Towards Electronic Democracy

E-negotiations and the design of participatory processes

Gregory E. Kersten
InterNeg Research Centre
Concordia University
Montreal, Canada

John Molson School of Business
Concordia University
InterNeg Research Centre

InterNeg

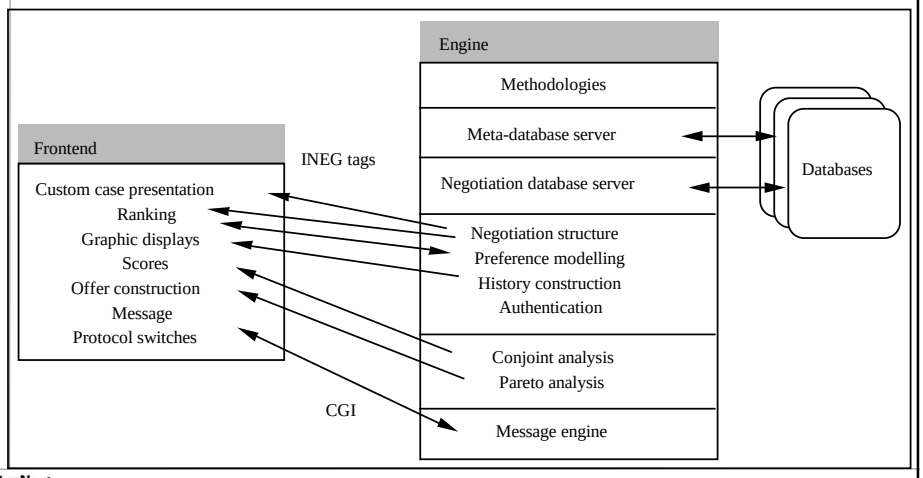
Plan

- Inspire e-negotiation system 1995 – 2006
- Invite software platform
- Experiments
- E-participation and decision analysis
- Auctions and negotiations
- A proposition

Design

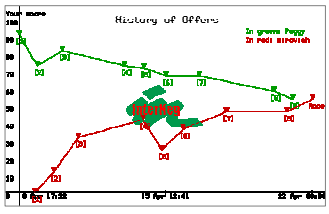
INSPIRE InterNeg Support Program for Intercultural REsearch

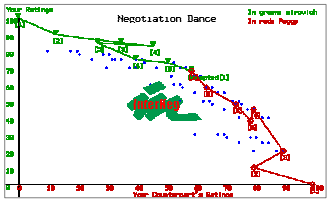
- Assumption: system can be used by almost anyone without any training

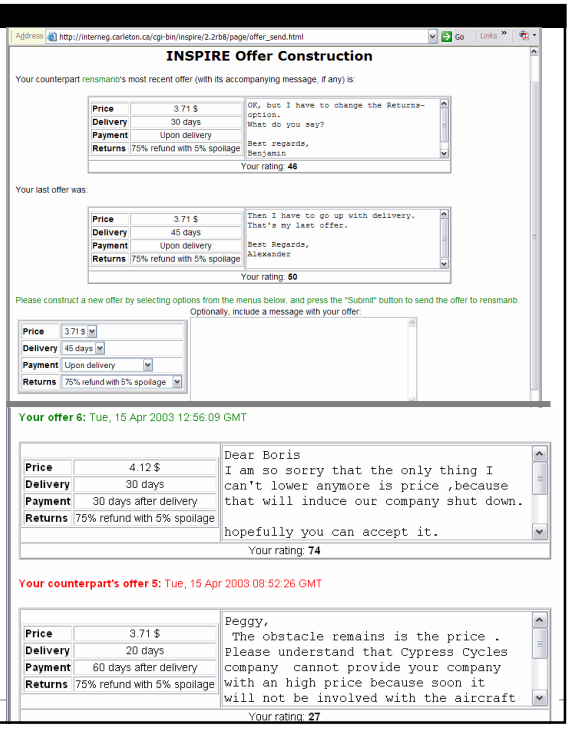


InterNeg

Interface



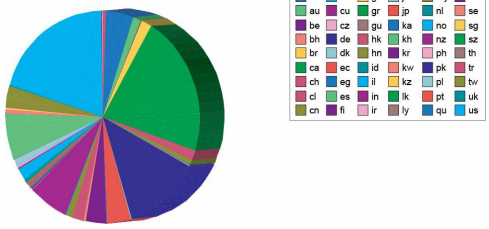




InterNeg

Inspire users

- 6,126 users from 62 countries (Jan. 06)
- Mostly students; also managers, lawyers, engineers, physici
- Cases:
  - Itex-Cypress (95%) (180 alternatives)
  - Riverside hospital (86,000 alternatives)



Invite

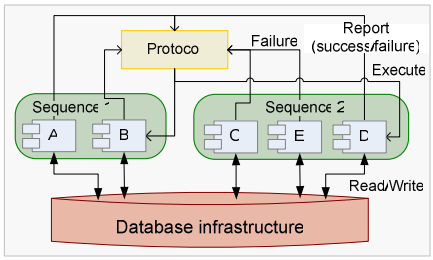
- Objective
  - An easy to develop and maintain software
  - Industry-strength software which can be used in laboratory experiments and online replacing Inspire
  - Software which can be easily modified and extended to new types of negotiations

