

Financial Information Forum: Symbology Symposium II

May 20, 2008

Hosted by BluePhoenix Solutions

Agenda

- Welcome/FIF Update
Tom Jordan, Chairman Advisory Committee, FIF
- Exchange Symbology Plans and Options Industry Overview
Leo McBlain, Chairman, FIF
- OSI Internal Implementation and Industry Testing Panel
Moderator:
 - Tom Jordan, Chairman Advisory Committee, FIFPanelists:
 - Joe Dattolo, Pershing, Managing Director, Trading Services
 - Peter Peluso, Merrill Lynch, Vice President, OSI Project Office
 - Karen Glad, OCC, Vice President, Requirements Engineering
- Sponsor Update - BluePhoenix Solutions
- Cocktail Reception

FIF Membership



FIF 2008 Update

- Seven new members in 2008
 - Quarter 2
 - Intel
 - Investment Technology Group
 - Quarter 1
 - Charles Schwab
 - Fidessa
 - Pershing
 - Raymond James
 - Knight Capital Group
- FIF Committees
 - Front Office
 - Market Data
 - Multi-Client Back Office
 - BCP
- FIF Working Groups
 - Market Data Capacity
 - Symbology

FIF Initiatives Tracking

Date / Quarter	Entity	Issue
May-08		
May-08	DTCC	Underwriting Reengineering/NIIDS
5-May-08	FINRA	Deferred Variable Annuity Compliance (NASD Rule 2821)
14-May-08	FINRA/NYSE	Riskless Principal Trading on NYSE (Rule 92)
15-May-08	FINRA	Short Interest Consolidation
19-May-08	OPRA	Options Symbology - FAST for Symbology Network Activation
2Q2008	DTCC	ID Net
2Q2008	NYSE	Common Customer Gateway (CCG)
June-08		
June-08	DTCC	Underwriting Reengineering/NIIDS
June-08	OCC	Expiration Date Exercise Threshold
02-Jun-08	FINRA/NYSE	NYSE Program Trading Reporting
07-Jun-08	Industry	Industry BCP Testing
27-Jun-08	Options Exchanges/OPRA/OCC	Options Symbology - New Record Layouts Available
30-Jun-08	MSRB	Three hour muni reporting exemption expiring
July-08		
08-Jul-08	OPRA	Market Data Capacity - Bandwidth Upgrade
11-Jul-08	NASDAQ/NSCC	NASDAQ Clearing
Aug 2008 / 3Q2008		
04-Aug-08	FINRA	Deferred Variable Annuity Compliance (NASD Rule 2821)
3Q2008	NSCC	CNS Equity Master File
3Q2008	NYSE	Common Customer Gateway (CCG)
4Q2008		
4Q2008	DTCC	SMART/Track for Buy-Ins
4Q2008	DTCC	Underwriting Reengineering/NIIDS

FIF Symbology Symposium II

- Exchange Symbology Plans and Options
Industry Overview
Leo McBlain, Chairman, FIF

Current Symbology Efforts

- NMS Plans for the Selection and Reservation of Securities Symbols
- Options Symbology Initiative

NMS Plans for the Selection and Reservation of Securities Symbols

- Three-Character Plan: Amex, NYSE and NYSE Arca
- Five-Character Plan: NASDAQ, NASD, NSX and PHLX

