

Project Overview and Update

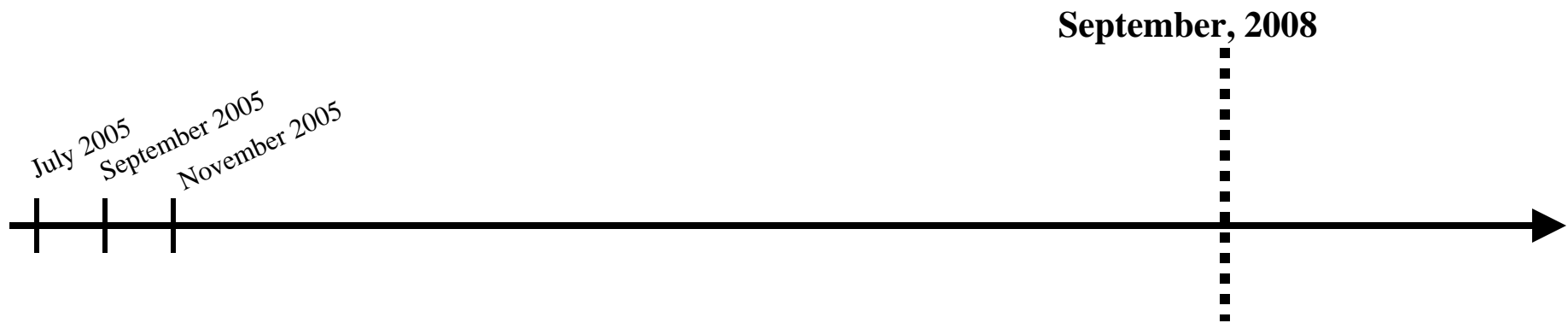
Presented By:

David Harrison
Vice President, Member Services
Options Clearing Corporation

September 23, 2008

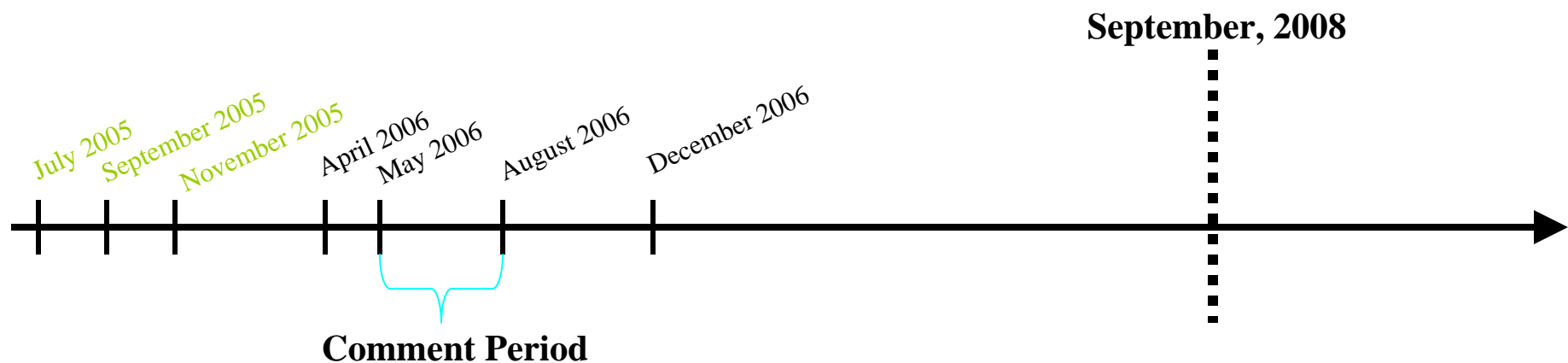


Symbology Timeline



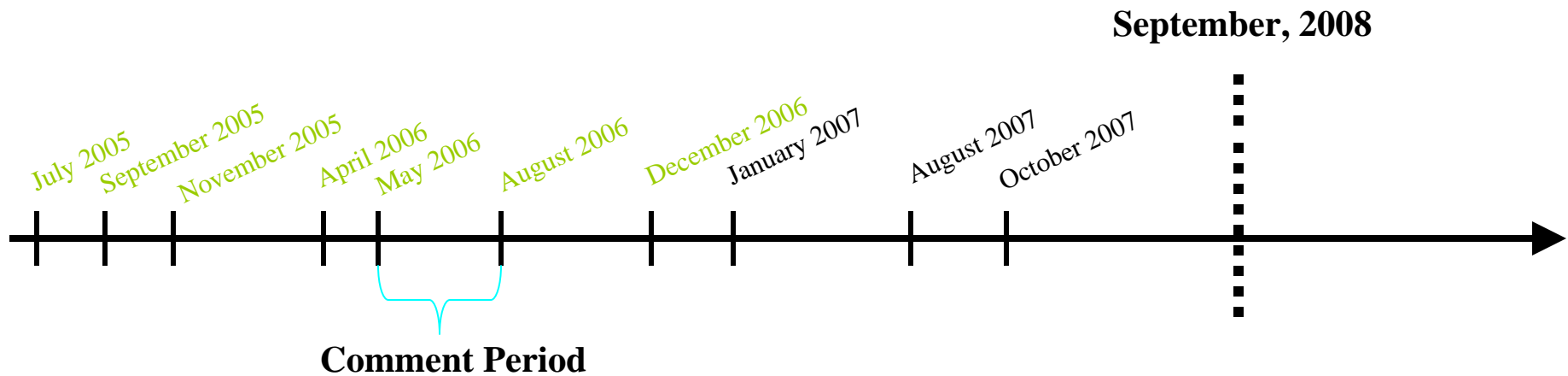
- | | |
|----------------|--|
| July 2005 | OCC Board directs staff to lead Symbology effort |
| September 2005 | Symbology Committee formed |
| November 2005 | Symbology Key recommended by OSI Committee |

OSI Project Update



- April 2006 OCC informs SEC
- May 2006 OSI Plan released for comment
- Dec 2006 OCC Board approves plan