Co-authors:

Eva Chen, JinBaek Kim, Ka Pong Law, Simone Ludwig, Stefan Strecker, Jesus M. Rios, Reza Sadeghi, Steve Sisalith,
Sadat Saed

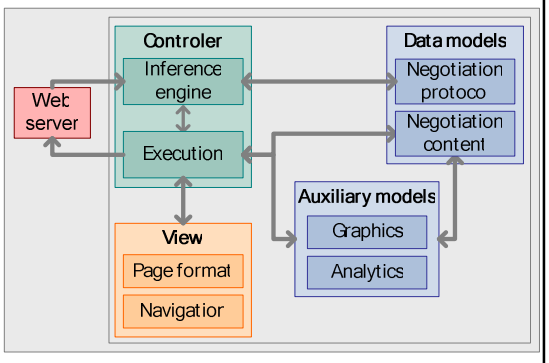
Invite

- A software platform for generation of ENSs
- Separation of control from other components
  - Protocols – blueprints
- Separation of computation from presentation and interaction
  - Interface testing
  - Services



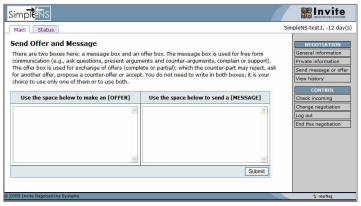
Invite customizations

- Flexibility (Liam Bannon)
- Process-level
- Tool-level
- Interface-level

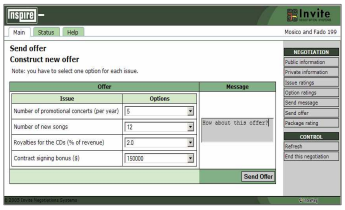


- Separation: theory vs. practice
  - Flexibility and complexity
  - “Hardwired” links

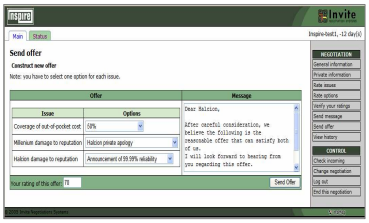
Invite systems



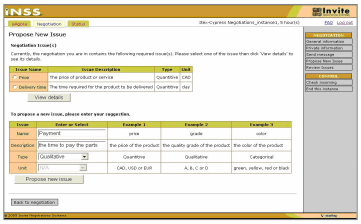
SimpleNS



Inspire -



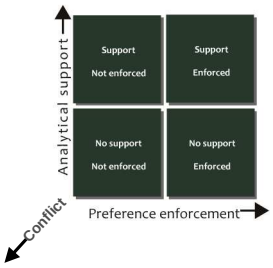
Inspire



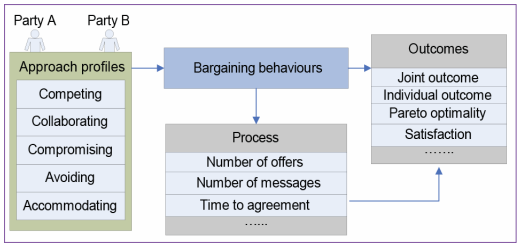
INSS

Invite experiments

- Laboratory experiments
  - "Old" Inspire
  - In Montreal and Karlsruhe and …
- On-line … as of Oct. 22

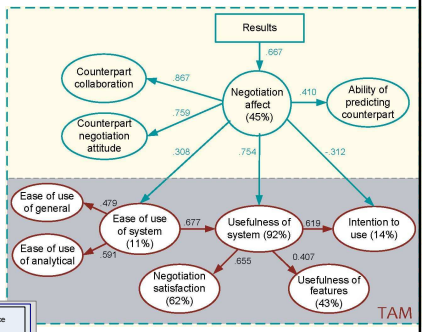


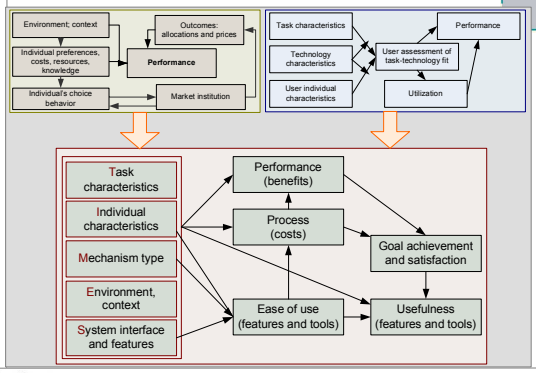
Profile: What mixes (profiles) of the approaches are more effective, efficient, perceived friendly ... ?



“Chemistry”

- What transpires during the negotiation? What causes the changes in approaches, expectations, preferences?





- Objectives:
  - Assessment of tools and mechanisms
  - Prescriptions for users and markets
  - E-market system design principles

Inspire, Invite, …e-participation?

