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Beyond Compliance: Leveraging MiFID Regulations

An Overview of Wombat's Products Related to MiFID

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September 14, 2007

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1. Introduction

The overriding principles of the Markets in Financial Instruments Directive (MiFID) can be defined as:

- Pre- and post-trade transparency.
- Increased competition.
- Investor protection.

These objectives fundamentally alter the rules of engagement between investors and the financial institutions acting on their behalf. In the European context, the main outcome of the directive will be to open up the markets in order to promote the trading of financial instruments across a wide variety of execution destinations resulting in a much greater fragmentation of liquidity.

In the post-MiFID environment, increasingly sophisticated clients will expect their broker/dealers to demonstrate that they can achieve best execution by exploiting the pan-European marketplace. This will place ever greater demands upon market data systems which will need to support potentially dramatic increases in volumes as the financial institutions adapt to satisfy the new rules on pre-trade transparency and post-trade reporting. As a consequence the normalisation and consolidation of related trade and quote data from a variety of cross border sources will become even more complex and difficult to achieve. The Wombat Market Data Platform is well placed to meet these new demands. Wombat technology was specifically designed up front to handle the high volumes of the already fragmented North American marketplace allowing Wombat customers not only to survive in this trading landscape but, indeed, to take advantage of its full potential. A complete front-to-back market data enterprise class solution is therefore on offer, including:

- Low latency feed handlers for all MiFID Exchanges and associated trade reporting facilities (e.g. Project BOAT).
- The Wombat Middleware backbone with support for a variety of vendor products including Tibco's Rendezvous, 29West's LBM and Wombat's own messaging solutions, Wombat Middleware and Wombat Data Fabric.
- Wombat SuperBook™: Wombat's flagship MiFID product providing a consolidated real time order book view of available liquidity across all relevant exchanges.
- Wombat SuperTrade™: a consolidated view of all trades across the various exchanges allowing subscribers to make well informed judgements based on current trading activity.
- Wombat Acumen™ Complex Event Processing Framework: a real time event processing cluster for fast deployment of custom built analytics and electronic trading strategies. Used in conjunction with Wombat SuperBook this could be utilised for smart order routing and auto-market making applications, among others.
- Wombat Exchange Data Dissemination Platform: a means for customers to disseminate internally generated data, such as MiFID-required trades and quotes to external recipients.
- Wombat Plugin GUI Framework: a GUI Framework that allows our customers to deploy plugins for rendering of Wombat published data in a look and feel of their choice.

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The strategic focus of Wombat has been to provide the necessary framework to facilitate the trading of fungible instruments across a disparate and, to some extent, deregulated European marketplace. Whereas some vendors have focused on helping their customers achieve MiFID compliance, Wombat's objective has been to provide them with an opportunity to reap the benefits of a more open and transparent trading landscape.

1.1. Related Documents

An overview of Wombat's MAMA API is available at: <http://wombatfs.com/docs/papers/mama-intro.html>.

An overview of Wombat's MAMDA API is available at: <http://wombatfs.com/docs/papers/mamda-intro.html>.

A White Paper of Wombat's Universal Feed Handler Suite is available at: <http://wombatfs.com/docs/feed-handler/feed-handler-white-paper.html>.

This document is available in PDF [mifid.pdf] and HTML [mifid.html] formats.

2. MiFID Feed Handlers

All of the major MiFID data feeds are among the well over 100 direct feeds supported by Wombat and the remaining MiFID feeds are in Wombat near term product road map. These provide direct access to low latency, real time trade, quote and order book information, and certain essential reference data, where available. As well as providing low latency, Wombat feed handlers are already prepared to handle the much larger volumes of market data that MiFID is expected to generate.

MiFID exchanges for which Wombat does not currently have a feed handler can be received via a Wombat feed handler for aggregated vendor feeds such as Bloomberg B-PIPE and BPOD, Reuters RDF, Comstock CTF, GL and Fidessa EMMA.

3. SuperBook

Wombat's SuperBook product provides a complete view of liquidity for fungible instruments from different liquidity pools. In other words, it aggregates order books from multiple venues into a single consolidated order book. Any data source providing quotes and/or order books, including exchanges, ECNs and in-house (dark) order books and market maker quotes may be used as inputs to SuperBook. SuperBook can publish full, consolidated order books, top-N consolidated books (attributed and non-attributed) and top-of-consolidated-book quotes. (The full, consolidated book contains enough information to be interpreted as both an attributed and a non-attributed book.)

