423.00 **60-Degree Coordination**

423.01 In the octet truss system, all the vectors are of identical length and all the angles around any convergence are the same. The patterns repeat themselves consistently. At every internal convergence, there are always 12 vectors coming together, and they are always convergent at 60 degrees with respect to the next adjacent ones.

423.02 There are angles other than 60-degrees generated in the system, as for instance the square equatorial mid-section of the octahedron. These angles of other than 60-degrees occur between nonadjacently converging vectorial connectors of the system. The prime structural relationship is with the 60 degree angle.

423.03 Fundamental 60-degree coordination operates either circumferentially or radially. This characteristic is lacking in 90-degree coordination, where the hypotenuse of the 90-degree angles will not be congruent and logically integratable with the radials.

423.04 When we begin to integrate our arithmetical identities, as for instance n^2 or n^3 , with a 60-degree coordination system, we find important coincidence with the topological inventories of systems, particularly with the isotropic vector matrix which makes possible fourth- and fifth-power modeling.

423.10 **Hexagon as Average of Angular Stabilizations:** The irrational radian and *pi* are not used by nature because angular accelerations are in finite package impellments[3] which are chordal (not arcs) and produce hexagons because the average of all angular stabilizations from all triangular interactions average at 60 degrees—ergo, radii and 60-degree chords are equal and identical; ergo, six 60-degree chords equal one frequency cycle; ergo, one quantum. Closest packed circles or spheres do not occupy all area or space, but six-triangled, nucleated hexagons do constitute the shortest route cyclic enclosure of closest-packed nucleation and do uniformly occupy all planar area or volumetric space.

(Footnote 3: For a related concept see Secs. 1009.50, Acceleration, and 1009.60, Hammerthrower.)

424.00 **Transformation by Complementary Symmetry**

424.01 The octet truss complex is a precessionally nonredundant, isotropic vector- tensor evolutionary relationship whose energy transformation accountings are comprehensively rational—radially and circumferentially—to all chemical, biological, electromagnetic, thermodynamic, gravitational, and radiational behaviors of nature. It accommodates all transformations by systematic complementary symmetries of concentric, contractile, involutional, turbo-geared, rational, turbulence-accommodating, inside-outing, positive-tonegative-to-equilibrium, pulsative coordinate displacements.

424.02 Thus we see both the rational energy quantum of physics and the topological tetrahedron of the isotropic vector matrix rationally accouming all physical and metaphysical systems and their transforrnative transactins. (See Sec. 620.12.)

424.03 This indefinitely extending vector system in dynamic equilibrium provides a rational frame of reference in universal dimension for measurement of any energy conversion or any degree of developed energy factor disequilibrium or its predictable reaction developments—of impoundment or release— ergo, for atomic characteristics.

425.00 **Potentiality of Vector Equilibrium**

425.01 Where all the frequency modulations of the local vectors are approximately equal, we have a potentially local vector equilibrium, but the operative vector frequency complexity has the inherent qualities of accommodating both proximity and remoteness in respect to any locally initiated actions, ergo, a complex of relative frequencies and velocities of realization lags are accommodated (*Corollary* at Sec. 240.37).

426.00 **Spherics**

426.01 An isotropic vector matrix can be only omnisymmetrically, radiantly, and "broadcastingly" generated, that is, propagated and radiantly regenerated, from only one vector equilibrium origin, although it may be tuned in, or frequency received, at any point in Universe and thus regenerate local congruence with any of its radiantly broadcast vector structurings.

426.02 An isotropic vector matrix can be only radiantly generated at a "selectable" (tunable) propagation frequency and vector-size (length) modular spacing and broadcast omnidirectionally or focally beamed outward from any vector-center-fixed *origin* such that one of its symmetrically regenerated vector-convergent fixes will be congruent with any other identical wavelength and frequency attuned and radiantly reachable vector-center fixes in Universe.