OSI Project Update



January 2007

OCC/Exchanges publish record layouts

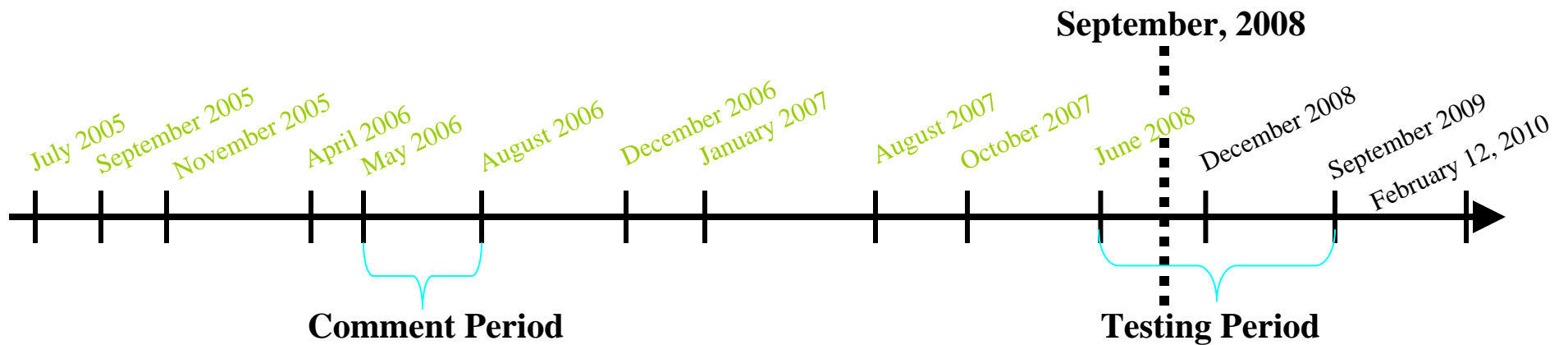
August 2007

Implementation strategy published

October 2007

OCC/Exchanges publish individual implementation plans

OSI Project Update



June 30, 2008	OCC/Exchanges send and receive OSI-compliant data
September 2008	Finalized industry test scripts published
December 1, 2008	Detailed Symbol consolidation strategy communicated
February 12, 2010	Mandatory cutover to use of explicit data elements
February 26, 2010	Symbol consolidation cycles begin

Options Clearing Corp.

Presented By:

Erin Collins
Business Analyst

September 23, 2008





OCC Impact February 12, 2010

▶ DDS Changes

- Elimination of the distribution of OPRA code
 - > ID (tag 48) where Src (Tag 22) equals J
- With the conversion of equity strike prices to decimal OCC will eliminate the fractional representation of Strike Price
 - > StrkQt (OCC custom tag)
- OCC will not produce update messages associated with the removal of these tags.
- For Inbound files, OCC will begin validating the day portion of the MMY (tag 200). The MMY tag must be in the YYYYMMDD format, reflecting the correct expiration date.



OCC Impact February 12, 2010 (cont.)

- ▶ Profit and loss data for Broker net capital and Customer Portfolio Margins
 - All subscribers to RBH and CPM files must be converted to the new file.
 - OCC will no longer produce the non-symbology compliant version.

- ▶ ENCORE
 - OPRA code data will be removed from all screens.
 - OCC will begin validating the day portion of the Series/Contract Date.
 - A new field, Expiration Event, will be added to all filter screens.
 - > Users can filter on Daily, Weekly, Quarterly, Standard Expirations, etc.



OCC Impact February 12, 2010 (cont.)

- ▶ DTCC Collateral Pledge Processing through to OCC
 - Specific Deposits
 - > *Firms must provide the expiration day, DD*
 - > *Firms must provide strike decimal*



OCC Impact Symbol Consolidations

- ▶ Scheduled February 26, 2010 – May 7, 2010
- ▶ For each consolidation, OCC will publish a spreadsheet containing the symbols to be consolidated to the public website.
 - Will be published Monday – Thursday of a consolidation week.
- ▶ Following the consolidation schedule, all products with LEAP and SDO subclasses will be converted to a Standard subclass.
- ▶ Following the consolidation schedule firms must supply the new base symbol for all Specific Deposits and Escrow Deposits.
- ▶ Detailed consolidation strategy to be published December 1, 2008, including sample consolidation spreadsheet.



OCC Timeline

- ▶ Current – August 2009 – Format and validation testing
 - Inclusion of expiration day on all inbound FIXML files.
 - Early production adoption allowed and encouraged.
- ▶ 2nd Quarter 2009 - OSI Compliant DDS files minus OPRA code and StrkQt available.
 - Parallel old and new outbound DDS formats can be created on a request basis.
- ▶ 3rd Quarter 2009
 - Connectivity setup and testing for OSI Testing Environment.
 - Symbol Consolidation practice test.
 - DTCC/OCC Roundtrip testing.

OCC Timeline (cont.)

- OSI Throughput Testing
 - > *Required for participation in scripted industry testing.*
 - > *Will include consolidated and non-consolidated classes*
 - > *All Equity strike prices defined as decimal.*
 - > *½ point strikes will be converted*
 - > *On-Line access to ENCORE*
 - > *Inbound FIXML accepted*
 - > *Outbound DDS provided.*

- ▶ September 2009 – January 2010 – Scripted Industry Testing

- ▶ February 12, 2010
 - DDS users who subscribe to real time data will see messages without the OPRA and Strike Quote data for the first time with real time trade and series update message on the morning of February 12, 2010.

 - Expiration day will be validated on all inbound transactions to OCC and on all ENCORE screens.

