

# SEC Rule 613 - Consolidated Audit Trail (CAT)

SRO NMS Plan Industry Call

November 29, 2012



# Agenda

- 1. SRO Action Plan Update**
- 2. SRO Guiding Principles**
- 3. RFP Process and Timeline**
- 4. Reporting Requirements Concepts**
  - **CAT-Reporter-ID**
  - **Customer-ID**
  - **CAT-Order-ID**
- 7. Processor, Repository and Data Security Requirements**
- 8. RFP Concept Document**
- 9. Feedback and Upcoming Outreach Event**

# SRO Action Plan Update

## 1. Governance Committee

- Drafting of NMS Plan in progress

## 2. Cost/Funding Committee

- High level funding concepts in development; final cost and funding decisions dependent on analysis of RFP responses

## 3. Technical Committee

- RFP and key reporting requirements under development

## 4. Industry Outreach Committee

- Facilitating outreach efforts with respect to RFP concept development

## 5. Other Products Committee

- Analysis of expansion to other products to begin in 1Q13

# SRO Guiding Principles

**In creating a Consolidated Audit Trail (CAT) pursuant to SEC Rule 613, the SROs have developed the following Guiding Principles:**

- The CAT must meet the requirements of Rule 613 and achieve the primary goal of creating a single, comprehensive audit trail to enhance regulators' ability to surveil the U.S. markets in an effective and efficient way.
- The reporting requirements and technology infrastructure developed must be reflective of current trading practices and adaptable to changing market structures.
- The CAT must be scalable to handle increases in market volumes.
- The costs of implementing and operating the CAT should be minimized to the extent possible. Existing reporting structures and technology interfaces will be utilized where practicable.
- Industry input is a critical component in the creation of the CAT. The SROs will consider industry feedback before decisions are made with respect to reporting requirements and cost allocation models.

# RFP Process

- The SROs are in the process of developing an RFP that will be published on the [catnmsplan.com](https://catnmsplan.com) website inviting interested bidders to respond.
- The SROs will publish an RFP concept document next week for public comment in order to obtain feedback on the feasibility and costs of implementing the CAT reporting requirements being considered by the SROs. Comments received will inform the content of the final RFP.
- While the SROs must identify solutions for all aspects of administering and operating the CAT, we are considering whether to accept responses from separate bidders for the administration functions and processor/repository functions.

# RFP Timeline

- **Week of December 3, 2012 – Publish RFP concept document on [catnmsplan.com](http://catnmsplan.com)**
- **December 10, 2012 – In-person event to cover RFP concept document, including Q&A session to address questions**

**Currently, the NMS Plan must be filed by April 26, 2013. However, given the significant work and analysis that is required to develop the NMS plan, including the issuance of an RFP, the SROs plan to submit an exemption request to the SEC to extend the due date for filing the NMS Plan until December 2013. If approved by the SEC, the RFP timeline will be as follows:**

- **Feedback on RFP concepts needed by mid-January 2013**
- **Publish RFP mid-February 2013**
- **RFP responses due early April 2013**

# RFP Timeline

**Formal selection of a bidder is subject to SEC approval of the NMS Plan.**

- **SEC Rule 613 requires that a CAT processor be selected within two months of the effectiveness of the NMS Plan. Therefore, based on the proposed timeline discussed, the SROs anticipate formal selection of a bidder would occur sometime in 2014.**

# Reporting Requirement Concepts

**Three key elements required for the CAT to build the lifecycle of an order as required by SEC Rule 613 are:**

**1. CAT-Reporter-ID**

- **Identifies the entity submitting data to the CAT**

**2. Customer-ID**

- **Consistently and uniquely identifies each customer**

**3. CAT-Order-ID**

- **A unique identifier or series of identifiers that allow the CAT to efficiently and accurately link all events in the life of an order**



