
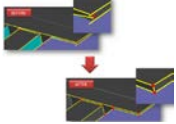
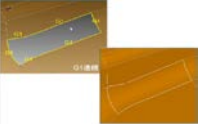


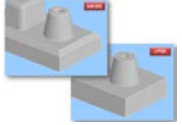

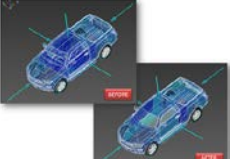
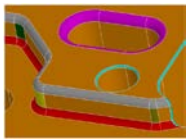

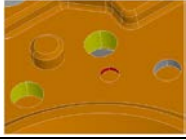
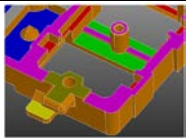
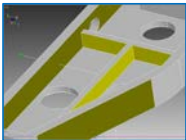
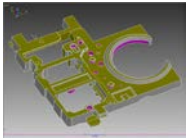
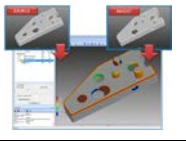
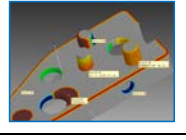

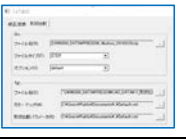
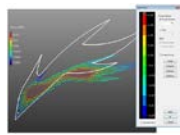
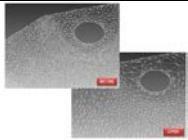
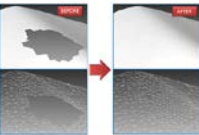
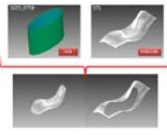
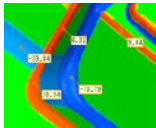

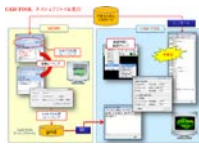




1	Import / Export	<p>spGate standardly equips 3D Native Files of CATIA V5, NX, Creo (Pro/E), Alias, Rhinoceros as well as IGES, JAMA-IS, STEP, Parasolid, ACIS, STL and OB.</p> <p>spGate is a multi-translator that corresponds to most three-dimensional CAD data circulating in the world.</p>
Error Check		
2		<p>Verified according by PDQ (Product Data Quality: Model Data Quality) Guidelines established by JAMA (Japan Automobile Manufacturers Association) and JAPIA (Japan Auto Parts Industries Association)</p> <p>There are also spGate original error check items. Various error check patterns can be constructed and use them separately.</p>
Healing		
3-1 : Auto Healing		
3		<p>Minor errors can be corrected automatically.</p>
3-2 : Manual Healing		
		<p>Severe errors are fixed manually. When modification is impossible, it is possible to remove an error surface and create new tangent continuous surface connect to adjacent surfaces.</p>
Simplify		
4-1 : Fillet Removal		
		<p>Simple Fillets and Corner Fillets can be removed automatically by specifying the radius value.</p>
4-2 : Partial Fillet Removal		
4		<p>It is possible to simplify by removing in stages the complicated Fillet shape which is difficult to remove automatically. Unlike the CAD system, there is no problem even if gaps and holes are created during the work process.</p>
4-3 : Chamfer Removal		
		<p>The chamfered shape part (cone, plane) can be recognized and removed automatically by specifying the angle.</p>
4-4 : Boss shapes and Cutouts Removal		
		<p>Unnecessary Boss shape and Cutout can be removed by specifying the range.</p>
Data Downsizing Feature		
5-1 : Remove Hidden Faces		
5		<p>It is a function to instantaneously remove the hidden (invisible) faces seen from any direction. Even with data of about 10,000 faces, it is possible to remove hidden faces in a few seconds. By significantly reducing the size of CAD data, it is possible to shorten the rendering time of models for CG and ensure the confidentiality of data to be taken outside the company.</p>

Feature Recognition	
6-1 : Fillet	
	All Fillets will be color-coded automatically.
6-2 : Taper	
	By specifying the draft direction, Faces will be color-coded automatically by each angle.
6-3 : Hole	
	All hole's diameter will be calculated and will be color-coded automatically.
6	6-4 : Height
	By specifying the reference plane, all parallel faces will be recognized and will be color-coded automatically.
6-5 : Thickness	
	Parallel planes will be color-coded automatically by plate thickness.
6-6 : Analytics Surface	
	Primitive surfaces (plane, cone, cylinder, sphere, torus and spline surfaces) in the model will be color-coded automatically.
Compare Models	
7-1 : Compare Models	
	Import the CAD models before and after design change and change of shape (hole position change, Boss position change, Fillet radius value change, with or without draft angle, etc.) can be confirmed in detail by gradation display.
7-2 : Memo (Gap value)	
	On the condition of displaying color map, the gap value is displayed at the indicated position. Addition of notes is also possible.
7	7-3 : Align 3 points
	Alignment is possible by specifying three points for CAD models with different origin and coordinate system.
7-4 : Batch processing	
	Batch processing of the design changes check (compare models) function became possible.

8	Unfold 3D to 2D	
		<p>It is a function to unfold outlines of the 3D surfaces to 2D.</p> <p>Enable to use in a wide variety of fields including graphic decal design to be stuck on the cowl of a motorcycle and logo seal production on 3-dimensional surfaces.</p> <p>It is also enable to suppress the expansion and contraction points or to simulate the final state of expansion and contraction by gradation display.</p> <p>Outline data unfolded to 2D can be exported with IGES or DXF file.</p>
9	Edit Polygon Mesh	
	<p>Importing STL, OBJ files and various polygon editing (fill hole, thin-out, smoothing, partial removal, etc.) is possible.</p> <p>Since polygon mesh data and surface data can be handled at the same time, the polygon shape can also be divided neatly by surfaces.</p> <p>spGate modifies polygon mesh data with error, and export it as clean polygon mesh data.</p> <p>In case of creating surface from polygon mesh data, reverse engineering software is necessary, so please consider spScan.</p>	
	9-1 : Thin-out	
		Thin-out the selected polygon mesh with the specified thinning rate.
	9-2 : Fill Hole	
	It is not only to fill the hole part, there are various interpolation method such as referring to the surrounding polygon mesh curvature, filling in the virtual surface after creating it internally, etc.	
9-3 : Cut		
	Import polygon mesh data (STL) and surface data (IGES, STEP, etc.) at the same time and divide polygon mesh data with the surface.	
9-4 : Curvature		
	<p>Since the curvature radius of the polygon mesh is distinguished by color coding, distortion of the shape can be easily detected.</p> <p>It also enables to display the curvature radius of arbitrary position.</p>	
10	Others	
	10-1 : Correct Face Direction	
		<p>For surface group models that are disconnected and not solid will be automatically set the outer to the front side.</p> <p>Please use "Auto Correct Face Direction" just before CG rendering and pre-processing of inspection.</p>
	10-2 : CAM-TOOL	
		After correcting the error for CAM-TOOL, it will be exported as a native file (gmd).
10-3 : Batch processing		
	If conversion takes time or the number of conversions is large, batch processing is recommended. spGate -Job-Manager as a batch conversion utility will be standard equipped. Batch processing for "Hidden face removal" and "Compare models" is also possible.	
10-4 : Training Manual		
	Easy-to-understand training manual is included (approximately 120 pages), even the first-time user can easily learn the operation.	