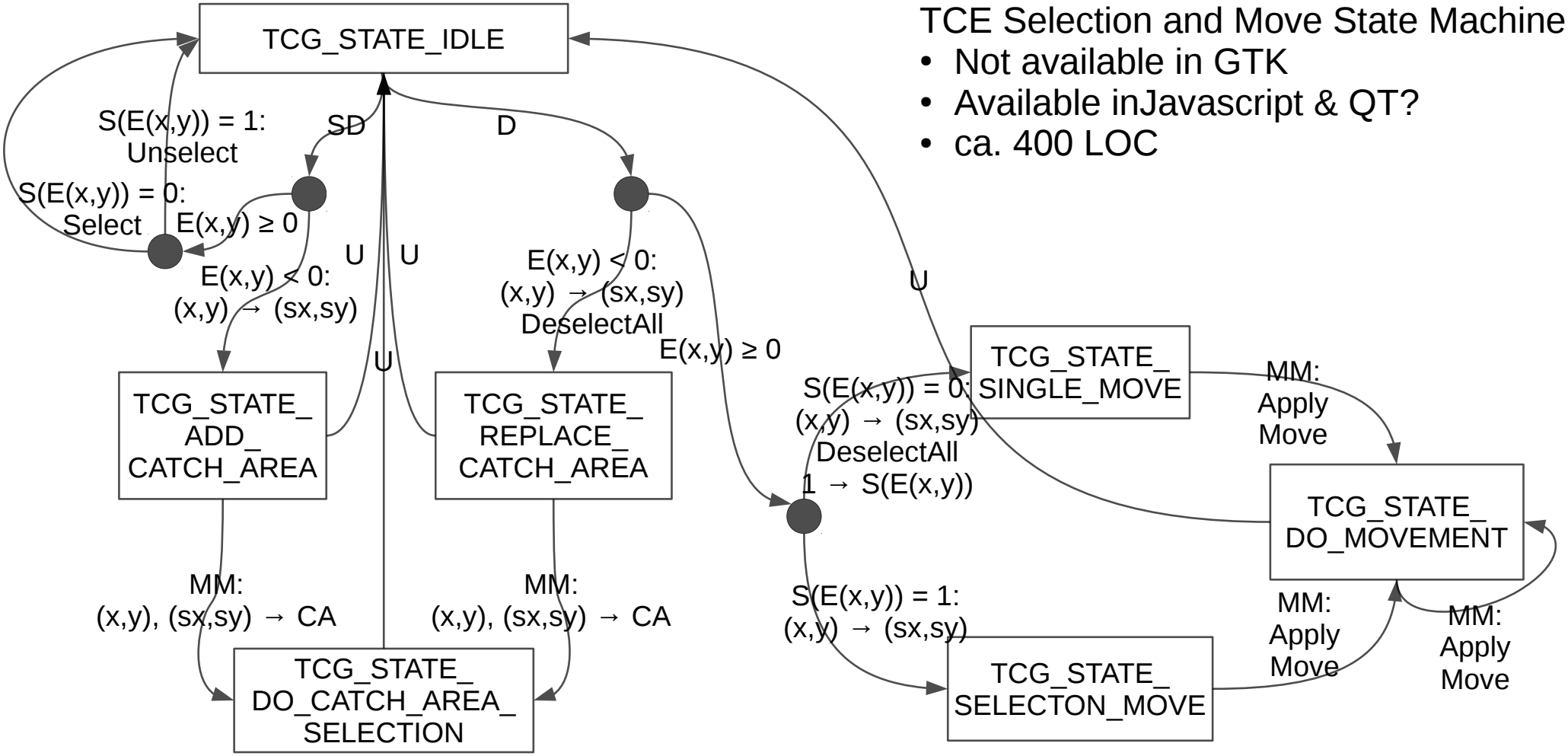
TCE Selection and Move State Machine

Input: x, y, e Values for „e“:BUTTON_DOWN (D), SHIFT_BUTTON_DOWN (SD), MOUSE_MOVE (MM), BUTTON_UP (U)
Functions:

E(x,y)	tcg_GetElementOverPosition(tcg, x, y)	Element-Index, if (x,y) is above an element
S(Element-Index)	tcg_IsSelected(tcg, idx)	True, if the element is selected

Internel: Start position: sx, sy (tcg->start_x, tcg->start_y). Catch Area: CA (tcg->catch_area)

