

Appendix B - Tables

Table 1 – Edge Density Translation Table (Network Size = N)											
Density (%)	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
1	1	1	1	1	1	1	2	2	2	2	3
2	1	1	1	2	2	2	3	3	4	4	5
3	1	1	2	2	3	3	4	4	5	6	7
4	1	2	2	3	3	4	5	6	7	8	9
5	1	2	3	3	4	5	6	7	8	10	11
6	2	2	3	4	5	6	7	8	10	11	13
7	2	3	3	4	6	7	8	10	11	13	15
8	2	3	4	5	6	8	9	11	13	15	17
9	2	3	4	6	7	9	10	12	15	17	19
10	2	3	5	6	8	9	11	14	16	19	21
11	3	4	5	7	8	10	13	15	18	21	24
12	3	4	6	7	9	11	14	16	19	22	26
13	3	4	6	8	10	12	15	18	21	24	28
14	3	5	6	8	11	13	16	19	22	26	30
15	3	5	7	9	11	14	17	20	24	28	32
16	4	5	7	9	12	15	18	22	25	30	34
17	4	6	8	10	13	16	19	23	27	31	36
18	4	6	8	11	13	17	20	24	29	33	38
19	4	6	8	11	14	18	21	26	30	35	40
20	4	6	9	12	15	18	22	27	32	37	42
21	5	7	9	12	16	19	24	28	33	39	45
22	5	7	10	13	16	20	25	30	35	41	47
23	5	7	10	13	17	21	26	31	36	42	49
24	5	8	11	14	18	22	27	32	38	44	51
25	5	8	11	14	18	23	28	33	39	46	53
26	6	8	11	15	19	24	29	35	41	48	55
27	6	9	12	16	20	25	30	36	43	50	57
28	6	9	12	16	21	26	31	37	44	51	59
29	6	9	13	17	21	27	32	39	46	53	61
30	6	9	13	17	22	27	33	40	47	55	63
31	7	10	14	18	23	28	35	41	49	57	66
32	7	10	14	18	24	29	36	43	50	59	68
33	7	10	14	19	24	30	37	44	52	61	70
34	7	11	15	20	25	31	38	45	54	62	72
35	7	11	15	20	26	32	39	47	55	64	74
36	8	11	16	21	26	33	40	48	57	66	76
37	8	12	16	21	27	34	41	49	58	68	78
38	8	12	16	22	28	35	42	51	60	70	80
39	8	12	17	22	29	36	43	52	61	71	82
40	8	12	17	23	29	36	44	53	63	73	84
41	9	13	18	23	30	37	46	55	64	75	87
42	9	13	18	24	31	38	47	56	66	77	89
43	9	13	19	25	31	39	48	57	68	79	91
44	9	14	19	25	32	40	49	59	69	81	93
45	9	14	19	26	33	41	50	60	71	82	95
46	10	14	20	26	34	42	51	61	72	84	97
47	10	15	20	27	34	43	52	63	74	86	99
48	10	15	21	27	35	44	53	64	75	88	101
49	10	15	21	28	36	45	54	65	77	90	103
50	10	15	21	28	36	45	55	66	78	91	105
51	11	16	22	29	37	46	57	68	80	93	108
52	11	16	22	30	38	47	58	69	82	95	110
53	11	16	23	30	39	48	59	70	83	97	112
54	11	17	23	31	39	49	60	72	85	99	114
55	11	17	24	31	40	50	61	73	86	101	116
56	12	17	24	32	41	51	62	74	88	102	118
57	12	18	24	32	42	52	63	76	89	104	120
58	12	18	25	33	42	53	64	77	91	106	122
59	12	18	25	34	43	54	65	78	93	108	124
60	12	18	26	34	44	54	66	80	94	110	126
61	13	19	26	35	44	55	68	81	96	112	129
62	13	19	27	35	45	56	69	82	97	113	131
63	13	19	27	36	46	57	70	84	99	115	133
64	13	20	27	36	47	58	71	85	100	117	135
65	13	20	28	37	47	59	72	86	102	119	137
66	14	20	28	37	48	60	73	88	103	121	139
67	14	21	29	38	49	61	74	89	105	122	141
68	14	21	29	39	49	62	75	90	107	124	143
69	14	21	29	39	50	63	76	92	108	126	145
70	14	21	30	40	51	63	77	93	110	128	147
71	15	22	30	40	52	64	79	94	111	130	150
72	15	22	31	41	52	65	80	96	113	132	152
73	15	22	31	41	53	66	81	97	114	133	154
74	15	23	32	42	54	67	82	98	116	135	156
75	15	23	32	42	54	68	83	99	117	137	158
76	16	23	32	43	55	69	84	101	119	139	160
77	16	24	33	44	56	70	85	102	121	141	162
78	16	24	33	44	57	71	86	103	122	142	164
79	16	24	34	45	57	72	87	105	124	144	166
80	16	24	34	45	58	72	88	106	125	146	168
81	17	25	35	46	59	73	90	107	127	148	171
82	17	25	35	46	60	74	91	109	128	150	173
83	17	25	35	47	60	75	92	110	130	152	175
84	17	26	36	48	61	76	93	111	132	153	177
85	17	26	36	48	62	77	94	113	133	155	179
86	18	26	37	49	62	78	95	114	135	157	181
87	18	27	37	49	63	79	96	115	136	159	183
88	18	27	37	50	64	80	97	117	138	161	185
89	18	27	38	50	65	81	98	118	139	162	187
90	18	27	38	51	65	81	99	119	141	164	189
91	19	28	39	51	66	82	101	121	142	166	192
92	19	28	39	52	67	83	102	122	144	168	194
93	19	28	40	53	67	84	103	123	146	170	196
94	19	29	40	53	68	85	104	125	147	172	198
95	19	29	40	54	69	86	105	126	149	173	200
96	20	29	41	54	70	87	106	127	150	175	202
97	20	30	41	55	70	88	107	129	152	177	204
98	20	30	42	55	71	89	108	130	153	179	206
99	20	30	42	56	72	90	109	131	155	181	208
100	20	30	42	56	72	90	110	132	156	182	210

Table 1 – Edge Density Translation Table (Network Size = N)

Table 2 – Edge Structure Volume Distributions Network Sizes 5 through 15 (Network Size = N)

Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
1	20	30	42	56	72	90	110	132	156	182	210
2	190	435	861	1540	2556	4005	5995	8646	12090	16471	21945
3	1140	4060	11480	27720	59640	117480	215820	374660	620620	988260	1521520
4	4845	27405	111930	367290	1028790	2555190	5773185	12082785	23738715	44224635	78738660
5	15504	142506	850668	3819816	13991544	43949268	122391522	309319296	721656936	1574397006	3244032792
6	38760	593775	5245786	32468436	156238908	622614630	2141851635	6547258432	18161699556	46444711677	1.10838E+11
7	77520	2035800	26978328	231917400	1473109704	7471375560	31821795720	1.17851E+11	3.89179E+11	1.16775E+12	3.23013E+12
8	125970	5852925	118030185	1420494075	11969016345	77515521435	4.09706E+11	1.84142E+12	7.24846E+12	2.55446E+13	8.19645E+13
9	167960	14307150	445891810	7575968400	85113005120	7.06253E+11	4.64333E+12	2.53706E+13	1.19197E+14	4.93862E+14	1.84E+15
10	184756	30045015	1471442973	35607051480	5.36212E+11	5.72065E+12	4.68976E+13	3.12059E+14	1.75E+15	8.54E+15	3.70E+16
11	167960	54627300	4280561376	1.48902E+11	3.02229E+12	4.16047E+13	4.26342E+14	3.46E+15	2.33E+16	1.34E+17	6.72E+17
12	125970	86493225	11058116888	5.58383E+11	1.53633E+13	2.73898E+14	3.52E+15	3.49E+16	2.81E+17	1.90E+18	1.11E+19
13	77520	119759850	25518731280	1.88991E+12	7.09075E+13	1.64E+15	2.65E+16	3.22E+17	3.11E+18	2.49E+19	1.70E+20
14	38760	145422675	52860229080	5.80473E+12	2.98824E+14	9.04E+15	1.84E+17	2.74E+18	3.18E+19	3.01E+20	2.39E+21
15	15504	155117520	98672427616	1.62532E+13	1.16E+15	4.58E+16	1.18E+18	2.15E+19	3.01E+20	3.37E+21	3.12E+22
16	4845	145422675	1.6651E+11	4.1649E+13	4.12E+15	2.15E+17	6.98E+18	1.58E+20	2.65E+21	3.51E+22	3.81E+23
17	1140	119759850	2.54662E+11	9.79975E+13	1.36E+16	9.34E+17	3.86E+19	1.07E+21	2.18E+22	3.43E+23	4.34E+24
18	190	86493225	3.53697E+11	2.12328E+14	4.14E+16	3.79E+18	1.99E+20	6.87E+21	1.69E+23	3.14E+24	4.66E+25
19	20	54627300	4.46775E+11	4.24656E+14	1.18E+17	1.44E+19	9.66E+20	4.12E+22	1.23E+24	2.71E+25	4.71E+26
20	1	30045015	5.13792E+11	7.85614E+14	3.12E+17	5.10E+19	4.39E+21	2.33E+23	8.39E+24	2.21E+26	4.49E+27
21	0	14307150	5.38258E+11	1.35E+15	7.73E+17	1.70E+20	1.88E+22	1.24E+24	5.44E+25	1.71E+27	4.07E+28
22	0	5852925	5.13792E+11	2.14E+15	1.79E+18	5.33E+20	7.62E+22	6.26E+24	3.34E+26	1.25E+28	3.49E+29
23	0	2035800	4.46775E+11	3.17E+15	3.89E+18	1.58E+21	2.91E+23	3.00E+25	1.94E+27	8.69E+28	2.85E+30
24	0	593775	3.53697E+11	4.36E+15	7.95E+18	4.40E+21	1.06E+24	1.36E+26	1.08E+28	5.76E+29	2.22E+31
25	0	142506	2.54662E+11	5.57E+15	1.53E+19	1.16E+22	3.63E+24	5.88E+26	5.69E+28	3.64E+30	1.65E+32
26	0	27405	1.6651E+11	6.65E+15	2.76E+19	2.90E+22	1.19E+25	2.42E+27	2.86E+29	2.20E+31	1.18E+33
27	0	4060	98672427616	7.38E+15	4.70E+19	6.88E+22	3.70E+25	9.50E+27	1.38E+30	1.27E+32	8.02E+33
28	0	435	52860229080	7.65E+15	7.56E+19	1.55E+23	1.10E+26	3.56E+28	6.35E+30	7.03E+32	5.24E+34
29	0	30	25518731280	7.38E+15	1.15E+20	3.31E+23	3.10E+26	1.28E+29	2.80E+31	3.73E+33	3.29E+35
30	0	1	11058116888	6.65E+15	1.64E+20	6.73E+23	8.37E+26	4.38E+29	1.19E+32	1.90E+34	1.99E+36
31	0	0	4280561376	5.57E+15	2.23E+20	1.30E+24	2.16E+27	1.44E+30	4.83E+32	9.33E+34	1.15E+37
32	0	0	1471442973	4.36E+15	2.85E+20	2.40E+24	5.33E+27	4.55E+30	1.89E+33	4.40E+35	6.45E+37
33	0	0	445891810	3.17E+15	3.46E+20	4.22E+24	1.26E+28	1.38E+31	7.08E+33	2.00E+36	3.48E+38
34	0	0	118030185	2.14E+15	3.97E+20	7.08E+24	2.85E+28	4.02E+31	2.56E+34	8.77E+36	1.81E+39
35	0	0	26978328	1.35E+15	4.31E+20	1.13E+25	6.20E+28	1.13E+32	8.93E+34	3.71E+37	9.11E+39
36	0	0	5245786	7.85614E+14	4.43E+20	1.73E+25	1.29E+29	3.03E+32	3.00E+35	1.51E+38	4.43E+40
37	0	0	850668	4.24656E+14	4.31E+20	2.53E+25	2.58E+29	7.87E+32	9.74E+35	5.97E+38	2.08E+41
38	0	0	111930	2.12328E+14	3.97E+20	3.52E+25	4.96E+29	1.97E+33	3.05E+36	2.28E+39	9.48E+41
39	0	0	11480	9.79975E+13	3.46E+20	4.70E+25	9.16E+29	4.74E+33	9.23E+36	8.42E+39	4.18E+42
40	0	0	861	4.1649E+13	2.85E+20	5.99E+25	1.63E+30	1.10E+34	2.70E+37	3.01E+40	1.79E+43
41	0	0	42	1.62532E+13	2.23E+20	7.30E+25	2.77E+30	2.47E+34	7.64E+37	1.04E+41	7.41E+43
42	0	0	1	5.80473E+12	1.64E+20	8.52E+25	4.56E+30	5.36E+34	2.09E+38	3.50E+41	2.98E+44
43	0	0	0	1.88991E+12	1.15E+20	9.51E+25	7.21E+30	1.12E+35	5.54E+38	1.14E+42	1.16E+45
44	0	0	0	5.58383E+11	7.56E+19	1.02E+26	1.10E+31	2.27E+35	1.42E+39	3.60E+42	4.42E+45
45	0	0	0	1.48902E+11	4.70E+19	1.04E+26	1.61E+31	4.44E+35	3.54E+39	1.10E+43	1.63E+46
46	0	0	0	35607051480	2.76E+19	1.02E+26	2.27E+31	8.39E+35	8.55E+39	3.29E+43	5.85E+46
47	0	0	0	7575968400	1.53E+19	9.51E+25	3.10E+31	1.53E+36	2.00E+40	9.51E+43	2.04E+47
48	0	0	0	1420494075	7.95E+18	8.52E+25	4.07E+31	2.72E+36	4.54E+40	2.67E+44	6.93E+47
49	0	0	0	231917400	3.89E+18	7.30E+25	5.14E+31	4.66E+36	1.00E+41	7.32E+44	2.29E+48
50	0	0	0	32468436	1.79E+18	5.99E+25	6.28E+31	7.73E+36	2.14E+41	1.95E+45	7.38E+48
51	0	0	0	3819816	7.73E+17	4.70E+25	7.38E+31	1.24E+37	4.45E+41	5.04E+45	2.32E+49
52	0	0	0	367290	3.12E+17	3.52E+25	8.38E+31	1.94E+37	8.99E+41	1.27E+46	7.08E+49
53	0	0	0	27720	1.18E+17	2.53E+25	9.17E+31	2.92E+37	1.76E+42	3.11E+46	2.11E+50
54	0	0	0	1540	4.14E+16	1.73E+25	9.68E+31	4.28E+37	3.37E+42	7.43E+46	6.14E+50
55	0	0	0	56	1.36E+16	1.13E+25	9.85E+31	6.07E+37	6.24E+42	1.73E+47	1.74E+51
56	0	0	0	1	4.12E+15	7.08E+24	9.68E+31	8.34E+37	1.13E+43	3.92E+47	4.82E+51
57	0	0	0	0	1.16E+15	4.22E+24	9.17E+31	1.11E+38	1.98E+43	8.67E+47	1.30E+52
58	0	0	0	0	2.98824E+14	2.40E+24	8.38E+31	1.44E+38	3.37E+43	1.87E+48	3.43E+52
59	0	0	0	0	7.09075E+13	1.30E+24	7.38E+31	1.80E+38	5.60E+43	3.93E+48	8.84E+52
60	0	0	0	0	1.53633E+13	6.73E+24	6.28E+31	2.19E+38	9.05E+43	8.05E+48	2.23E+53
61	0	0	0	0	3.02229E+12	3.31E+23	5.14E+31	2.59E+38	1.42E+44	1.61E+49	5.47E+53
62	0	0	0	0	5.36212E+11	1.55E+23	4.07E+31	2.97E+38	2.18E+44	3.14E+49	1.32E+54
63	0	0	0	0	85113005120	6.88E+22	3.10E+31	3.30E+38	3.26E+44	5.99E+49	3.09E+54
64	0	0	0	0	11969016345	2.90E+22	2.27E+31	3.55E+38	4.73E+44	1.11E+50	7.10E+54
65	0	0	0	0	1473109704	1.16E+22	1.61E+31	3.72E+38	6.70E+44	2.02E+50	1.59E+55
66	0	0	0	0	156238908	4.40E+21	1.10E+31	3.77E+38	9.24E+44	3.58E+50	3.50E+55
67	0	0	0	0	13991544	1.58E+21	7.21E+30	3.72E+38	1.24E+45	6.20E+50	7.53E+55
68	0	0	0	0	1028790	5.33E+20	4.56E+30	3.55E+38	1.62E+45	1.05E+51	1.58E+56
69	0	0	0	0	59640	1.70E+20	2.77E+30	3.30E+38	2.07E+45	1.73E+51	3.26E+56
70	0	0	0	0	2556	5.10E+19	1.63E+30	2.97E+38	2.57E+45	2.80E+51	6.56E+56
71	0	0	0	0	72	1.44E+19	9.16E+29	2.59E+38	3.12E+45	4.41E+51	1.29E+57
72	0	0	0	0	1	3.79E+18	4.96E+29	2.19E+38	3.68E+45	6.80E+51	2.50E+57
73	0	0	0	0	0	9.34E+17	2.58E+29	1.80E+38	4.24E+45	1.03E+52	4.72E+57
74	0	0	0	0	0	2.15E+17	1.29E+29	1.44E+38	4.75E+45	1.51E+52	8.74E+57
75	0	0	0	0	0	4.58E+16	6.20E+28	1.11E+38	5.19E+45	2.17E+52	1.59E+58
76	0	0	0	0	0	9.04E+15	2.85E+28	8.34E+37	5.54E+45	3.06E+52	2.82E+58
77	0	0	0	0	0	1.64E+15	1.26E+28	6.07E+37	5.75E+45	4.22E+52	4.90E+58
78	0	0	0	0	0	2.73898E+14	5.33E+27	4.28E+37	5.83E+45	5.67E+52	8.36E+58
79	0	0	0	0	0	4.16047E+13	2.16E+27	2.92E+37	5.75E+45	7.47E+52	1.40E+59
80	0	0	0	0	0	5.72065E+12	8.37E+26	1.94E+37	5.54E+45	9.62E+52	2.29E+59
81	0	0	0	0	0	7.06253E+11	3.10E+26	1.24E+37	5.19E+45	1.21E+53	3.67E+59
82	0	0	0	0	0	77515521435	1.10E+26	7.73E+36	4.75E+45	1.49E+53	5.77E+59
83	0	0	0	0	0	7471375560	3.70E+25	4.66E+36	4.24E+45	1.80E+53	8.90E+59
84	0	0	0	0	0	622614630	1.19E+25	2.72E+36	3.68E+45	2.12E+53	1.35E+60
85	0	0	0	0	0	43949268	3.63E+24	1.53E+36	3.12E+45	2.44E+53	2.00E+60
86	0	0	0	0	0	2555190	1.06E+24	8.39E+35	2.57E+45	2.75E+53	2.90E+60
87	0	0	0	0	0	117480	2.91E+23	4.44E+35	2.07E+45	3.04E+53	4.13E+60
88	0	0	0	0	0	4005	7.62E+22	2.27E+35	1.62E+45	3.28E+53	5.78E+60
89	0	0	0	0	0	90					

Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
114	0	0	0	0	0	0	0	6.87E+21	2.09E+38	1.05E+51	4.20E+61
115	0	0	0	0	0	0	0	1.07E+21	7.64E+37	6.20E+50	3.50E+61
116	0	0	0	0	0	0	0	1.58E+20	2.70E+37	3.58E+50	2.87E+61
117	0	0	0	0	0	0	0	2.15E+19	9.23E+36	2.02E+50	2.30E+61
118	0	0	0	0	0	0	0	2.74E+18	3.05E+36	1.11E+50	1.82E+61
119	0	0	0	0	0	0	0	3.22E+17	9.74E+35	5.99E+49	1.40E+61
120	0	0	0	0	0	0	0	3.49E+16	3.00E+35	3.14E+49	1.06E+61
121	0	0	0	0	0	0	0	3.46E+15	8.93E+34	1.61E+49	7.92E+60
122	0	0	0	0	0	0	0	3.12059E+14	2.56E+34	8.05E+48	5.78E+60
123	0	0	0	0	0	0	0	2.53706E+13	7.08E+33	3.93E+48	4.13E+60
124	0	0	0	0	0	0	0	1.84142E+12	1.89E+33	1.87E+48	2.90E+60
125	0	0	0	0	0	0	0	1.17851E+11	4.83E+32	8.67E+47	2.00E+60
126	0	0	0	0	0	0	0	6547258432	1.19E+32	3.92E+47	1.35E+60
127	0	0	0	0	0	0	0	309319296	2.80E+31	1.73E+47	8.90E+59
128	0	0	0	0	0	0	0	12082785	6.35E+30	7.43E+46	5.77E+59
129	0	0	0	0	0	0	0	374660	1.38E+30	3.11E+46	3.67E+59
130	0	0	0	0	0	0	0	8646	2.86E+29	1.27E+46	2.29E+59
131	0	0	0	0	0	0	0	132	5.69E+28	5.04E+45	1.40E+59
132	0	0	0	0	0	0	0	1	1.08E+28	1.95E+45	8.36E+58
133	0	0	0	0	0	0	0	0	1.94E+27	7.32E+44	4.90E+58
134	0	0	0	0	0	0	0	0	3.34E+26	2.67E+44	2.82E+58
135	0	0	0	0	0	0	0	0	5.44E+25	9.51E+43	1.59E+58
136	0	0	0	0	0	0	0	0	8.39E+24	3.29E+43	8.74E+57
137	0	0	0	0	0	0	0	0	1.23E+24	1.10E+43	4.72E+57
138	0	0	0	0	0	0	0	0	1.69E+23	3.60E+42	2.50E+57
139	0	0	0	0	0	0	0	0	2.18E+22	1.14E+42	1.29E+57
140	0	0	0	0	0	0	0	0	2.65E+21	3.50E+41	6.56E+56
141	0	0	0	0	0	0	0	0	3.01E+20	1.04E+41	3.26E+56
142	0	0	0	0	0	0	0	0	3.18E+19	3.01E+40	1.58E+56
143	0	0	0	0	0	0	0	0	3.11E+18	8.42E+39	7.53E+55
144	0	0	0	0	0	0	0	0	2.81E+17	2.28E+39	3.50E+55
145	0	0	0	0	0	0	0	0	2.33E+16	5.97E+38	1.59E+55
146	0	0	0	0	0	0	0	0	1.75E+15	1.51E+38	7.10E+54
147	0	0	0	0	0	0	0	0	1.19197E+14	3.71E+37	3.09E+54
148	0	0	0	0	0	0	0	0	7.24846E+12	8.77E+36	1.32E+54
149	0	0	0	0	0	0	0	0	3.89179E+11	2.00E+36	5.47E+53
150	0	0	0	0	0	0	0	0	18161699556	4.40E+35	2.23E+53
151	0	0	0	0	0	0	0	0	721656936	9.33E+34	8.84E+52
152	0	0	0	0	0	0	0	0	23738715	1.90E+34	3.43E+52
153	0	0	0	0	0	0	0	0	620620	3.73E+33	1.30E+52
154	0	0	0	0	0	0	0	0	12090	7.03E+32	4.82E+51
155	0	0	0	0	0	0	0	0	156	1.27E+32	1.74E+51
156	0	0	0	0	0	0	0	0	1	2.20E+31	6.14E+50
157	0	0	0	0	0	0	0	0	0	3.64E+30	2.11E+50
158	0	0	0	0	0	0	0	0	0	5.76E+29	7.08E+49
159	0	0	0	0	0	0	0	0	0	8.69E+28	2.32E+49
160	0	0	0	0	0	0	0	0	0	1.25E+28	7.38E+48
161	0	0	0	0	0	0	0	0	0	1.71E+27	2.29E+48
162	0	0	0	0	0	0	0	0	0	2.21E+26	6.93E+47
163	0	0	0	0	0	0	0	0	0	2.71E+25	2.04E+47
164	0	0	0	0	0	0	0	0	0	3.14E+24	5.85E+46
165	0	0	0	0	0	0	0	0	0	3.43E+23	1.63E+46
166	0	0	0	0	0	0	0	0	0	3.51E+22	4.42E+45
167	0	0	0	0	0	0	0	0	0	3.37E+21	1.16E+45
168	0	0	0	0	0	0	0	0	0	3.01E+20	2.98E+44
169	0	0	0	0	0	0	0	0	0	2.49E+19	7.41E+43
170	0	0	0	0	0	0	0	0	0	1.90E+18	1.79E+43
171	0	0	0	0	0	0	0	0	0	1.34E+17	4.18E+42
172	0	0	0	0	0	0	0	0	0	8.54E+15	9.48E+41
173	0	0	0	0	0	0	0	0	0	4.93862E+14	2.08E+41
174	0	0	0	0	0	0	0	0	0	2.55446E+13	4.43E+40
175	0	0	0	0	0	0	0	0	0	1.16775E+12	9.11E+39
176	0	0	0	0	0	0	0	0	0	46444711677	1.81E+39
177	0	0	0	0	0	0	0	0	0	1574397006	3.48E+38
178	0	0	0	0	0	0	0	0	0	44224635	6.45E+37
179	0	0	0	0	0	0	0	0	0	988260	1.15E+37
180	0	0	0	0	0	0	0	0	0	16471	1.99E+36
181	0	0	0	0	0	0	0	0	0	182	3.29E+35
182	0	0	0	0	0	0	0	0	0	1	5.24E+34
183	0	0	0	0	0	0	0	0	0	0	8.02E+33
184	0	0	0	0	0	0	0	0	0	0	1.18E+33
185	0	0	0	0	0	0	0	0	0	0	1.65E+32
186	0	0	0	0	0	0	0	0	0	0	2.22E+31
187	0	0	0	0	0	0	0	0	0	0	2.85E+30
188	0	0	0	0	0	0	0	0	0	0	3.49E+29
189	0	0	0	0	0	0	0	0	0	0	4.07E+28
190	0	0	0	0	0	0	0	0	0	0	4.49E+27
191	0	0	0	0	0	0	0	0	0	0	4.71E+26
192	0	0	0	0	0	0	0	0	0	0	4.66E+25
193	0	0	0	0	0	0	0	0	0	0	4.34E+24
194	0	0	0	0	0	0	0	0	0	0	3.81E+23
195	0	0	0	0	0	0	0	0	0	0	3.12E+22
196	0	0	0	0	0	0	0	0	0	0	2.39E+21
197	0	0	0	0	0	0	0	0	0	0	1.70E+20
198	0	0	0	0	0	0	0	0	0	0	1.11E+19
199	0	0	0	0	0	0	0	0	0	0	6.72E+17
200	0	0	0	0	0	0	0	0	0	0	3.70E+16
201	0	0	0	0	0	0	0	0	0	0	1.84E+15
202	0	0	0	0	0	0	0	0	0	0	8.19645E+13
203	0	0	0	0	0	0	0	0	0	0	3.23013E+12
204	0	0	0	0	0	0	0	0	0	0	1.10838E+11
205	0	0	0	0	0	0	0	0	0	0	3244032792
206	0	0	0	0	0	0	0	0	0	0	78738660
207	0	0	0	0	0	0	0	0	0	0	1521520
208	0	0	0	0	0	0	0	0	0	0	21945
209	0	0	0	0	0	0	0	0	0	0	210
210	0	0	0	0	0	0	0	0	0	0	1

