Thomas F. Knight, Jr.

Project Overview

- Engineer behavior into living systems
  - Applications in medicine, agriculture, environment, materials, nanofabrication
- Create Components and Interfaces
  - Learn ideas of pattern formation, robustness, abstraction
- Create a new engineering discipline
  - Students, texts, experimental guides

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Progress Through June 2001

- Controlled mutation of ribosomal binding sites, promoters
  - Engineered transfer curve
- Sequenced 10% of “minimal organism” candidate
- Rejected recursive assembly technique
- Acquire Lambda RED recombination tools and techniques

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Research Plan for the Next Six Months

- Plasmids for minimal organism
- Complete sequence of minimal organism
- New gate forms
  - Differential
  - Anti-termination
- Oscillators
  - Followed by communicating, synchronized oscillators