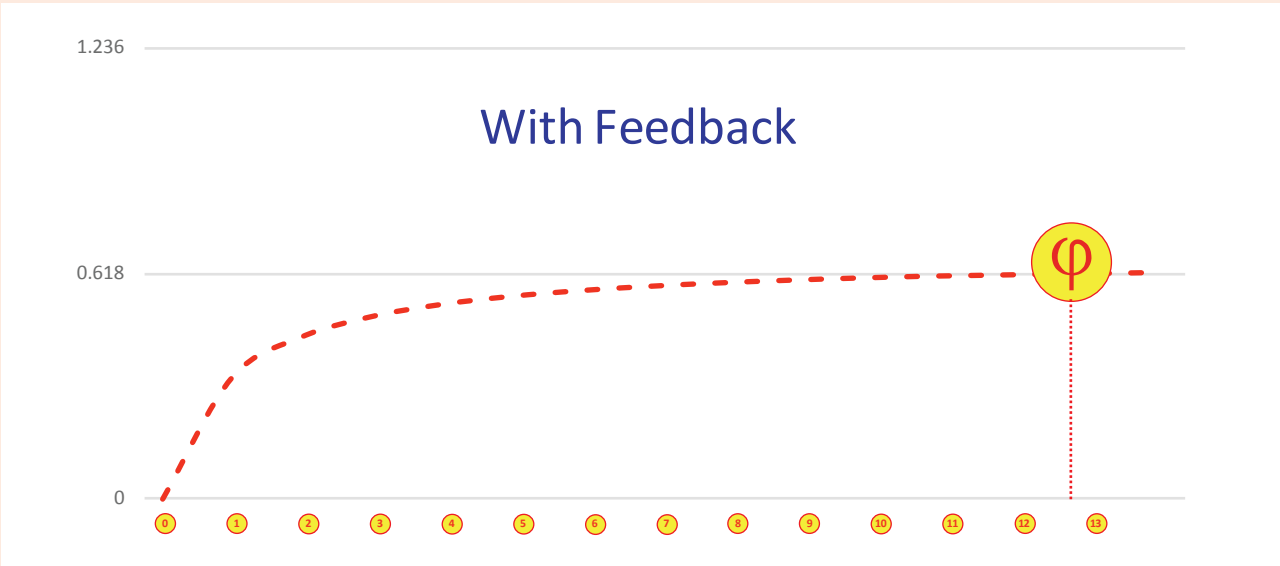


The Derivation of Phi Φ

... from just the Ratios of the Fibonacci Numbers

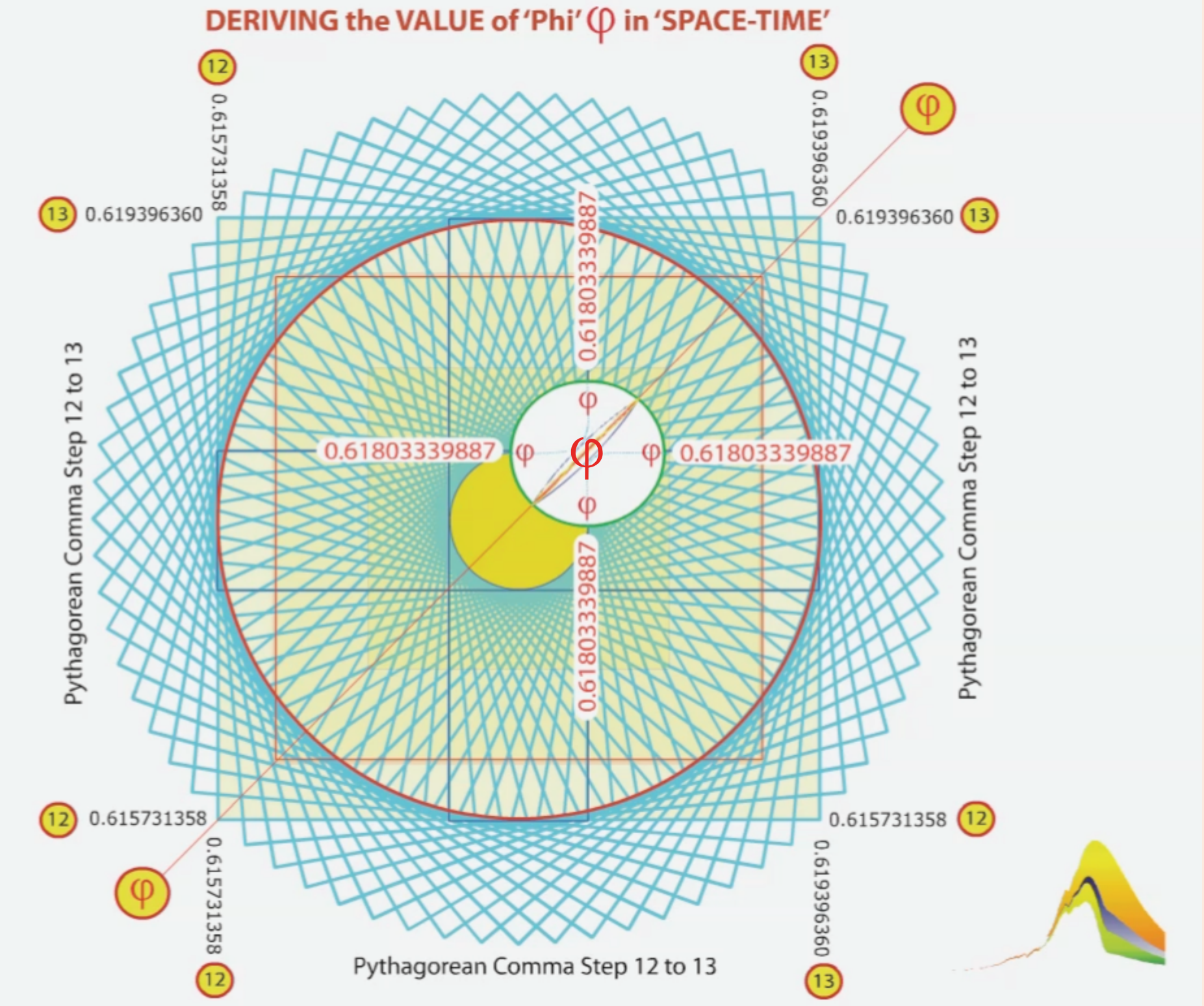


... from the Rates & Ratios of the Pythagorean Comma



Fibonacci Numbers (Ratios)															
1	1	2	3	5	8	13	21	34	55	89	144	233	377	610	987
Feedback leading to 'Phi' dividing the larger Fibonacci number into the smaller preceding number															
	1.00000	0.50000	0.66667	0.60000	0.62500	0.61538	0.61905	0.61765	0.61818	0.61798	0.61806	0.61803	0.61804	0.61803	0.61803
Pythagorean Comma (Rates & Ratios showing 'symmetry breaking')															
Perfect 5ths (3/2) Tempered 5ths	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	1.00000	1.50000	2.25000	3.37500	5.06250	7.59375	11.39063	17.08594	25.62891	38.44336	57.66504	86.49756	129.74634	194.61951	291.92926
	1.00000	1.49831	2.24492	3.36359	5.03968	7.55099	11.31371	16.95141	25.39842	38.05463	57.01752	85.42975	128.00000	191.78331	287.35028
Differences - Subtract Well Tempered 5ths from Perfect 5ths (Rates & Ratios showing 'symmetry bonding')															
	0.00000	0.00169	0.00508	0.01141	0.02282	0.04276	0.07692	0.13453	0.23049	0.38873	0.64752	1.06781	1.74634	2.83620	4.57898
Feedback leading to 'Phi' dividing the larger 'difference' number into the smaller preceding number															
	0.00000	0.33352	0.444695342	0.500282207	0.533634297	0.55587	0.57175	0.58366	0.59293	0.60034	0.60640	0.61146	0.61573	Φ 0.61940	
STEPS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	

The Derivation of Phi
from the Pythagorean Comma puts
'Phi' at the 'Phi-Point' between steps 12 & 13



http://www.gci.org.uk/movies/PC_12_13.mp4