As requested by SEC staff, FISD did a survey of market data vendors on the technological barriers and conversion issues associated with the shift from the current consolidation model (SIAC for Network A/B and Nasdaq for UTP) to a multiple consolidator model.

We've had discussions with nine market data vendors (Bloomberg, Bridge, Financial Times/Interactive Data Corporation, Reuters, Standard & Poor's Comstock, Telekurs Financial, Thomson Financial (Primark and ILX) and vwd). We also had informal conversations with representatives from NYSE, Nasdaq and SIAC. This summary represents FISD’s assessment of the question and is not necessarily the position of the above referenced organizations.

In general, we ended every vendor conversation with the same conclusion -- within the confines of the existing NBBO model, there is very little to be gained and a significant amount of risk associated with the movement to a multiple consolidator model. Almost without exception, the vendors indicated that SIAC provides a high quality (e.g. accurate, reliable and consistent) market data feed. In addition, line migration and technology upgrades are well facilitated and efficiently implemented. Market data vendors are very satisfied with SIAC (and by assumption UTP). However, some vendors are concerned the current system lacks sufficient flexibility to address future needs. At least one vendor questioned whether the NBBO should serve as the prism for determining whether to implement a system of multiple competing consolidators.

We focused on three core issues as part of our investigation: (1) costs and difficulties associated with conversion from one consolidator to another; (2) concerns (if any) about competitors being one of the consolidators; and (3) technological and data quality issues associated with the multiple consolidator model.

Conversion

Managing market data feeds (including conversion) is an expected and normal business function for market data vendors. However, effective data feed change management is a complex process that does require a significant expenditure of time, resources and technical expertise. The various systems and networks traversed by market data are diverse and the time required to design, implement and test can differ from one vendor to another.

Downstream organizations (both users and market data vendors) have limited resources to make changes, and these resources must be allocated to changes arising from many different
sources. Once the programming is complete, the costs of conversion (programming and infrastructure changes, quality assurance parameters) are significant.

FISD members have developed and published a best practice recommendation on change management (http://www.fisd.net/mdadmin/notfp_leadtime.htm) which defines the implementation of a new data feed as a "major change." Major changes are those that involve changes to network or administrative systems, hardware, software or commercial purchase decisions and can take anywhere from six weeks to nine months for migration -- depending on the complexity of the conversion.

Competitive Implications

Some vendors expressed concern about maintaining a level playing field in terms of access to data or time to market in a multiple consolidator model. One of the advantages of consortium ownership is transparency in the way market data is processed. Some believe the entire industry has been able to provide collective pressure on the consolidators for technological upgrades, while others believe the monopoly status of the exclusive processor immunizes it from the need to respond to pressure for technological upgrades.

Some vendors suggest that since the function of consolidation presents a significant technical and business challenge, the consolidators will likely have to contract with each other to fill in data collection gaps. Even with strong regulatory oversight, many believe there is a likelihood of anti-competitive behavior in terms of access and data timeliness as well as the potential for cross-subsidization. However, others believe that with the appropriate regulatory framework, issues related to terms of access, data timeliness and cross subsidization can be effectively addressed.

Perhaps the most important competitive issue is the maintenance of a level playing field for data access. In today's system, a circuit delay in a single market has little negative impact on the identification of "best price." The current system of exclusive consolidators at least guarantees that all market participants will be equally disadvantaged. By contrast, under a system of multiple consolidators, the same circuit delay in a single market or with a single consolidator has the potential to have a significant and unbalanced negative effect on the discovery of best price. Some vendors have suggested that market forces can overcome this potential problem because end users will reward the consolidators who consistently supply the most reliable information.

Data Quality

By far, the most significant issue with the multiple consolidator model relates to the technological concerns associated with the consistency, accuracy and completeness of core market data. So far the technological hurdles seem to fall into three categories:

- **Sequencing**. There are significant technical issues associated with maintaining proper sequencing of trade and quote messages. Some vendors have expressed serious concern about sequencing particularly if the requirement is to blend information from multiple delivery sources in fast markets. Other vendors have suggested that exclusive consolidators face the same problems with sequencing and that the same methods they use can also be employed by the competing consolidators to resolve them.
• **Data Completeness.** Some vendors have suggested that since each consolidator would have to collect data from multiple sources, there is a possibility that the resulting data stream might be incomplete. This could result in variations and discrepancies in the calculation of NBBO and could contribute to price confusion. Other vendors have suggested that BBO quality could be achieved by adoption of minimum standards of completeness for the competing consolidators.

• **Traffic Engineering.** In the current model, the exclusive SIP as the sole delivery vehicle has been subject to regulatory pressure for appropriate planning procedures. A new model would be required in a competing consolidator environment. In addition, in the current structure there is a single point of contact for data quality problem resolution. And while this makes communication easier, wisdom would dictate that contracts between sources and consolidators would include service level agreements to address capacity planning, problem escalation and resolution, customer service and similar issues of best practice.

**Summary**

If the conclusion of the Securities and Exchange Commission is that the current NBBO regime should continue, most vendors would see little incentive to seek to establish a competing consolidator model. Some vendors are skeptical that the technology exists to successfully use multiple consolidators to gather and disseminate core data. Their biggest concern is the inability of a system of multiple consolidators to prevent price inconsistencies and distortions. They are concerned that while processing by multiple competing consolidators might be technologically feasible, the risks of price discrepancies and disruption of markets might significantly outweigh any potential benefits to be gained.

However, if the existing NBBO regime were to change, certain vendors believe that not only would data quality considerations be mitigated, the entire industry could gain from the benefits of information competition. In fact, some vendors are strongly advocating this change and may even consider competing as non-exclusive consolidators if permitted by the Commission.

Please feel free to contact me for clarification or if we can be of additional service.