

MEMORANDUM FOR THE RECORD

MFR 03013078

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Type of event: Interview

Date: December 11, 2003

Special Access Issues: None

Prepared by: Emily Walker

Team Number: 8

Location: NYSE 11 Wall Street, NY

Participants - Non-Commission: (Meeting 1) Roger Burkhardt, Chief Technology Officer; (Meeting 2): Robert T. Zito, EVP Communications

Participants - Commission: Emily Walker, Sam Caspersen

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Commission staff spoke with Mr. Roger Burkhardt, Chief Technology Office of the NYSE to gain greater understanding of the continuity of business issues faced by the NYSE at the closure of the markets on September 11, 2001 and what changes they have made since that time.

Mr. Burkhardt has been at the Stock Exchange for 3 years. He came in just prior to September 11, 2003. He said that he stayed with the Management Team in the Crisis center that day. All the staff was kept on the trading floor because that was deemed the safest place in the building. Their building is open through tunnels to the building on 20 Broad Street. Because of this, they let people in who were covered with dust after the first tower fell. He also mentioned that the NYSE had 130 in the 29<sup>th</sup> and 30<sup>th</sup> floor of the South Tower and they evacuated immediately upon impact of the first tower. It was an orderly evacuation.

Mr. Burkhardt described the NYSE data system in place on September 11, 2001 and the problems that system incurred during the crisis. He said that they had a trading data center which they used all of the time which was part of a holistic system which included market data vendors and as a separate event, the Deposit Trust Clearing and the National Security Clearing Corp. He noted that even after September 11, these data centers ran normally all week even though there was no trading.

He said that on September 11, the NYSE did NOT have any problems with technology or facilities. They had 2 data centers and 5 trading rooms over 5 blocks. They have the capacity to move stocks to other floors. In 2000, they had put into place state of the art IP protocols so all of the technology was up to date. The critical technology issue that they faced on September 11, 2001 was connectivity to their members. The connectivity issue related to the fact that they discovered after Sept. 11, that there was NOT a diverse routing from their members to the NYSE Data Center. The members were connected directly to the center and when the phone system of Verizon

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went down on 9-11, the back-up systems were also connected to the same central office in lower Manhattan. In addition, the American Stock Exchange lost its building and was moved immediately into a little used trading floor at the NYSE. Because there was no need for application logic since all the AMEX applications run in the same data centers as the NYSE, the technology just pointed the application at different screens and they were up and running.

Following 9-11, in the aftermath report, the NYSE decided that they needed additional, back-up trading floors and different methods of connectivity to their members. The task force recommended tactical issues that could be accomplished quickly and then long-term investments. In terms of tactical ideas, the following were accomplished immediately: 2 additional trading rooms to serve as back-ups were created. They felt that the scope of the threat was larger than previously thought and that it would be possible to conceive of a scenario where the NYSE was shut out for a long period of time from Lower Manhattan. They immediately dedicated 2 floors for back-up trading floors and they were ready to go within 60 days of Sept. 11. However, these were in the same building. By 2002, they had developed alternate sites located outside the NYSE.

A more long-term investment was to develop a system where the members were not connected directly to the data centers but through access centers which led to the data centers. These access centers were located in 6 areas around the country. With the connectivity being the "Achilles heal" of the entire industry, they felt that now members could connect 24/7 from access centers that would alleviate the back-up problem. In addition, the NYSE contracted private fiber from Con Ed which is guaranteed to be diverse from its other connectivity. At this point the SIAC data center which serves the entire industry authorized this new structure in May '02 and by Jan '03 it was live and all firms were mandated to connect.

An issue that Mr. Burkhardt raised as a serious vulnerability for the NYSE and the markets in general is the existence of "carrier hotels". These are places where all the carriers put their switching equipment and run cable between each other so they are connected. He said that over 70% of the transatlantic traffic goes through one carrier hotel in Manhattan and the vulnerability of this high of a concentration is huge. He said that security standards are needed for these hotel carriers.

He said that the SEC requested as a follow up to 9-11, that the NYSE and NASDAQ be able to back each other up. He said that NYSE does have enough capacity to trade in the top 250 symbols and has tested it with member firms. He said that NASDAQ originally said they could not trade 3 symbols, but eventually worked out a system where they could.