OCC Timeline (cont.)

▶ Symbol Consolidations

- February 26, 2010
- March 5, 2010
- April 2, 2010
- April 23, 2010
- May 7, 2010



OCC Contacts

- ▶ OCC Technical Specification
www.theocc.com/initiatives/symbology/tech_spec_occ.jsp
- ▶ OCC Testing Contact Karen Glad kglad@theocc.com
312.322.2041, Mary Kay Kulinski mkulinski@theocc.com
312.322.2014 or email OSI_Testing@theocc.com.
- ▶ OCC Clearing Members contact your Clearing Member Representative or call 800.544.6091
- ▶ OSI Project Information www.optionsclearing.com/symbology

Scripted Industry Testing

Presented By:

Karen Glad
Vice President Requirements Engineering
The Options Clearing Corporation

September 23, 2008



What Is Scripted Industry Testing?

- ▶ Simulation of daily and expiration processing within the options industry.
- ▶ Includes:
 - Order entry
 - Exchange trade processing
 - Post trade processing
 - Pricing
 - Clearing
 - E/A Settlement
 - Back office processing
 - Outbound data generation

Purpose:

- ▶ Validation of industry wide handoffs prior to production implementation.
- ▶ Simulation of February 12, 2010 conversion process and subsequent consolidation processes.
- ▶ Final system validations prior to production implementation.

Assumptions:

- ▶ Testing prerequisites have been completed prior to participation.
- ▶ Participants will utilize environments isolated from production.
- ▶ Participants will be able to advance processing to a March 2010 date.
- ▶ Test environments will be staged with test data:
 - Products and series
 - Open interest
 - Prices

Test Scripts:

- ▶ Order entry and trade scenarios executed on a variety of series utilizing differing products types and symbology formats (LEAPS, wrap, quarterly, 1-4 character symbol, etc.).
- ▶ Representative sampling of daily exchange and member activity.
- ▶ Common scenarios to be executed across all exchanges.
- ▶ Exchange specific scenarios address system and product differences.
- ▶ Test symbols, underlyings and prices will be used.

Test Scripts (continued):

- ▶ Pre-established open interest.
- ▶ Exchange books will be staged for order execution.
- ▶ Production broker dealer account numbers utilized.
- ▶ Variation of account types at each participant's discretion.
- ▶ Quote data provided to OPRA for distribution.
- ▶ Scripts will support exchange API and FIX interfaces. (*Participants are urged to contact Exchanges in advance for format details*)
- ▶ Scripts represent data to be included on orders but not the actual exchange formats.

Phase I Test:

- ▶ Simulates processing in an environment similar to February 12, 2010.
- ▶ Allows participants to execute and validate any day one conversion processes.
- ▶ OPRA codes absent.
- ▶ Equity strike prices converted to decimal representation.
- ▶ Full OSI symbology key required.
- ▶ Unique symbols remain to identify LEAPS, wrap, quarterly, non-standard, etc.

Phase II Test:

- ▶ Simulates consolidation event and post consolidation processing.
- ▶ Allows participants to execute and validate any consolidation processes.
- ▶ Test scripts will be executed on consolidated and non-consolidated classes.
- ▶ Consolidated classes will **no longer** have unique symbols to differentiate LEAPS, wrap, quarterly, etc.
- ▶ Full OSI key required.
- ▶ Includes E/A activity and corporate actions processing.

