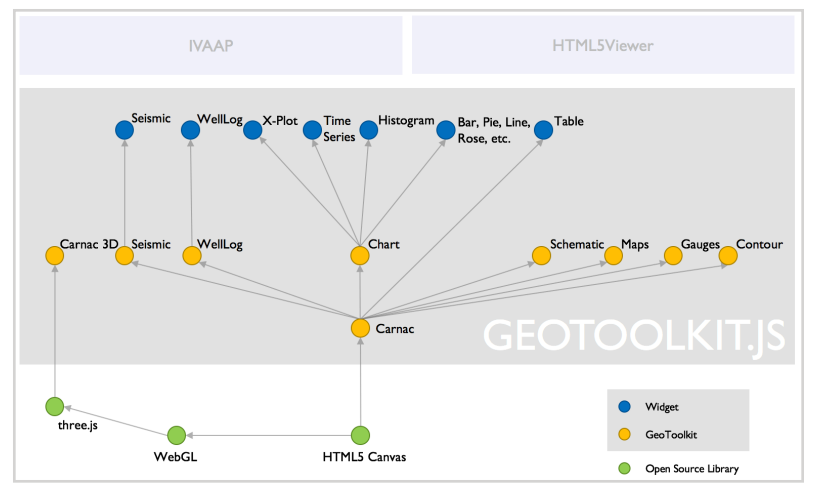


# GeoToolkit.JS 2020

## Features and Architecture Overview



GeoToolkit Architecture

### E&P Libraries and Widgets

WellLog		Seismic		Schematics		3D	
<b>WellLog Visuals</b>	<b>WellLog Widget</b>	<b>Widgets</b>	<b>Data Processing</b>	<b>Display Features</b>	<b>Display Features</b>		
Log curve	Display single well log data	Seismic widget	Interpolation (linear, quadratic, step)	Linear or compressed	Grid		
Discrete curve	Vertical or horizontal view	Seismic widget with trace header table	Normalization (maximum, average, RMS, specific limits)	Vertical or deviated	Compass		
Tick curve	Template support	Seismic widget with auxiliary graph	Taper filter	L-shaped	Three.js library integration		
Value curve	Interactive tool support	Trace headers table view	Automatic gain control	Multi-string	Different cameras		
Gradient curve	Time or depth-based data	Annotations overlay	<b>Data Formats</b>	High-quality SVG symbols	Well trajectory		
Stacked curve	Real-time support	<b>Display Features</b>	SEG-Y	Labeling and annotations	Log curve: cylinder or 2D		
Fill between two curves or base line	PDF printing	Wiggles	Memory data source	Real-time	Log fill		
Gradient fill	Custom header/footer	Positive and negative fill	Remote data source	Fluid levels	Array log		
Stacked fill	<b>Headers</b>	Variable density with custom color map	INTGeoServer integration with trace decimation and data compression	Lithology	Well annotations		
Marker (tops)	Curve	Trace headers	Custom source	Well log track	Vector object		
Lithology	Fill	Variable trace spacing	IVAAP integration with decimation and data compression	Options to integrate own schematics elements library (vector/raster images)	Surfaces		
Annotations	Lithology histogram	Waveform pattern	<b>Real-Time Support</b>	<b>Widgets</b>	Height maps		
Array log	Track	Decimation and clipping	Real-time traces	Widget schematic	Seismic slices		
Tadpole	Collapsed	Vertical or horizontal view	Waveform	L-Shape schematic widget	Seismic overlays		
Rose diagram	Composite	Trace headers table	DTS acquisition	Multilateral schematics	Pointset (microseismic)		
Density log	Custom/third-party headers	Time slices in base maps	Shot monitoring	Deviated schematics	2D map		
Image log	<b>Tracks</b>	Auxiliary graph	<b>Export</b>	<b>Contour</b>	Animations		
Raster log	Linear	Base map	PDF	<b>Display Features</b>	Picking		
Core image	Logarithmic	Overlay support	CGM+	2D/3D	Reservoir grid		
Cross-section	Axis	Variable trace spacing		Isolines with labels	Schematics		
Waveform (requires seismic module)	Navigation			Smoothing	VTK formats		
Custom/third-party visuals	<b>Tools</b>			Label collision detection	Seismic volume support		
<b>Correlation Widget</b>	Ghost tool (linear and deviated tracks)			Colormap-based fill	ScatterPlot		
Display multiple wells	Tops editor			Faults	GigaGrid		
Supports header/footer	Curve and marker editor			Overlays			
<b>Data Formats</b>	Drag and drop tool			<b>Types</b>			
LAS	<b>Misc</b>			Regular rectangular grid			
Data Object Model	Responsive (level of details)			Arbitrary triangular grid			
<b>Deviated View</b>	Annotation overlay			Gridding algorithms: Kriging and ThinPlate			
Deviated view (existing visuals)	LAS 2 writer						

