

Pushing the envelope...

New and innovative ways to
leverage Open Source Toolkits for
the ERMA portal

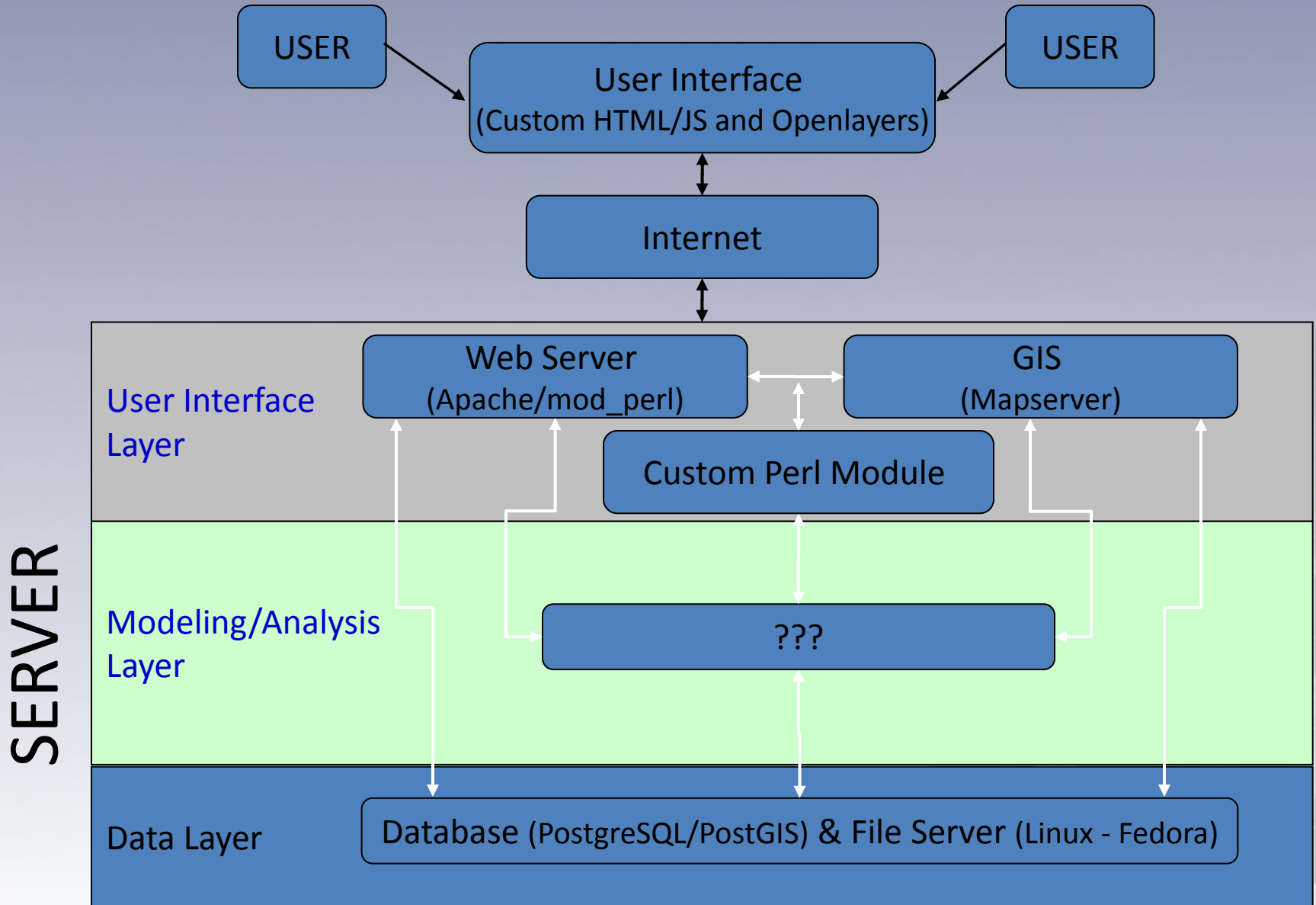
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Architecture