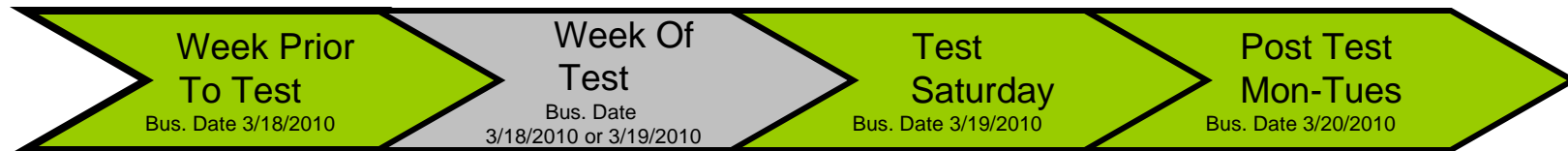
Scripted Industry Testing

Phase I Timeline Details:



- ▶ OCC provides starting inventory as DDS Reports.
 - Security Definition – full file
 - Security List – full file
 - Security Definition – Updates
 - Security List – Updates
 - Positions
 - Open Interest
- ▶ OCC will stage ACATS transactions upon request.

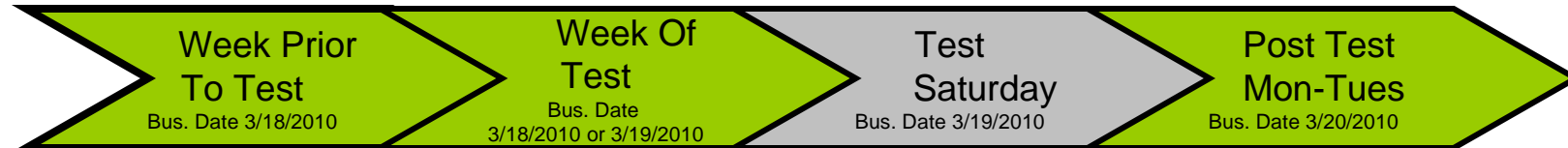
Phase I Timeline Details:



- ▶ Participants prepare systems as necessary for industry test.
- ▶ Preparation may include the execution of conversion activities that would take place between close of business 2/11/2010 and start of business 2/12/2010.

Scripted Industry Testing

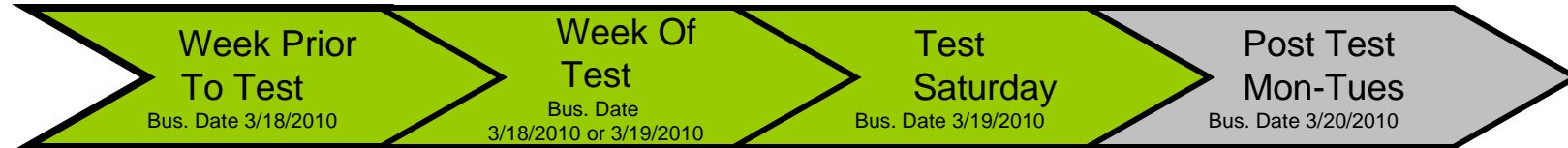
Phase I Timeline Details:



- ▶ Network connectivity 8:00 – 9:00 a.m. ET.
- ▶ Mock trading 9:00 – 1 p.m. ET.
 - Scripts executed
 - Quote data provided to OPRA
 - Trades processed by OCC
- ▶ ENCORE window closes and exchanges balance with OCC 3:00 p.m. ET.
- ▶ OCC finalizes activity for business date and provides DDS & reports to participants by approximately 6:00 p.m. ET.
- ▶ External parties utilize test data for additional system validations.

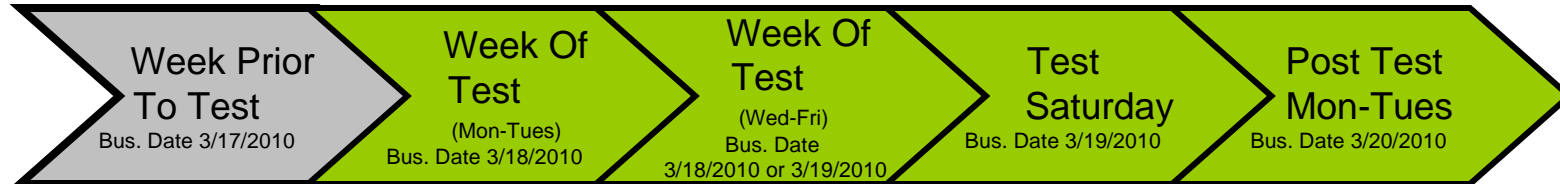
Scripted Industry Testing

Phase I Timeline Details:



