

Design and Implementation of an Open Source Web-based GIS Framework for Rapid Development of Business Intelligence Applications

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SUMMARY

As a planning and data visualization tool GIS has found itself a place in countless disciplines such as epidemiology, road transport, business management and governance. The expanding volume of data set available to GIS reduces the usefulness of simple applications, because being presented with a map overlay of 10 thousand objects doesn't help a manager in decision making. However Business Intelligence (BI) helps by identifying patterns of interest in the countless volumes of data. This shows that the need for integrating business intelligence into applications is more critical than ever. Even though many Open source GIS Web Mapping Frameworks have been developed it seems that they do not provide BI communication between modules. Development time is high for building BI solutions with graphical reporting and mapping, because these frameworks give the ingredients but leave the developer to cook all the BI. What makes the proposed framework interesting is its ability to share BI between existing and new modules using two simple concepts called triggers and actions. The approach adopted for the project is the popular agile software development method, which allows flexible planning and deployment of software. The proposed framework intends to create a new breed of open source web based GIS Development framework that positions the developer for rapid building of spatially enabled business applications. The web applications built with the framework will be highly configurable by the end users and easily extendable by developers.