**The structure of these data elements will dictate how the CAT processor builds the lifecycle of an order.**

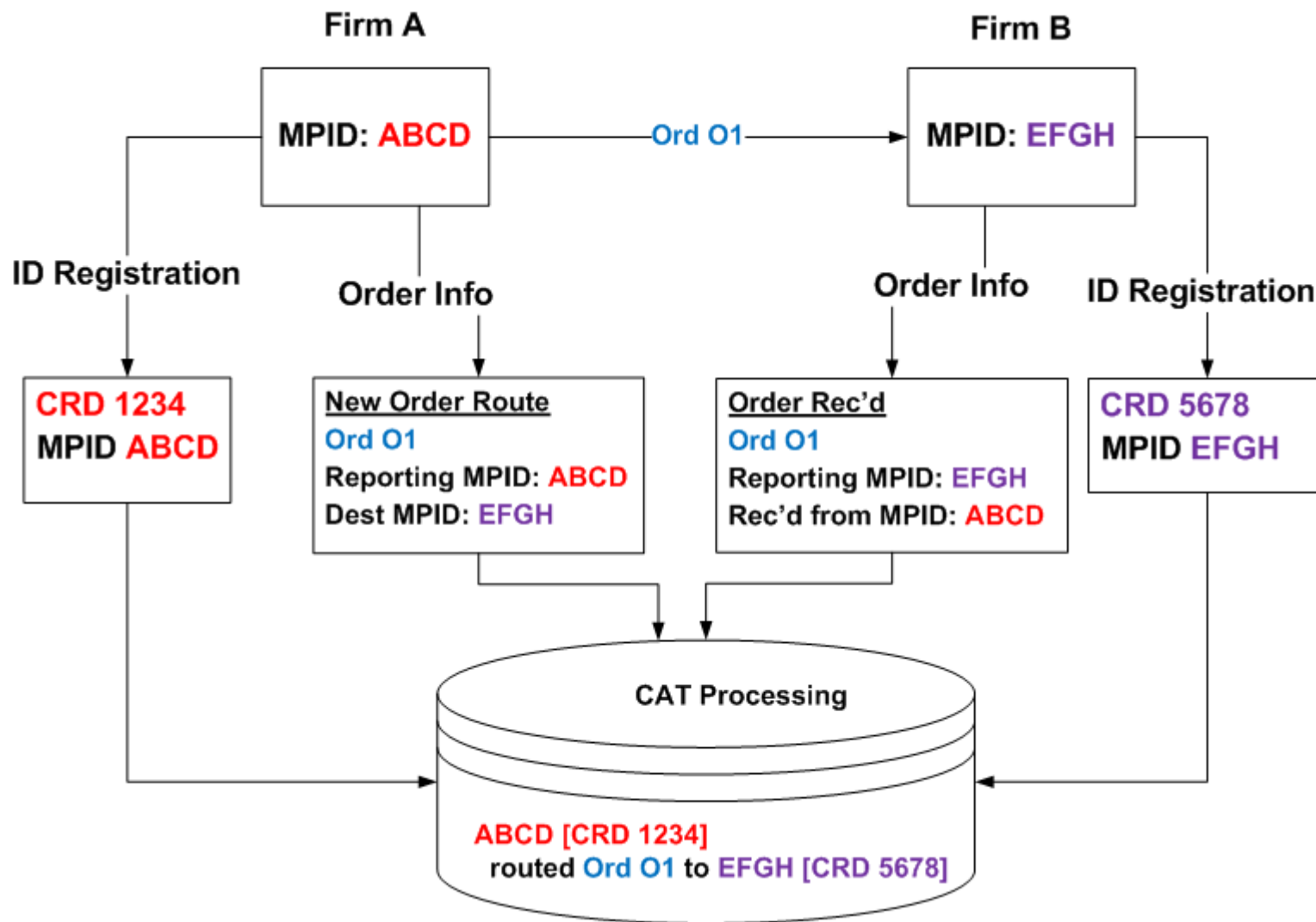


# CAT-Reporter-ID

**Rule 613 defines the CAT-Reporter-ID as a code that uniquely identifies each CAT Reporter submitting data to the central repository.**