Current Architecture

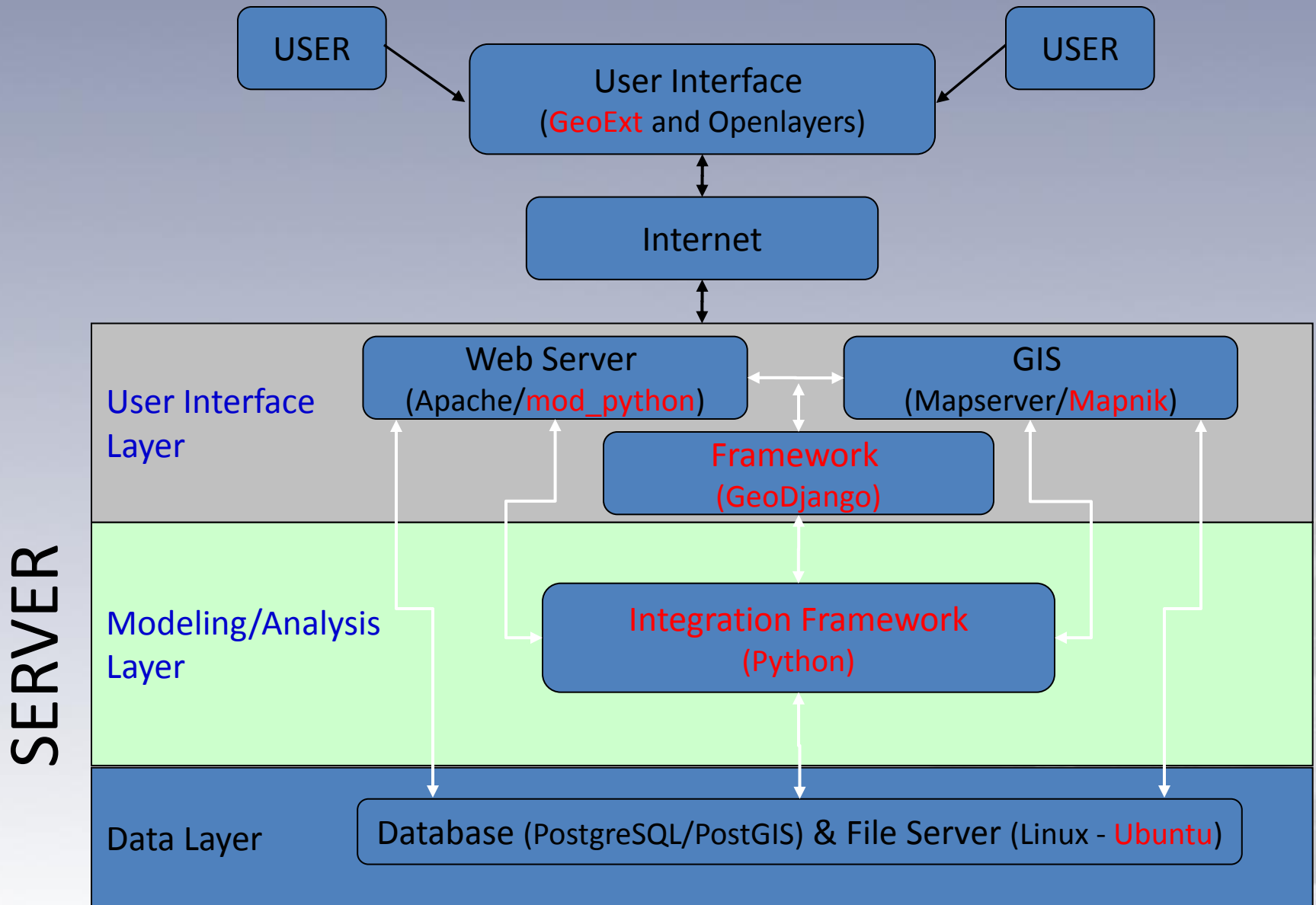


Architecture Direction

- **Consolidation of Languages**
 - Migrate to Python where it makes sense
- **Integrate frameworks**
 - GeoDjango – Authentication, REST Services, Admin
 - GeoExt – UI Layout, Cross Platform Support
- **Increase ease of deployment**
 - Automate with install scripts
 - Reduce dependencies



