“Contact Tracing” System - Adoption Test Suite

DRAFT Proposal

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The Need: Shared Evaluative Criteria for "Contact Tracing" and similar Systems

- We need contact tracing systems (and similar location capture systems) that can be successfully implemented (alongside other pandemic-responsive BOLTS systems) to help end the SARS-COVID 19 pandemic and to be available for other future public health and other similar public benefits.
  - "Technically feasible" systems are necessary, but insufficient, to assure successful deployment
  - Evidence from existing early deployments (Singapore, S. Korea) is that contact tracing requires adoption (downloading of app, etc.) by at least supermajority of the population to be effective.
    - Compare getting location reports from 50% of drivers tells you nothing about traffic.
- Specifically, we need resilient and sustainable "Contact Tracing" systems to help inform stakeholders' insights into the infectious potential of individuals' past and future interactions.
  - Enable individuals to to make informed decisions regarding interaction strategies and to collectively "flatten the curve" of new infections during the expected extended period prior to development of a SARS-COVID 19 vaccine and/or other long-term pandemic public health strategy.

Our Approach:

- Because evidence of early contact tracing systems indicates that their effectiveness is entirely dependent on high levels of adoption in a given population, we are working to create an “adoption test suite” to assist all levels of stakeholders with that evaluation.
  - Develop a BOLTS-oriented, sophisticated “consumer reports” for Contact Tracing system evaluation
- Specifically, we will create (and pilot systems using) a test suite and tools designed to help individuals and organizations determine whether a given “contact tracing” system is both:
  - Technically **feasible**
    - Interoperable with dependent systems
    - Based on sufficiently ubiquitous existing infrastructure
    - [other?]
  - B-O-L-T-S **reasonable**
    - Business (Is the system self-sustaining alone or in combination with existing BOLTS systems, [other?])
    - Operations (Is the system operationally possible to implement, and at what effort/cost?[other?])
    - Legal (Are stakeholders harmed directly or indirectly in ways that are legally cognizable?[other?])
    - Technically feasible (Is the system interoperable with existing technology? What are normative and informative cross references? How do different BOLTS tech platforms hybridize?[other?])
    - Socially acceptable
      - Privacy preserving
      - Adapted culturally to norms
      - Accessible and UI appropriate
      - Ethically sound
      - Consistent with principles/aspirations of population
      - Industry practices
      - [other?]

Benefits:

- Avoid costly mistake of deploying and supporting projects that are either NOT technically feasible in operation, or are technically feasible, but NOT BOLTS reasonable.
  - In either event, Contact Tracing that is not adopted very broadly is a useless waste of time and lives
  - Knowledge (from Singapore and S. Korea experience thus far) that a high percentage of adoption is prerequisite to Contact Tracing function sets high threshold of system testing, under additional pressure of mounting deaths, which pushes the question of the "adoptability of the system" into the initial requirements for designing, developing and operating the system.
- Additional Practices and Compensating Controls available across multiple BOLTS elements to increase solution phase space for context-adapted deployments suitable to given stakeholder populations
- Multiple sorts of "reasonable" systems can be configured flexibly with practices library
  - Balance BOLTS variables to adapt Contact Tracing to a given jurisdiction/culture
    - Maintain interoperability of non-modified BOLTS elements
    - Interoperability in operation enables future standards for increased integrity/benefit
- Approach enables later formalization, as appropriate, of a subset of collected practices as:
  - "best practices" – if a group of stakeholders voluntarily agrees to adopt one or more BOLTS practices
  - "standards: - if a group of stakeholders voluntarily decide to signal and enforce their shared practices.

Competition:

- Competition is absorbed by “analysis/synthesis” approach
  - Collect practices from existing systems to inform later re-constitution
- See later notes slide on comparable commercial contact systems

Examining Existing Provenance and Location Systems for BOLTS Contact Tracing Analogies

- Additional BOLTS practices for contact tracing may be derived from other systems of integrated BOLTS that have been created and applied for both determining and signaling provenance and contact.
  - Chain of possession (evidentiary rules)
  - Trade marks (source of manufacture/production)
  - Certification marks (conformity with 3rd party rules, production in location)
  - Terroir in agriculture
  - Chain of title (real estate)(maybe relevant if SARS-COVID 19 demonstrates infectious latency (see AIDS, Chagas, etc.)

Potential BOLTS Legal issues to revisit.

- This is just a slide to preserve other thoughts on the program research

- Note: US Constitution 1st amendment Freedom of Association (NAACP v. Alabama, S. Ct. Case)
- Note: Police power of states and constitutional guarantees of bill of rights.
- Note: 4th Amendment question of “search and seizure”
- Note: 5th and 14th Amendment ”Due Process” clauses (substantive and procedural DP)
- Note 4 traditional torts of privacy and Contact Tracing
  - Intrusion on private affairs
  - Publication of private facts
  - Defamation
  - Mis-appropriation (not face or likeness, not economic use?)