- The SROs believe the CAT-Reporter-ID approach should minimize the effect on current realtime business processes and data flows, and should allow existing identifiers used for order routing and execution to remain intact.**
- The SROs are considering leveraging CRD to assign the CAT-Reporter-ID for each CAT Reporter.**
- The SROs are also considering an approach whereby each CAT Reporter would register with the CAT all market participant identifiers used in the routing or execution of any CAT reportable event. Once registered with the CAT, market participant identifiers could be used when reporting to the CAT.**

# CAT-Reporter-ID: CRD Approach



# Customer-ID

**Rule 613 Requirements:** A unique Customer-ID must be recorded and reported to the CAT for each order.

In order to implement the Customer-ID requirement as defined in Rule 613, broker-dealers would need to submit detailed customer information, including SSN, ITIN and other unique identifying information, to the CAT to obtain a unique Customer-ID before orders could be reported to the CAT.

- This would require intraday transmissions between broker-dealers and the CAT for new customers.
- This would also require broker-dealers to change systems to capture a CAT-assigned Customer-ID.
- SSN, ITIN and other similar identifiers would be used by the CAT to guarantee uniqueness of Customer-ID across CAT Reporters.

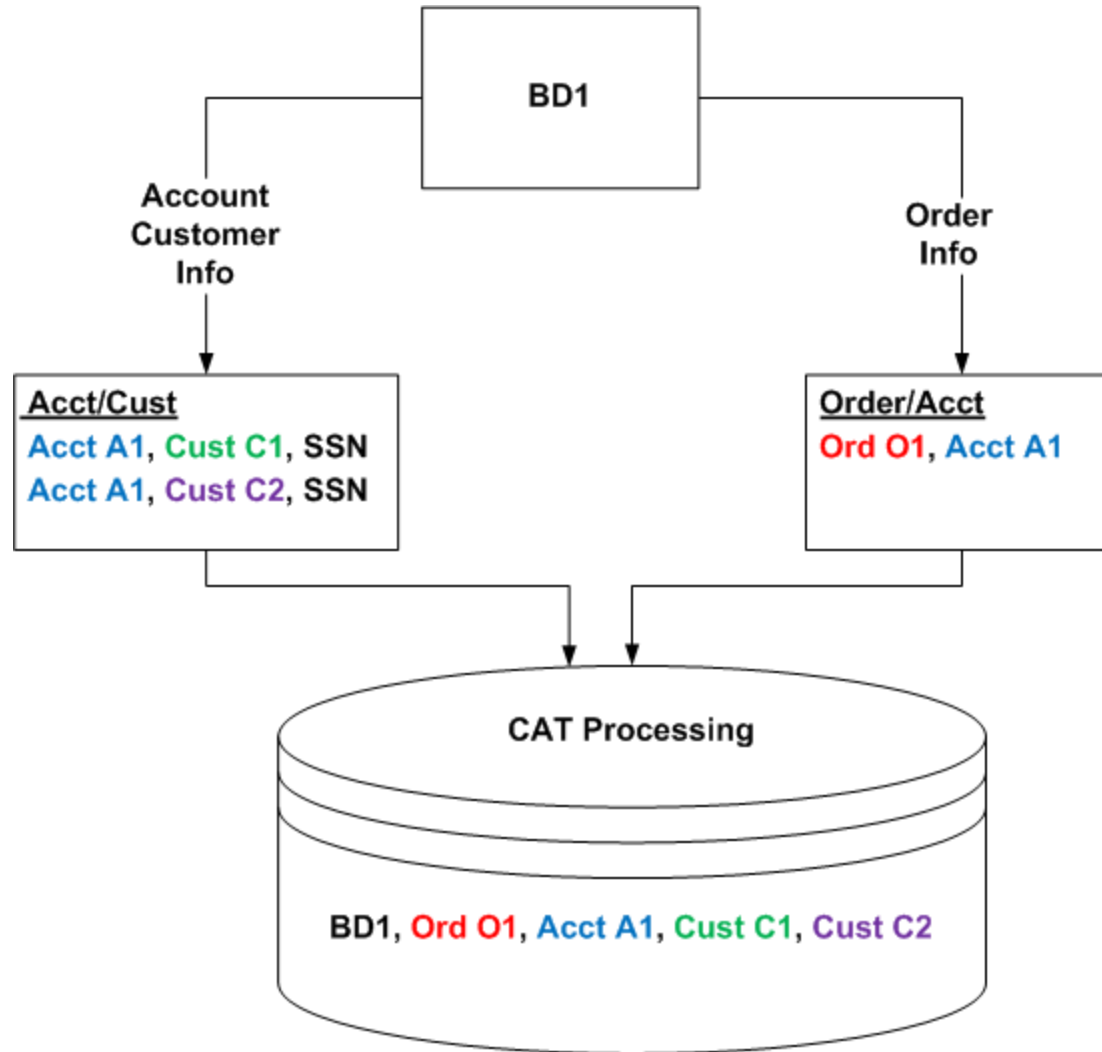
# **Customer-ID: Account Number Approach**

