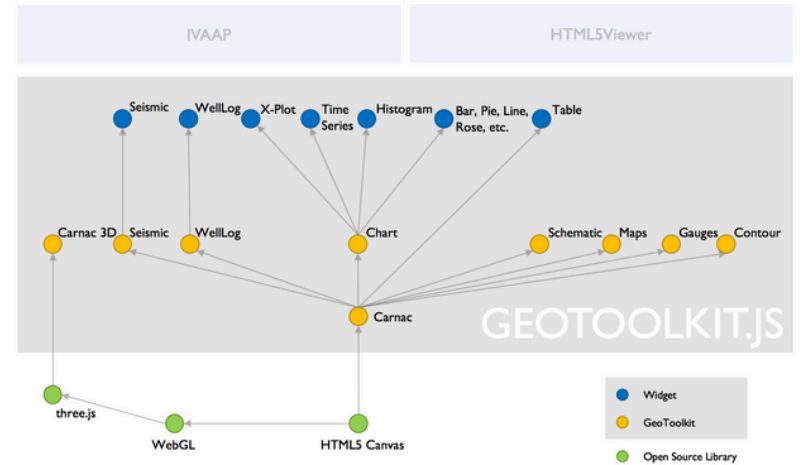


GeoToolkit.JS 2024.1 (4.2)

Features and Architecture Overview

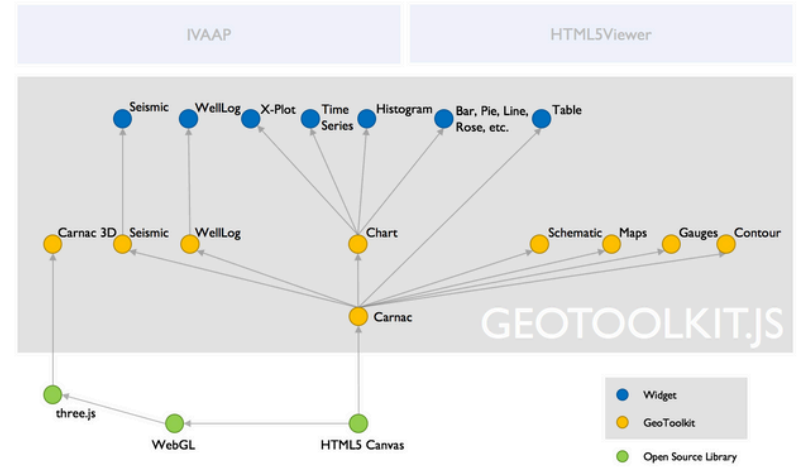


E&P Libraries and Widgets

WellLog		Seismic		3D	
<p>WellLog Visuals</p> <ul style="list-style-type: none"> Log curve Discrete curve Tick curve Value curve Gradient curve Stacked curve Fill between two curves or base line Gradient fill Stacked fill Marker (tops) Lithology Annotations Array log Tadpole Rose diagram Density log Image log Raster log Core image Cross-section Waveform (requires seismic module) Custom/third-party visuals Cutoff log Micropositions <p>Correlation Widget</p> <ul style="list-style-type: none"> Display multiple wells Supports header/footer Option to share the same template between wells Horizontal mode Lazy loading for proxy well Attached / deatched headers and footers Proportional / equal distance spacing between wells <p>Data Formats</p> <ul style="list-style-type: none"> LAS Data Object Model 	<p>Deviated View</p> <ul style="list-style-type: none"> Deviated view (existing visuals) Attached header / footer Fills to accumulation cycle visual <p>WellLog Widget</p> <ul style="list-style-type: none"> Display single well log data Vertical or horizontal view Template support Interactive tool support Time or depth-based data Real-time support PDF printing Custom header/footer Cursor tracking tool Zones support Auto depth limits <p>Headers</p> <ul style="list-style-type: none"> Curve Fill Lithology histogram Track Collapsed Composite Custom/third-party headers Cursor tracking <p>Tracks</p> <ul style="list-style-type: none"> Linear Logarithmic Axis Navigation Tangential Split track 	<p>Misc</p> <ul style="list-style-type: none"> Responsive (level of details) Annotation overlay LAS 2.0 writer LAS 3.0 writer <p>Tools</p> <ul style="list-style-type: none"> Ghost tool (linear and deviated tracks) Tops editor Curve and marker editor Drag and drop tool Lithology editor Interactive annotation editing Symbols mode to Log-MudLog Section Paint annotations Depth-shifting <p>Schematics</p> <p>Display Features</p> <ul style="list-style-type: none"> Linear or compressed Vertical or deviated L-shaped Multi-string High-quality SVG symbols Labeling and annotations Real-time Fluid levels Lithology Well log track Options to integrate own schematics elements library (vector/raster img.) Support for Reach Native <p>Widgets</p> <ul style="list-style-type: none"> Widget schematic L-Shape schematic widget Multilateral schematics Deviated schematics Tooltip tool Dual schematics widget 	<p>Widgets</p> <ul style="list-style-type: none"> Seismic widget Seismic widget with trace header table Seismic widget with auxiliary graph Trace headers table view Annotations overlay <p>Display Features</p> <ul style="list-style-type: none"> Wiggles anti-aliasing Positive and negative fill Variable density with custom color map Trace headers Variable trace spacing Waveform pattern Decimation and clipping Vertical or horizontal view Trace headers table Time slices in base maps Auxiliary graph Base map Overlay support Variable trace spacing Horizon picking tool Transparency support for each type of density, fills, traces and traces by status <p>Data Processing</p> <ul style="list-style-type: none"> Interpolation (linear, quadratic, step) Normalization (maximum, avg., RMS, specific limits) Taper filter Automatic gain control 	<p>Data Formats</p> <ul style="list-style-type: none"> SEG-Y Memory data source Remote data source INTGeoServer integration with trace decimation and data compression Custom source IVAAP integration with decimation and data compression Azure SEG-Y reader IVAAP integration with decimation and data wavelets based and ZFP compression IVAAP Backend and INTGeoServer 3.0+ Backend <p>Real-Time Support</p> <ul style="list-style-type: none"> Real-time traces Waveform DTS acquisition Shot monitoring ZFP decompression for IVAAP backend <p>Contour</p> <p>Display Features</p> <ul style="list-style-type: none"> 2D/3D Isolines with labels Smoothing Label collision detection Colormap-based fill Faults Overlays <p>Types</p> <ul style="list-style-type: none"> Regular rectangular grid Arbitrary triangular grid Gridding algorithms: Kriging and ThinPlate 	<p>Display Features</p> <ul style="list-style-type: none"> Grid Compass Three.js library integration v152 Different cameras Well trajectory Log curve: cylinder or 2D Log fill Array log Well annotations Vector object Surfaces Height maps Seismic slices Seismic overlays Pointset (microseismic) 2D map Animations Picking Reservoir grid Schematics VTK formats Seismic volume support ScatterPlot GigaGrid 3D shape highlighting Contour 3D Multi-lateral trajectory tube Faults visualization Surface Projection widget Grid Surface loader and data type Seismic fence intersection support WellLog array 2D 3D reservoir along trajectory Highlight mode Volumetric rendering WellLog Array 2D Clipping support of different objects Tick generators with grids integration Texture support for 3D Surfaces/Contour

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Features and Architecture Overview



Generic Libraries and Widgets (CARNAC Modules)

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