

Proof

Theorem refinement: forall A C D: Stream TD,
exists B, FIFO1(A,B) \wedge Sync(B,C) \wedge Sync(B,D) \rightarrow
exists E, Sync(A,E) \wedge FIFO1(E,C) \wedge FIFO1(E,D)

Goal:
exists E, Sync(A,E) \wedge FIFO1(E,C) \wedge FIFO1(E,D)

assert E=A

Sync(A,A)

default

FIFO1(A,C)

hypothesis

FIFO1(A,D)

hypothesis

No more subgoals

Hypothesis:
exists B, FIFO1(A,B) \wedge Sync(B,C) \wedge Sync(B,D)

Sync(B,C)

FIFO1(A,C)

FIFO1(A,B)

FIFO1(A,D)

Sync(B,D)