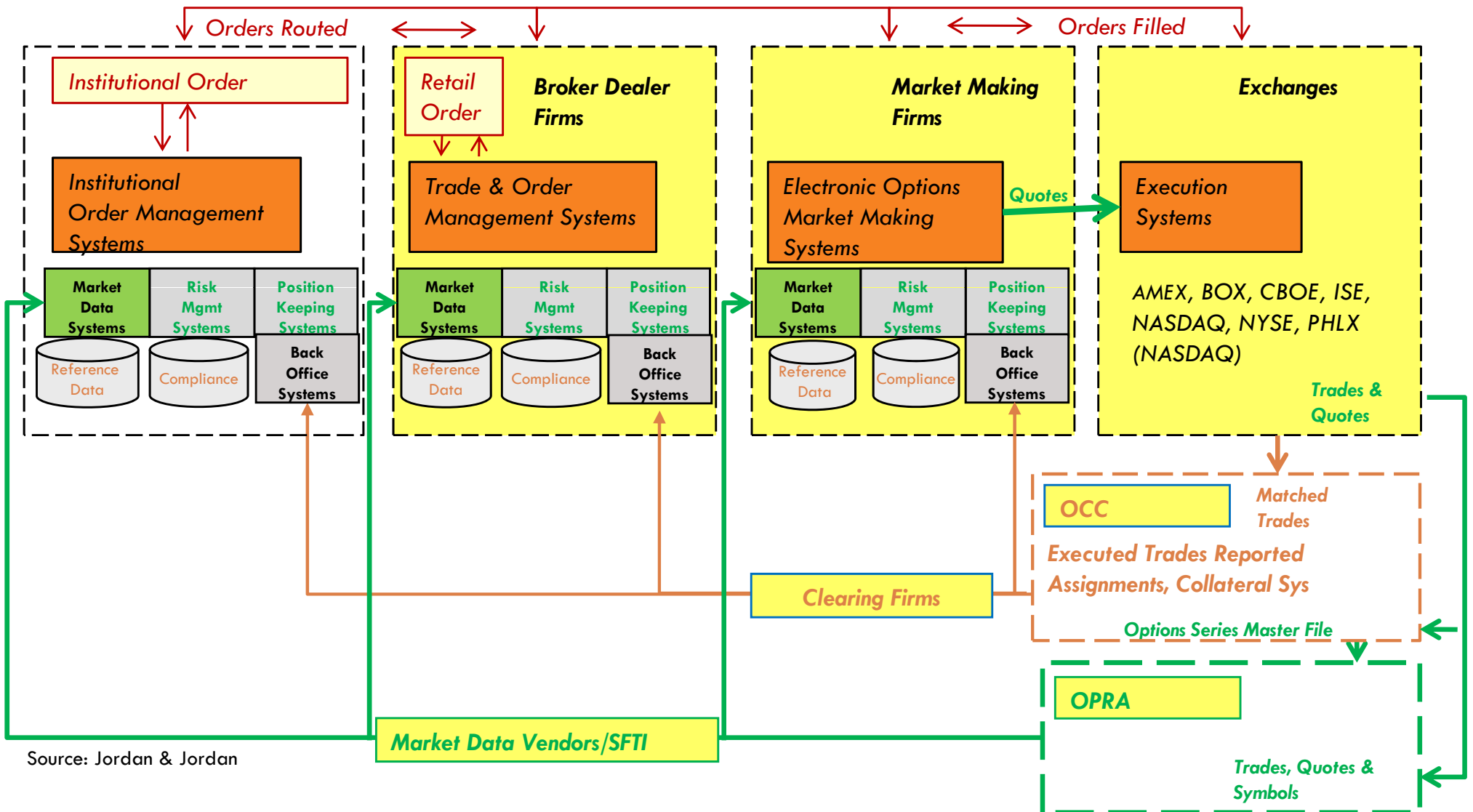
FIF Comments on NMS Symbology Plan

- Support Trading Across Multiple Markets
- Consistent Suffix Convention
- Compatible with Business Continuity Plans
- Industry-wide Test Symbols

