Read Crown

read_crown															
1readonly															
	occ4		occ3ltx1		occ2ltx1 occ1		occ1ltx1 occ2		ltx1occ3		occ2ltx2		occ1ltx1 occ1ltx1		ltx1occ2ltx1
t1	OCC	c	OCC	c	OCC	c	OCC	a:t2	LTX	c bd1	OCC	c	OCC	a:t2	LTX	c bd1
t2	OCC	c	OCC	c	OCC	c	LTX	c bd2	OCC	c	OCC	c	LTX	c bd2	OCC	c
t3	OCC	a:t1	OCC	a:t1	LTX	c bd3	OCC	c	OCC	a:t1	LTX	c bd3	OCC	c	OCC	a:t1
t4	OCC	c	LTX	c bd4 RUB2	OCC	a:t3	OCC	c	OCC	c	LTX	a bd3 r:t3 RUB (t3<) t2	LTX	c bd4 RUB2	LTX	c bd4 RUB2

	occ1ltx2 occ1		ltx1occ1 ltx1occ1		ltx2occ2		occ1ltx3		ltx1occ1ltx2		ltx2occ1ltx1		ltx3occ1		ltx4
t1	OCC	a:t2	LTX	c bd1	LTX	c bd1	OCC	a:t2	LTX	c bd1	LTX	c bd1	LTX	c bd1	LTX	c bd1
t2	LTX	c bd2	OCC	c	LTX	c bd2	LTX	c bd2	OCC	c	LTX	c bd2	LTX	c bd2	LTX	c bd1 r:t1
t3	LTX	c bd3	LTX	c bd1 r:t1	OCC	a:t1	LTX	c bd3	LTX	c bd1 r:t1	OCC	a:t1	LTX	c bd1 r:t1	LTX	c bd1 r:t2
t4	OCC	a:t3	OCC	a:t3	OCC	c	LTX	c bd3 r:t3 RUB2	LTX	a bd1 RUB t2 (t1<)	LTX	c bd4 RUB t2	OCC	a:t3	LTX	a bd1 r:t3 RUB t2

w(x) r(x) T1 w(x) w(z)

w(z) r(z) T3 w(y)

w(y) r(y) w(a)

w(a) T4

w(b) r(b) T2 w(x) r(x) r(a)

T5
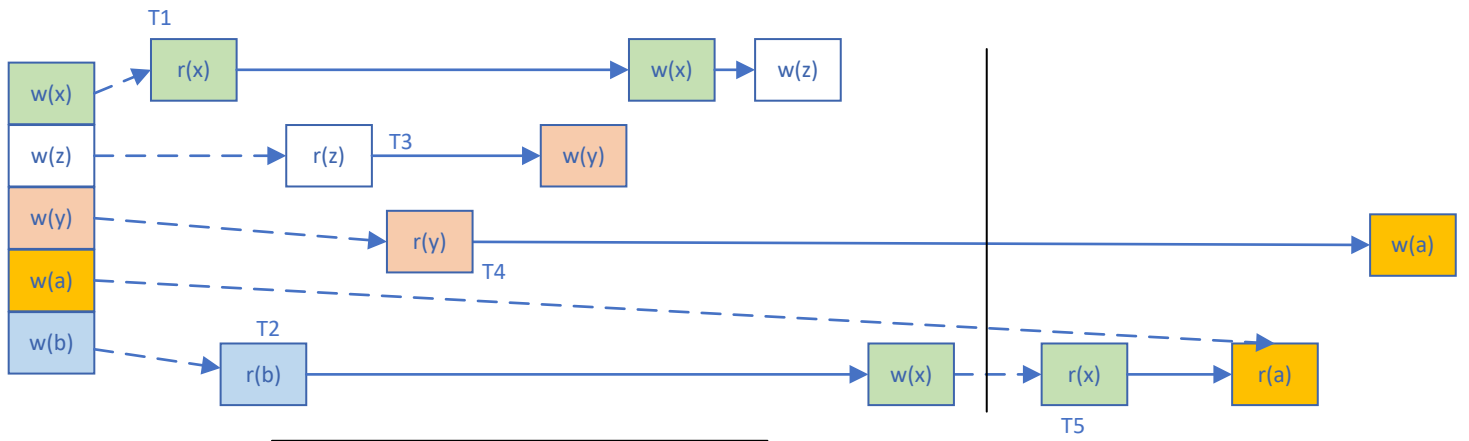
read_crown		
1readonly_withOCCoverlapped		
t1	OCC	c
t2	OCC	c
t3	OCC	c
t4	LTX	c bd:t4
t4	LTX	a bd:t4 RUB t2 (t4<t2)

