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1 |----- MODULE BufferStateSpace -----|
  |The buffer (i.e., sequence) representation of state space used in AJupiter. This module defines|
  |generalized OT functions on operation sequences.
6 | EXTENDS Naturals, SequenceUtils
7 |-----|
8 | RECURSIVE xFormOpOps(-, -, -) Transform op against an operation sequence ops.
9 | xFormOpOps(xform(-, -), op, ops)  $\triangleq$ 
10 |   IF ops =  $\langle \rangle$  THEN  $\langle op \rangle$  Maintain and return the intermediate transformed operations.
11 |   ELSE  $\langle op \rangle \circ xFormOpOps(xform, xform(op, Head(ops)), Tail(ops))$ 
13 | xFormOpsOp(xform(-, -), ops, op)  $\triangleq$  Transform an operation sequence ops against op.
14 |   LET opX  $\triangleq xFormOpOps(xform, op, ops)$ 
15 |   IN   [i  $\in 1 \dots Len(ops) \mapsto xform(ops[i], opX[i])$ ]
17 | xForm(xform(-, -), op, ops)  $\triangleq$ 
18 |   [xop  $\mapsto Last(xFormOpOps(xform, op, ops))$ ,
19 |   xops  $\mapsto xFormOpsOp(xform, ops, op)$ ]
21 | xFormShift(xform(-, -), op, ops, shift)  $\triangleq$  shift of ops
22 |   xForm(xform, op, SubSeq(ops, shift, Len(ops)))
23 |-----|
  \ * Modification History
  \ * Last modified Wed Jan 16 17:03:47 CST 2019 by hengxin
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