



## SuperGIS 3D Earth Server 3.2 Specification

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### Specification

- I. Resource publishing tool: 3D Earth Administrator
  1. Support to use 3D Earth Administrator, which is an add-on of the SuperGIS Desktop or SuperGIS Map Designer, to publish 3D map services through internet connection.
  2. Support to store all the published data to a database for easy management.
  3. Supported file format:
    - Vector data: SHP, GEO, KML
    - Raster data: BMP, PNG, LAN, GeoTIFF, ECW, SID, JPEG2000, JPEG, SGR, TIFF, USGS SDTS DEM, ASCII DEM, GIF , MrSID, DGN, CSV
    - Model data: KMZ, 3DS, X, CityGML
  4. Support to publish multiple DEM model in a single 3D map services and display them simultaneously.
  5. Support to publish the GIS data in 2 different ways, which are uploading physical data and uploading cached images.
  6. Provide different options for the cache image output format, including PNG8, PNG24, PNG32, JPEG °
  7. Support cache image smoothing process.
  8. Support to assign specific layers and define scale definitions to generate cache image.
  9. Provide English and Mandarin interface.
  
- II. SuperGIS 3D Earth Server managing interface: SuperGIS 3D Earth Server Manager
  1. Provide an integrated interface, called SuperGIS 3D Earth Server Manager, for managing the published services, building and managing the 3D globe websites, and managing user accounts.
  2. Support multiple users.
  3. Provide services managing interface to manage published services and browse the service details.



4. Provide 3D globe website managing interface to build, manage, edit, and browse the websites and their detail settings.
  5. Provide user account managing interface to manage multiple users, including their authorizations and abilities:
    - Abilities: the ability to publish services, log in SuperGIS 3D Earth Server Manager, and access server data.
    - Authorizations: account starting data and expiration data, administrator authorization, and account validation.
- III. Provide web applications to view the 3D globe services. The web applications includes the features below:
1. Support to use web browsers to view the web application without installing any add-on. The supported web browsers include Firefox (15.0 or above), Chrome(21.0 or above). Safari(5.1 or above), Opera(12.0 or above) °
  2. Provide internet dynamic globe model based 3D windows environment services to allow user to view the map services.
  3. Support to open and display vector data, raster data, DEM models, and 3D models.
  4. Support to display multiple 3D globe services on a single web application.
  5. Support to set the exaggeration of the elevation model, and support to display multiple DEM models simultaneously.
  6. Support the level of detail (LOD) of the 3D models.
  7. Provide map control tool, including zoom in and out, pan, and viewing angle control.
  8. Provide length, area, and altitude measuring tool.
  9. Support to draw different geometries to mark features, including point, line, and polygon geometries.
  10. Support to overlay kml, kmz data, and CityGML.
  11. Provide index map.
  12. Provide label function to label features on the 3D platform.
  13. Provide positioning and searching functions.
  14. Support to overlay OGC images, including OGC KML, OGC WMS 1.0.0, 1.1.1, 1.3.0, and OGC WMTS 1.0.0.



15. Provide sharing function to share the map, landmarks, and notes to your friend via e-mails.
  16. Provide JavaScript API to assist developers to access the services and customize the website.
- IV. Support multiple spatial databases.
1. The supported databases are:
    - Microsoft SQL Server 2008 Spatial.
  2. Support to read, write, save, and manage spatial data.
  3. Allow multiple users to access the database simultaneously.
  4. No limitation on the database storage.
- V. Supported OGC formats:
1. OGC WMS 1.0.0, 1.1.1, 1.3.0
  2. OGC WMTS 1.0.0
  3. OGC KML
- VI. System requirement:
1. Server side:
    - CPU: Pentium IV 2.2Ghz or higher.
    - RAM: 4GB recommended or higher.
    - Operating system:
      - a. Windows Server 2003/R2 Standard, Enterprise and Datacenter
      - b. Windows Server 2008 (32/64 bit) /R2(64 bit)
      - c. Windows Server 2012/R2
    - Software requirement:
      - a. IIS : 5.1 or higher.
      - b. .Net Framework 2.0 SP2 or higher.
    - Suggested bandwidth:
      - a. Intranet : 100Mb or higher.
      - b. Internet : 4Mb/1Mb (download/upload) or higher.
    - Communication environment:

On the server side, the communication between each AP is via intranet. The communication environment between server and

client is via internet, which is based on web services to access data. The communication protocol is HTTP, and the COM port is port 80. However, different client software can be set up with different settings.