Faster Brute Force Proofs

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In this paper I suggest an idea for speeding up brute force propositional logic and at the same time allow easier modeling of path semantics.

By separating propositions[1] into two groups `F` and `X`, one can speed up brute force[2] propositional logic by enumerating only cases that satisfies the core axiom[3] of path semantics. This is possible because when `F(X)`, `X` is uniquely associated with `F`[4].

The core axiom of path semantics might be modeled in propositional logic, for more than two symbols, under the assumption that no more than one symbol in `F` is undefined or all symbols `X` are equal.

Examples:

F	X	
0100	1001	`F` has more than one zero, `X`s are not equal (skip case)
0100	0000	`X`s are equal (keep case)
1101	0110	`F` has only one zero (keep case)

Here is a table with fractions measured by counting cases:

|F| \ |X|	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
2	0.875	0.8125	0.78125	0.76563	0.75781	0.75391	0.75195	0.75098	0.7505
3	0.75	0.625	0.5625	0.53125	0.51563	0.50781	0.50391	0.50195	0.50098
4	0.65625	0.48438	0.39844	0.35547	0.33398	0.32324	0.3179	0.31519	0.31384
5	0.59375	0.39063	0.28906	0.23828	0.21289	0.2002	0.19385	0.19067	0.18909
6	0.55469	0.33203	0.2207	0.16504	0.1372	0.12329	0.11633	0.11285	0.11111
7	0.53125	0.29688	0.17969	0.12109	0.0918	0.07715	0.06982	0.06616	0.06433
8	0.51758	0.27637	0.15576	0.09546	0.06531	0.05023	0.04269	0.03893	0.03704
9	0.50977	0.26465	0.14209	0.08081	0.05017	0.03485	0.02719	0.02336	0.02145
10	0.5054	0.25806	0.1344	0.07257	0.04166	0.0262	0.01847	0.01461	0.01267
11	0.50293	0.25439	0.13013	0.06799	0.03693	0.02139	0.01363	0.00974	0.0078
12	0.50159	0.25238	0.12778	0.06548	0.03432	0.01875	0.01096	0.00707	0.00512
13	0.50085	0.25128	0.1265	0.0641	0.03291	0.01731	0.00951	0.00561	0.00366
14	0.50046	0.25069	0.1258	0.06336	0.03214	0.01653	0.00872	0.00482	0.00287
15	0.50024	0.25037	0.12543	0.06296	0.03172	0.01611	0.0083	0.00439	0.00244
16	0.50013	0.25019	0.12523	0.06274	0.0315	0.01588	0.00807	0.00416	0.00221

References:

[1] “Propositional calculus”
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[4] “Philosophy of The Core Axiom”
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https://github.com/advancedresearch/path_semantics/blob/master/papers-wip/philosophy-of-the-core-axiom.pdf