Possible Future Architecture



Current Short List

- **Shortcuts for speed**
 - Server/Connection speed
 - Faster map requests via Caching (TileCache)
 - Database optimization (indexing, normalization)
 - Avoid on-the-fly reprojection – Harmonize into common projection
- **Frameworks and Libraries for:**
 - Security
 - Wrapping WMS/WFS services in authentication framework
 - Cross Platform Support
 - Get IE support enabled
 - UI Layout optimization
 - Increase map size
 - Online help
- **Increased print functionality**



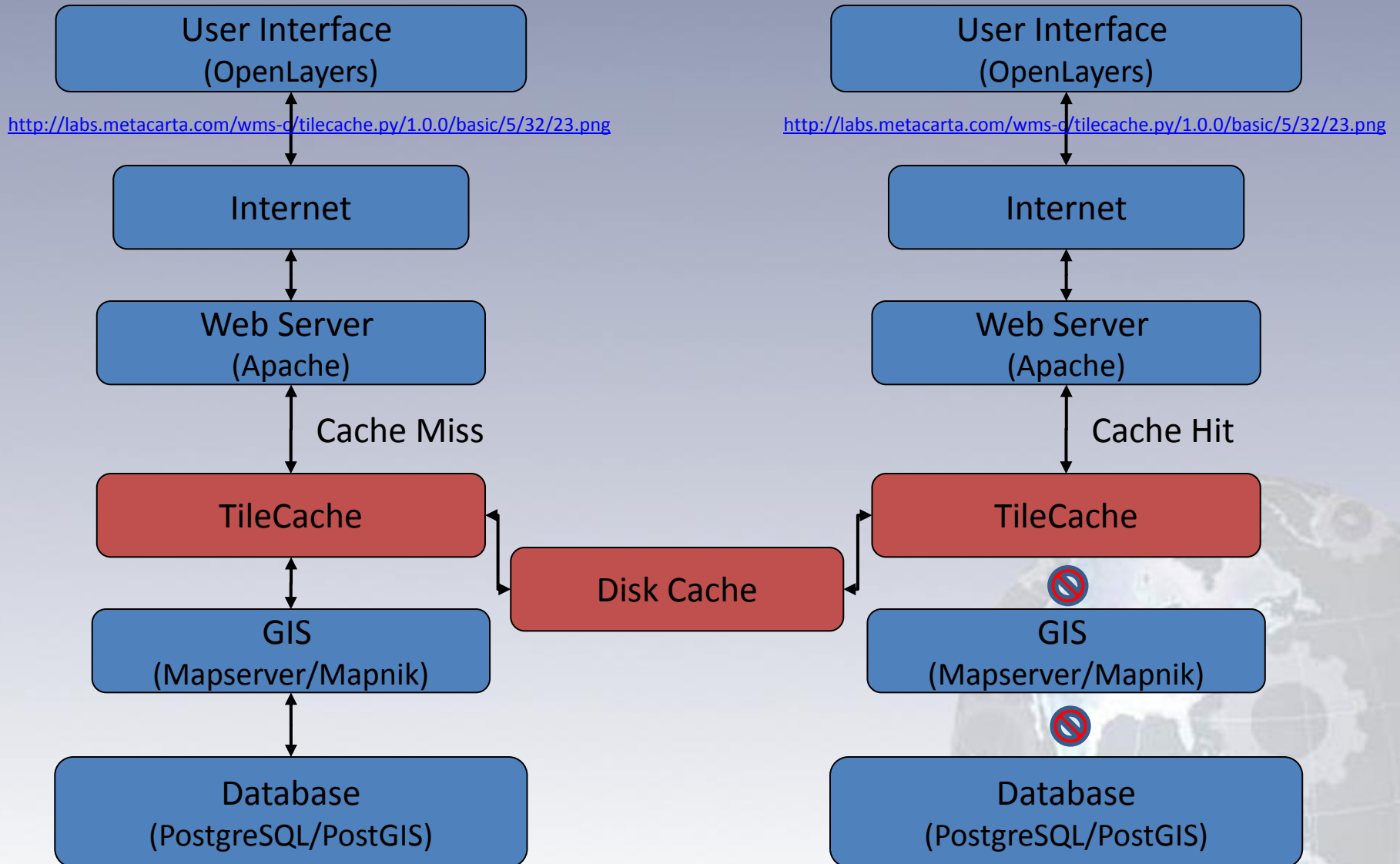
Current Long List

- Batch uploads
- Search and Query capability
- Enhanced Reporting
- Incorporate 3rd party datasets (IOOS etc), both WMS/WFS/WCS
- Custom groups for categorizing users, AOI's, visible datasets, etc.
- Bookmarks for quickly allowing users to scale to a project scope in the interface