426.03 In time-vectorable Universe, the maximal range of radiant-regenerative reachability in time is determined by the omnidirectional velocity of all radiation: c^2, i.e., $(186,000)^2$.[4]

(Footnote 4: Within a week after this paragraph was drafted *The New York Times* of 22 November 1972 reported that the National Bureau of Standards laboratories at Boulder, Colorado, had determined the speed of light as "186,282.3960 miles per second with an estimated error margin no greater than 3.6 feet a second... Multiplying wavelength by frequency gives the speed of light.")

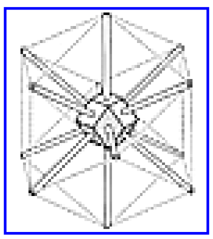
Fig. 426.04

426.04 **Spherics:** Employing the rhombic dodecahedron as the hub at the vector crossings of the octet truss (the isotropic vector matrix) provides unique economic, technical, and geometric advantages: its 12 facets represent the six pairs of planes perpendicular to the six degrees of freedom. (See Sec. 537.10.) Its 12 diamond faces also provide the even-numbered means of allowing the vectors to skew-weave around the nucleus at critical-proximity distances without touching the nucleus or one another. Because two or more lines cannot go through the same point at the same time, this function of the rhombic dodecahedron's hub makes all the difference between regenerative success or failure of Universe. (See Figs. 955.52 and 426.04.)

426.10 **Definition of a Spheric:** A "spheric" is any one of the rhombic dodecahedra symmetrically recurrent throughout an isotropic-vector-matrix geometry wherein the centers of area of each of the rhombic dodecahedra's 12 diamond facets are exactly and symmetrically tangent at 12 omnisymmetrically interarrayed points Iying on the surface of any one complete sphere, entirely contained within the spheric-identifying rhombic dodecahedra, with each of any such rhombic dodecahedra's tangentially contained spheres symmetrically radiant around *every other*, i.e., every omnidirectionally alternate vertex of every isotropic vector matrix, with the 12 points of spherical tangency of each of the rhombic dodecahedra exactly congruent also with the 12 vertexes of the vector equilibrium most immediately surrounding the vertex center of the sphere, each of whose 12 vector equilibrium radii are the special set of isotropic vector matrix

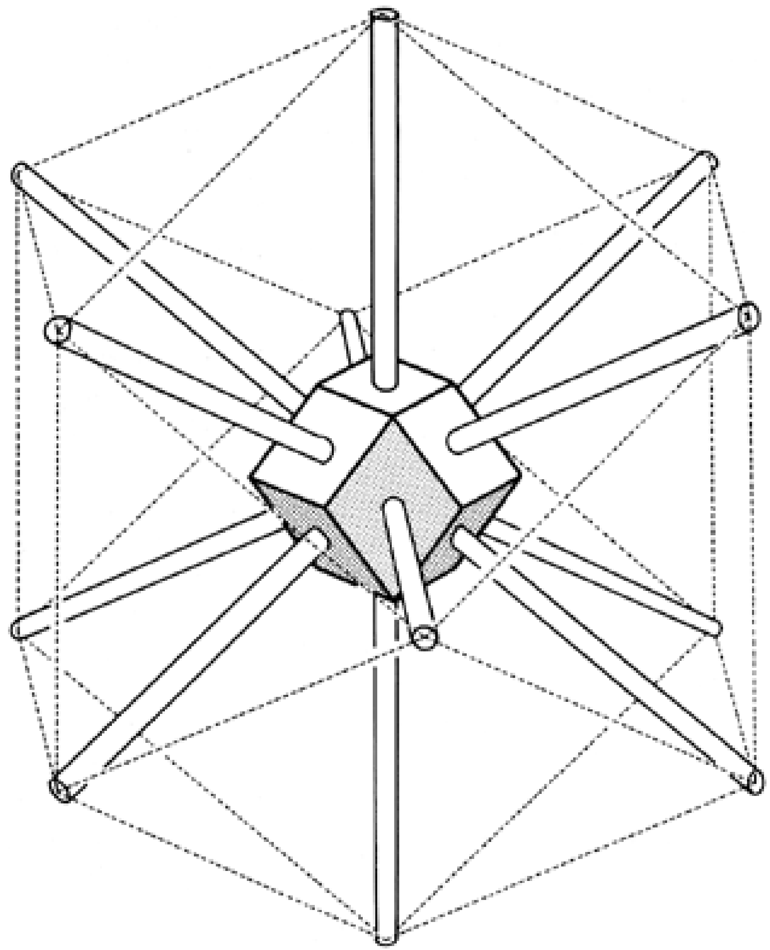

Fig. 426.04 Rhombic Dodecahedron as Hub at the Vector Crossings within the Isotropic Vector Matrix

---

vectors leading outwardly from the sphere's center vertex to the 12 most immediately surrounding vertexes.