In addition, the recognized from 9-11, that it may not be possible to get people to work so the NYSE is considering setting up remote network operations where traders can go to work near their home in case of an emergency. They are also working on setting up a reserve force by requiring key groups to have a trained and ready to call upon reserve force. Also, they are not placing key personnel in the building at the same time.

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The Commission also spoke with Robert Zito who outlined the events on September 11 from his viewpoint as Head of Communications for the NYSE and a key player in the firm's response that day. He said that the first plane hit the North Tower. He saw the plane hit from his window. He called Dick Grasso, then chairman of the NYSE, who was at a breakfast in NY City. Dick told him to have their people evacuated from the South tower which they immediate did due to short memories from the Pan Am building. Between the first and second plane, Zito said that Dick Grasso had already called Harvey Pitt, then chairman of the SEC. After the 2<sup>nd</sup> tower was hit, Grasso decided to delay opening of the market. By the time the Pentagon was hit, they had decided NOT to open that day. Then Mr. Grasso locked down the building (which effectively means keeping people inside until it was deemed safe to go out). They kept all people on the trading floor because they thought it was safer than being outside, particularly as many people from the outside were coming into the NYSE, looking for a safe haven. At 11:15- 11:30 a.m. Dick Grasso spoke to the Mayor and to the Office of Emergency Management in NYC and was told that it was safe to let people out of the building to go East or South. The Management Committee stayed. Dick Grasso lived in the NYSE for several days.

On Wed. Sept. 12, Mr. Zito said that Dick Grasso arranged for the heads of member firms, Harvey Pitt, Peter Fischer and others to attend a meeting to discuss the future opening of the market. The meeting was held at Bear Stearns. He remembers a difficult meeting, but largely over the incident, not over when to open the markets. They key issue was connectivity to the markets and the difficulty in getting 50,000 people to work. At that time, the OEM said they were still looking for anyone who might be alive and that was taking precedent. Representatives from Verizon, ConEd, and OEM were at the meeting as well.

On Thursday, Sept. 13, Mr. Zito said that there was another meeting at CSFB where they agreed to open the markets on Monday while conducting a test run during the weekend. He said that the main reasons were that the first responders needed time to do their work, and the need to get connectivity to back-up sites ready. Verizon Center was the main problem. Verizon also needed to know where displaced companies wanted to set up their phones before they could connect them. He said that the NYSE was NOT damaged and was able to run effectively.

When questioned about air quality, Mr. Zito said the thought that their Human Resources Dept. had mentioned that EPA had been issuing statements saying the quality of the air was adequate to bring people to work. He said that the HR person said that EPA said that the air was within acceptable limits and there were no concerns.

He felt that the NYSE decisions to close the markets went incredibly smoothly. He felt that since the NYSE management team had recently gone through a crisis (software problem that kept NYSE from opening), this practice session helped them on Sept. 11, 2001.

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He mentioned that there were press conferences on Sept. 12 and 13 and that they would get the tapes to us. He also said that they would pull together press clips on the market closure. He gave us the name of Sal Sodano at AMEX with whom we should speak on AMEX's issues that day. He remarked finally how competitors were helping each other which showed the gravity of the crisis.

When asked if NYSE has a crisis management plan, he said that there is nothing on paper. They have put in place phone/fax/internet etc in several places in the building in case some floors were limited as they were when the blackout occurred (generator only went up to floor 6). He also said that there are 4 exits to get out the trading floor and he showed us those exits. They are very small stairwells and hard to see in the chaos of the floor.

