



ETLOGIC

Industry Challenges

There are several challenges faced within the electronic trading and pre-trade negotiation arena. This document sets out these challenges, and describes how the DUET product aims to address them.

In our experience, many e-trading systems have grown organically over the years, mainly because of the pressure to deliver new functionality very quickly and in response to rapid changes in the markets. Although these systems do work, in many cases they require a lot of support and have reached a critical mass of functionality making them hard to enhance, and making it difficult to provide a consistent, global view of e-trading configuration and activity across the trading desks.

Our goal is to provide you with a system designed to provide a unified solution across the whole problem domain, based on our extensive experience within the industry working with traders, trading desk heads, support departments and other business users for several Tier-1 investment banks. We aim for our system to be as understandable as possible to these users as well as technologists. The technology is there of course, but as a servant to deliver these requirements.

1. Business needs can be slower to deliver

When the traders want changes to the system behaviour, such as the set-up of new rules and conditions and the new categorisations of things, it is generally not possible for them to bring this about themselves.

It is often difficult to translate between their business needs and the technical implementation and configuration of the systems such that the needs are actually delivered. This work must be delegated to IT or support staff to analyse the changes required and make it happen within the constraints of the system's functionality, or develop additional components in-house to fill the gaps.

2. Traders can find the systems hard to understand

The concepts, terminology and user-interface elements of electronic trading systems are often not easily understandable by traders, business users and business support staff, and therefore much of the maintenance and understanding is delegated to technology staff. When things go wrong, it can be hard for the business users to know why. Generally, business users and traders tend to have less confidence in systems they have less understanding about, and can feel that such systems are a hindrance and not a help.

SOLUTION TO 1 & 2

DUET aims to reduce these costs and overheads by presenting electronic negotiation and quoting configuration in a form that is very accessible, understandable and maintainable by business users and front-line support desks, and already aligned as far as possible directly to their business needs.

3. Data inconsistencies cause differences in automated negotiation behaviour between electronic market venues

Electronic trading systems, by the nature of the way they have grown organically, have resulted in a landscape which means that there is not always the time to consider the abstraction of the core data pertinent to the electronic market venues into a unified form. Financial instruments, customers and their categorisations, and sometimes the inquiry negotiation behaviour rules, are often maintained separately but in parallel for each of the market connectivity components.

It is hard work to try to maintain the same configurations across a number of electronic market venues in parallel. Data errors, inconsistencies and 'clutter' are often introduced as a result over time. This of course causes inconsistent behaviour when it comes to the automated negotiation of customer activity.

4. Functional inconsistencies cause problems for management reporting and feedback

Electronic trading activity often has slightly varying functionality, structure and data values depending on the market connectivity solution and market in question, even for the same class of instruments. In addition, different technical solutions are adopted by different regions in a multi-region, multi-instrument-class environment found within many banks. It is hard to abstract all of this into a unified representation and time/resource constraints and the pressure to deliver new functionality means the problem often cannot be addressed.

This compounds the situation which may already exist caused by inconsistencies in basic data across markets such as instruments and customers. Hence management feedback and reports are difficult to understand and need further manual interpretation, and are often simply inaccurate.

SOLUTION TO 3 & 4

DUET addresses these issues by providing a single data source that is abstracted across all the electronic venues with a maintenance front-end that is easy to use and understand (and/or can be integrated with your in-house data), and by unifying the functionality and behaviour of inquiry activity across the venues which itself is stored in a standard data format.

This unified structure, indifferent to venue-specific naming conventions and functionality, is then used by DUET as a platform to deliver meaningful business reports, combining information from several markets and providing valuable information that can span multiple business areas and regions.

5. The ability to innovate is severely restricted by the lack of unified data and functionality across electronic venues

The markets are growing in complexity and this is accompanied by ever-changing business needs. However, the potential to deliver new functionality and innovations to the e-trading space is currently severely limited.

