Fig. 725.02 Transformation of Six-Strut Tensegrity Structures: A six-strut tensegrity tetrahedron (A) can be transformed by changing the distribution and relative lengths of its tension members (B, C) to the six- strut icosahedron (D). A theoretical three-way coordinate expansion can be envisioned with three parallel pairs of constant-length struts in which a stretching of tension members is permitted as the struts move outwardly from a common center. Starting with a six-strut octahedron (E), the structure expands outwardly going through the icosahedron phase (F) to the vector-equilibrium phase (G). When the structure expands beyond the vector equilibrium, the six struts become the edges of figure H. They consequently lose their structural function (assuming the original distribution of tension and compression members remains unchanged). As the tension members become substantially longer than the struts, the struts tend to approach relative zero and the overall shape of the structure approaches a super octahedron (I, J).