- Similar conclusions as these presented by and Juri Mustajoki and Raimo Hämäläinen:
  - A simple case was tested with last-year high school students and low-level English proficiency;
  - Ignores attribute preferential independence, probability;
  - Good for training and self-learning;
  - Not tested for problem formulation;
  - Not appropriate for general public; not scalable

E-participation and decision analysis

- S. French, D. Rios Insua and F. Ruggeri, ***E-participation and decision analysis***, June 2006.
- Five group decision-making modes:
  - **GDM1.** Elicit individual utilities and aggregate them;
  - **GDM2.** Get every person to understand the problem and then ask all to vote;
  - **GDM3.** Supra-decision maker observes people and solved the problem for them;
  - **GDM4.** Gather the people together, facilitate and get them to seek consensus; and
  - **GDM5.** Apply negotiation techniques and tools to allow the people to interact and seek agreement.

French, Rios Insua and Ruggeri

- Naïve approaches favour GDM1, GDM2 and algorithmic GDM5
- GDM3 is not appropriate for "true democratic approaches to e-participation"

- Thus, we are left with GDM4 and social process based on GDM5

Claim:

- GDM1, …, GDM5 are the **infeasible modes** for e-participation

Because: …

Because of problems with

- **Scalability**: GDM*i* were conceived for 5, 15, perhaps 50 participants but not for many 1,000s;
- **Capability**: GDM*i* were designed for participants who have knowledge and get required training;
- **Time and will**: the underlying assumption for GDM*i* use is that users have time and will;
- **Reward**: although rarely stated, GDM*i* assumes that there is a reward (or lack of punishment) for participation;
- **Communication**: "How decision analyses should be communicated to the general public is still a largely unanswered question."
- **Coordination**: no approaches available …

French, Rios Insua and Ruggeri

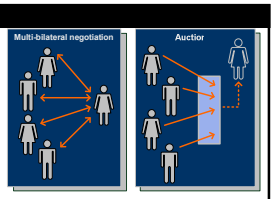
Suggest

- "A hybrid process arranging a number of participation instruments throughout the deliberation process"
  - Definitely for experts, people with lots of time to spare, lobbyists and representatives of interest groups
  - But what about the very many 1,000s ?
- Looking for:
  - a benevolent dictator; or
  - a new paradigm?

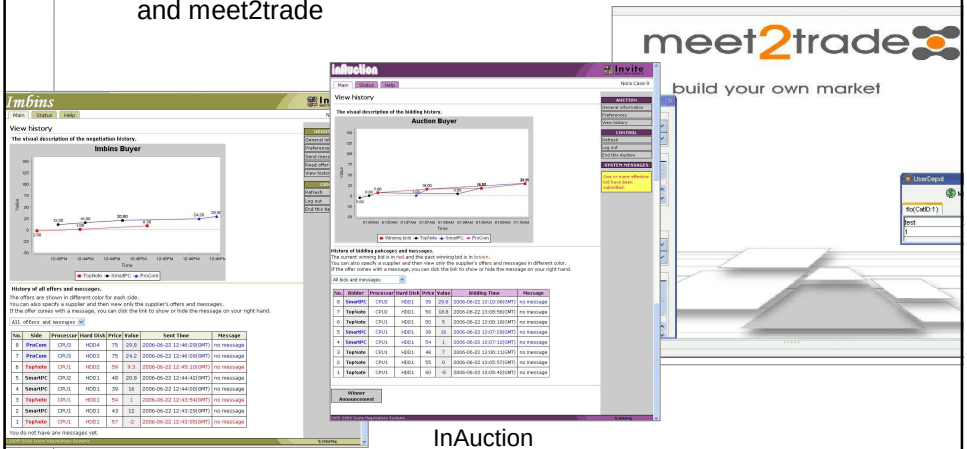
Participation and decisions

- Participation:
  - How to help a very large number of people to engage in all activities leading to a decision ?
  - What is the minimal support; what is necessary to participate?
  - How to provide progressive support?
- Voting:
  - Allows for participation in choosing with no preparation;
  - For millions not only several;
  - Single step
- **Can we extend the choice process so that the people have the possibility to informed**?

NorA: Negotiations-or-Auctions



- Comparison of multi-bilateral negotiations with English auction using Invite systems and meet2trade



Imbis

InAuction

Auctions

- Market mechanisms successfully used to predict results of social processes, e.g., Taiwan 2004 elections, shifts in Federal Reserve monetary policy, the outcome of political conventions, software development being on time, and sales of consumer products.
- Hal Varian: “Political stock markets provided somewhat better forecasts than polls right before the election -- and they provide much better (and less volatile) forecasts several months before the elections. Thus, markets do best exactly where the public opinion polls and expert opinion polls are weakest.”

Auctions as decision support

- Give continuously updated forecasts;
- Aggregate information across participants (bidders);
- Give unbiased, relatively accurate information in advance of the event;
- Can outperform existing alternatives;
- Overcome bias that individual participants may have, effectively eliminate bias from forecasts;

Auction mechanism in e-participation

- New paradigm:
  - Continuous double auction
  - In large markets the true values are reported; maximum strategic misrepresentation is small (Rustichini et al. 1994)