Poirot: Private Contact Summary Aggregation

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Poirot: In a Nutshell

Physical distancing between individuals is key to preventing the spread of contagious diseases.

Poirot: Measures physical distancing while ensuring user privacy.
- Measures physical distancing through contact events between individuals (independent of diagnosis status).
- Protects user privacy by collecting and releasing aggregate statistics that can’t be linked back to every individual.

Poirot complements traditional contact tracing techniques by enabling more proactive measures.

Poirot collects and shares aggregate statistics without linkability.

How would Poirot be used?

- Measures physical distancing through contact events between individuals (independent of diagnosis status).
- Protects user privacy by collecting and releasing aggregate statistics that can’t be linked back to every individual.

Poirot provides actionable information to both individual users and decision makers.

How many contacts do I have on a daily basis? When is it safest for me to visit a given building?

Which buildings require policy changes? Are certain groups at higher risk?

How would Poirot be used?

- Measures physical distancing through contact events between individuals (independent of diagnosis status).
- Protects user privacy by collecting and releasing aggregate statistics that can’t be linked back to every individual.

Poirot allows access control for the set of participating users. Blind signatures decouple identity from uploaded summaries.

Server: only learn metadata about contact summaries.

Poirot scales effectively even for large (e.g., state-wide) deployment scenarios.

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