

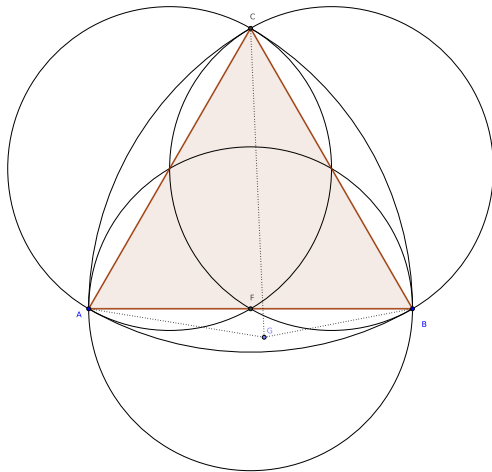
# PFLOCK Report

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September 18, 2020

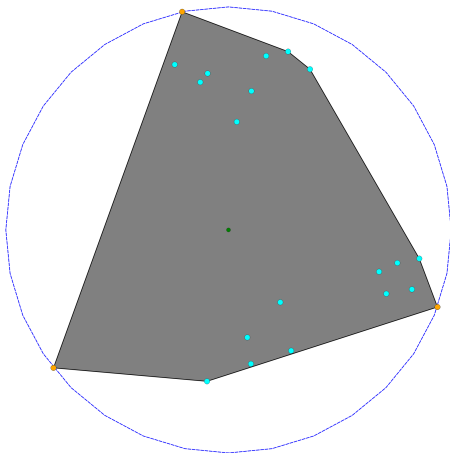
A mistake in my previous approach...



# Can still MBC help?

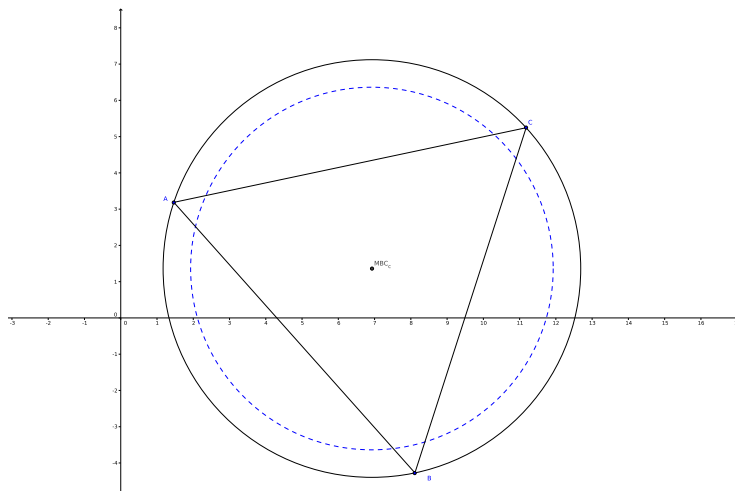
## Extremal points

- The 3 points which describe the MBC in an input set of points...



# Can still MBC help?

Extremal points



# Proposed Algorithm

- Input: Maximal cliques which MBC is greater than  $\epsilon$

For each clique:

1.  $P \leftarrow$  Set of points in clique
2.  $S \leftarrow \emptyset$
3. Find  $MBC$  in  $P$
4. While  $MBC.radius \leq \frac{\epsilon}{2}$ :
  - 4.1.  $E \leftarrow ExtremalPoints(MBC)$
  - 4.2.  $S \leftarrow S \cup E$
  - 4.3.  $P \leftarrow P - E$
  - 4.4. Find  $MBC$  in  $P$
5.  $S \leftarrow S \cup ConvexHull(P)$
6. return  $S$

# What's next

- ▶ I have implemented the algorithm and the output compared with the previous implementation are the same.
- ▶ Still working on the formal proof.
- ▶ Run performance tests with more datasets.