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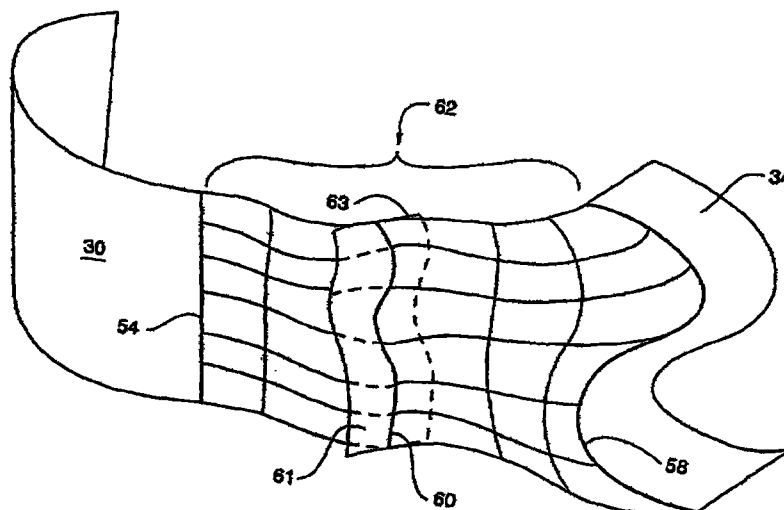
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(54) Title: GEOMETRIC DESIGN AND MODELING SYSTEM USING CONTROL GEOMETRY



(57) Abstract: A method and system for computer aided design (CAD) for designing geometric objects (30, 34). The present invention interpolates and/or blends ($B_1(u, v)$, $B_2(u, v)$) between geometric objects (62) sufficiently fast so that real-time deformation of such objects occurs while deformation data is being input. Thus, a user designing obtains immediate feedback to input modifications without separately entering a command for performing deformation. The present invention utilizes novel computational techniques for blending between geometric objects, wherein weighted sums of points on the geometric objects are used in deriving a new blended geometric object. The present invention is particularly useful for designing the shape of surfaces (S_1 , S_2) and various design domains; additionally, providing efficient animation via repeatedly modifying surfaces of an animated object.

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