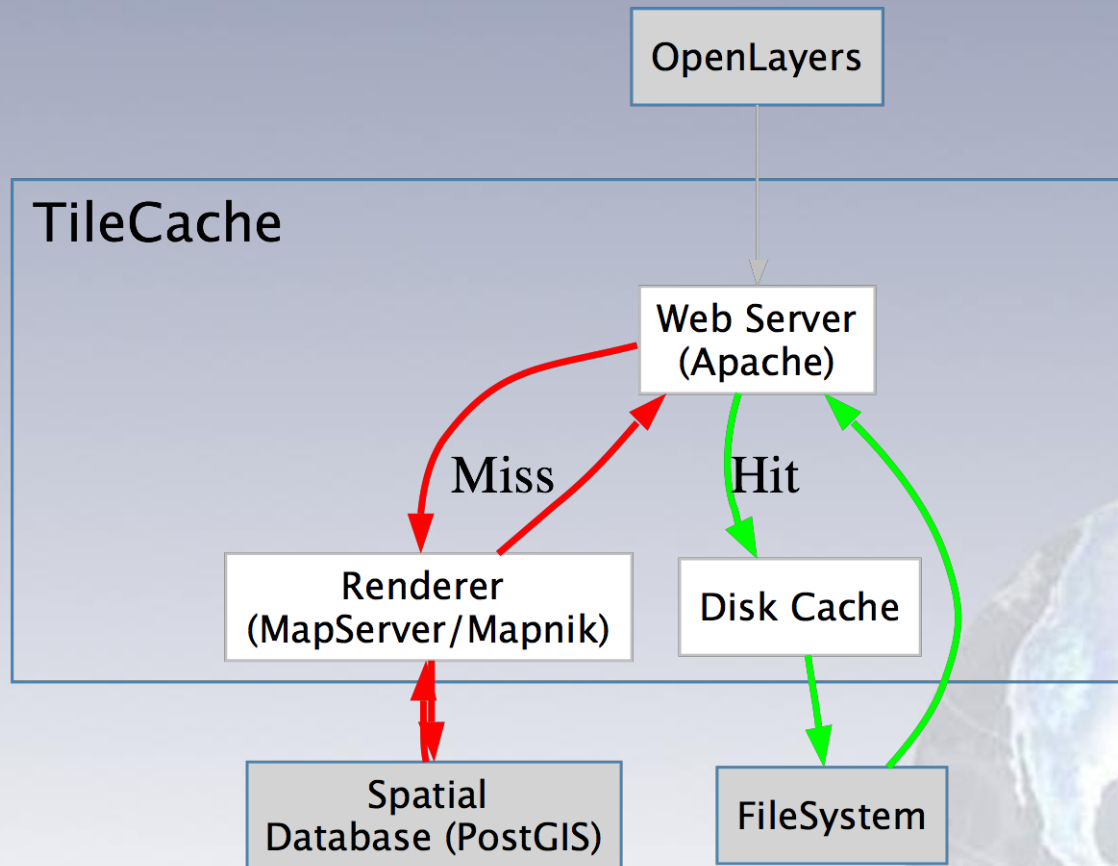
Speed



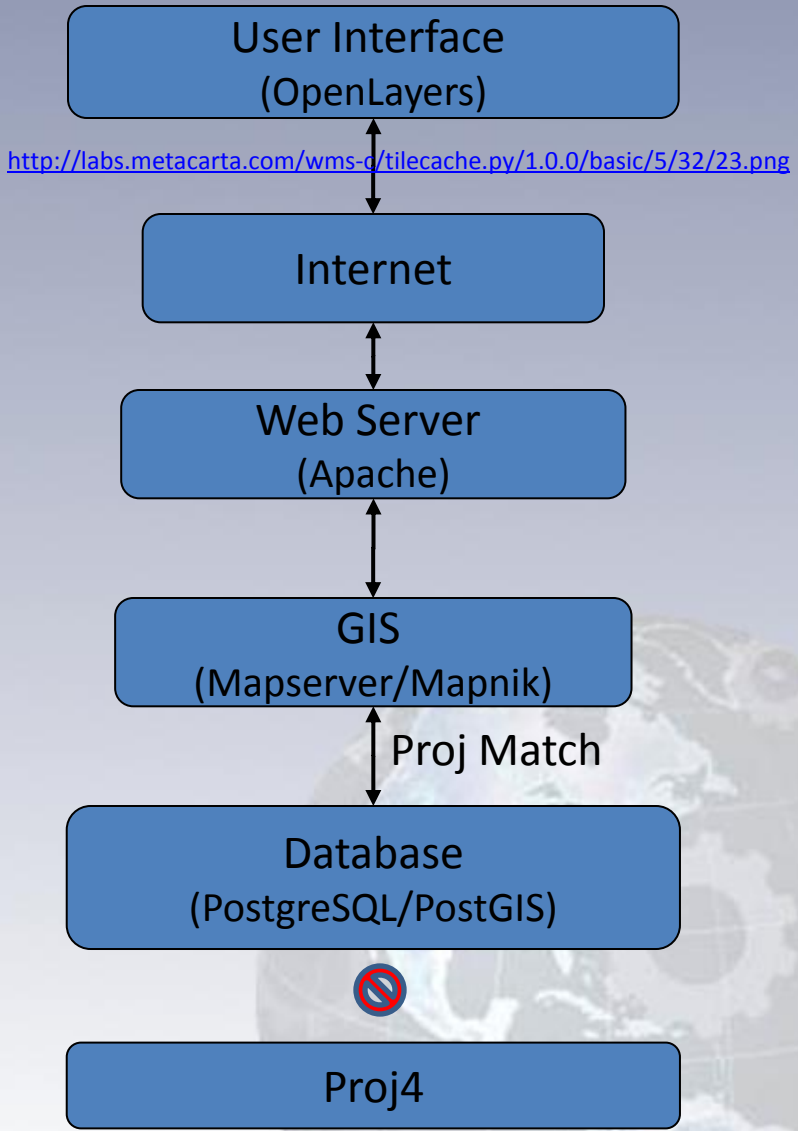