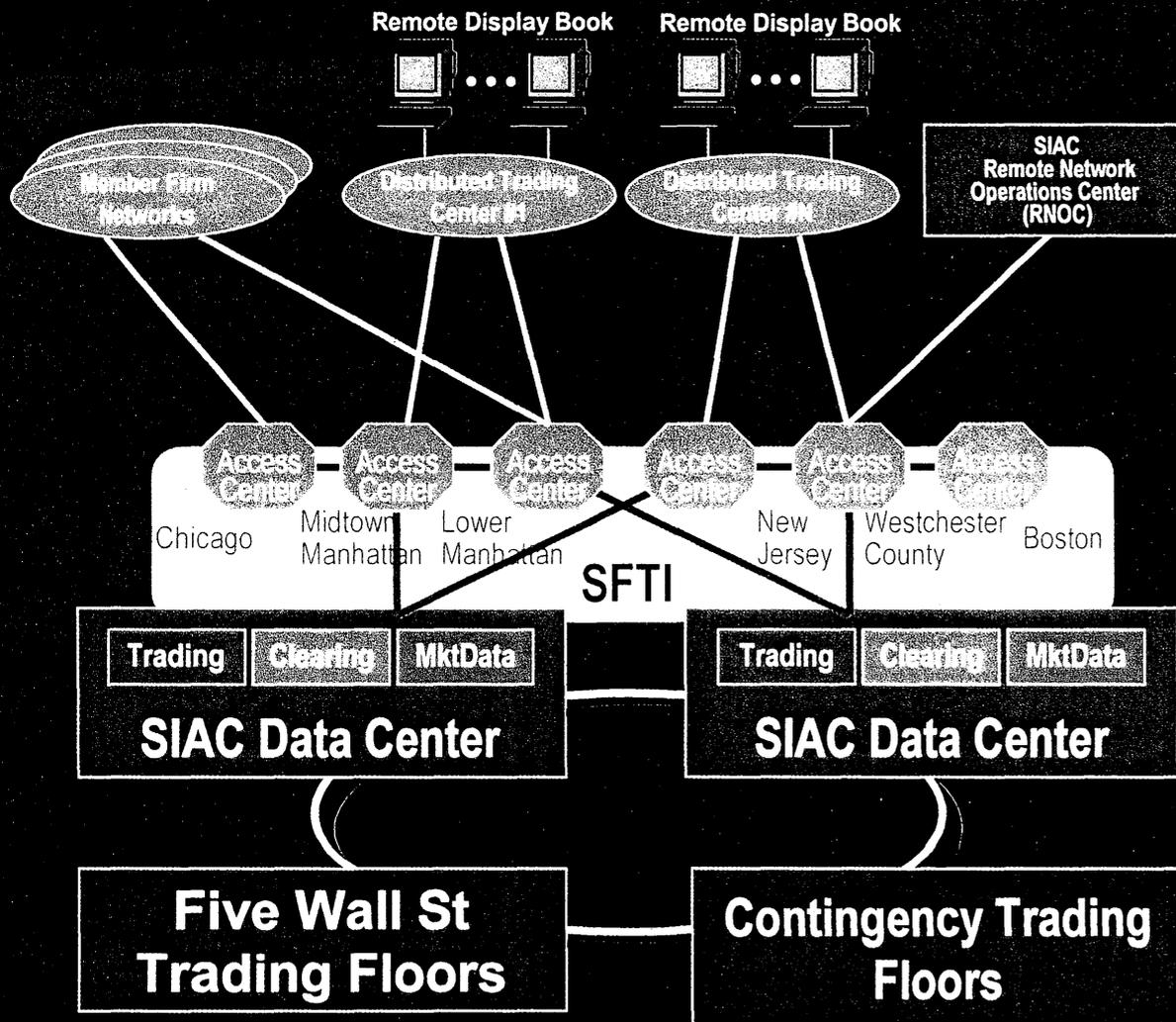
Mr. Zito took us to the trading floor and showed us the Command center for the Chairman of the NYSE to use in the case of an Emergency which included direct dials to the Fed NY, Fed DC, SEC, OCC, etc. The names had not been changed on the phones since some recent departures (including that of Mr. Grasso) but apparently the numbers remained the same and probably worked. He said that the staff is aware of how to exit and that fire wardens were on each floor. The security of the building is incredibly tight so much so that the interim Chairman John Reed (who was not in NYC on Sept. 11) suggested that meetings be held outside the Stock Exchange because it was so hard for guests to get in. Mr. Zito said that they consider the NYSE a target and have blocked all access on the road. (Mr. Burkhardt had said that they have developed 2 alternate sites plans for outside lower Manhattan which they are working on implementing but so far, their back-up trading floors are in the same building and the data centers are located elsewhere).

Upon departing, the Commission staff asked if it were possible to get both Harvey Pitt and Dick Grasso's current phone numbers. We were given Mr. Pitt's number and subsequently set up a meeting. We were told Mr. Grasso was unavailable. However, later on Dec. 11, Mr. Grasso called Sam Caspersen at his Commission office and provided his version of the events.