t4<t3<t1<t2

T1 r(v) w(x)
T2:LTX r(v) w(u)
T3:LTX r(x) w(y)
T4 r(x) r(u)
T5 r(u) r(y)
w(v) w(x) w(y) w(u)
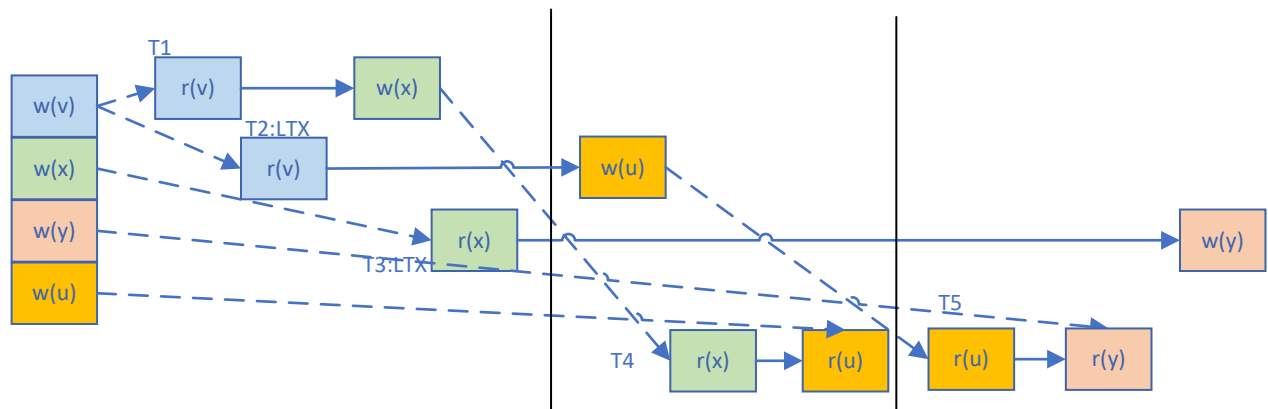
t4がない場合t2<t5<t3<t1　t5がない場合 t3<t1<t4<t2

read_crown			
sequent_2readonly			
	ltx5		ltx4_succ_omit
t1	LTX	c bd:1	LTX	c bd:1
t2	LTX	c bd:2	LTX	c bd:2
t3	LTX	c bd:1 r:t1	LTX	c bd:1 r:t1
t4	LTX	c bd:2 r:t2 RUB 1	LTX	c bd:2 r:t2 RUB 1
t5	LTX	a bd:1 r:t3 RUB 2	omit	

read_crown							
sequent_2readonly							
	occ1ltx3_prep_omit		1occ3ltx		ltx4_prep_omit		4ltx
t1	OCC	c	OCC	c	LTX	c bd:1	LTX	c bd:1
t2	LTX	c bd:2	LTX	c bd:2	LTX	c bd:2	LTX	c bd:2
t3	LTX	c bd:3	LTX	c bd:3	LTX	c bd:1 r:t1	LTX	c bd:1 r:t1
t4	omit		LTX	a bd:2 r:t2 RUB (2<)1	omit		LTX	c bd:2 r:t2 RUB 1
t5	LTX	c bd:3 r:t3 RUB2	LTX	c bd:3 r:t3 RUB2	LTX	a bd:1 r:t3 RUB2	LTX	a bd:1 r:t3 RUB2