**The SROs are considering an alternative approach to capture customer information and assign Customer-IDs that would not require broker-dealers to obtain and store a unique Customer-ID from the CAT. This approach would instead rely on account number and customer associations stored by the CAT and used to obtain Customer-ID(s) for each order.**

## **Specifically:**

- Broker-Dealers would send account information on a daily basis that would include the identity of each customer (as defined by Rule 613) for each account.**
- Broker-dealers would need to ensure uniqueness of account numbers across the firm.**
- SSN, ITIN, LEI and possibly other identifiers would be used by the CAT to uniquely identify customers across accounts and broker-dealers.**

# Customer-ID: Account Number Approach



# **Customer-ID: Account Number Approach**

**Upon receipt of the daily account and customer information, the CAT Processor would assign and store internally a unique Customer-ID for each unique SSN, ITIN, or other unique identifier. Key points of this approach are:**

- The CAT assigned Customer-ID would not be returned to CAT Reporters**
- CAT Reporters would only report the account number on order reports and the CAT Processor would use the account number to obtain the CAT assigned Customer-ID**
- Tax identifiers such as SSN would be stored in a highly secured manner**

# CAT-Order-ID

**Rule 613 defines CAT-Order-ID as “a unique order identifier or series of unique order identifiers that allow the central repository to efficiently and accurately link all reportable events for an order, and all orders that result from the aggregation or disaggregation of such order.”**

- **The CAT-Order-ID framework must:**
  - Allow for the accurate and efficient linkage of related order events within a single firm and between broker-dealers and exchanges, regardless of where it was routed or executed.
  - Guarantee a unique link between all related order events without relying on any form of “fuzzy” matching.
  - Prevent information leakage and reduce the possibility of “reverse engineering” to identify large orders or other similar material market information.

# CAT-Order-ID

**The SROs are considering two approaches for CAT-Order-ID:**

## **1. Single Unique Order ID Approach**

A single, unique CAT-Order-ID that would travel with the order throughout its life

- Each CAT Reporter involved in the life of the order would need to capture and pass the CAT-Order-ID assigned by the original CAT Reporter.

