Discrete Event Simulation Algorithm

**START**
\[
\text{CellStatus} = 0 \\
\text{CellCapacity} = 3 \\
\text{NOW} = 0.0
\]

**Initialise List**
- Schedule an *Arrival* event at time NOW

**WHILE** (NOT end of list) AND (NOW < MaxTime)
- NOW = Time of event scheduled at the head of the list

**CASE** of EventType

1. **CALL** Event Routine Arrival
   - Generate Next Arrival
   - \( \text{CallsAttempted} + + \)
   - Schedule Begin Service Event at Time NOW
   - Delete Event from List

2. **CALL** Event Routine Begin Service
   - IF (CellStatus < CellCapacity)
     - \( \text{CellStatus} + + \)
     - Schedule End Service Event at \( \text{NOW} + \text{ServiceTime} \)
     - \( \text{CallServiced} + + \)
   - ELSE
     - \( \text{CallsBlocked} + + \)
     - Delete Event from List

2. **CALL** Event Routine End Service
   - \( \text{CellStatus} -- \)
   - Delete Event from List

Display \( \text{CallsAttempted} \)
Display \( \text{CallServiced} \)
Display \( \text{CallsBlocked} \)
Display \( \text{BlockingProbability} \)

**END**