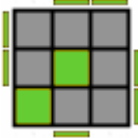
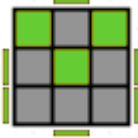
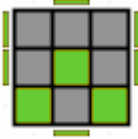
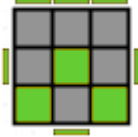
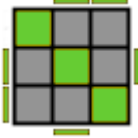
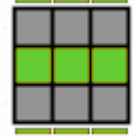
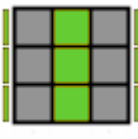
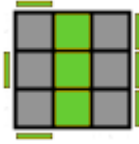


【OLL双向手法】 作者：张砷镓 2011. 1. 18

编号	CASE	公式	时间
1		$(R\ U)\ \underline{B}'\ (R\ B\ R'^2)\ \underline{U}'\ (R'\ F\ R\ F')$	1.3s
		$U'\ (R\ U)\ \underline{B}'\ (R\ B\ R'^2)\ \underline{U}'\ (R'\ F\ R\ F')$	1.4s
		$F\ (R\ U\ R'\ \underline{U}')\ F'\ f\ (R\ U\ R'\ \underline{U}')\ f$	1.1s
2		$(U\ r'\ \underline{U}'\ r\ U'\underline{U}')\ (R'\ U^2\ R\ U'\underline{U}')\ (r'\ U\ r)$	1.2s
		$f\ (R\ U\ R'\ \underline{U}')\ f'\ \underline{U}'\ F\ (R\ U\ R'\ \underline{U}')\ F'$	1.3s
		$F\ (U\ R\ \underline{U}'\ R')\ F'\ U\ F\ (R\ U\ R'\ \underline{U}')\ F'$	1.5s
4		$f\ (R\ U\ R'\ \underline{U}')\ y\ x\ R'\ F\ (R\ U\ R'\ \underline{U}')\ F'$	1.3s

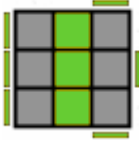
		$F (U R \underline{U}' R') F' U' F (R U R' \underline{U}') F'$	1.3s
5		$(r' R U) (R U R' \underline{U}') r (R'^2 F R F')$	1.1s
		$F (U R \underline{U}' R'^2 F') \underline{U}' F (U R \underline{U}') F'$	1.5s
6		$F (R U R') (U y') (R' U^2) (R' F R F')$	1.2s
		$F (R' F R) (U R \underline{U}' R' U) F (R U R' \underline{U}') F'$	1.5s
7		$(R \underline{B}') (R' f \mid R U \mid U R' \underline{U}' f)$	1.3s
		$F (U R' \underline{U}' F') U (F R^2) (U R' \underline{U}') F'$	1.4s
8		$R' F (U R \underline{U}' R'^2 \underline{F}' R^2) (U R' \underline{U}' R)$	1.1s
		$U' R' F (U R \underline{U}' R'^2 \underline{F}' R^2) (U R' \underline{U}' R)$	1.2s

9



$(R' \underline{U}' R \underline{U}') (R' U) y' (R' U R B)$

1.0s



$(L' \underline{U}' L) \underline{U}' (r' F \underline{U}' F) U r$

1.1s

10



$f (R U R' \underline{U}') * 2 f$

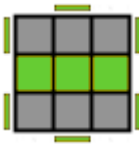
0.9s



$F (U R \underline{U}' R') * 2 F'$

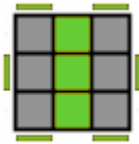
0.9s

11



$(r U r') (U R \underline{U}' R') * 2 (r \underline{U}' r')$

1.2s



$(\underline{U}' r U r') (U R \underline{U}' R') * 2 (r \underline{U}' r')$

1.2s

12



$F (R U R' \underline{U}') * 2 F'$

0.8s



$f (U R \underline{U}' R') * 2 f$

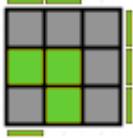
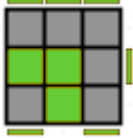
0.9s

13



$f (\underline{U}' L' U L) * 2 f$

1.0s

		$(R' U') \times (R' U R \underline{U}')^2 x' U R$	1.0s
14		$(I \underline{U}') (I'^2 U I^2 U I'^2) \underline{U}' I$	1.0s
		$r \underline{U}' r'^2 U r^2 U r'^2 \underline{U}' r$	1.1s
15		$(r' U) (r^2 \underline{U}' r'^2 \underline{U}' r^2) U r'$	1.1s
		$(R' F) (R^2 B') (R^2 F') (R^2 B R')$	1.1s
16		$(r' U^2) (R U R' \underline{U}' R U R' U r)$	1.1s
		$(U r' \underline{U}') (R \underline{U}' R' U R \underline{U}' R' U' \underline{U}' r)$	1.2s
17		$(r U' \underline{U}') (R' \underline{U}' R U R' \underline{U}' R U' r')$	1.0s
		$(\underline{U}' r U) (R' U R \underline{U}' R' U R U' \underline{U}' r')$	1.1s

