



**GREY MATTER INDIA TECHNOLOGIES
PRIVATE LIMITED**

www.greymatterindia.com

CASE STUDY

**ONLINE STOCK BASED FINANCE
NETWORKING PORTAL**

CLIENT REQUIREMENT

The client envisioned an exhaustive financial community website for investors and traders allowing them to view dynamic real-time statistics online, procuring up-to-the-minute information, news, and user opinions on the current happenings in the stock market. The site would incorporate streaming videos with Sound ON/OFF feature to alert users about possible advantages and windfalls of certain stocks. The site will encourage users to create fantasy portfolios which would allow participation in various contests hosted by the site. The site would also focus on raising the bar of the user's online trading experience through numerous convenient features like instant messaging, blogs, a learning section and a store, among others and in addition to its business related attributes. The site would be expected to offer a unique and next generation viewing experience through the implementations of new technologies and web usability principles.

CHALLENGES

- Incorporation and management of up-to-date information, news, statistics and related data on the backend through RSS feeds.
- Development of a sturdy and dependable framework to support real-time update of content on the site.
- Endowing the website with the ability to handle millions of users simultaneously without a reduction in performance.
- Incorporation of advanced, cutting-edge web usability principles through AJAX while the development of numerous other features designed for enhancing the user's community networking experience.
- Maintenance of consistent load balance and harmonizing the simultaneous execution of various integrated features and options.
- Integration of RSS feeds and also ensuring safe and secure transfer of data.

TECHNOLOGIES USED

.NET (Visual Studio .NET) 2005	An apt managed code development requirement for handling the extensive project.
Windows 2000	A high level of functionality for online development provided by this stable and sturdy operating system.
MS-SQL 2005	A versatile, scalable, secure and low

	maintenance DBMS.
Rational Rose Enterprise Edition	Integrated tool best suited for modular architecture and iterative development of software.
Microsoft VSS (SCM & Backup)	Ideal client/server application providing stratified storage system of files.
Dreamweaver	Versatile web development tool with exhaustive support for CSS, JavaScript etc...

MANPOWER

Project Leader	1
Developers	5
Designers	2
Quality Assurance Testers	2

PLANNING

A four tier development approach was necessary to equip the site with numerous features and functionalities:

- MySQL Server Database, Tables, stored procedures etc... incorporated within the database layer
- The Data Access DLL responsible for accessing data from database are contained in the data access layer.
- All the business logic procedures for modules such as User Profiles, Blogs etc... forming the Business Layer.
- The GUI of the website formed by the User Interface layer

ARCHITECTURE

All business logic for modules like Offices, Properties, Maps etc... were a part of the Business Layer DLL which was developed in C#.NET and were compiled to a single Business DLL that directly interacted with the UI layer. All business logic was contained within the DLL for respective modules like Save [Add/Update], Delete, Get Single object, get multiple objects for listing and were designed to be capable of handling many more logics which were not related to the database. The data access DLL is contained within the data access layer and is responsible for accessing data from the database and built a generic query for insert, update, delete and select, depending on the business class. This DLL was used for data access process from database and all the business layer components were coded to use it. Only the complex retrieval of data from multiple tables was facilitated through stored procedures and everywhere else conditional syntax was implemented to ensure seamless performance of the website. Images, applications and data were called from their respective servers keeping the UI

layer free of any business logic and scalability was guaranteed by implementing sub-domains for various areas of the website.

DEVELOPMENT HIGHLIGHTS

A feature rich site was conceived providing a high level of customization through the implementation of Ajax driven PODS which is to date an intensively pioneering technology. The provision for selecting different layout themes, with 'drag-and-place' page content which was auto-saved by the site every time the user logged in. The site was designed in a way such that it continuously displayed dynamic content through the inclusion of RSS feeds, which involved interacting with third party providers, parsing a variety of content, queuing and presenting this content to users etc...Alerts about stock related information were formulated through streaming video content complete with Sound On/Off features and were stored and streamed through 'Userplane'. The heavy use of brand new technologies employed through advanced AJAX and others was compensated through the use of a robust framework ensuring smooth performance. Web usability guidelines were strictly adhered to during the development and the interface was easily navigable through the judicious use of AJAX, CSS and HTML controls. The site was developed and fully functional within a span of 6 months.

CLIENT FEEDBACK

"This was a large project and GMI performed beyond even our most ambitious expectations. We were hesitant to use an Indian firm for such a major project, but GMI showed professionalism and a staff that was eager to please us and easy to communicate with. Language was not an issue at any pint, as the entire GMI staff speaks excellent English. I was also impressed that they were ALWAYS willing to make time during our business hours to chat online or on the telephone to make sure that everyone was on the same page on the project. An A+ firm that we have now signed an ongoing contract with, and if you work with them then you will most likely do the same."