

<b>Name of the Project</b>	Electronic Lab Notebook
<b>Industry</b>	Life Sciences
<b>Technology</b>	Open sources - PHP, MySQL, and AJAX

### Business

The business of the client is to deliver specialized technological IT solutions for life sciences, R&D and other related industries. Client deals with various lab organizations where the experiment data was handled manually.

The need to organize experiment data electronically which can be shared and edited collaboratively by fellow research scientists was impending to the client. The goal of the system is to improve organizing the experiment data in efficient manner which overall will improve the productivity of research scientists and experiments. The system should be able to capture experiment data, share experiment data with other users which can thus be edited collaboratively, define and manage custom workflows for experiments.

### Client

Client is a leader in providing custom and packaged IT solutions to various highly competitive life science Organizations and labs in Europe and North America.

### Challenge

Client wanted to define custom workflows and experiments which were abstracted so that the labs can customize these workflows depending upon their requirement. This required a though understanding of the life sciences systems, terms and process and hence needed a complex database design so that the custom workflow and experiments can be handled.

The other major requirements of the system were to have the flexibility of designing custom fields for each experiment. This required a more generic database design abstracted at a higher level to achieve customization.

### Solution

We provided a web based solution that supported all of the features that the customer was interested in. The solution was based on open source web2.0 technologies using PHP, MySQL, and AJAX. For ease of navigation AJAX technology was used. Screens were designed in such a way the end user can conveniently enter and update experiment data. For improved data consistency, thorough input data validation was performed using client-side scripts, server-side checks.

The system provided various levels of security policy regulating user access to data and functions for various functionalities of the system. One of client requirement was to implement reporting and export them to PDF files. The reports can be viewed and printed from a pop-up Web browser window or exported to PDF files and can be saved to local systems.

### Benefits

Electronic lab notebook eliminates the manual paper entries and improves the overall research productivity by maintaining a secure paperless research data which can be shared and edited by various research scientists. Customized workflows can now be defined depending upon the experimental requirements which give a complete flexibility of handling data.