CS222 Logic and rational Agency
Lecture of April 26, 2010
Time, action and agency
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** Adding dynamics into the logic

- Time (temporal logics) versus action (Situation Calculus, Dynamic Logic)

- Time basics
--- The structure of time
--- The entities (facts, events, actions)
--- the language and models (explicit time versus tense logics)

- Dynamic Logic versus Situation Calculus

- Explicit time + K
        Logic of perfect memory
        Logic of minimal learning?

- Lakemeyer: Sit Calc+time+K (note: Barcan formula...)

- Mostly Modal: a note on ETL and DEL (TL+K, DL+K)

** Agency

Timeless:

        P\"orn: "Do", the KT logic
        Elgesem: "Can" (E) and "Do" (C), a *nonstandard* modal logic

TL-based:

        Chellas: "See to it that (STIT)"
        Belnap++: branching-time TL semantics for STIT

DL-based:

        Segerberg: "Bring it about that" (BIAT): making explicit the causing action

SitCalc-based:

        LLLS: "Can" + having a plan