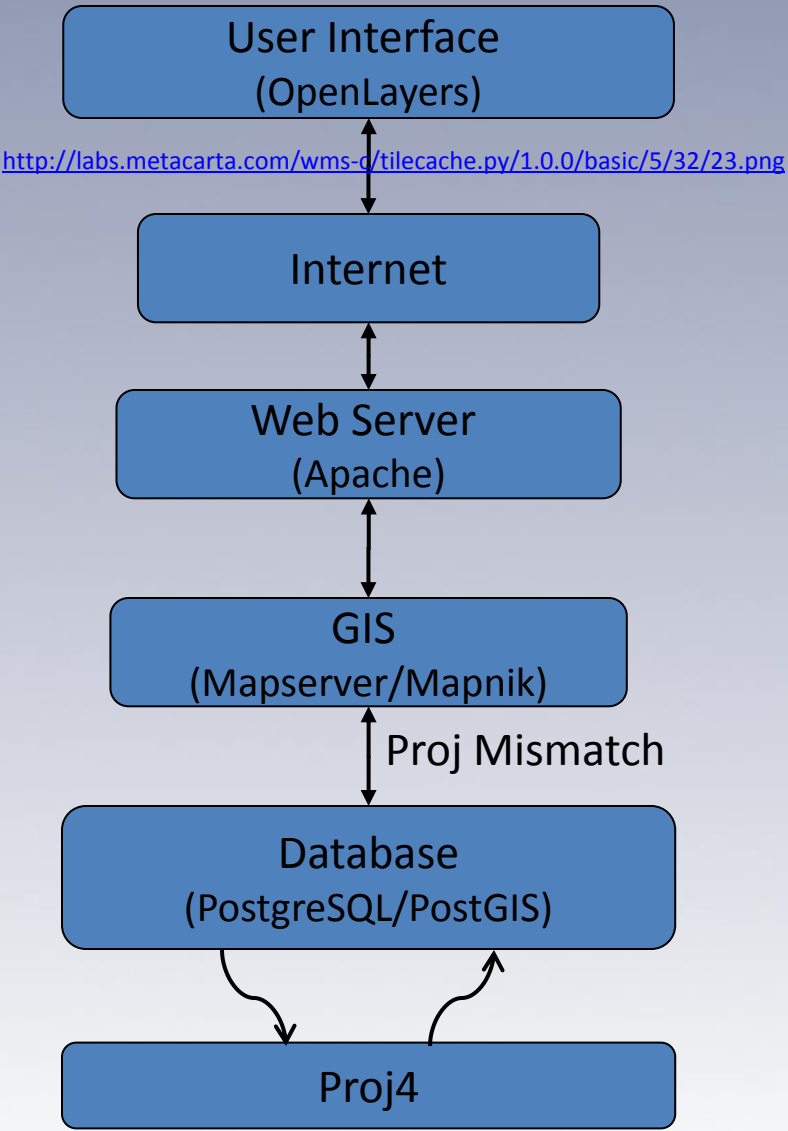
Tile Serving with TileCache

