Inevitable Dilbert Cartoon

Importance of Applications

- Applications are hard
  - Tend to have many irregular pieces
  - A breakthrough algorithm may make a solution possible
    - but rarely are the bulk of the ingenuity and effort
  - Success demands serious collaboration
    - Deep knowledge sharing,
    - NOT finding a model to justify puristic CS research
  - CS insights can illuminate other fields
    - But only after understanding them
- Essential for feeding ideas and problems
  - Issues of scale, reliability, usability flow from them
    - Modern infrastructure, major sciences
  - How to give appropriate CS 'credit' (tenure, publication, recognition) for cross-subject efforts
  - Results are often deep and complex; they address and drive fundamental issues

E-Commerce and E-business

- An area rich in applications
- CS research contributions important but narrow
  - Cryptography and protocols
  - Payment techniques
  - Search
  - Collaborative filtering
- Many ideas driven from other areas
  - Game theory
  - Economic mechanism design (not only auctions)
  - Buisiness Processs modeling and analysis
- Many other hard problems
  - Integration, federation
  - Distributed transactions, data, analysis
  - Identity, privacy, persona management

Academia and Industry

- Interactions between researchers comfortable
  - But likely to be short on impact due to imperfect matching of interests, values, Not-Invented-Here, and extra delays
- Interactions with developers complicated and difficult
  - Developers usually interested only when desperate or have a project in hand that could get benefit from (perceived) risky deployment
  - Timing is everything, and outsiders cannot predict
- Long-term involvement required to increase knowledge, comfort, and likelihood of useful timing