

My name is David Swallow and I am Director of Engineering at Charles River Development (CRD). Charles River IMS (CRIMS) provides a comprehensive Order and Execution Management System (OEMS) seamlessly integrated with data, FIX connectivity and trade analytics. Extensive trade decision support capabilities help traders find liquidity, execute trades across all asset classes and currencies, and ensure trades are compliant. I am responsible for data services development and delivery of CRIMS interfaces to Bloomberg and other data providers and sources at CRD and have been with the company for 14 years. I am writing to inform you that I consider Bloomberg SAPI to be a display product intimately tied to the Bloomberg terminal and not a datafeed product. Bloomberg SAPI is a key product for our CRIMS and we have many production customers who have been using our interface for many years. Our customers rely on our Bloomberg SAPI interface to bring terminal based, real-time and static market data into CRIMS.

CRD has many of the world's largest financial firms as customers and we have a large percentage of both large and smaller customers who leverage the Bloomberg SAPI product via our CRIMS interface. Some of the key reasons why I view Bloomberg SAPI to be a terminal based display product and not a datafeed product are as follows:

- Bloomberg has a robust SAPI certification process for all OMS vendors that ensures total exchange compliance and proper data attribution. CRD was the first OMS vendor to be certified and provide broad commercial integration and has been listed as a Bloomberg certified vendor for many years now
- SAPI is intimately tied to the Bloomberg terminal and every user must be logged in to receive any data from SAPI. SAPI and the Bloomberg Terminal share the same technology and published API
- SAPI leverages Bloomberg Terminal exchange entitlements and preferences and does not have a separate entitlements management system that any stand-alone, datafeed products would provide. Users change data preferences and sources via the Bloomberg Terminal to alter SAPI data on a per user basis
- SAPI supports a User Mode, which is leveraged in the CRD CRIMS integration that binds a user session to the Bloomberg Terminal
- Any data that is persistent from SAPI must carry along exchange entitlement identifiers so and future access is managed based on Bloomberg Terminal exchange entitlement
- In addition to client GUI applications that interface directly on user desktop machines, Bloomberg SAPI also supports Citrix based deployment. In this case client desktop applications are run from centralized servers. This is a key deployment option for many of our customers. Our CRIMS application, Bloomberg SAPI and Bloomberg terminal integrate seamlessly on a server platform under Citrix with Bloomberg terminal based exchange entitlement enforcement

Classifying the Bloomberg SAPI product as a data feed with associated large, additional exchange fees would have a major, negative impact to our CRD customers and cause broad

disruption. I strongly recommend that Bloomberg SAPI continues to be classified properly as a terminal-based display product without any change.

If you need to speak with me further regarding this issue, I can be contacted via email at: [REDACTED] or phone: [REDACTED].

Thank you,

David Swallow

About Charles River:

Charles River enables sound and efficient investing across all asset classes. Over 350 firms worldwide use Charles River IMS to manage more than US\$25 Trillion in assets in the institutional investment, wealth management and hedge fund industries. Our Software as a Service-based solution automates and simplifies investment management on a single platform – from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. Headquartered in Burlington, Massachusetts, we support clients globally with more than 750 employees in 11 regional offices. For more information, please visit www.crd.com.