### Generic Libraries and Widgets (CARNAC Modules)

Base 2D Graphics		Charts		Maps		Gauges/Alarms	
<b>Scene Graph: Graphical Primitives</b>	<b>Axes and Grids</b>	<b>Misc</b>	<b>Types</b>	<b>Display Features</b>	<b>Display Features</b>		
Line/polyline	Regular interval	Color bar	Area	Support for different layers	Circular		
Polygon	Adaptive (depending on current on zoom factor)	Legends	Bar	WMTS services: Google, MapQuest, ESRI, OpenStreet map, Bing	Half-circular		
Rectangle	Logarithmic	Color providers	Box plot	ArcGIS GeoServices (feature, map service)	Linear		
Ellipse	Time-based	Scrollbars	Bubble	ArcGIS web map	Numeric		
Arc	Automatic step and limits	Support of CSS styles	Donut	ArcGIS query/identify/legend API support for ArcGIS servers	Digital		
Arrow	Finite / Infinite axes	Support of CSS 2D transform	Histogram	GeoJSON support	Traffic		
Generic path (bezier)	<b>Node Layout</b>	Support CSS text-transform	Table	KML support	Multi-value		
Spline	CSS	Persistence	Pyramid	GeoRSS	Custom gauges		
Symbol	Vertical/horizontal	JSON schema	Line	Stream service	<b>Time Series</b>		
Text	Grid	Units	Pie	CSS	<b>Display Features</b>		
Image	Annotated	Transition animation	Radar	Limited Error Raster Compression format	Customizable time axis		
Tiled image	Margins and padding	Responsive style (supports level of details)	Rose	Coordinate systems	Annotations		
Groups	<b>Table Widgets</b>	HTML text formatting	Cross plot	Vector tiles	Overlays		
Pyramid image support	Large dataset	Internationalization/localization	Stacked area	Overlays	Fill/fill between		
<b>Interactive Tools</b>	Sort	Abstract layer for http communication	Tornado	Symbols aggregation	Interpolation modes		
Cross hair	Cell editing	<b>Generic</b>	XY Line chart	Symbol aggregation as bubble chart	Linear/logarithmic		
Rubber band	Custom cells	<b>Supported platform:</b> Mobile, Desktop (Chrome, etc.), Node JS	Heat map	Smart labeling	Micro Positions		
Point and area selection	<b>Data Source</b>	<b>Supported frameworks:</b> Angular, React, VUE	Multiseries	Tool to measure distances and area	<b>Reports</b>		
Shape Editor	Data Series: represent a single series of values	<b>Supported languages:</b> TypeScript, JavaScript (ES5, ECMAScript 2015 (ES6) and beyond)	Peity (small charts)	GPX format support	<b>Display Features</b>		
Elastic zoom and scroll	Data Table: a group of data series organized as table		Treemap	Optional UI floating control	Document Preview		
DOM tools	Data View: read-only sub view of data series/table		Flow charts	Infinite horizontal scroll	PDF		
Measure Distance	Data Set: a set of data tables		Multi-histogram	Contour layer (requires Contour module)			
<b>Export Options</b>			Linear / non-linear regression				
Image			Regression line				
PDF			Cross-section				
CGM			Real-time support for all charts and widgets				

