SoCV hw4 p2

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In the following sub-problem, the implication generated by "updateWatch()" is marked in red.

(a) f ← 0

f is not a watched pins ➜ Nothing changed.

a	b	c
watched pins: { a, d } watching-0: { } watching-1: { } watching-known: { a }	watched pins: { b, j } watching-0: { } watching-1: { b, c } watching-known: { }	watched pins: { c, b } watching-0: { c } watching-1: { } watching-known: { }

(b) b ← 1

Update watch b.

a	b	c
watched pins: { a, d } watching-0: { } watching-1: { } watching-known: { a }	watched pins: { j, k } watching-0: { } watching-1: { } watching-known: { }	watched pins: { c, g } watching-0: { c } watching-1: { } watching-known: { }

(c) e ← 0

e is not a watched pin ➜ nothing changed

a	b	c
watched pins: { a, d } watching-0: { } watching-1: { } watching-known: { a }	watched pins: { j, k } watching-0: { } watching-1: { } watching-known: { }	watched pins: { c, g } watching-0: { c } watching-1: { } watching-known: { }

(d) a ← 1

a ← 1 implies d ← 0

a	b	c
watched pins: { } watching-0: { } watching-1: { } watching-known: { }	watched pins: { j, k } watching-0: { } watching-1: { } watching-known: { }	watched pins: { c, g } watching-0: { c } watching-1: { } watching-known: { }

(e) l ← 1

l ← 1 implies b ← 1, but we already known b ← 1. So, nothing changed.

a	b	c
watched pins: { }	watched pins: { j, k }	watched pins: { c, g }
watching-0: { }	watching-0: { }	watching-0: { c }
watching-1: { }	watching-1: { }	watching-1: { }
watching-known: { }	watching-known: { }	watching-known: { }

(f) j ← 0

Update watch j.

a	b	c
watched pins: { }	watched pins: { k, l }	watched pins: { c, g }
watching-0: { }	watching-0: { }	watching-0: { c }
watching-1: { }	watching-1: { }	watching-1: { }
watching-known: { }	watching-known: { }	watching-known: { }

(g) g ← 0

g ← 0 implies c ← 0 ➜ update watch c.

a	b	c
watched pins: { }	watched pins: { k, l }	watched pins: { g, h }
watching-0: { }	watching-0: { }	watching-0: { }
watching-1: { }	watching-1: { }	watching-1: { }
watching-known: { }	watching-known: { }	watching-known: { }

(h) h ← 1

h is a watched pin ➜ update watch h.

a	b	c
watched pins: { }	watched pins: { k, l }	watched pins: { g, i }
watching-0: { }	watching-0: { }	watching-0: { }
watching-1: { }	watching-1: { }	watching-1: { }
watching-known: { }	watching-known: { }	watching-known: { }