Attachments:

NYSE 2001: A year to Remember  
NYSE Publication: Let Freedom Ring  
Two Slides on Technology

# Post 9/11 Investments in Resilience for Business Continuity



## Investments to date:

Five Trading Rooms w/Intra-day Post Compaction capability

Dual Active Data Centers (1992)

Diversely Routed Inter-site Fiber Backbone (1995)

Implemented External IP Network (2000)

Contingency Trading Floor (2002)

Secure Financial Transaction Infrastructure (2003)

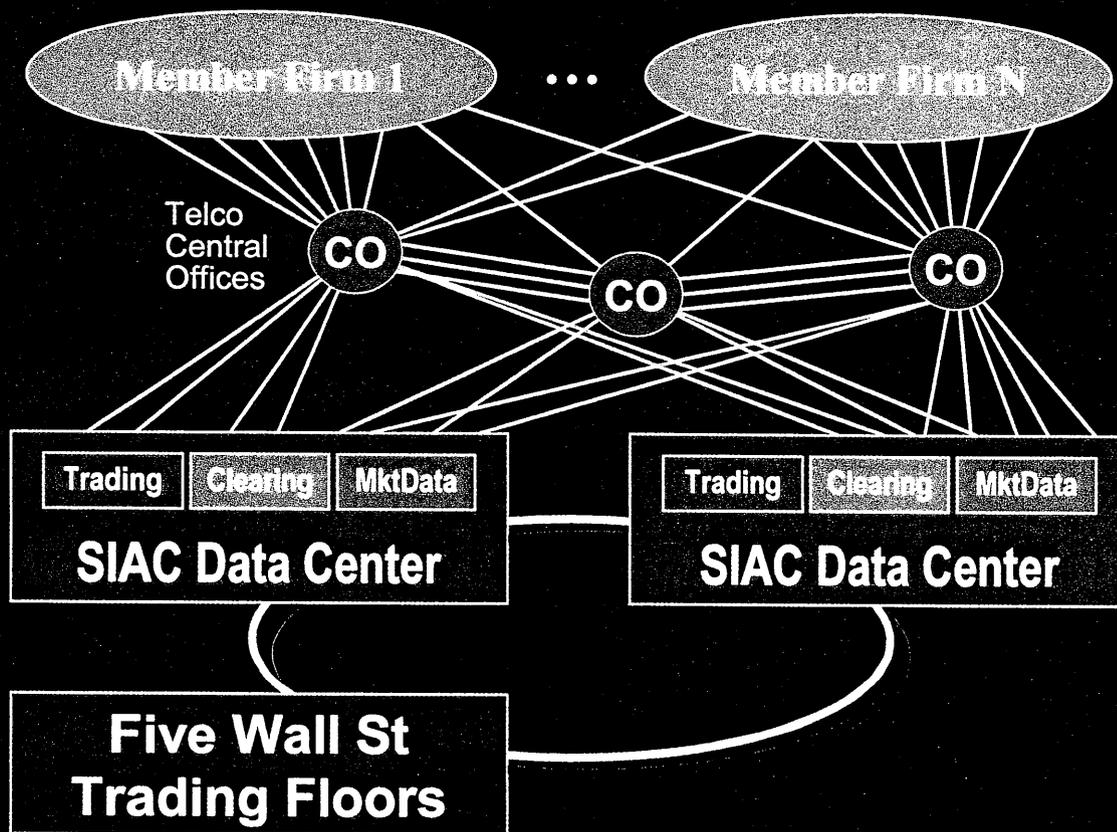
Backup for NASDAQ (2002)

## Investments In Process:

Remote Network Operations Center

Distributed Trading Centers

# Resilient Infrastructure Prior to 9/11



Investments to date:

Five Trading Rooms w/Intra-day  
Post Compaction capability

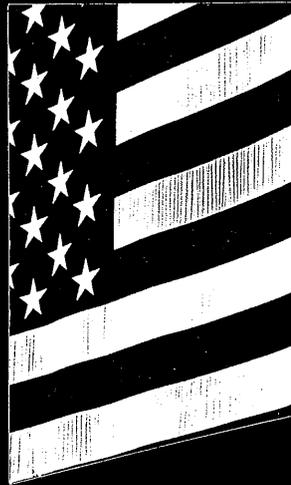
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# NYSE

New York Stock Exchange Annual Report 2001



# Let Freedom Ring

**NYSE**

2001: A Year  
To Remember

New York  
Stock Exchange

