



Online banking services, both Intranet and Internet, are being used more and more to distribute financial information and data. MFI Cast is robust and flexible EII middleware, providing a set of highly evolved tools to centrally manage, distribute data in both Push and Pull and display charts. With MFI Cast, performance and business continuity are guaranteed!

### The scenario

Financial information has become a central part of a banks services. From simple window display boards and mainframe applications, it has moved on to become an integral part of online trading, private banking, and company intranets. Banks increasingly use information not only in internal channels, but also as part of their service to customers. Importantly it becomes a marketing tool, increasing customer satisfaction, distributed through multiple communication channels: web, mobiles, palm-tops, digital TV & radio. Continuously changing requests for data and services create repercussions throughout the whole infrastructure, down to the applications using financial information, which creates challenges to banks IT distribution networks.

MFI Cast manages financial information centrally and uniformly, making data available both in Pull & Push to internal services including charting and historical data functions.



### The problem

Financial Information is very often channelled through proprietary systems that have very complex and specific technical requirements.

### The Solution - MFI CAST

MFI Cast is a back-end solution that will integrate data supplied by multiple and diverse information sources and providers.

MFI Cast represents a winning solution because it:

- gives the bank a greater power of choice, to be able to plan and develop applications that will not be subject to limitations imposed by specific sources, data types or proprietary delivery systems from the data distributor, which reduce inter-operability,
- allows the bank to gather data from different information providers and pass these to channels in the most efficient and cost-effective way,
- guarantees freedom of choice and the ability to easily develop new business tools with very low costs. Because once the know-how is taken on board, it becomes part of the banks core-competence,
- simply integrates internal sources such as technical or fundamental analysis, commentary and advice or other editorial type information.

### How it works

MFI Cast offers a fully documented and open development environment, with standard interfaces.

- It can be applied to any technological environment and diverse information delivery channels.
- Independent from specific information providers.
- Designed to be used simply and easily by all sectors of the bank.

Information Providers and data services are "hidden" from the end user applications, as they are integrated through specialized adapters designed for each data source. This means that financial information can be distributed from a single, centralized point to the banks channels:- internet, online trading, sales groups, branches, call-centre, dealing room, mobiles, ATM's, sales desks.

### Functionality

- **Quotes:** financial instruments
- **Chain:** lists
- **News:** from internal sources or external feeds
- **Historical** data and instrument searches
- **Daily & Intraday series**
- **Data displayed** in both pull e push
- **Charts:** line, bar and candlestick
- **Charts:** daily & Intraday
- **Technical Analysis** main indicators available
- **Oscillators** most commonly used
- **Compare** markets and instruments

MFI Cast, being both modular and expandable, is integrated with specialized services and applications designed to supply financial information and data to distribution channels.

**Thincharts:** Graphics engine that generates Daily and Intraday charts with analytical indicators.

**Lightstreamer:** Real-time data push server to both HTML front-end (without using applets or plug-ins) and dedicated client applications.

**PT Five:** highly evolved desktop for real-time data management, online trade entry, management and tracking.

**MFI Cast Web:** Application WEB HTML, for "light" financial data distribution. Can be used for online order entry. Optional components: Daily & Intraday historical data collection and watchlists, virtual portfolios.

## Architecture

The main component of the **MFI Cast** service broker is a fully fail-safe server, which:

- manages the data flow between data sources and user applications,
- retrieves information from the providers by using data adapters,
- has interfaces based on open protocols, independent and easily integrated with any application in "pull" or "push",
- offers very high performance, reliability and scalability, via sophisticated cache and clustering methods

The service broker implements a distributed cache to:

- minimize access to information providers resources,
- provide exceptionally high speed access times,
- synchronize all updates, guaranteeing unlimited scalability.

**MFI Info Adapters**, through which the information feeds are connected:

- translate standard requests for data into specific functions for all the services,
- prepares output converted into standard formats.

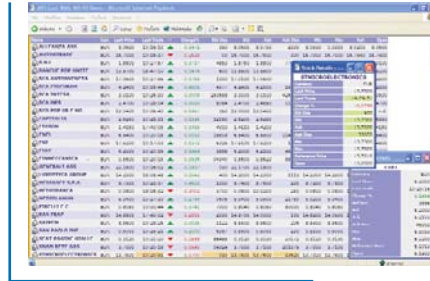
### The interfaces

The service broker permits access to the data on behalf of the requesting channel applications in synchronous (pull) and asynchronous (push) modes, through different interfaces.

#### Synchronous delivery (pull):

- XML over JMS:** data are delivered in XML format using JMS Topic
- Java Objects over JMS:** data are delivered as objects using Java on JMS
- SOAP over HTTP:** data are delivered using SOAP protocol

MFI Cast Web is a unique front-end which provides real time data push in native HTML, without the use of applets oractivex.



#### Asynchronous delivery (push):

**XML over JMS:** data are delivered in XML format as JMS Topic Messages

**Java objects over JMS:** data are delivered as Java objects contained in JMS Topic messages

#### PT Five and MFI Cast Web client applications

**PT Five** is a function rich front end designed to be used by high level users, whether professionals or not, which:

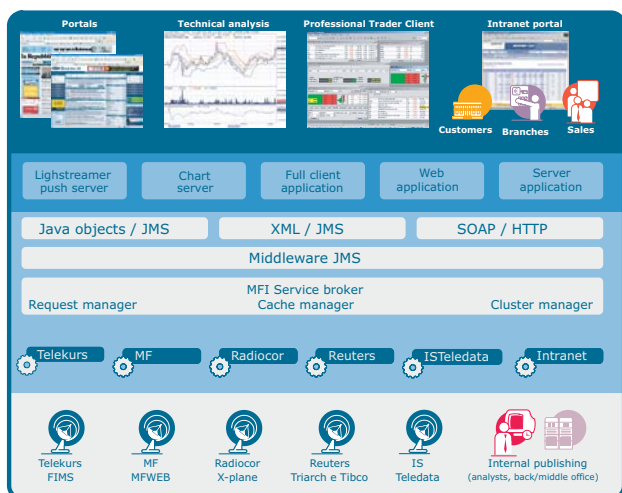
- provides Real-Time, global updates in PUSH,
- allows total configurability of layout, colours and content,
- is simple and sophisticated, thanks to its use of the classic paradigms of office automation (menu, icons, toolbar, drag and drop).

Developed using the very latest generation of pure Java (J2SE), with automatic version control and updates, provided by Java web start, makes it compatible with all types of proxy and firewall.

**MFI Cast Web** is the HTML front end for access to all financial information managed and delivered by **MFI Cast**.

Thanks to the highly innovative Lightstreamer technology, this front end offers realtime push in native HTML without using applets or ActiveX.

Both client applications are fully integrated with market order entry functionality, allowing complete online trading systems to be built.



users/channel

client application

server broker

info adapter

info provider



Every product is integrated with Lightstreamer© data push

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