18


 $(R\ U\ R'\ \underline{U})\ (R'\ F\ R^2)\ (U\ R'\ \underline{U})\ F$

1.0s


 $(L'\ \underline{U}'\ L)\ y'\ (L\ \underline{F}'\ L'\ U)\ (r\ U\ r')$

1.1s

19

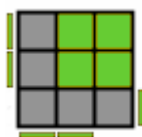

 $(R\ U\ R')\ (U\ R'\ F\ R\ F')\ (R\ \underline{U}'\underline{U}'\ R')$

1.1s


 $f\ (U\ R'\ F\ R\ F')\ (R\ \underline{U}'\ R'\ f)$

1.1s

20


 $(r\ \underline{U}'\underline{U}')\ (R'\ \underline{U}'\ R'\ \underline{U}'\ r')$

0.7s

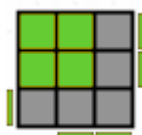

 $(l\ U^2\ L'\ \underline{U}'\ L)\ (\underline{U}'\ l')$

0.9s

21


 $r'\ U^2\ R\ U\ R'\ U\ r$

0.8s


 $l'\ U^2\ L\ U\ L'\ U\ l$

0.7s

22


 $r\ U\ R'\ U\ R\ \underline{U}'\underline{U}'\ r'$

0.7s

		$I U L' U L U' \underline{U}' I'$	0.8s
23		$r' \underline{U}' R \underline{U}' R' U' \underline{U}' r$	0.8s
		$R' F' L \underline{F}' L' F^2 R$	0.8s
24		$(r R^2 \underline{U}') (R \underline{U}' R' U^2 R \underline{U}' R) r'$	1.2s
		$I (L'^2 \underline{U}') (L \underline{U}' L' U^2 L \underline{U}' r R')$	1.2s
25		$r' (R^2 U R' U) (R U' \underline{U}' R' U) M$	1.1s
		$(r U R' U) (R' F R F') (R U' \underline{U}' r')$	1.2s
26		$(R' F R U R' F' R) (F U' F)$	1.0s
		$(r' U r) (U r' d') (f R \underline{U}' R')$	1.2s

27


 $F (U R \underline{U}' R^2 F) (R U R \underline{U}' R')$

1.0s


 $f (R U R^2 U' R' U R \underline{U}') f'$

1.1s

28


 $(r U r') (R U R' \underline{U}') (r \underline{U}' r')$

0.8s


 $(I U M U L') (U' R \underline{B}' R')$

1.1s

29


 $(r' \underline{U}' r) (R' \underline{U}' R U) (r' U r)$

0.9s


 $(R' F R) (L' \underline{U}' L U) (R' F R)$

0.9s

30


 $(r' R U) (R U R' \underline{U}') (r^2 R'^2 U) (R \underline{U}' r')$

1.0s

31


 $(R U' \underline{U}') (R'^2 F R F') (R U' \underline{U}' R')$

1.0s


 $(L U' \underline{U}') (L' r' U) (L \underline{U}' r) (U' \underline{U}' L')$

1.2s

32

F (R' F' R U R U' R')

0.7s

(B L U' L' U') (L U L' B')

1.0s

33

(R U R') (U R U' R' U') (R' F R F')

1.1s

(L U L' U L U' L' U') (r' U r B')

1.1s

34

(R' U' R U' R' U R) U (l U' R' U)

1.1s

(L' U') (L U' L' U L U r U' r' F)

1.0s

35

(R U) B' U' (R' U R B R')

1.0s

L U F' (U' L' U r) (U r')

1.1s

36

R' U' F (U R U') (R' F' R)

