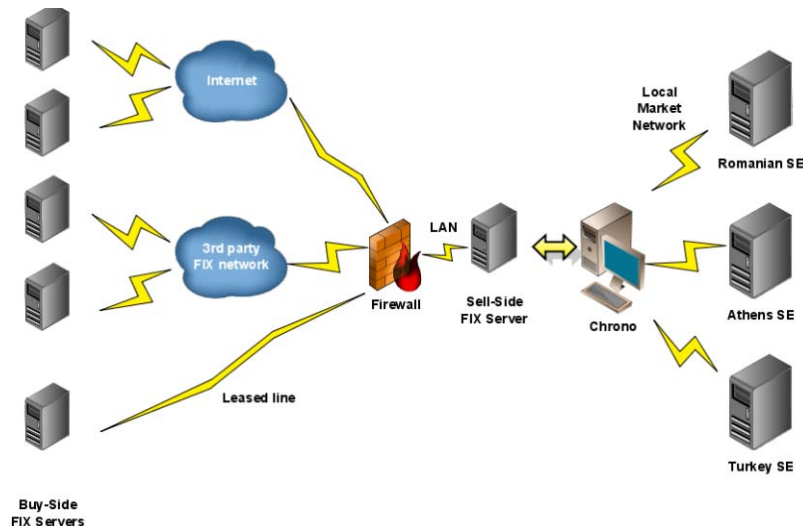




Chrono FIX native adapter

A fast, reliable and uniform Direct Market Access IT solution for the Greek, Turkish and Romanian Equity Stock Markets

Chrono is a traditional Direct Market Access (DMA) IT solution that accepts FIX encoded flow and translates it to native local exchange language API



Chrono Business Benefits

- Provides support for potentially *extremely high trading volumes*
- Enables buy-side to *quickly respond to changes in the market*
- Enables *algorithmic trading or trading automata* on the buy-side due to the low latency and high throughput
- Brokers can *adapt to their clients' requests with minimal implementation costs* in terms of FIX flavors or dialects as well as in terms of message adaptation/transformation for their particular needs

Business opportunities with Chrono

- Transparent order routing to Greek, Turkish and Romanian stock exchanges
- Setup as a routing hub or as independent market access nodes or even as a hybrid solution
- Single point of Service - unique DMA application - multiple market access points
- Modular business solutions for seamless integration of software in the business processes



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Chrono Quality-Of-Service

- *The system works flawlessly all day, every day and needs minimal attention for initialization and daily maintenance*
- *In case of any external malfunction, the system will go up again in an effortless way with no critical errors - costs*
- High-performance
 - Responsiveness: down to 15 ms pending response, down to 75 ms confirmation response (including market delay)
 - Throughput: 20 orders/sec
- Proven reliability
 - 100% consistency
 - Particular care for persistency
 - Enhanced resilience by special integrated modules
- High-availability deployment for all components of the system
- Advanced architecture
 - Open
 - Customizable
 - Adaptable
 - Extensible

Chrono Solution Features

- Chrono implements the *application layer* of the FIX protocol whilst letting *any FIX engine* manage the session layer of the incoming clients' connections
- Supports FIX protocol versions 4.0, 4.1 and 4.2
- Controls *message and order flow* and is specifically designed for the local exchanges taking into account *local market specific restrictions and characteristics*
- Provides *integrated business and compliance rules*, allowing cooperation with add-on modules either on a FIX engine or on application level
- Embodies *smart adapting modules* for the Greek, Turkish and Romanian markets
- Component-based deployment for enhanced manageability
- Easy to use, state-of-the-art Graphical User Interface design for administrative purposes
- One-click applied operations for straightforward and fast administration
- Simple performing of maintenance tasks



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Chrono Technical Characteristics

- State-of-the-art design and implementation
- Stand-alone, multithreaded application developed with Microsoft .NET technologies
- Interoperation with a Microsoft SQL Server Database back-end

Chrono 1.7

Connections Settings Maintenance Chrono

Connect Disconnect Connect Disconnect
FIX ODL

Time connected to FIX: 00:01:31 Time connected to ODL: 00:01:32 Thursday
26/02/2009 17:07:36

New Order	Order Replace	Order Cancel	Confirmation	Trade	Rejection	Status
2045	760	503	3257	3474	5	5252

17:06:04.058: Attempting connection to ODL...
17:06:04.105: Connection to ODL established
17:06:05.105: Attempting connection to FIX...
17:06:05.230: Connection to FIX established