

## **f2f+-pred-preserves-order**<sup>11,40</sup>

$\forall es:ES, ff:FIFO, f2f+:F2F+-decls.$

$\text{plus-ify}\{i:l\}(es;ff;is\_req ;is\_ack ;awaiting ;owes\_ack )$

$\Rightarrow (\forall sndr, rcvr:ff.C, e, e':E.$

$([e: sndr \dashv\vdash is\_req \rightarrow rcvr] \vee [e: rcvr \dashv\vdash is\_ack \rightarrow sndr])$

$\Rightarrow ([e': sndr \dashv\vdash is\_req \rightarrow rcvr] \vee [e': rcvr \dashv\vdash is\_ack \rightarrow sndr])$

$\Rightarrow (e' < e)$

$\Rightarrow (\forall x, x':E. f2f+-pred(x,e) \Rightarrow f2f+-pred(x',e') \Rightarrow (x' < x))$ )