

Current Architecture

Review of Current Architecture and Implementation

The majority of the GIS functionality in Market Maker is provided by ESRI products such as ArcIMS. The map images are rendered on the server-side (ArcIMS) and are fed to the client (see Figure 1). This requires all the rendered map layers to be supported and registered with the ArcIMS service. The advantage of this architecture and implementation are the advanced rendering capabilities offered by ESRI ArcIMS and the limited in house work required to make new features available since ESRI has done most of the implementation. Commercial vendors, however, tend to be slower to respond with bug fixes and new features so technological improvements that are still in incubation stage cannot be explored until the commercial vendor adds them to the software release.

Another disadvantage is that the implementation technology is limited to the software stack ESRI provides, such as ArcIMS, ArcObject, ArcXML. These technologies, while providing powerful geospatial management and computation, currently do not have flexible and intuitive user interfaces and are difficult for many users to comfortably navigate. Handling everything with server-side technologies limits both the amount of interactivity and responsiveness of the user interface and restricts the types of problems that can be solved as the functionality delivered by the ESRI stack is determined by ESRI.

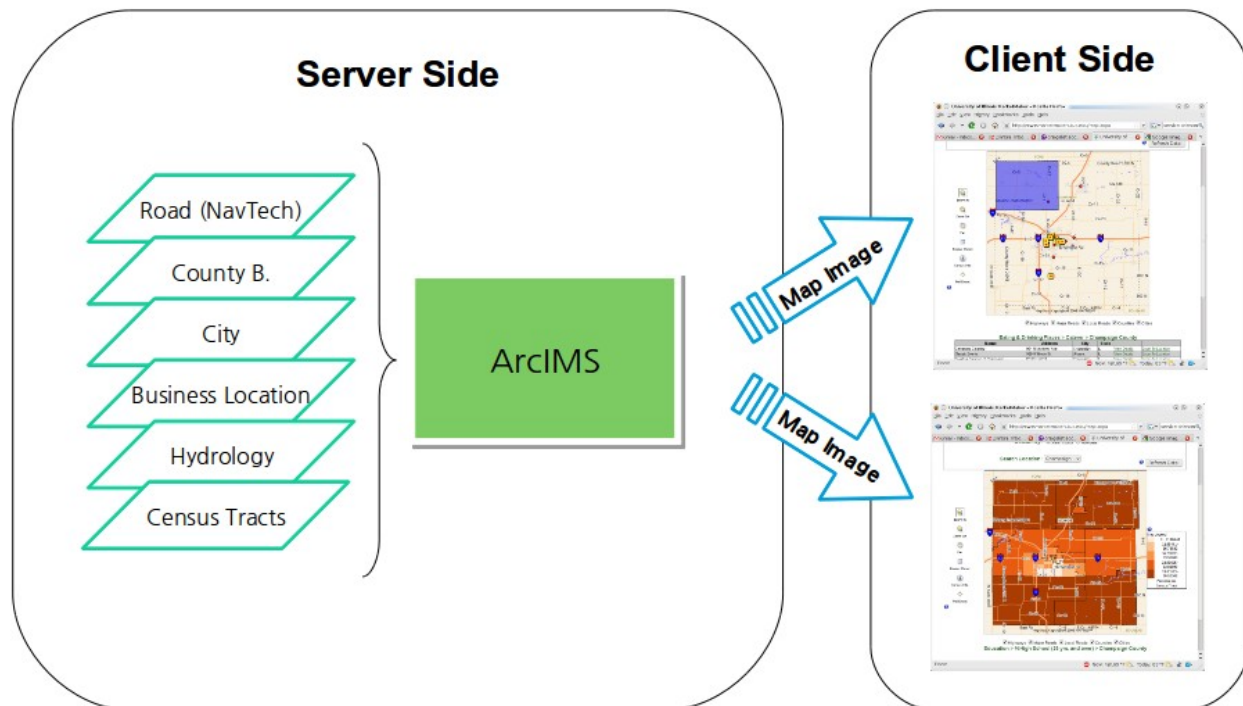


Figure 1. Existing Architecture