

$OTII(lins, rins) \triangleq$ *lins* is transformed against *rins*; *II* is for *Ins* vs. *Ins*.

IF *lins.pos* < *rins.pos* THEN *lins*

ELSE IF *lins.pos* > *rins.pos*

THEN [*lins* EXCEPT !.pos = @ + 1]

ELSE IF *lins.ch* = *rins.ch* THEN *Nop*

ELSE IF *lins.pr* > *rins.pr* THEN *lins* using “priority”

ELSE [*lins* EXCEPT !.pos = @ + 1]

$OTID(ins, del) \triangleq$ *ins* is transformed against *del*

IF *ins.pos* ≤ *del.pos* THEN *ins*

ELSE [*ins* EXCEPT !.pos = @ − 1]

$OTDI(del, ins) \triangleq$ *del* is transformed against *ins*

IF *del.pos* < *ins.pos* THEN *del*

ELSE [*del* EXCEPT !.pos = @ + 1]

$OTDD(l\text{del}, r\text{del}) \triangleq$ *l\text{del}* is transformed against *r\text{del}*; *DD* is for *Del* vs. *Del*.

IF *l\text{del}.pos* < *r\text{del}.pos* THEN *l\text{del}*

ELSE IF *l\text{del}.pos* = *r\text{del}.pos* THEN *Nop*

ELSE [*l\text{del}* EXCEPT !.pos = @ − 1]

$OT(lop, rop) \triangleq$ *lop* is transformed against *rop*

CASE *lop* = *Nop* ∨ *rop* = *Nop* → *lop*

□ *lop.type* = “Ins” ∧ *rop.type* = “Ins” → $OTII(lop, rop)$

□ *lop.type* = “Ins” ∧ *rop.type* = “Del” → $OTID(lop, rop)$

□ *lop.type* = “Del” ∧ *rop.type* = “Ins” → $OTDI(lop, rop)$

□ *lop.type* = “Del” ∧ *rop.type* = “Del” → $OTDD(lop, rop)$