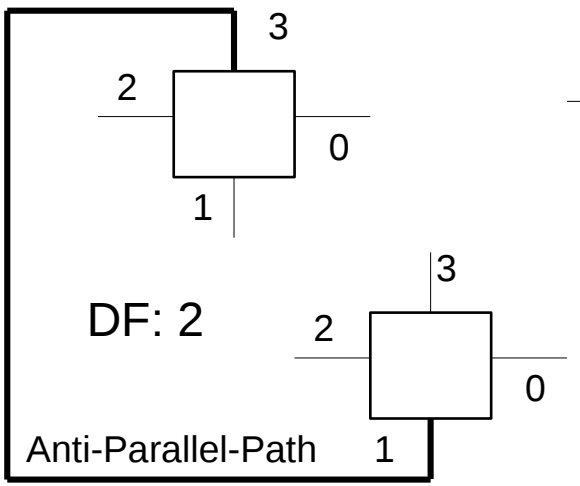


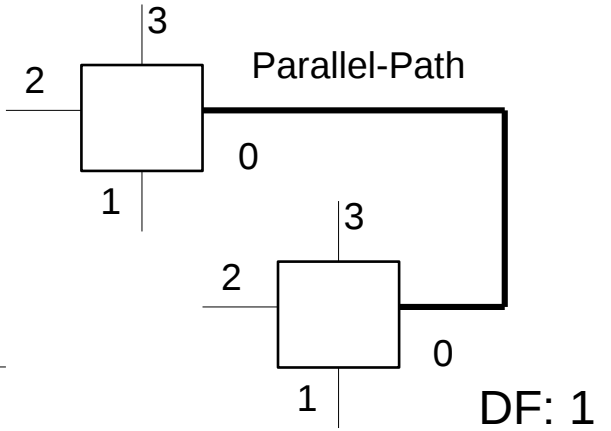
TCE Selection and Move State Machine

- Not available in GTK
- Available inJavascript & QT?
- ca. 400 LOC

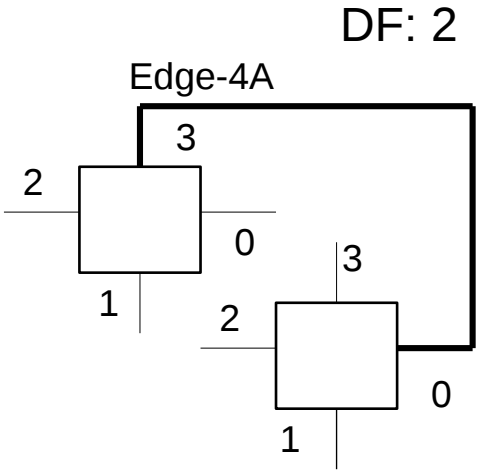
TCE Automatic Path Draw Algorithm

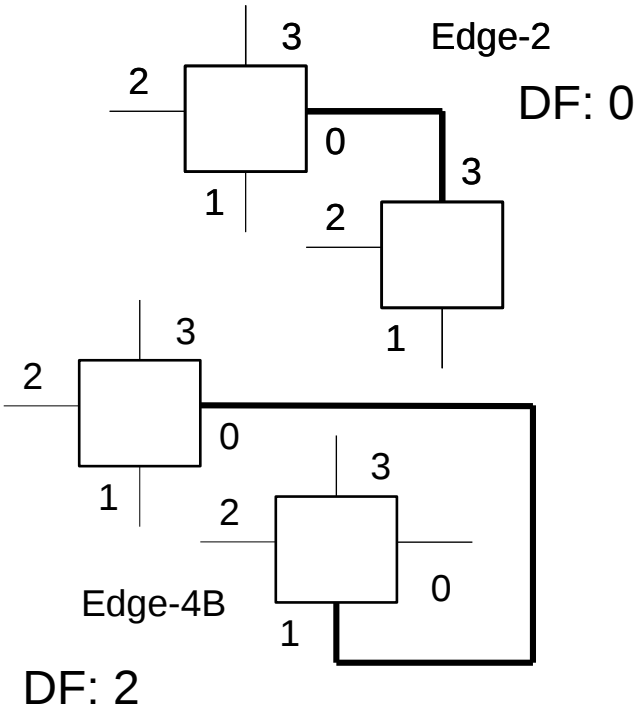
dir_src	dir_dest	Path-Algoritm
0	0	Parallel
0	1	Edge-X
0	2	Anti-Parallel
0	3	Edge-X
1	0	Edge-X
1	1	Parallel
1	2	Edge-X
1	3	Anti-Parallel
2	0	Anti-Parallel
2	1	Edge-X
2	2	Parallel
2	3	Edge-X
3	0	Edge-X
3	1	Anti-Parallel
3	2	Edge-X
3	3	Parallel





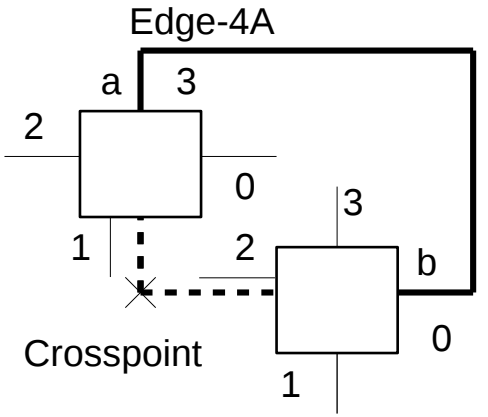
Condition	Path-Algorithm
dir_src == dir_dest	Parallel
dir_src+dir_dest == 4	Anti-Parallel
All other	Edge-X





TCE Automatic Path Draw Algorithm

Point a	Dir a	Point b	Dir b	Crosspoint	Crosspoint covers
(ax, ay)	3 odd: x	(bx, by)	0 even: y	(ax, by)	0 → Edge-4A
(ax, ay)	0 even: y	(bx, by)	1 odd: x	(bx, by)	1 → Edge-4B
(ax, ay)	0 even: y	(bx, by)	3 odd: x	(bx, by)	2 → Edge-2



Path	Degree of Freedom	Line Segments	Points
Parallel	1	3	2
Anti-Parallel	2	5	4
Edge-4A	2	4	3 Example: (ax, d0) (d1, d0) (d1, by)
Edge-4B	2	4	3
Edge-2	0	2	1