1. **TIMER**
2. **Transceiver Comp (Generic Comm)**
   - Receive Msg
   - Send Msg

**Flood DM**
- **TIMER**
- **TIMERC**
- **Send (P)**
- **Send (R)**

**Send (R)**

(Single Timer)
Coverage Problems

breach of a path is the closest distance to any sensor

\[ B(P_i) : \text{breach shock of path } P_i \]

\[ \text{arg max } \{ B(P_i) \} = P_B \leftarrow \text{maximal breach path} \]

1) Worst-case coverage problem

Support : max distance from closest sensor. \( S(P) \)

2) Best-case.

\[ \text{arg min } \{ S(P_i) \} = P_s \leftarrow \text{maximal support path} \]

\( P_i \in \text{paths } \{ I, F \} \)
Computational Geometry: Algorithmic technique for efficiently solving problems in geometric problems.

Voronoi Diagram.

- Maximal Branch Path has to be along Voronoi edges.

\[ P = \{ p_1, \ldots, p_n \} \]

\[ U(p_i) : \text{set of all points in space such that they are closer to } p_i \text{ than any other point in } P. \]

\[ U(p_i) : \text{Voronoi Cell of } p_i \]
Steps for finding P8:
1. Generate Voronoi Diagram D
2. Apply graph theoretic abstraction by transforming D to a weighted graph G.
3. Find P8 using binary-search and breadth-first search on G.

Related Structure: Delaunay Triangulation for a Voronoi Diagram