Table 2 – Edge Structure Volume Distributions Network Sizes 5 through 15 (Network Size = N)

Table 3 - Actor Structure Volume Distributions Network Sizes 5 through 15 (Network Size = N)											
Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
1	20	30	42	56	72	90	110	132	156	182	210
2	15	21	28	36	45	55	66	78	91	105	120
3	35	56	84	120	165	220	286	364	455	560	680
4	70	126	210	330	495	715	1001	1365	1820	2380	3060
5	121	252	462	792	1287	2002	3003	4368	6188	8568	11628
6	185	456	924	1716	3003	5005	8008	12376	18564	27132	38760
7	255	756	1709	3432	6435	11440	19448	31824	50388	77520	116280
8	320	1161	2954	6427	12870	24310	43758	75582	125970	203490	319770
9	365	1666	4809	11376	24301	48620	92378	167960	293930	497420	817190
10	381	2247	7420	19160	43677	92368	184756	352716	646646	1144066	1961256
11	365	2856	10906	30864	75177	167860	352705	705432	1352078	2496144	4457400
12	320	3431	15330	47748	124485	293380	646525	1352066	2704156	5200300	9657700
13	255	3906	20664	71184	199035	495220	1143340	2496000	5200287	10400600	20058300
14	185	4221	26769	102552	308187	810040	1958110	4456464	9657531	20058286	40116600
15	121	4332	33390	143088	463287	1287484	3257749	7721792	17382677	37441964	77558745
16	70	4221	40166	193705	677556	1992925	5278702	13021515	30415840	67862445	145422450
17	35	3906	46655	254808	965745	3010150	8348197	21421764	51872275	119752010	265180725
18	15	3431	52374	326124	1343521	4443725	12909182	34448778	86412781	206219755	471425400
19	5	2856	56854	406568	1826577	6420700	19548672	54245412	140879193	347253648	818763300
20	1	2247	59710	494166	2429487	9091270	29028857	83765331	225137796	572786592	1391801220
21	0	1666	60691	586056	3164355	12628000	42319849	127008960	353179710	926898480	2319378000
22	0	1161	59710	678588	4039335	17223250	60632419	189304128	544532950	1473488940	3794553000
23	0	756	56854	767544	5057127	23084500	85448539	277632576	826045402	2303825720	6102290250
24	0	456	52374	848443	6213582	30427375	118547044	401001030	1234100686	3546450376	9657296250
25	0	252	46655	916896	7496577	39466306	162021310	570852360	1817328968	5380004280	15055085556
26	0	126	40166	968976	8885349	50402935	218285551	801508500	2639871326	8049621244	23140068840
27	0	56	33390	1001568	10350421	63412580	290066216	1110632392	3785248350	11887614480	35095287220
28	0	21	26769	1012664	11854197	78629320	380375061	1519691394	5360870398	17339260251	52559354580
29	0	6	20664	1001568	13352247	96130540	492460826	2054399568	7503207595	24994542314	77777211360
30	0	1	15330	968976	14795247	115921972	629737108	2745111304	10383611693	35626762913	1.13792E+11
31	0	0	10906	916896	16131483	137924380	795685033	3627134160	14214749003	50238939492	1.6469E+11
32	0	0	7420	848443	17309772	161963065	993730738	4740924981	19257563780	70118882575	2.359E+11
33	0	0	4809	767544	18282597	187761310	1227099358	6132130732	25828645089	96903780078	3.34572E+11
34	0	0	2954	678588	19009197	214938745	1498649053	7851434526	34307818155	1.32655E+11	4.70039E+11
35	0	0	1709	586056	19458297	243015388	1810690486	9954168588	45145724871	1.79944E+11	6.5437E+11
36	0	0	924	494166	19610233	271421810	2164798955	12499659745	58871099456	2.41947E+11	9.0305E+11
37	0	0	462	406568	19458297	299515480	2561627970	15550279680	76097386820	3.22555E+11	1.23577E+12
38	0	0	210	326124	19009197	326602870	3000734330	19170181680	97528296320	4.2649E+11	1.67739E+12
39	0	0	84	254808	18282597	351966340	3480425575	23423717824	1.23962E+11	5.59431E+11	2.25902E+12
40	0	0	28	193705	17309772	374894389	3997640944	28373545212	1.56292E+11	7.28152E+11	3.01931E+12
41	0	0	7	143088	16131483	394713550	4547876542	34078446480	1.9551E+11	9.40657E+11	4.00591E+12
42	0	0	1	102552	14795247	410820025	5125164187	40590907864	2.42697E+11	1.20633E+12	5.27714E+12
43	0	0	0	71184	13352247	422709100	5722111252	47954516688	2.99022E+11	1.53606E+12	6.90385E+12
44	0	0	0	47748	11854197	430000450	6330005947	56201258412	3.65725E+11	1.9424E+12	8.97147E+12
45	0	0	0	30864	10350421	432457640	6938989112	65348810176	4.44109E+11	2.43966E+12	1.15823E+13
46	0	0	0	19160	8885349	430000450	7538289924	75397941840	5.35512E+11	3.04406E+12	1.48581E+13
47	0	0	0	11376	7496577	422709100	8116519169	86330145408	6.41289E+11	3.77374E+12	1.89424E+13
48	0	0	0	6427	6213582	410820025	8662010104	98105618326	7.62778E+11	4.64889E+12	2.40038E+13
49	0	0	0	3432	5057127	394713550	9163193644	1.10662E+11	9.0127E+11	5.6917E+12	3.02384E+13
50	0	0	0	1716	4039335	374894389	9608991865	1.23912E+11	1.05797E+12	6.92635E+12	3.78731E+13
51	0	0	0	792	3164355	351966340	9989211826	1.37746E+11	1.23395E+12	8.37891E+12	4.71685E+13
52	0	0	0	330	2429487	326602870	10294920691	1.5203E+11	1.43012E+12	1.00772E+13	5.84216E+13
53	0	0	0	120	1826577	299515480	10518783286	1.66608E+11	1.64716E+12	1.20505E+13	7.19691E+13
54	0	0	0	36	1343521	271421810	10655344766	1.81303E+11	1.8855E+12	1.43295E+13	8.81895E+13
55	0	0	0	8	965745	243015388	10701243741	1.95923E+11	2.14527E+12	1.69455E+13	1.07505E+14
56	0	0	0	1	677556	214938745	10655344766	2.10262E+11	2.42623E+12	1.99303E+13	1.30385E+14
57	0	0	0	0	463287	187761310	10518783286	2.24106E+11	2.72778E+12	2.33156E+13	1.57344E+14
58	0	0	0	0	308187	161963065	10294920691	2.37235E+11	3.04891E+12	2.71324E+13	1.88946E+14
59	0	0	0	0	199035	137924380	9989211826	2.49435E+11	3.38815E+12	3.141E+13	2.25799E+14
60	0	0	0	0	124485	115921972	9608991865	2.60497E+11	3.74359E+12	3.6176E+13	2.6856E+14
61	0	0	0	0	75177	96130540	9163193644	2.70226E+11	4.11289E+12	4.14545E+13	3.17926E+14
62	0	0	0	0	43677	78629320	8662010104	2.78446E+11	4.49326E+12	4.72663E+13	3.74634E+14
63	0	0	0	0	24301	63412580	8116519169	2.85006E+11	4.88146E+12	5.36271E+13	4.39457E+14
64	0	0	0	0	12870	50402935	7538289924	2.89784E+11	5.2739E+12	6.05474E+13	5.13192E+14
65	0	0	0	0	6435	39466306	6938989112	2.92687E+11	5.66663E+12	6.80313E+13	5.96658E+14
66	0	0	0	0	3003	30427375	6330005947	2.93661E+11	6.05544E+12	7.60757E+13	6.90682E+14
67	0	0	0	0	1287	23084500	5722111252	2.92687E+11	6.43589E+12	8.46696E+13	7.96091E+14
68	0	0	0	0	495	17223250	5125164187	2.89784E+11	6.80341E+12	9.37936E+13	9.13697E+14
69	0	0	0	0	165	12628000	4547876542	2.85006E+11	7.15339E+12	1.03419E+14	1.04E+15
70	0	0	0	0	45	9091270	3997640944	2.78446E+11	7.48127E+12	1.13509E+14	1.19E+15
71	0	0	0	0	9	6420700	3480425575	2.70226E+11	7.78264E+12	1.24016E+14	1.35E+15
72	0	0	0	0	1	4443725	3000734330	2.60497E+11	8.05332E+12	1.34882E+14	1.52E+15
73	0	0	0	0	0	3010150	2561627970	2.49435E+11	8.28946E+12	1.46043E+14	1.71E+15
74	0	0	0	0	0	1992925	2164798955	2.37235E+11	8.48764E+12	1.57422E+14	1.92E+15
75	0	0	0	0	0	1287484	1810690486	2.24106E+11	8.64496E+12	1.68937E+14	2.14E+15
76	0	0	0	0	0	810040	1498649053	2.10262E+11	8.75905E+12	1.80496E+14	2.37E+15
77	0	0	0	0	0	495220	1227099358	1.95923E+11	8.8282E+12	1.92002E+14	2.63E+15
78	0	0	0	0	0	293380	993730738	1.81303E+11	8.85137E+12	2.03353E+14	2.90E+15
79	0	0	0	0	0	167860	795685033	1.66608E+11	8.8282E+12	2.14443E+14	3.18E+15
80	0	0	0	0	0	92368	629737108	1.5203E+11	8.75905E+12	2.25163E+14	3.48E+15
81	0	0	0	0	0	48620	492460826	1.37746E+11	8.64496E+12	2.35404E+14	3.80E+15
82	0	0	0	0	0	24310	380375061	1.23912E+11	8.48764E+12	2.45058E+14	4.13E+15
83	0	0	0	0	0	11440	290066216	1.10662E+11	8.28946E+12	2.54021E+14	4.46E+15
84	0	0	0	0	0	5005	218285551	98105618326	8.05332E+12	2.62194E+14	4.81E+15
85	0	0	0	0	0	2002	162021310	86330145408	7.78264E+12	2.69483E+14	5.17E+15
86	0	0	0	0	0	715	118547044	75397941840	7.48127E+12	2.75805E+14	5.54E+15
87	0	0	0	0	0	220	85448539	65348810176	7.15339E+12	2.81083E+14	5.90E+15
88	0	0	0	0	0	55	60632419	56201258412	6.80341E+12	2.85257E+14	6.28E+15
89	0	0	0	0	0	10	42319849	47954516688	6.43589E+12	2.88275E+14	6.65E+15
90	0	0	0	0	0	1	29028857	40590907864	6.05544E+12	2.901E+14	7.01E+15

Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
113	0	0	0	0	0	0	0	54245412	2.99022E+11	1.03419E+14	9.26E+15
114	0	0	0	0	0	0	0	34448778	2.42697E+11	9.37936E+13	8.99E+15
115	0	0	0	0	0	0	0	21421764	1.9551E+11	8.46696E+13	8.70E+15
116	0	0	0	0	0	0	0	13021515	1.56292E+11	7.60757E+13	8.39E+15
117	0	0	0	0	0	0	0	7721792	1.23962E+11	6.80313E+13	8.07E+15
118	0	0	0	0	0	0	0	4456464	97528296320	6.05474E+13	7.73E+15
119	0	0	0	0	0	0	0	2496000	76097386820	5.36271E+13	7.37E+15
120	0	0	0	0	0	0	0	1352066	58871099456	4.72663E+13	7.01E+15
121	0	0	0	0	0	0	0	705432	45145724871	4.14545E+13	6.65E+15
122	0	0	0	0	0	0	0	352716	34307818155	3.6176E+13	6.28E+15
123	0	0	0	0	0	0	0	167960	25828645089	3.141E+13	5.90E+15
124	0	0	0	0	0	0	0	75582	19257563780	2.71324E+13	5.54E+15
125	0	0	0	0	0	0	0	31824	14214749003	2.33156E+13	5.17E+15
126	0	0	0	0	0	0	0	12376	10383611693	1.99303E+13	4.81E+15
127	0	0	0	0	0	0	0	4368	7503207595	1.69455E+13	4.46E+15
128	0	0	0	0	0	0	0	1365	5360870398	1.43295E+13	4.13E+15
129	0	0	0	0	0	0	0	364	3785248350	1.20505E+13	3.80E+15
130	0	0	0	0	0	0	0	78	2639871326	1.00772E+13	3.48E+15
131	0	0	0	0	0	0	0	12	1817328968	8.37891E+12	3.18E+15
132	0	0	0	0	0	0	0	1	1234100686	6.92635E+12	2.90E+15
133	0	0	0	0	0	0	0	0	826045402	5.6917E+12	2.63E+15
134	0	0	0	0	0	0	0	0	544532950	4.64889E+12	2.37E+15
135	0	0	0	0	0	0	0	0	353179710	3.77374E+12	2.14E+15
136	0	0	0	0	0	0	0	0	225137796	3.04406E+12	1.92E+15
137	0	0	0	0	0	0	0	0	140879193	2.43966E+12	1.71E+15
138	0	0	0	0	0	0	0	0	86412781	1.9424E+12	1.52E+15
139	0	0	0	0	0	0	0	0	51872275	1.53606E+12	1.35E+15
140	0	0	0	0	0	0	0	0	30415840	1.20633E+12	1.19E+15
141	0	0	0	0	0	0	0	0	17382677	9.40657E+11	1.04E+15
142	0	0	0	0	0	0	0	0	9657531	7.28152E+11	9.13697E+14
143	0	0	0	0	0	0	0	0	5200287	5.59431E+11	7.96091E+14
144	0	0	0	0	0	0	0	0	2704156	4.2649E+11	6.90682E+14
145	0	0	0	0	0	0	0	0	1352078	3.22555E+11	5.96658E+14
146	0	0	0	0	0	0	0	0	646646	2.41947E+11	5.13192E+14
147	0	0	0	0	0	0	0	0	293930	1.79944E+11	4.39457E+14
148	0	0	0	0	0	0	0	0	125970	1.32655E+11	3.74634E+14
149	0	0	0	0	0	0	0	0	50388	96903780078	3.17926E+14
150	0	0	0	0	0	0	0	0	18564	70118882575	2.6856E+14
151	0	0	0	0	0	0	0	0	6188	50238939492	2.25799E+14
152	0	0	0	0	0	0	0	0	1820	35626762913	1.88946E+14
153	0	0	0	0	0	0	0	0	455	24994542314	1.57344E+14
154	0	0	0	0	0	0	0	0	91	17339260251	1.30385E+14
155	0	0	0	0	0	0	0	0	13	11887614480	1.07505E+14
156	0	0	0	0	0	0	0	0	1	8049621244	8.81895E+13
157	0	0	0	0	0	0	0	0	0	5380004280	7.19691E+13
158	0	0	0	0	0	0	0	0	0	3546450376	5.84216E+13
159	0	0	0	0	0	0	0	0	0	2303825720	4.71685E+13
160	0	0	0	0	0	0	0	0	0	1473488940	3.78731E+13
161	0	0	0	0	0	0	0	0	0	926898480	3.02384E+13
162	0	0	0	0	0	0	0	0	0	572786592	2.40038E+13
163	0	0	0	0	0	0	0	0	0	347253648	1.89424E+13
164	0	0	0	0	0	0	0	0	0	206219755	1.48581E+13
165	0	0	0	0	0	0	0	0	0	119752010	1.15823E+13
166	0	0	0	0	0	0	0	0	0	67862445	8.97147E+12
167	0	0	0	0	0	0	0	0	0	37441964	6.90385E+12
168	0	0	0	0	0	0	0	0	0	20058286	5.27714E+12
169	0	0	0	0	0	0	0	0	0	10400600	4.00591E+12
170	0	0	0	0	0	0	0	0	0	5200300	3.01931E+12
171	0	0	0	0	0	0	0	0	0	2496144	2.25902E+12
172	0	0	0	0	0	0	0	0	0	1144066	1.67739E+12
173	0	0	0	0	0	0	0	0	0	497420	1.23577E+12
174	0	0	0	0	0	0	0	0	0	203490	9.0305E+11
175	0	0	0	0	0	0	0	0	0	77520	6.5437E+11
176	0	0	0	0	0	0	0	0	0	27132	4.70039E+11
177	0	0	0	0	0	0	0	0	0	8568	3.34572E+11
178	0	0	0	0	0	0	0	0	0	2380	2.359E+11
179	0	0	0	0	0	0	0	0	0	560	1.6469E+11
180	0	0	0	0	0	0	0	0	0	105	1.13792E+11
181	0	0	0	0	0	0	0	0	0	14	77777211360
182	0	0	0	0	0	0	0	0	0	1	52559354580
183	0	0	0	0	0	0	0	0	0	0	35095287220
184	0	0	0	0	0	0	0	0	0	0	23140068840
185	0	0	0	0	0	0	0	0	0	0	15055085556
186	0	0	0	0	0	0	0	0	0	0	9657296250
187	0	0	0	0	0	0	0	0	0	0	6102290250
188	0	0	0	0	0	0	0	0	0	0	3794553000
189	0	0	0	0	0	0	0	0	0	0	2319378000
190	0	0	0	0	0	0	0	0	0	0	1391801220
191	0	0	0	0	0	0	0	0	0	0	818763300
192	0	0	0	0	0	0	0	0	0	0	471425400
193	0	0	0	0	0	0	0	0	0	0	265180725
194	0	0	0	0	0	0	0	0	0	0	145422450
195	0	0	0	0	0	0	0	0	0	0	77558745
196	0	0	0	0	0	0	0	0	0	0	40116600
197	0	0	0	0	0	0	0	0	0	0	20058300
198	0	0	0	0	0	0	0	0	0	0	9657700
199	0	0	0	0	0	0	0	0	0	0	4457400
200	0	0	0	0	0	0	0	0	0	0	1961256
201	0	0	0	0	0	0	0	0	0	0	817190
202	0	0	0	0	0	0	0	0	0	0	319770
203	0	0	0	0	0	0	0	0	0	0	116280
204	0	0	0	0	0	0	0	0	0	0	38760
205	0	0	0	0	0	0	0	0	0	0	11628
206	0	0	0	0	0	0	0	0	0	0	3060
207	0	0	0	0	0	0	0	0	0	0	680
208	0	0	0	0	0	0	0	0	0	0	120
209	0	0	0	0	0	0	0	0	0	0	15
210	0	0	0	0	0	0	0	0	0	0	1

