

Notice to Subscribers

December 5, 2012

2012-050

Alpha Migration to TMX Quantum™

TMX Group is pleased to provide additional information related to the migration of Alpha to TMX Quantum.

As announced in PO Notice 2012-046 distributed October 24, 2012, TMX concluded that the TMX Quantum technology currently being used by all participants on Toronto Stock Exchange (TSX), TSX Venture Exchange (TSXV) and TMX Select provides the most streamlined approach and offers maximum ongoing efficiency for customers. As such, migration from Alpha's outsourced technology onto TMX Quantum is being planned, with expected completion by the end of the second quarter of 2013. In addition to the technology migration, we announced plans to move Alpha into existing TMX Group data centres, offering customers further reductions in complexity as well as cost-saving opportunities.

Further details on the Alpha migration plan are provided below.

Key Dates

Publication of Alpha Specifications – **December 5, 2012**
Alpha Available in TMX Quantum GTE – **February 2013**
Alpha Migration to TMX Quantum – **end of April 2013**

Specific dates will be announced as they are confirmed.

Alpha on TMX Quantum Specifications and Documentation

Alpha order entry specifications for FIX and STAMP are now available along with the Alpha Broadcast Feed (ABF) specifications. Please note that Alpha will not support the EMAPI protocol once migrated to TMX Quantum. Alpha specifications are available through the TMX Secure Documentation Portal at <http://tmx.com/en/login.html>

In order to provide efficiencies associated with maintaining common protocols across markets, it is our objective to create Alpha STAMP and FIX protocols which align the with existing TSX/TSXV protocols as much as possible. Some differences will exist due to the unique order types and features that will continue to be supported on Alpha on TMX Quantum which currently do not exist on TSX/TSXV/Select, or for which there is no existing TSX/TSXV tag or tag value. The attached Functional Overview will provide users with a summary of the changes and enhancements to existing Alpha functionality and features as a result of the migration.

Connectivity and Access to Alpha

Clients will be able to connect to Alpha on TMX Quantum using the existing TMX Quantum gateway. The use of a common gateway provides the ability for clients to access the Toronto Stock Exchange, TSX Venture Exchange, TMX Select and Alpha using a single session bundle. In addition, the ability to use one circuit to connect to all TMX Equities marketplaces provides further connectivity efficiencies. Similar to the existing method of designating orders destined for TMX Select, orders that are intended to be routed to Alpha will be designated through the order entry protocol.

GTE Testing for Alpha

The target date for Alpha on TMX Quantum in GTE is February 2013. The specific date will be announced once confirmed. A formal certification will not be required for those currently certified to the TMX Quantum Gateway as we are utilizing a common gateway. Although not mandatory we encourage all clients to test and validate access to Alpha on TMX Quantum via FIX and/or STAMP. We will also make test data available to facilitate client testing.

To facilitate client connectivity and routing testing prior to the Alpha migration, test symbols will be enabled in the Alpha on Quantum production environment closer to the production migration date. The test symbols are not intended for performance testing. Please contact TSX Market Operations for further information at 416-947-4705.

Alpha on TMX Quantum Migration Weekend

All securities will be migrated to Alpha on TMX Quantum over a weekend, where trading on the existing Alpha platform will cease on a Friday and trading on Alpha on TMX Quantum in the TMX Group data centre will commence on a Monday. All open orders will be purged from the Alpha book as of close of business on the Friday. On the Monday Alpha on TMX Quantum will open at 7am in a pre open state as per usual. The Alpha on TMX Quantum production environment will be available on the Saturday for clients to ensure preparedness for start of day Monday. Once the migration date has been finalized, further details will be announced.

Alpha Market Data Feed Offerings

All existing Alpha data feeds will cease to be available after the migration to Alpha on TMX Quantum. Once Alpha migrates to TMX Quantum the below feeds will be available to clients.

- AL1 - Alpha Level 1 Trades and Quotes (fixed file format)
- AL2 - Alpha Level 2 Orders and Trades (STAMP based format)
- ABF - Alpha Broadcast Feed (Level 2 including encrypted private data in STAMP protocol)
- AQL1 - Alpha TMX QuantumFeed™ Level 1 feed (XMT binary format)
- AQL2 - Alpha TMX QuantumFeed Level 2 feed (XMT binary format)
- ARF – Alpha Reconciliation Feed (Stamp protocol)



Alpha Support and Operations

Please continue to contact Alpha directly for all daily operational and trading inquiries through the Alpha Trading Support and Alpha Trading Operations desks until otherwise communicated.

For additional information or questions related to this notice, please contact a TMX Account Manager or by email at trading_sales@tsx.com.

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About TMX Group (TSX-X)

TMX Group's key subsidiaries operate cash and derivative markets for multiple asset classes including equities, fixed income and energy. Toronto Stock Exchange, TSX Venture Exchange, TMX Select, Alpha Group, The Canadian Depository for Securities, Montreal Exchange, Canadian Derivatives Clearing Corporation, Natural Gas Exchange, Boston Options Exchange, Shorcan, Shorcan Energy Brokers, Equicom and other TMX Group companies provide listing markets, trading markets, clearing facilities, data products and other services to the global financial community. TMX Group is headquartered in Toronto and operates offices across Canada (Montreal, Calgary and Vancouver), in key U.S. markets (New York, Houston, Boston and Chicago) as well as in London, Beijing and Sydney. For more information about TMX Group, visit our website at www.tmx.com. Follow TMX Group on Twitter at <http://twitter.com/tmxgroup>.

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