



**GREY MATTER INDIA TECHNOLOGIES  
PRIVATE LIMITED**

[www.greymatterindia.com](http://www.greymatterindia.com)

**CASE STUDY**

**HYBRID ADVERTISING NETWORK**

## CLIENT REQUIREMENT

The client needed an online as well as a P2P system designed for managing all online advertising activities with a view to increasing productivity. The system envisioned would allow users to assume the roles of publisher as well as the advertiser in an effort to reduce their online marketing costs and also provide them with the ability to publish their ads on their sites, bid for the ad listings and also have other advertisers circulate ads on their sites. The system would incorporate various types of advertising like photo, video, pod cast, blog and search advertising and would be easily operable and user friendly for advertisers and publishers alike.

## CHALLENGES

- Implementation of an online and P2P advertising network capable of managing all online advertising activities for users.
- Development of a versatile system allowing the mutual publishing of ads on sites.
- Providing a robust framework for rear end maintenance of user's publisher and advertiser profiles.
- Providing a tool to monitor the success of user's ads and providing updated information on metrics.
- Allowing user participation in bidding and management of their bidding accounts.
- Incorporation of a wide variety of advertising like photo, video, pod cast, blog advertising and search advertising.

## TECHNOLOGIES USED

PHP (Server Side Language)	Most appropriately suited to create dynamic web pages. Enables fast extraction of data out of a database for presenting it on the web page
JavaScript and AJAX (Client Side Language)	(Client-side Language) Cross browser support & faster loading time with light web pages that require no plug-in downloads. Scalable Javascript based controls to provide flexibility and enhance user experience and involvement.
MySQL Engine	A versatile low maintenance database management system which acts as a cross-platform compatible database component of the LAMP platform.
Red Hat Linux	License free, sturdy platform with open source code for extensive customization and with powerful multitasking abilities.

Apache Web Server	Server Ideal for serving static as well as dynamic content on the web in a safe and secure manner. Supports a variety of features while offering extendable core functionality
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## MANPOWER

Project Leader	1
Developers	4
Designers	2
Quality Assurance Testers	2

## PLANNING

The enormous structure of the website and the challenges involved necessitated the adoption of a four-tier approach that consisted of

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

## ARCHITECTURE

The website was mainly characterized by rich user data and featured extensive capabilities for online advertising management which entailed a PHP based design approach involving MySQL Server. PHP was used to develop modules like Ad Zones, User Profiles, Website Tagging, Uploads and other modules such that direct execution from the UI layer was possible and the corresponding PHP files consisting of the business logic for respective modules like Save (Add/Update), Delete, Get Single Object, Get Multiple Objects for listing were designed to possess the capability to handle much more logic not related to the database. Effective access to the database in an object oriented context was implemented using an interface translating the object logic to relational logic so as to communicate with the relational databases in an object-oriented manner. Access to the data base was enabled through the creation of an intermediary abstraction layer. 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**

The system was developed successfully to enable users to assume the dual roles of publisher as well as the advertiser in addition to the systematic management of all online advertising activities. The fully functional system facilitated the bidding process and provided a range of advertising like photo, video, pod cast, blog and search advertising while monitoring the success of user's ads and providing updated information on metrics. The second phase of development involved implementation of in-text advertising, greater functionality in video uploading and options for creating message board forums that host exclusive advertising and also enhancements such as the deployment of higher security features with accurate statistical information for better network monitoring. 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. Search Engine Optimization activities were regularly resorted to with a view to ensuring high visibility for the site over the internet. The site was developed and fully functional within a span of 4 months.

## **CLIENT FEEDBACK**

"My experience says there cannot be a better provider than GMI. If you have a major project and you need quality coding, on-schedule delivery and expertise...you are compromising if you choose another provider. Feedback and detailed reporting is done daily. Bugs are fixed daily. The speed of this team is absolutely remarkable. I have given them more projects and I can't imagine working with another team."