Table 3 - Actor Structure Volume Distributions Network Sizes 5 through 15 (Network Size = N)

Table 4 - Chain Structure Volume Distributions Network Sizes 5 through 15 (Network Size = N)											
Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	5	5	5	5	5	5	5	5	5	5	5
5	6	7	7	7	7	7	7	7	7	7	7
6	8	10	11	11	11	11	11	11	11	11	11
7	9	12	14	15	15	15	15	15	15	15	15
8	11	16	19	21	22	22	22	22	22	22	22
9	11	19	24	27	29	30	30	30	30	30	30
10	12	23	31	36	39	41	42	42	42	42	42
11	11	25	37	45	50	53	55	56	56	56	56
12	11	29	46	58	66	71	74	76	77	77	77
13	9	30	52	70	82	90	95	98	100	101	101
14	8	32	61	86	104	116	124	129	132	134	135
15	6	32	68	101	127	145	157	165	170	173	175
16	5	32	76	120	156	182	200	212	220	225	228
17	3	30	81	137	185	222	248	266	278	286	291
18	2	29	88	158	222	273	310	336	354	366	374
19	1	25	90	176	258	326	378	415	441	459	471
20	1	23	94	197	302	392	463	515	552	578	596
21	0	19	94	214	345	462	556	628	680	717	743
22	0	16	94	233	394	544	669	766	838	890	927
23	0	12	90	247	441	630	792	921	1019	1091	1143
24	0	10	88	263	495	731	939	1109	1241	1339	1411
25	0	7	81	272	543	833	1097	1317	1491	1624	1722
26	0	5	76	282	597	949	1281	1564	1792	1969	2102
27	0	3	68	285	645	1067	1478	1838	2133	2365	2543
28	0	2	61	289	696	1197	1703	2156	2535	2838	3073
29	0	1	52	285	738	1326	1940	2505	2986	3377	3684
30	0	1	46	282	783	1468	2208	2907	3514	4014	4413
31	0	0	37	272	816	1603	2486	3342	4100	4735	5247
32	0	0	31	263	851	1749	2795	3836	4777	5577	6231
33	0	0	24	247	873	1887	3113	4368	5526	6526	7354
34	0	0	19	233	894	2030	3460	4962	6378	7621	8663
35	0	0	14	214	902	2161	3812	5597	7314	8847	10149
36	0	0	11	197	910	2297	4191	6300	8372	10251	11869
37	0	0	7	176	902	2414	4569	7040	9521	11811	13807
38	0	0	5	158	894	2532	4970	7850	10806	13580	16032
39	0	0	3	137	873	2630	5364	8698	12197	15536	18529
40	0	0	2	120	851	2724	5776	9613	13734	17735	21370
41	0	0	1	101	816	2794	6172	10560	15383	20150	24540
42	0	0	1	86	783	2860	6580	11573	17193	22845	28125
43	0	0	0	70	738	2897	6964	12608	19117	25785	32100
44	0	0	0	58	696	2929	7352	13703	21209	29040	36564
45	0	0	0	45	645	2934	7708	14812	23420	32571	41492
46	0	0	0	36	597	2929	8060	15968	25798	36449	46984
47	0	0	0	27	543	2897	8371	17125	28292	40629	53015
48	0	0	0	21	495	2860	8672	18320	30957	45190	59699
49	0	0	0	15	441	2794	8924	19496	33723	50074	66995
50	0	0	0	11	394	2724	9160	20696	36652	55363	75031
51	0	0	0	7	345	2630	9340	21863	39674	60994	83762
52	0	0	0	5	302	2532	9499	23034	42841	67050	93316
53	0	0	0	3	258	2414	9598	24152	46078	73456	103643
54	0	0	0	2	222	2297	9673	25261	49446	80299	114883
55	0	0	0	1	185	2161	9686	26295	52853	87491	126965
56	0	0	0	1	156	2030	9673	27302	56365	95121	140040
57	0	0	0	0	127	1887	9598	28218	59888	103090	154028
58	0	0	0	0	104	1749	9499	29087	63479	111485	169075
59	0	0	0	0	82	1603	9340	29849	67044	120195	185091
60	0	0	0	0	66	1468	9160	30554	70648	129311	202231
61	0	0	0	0	50	1326	8924	31132	74176	138704	220374
62	0	0	0	0	39	1197	8672	31641	77703	148464	239684
63	0	0	0	0	29	1067	8371	32017	81118	158453	260027
64	0	0	0	0	22	949	8060	32312	84484	168759	281553
65	0	0	0	0	15	833	7708	32467	87691	179229	304113
66	0	0	0	0	11	731	7352	32540	90814	189953	327863
67	0	0	0	0	7	630	6964	32467	93728	200763	352616
68	0	0	0	0	5	544	6580	32312	96517	211751	378533
69	0	0	0	0	3	462	6172	32017	99061	222738	405408
70	0	0	0	0	2	392	5776	31641	101436	233814	433385
71	0	0	0	0	1	326	5364	31132	103530	244790	462237
72	0	0	0	0	1	273	4970	30554	105430	255762	492113
73	0	0	0	0	0	222	4569	29849	107009	266528	522744
74	0	0	0	0	0	182	4191	29087	108368	277185	554281
75	0	0	0	0	0	145	3812	28218	109392	287528	586437
76	0	0	0	0	0	116	3460	27302	110171	297658	619341
77	0	0	0	0	0	90	3113	26295	110599	307363	652689
78	0	0	0	0	0	71	2795	25261	110780	316750	686615
79	0	0	0	0	0	53	2486	24152	110599	325604	720772
80	0	0	0	0	0	41	2208	23034	110171	334040	755301
81	0	0	0	0	0	30	1940	21863	109392	341843	789839
82	0	0	0	0	0	22	1703	20696	108368	349134	824509
83	0	0	0	0	0	15	1478	19496	107009	355701	858938
84	0	0	0	0	0	11	1281	18320	105430	361677	893258
85	0	0	0	0	0	7	1097	17125	103530	366851	927060
86	0	0	0	0	0	5	939	15968	101436	371365	960489
87	0	0	0	0	0	3	792	14812	99061	375017	993133
88	0	0	0	0	0	2	669	13703	96517	377961	1025124
89	0	0	0	0	0	1	556	12608	93728	380001	1056050
90	0	0	0	0	0	1	463	11573	90814	381301	1086063
91	0	0	0	0	0	0	378	10560	87691	381676	1114726
92	0	0	0	0	0	0	310	9613	84484	381301	1142213
93	0	0	0	0	0	0	248	8698	81118	380001	1168098
94	0	0	0	0	0	0	200	7850	77703	377961	1192550
95	0	0	0	0	0	0	157	7040	74176	375017	1215158
96	0	0	0	0	0	0	124	6300	70648	371365	1236119
97	0	0	0	0	0	0	95	5597	67044	366851	1255011
98	0	0	0	0	0	0	74	4962	63479	361677	1272063
99	0	0	0	0	0	0	55	4368	59888	355701	1286875
100	0	0	0	0	0	0	42	3836	56365	349134	1299679
101	0	0	0	0	0	0	30	3342	52853	341843	1310102
102	0	0	0	0	0	0	22	2907	49446	334040	1318411
103	0	0	0	0	0	0	15	2505	46078	325604	1324233
104	0	0	0	0	0	0	11	2156	42841	316750	1327869
105	0	0	0	0	0	0	7	1838	39674	307363	1328980
106	0	0	0	0	0	0	5	1564	36652	297658	1327869
107	0	0	0	0	0	0	3	1317	33723	287528	1324233
108	0	0	0	0	0	0	2	1109	30957	277185	1318411
109	0	0	0	0	0	0	1	921	28292	266528	1310102
110	0	0	0	0	0	0	1	766	25798	255762	1299679
111	0	0	0	0	0	0	0	628	23420	244790	1286875
112	0	0	0	0	0	0	0	515	21209	233814	1272063
113	0	0	0	0	0	0	0	415	19117	222738	1255011

Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
114	0	0	0	0	0	0	0	336	17193	211751	1236119
115	0	0	0	0	0	0	0	266	15383	200763	1215158
116	0	0	0	0	0	0	0	212	13734	189953	1192550
117	0	0	0	0	0	0	0	165	12197	179229	1168098
118	0	0	0	0	0	0	0	129	10806	168759	1142213
119	0	0	0	0	0	0	0	98	9521	158453	1114726
120	0	0	0	0	0	0	0	76	8372	148464	1086063
121	0	0	0	0	0	0	0	56	7314	138704	1056050
122	0	0	0	0	0	0	0	42	6378	129311	1025124
123	0	0	0	0	0	0	0	30	5526	120195	993133
124	0	0	0	0	0	0	0	22	4777	111485	960489
125	0	0	0	0	0	0	0	15	4100	103090	927060
126	0	0	0	0	0	0	0	11	3514	95121	893258
127	0	0	0	0	0	0	0	7	2986	87491	858938
128	0	0	0	0	0	0	0	5	2535	80299	824509
129	0	0	0	0	0	0	0	3	2133	73456	789839
130	0	0	0	0	0	0	0	2	1792	67050	755301
131	0	0	0	0	0	0	0	1	1491	60994	720772
132	0	0	0	0	0	0	0	1	1241	55363	686615
133	0	0	0	0	0	0	0	0	1019	50074	652689
134	0	0	0	0	0	0	0	0	838	45190	619341
135	0	0	0	0	0	0	0	0	680	40629	586437
136	0	0	0	0	0	0	0	0	552	36449	554281
137	0	0	0	0	0	0	0	0	441	32571	522744
138	0	0	0	0	0	0	0	0	354	29040	492113
139	0	0	0	0	0	0	0	0	278	25785	462237
140	0	0	0	0	0	0	0	0	220	22845	433385
141	0	0	0	0	0	0	0	0	170	20150	405408
142	0	0	0	0	0	0	0	0	132	17735	378533
143	0	0	0	0	0	0	0	0	100	15536	352616
144	0	0	0	0	0	0	0	0	77	13580	327863
145	0	0	0	0	0	0	0	0	56	11811	304113
146	0	0	0	0	0	0	0	0	42	10251	281553
147	0	0	0	0	0	0	0	0	30	8847	260027
148	0	0	0	0	0	0	0	0	22	7621	239684
149	0	0	0	0	0	0	0	0	15	6526	220374
150	0	0	0	0	0	0	0	0	11	5577	202231
151	0	0	0	0	0	0	0	0	7	4735	185091
152	0	0	0	0	0	0	0	0	5	4014	169075
153	0	0	0	0	0	0	0	0	3	3377	154028
154	0	0	0	0	0	0	0	0	2	2838	140040
155	0	0	0	0	0	0	0	0	1	2365	126965
156	0	0	0	0	0	0	0	0	1	1969	114883
157	0	0	0	0	0	0	0	0	0	1624	103643
158	0	0	0	0	0	0	0	0	0	1339	93316
159	0	0	0	0	0	0	0	0	0	1091	83762
160	0	0	0	0	0	0	0	0	0	890	75031
161	0	0	0	0	0	0	0	0	0	717	66995
162	0	0	0	0	0	0	0	0	0	578	59699
163	0	0	0	0	0	0	0	0	0	459	53015
164	0	0	0	0	0	0	0	0	0	366	46984
165	0	0	0	0	0	0	0	0	0	286	41492
166	0	0	0	0	0	0	0	0	0	225	36564
167	0	0	0	0	0	0	0	0	0	173	32100
168	0	0	0	0	0	0	0	0	0	134	28125
169	0	0	0	0	0	0	0	0	0	101	24540
170	0	0	0	0	0	0	0	0	0	77	21370
171	0	0	0	0	0	0	0	0	0	56	18529
172	0	0	0	0	0	0	0	0	0	42	16032
173	0	0	0	0	0	0	0	0	0	30	13807
174	0	0	0	0	0	0	0	0	0	22	11869
175	0	0	0	0	0	0	0	0	0	15	10149
176	0	0	0	0	0	0	0	0	0	11	8663
177	0	0	0	0	0	0	0	0	0	7	7354
178	0	0	0	0	0	0	0	0	0	5	6231
179	0	0	0	0	0	0	0	0	0	3	5247
180	0	0	0	0	0	0	0	0	0	2	4413
181	0	0	0	0	0	0	0	0	0	1	3684
182	0	0	0	0	0	0	0	0	0	1	3073
183	0	0	0	0	0	0	0	0	0	0	2543
184	0	0	0	0	0	0	0	0	0	0	2102
185	0	0	0	0	0	0	0	0	0	0	1722
186	0	0	0	0	0	0	0	0	0	0	1411
187	0	0	0	0	0	0	0	0	0	0	1143
188	0	0	0	0	0	0	0	0	0	0	927
189	0	0	0	0	0	0	0	0	0	0	743
190	0	0	0	0	0	0	0	0	0	0	596
191	0	0	0	0	0	0	0	0	0	0	471
192	0	0	0	0	0	0	0	0	0	0	374
193	0	0	0	0	0	0	0	0	0	0	291
194	0	0	0	0	0	0	0	0	0	0	228
195	0	0	0	0	0	0	0	0	0	0	175
196	0	0	0	0	0	0	0	0	0	0	135
197	0	0	0	0	0	0	0	0	0	0	101
198	0	0	0	0	0	0	0	0	0	0	77
199	0	0	0	0	0	0	0	0	0	0	56
200	0	0	0	0	0	0	0	0	0	0	42
201	0	0	0	0	0	0	0	0	0	0	30
202	0	0	0	0	0	0	0	0	0	0	22
203	0	0	0	0	0	0	0	0	0	0	15
204	0	0	0	0	0	0	0	0	0	0	11
205	0	0	0	0	0	0	0	0	0	0	7
206	0	0	0	0	0	0	0	0	0	0	5
207	0	0	0	0	0	0	0	0	0	0	3
208	0	0	0	0	0	0	0	0	0	0	2
209	0	0	0	0	0	0	0	0	0	0	1
210	0	0	0	0	0	0	0	0	0	0	1

Table 4 - Chain Structure Volume Distributions Network Sizes 5 through 15 (Network Size = N)

Table 5 - Group Degree Centrality Value Volume Distributions Network Sizes 5 through 15 (Network Size = N)												
Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15	
1	1	1	1	1	1	1	1	1	1	1	1	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	4	5	5	5	5	5	5	5	5	5	5	
6	3	5	6	6	6	6	6	6	6	6	6	
7	3	4	6	7	7	7	7	7	7	7	7	
8	3	4	5	7	8	8	8	8	8	8	8	
9	3	4	5	6	8	9	9	9	9	9	9	
10	3	4	5	6	7	9	10	10	10	10	10	
11	2	4	5	6	7	8	10	11	11	11	11	
12	2	4	5	6	7	8	9	11	12	12	12	
13	2	3	5	6	7	8	9	10	12	13	13	
14	2	3	5	6	7	8	9	10	11	13	14	
15	2	3	4	6	7	8	9	10	11	12	14	
16	1	3	4	6	7	8	9	10	11	12	13	
17	1	3	4	5	7	8	9	10	11	12	13	
18	1	3	4	5	7	8	9	10	11	12	13	
19	1	2	4	5	6	8	9	10	11	12	13	
20	1	2	4	5	6	8	9	10	11	12	13	
21	0	2	4	5	6	7	9	10	11	12	13	
22	0	2	3	5	6	7	9	10	11	12	13	
23	0	2	3	5	6	7	8	10	11	12	13	
24	0	2	3	5	6	7	8	10	11	12	13	
25	0	1	3	4	6	7	8	9	11	12	13	
26	0	1	3	4	6	7	8	9	11	12	13	
27	0	1	3	4	6	7	8	9	10	12	13	
28	0	1	3	4	5	7	8	9	10	12	13	
29	0	1	2	4	5	7	8	9	10	11	13	
30	0	1	2	4	5	7	8	9	10	11	13	
31	0	0	2	4	5	6	8	9	10	11	12	
32	0	0	2	4	5	6	8	9	10	11	12	
33	0	0	2	3	5	6	8	9	10	11	12	
34	0	0	2	3	5	6	7	9	10	11	12	
35	0	0	2	3	5	6	7	9	10	11	12	
36	0	0	1	3	5	6	7	9	10	11	12	
37	0	0	1	3	4	6	7	8	10	11	12	
38	0	0	1	3	4	6	7	8	10	11	12	
39	0	0	1	3	4	6	7	8	10	11	12	
40	0	0	1	3	4	6	7	8	9	11	12	
41	0	0	1	2	4	5	7	8	9	11	12	
42	0	0	1	2	4	5	7	8	9	11	12	
43	0	0	0	2	4	5	7	8	9	10	12	
44	0	0	0	2	4	5	7	8	9	10	12	
45	0	0	0	2	4	5	6	8	9	10	12	
46	0	0	0	2	3	5	6	8	9	10	11	
47	0	0	0	2	3	5	6	8	9	10	11	
48	0	0	0	2	3	5	6	8	9	10	11	
49	0	0	0	1	3	5	6	7	9	10	11	
50	0	0	0	1	3	5	6	7	9	10	11	
51	0	0	0	1	3	4	6	7	9	10	11	
52	0	0	0	1	3	4	6	7	9	10	11	
53	0	0	0	1	3	4	6	7	8	10	11	
54	0	0	0	1	3	4	6	7	8	10	11	
55	0	0	0	1	2	4	6	7	8	10	11	
56	0	0	0	1	2	4	5	7	8	10	11	
57	0	0	0	0	2	4	5	7	8	9	11	
58	0	0	0	0	2	4	5	7	8	9	11	
59	0	0	0	0	2	4	5	7	8	9	11	
60	0	0	0	0	2	4	5	7	8	9	11	
61	0	0	0	0	2	3	5	6	8	9	10	
62	0	0	0	0	2	3	5	6	8	9	10	
63	0	0	0	0	2	3	5	6	8	9	10	
64	0	0	0	0	1	3	5	6	8	9	10	
65	0	0	0	0	1	3	5	6	8	9	10	
66	0	0	0	0	1	3	5	6	7	9	10	
67	0	0	0	0	1	3	4	6	7	9	10	
68	0	0	0	0	1	3	4	6	7	9	10	
69	0	0	0	0	1	3	4	6	7	9	10	
70	0	0	0	0	1	3	4	6	7	9	10	
71	0	0	0	0	1	2	4	6	7	8	10	
72	0	0	0	0	1	2	4	6	7	8	10	
73	0	0	0	0	0	2	4	5	7	8	10	
74	0	0	0	0	0	2	4	5	7	8	10	
75	0	0	0	0	0	2	4	5	7	8	10	
76	0	0	0	0	0	2	4	5	7	8	9	
77	0	0	0	0	0	2	4	5	7	8	9	
78	0	0	0	0	0	2	3	5	7	8	9	
79	0	0	0	0	0	2	3	5	6	8	9	
80	0	0	0	0	0	2	3	5	6	8	9	
81	0	0	0	0	0	1	3	5	6	8	9	
82	0	0	0	0	0	1	3	5	6	8	9	
83	0	0	0	0	0	1	3	5	6	8	9	
84	0	0	0	0	0	1	3	5	6	8	9	
85	0	0	0	0	0	1	3	4	6	7	9	
86	0	0	0	0	0	1	3	4	6	7	9	
87	0	0	0	0	0	1	3	4	6	7	9	
88	0	0	0	0	0	1	3	4	6	7	9	
89	0	0	0	0	0	1	2	4	6	7	9	
90	0	0	0	0	0	1	2	4	6	7	9	
91	0	0	0	0	0	0	2	4	6	7	8	
92	0	0	0	0	0	0	2	4	5	7	8	
93	0	0	0	0	0	0	2	4	5	7	8	
94	0	0	0	0	0	0	2	4	5	7	8	
95	0	0	0	0	0	0	2	4	5	7	8	
96	0	0	0	0	0	0	2	4	5	7	8	
97	0	0	0	0	0	0	2	3	5	7	8	
98	0	0	0	0	0	0	2	3	5	7	8	
99	0	0	0	0	0	0	2	3	5	6	8	
100	0	0	0	0	0	0	1	3	5	6	8	
101	0	0	0	0	0	0	1	3	5	6	8	
102	0	0	0	0	0	0	1	3	5	6	8	
103	0	0	0	0	0	0	1	3	5	6	8	
104	0	0	0	0	0	0	1	3	5	6	8	
105	0	0	0	0	0	0	1	3	4	6	8	
106	0	0	0	0	0	0	1	3	4	6	7	
107	0	0	0	0	0	0	1	3	4	6	7	
108	0	0	0	0	0	0	1	3	4	6	7	
109	0	0	0	0	0	0	1	2	4	6	7	
110	0	0	0	0	0	0	1	2	4	6	7	
111	0	0	0	0	0	0	0	2	4	6	7	
112	0	0	0	0	0	0	0	2	4	6	7	
113	0	0	0	0	0	0	0	2	4	5	7	