Beyond full liquidity aggregation, SuperBook can manage duplicate and overlapping data from multiple sources, as well as the switching of data sources in the case of full or partial failure of a source. For example, the pre-trade (quote) data for an individual market maker may be available from a stock exchange, an ECN as well as from aggregated data feed vendors. Any or all of these "sub-sources" can be used as inputs to SuperBook, with only one data source for the same market maker quote active at any given time. If the latency or another measure of quality of the preferred data source becomes too problematic, another data source can be designated the primary source. (Wombat's Quality of Service Manager product can be used to monitor the status of each data source.)

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SuperBook has the ability to perform symbology mapping between data sources as different liquidity pools often use different identifiers to represent a given fungible instrument.

SuperBook has been used in production for over three years, with a huge surge in use since the announcements of Reg. NMS and MiFID.

4. SuperTrade

MiFID requires investment firms to report all over-the-counter (OTC) and internalized trades, but such reports can be disseminated via venues of the firms' choice. Wombat's SuperTrade application is responsible for aggregating trade reports across all MiFID trade reporting centres. The result is a stream of real-time, consolidated trade reports, much like the consolidated trade data disseminated by the NASDAQ SIP for US OTC securities.

5. Wombat Acumen Complex Event Processing

In the post-MiFID environment, any designated fungible instrument could be traded across a variety of traditional exchanges, MTFs or even directly with a systematic internalizer trading off their own positions. Wombat Acumen Complex Event Processing provides an opportunity to fully exploit these ever more fragmented sources of liquidity. Built upon the Coral8 technology, it provides a low latency, high throughput solution that allows both buy and sell side trading houses to deploy bespoke algorithms into their business enterprise within a very short time frame.

A key feature of Wombat Acumen is its capacity to consume Wombat SuperBook events in real-time, straight out of the box. This means that not only can Wombat customers build a consolidated order book view across all MiFID exchanges but they can also execute their trading strategies in real-time. Deploying these components together into their order and execution platforms gives an unprecedented advantage in the increasingly competitive domain of electronic strategy trading. The flexibility of the Acumen platform is demonstrated by the following example use cases:

- Smart Order Routing – SuperBook data enables the engine to route orders to one or more destinations basing its decision upon a variety of factors depending on the needs of each individual customer. For example, the platform is designed specifically to meet the requirement to source the maximum liquidity at the best possible price. However, if the customer wishes to include other factors into the decision making process such as exposure to currency rates or fixed cost expenses (e.g., settlement and execution fees or stamp duty), then that too can be facilitated through integration with existing bank systems and static data sources.
- Strategy Trading – Bespoke algorithms can be tailored to suit the very specific requirements of each individual client. For example the trader may want to participate at a certain percentage of the market volume until the order is filled or to peg to a particular price with each print remaining above a particular minimum size. The flexibility and ease of use of the Coral8 CCL processing language allows fast deployment of custom strategies that can generate entry and exit point signals based upon well informed decision making process.
- Real-time Analytical Processing – The ability to publish industry standard benchmarks and metrics that update in real-time throughout the order life cycle is of major benefit in the post MiFID world. Factors such as VWAP, TWAP, the high and low price, total volume, average spread and arrival price calculated from the time of order capture and updating dynamically until the order is fully filled allows sales traders to understand

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whether they are indeed providing best execution as and when it really matters. This information can be persisted as for subsequent best execution reporting helping to achieve another key milestone in trading in the post MiFID environment.

- System Monitoring and Control – A value added benefit of the engine is that because it subscribes to the Wombat market data distribution system it can easily act as a platform monitor. Identifying prolonged increases in latency or spotting volumes that are a significant deviation away from the norm could indicate a potential problem. The Wombat Complex Event Processing platform provides this Quality of Service functionality off the shelf.

The Wombat Market Data Platform supports the ability to replay entire trading days worth of market data making it much easier to analyse strategy performance. The flexible and extensible nature of the engine allows fast and easy deployment of newly customised algorithms to eliminate problems or further exploit inefficiencies in the market.

The Wombat Algorithmic Trading Engine provides yet another building block in delivering a strategic solution to operating within a transparent and open European market context. By subscribing to the Wombat SuperBook and integrating with existing customer order and execution platforms it offers the ability to deliver best of breed algorithmic trading solutions to the capital markets sector.

6. MiFID Data Dissemination

Wombat's Exchange Data Dissemination Platform is a new Wombat product that provides investment banks with the ability to disseminate their trading activity directly to recipients, should they desire to do so for the benefit of their trading partners. This technology could provide the foundation of an alternative or parallel system to the BOAT project. Quotes and order books can also be disseminated.

The Exchange Data Dissemination Platform is an extension to the standard Wombat Market Data Platform. Internal applications can publish trade, quote and order book information using Wombat's Middleware Agnostic Messaging API (MAMA) without regard for how that data reaches interested parties. The Exchange Data Dissemination Platform subsequently disseminates the data to recipients via FIX, FAST or other message formats, and via a choice of TCP or IP multicast network protocols.