The data clutter and lack of unified logical data source means that, although the business requirements may be expressed in terms of their logical view, that requirement may be difficult or impossible to deliver because the tidy-up and on-going maintenance overhead would be too great to ensure the resulting system was safely performing the new functions. For example, the ability to capture cross-market activity and automatically feed that back into intelligent rule strategies is severely hampered by the lack of unification of master and transactional data.

6. The ability to integrate with your in-house systems is restricted

The ability to use in-house GUI's to manage electronic trading activity pop-ups and blotters is straightforward technically - but severely hampered by the lack of unification of market-specific inquiry data and state behaviour, which means in-house developers need to be aware of these nuances and either build their own abstraction, or expose the GUI to that logic – possibly tying themselves in to the existing technical implementations still further.

In addition, unified cross-market activity reporting is not easy with the separate market-specific connectivity implementations, because the in-house reporting system needs to capture the raw activity data and do its own unification and abstraction of that data if the reports are to be accurate. Again, this would bind your reporting system into the existing technical implementation.

Due to differences in cross-region technical implementations, it is also hard to enhance the system functionality to provide offerings for the same instrument class to customers on a 24-hour, follow-the-sun basis.

SOLUTION TO 5 & 6

By providing a single data source that applies across all electronic markets, and by unifying the functionality and behaviour of inquiry activity across the venues, DUET will be able to provide more advanced behaviour which automatically feeds back the result of trading activity into the negotiation rules.

DUET will also expose the hooks into the system to allow your IT and strategy departments to do the same. You will be able to write your own components which allow you to differentiate yourselves, by concentrating on your new logic and not needing to worry about abstracting the e-trading model across markets, which is already taken care of by DUET. This could also be used to insulate whatever trader front-ends and reporting systems you choose from any technical market connectivity solution, by accessing DUET's abstraction instead.

7. The ability to replace one market connectivity solution with another is restricted

New market connectivity components, adhering to the emerging FIX standard for bonds and swaps, are coming onto the scene. But in many cases, e-trading business logic and data is already bound up within existing market connectivity components themselves and is not logically separate. To replace one set of market connectivity components with another means ensuring the new component replicates all that existing business data and business logic, as well as ensuring they connect and interact with the electronic venues properly.

In addition, the lack of unified data and technical nuances between the electronic markets means that trader front-end systems and reporting systems need to be aware of those nuances and provide the effective unification, tying them in to the existing implementations and making it very difficult to change later.

SOLUTION TO 7

DUET will adhere to the FIX standard and will interface with FIX market components. DUET will also map the electronic activity data into FIX format for any connectivity components that do not adhere to FIX, and provide the abstraction. Connectivity components will not need to worry about all the business logic concerning customers, instruments, categorisations, traders and routing rules, automatic negotiation rules etc - they connect and interact technically with the markets but all activity is handed off to DUET, which takes over the business logic of what you want to happen within your bank.

You can then much more easily swap out one electronic venue connectivity component with another; you can focus on ensuring the new component works in terms of its connectivity and state management, and in simply meeting the interface required by DUET. As all the business data is unified in DUET, your existing inquiry negotiation set-up will continue unaffected.

8. D2C Negotiation and Streamed Quotes are not always consistent

In many cases, electronic trading systems deliver components for streamed quote contributions separately from components for negotiation rules. But the two are logically connected e.g. Firm quotes on Bloomberg need to be backed-up by auto-acceptance rules for Price Orders up to the published quantity, and price adjustments in response to customer RFQs need to be consistent with, or expressed relative to, the bid/offer spread that was already visible to that customer via their authorised pricing level on those market screens.

On the latter subject, there can also be inconsistencies between the pricing level a given customer is set up with on the market, and that same customer's categorisation in the banks internal negotiation system.

SOLUTION TO 8

DUET will join up these two functional areas into a consistent whole, that is easily manageable and understandable by business users. DUET will also provide the facility to allow discrepancies between customer's categorisations and their allowed market-side pricing level to be highlighted and therefore kept in line more easily.