

Comparison chart

This page lists technologies considered or used in the SKOPE system.

	References	General problem	Specific approach	Advantages	Limitations	Team experiences
AngularJS						
Clowder	Document ation	Data management	Automate processing of new data.	Extend with extractors that process data based on data type.	Supports simple data processing workflows only.	
Django						
Docker						
Electron						
Flyway		Database migration				
GeoJP2	GDAL driver TNTGis docs JPEG2000 OpenJPEG codec License /trademark issues	Raster tile format for <i>display or storage</i> .	Extend JPEG2000 with georeference metadata.	- Supports both lossy and lossless compression. - Generally higher compression than PNG.	- JPEG2000 not widely supported in web browsers. - No transparency support.	
GeoServer	Website	Serve geospatial data using OGC web services.		Web dashboard, web previews of web services.		
GeoTIFF	GDAL support GeoServer/GDAL GeoTIFF specification TIFF 6.0 specification TIFF FAQ	Raster tile format for <i>storage</i> .	Extend TIFF format with georeference metadata.	- Supports both lossy and lossless (DEFLATE) compression. - Internal data layout can be optimized for expected data access patterns.		
Girder	Document ation	Data management	Share data via RESTful services			
JPEG	TNTGis docs	Raster tile format for <i>display or storage</i> .		- Supported in web browsers. - Generally better compression than PNG.	- Data storage always lossy - No transparency support	
Leaflet						
MapServer	Website Architecture	Serve geospatial data using OGC web services.		Configured through Mapfiles		
MBTiles	Overview Specification	Raster tile storage			Stores all tiles in a single SQLite file	
Mockito		Unit testing	Mock Java classes			
NodeJS						

NetCDF	• Documentation • GDAL driver • CF Conventions	Raster tile format for <i>storage</i> .		• Raster data standard of paleoenvironmental community (Unidata/UCAR) • Data in NOAA paleoclimate community in this format • "Self-documenting"—flexible metadata in xml that can fit diverse datasets • Can be compressed many ways, including DEFLATE (same as PNG)		
PNG	• libpng reference library • libpng manual	Raster tile format for <i>display</i> or <i>storage</i> .		• Supported in web browsers. • Lossless compression • Higher compression than JPEG and JPEG2000 for images with many identical pixel values. • Transparency support facilitates display of irregular overlays.		
PostGIS						
OAuth						
Rasdaman - Raster Data Manager	• rasdaman.org • Installation and administration (video) • Wikipedia	Spatio-temporal database	Array database with SQL-like query language and support for OGC interface standards.			
React						
Socrata	• Website • Datasheet	Data management			• For government organizations sharing government data	
Spring Boot						
Web World Wind	• webworldwind.org	Web-based visualization of geographic information				