426.11 These 12 vertexes, which are omni-equidistant from every other vertex of the isotropic vector matrix, also occur at the diamond-face centers of the "spheric" rhombic dodecahedra and are also the points of tangency of 12 uniradius spheres immediately and omni-intertangentially surrounding (i.e., closest-packing) the sphere first defined by the first rhombic dodecahedron. Each rhombic dodecahedron symmetrically surrounds every radiantly alternate vertex of the isotropic vector matrix with the other radiantly symmetrical unsurrounded set of vertexes always and only occurring at the diamond-face centers of the rhombic dodecahedra.

426.12 One radiantly alternate set of vertexes of the isotropic vector matrix always occurs at the spheric centers of omni-closest-packed, uniradius spheres; whereas the other radiantly alternate set of vertexes of the isotropic vector matrix always occurs at the spheric intertangency points of omniclosest-packed, uniradius spheres.

426.20 **Allspace Filling:** The rhombic dodecahedra symmetrically fill allspace in symmetric consort with the isotropic vector matrix. Each rhombic dodecahedron defines exactly the unique and omnisimilar domain of every radiantly alternate vertex of the isotropic vector matrix as well as the unique and omnisimilar domains of each and every interior-exterior vertex of any aggregate of closest-packed, uniradius spheres whose respective centers will always be congruent with every radiantly alternate vertex of the isotropic vector matrix, with the corresponding set of alternate vertexes always occurAng at all the intertangency points of the closest-packed spheres.

426.21 The rhombic dodecahedron contains the most volume with the least surface of all the allspace-filling geometrical forms, ergo, rhombic dodecahedra are the most economical allspace subdividers of Universe. The rhombic dodecahedra fill and symmetrically subdivide allspace most economically, while simultaneously, symmetrically, and exactly defining the respective domains of each sphere as well as the spaces between the spheres, the respective shares of the inter-closest-packed-sphere-interstitial space. The rhombic dodecahedra are called "spherics," for their respective volumes are always the unique closest-packed, uniradius spheres' volumetric domains of reference within the electively generatable and selectively "sizable" or tunable of all isotropic vector matrixes of all metaphysical "considering" as regeneratively reoriginated by any thinker anywhere at any time; as well as of all the electively generatable and selectively tunable (sizable) isotropic vector matrixes of physical electromagnetics, which are also reoriginatable physically by anyone anywhere in Universe.

426.22 The rhombic dodecahedron's 12 diamond faces are the 12 unique planes always occurring perpendicularly to the midpoints of all vector radii of all the closest- packed spheres whenever and wherever they may be metaphysically or physically regenerated, i.e., perpendicular to the midpoints of all vectors of all isotropic vector matrixing.

426.30 **Spherics and Modularity:** None of the rhombic dodecahedra's edges are congruent with the vectors of the isotropic vector matrix, and only six of the rhombic dodecahedra's 14 vertexes are congruent with the symmetrically co-reoccurring vertexes of the isotropic vector matrix. The other eight vertexes of the rhombic dodecahedra are congruent with the centers of volume of the eight edge-interconnected tetrahedra omnisymmetrically and radiantly arrayed around every vertex of the isotropic vector matrix, with all the edges of all the tetrahedra always congruent with all the vectors of the isotropic vector matrix, and all the vertexes of all the tetrahedra always congruent with the vertexes of the isotropic vector matrix, all of which vertexes are always most economically interconnected by three edges of the tetrahedra.

426.31 A spheric is any one of the rhombic dodecahedra, the center of each of whose 12 diamond facets is exactly tangent to the surface of each sphere formed equidistantly around each vertex of the isotropic vector matrix.