## **2. “Daisy Chain” Approach**

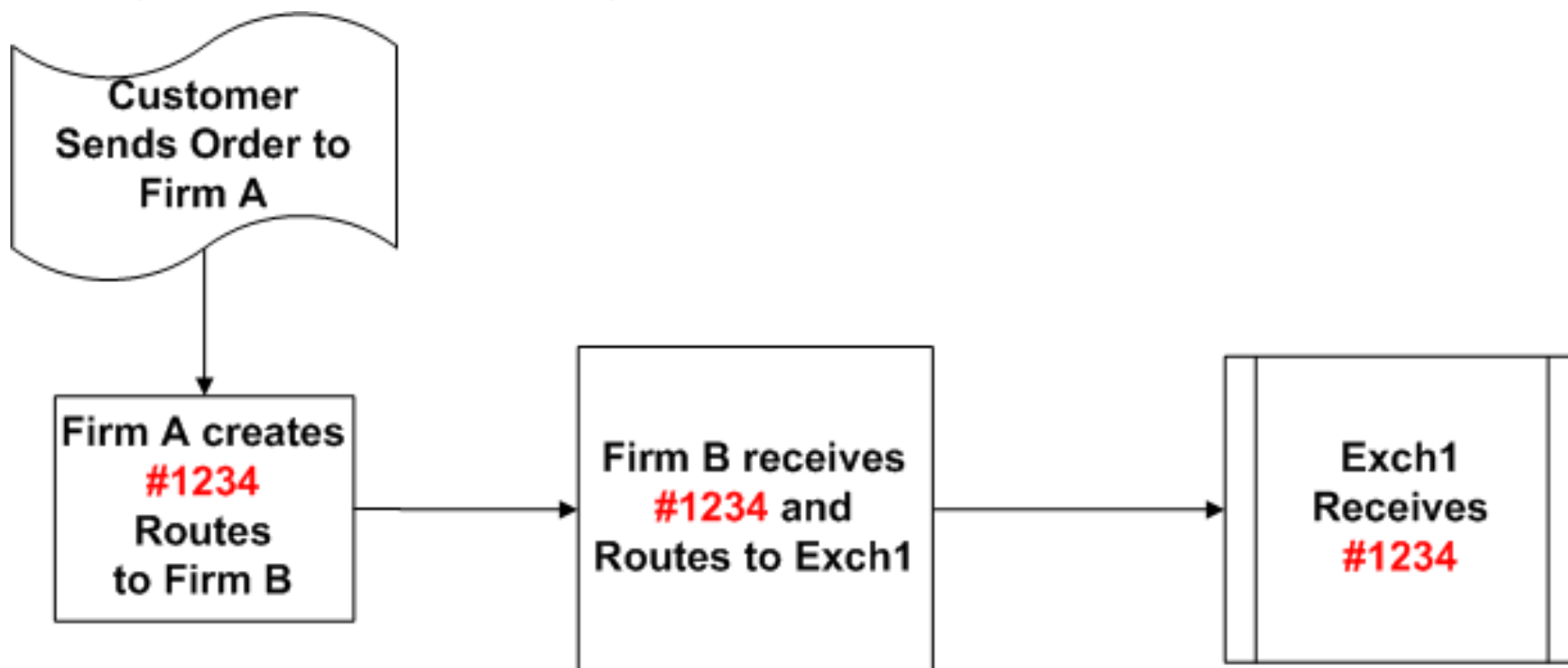
A series of unique CAT-Order-IDs that are linked together by the CAT Processor to create the lifecycle of an order.

- Each CAT Reporter would generate its own unique Order ID but could pass a different identifier as the order is routed and the CAT Processor would link related order events from all the CAT Reporters involved in the life of the order.



