

Commonwealth

Notes on a grant proposal

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Context

- Proposal in preparation
- Cliff, me, possibly another RA, a PhD
- Submitting soon

Motivation

- Formal Methods
 - Commonalities
 - Development *with*
 - Development *of*
- Tooling
 - Method-agnostic
 - Flexible
 - Extensible

Exclusions

- \neg Grand Unified Theory
- \neg One True Method

Hypothesis

- Sequences of judgements
- Methods are data
- Characterisation
 - Logical Frames :: Method Frames
 - Hidden assumptions
 - Notation

Development With

- Tool support for new methods and extensions
- Cross-method knowledge
 - One project/Multiple methods
 - Accumulation across successive projects
- Familiarity
- Feature envy

Development Of

- Effort!
 - Soundness, etc
 - Tooling from scratch
 - Adoption
- Speed
 - “rapid prototyping”

Tool Desiderata

- Verification/validation of proofs
 - $Frame \times Argument \rightarrow \mathbb{B}$
- Initial support for undefinedness
- Future directions
 - “execution” semantics
 - POGs
 - “holes” in arguments
 - TP/SAT solver integration

Thank you.
Questions?