426.32 A spheric has 144 A and B modules, and there are 24 A Quanta Modules (see Sec. 920 and 940) in the tetrahedron, which equals l/6th of a spheric. Each of the tetrahedron's 24 modules contains 1/144th of a sphere, plus 1/l44th of the nonsphere space unique to the individual domain of the specific sphere of which it is a l/144th part, and whose spheric center is congruent with the most acute-angle vertex of each and all of the A and B Quanta Modules. The four corners of the tetrahedron are centers of four embryonic (potential) spheres.

426.40 **Radiant Valvability of Isotropic-Vector-Matrix-Defined Wavelength:** We can resonate the vector equilibrium in many ways. An isotropic vector matrix may be both radiantly generated and regenerated from any vector-centered fixed origin in Universe such that one of its vertexes will be congruent with any other radiantly reachable center fix in Universe; i.e., it can communicate with any other noninterfered-with point in Universe. The combined reachability range is determined by the omnidirectional velocity of all radiation, c^2 within the availably investable time.

426.41 The rhombic dodecahedron's 144 modules may be reoriented within it to be either radiantly disposed from the contained sphere's center of volume or circumferentially arrayed to serve as the interconnective pattern of six 1/6th-spheres, with six of the dodecahedron's 14 vertexes congruent with the centers of the six individual l/6th spheres that it interconnects. The six l/6th spheres are completed when 12 additional rhombic dodecahedra are close-packed around it.

426.42 The fact that the rhombic dodecahedron can have its 144 modules oriented as either introvert-extrovert or as three-way circumferential provides its valvability between broadcasting-transceiving and noninterference relaying. The first radio tuning crystal must have been a rhombic dodecahedron.

426.43 Multiplying wavelength by frequency equals the speed of light. We have two experimentally demonstrable radiational variables. We have to do whatever we do against time. Whatever *we* may be, each *we* has only so much commonly experienceable time in scenario Universe within which to articulate thus and so. Therefore, the vector equilibrium's radiant or gravitational "realizations" are always inherently geared to or tuned in with the fundamental time-sizing of = 186,000 mps (approximately), which unique time-size- length increments of available time can be divided into any desirable frequency. One second is a desirable, commonly experienceable increment to use, and within each unit of it we can reach = 186,000 miles (approximately) in any non-frequency-interferedwith direction.

426.44 Wavelength times frequency is the speed of all radiation. If the frequency of the vector equilibrium is four, its vector radius, or basic wavelength = 186,000 / 4 miles reachable within one second = 46,500 reach-miles. Electromagnetically speaking, the unarticulated vector equilibrium's onesecond vector length is always 186,282.396 miles.

426.45 We multiply our frequency by the number of times we divide the vector of the vector equilibrium, and that gives c^2 ; our reachable points in Universe will multiply at a rate of $F^2 \times 10 + 2$.

426.46 All the relative volumetric intervaluations of all the symmetric polyhedra and of all uniradius, closest-packed spheres are inherently regenerated in omnirational respect to isotropic vector matrixes, whether the matrixes are inadvertently—i.e., subjectively— activated by the size-selective, metaphysical-consideration initiatives, whether they are objectively and physically articulated in consciously tuned electromagnetic transmission, or whether they are selectively tuned to receive on that isotropic-vector-matrix-defined "wavelength."

426.47 Humans may be quite unconscious of their unavoidable employment of isotropic vector matrix fields of thought or of physical articulations; and they may oversimplify or be only subconsciously attuned to employ their many cosmically intertunable faculties and especially their conceptual and reasoning faculties. However, their physical brains, constituted of quadrillions times quadrillions of atoms, are always and only most economically interassociative, interactive, and intertransforming only in respect to the closestpacked isotropic vector matrix fields which altogether subconsciously accommodate the conceptual geometry picturing and memory storing of each individual's evolutionary accumulation of special-case experience happenings, which human inventories are accumulatingly stored isotropic-vector-matrix wise in the brain and are conceptually retrievable by brain and are both subconsciously and consciously reconsidered reflexively or by reflex-shunning mind.

Next Section: 427.00