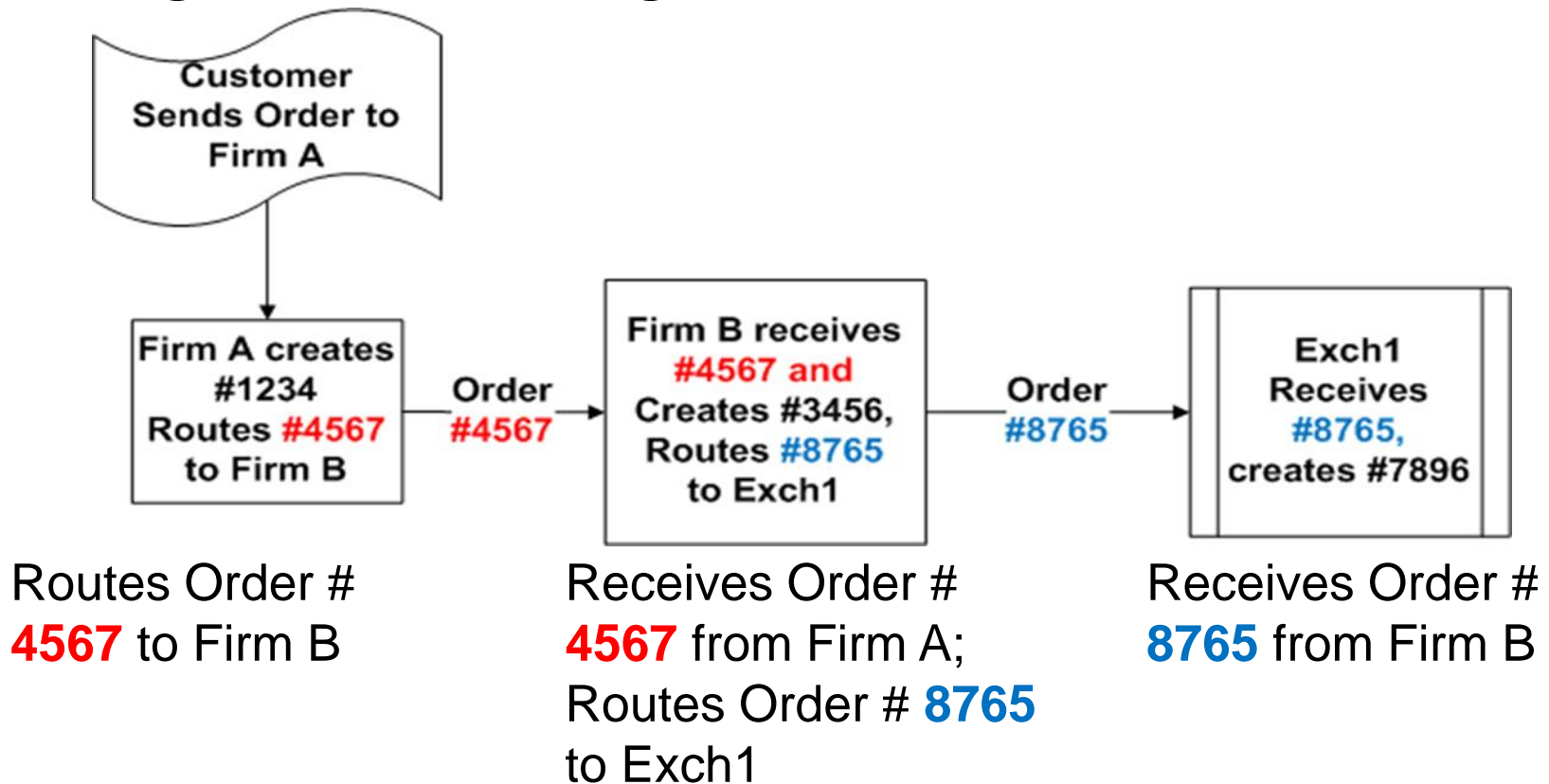
# CAT-Order-ID: Single Order ID Approach

- Firm A receives order from a customer and routes it as agent to a Firm B.
- Firm B receives the order from Firm A and routes it as agent to an exchange for execution.



