1.

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Table 1. Cumulative Destruction Spectra

i	M=1000	M=10000
1	1	1
2	1	1
3	1	1
4	1	0.9989
5	0.995	0.9964
6	0.989	0.9899
7	0.978	0.9779
8	0.962	0.9581
9	0.926	0.9183
10	0.865	0.8519
11	0.77	0.7541
12	0.631	0.6135
13	0.483	0.4489
14	0.333	0.2985
15	0.213	0.178
16	0.129	0.1038
17	0.069	0.055
18	0.036	0.0266
19	0.011	0.0121
20	0.005	0.0051
21	0.002	0.002
22	0.001	0.0004
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0

3.

Groups by importance:

Group 1: 3, 4, 9, 10, 16, 17, 22, 27, 29
Group 2: 2, 23
Group 3: 1, 5, 6, 7, 8, 11, 14, 18, 21, 24, 26, 28, 30
Group 4: 12, 13, 15, 19, 20, 25

Table 2. BIM Spectra for selected edges

	Most important				**Least important**			
	Edge 17		**Edge 9**		**Edge 15**		**Edge 12**	
i	**M=1000**	**M=10000**	**M=1000**	**M=10000**	**M=1000**	**M=10000**	**M=1000**	**M=10000**
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0
10	0	0.001	0	0.001	0	0.001	0	0
11	0	0.003	0	0.003	0	0.002	0	0.001
12	0.01	0.007	0	0.008	0	0.003	0	0.003
13	0.02	0.016	0.02	0.016	0.01	0.008	0.01	0.008
14	0.04	0.034	0.04	0.033	0.02	0.02	0.03	0.02
15	0.08	0.064	0.09	0.065	0.05	0.042	0.06	0.042
16	0.13	0.113	0.14	0.112	0.1	0.081	0.1	0.083
17	0.21	0.194	0.22	0.194	0.17	0.152	0.17	0.157
18	0.32	0.299	0.32	0.297	0.27	0.248	0.27	0.258
19	0.44	0.418	0.42	0.419	0.39	0.367	0.38	0.374
20	0.55	0.529	0.53	0.531	0.5	0.487	0.5	0.492
21	0.63	0.619	0.62	0.618	0.59	0.585	0.6	0.588
22	0.71	0.69	0.69	0.694	0.67	0.668	0.67	0.67
23	0.76	0.746	0.74	0.749	0.73	0.733	0.74	0.732
24	0.8	0.794	0.79	0.797	0.77	0.784	0.78	0.78
25	0.84	0.833	0.82	0.835	0.81	0.826	0.83	0.823
26	0.87	0.866	0.86	0.87	0.85	0.865	0.86	0.863
27	0.91	0.902	0.9	0.901	0.89	0.901	0.89	0.896
28	0.94	0.936	0.94	0.935	0.94	0.933	0.91	0.933
29	0.97	0.968	0.97	0.965	0.96	0.967	0.96	0.965
30	1	1	1	1	1	1	1	1

4.

Table 3. BIMs and Gain in Reliability

	Most important				Least important			
p	**BIM(17)**	**BIM(17)·δp**	**BIM(9)**	**BIM(9)·δp**	**BIM(15)**	**BIM(15)·δp**	**BIM(12)**	**BIM(12)·δp**
0.4	0.04887	0.0293	0.04621	0.0277	0.01174	0.007	0.01171	0.007
0.5	0.12391	0.062	0.11917	0.0596	0.03185	0.0159	0.03311	0.0166
0.6	0.18236	0.0729	0.17614	0.0705	0.04235	0.0169	0.04648	0.0186
0.7	0.159	0.0477	0.14519	0.0436	0.01675	0.005	0.02687	0.0081
0.8	0.08779	0.0176	0.06042	0.0121	-0.0232	-0.005	-0.0085	-0.002
0.9	0.04253	0.0043	0.006	0.0006	-0.0367	-0.004	-0.0195	-0.002

The negative values in this table does not make sense, but still occurs in the last two rows, since 10’000 repetitions are not enough for this method to give accurate results when p is sufficiently big. For this reason we repeated the calculations above using 100’000’000 repetitions. The results are shown in the following table.