Edge Count	N=5	N=6	N=7	N=8	N=9	N=10	N=11	N=12	N=13	N=14	N=15
114	0	0	0	0	0	0	0	2	4	5	7
115	0	0	0	0	0	0	0	2	4	5	7
116	0	0	0	0	0	0	0	2	4	5	7
117	0	0	0	0	0	0	0	2	4	5	7
118	0	0	0	0	0	0	0	2	3	5	7
119	0	0	0	0	0	0	0	2	3	5	7
120	0	0	0	0	0	0	0	2	3	5	7
121	0	0	0	0	0	0	0	1	3	5	6
122	0	0	0	0	0	0	0	1	3	5	6
123	0	0	0	0	0	0	0	1	3	5	6
124	0	0	0	0	0	0	0	1	3	5	6
125	0	0	0	0	0	0	0	1	3	5	6
126	0	0	0	0	0	0	0	1	3	5	6
127	0	0	0	0	0	0	0	1	3	4	6
128	0	0	0	0	0	0	0	1	3	4	6
129	0	0	0	0	0	0	0	1	3	4	6
130	0	0	0	0	0	0	0	1	3	4	6
131	0	0	0	0	0	0	0	1	2	4	6
132	0	0	0	0	0	0	0	1	2	4	6
133	0	0	0	0	0	0	0	0	2	4	6
134	0	0	0	0	0	0	0	0	2	4	6
135	0	0	0	0	0	0	0	0	2	4	6
136	0	0	0	0	0	0	0	0	2	4	5
137	0	0	0	0	0	0	0	0	2	4	5
138	0	0	0	0	0	0	0	0	2	4	5
139	0	0	0	0	0	0	0	0	2	4	5
140	0	0	0	0	0	0	0	0	2	4	5
141	0	0	0	0	0	0	0	0	2	3	5
142	0	0	0	0	0	0	0	0	2	3	5
143	0	0	0	0	0	0	0	0	2	3	5
144	0	0	0	0	0	0	0	0	1	3	5
145	0	0	0	0	0	0	0	0	1	3	5
146	0	0	0	0	0	0	0	0	1	3	5
147	0	0	0	0	0	0	0	0	1	3	5
148	0	0	0	0	0	0	0	0	1	3	5
149	0	0	0	0	0	0	0	0	1	3	5
150	0	0	0	0	0	0	0	0	1	3	5
151	0	0	0	0	0	0	0	0	1	3	4
152	0	0	0	0	0	0	0	0	1	3	4
153	0	0	0	0	0	0	0	0	1	3	4
154	0	0	0	0	0	0	0	0	1	3	4
155	0	0	0	0	0	0	0	0	1	2	4
156	0	0	0	0	0	0	0	0	1	2	4
157	0	0	0	0	0	0	0	0	0	2	4
158	0	0	0	0	0	0	0	0	0	2	4
159	0	0	0	0	0	0	0	0	0	2	4
160	0	0	0	0	0	0	0	0	0	2	4
161	0	0	0	0	0	0	0	0	0	2	4
162	0	0	0	0	0	0	0	0	0	2	4
163	0	0	0	0	0	0	0	0	0	2	4
164	0	0	0	0	0	0	0	0	0	2	4
165	0	0	0	0	0	0	0	0	0	2	4
166	0	0	0	0	0	0	0	0	0	2	3
167	0	0	0	0	0	0	0	0	0	2	3
168	0	0	0	0	0	0	0	0	0	2	3
169	0	0	0	0	0	0	0	0	0	1	3
170	0	0	0	0	0	0	0	0	0	1	3
171	0	0	0	0	0	0	0	0	0	1	3
172	0	0	0	0	0	0	0	0	0	1	3
173	0	0	0	0	0	0	0	0	0	1	3
174	0	0	0	0	0	0	0	0	0	1	3
175	0	0	0	0	0	0	0	0	0	1	3
176	0	0	0	0	0	0	0	0	0	1	3
177	0	0	0	0	0	0	0	0	0	1	3
178	0	0	0	0	0	0	0	0	0	1	3
179	0	0	0	0	0	0	0	0	0	1	3
180	0	0	0	0	0	0	0	0	0	1	3
181	0	0	0	0	0	0	0	0	0	1	2
182	0	0	0	0	0	0	0	0	0	1	2
183	0	0	0	0	0	0	0	0	0	0	2
184	0	0	0	0	0	0	0	0	0	0	2
185	0	0	0	0	0	0	0	0	0	0	2
186	0	0	0	0	0	0	0	0	0	0	2
187	0	0	0	0	0	0	0	0	0	0	2
188	0	0	0	0	0	0	0	0	0	0	2
189	0	0	0	0	0	0	0	0	0	0	2
190	0	0	0	0	0	0	0	0	0	0	2
191	0	0	0	0	0	0	0	0	0	0	2
192	0	0	0	0	0	0	0	0	0	0	2
193	0	0	0	0	0	0	0	0	0	0	2
194	0	0	0	0	0	0	0	0	0	0	2
195	0	0	0	0	0	0	0	0	0	0	2
196	0	0	0	0	0	0	0	0	0	0	1
197	0	0	0	0	0	0	0	0	0	0	1
198	0	0	0	0	0	0	0	0	0	0	1
199	0	0	0	0	0	0	0	0	0	0	1
200	0	0	0	0	0	0	0	0	0	0	1
201	0	0	0	0	0	0	0	0	0	0	1
202	0	0	0	0	0	0	0	0	0	0	1
203	0	0	0	0	0	0	0	0	0	0	1
204	0	0	0	0	0	0	0	0	0	0	1
205	0	0	0	0	0	0	0	0	0	0	1
206	0	0	0	0	0	0	0	0	0	0	1
207	0	0	0	0	0	0	0	0	0	0	1
208	0	0	0	0	0	0	0	0	0	0	1
209	0	0	0	0	0	0	0	0	0	0	1
210	0	0	0	0	0	0	0	0	0	0	1

Table 5 - Group Degree Centrality Value Volume Distributions Network Sizes 5 through 15 (Network Size = N)