

ALERTS

ALERT MANAGEMENT TOOLS

CASE MANAGEMENT

AND INVESTIGATION TOOLS

FLIP TABLES

MARKET RECONSTRUCTION

TRADE & ORDER BOOK

ORDER TRACKING FACILITY

GRAPHICS

BENCHMARKING

CIRCULAR TRADING DETECTION

VERB

CAPITAL ADEQUACY MANAGEMENT

COMPREHENSIVE MIS REPORTS

DATABASE

TOUCHLINE

CORPORATE ACTIONS

REAL TIME MARGINING

TWO WAY COMMUNICATION

SECURITY

Graphical representation is provided to enable you to view order modification, cancellation and matching. With a click on the alert indicator you can view complete alert details. This can help you to identify manipulative trading patterns.

AWACS – A GRAPHICAL USER INTERFACE

AWACS offers various charting tools that enhance transparency and visibility of information to help you handle information overflow and judge the criticality of the same.

SOME OF THESE ARE

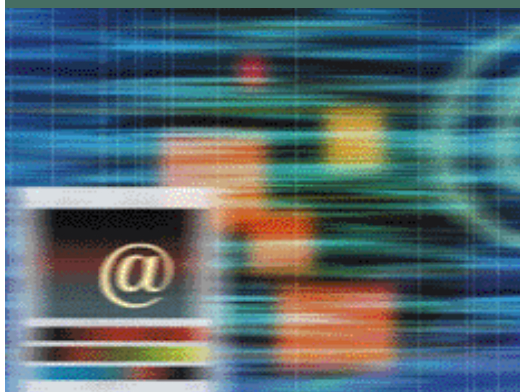
- Member Position Behaviour Graph
- Graphical Alert Tracker
- Spread Graph
- Holding Pattern Graph
- Visual Benchmarking
- Benchmark History Graph

LANGUAGE CAPABILITY

AWACS is a multi-linguist – a solution that supports English, Arabic, Chinese and Dutch languages.

DATABASES

AWACS maintains large databases of trades, personal background of traders, news, and past case materials, to identify, compare, and probe suspicious trends. With this, you can check all questionable price and volume fluctuations, concentrated member positions, instrument centric analysis and get narrow sets of data to investigate further.



REPORTING ENGINE - REPORT BUILDER AND QUERY BUILDER

AWACS comes with a Query Builder Module – a sophisticated Data Query and Data-Mining tool, which allows you to speedily retrieve data .

You can create customized reports with the 'Adhoc Query facility' which can be exported to various formats like html, txt, excel, pdf, etc.

SECURITY & AUDIT TRAIL

The built-in Hierarchical Security System - with individual or group access rights - ensures the confidentiality of sensitive data. All actions performed at any terminal can be tracked easily using 'Audit trail'.

FLEXIBILITY – UNMATCHED

You can configure settings for Currency, Login, Date and Time Formats, Alerts Color Logic etc.

ADVANCED ANALYTICS

LINK TRACER

Explores the possibility of links between Traders and key Employees (Promoters/Directors/ Associates) of the Company. Subject to information availability, the Link Tracer can also indicate personal/family relations between the involved entities.



ALERT MANAGER

The Heart of Market Surveillance System

AWACS monitors positions of significant size and are alert for unusual cash and derivative market activities. It serves as an excellent barometer for identifying price aberrations and addressing disruptive or potentially disruptive markets.

TESTIMONIALS

"Choosing AWACS enabled us to meet the project timetable and provided us flexibility, given the constraints of the project. We hope that, as we move forward, AWACS can serve as an effective tool to help build and sustain confidence in the equities market."

Joselia J Poblador
Commissioner
Securities and Exchange Commission
Philippines

"The AWACS system at the Securities and Exchange Commission of the Philippines is now installed, working and signed off by the SEC. Both the SEC and the Asian Development Bank have expressed their gratitude for this critical improvement to the SEC's surveillance capabilities."

Stephen J Ujvarosy
President
Telchar Systems Inc, USA

LIST MANAGER

List Manager enhances the watchfulness of the monitoring entity. This is essentially a screening and exception reporting Tool, which allows you to screen 'Market Entities' – against various Blacklists and Watch Lists.

You can assign risk based rating a watchlist .

CRIMPS (CRITICAL REPORTS INDICATING MANIPULATION IN PRICES)

AWACS has a host of critical reports that clearly indicate manipulations by any entity - member and/or investor(s). These coupled with the alert scenarios can be used to prove fraudulent intent.

AWACS TIME SLICE ANALYSIS

The "Time Slice" feature of AWACS facilitates time-specific activity analysis of Instrument/ Member/ Investor. You can define the Time Slice to track and monitor the market activity. This also facilitates inter-time interval comparisons.

PROSECUTION AND EVIDENCE MANAGEMENT - ADDING

POWER TO CASE RESOLUTION

AWACS allows for advanced Prosecution and Evidence Management designed to complement the Investigation Procedures. The *highlights of the Case Management Functionality* offered by AWACS include the following –

- **The Case Tracking system** - This enables you to monitor progress at every stage, allocate resources and balance workload.
- **An auditable workflow** - Cases once created CANNOT be deleted.
- **Case Folders** - The Case Manager enables the User to maintain and update all the relevant case material, such as, alerts fired, suspicious transaction reports generated, other compliance reports, non-alert files (rumour files, text files, bitmaps, audio & conversation files) –in folders referred to as 'Case Folders' thereby facilitating a paperless investigation.
- **Supports Case Links** - This helps in a more informed judgement.
- **Maintains comprehensive self-updating "Investigation Report"** for every Case.

SDG-AWACS, in its endeavour to deliver value, scouts market activity in all its dimensions.



About Us

SDG Software Technologies is an India-based financial products & solutions firm. Its products are installed in many brokerage houses and stock exchanges all over the world.

Widely known and appreciated by its clients for the quality of software and support, SDG has years of hands-on experience in providing reliable and cost effective order management solutions.



Delivering value

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