0.9s



$(r' F U F) (r \underline{U}' r' \underline{U}' r)$

0.9s

37



$f (R U R' \underline{U}') f$

0.7s



$F (U R \underline{U}' R)' F$

0.7s

38



$F' (\underline{U}' L' U L) F$

0.7s



$B' (\underline{U}' R' U R B)$

0.8s

39



$(R U R' \underline{U}') (R \underline{U}' R' F' \underline{U}' F) (R U R')$

1.2s



$U r' R U (R U R' U') (R' F R F') M$

1.2s

40



$f (R U) (R^2 \underline{U}' R' U) (R^2 \underline{U}' R') f$

1.2s



$F (R' F R^2 \underline{U}' R' \underline{U}') (R U R' F^2)$

1.3s

41


 $(R \underline{U}' R' U^2 R U) y (R \underline{U}' R' \underline{U}') F'$

1.2s


 $(R U R' U) (R \underline{U}' \underline{U}') (R' F) (R U R' \underline{U}') F'$

1.0s

42


 $(R' U R \underline{U}' \underline{U}' R' \underline{U}' F U) F (U R)$

1.4s


 $(R' \underline{U}' R \underline{U}' R' U^2 R) F (R U R' \underline{U}') F'$

1.3s

43


 $(R' F R U R' \underline{U}' F) U R$

0.8s


 $(r' U) (r U r' F \underline{U}' F) r$

1.1s

44


 $(r \underline{U}' r' \underline{U}' r) y (R U R' f)$

1.0s

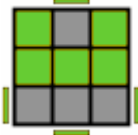
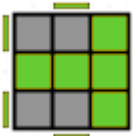

 $(R B' R' \underline{U}' R U) B \underline{U}' R'$

1.1s

45


 $(R' \underline{U}') (R' F R F) U R$

0.7s

		$(r' F) (L' U L \underline{U}') F r$	0.9s
46		$(R' \underline{U}' R U) y (r U R' \underline{U}' R) r'$	1.0s
		$(R U) (R^2 \underline{U}') (R' F R U R \underline{U}') F'$	1.1s
47		$F (R U R' \underline{U}') F'$	0.5s
		$f (U R \underline{U}' R') f'$	0.7s
48		$(R U R' \underline{U}') (R' F R F')$	0.6s
		$(L' \underline{U}' L U) (r \underline{U}' r' F)$	0.7s
49		$(R \underline{U}' \underline{U}') (R'^2 \underline{U}') (R^2 \underline{U}' R'^2) U^2 R$	1.1s
		$U^2 (R \underline{U}' \underline{U}') (R'^2 \underline{U}') (R^2 \underline{U}' R'^2) U^2 R$	1.3s

50


 $(R \ U' \underline{U} \ R' \ \underline{U}) \ (R \ U \ R' \ \underline{U} \ R \ \underline{U} \ R')$

0.9s


 $U' \ (R \ U' \underline{U} \ R' \ \underline{U}) \ (R \ U \ R' \ \underline{U} \ R \ \underline{U} \ R')$

1.0s

51

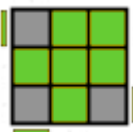

 $(R \ U \ R' \ U) \ (R \ U' \underline{U} \ R')$

0.6s

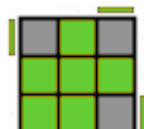

 $U \ R' \ U' \ U' \ R \ U \ R' \ U \ R$

0.6s

52


 $(R \ U' \underline{U}) \ (R' \ \underline{U} \ R \ \underline{U} \ R')$

0.6s


 $(U \ R' \ \underline{U}) \ (R \ \underline{U} \ R' \ U^2 \ R)$

0.7s

53


 $(R \ U \ R' \ \underline{U}) \ (r \ R' \ U \ R \ \underline{U} \ r')$

0.8s


 $U' \ (R \ U \ R' \ \underline{U}) \ (r \ R' \ U \ R \ \underline{U} \ r')$

0.8s

54


 $(r \ U \ R' \ \underline{U}) \ (r' \ R \ U \ R \ \underline{U} \ R')$

0.8s



$(I\ U\ L'\ \underline{U}\ M\ U)\ (L\ \underline{U}'\ L')$

0.9s

55



$(R^2\ D')\ (R\ U'\underline{U}')\ (R'\ D)\ (R\ U'\underline{U}'\ R)$

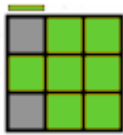
1.2s



$(R^2\ D)\ (R'\ U^2)\ (R\ D')\ (R'\ U^2\ R')$

1.3s

56



$(r\ U\ R'\ \underline{U}')\ (r'\ F\ R\ F')$

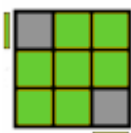
0.7s



$(R'\ F)\ (r\ U\ R\ \underline{U}')\ (r'\ F)$

0.8s

57



$F'\ (r\ U\ R'\ \underline{U}')\ (r'\ F\ R)$

0.8s



$x'\ (R\ \underline{U}'\ R'\ D)\ (R\ U\ R'\ D')$

0.8s

满意度

100

80

100

100

100

85

100

100

100

80

90

85

100

85

100

90

100

95

100

100

100

100

100

100

100

100

100

100

100

95

100

100

100

100

100

95

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

90

100

90

100

100

100

100

100

100

100

100

100

100

100

100

100

85

100

100

95

100

85

90

100

100

100

100

100

100

100

100

100

100

100

100

100

70

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100