- ▶ OCC's system rolls to Equity/Index options expiration Saturday.
- ▶ External ENCORE available for expiration processing.
 - X-by-X responses
 - GUI post trades
- ▶ Participants authorize accounts and external Encore window closes by 1:00 p.m. ET. on Tuesday.
- ▶ OCC finalizes processing for Equity/Index options expiration, provides DDS and reports to participants by approximately 5:00 p.m. ET.
- ▶ External parties utilize test data for additional system validations.

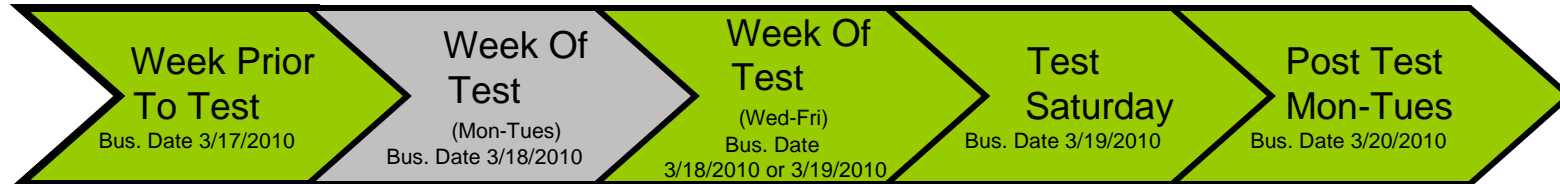
Phase II Timeline Details



- ▶ OCC provides starting inventory as DDS Reports.
 - Security Definition – full file
 - Security List – full file
 - Security Definition – Updates
 - Security List – Updates
 - Positions
 - Open Interest
- ▶ OCC publishes consolidation spreadsheet for classes to be consolidated as part of Phase II test.

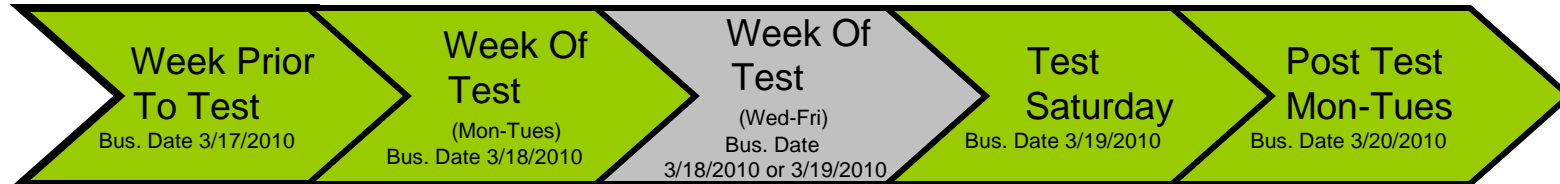
Scripted Industry Testing

Phase II Timeline Details



- ▶ OCC stages consolidation event to be effective for Saturday testing activities.
- ▶ OCC provides DDS resulting from consolidation to participants.
 - Security Definition – full file
 - Security List – full file
 - Security List – Updates (add, modify & link messages)
 - Positions
 - Open Interest
 - Adjusted Positions (positions impacted from consolidation event)

