Background to Proposal

- Experiments with HOL and set theory:
  - various lash-ups by me (Mike Gordon)
    - set theory defined inside HOL logic
    - transfer principles link types with sets
  - construction of D_∞ by Sten Agerholm
- Larry Paulson's work on Isabelle/ZF
  - demonstrates that set theory is practical
  - many *tour de forces* of proof (e.g. `Vrec`)
  - basis for comparison of first and higher order axiomatisations (Sten Agerholm)
- Francisco Corella's 1991 Cambridge PhD *Mechanizing Set Theory*
  - discusses uses of type theory
    - for higher order syntax (Isabelle/ZF)
    - as the underlying logic (HOL-ST)