

Perfect Distribution Phenomenon and the Origin of the Spacetime Harmony

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Abstract

Perfect Distribution Phenomenon (PDP), namely one- ($t=1$) and t -dimensional ($t>1$) Ideal Ring Relationships (t -D IRR)s are cyclic sequences of integers which form perfect partitions of a finite interval $[1,s]$ of integers. The sums of connected sub-sequences of an IRR enumerate the set of integers $[1,s]$ exactly R -times.

Example: The 1-D IRR $\{1,3,2,7\}$ containing four elements (Fig.1) allows an enumeration of all numbers $1=1$, $2=2$, $3=3$, $4=1+3$, $5=3+2$, $6=1+3+2$, $7=7$, ... $13=1+3+2+7$ exactly once ($R=1$).

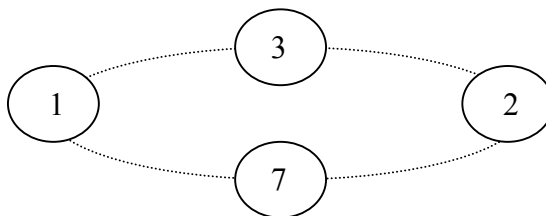


Figure 1. The IRR $\{1,3,2,7\}$

Here is 2-D phase space being distributed perfectly by the IRR $\{1,3,2,7\}$ (Fig.2).

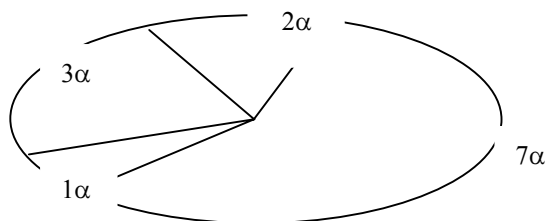


Figure 2. 2-D phase space being distributed perfectly by the IRR $\{1,3,2,7\}$

It is known, 2-D phase space can be distributed perfectly by infinitely great number of ways, and the minimal segment of the partitioning can be obtained as small as needed. Besides, the perfect distribution phenomenon is spreading of anyone vector space dimensionality (theoretically), including the space-time. The remarkable physical property make it possible to reproduce the maximum number of combinatorial varieties in natural or man-made objects with a limited number of the spice-time shares and bonds with the smallest possible number of intersections. Underlying property is one more proof that a perfection, beauty and harmony is the basis of the origin of the universe and generative art.