Without a shared clock, need synchronization to exchange data

For each producer-consumer pair

Each side sends a one-bit SYNC signal to the other

Let's say both start at 0

The producer follows this protocol:

- Put data on the data wires
- Flip the SYNC bit from producer to consumer
- Consumer can tell that the two SYNC bits are now different
- Consumer safely (DATA wires are held constant) reads the data
- After it's done, it tells the producer that it's done by flipping its SYNC bit
- (so the SYNC values both change to 1, then both change to 0, and so forth, over time)