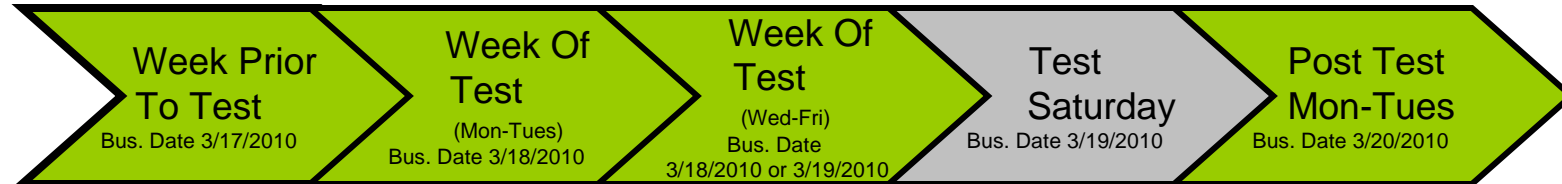
Phase II Timeline Details



- ▶ Participants prepare systems as necessary for industry test.
- ▶ Preparation may include the execution of consolidation activities that would take place between close of business and the start of business on the actual consolidation days.

Scripted Industry Testing

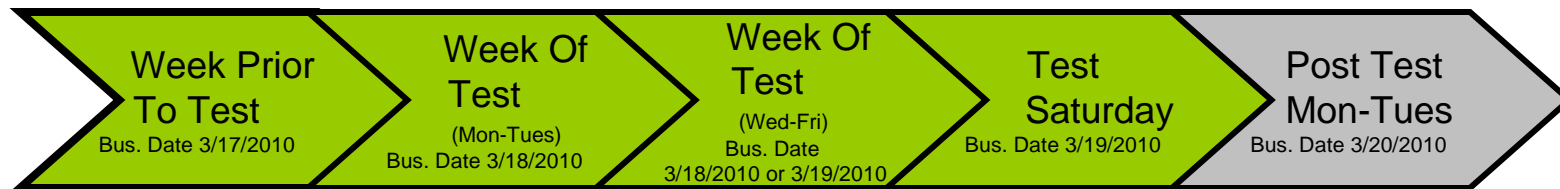
Phase II Timeline Details



- ▶ Network connectivity 8:00 – 9:00 a.m. ET.
- ▶ Mock trading 9:00 – 1:00 p.m. ET.
 - Scripts executed
 - Quote data provided to OPRA
 - Trades processed by OCC
 - OCC stages corporate action on previously consolidated class
- ▶ ENCORE window closes and exchanges balance with OCC by 3:00 p.m. ET.
- ▶ OCC finalizes processing for business date 3/19/2010 and provides DDS & reports to participants by approximately 6:00 p.m. ET.
- ▶ External parties utilize test data for additional system validations.

Scripted Industry Testing

Phase II Timeline Details



- ▶ OCC's system rolls to Equity/Index options expiration Saturday.
- ▶ External Encore available for expiration processing
 - X-by-X responses
 - GUI post trades
- ▶ Participants authorize accounts and external ENCORE window closes by 1:00 p.m. ET. on Tuesday.
- ▶ OCC finalizes processing for Equity/Index options expiration provides DDS and reports to participants approximately 5:00 p.m. ET.
- ▶ External parties utilize test data for additional system validations.

Scripted Industry Testing

Testing Dates:

- ▶ Saturday, September 12, 2009
 - Beta test with limited participation
- ▶ Saturday, October 10, 2009
 - Phase I Scripted Industry Test - Round 1
- ▶ Saturday, November 14, 2009
 - Phase II Scripted Industry Test – Round 1
- ▶ Saturday, January 9, 2010
 - Phase I Scripted Industry Test – Round 2
- ▶ Saturday, January 30, 2010
 - Phase II Scripted Industry Test – Round 2

Contacts:

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- ▶ Mary Kay Kulinski mkulinski@theocc.com 312.322.2014
- ▶ Mike Hemmerling mhemmerling@theocc.com 312.322.7624
- ▶ General Testing Email [OSI_Testing @theocc.com](mailto:OSI_Testing@theocc.com)
- ▶ As needed, all questions will be addressed in conjunction with the exchanges in order to provide thorough responses.