Options Contract Identifier

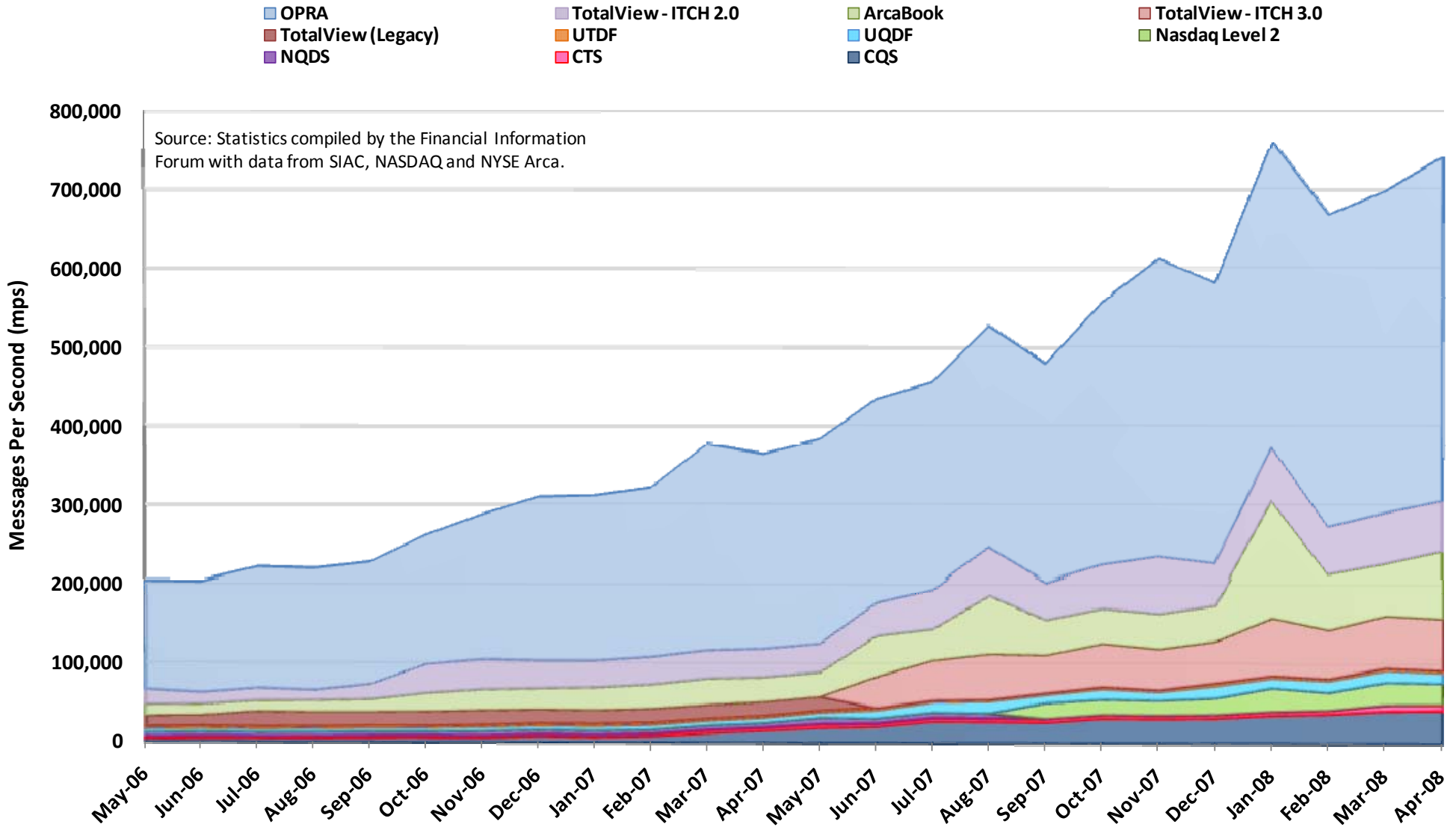
- Old
 - 3 – Underlying
 - 1 – Strike Price
 - 1 - Expiration Month
 - Total = 5 Bytes
- New
 - 6 – Symbol
 - 2 – Year
 - 2 – Month
 - 2 – Day
 - 1 – Put or Call
 - 5 – Strike Dollar
 - 3 – Strike Decimal
 - Total = 21 Bytes

US Options Trade Lifecycle



Consolidated Options & Equities

5 Second Peak Rates



OSI Internal Implementation and Industry Testing

Panel Moderator:

- Tom Jordan, Chairman Advisory Committee, FIF

Panelists:

- Joe Dattolo, Pershing, Managing Director, Trading Services
- Peter Peluso, Merrill Lynch, Vice President, OSI Project Office
- Karen Glad, OCC, Vice President, Requirements Engineering

OSI Implementation Milestones

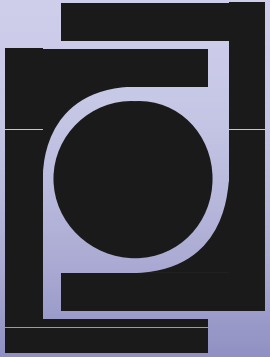
Milestone Date	Entity	Action to	Description
April 2008	OCC	External Testing	OCC will provide system generated, sample outbound DDS messages containing the YYYYMMDD populated MMY-Tag 200. Manually created sample data is currently available
Friday, June 27, 2008	OCC	Systems Compliant	External ENCORE screens and reports to accept/display a full MMDDYYYY Series/Contract date, receive the DD values in the MMY tag 200 on all DDS messages and adhere to new record layouts in Net Capital and Customer Margin profit/loss data transmissions.
Friday, June 27, 2008	Options Exchanges	New Fields Available	OCC / Exchanges send and receive OSI-compliant data. OCC and Exchanges supply and accept OSI compliant data values in new record layouts for industry internal testing efforts. The data will be available on production data feeds only.
Friday, July 25, 2008 – <i>Pending Update</i>	OPRA	Feed Decommissioned	<p>Only FAST for Symbology supported (originally scheduled for June 27)</p> <ul style="list-style-type: none"> •Strike Price Code continues to be supported •Two-Byte Expiration Date will only be populated if provided by Exchanges SIAC will provide canned data for testing that will include the Expiration Date and elimination of the Strike Price Code
Friday, Aug 8, 2008	DTCC	Migration Begins	Migration period begins for new file formats for OCC Pledges & Release Requests
Monday, Aug 11, 2008	DTCC	Systems Compliant	Implementation date for new file formats for OCC Pledges & Release Requests
Monday, Dec 1, 2008	OSI Committee	Documentation Published	Detailed symbol consolidation strategy communicated
Saturday, September 12, 2009	BOX	HSVF Market Data Feed Decommissioned	BOX will decommission the old formats and only the OSI formats will be supported. Decommissioning may be accelerated based on Participant readiness
Sunday, March 1, 2009	DTCC	External Testing	Testing period for population of Option Expiration Day and Option Strike Price Decimal field in decimal format for collateral type of specific deposits only OCC Pledges & Release Requests