偽陽性

Diagram labels (top): w(x), T3 LTX, r(x), w(y), w(u), T4 LTX, r(u), w(v), w(y), T1, T6, r(u), r(y), r(v), w(u), w(w), r(v), w(x), T5, r(x), r(v), T2, w(v)
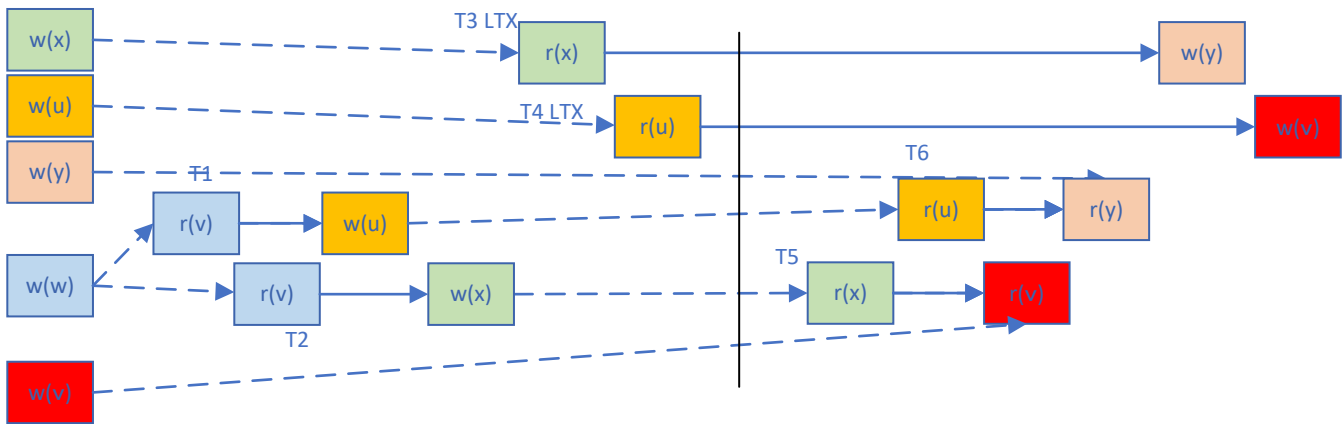
t6 omit t3(ltx)<t2<t5<t4(ltx)<t1
t5 omit t4(ltx)<t1<t6<t3(ltx)<t2

read_crown
cascading_2readonly

t	ltx6		occ1ltx4_succ_omit		ltx5_succ_omit	
t1	LTX	c bd1	OCC	c	LTX	c bd1
t2	LTX	c bd2	LTX	c bd2	LTX	c bd2
t3	LTX	c bd2 r:t2	LTX	c bd2 r:t2	LTX	c bd2 r:t2
t4	LTX	c bd1 r:t1	LTX	c bd4	LTX	c bd1 r:t1
t5	LTX	a bd1 r:t4 RUB 2	LTX	c bd4 r:t4 RUB 2	LTX	a bd1 r:t4 RUB 2
t6	LTX	c bd2 r:t3 RUB 1	omit		omit	

偽陽性

t	occ1ltx5		ltx1occ1ltx3_prep_omit		ltx5_prep_omit	
t1	OCC	c	LTX	c bd1	LTX	c bd1
t2	LTX	c bd2	OCC	c	LTX	c bd2
t3	LTX	c bd2 r:t2	LTX	c bd3	LTX	c bd2 r:t2
t4	LTX	c bd4	LTX	c bd1 r:t1	LTX	c bd1 r:t1
t5	LTX	c bd4 r:t4 RUB 2	omit		omit	
t6	LTX	a bd2 r:t3 RUB (t2<)1	LTX	c bd3 r:t3 RUB 1	LTX	c bd2 r:t3 RUB 1
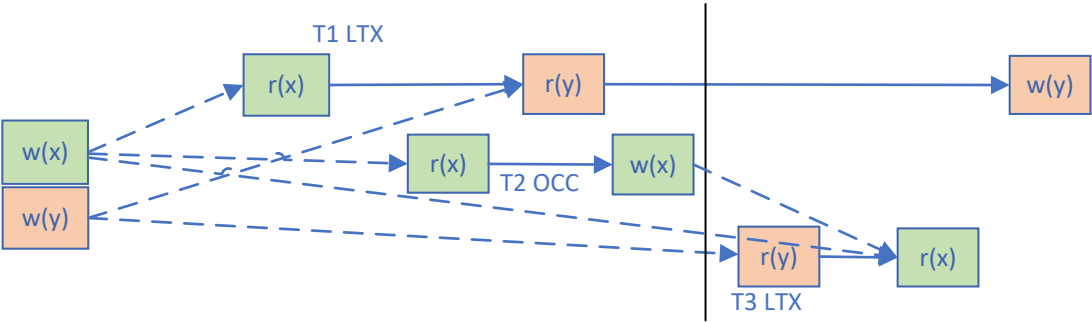
	read_crown			
	feket_readonlyanomaly			
	anomaly		safe_read	
t1	LTX	c bd1	LTX	c bd1
t2	OCC	c	OCC	c
t3	LTX	a bd1 r:t1 RUB 2	LTX	c bd1 r:t1 RUB 0 (Safe SS)