Prom Week

Josh McCoy and Mike Treanor

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UC Santa Cruz
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GDC 2012 – AI Summit
Though you may better your fits against my body, you will never break my spirit.

PROM WEEK

Well if this is your way of breaking up with me, then you got it my man.

INDEPENDENT GAMES FESTIVAL FINALIST

http://www.promweekgame.com
Mako: What I want to say is: You're awesome, and if you were lost in the same sector, I would definitely give you directions.

Good to know.

I am pretty awesome.

I'd do the same for you.
Explicitly Defined Interaction Points
Rich Realization & Deep Social Interaction

Dynamic Social Interaction

Character Realization

SW: TOR
The Sims

The Sims
SW: TOR
“Social Physics”

Angry Birds
First-Class Interaction Patterns

no, I think it looks fine!

Façade
http://www.interactivestory.net/
Demo
Social Exchange

- Ask on a Date
- Show Off
- Idolize
- Share Interest
- Open Up
- Text Message Break Up
- Make Plans
- Insult Friend Of
- Bully

and more...
# Relationships, Statuses, Character Desc.

## Character Description
- Traits (compassionate, arrogant)
- Character-specific locutions ("noob", "word")

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Temporary Statuses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Friends</td>
<td>• Heartbroken</td>
</tr>
<tr>
<td>• Dating</td>
<td>• Cheerful</td>
</tr>
<tr>
<td>• Enemies</td>
<td>• Popular</td>
</tr>
<tr>
<td></td>
<td>• ...</td>
</tr>
</tbody>
</table>
Subjective Opinions

Buddy
Romance
Cool
Social History

2: Doug was all fawning over Kate and it was like embarrassing

Romantic

3: Nicholas looks to shoot down Kate's text message break up.

Mean

4: Nicholas bragged Monica about being like a prodigy or whatever

Cool
Cultural Knowledge

Robert reads
likes
likes
likes
despises
has hobby

Dostoevsky

Roses
is
Romantic

Bears
is
Cool

Fire Tossing
is
Lame

Karen
The Social World

Social Considerations

Simon -> Monica

Response

Accept/Reject

Pick exchange pattern.
Get lost, %x%!

Fill in parameters.
Get lost, dork!

Evolve the world.
*embarrassed*

Social World

Simon

Monica

Cassandra

Naomi

Loyal
Shy
Popular
Sympathetic
Energetic
Positive
Confident
Cool

## Example Social Considerations

<table>
<thead>
<tr>
<th>Rule</th>
<th>Weight</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>friends(x, y)</td>
<td>4</td>
<td>nice(x, y)</td>
</tr>
<tr>
<td>friends(x, y) and hasCrushOn(x, z) and romantic(y, z, recently)</td>
<td>2</td>
<td>mean(x, y)</td>
</tr>
<tr>
<td>highRomance(x, y) and mean(z, x, first) and mean(y, z, second)</td>
<td>3</td>
<td>date(x, y)</td>
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And 5,000 more!
Social Considerations

- **Social considerations** are rules that influence behavior.
Choosing a Social Exchange

Social Considerations

Simon -> Monica

Response

Pick exchange pattern.
Get lost, %x%!

Fill in parameters.
Get lost, dork!

Accept/Reject

Evolve the world.
*embarrassed*

Social World

Simon, Monica, Naomi, Cassandra

Loyal, trend, cool, popular, sympathetic, brainy, macho, pretty, pathos
Choosing a Social Exchange

Social Considerations

Simon -> Monica

Response

Pick exchange pattern.
Get lost, %x%!

Accept/Reject

Fill in parameters.
Get lost, dork!

Evolve the world.
*embarrassed*

Social World

Simon

Monica

Cassandra

Naomi

Loyal
Tired

Useful
Cool

Popular
Sympathetic

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Responding to a Social Exchange

Social Considerations

Social Exchange: Pick-Up Line

Simon -> Monica

Response

Pick exchange pattern.
Get lost, %x%!

Fill in parameters.
Get lost, dork!

Evolve the world.
*embarrassed*

Social World

Monica

Cassandra

Naomi

Loyal
Tired

Sympathetic

Tyrant

Pimpish

Restless

Dorkish

Lose

Gain

Useful

Code

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How and Why Characters Respond

- **Accept** or **Reject** based determined by considerations
- Most salient response chosen
- Each changes the social world in different ways

Accept: • $Y$ has done something to embarrass $Z$ recently • $X$ is enemies with $Z$

 skeptic
Natural Language Generation

Social Considerations

Simon -> Monica

Response

Pick exchange pattern.
- Get lost, %x%!
- Accept/Reject

Fill in parameters.
- Get lost, dork!

Evolve the world.
- *embarrassed*

Social World

Simon, Monica, Cassandra, Naomi

Loyal, kind, popular, cute

Friendly, sympathetic, support

Outgoing, talkative, funny
X: Hey %y%. Man, I can't stand %z%...

Y: Tell me about it. Hey, remember that time when %SFDB_(embarrassed,y,z)%?

X: Oh god, I totally do! %pronoun(z ,he/she)% totally had that coming for being such a %pejorative%!
Simon: Hey Monica. Man, I can't stand Oswald...

Monica: Tell me about it. Hey, remember that time when I broke up with Oswald in the middle of his tennis match just to make him lose?

Simon: Oh god, I totally do! He totally had that coming for being such a n00b!
Evolving the Social World

Social Considerations

Simon -> Monica

Response

Pick exchange pattern.
Accept/Reject

Fill in parameters.

Evolve the world.

*embarrassed*

Social World

Simon

Monica

Cassandra

Naomi

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Indirect Effects

- Cascading consequences of social exchanges
- Captures state changes across social exchanges

E.g.
- Cheating(x,y):
  - Dating(x,y) then Dating(x,z)
- AngryAt(x,y):
  - Dating(x,z) and Mean(y,z)
Takeaway: “Social Physics” through Retargeting Social Interactions
Thanks!

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and Ben Samuel, Aaron Reed, Michael Mateas, Noah Wardrip-Fruin, Ryan Andonian, Kathleen Kralowec, Corey DiMiceli, Zane Mariano, Jacob Pernell, Christian Ress, Duncan Bowsman, Travis Brown, Melissa Bernetsky, Devon Wyland, Ellen Otsuka, Garin Kessler, Alexander Baker, Daniel Cetina, Alexander Schneider, Lauren Scott, Evan Mertz, Brandon Tearse, Alexei Othenin-Girard
Challenges

• Technical authoring
  • NLG + rules
  • unexpected consequences: “you’ll never get my flower!”
• What to show to the player
  • Performance vs spreadsheet
• Social space tuning
• Consistent story quality
Rich Realization & Deep Social Interaction

Prom Week

SW:TOR

Richly Realized Characters

The Sims 3

Highly Dynamic Social Space

No Character Realization

Static Social Space