OSI Implementation Milestones - continued

Milestone Date	Entity	Action to	Description
Sunday, May 31, 2009	NYSE Arca	Documentation Published	Mockups of all affected order processing screens will be available on the website by end of May 2008
July 2009	DTCC	External Testing	Testing period begins for new file formats for ACATS & CBRS
July 2009	DTCC	Migration Begins	Migration period begins for new file formats for Premium Payment Orders (PPOs)
Saturday, Sept 12, 2009	Market Participants	Beta Test	The Beta Test will simulate the Phase I testing. Exchanges, OCC, and Market Data Vendors are required to participate. There will be limited Broker/Dealer participation.
Saturday, Oct 10, 2009	Market Participants	Phase I Scripted Industry Test – Round #1	Phase I testing simulates the February 12, 2010 implementation. All testing will be in an environment absent OPRA codes and Equity strike prices will be converted from fractional representation to decimal representation.
Saturday, Nov 14, 2009	Market Participants	Phase I Scripted Industry Test – Round #2	Phase I testing simulates the February 12, 2010 implementation. All testing will be in an environment absent OPRA codes and Equity strike prices will be converted from fractional representation to decimal representation.
Saturday, Dec 12, 2009	Market Participants	Reserved Test Date – Will be used if additional testing is needed or requested.	Phase I testing simulates the February 12, 2010 implementation. All testing will be in an environment absent OPRA codes and Equity strike prices will be converted from fractional representation to decimal representation.
Saturday, Jan 9, 2010	Market Participants	Phase II Scripted Industry Test – Round #1	Phase II testing simulates the consolidation process and subsequent trading and clearing using post consolidated symbology.
Saturday, Jan 30, 2010	Market Participants	Phase II Scripted Industry Test – Round 2	Test Securities
Friday, Feb 12, 2010	Market-wide	Implementation (Drop Dead Date)	<ul style="list-style-type: none"> • Hard OSI Cutover Date. • OPRA, OCC, Exchanges, DTCC all processing absent OPRA codes • Convert all equity strikes to decimal format • Current Symbol nomenclature in use. • Approximately 259,000 series • Any completely new product listed on or after Friday, February 12, 2010 will be listed using the new OSI format. • If for any reason consolidations don't begin in February 2010, the approach can be adjusted to ensure LEAP classes are consolidated prior to May 2010.

OSI Implementation Milestones - continued

Milestone Date	Entity	Action to	Description
Friday, Feb 26, 2010	Market-wide	Consolidation Begins (Initial Group)	<ul style="list-style-type: none"> The initial consolidation of FLEX symbols will be a consolidation effort that drops the expiration day representation from the symbol. For example, 2DLQ13 would become 2DLQ. Initial group of options representing array of product scenarios to be consolidated. The options associated with strategic group of underlyings will convert to new symbology including those with nonstandard delivery (e.g., LEAPS, FLEX, Wraps, etc.) and non-standard symbols (i.e., as a result of a corporate action) First weekly Expiration
Monday, Mar 1, 2010	Market-wide	First Day Of Trading	
Friday, Mar 5, 2010	Market-wide	Convert all ½ point Index strike prices	<ul style="list-style-type: none"> All series for the 253 index issues If additional consolidation dates are needed the ½ point strike index conversion can be replaced with an actual consolidation event and the ½ point strike conversion can be addressed once all consolidations are completed. Additional consolidation dates are – Friday, April 9, 2010 and Friday, May 14, 2010.
Saturday, Mar 20, 2010	Market-wide	First Standard Expiration	
Wednesday, Mar 31, 2010	Market-wide	First Quarterly Expiration	
Friday, Apr 2, 2010	Market-wide	Consolidation Continues (2 nd group to be consolidated)	Consolidate options whose primary underlying starts with the letter A (app 250) including options with nonstandard delivery
Saturday, Apr 17, 2010	Market-wide	Second Standard Expiration	
Friday, April 23, 2010	Market-wide	Consolidation Continues (3 rd group to be consolidated)	All options (app 800) associated with “B-H” underlyings including those with nonstandard delivery
Friday, May 7, 2010	Market-wide	Consolidation Concludes (4 th group to be consolidated)	All options (app 1400) associated with “I-Z” underlyings including options with nonstandard delivery



Options Symbology Initiative Update

Karen Glad

Vice President

Requirements Engineering

May 20, 2008

What Is Industry Wide Testing?