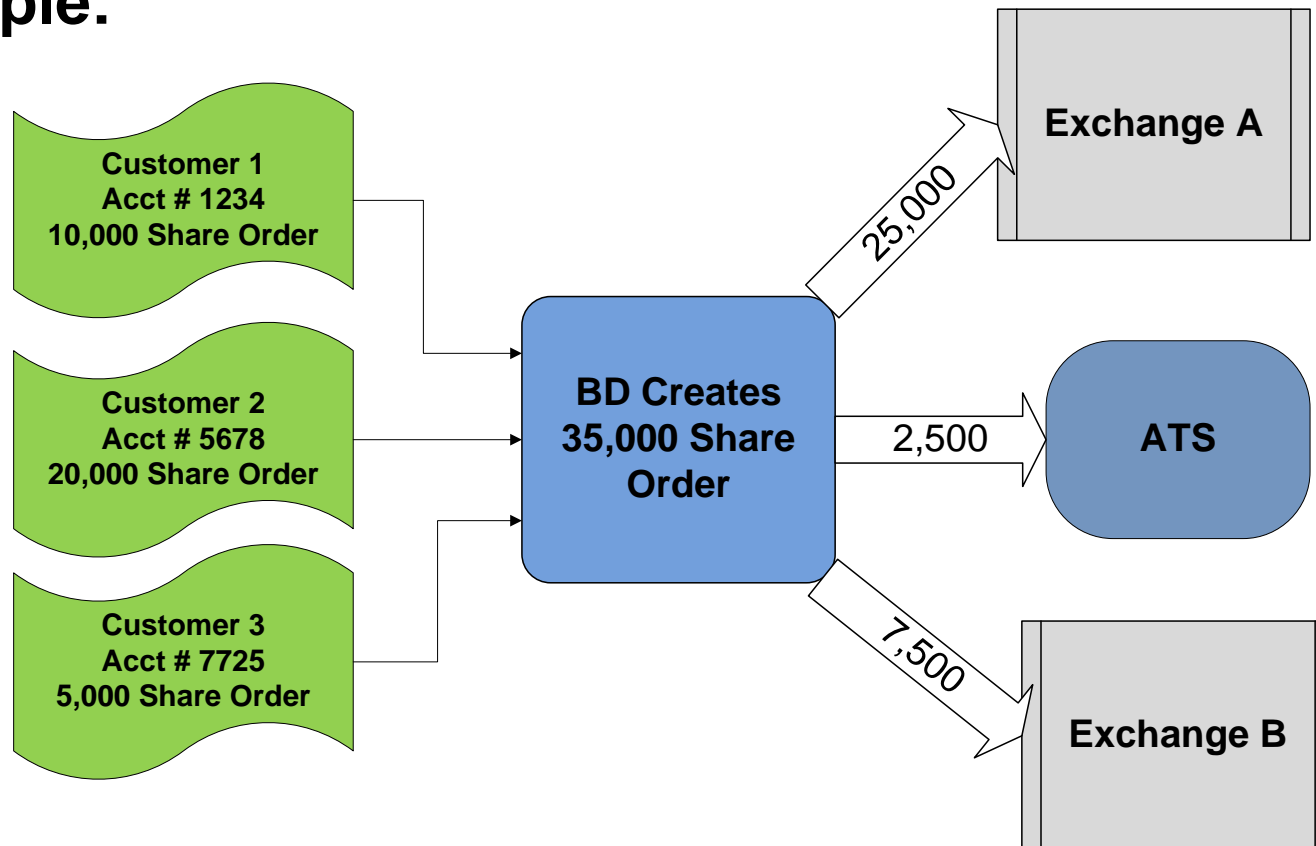
# CAT-Order-ID: Daisy Chain Approach

- Firm A receives order from a customer and routes it as agent to a Firm B.
- Firm B receives the order from Firm A and routes it as agent to an exchange for execution.



