



January 4, 2005

Penelope Saltzman  
Branch Chief, Office of Regulatory Policy  
Division of Investment Management  
Securities and Exchange Commission  
450 Fifth Street, N.W.  
Washington, D.C. 20549

**Re: Alternative to Hard 4 p.m. Close**

Dear Penelope:

Thank you for the opportunity to meet with you and other Division of Investment Management staff members on Monday December 20, 2004 to discuss our continuing efforts to develop the concepts of SPARK Solution alternative to the proposed mutual fund "hard 4 p.m. close." Following up on that meeting, we attach a written summary of our current understanding of critical requirements for intermediaries submitting orders to mutual funds after market close under an alternative to the hard 4 p.m. close. As discussed, we believe that recordkeeping and trade processing systems in the retirement plan services industry can be enhanced on a cost-effective basis to support these requirements.

As you know, the SPARK Institute is responding to suggestions by Division of Investment Management staff members that an alternative to the hard 4 p.m. close must include technological controls that eliminate or substantially minimize the potential for late trading abuses. We believe that that requirements described by the attached summary provide important technology-based safeguards protecting against potential late trading abuse. In particular, the transaction sequence number ("TSN") enhancement will enable mutual fund transfer agents (or their agents, such as Fund/SERV) to monitor whether there may be any irregularities in instructions processed after hours by retirement plan recordkeepers and other intermediaries. We look forward to your comments, including comments on whether all of the described critical requirements are both necessary and appropriate for a hard 4 p.m. alternative.

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I hope that this information is helpful. Please feel free to call me, or to contact Steve Saxon or Roberta Ufford of the Groom Law Group, Chartered, if you have further questions.

Very truly yours,



Robert G. Wuelfing  
SPARK Institute

cc: Robert Plaze, Associate Director  
C. Hunter Jones, Assistant Director  
Adam Glazer, Attorney



### **Critical Elements of the SPARK Alternative to the Hard 4 p.m. Close**

Any intermediary that submits orders under an alternative to the "hard 4 p.m." close must comply with the following key requirements.

1. **Trade Processing System Requirements** - A trade processing system used to submit orders after the "pricing time" (e.g., 4 p.m. ET) on any trading day must meet the following requirements. (These requirements apply to all trading activity on any system that processes and submits any orders after hours, including all trading activity that is processed and the resulting orders that are submitted during the trading day. This requirement is necessary in order to ensure that the orders submitted after hours are received by pricing time, and to eliminate the opportunity for abuse that would exist in a trade processing system that did not apply certain key requirements uniformly to all activity (e.g., electronic capture and third party time stamping.)

- a. All critical trade information needed to prepare orders for purchases/sales of mutual fund shares (other than fund price) is captured electronically and time stamped before the pricing time on each trading day.
- b. The time stamp is applied by a third party, is unalterable, and "tamper proof" or "tamper evident." (Third party application is a key component; proprietary systems have been manipulated and continue to pose a meaningful potential risk for abuse.)
- c. Each "instruction" containing critical trade information is assigned a unique sequential identification number (i.e., a "transaction sequence number" or "TSN"). Generally, an "instruction" is the customer request received by the intermediary that may generate one or more mutual fund transactions. The instruction may or may not include all of the information needed to generate a mutual fund order or trade at the time it is received but would still be valid provided that the intermediary receives all critical trade information prior to the pricing time.
- d. Hashing technology or other secure methodology is applied to protect the time stamp, the critical trade information and the TSN from undetected alteration.
- e. The trade processing system is programmed to ensure that:
  - all instructions received before the pricing time and within the "trading period" (i.e., after the prior trading day's pricing time and prior to the current trading day's pricing) are captured and processed;
  - no instructions outside the trading period are added in;
  - no instructions received within trading period are omitted from processing;
  - and
  - no instructions are cancelled or changed except by entry of a new instruction processed to meet a-d, above (this requirement facilitates the tracking of any

cancellation or modification and helps to ensure that cancellations or modifications of critical trade information either do not occur after the pricing time, or are readily detectable).

f. System generated internal "red flag" reports identify if any individuals (e.g., employees or registered representatives) attempt to manipulate order processing.

2. Third Party Controls - There are certain "third-party" systems, technologies, processes, and procedures that prevent manipulation of and provide for the detection of trading irregularities on a "real-time" basis. The following third party control mechanisms are proposed.

a. Third Party Time Stamping - The time stamping, hashing, and application of a TSN to instructions by an independent third party or by using third-party maintained hardware and/or software to protect against manipulation.

b. Third Party Storage - The time stamp, hashing and TSN information are stored by or under the control of a third party in order to facilitate later detection of any alteration of the instruction, time stamp, and TSN.

c. TSN Reporting and Monitoring - Each trading day, the intermediary submits the time stamp, hashing and TSN information for the first and last instruction entered into the trade processing system on the trading day to an independent third party.<sup>1</sup> For this function, the third party could be the NSCC/DTTC if the intermediary submits orders through NSCC/DTTC, the mutual fund's transfer agent, or some other entity that is an agent of the mutual fund or its transfer agent. On a real-time basis, the third party reviews the time stamp and TSN information for apparent irregularities in the instructions that support the trade orders submitted by the intermediary as follows.

- The third party verifies whether the first TSN reported for that trading day immediately follows the last TSN received for the previous day trading day.
- The third party verifies that the time stamp associated with the last TSN reported for that trading day is prior to the pricing time.

No further action is required if the third party confirms that the TSNs are in sequence between trading days and the time stamp on the last TSN is before the pricing time. However, if the third party detects an irregularity, it must notify the intermediary immediately and the intermediary may attempt to resolve and correct the error before the

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<sup>1</sup> If an intermediary operates more than one trade processing system, the intermediary may submit to the third party the first and last time stamp, hashing and TSN information generated by each trade processing system. Similarly, "aggregating" intermediaries, which receive and aggregate mutual fund orders from other entities (e.g., financial institutions aggregating orders from retirement plan recordkeepers and clearing brokers) will submit to the third party the first and last time stamp, hashing and TSN information received from each entity that submit orders through the aggregating intermediary. By generating and submitting multiple chains, the intermediary can operate systems that are not or cannot otherwise be integrated, continue to submit trades for other entities, and more readily detect the source of a potential irregularity that occurs.

third party's or the mutual fund's deadline for processing orders. If the intermediary does not resolve the irregularity before such deadline, the third party must report the irregularity to every mutual fund company that received orders from the intermediary on that trading day. If the intermediary submits multiple time stamp, hashing and TSN information chains, only the fund companies that received orders derived from the chain containing the irregularity must be notified. The intermediary must research and resolve the irregularity, including compensating the funds if any improper trading occurred. Mutual funds may terminate an intermediary's after hours trading privileges with the fund if the mutual fund compliance officer is not satisfied with the intermediary's resolution of the irregularity.

3. Order Audit Trail - Orders submitted by an intermediary must be traceable and auditable from original receipt of the instruction to submission of the order to the fund, and from submission of the order to receipt of the original instruction. (Two-way audit ability.)
4. Procedures for Corrections and Systems Failures - Corrections and processing in the event of systems failures would be permitted, subject to controls and limitations that mitigate the risk of abuse.
  - a. After the pricing time, the intermediary can only correct calculation errors caused by bad price information, prospectus violations, or coding errors. Mutual funds may approve after hours correction of critical trade information upon request from an intermediary (e.g., if there was an error at order entry).
  - b. Procedures for systems failures would be allowed.
5. Other issues - The alternative must address procedures for mutual funds that do not establish their pricing time at 4 p.m. ET.