Table 3a. BIMS and Gain in Reliability, M=100’000’000

	Most important				Least important			
p	**BIM(17)**	**BIM(17)·δp**	**BIM(9)**	**BIM(9)·δp**	**BIM(15)**	**BIM(15)·δp**	**BIM(12)**	**BIM(12)·δp**
0.4	0.04696	0.0282	0.04703	0.0282	0.01266	0.0076	0.01336	0.008
0.5	0.12018	0.0601	0.11975	0.0599	0.03791	0.019	0.03992	0.02
0.6	0.17685	0.0707	0.17611	0.0704	0.05788	0.0232	0.06067	0.0243
0.7	0.14666	0.044	0.14648	0.0439	0.04259	0.0128	0.04433	0.0133
0.8	0.06449	0.0129	0.0651	0.013	0.01223	0.0024	0.01241	0.0025
0.9	0.01247	0.0012	0.01321	0.0013	0.00084	0.0001	0.00061	0.0001

5.

Table 4. Gain in Reliability by means of CMC, M=100’000

	Most important		Least important	
p	**BIM(17)·δp**	**BIM(9)·δp**	**BIM(15)·δp**	**BIM(12)·δp**
0.4	0.0287	0.0277	0.0073	0.0088
0.5	0.0608	0.0591	0.0182	0.0192
0.6	0.0719	0.0696	0.0244	0.0245
0.7	0.0432	0.044	0.0124	0.0134
0.8	0.013	0.0126	0.0022	0.0025
0.9	0.0013	0.0012	0.0001	0.0001

6.

Figure 1. Network edges are colored by groups (see Task 3). Group 1 – yellow, group 2 – green, group 3 – blue, group 4 – purple.

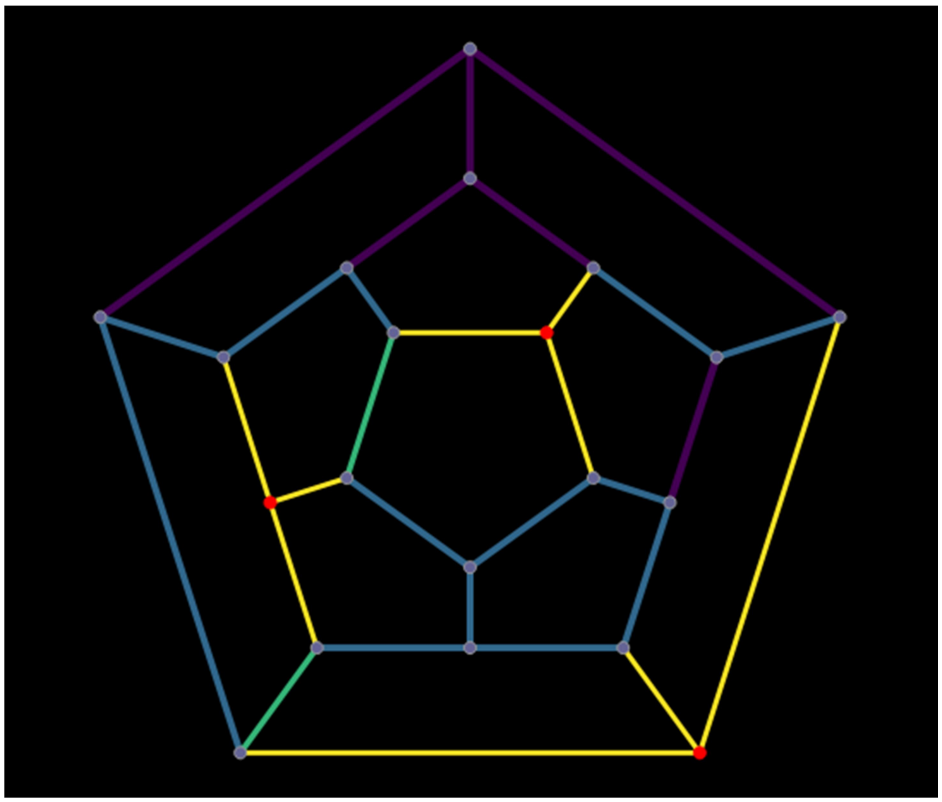

Figure 2. Network edges colors and widths are in proportion to their importance according to BIM Spectrum.