- **Coordinated end to end test designed to validate the data handoffs within the options industry.**
- **A “Practice Implementation”**
 - **Participants will practice phased implementation in non-production environments prior to the OSI Cutover Dates**
 - **Participants will use new formats and validations in simulated environment prior to the actual implementation .**

Testing Assumptions

- **Occurs on non-expiration weekends.**
- **Utilizes non-production environments.**
- **Utilizes test classes and test symbols.**
- **Participation will be mandatory.**

Testing Phases

- **Point To Point Testing**
- **Scripted Industry Testing**
 - **Phase I**
 - **Phase II**

Point To Point Testing

- **Independent testing with an external test partner.**
- **Preliminary certification testing prior to participation in scripted industry testing.**
- **Depending on external test partner, early adoption/implementation strategies may exist.**
- **Contact testing partner directly for details.**

Scripted Industry Testing – Phase I

- **Testing designed to simulate the February 12, 2010 implementation.**
- **New OSI compliant formats and validations are invoked.**
- **OPRA codes are absent.**
- **Equity Option strike prices converted to explicit decimals.**
- **Option symbols have not been consolidated.**

Phase I Example

Symbol	Exp & P/C	Strike	Type
CMI	F	Y	Std
CDM	F	Y	Wrap
VBE	A	Y	'09 LPS
3 bytes	1 byte	1 byte	N/A



Symbol	Year	Month	Day	P/C	Strk Int	Strk Dec
CMI	08	06	21	C	00027	50
CDM	08	06	21	C	00057	50
VBE	09	01	17	C	00027	50
6 bytes	2 bytes	2 bytes	2 bytes	1 byte	5 bytes	3 bytes

Scripted Industry Test – Phase II

- **Simulates the consolidation process and post consolidation trading, clearing and settlement.**
- **Select classes will be consolidated to primary deliverable symbol.**
- **Phase I Scripts will be executed with consolidated symbols**

Phase II Example

Symbol	Year	Month	Day	P/C	Strk Int	Strk Dec
CMI	08	06	21	C	00027	50
CDM	08	06	21	C	00057	50
VBE	09	01	17	C	00027	50
6 bytes	2 bytes	2 bytes	2 bytes	1 byte	5 bytes	3 bytes



Symbol	Year	Month	Day	P/C	Strk Int	Strl Dec
CMI	08	06	21	C	00027	50
CMI	08	06	21	C	00057	50
CMI	09	01	17	C	00027	50
6 bytes	2 bytes	2 bytes	2 bytes	1 byte	5 bytes	3 bytes

OSI Resources/Contacts

- **OSI Project Information**
www.optionsclearing.com/symbology
- **OSI Testing Sub-Committee Contact**
Karen Glad kglad@theocc.com
312.322.2041

FIF Symbology Symposium II

BLUEPHOENIX Update & Cocktail Reception



BLUEPHOENIX



Welcome to the Symbology Symposium II

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May 20, 2008

www.bphx.com

- **Complete inventory and repository import of any Legacy components possibly affected by OSI**
 - COBOL programs and copybooks
 - JCL
 - Databases, Data files
 - Presentation (Reports, Screens)
- **Automatically locates and updates any affected components**
- **Regeneration of all affected Legacy Components and Data based on new field size**

Project Risks and Risk Mitigation

- Our solution is based on twenty years of experience.
- We've performed many field expansion and currency conversion projects.
- All projects successfully completed on budget and on time.

Risk	Risk Mitigation
Missing the due date	Guaranteed delivery timetable
Data damage	Data validation tools ensure correctness of data
Application malfunction	Proven methodology; automated tools ensure controlled and predictable process

- ❑ **Be ready on time**
- ❑ **Relying on proven technology**
- ❑ **One-stop-shop:** We provide all the needed tools and manpower for the project without any need to integrate third parties.
- ❑ **Data integrity verification:** Automated rules based conversion, early test plan development, and automated test execution ensure the integrity of the data.
- ❑ **Turnkey solution:** We can take the responsibility from project initiation to final deployment.



Thank You!

Jeff Fulton

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