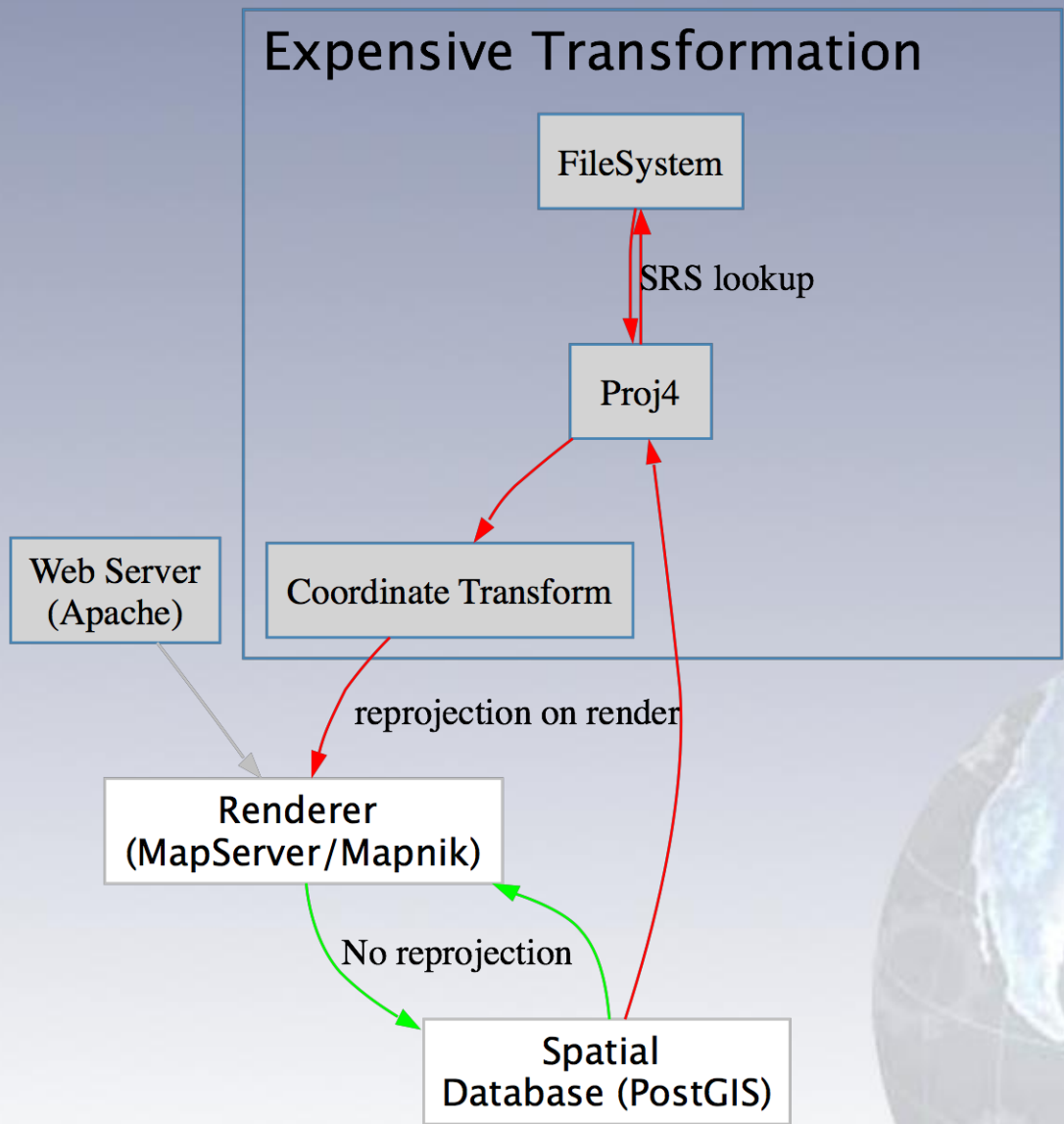


Tile Serving with TileCache



Projections





Frameworks



ExtJS

The screenshot shows the ExtJS website homepage. The main heading is "Introducing Ext Core 3.0". Below it, a paragraph describes Ext Core as a lightweight, high-performance cross-browser JavaScript library. A list of features includes: highly portable 25kb file size, flexible MIT license, comprehensive 75-page manual, and an easy-to-use API. A "DOWNLOAD NOW" button is prominent. The page is divided into sections for "Ext JS 2.0" and "Ext GWT 1.2", each with a "Learn More" button. A "3.0" badge is visible in the bottom left corner.

GeoExt

The screenshot shows the GeoExt website homepage. The main heading is "JavaScript Toolkit for Rich Web Mapping Applications". A search bar is located at the top right. The page is divided into sections: "Download" (Current release: 0.5), "GeoExt News" (GeoExt 0.5 released), "Using GeoExt" (See GeoExt in action), and "GeoExt is Open Source". A code snippet for a map window is shown in the "Using GeoExt" section. A "Run it!" button is located below the code. The footer contains the copyright notice: "© Copyright 2009, GeoExt Community."

Django



GeoDjango



Rendering



Mapserver

The screenshot shows the MapServer website homepage. The browser title is "JavaScript Toolkit for Rich Web Mapping Applications - GeoExt v0.5 - Mozilla Firefox". The address bar shows "http://mapserver.org/". The page features the "MAPSERVER" logo in a large, stylized