Requirements in Conflict
Player vs. Designer vs. Cheater

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Stakeholder Diversity

- **Producers**
  - **Designer, Developer, Publisher, Distributor, Vendor**
  - **Financier, Marketer, Media, After-market Suppliers, Regulator, Society**
- **Consumers**
  - **Game players**
    - Player *vs.* Game (PvG)
    - Player *vs.* Player (PvP)

Producer Requirements

- **Game Design and Implementation**
  - Gameplay (emotional) experience
  - Financial success
- **Security**
  - Artistic vision
  - IP protection
  - Integrity of gameplay experience
  - Positive player experience

Consumer Requirements

- **Emotional experience (fun, escape, accomplishment)**
- **Value for my money**
- **Some control over the gameplay experience**
  - **Give me at least *some* choices!**
- **Self-validation**

The Problem

- **No game is perfectly designed**
- **Player feels betrayed**
  - **Puzzles too hard / easy**
  - **Gameplay is repetitive / boring / takes too long**
  - **Can't play just the fun parts**
  - **Can't fix the bad parts**

Conflict: Who has Control?

- **Constructive stakeholders**
  - **Work to improve a (flawed) experience**
- **Destructive stakeholders**
  - **Work to interfere with the gameplay experience**
    - Cheat: the game, other players
    - Destructive infrastructure attacks
    - Disruptive gameplay (a.k.a. *griefing*)
- **Security threats anticipated by *a priori* security requirements**

The Proposal

- **Use in-game justice systems as a metaphor for just-in-time requirements negotiation**
- **Gameplay requirements ↔ Laws**
- **Justice systems**
  - **Authority**
  - **Penalty**
  - **Enforcement**
  - **Recidivism**

Prior Experience

- **Administrative Control**
  - **Developer acts as judiciary**
- **Player Control**
  - **Usually, with assistance of developer**
  - **A Tale In The Desert**
- **Player Classing**
  - **Players for virtual world (PvG)**
  - **Players for combat (PvP)**

Discussion

- **Dynamic RE techniques for**
  - **Eliciting and capturing requirements**
  - **Translating requirements into laws**
  - **Translating laws into gameplay**
- **A priori vs Runtime requirements**
  - **Is it possible?**
  - **Can we handle the repercussions?**
  - **Is it worth it?**

Extension to Other Areas

- **Is the concept applicable to other areas?**
    - **In what manner?**
    - **Are specific techniques applicable?**

Conclusions

- **Realtime requirements negotiation could be implemented via in-game justice systems**

- **Transition from concept to implementation is difficult**

- **Extensibility to other domains is still an open question**