



**GREY MATTER INDIA TECHNOLOGIES
PRIVATE LIMITED**

www.greymatterindia.com

CASE STUDY

HYBRID ADVERTISING NETWORK



CLIENT REQUIREMENT

The site will be an online as well as a P2P system designed for managing all online advertising activities and increasing their productivity.

The system will allow users to assume the roles of publisher as well as the advertiser in an effort to reduce their online marketing costs.

Users will be able to publish their ads on their sites, bid for the ad listings and also have other advertisers circulate ads on their sites.

The system will include different types of advertising like photo advertising, video advertising, pod cast advertising, blog advertising and search advertising, among others.

The system will be easily operable and user-friendly for advertisers and publishers alike.

CHALLENGES

Implementing an online and P2P advertising network capable of managing all online advertising activities for users.

Developing a system versatile enough to allow users to publish their ads on their sites and also have other advertisers post ads on their sites.

Rear end maintenance of user's publisher and advertiser profiles through a robust framework.

Monitoring the success of user's ads and providing updated information on metrics.

Allowing users to participate in bidding and managing their bidding account.

Incorporating various types of advertising like photo advertising, video advertising, pod cast advertising, 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)	Crossover browser support with ability to create sophisticated user interfaces. Faster loading time with light web pages that require no plug-in downloads.
MySQL Engine	Versatile, low-maintenance database management system. Cross-platform compatible database component of the LAMP platform.
Red Hat Linux	License-free, sturdy platform with powerful multi-tasking abilities. Open source code allowing for extensive customization.
Apache Web 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.

MANPOWER

Project Leader	1
Developers	4
Designers	2
Quality Assurance Testers	2



PLANNING

Keeping in mind the enormous structure of the website and the challenges involved, a four-tier development approach was adopted, consisting of:

The Database layer containing MySQL Server Database, Tables, stored procedures and so on.

The Data Access layer containing the libraries responsible for accessing data from database.

The Business Logic layer consisting of all business logic procedures for modules like User Profiles, Ad Zones, Website Tagging, Video uploads and so on.

The User Interface Layer which forms the Graphical User Interface of the website.

ARCHITECTURE

PHP and MySQL Server formed the basis of development as the site was rich with user data and featured extensive capabilities for online advertising management. Ad Zones, User Profiles, Website Tagging, uploads and other modules were developed in PHP such that they can be executed directly from the UI layer. These PHP files consisted of all Business logics used 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 layer contained the libraries responsible for accessing data from database and built a generic query for insert, update, delete and select, depending on the business class. All business layer components were coded to use this library for data accessing process from database. Stored procedures were used only for complex retrieval of data from multiple tables and were entirely avoided with conditional syntax to ensure smooth performance of the website. The UI layer was kept free of any business logic with images, applications and data being called from their respective servers. Sub-domains were used for the different areas of the website to guarantee scalability.



DEVELOPMENT HIGHLIGHTS

The system successfully enabled users to play the dual role of publisher as well as the advertiser in addition to systematically managing all their online advertising activities. The system facilitated the bidding process and provided a range of advertising options like different types of advertising like photo advertising, video advertising, podcast advertising, blog advertising and search advertising while monitoring the success of user's ads and providing updated information on metrics. Prospective enhancements in the second phase of development involved implementing In-text advertising, greater functionality in video uploading and options for creating message board forums that host exclusive advertising. In addition to this, deployment of higher security features with accurate statistical information for better network monitoring was also in the pipeline. Web usability guidelines were strictly followed during development and the interface was made easily navigable through judicious use of AJAX, CSS and HTML controls. 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."