font. Below the logo, there are navigation links for "Home | Docs | Issue Tracker | FAQ | Download". The main content area is titled "Welcome to MapServer" and includes a description of the platform as an open source tool for publishing spatial data. A map of Sydney, Australia, is displayed on the right side of the page. Below the map, there is a "Table of Contents" section with links to "Announcements", "Documentation", and "Download". The "Announcements" section lists several releases, including MapServer 5.4.1, 5.4, 5.2.2, and 4.10.4. At the bottom of the page, there is a "FOSS4G Sydney 2009" logo and a "Cost" of "\$2.3M".

Mapnik

The screenshot shows the Mapnik website homepage. The browser title is "OpenLayers: Home - Mozilla Firefox". The address bar shows "http://mapnik.org/". The page features the "mapnik" logo in a large, stylized font. Below the logo, there are navigation links for "Home News FAQ Demos Download Trac Documentation Maps Contact Licence". The main content area is titled "Welcome" and includes a description of Mapnik as a free toolkit for developing mapping applications. A map of Helsinki, Finland, is displayed on the right side of the page. Below the map, there is a "Support Mapnik" section with a "Donate" button and a "Get Mapnik 0.6.0" section with "Source" and "win32 binaries" buttons. The "Getting Started" section includes links to "Documentation" and "Installation Guide". At the bottom of the page, there is a "10 EAST" logo and a "Copyright © 2009 Artem Pavlenko" notice.