# Aggregation/Disaggregation

The approach selected must be able to handle complex order aggregation and disaggregation scenarios. For example:



# Aggregation/Disaggregation

**In such order aggregation/disaggregation scenario, the individual customer orders must be linked to the aggregated order, which must be linked to each outbound route and ultimately to the related execution(s) at each executing market center.**

- **Using the daisy chain approach, an order event type that represents the internal route of each individual order to a firm aggregation account could be used and then outbound routes could be linked to the aggregation account.**
- **Still analyzing how the single order ID approach could work with aggregated orders.**

# SRO Analysis of Both Approaches

## Single Order

- **Simplicity in design**
- **Simplifies the CAT linkage processing**
- **Requires changes to current industry practices**
- **Risk of information leakage**
- **Difficult to accommodate aggregation and disaggregation scenarios**

## Daisy Chain

- **Would not change current industry practices**
- **Accommodates aggregation and disaggregation scenarios**
- **Limits possibility of information leakage**
- **Requires more complex linkage processing by the CAT**

# CAT Processor Requirements

## Data Ingestion and Error Detection

- **Ingest multiple terabytes of data on a daily basis from broker-dealers, national securities exchanges, FINRA and other industry sources (e.g. SIP, OPRA).**
- **Process and validate data.**
- **Communicate identified errors to CAT Reporters within established timeframes.**
- **Calculate error rates on a daily basis and identify CAT Reporters exceeding maximum allowable error rates.**
- **Accept and re-process error corrections.**

# CAT Processor Requirements

## Lifecycle Creation and Delivery

- **Create and store the complete lifecycle of each order, regardless of where the order was routed or executed, including identification of customer(s).**
- **All events pertaining to the same originating order must be linked together in a manner that ensures timely and accurate retrieval in comprehensive data scans, report generation and targeted queries.**

# CAT Processor Requirements

## Security, Data Access, Testing and Disaster Recovery

- Design and implement robust data confidentiality and security measures.
- Control and log access by approved users.
- Provision and provide data to the SEC and SROs for both comprehensive data scans and targeted issue or broker-dealer based queries.
- Design and provide market reconstruction tools.
- Create and maintain adequate testing facilities for CAT Reporters, including the ability to conduct industry testing.
- Implement a comprehensive disaster recovery plan.



# CAT Repository

- **Retain the information collected pursuant to Rules 613(c)(7) and (e)(7) in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention for a period of not less than five years.**
- **We estimate the CAT repository to rapidly grow to a size of multiple Petabytes (PB = 1,000 Terabytes) within the first year of operation.**
- **Data will be used for two fundamental regulatory uses**
  - **Market reconstruction**
  - **SRO and SEC surveillance processing**

# RFP Concept Document

**The SROs will publish an RFP concept document covering in detail the concepts discussed during today's presentation, plus other CAT processor and repository requirements.**

**This document will be published on [catnmsplan.com](http://catnmsplan.com) the week of December 3, 2012. The SROs request comment on this document by mid-January 2013.**

# Industry Feedback

**The SROs are requesting feedback with respect to feasibility and costs on the RFP concepts presented today and in the concept document to be published next week, and in particular with respect to:**

- **Use of CRD Number as the CAT-Reporter-ID**
- **Obtaining Customer-ID(s) via account number**
- **Single Order ID vs. Daisy Chain Order ID for CAT-Order-ID**

# Feedback and Communication

**The SROs have established a dedicated website to provide information to the public on the development of the Reg NMS Plan. Today's presentation and the RFP concept document will be posted on this website.**

**[catnmsplan.com](http://catnmsplan.com)**

**The SROs have also established a dedicated email address to receive feedback. Feedback on the concepts covered today and the RFP concept document can be submitted to this address:**

**[feedback@catnmsplan.com](mailto:feedback@catnmsplan.com)**

# Upcoming Events

**The SROs will host an in-person event at Bayard's in New York on December 10, 2012 from 2:00 – 4:00 pm ET to cover in more detail the concepts discussed during today's presentation, the RFP concept document to be published the week of December 3, 2012 and to answer questions.**

**Registration for this event will be available on [catnmsplan.com](http://catnmsplan.com) beginning tomorrow.**