Conformant SOGBOFA 2018 IPPC

笔记本:	Mult_ROS		
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URL:	about:blank		

Conformant SOGBOFA

CONFORMANT-SOGBOFA-B-IPC18
设置了一个conformant depth，动作使用0,1

第0层使用 binary 0,1

```
maxVarDepth等于horizon
```

CONFORMANT-SOGBOFA-F-IPC18
第0层使用 binary 0,1
之后使用 **fractional**小数，可以理解成动作的边缘概率。

```
Updated the val to: 266.6780741226868
h = 0: [goto($r00, $l_t01);]
h = 1: [do($r00, $a00) = 0.15296242873782073;, goto($r00, $l_t00) = 0.24476265963011692;,
goto($r00, $l_t02) = 0.028495543312063457;, goto($r01, $l_t00) = 0.2562134947352236;, goto($r01,
$l_t01) = 0.326938201688797;, goto($r01, $l_t02) = 0.22271428804421584;, goto($r01, $l_t03) =
0.19413401553176352;]
h = 2: [do($r00, $a00) = 0.08468543968211942;, do($r01, $a00) = 0.6326996845375574;, goto($r00,
$l_t02) = 0.023440266575327426;, goto($r00, $l_t03) = 0.20339115753562706;]
h = 3: [do($r00, $a00) = 0.6356139194127727;, do($r01, $a00) = 0.44172360997388643;, goto($r00,
$l_t00) = 0.02190057261561448;]
h = 4: [do($r00, $a00) = 0.07755857382184395;, do($r01, $a00) = 0.5475569232477733;, goto($r00,
$l_t02) = 0.23326790813767923;]
h = 5: [do($r00, $a00) = 0.42318963336279836;]
h = 6: [do($r00, $a00) = 0.3361306167407746;]
h = 7: []
h = 8: [do($r00, $a01) = 0.0038329269309906808;]
h = 9: []
h = 10: []
```

相当于没有使用conformant planning

这两种从比赛结果上看，是sogbofa-f效果上更好

Score	Academic Advising	Chromatic Dice	Cooperative Recon	Earth Observation	Manufacturer	Push Your Luck	Red-finned Blue-eye	Wildlife Preserve	SUM

Conformant-SOGBOFA-F-IPC18	5.0	**18.4**	5.0	8.2	0.0	4.7	**18.4**	4.8	64.5
Conformant-SOGBOFA-B-IPC18	4.3	6.5	5.4	8.6	0.0	5.7	17.7	4.8	53.0

像sogbofa，Lifted Conformant SOGBOFA有内在的限制，聚合模拟只能产生近似值。然而，在大规模和排列组合上有挑战的问题上，它提供了精度和表现之间的折中。

向前聚合模拟对动作约束支持不好，这是在这届比赛中很大的挑战。

In summary, like SOGBOFA, Lifted Conformant SOGBOFA has an inherent limitation due to the aggregate simulation that produces approximate values. However, it provides a good tradeoff between accuracy and performance when the problems are large and combinatorially challenging so that other solvers must approximate as well. Forward aggregate simulation does not interact well with action constraints and this was a significant challenge in this competition.