* **Section 0 - Foreword**
* **Section 1 - Introduction / Overview**
  + Grabber
  + Introduction to Topic and Subtopics (and relations/dependencies therein)
  + Introduction to the sources that will be discussed
  + Invite ‘novelty idea if any’ in paper WRT merging these components into single agent realization
  + Wrap by inviting author to keep the idea in mind as well as relationships between components
* **Section 2 – OSC Model**
  + **Models Utilized / Design Thereof**
    - Emotion Model
    - Personality Model
    - Personality Model
    - Introduction to OSC Architecture
  + **Knowledge Representation**
    - Overview
    - Representing Actions/Attitudes/Praise
    - Representing Events
    - Representing Emotions
    - Representing Social Dynamics / Relationships
  + **Dynamics of Main Mechanisms**
    - Influence of Personality on Emotions
    - Emotions-based Social Dynamics
    - Final Note on Implementations
  + **Conclusion**
    - How theirs ties into my concept model
* **Section 3 – CiF Model**
  + **Introduction**
    - Problem Definition / Requirements
    - Introduction / Goal
    - Features Provided
  + **CiF Architecture**
    - Concept of Social Exchanges
    - Character Representation
    - Social State Representation
  + **Social Exchange Mechanics**
    - Introduction
    - Structural Composition
    - More About Microtheories
    - Additional Notes
* **Section 4 – Dialogue Agents Model**
  + **Background**
    - Introduction
    - Dialogue Elements
    - Dialogue Types/Modes
  + **Selected Ideas and Concepts**
    - Turn Taking
    - Interruptible Actions
    - Agent-Based Dialogue System
    - Affective Communication
    - Implications on NPC Personality
    - Implications on OSC events / CiF SFKB
* **Section 5 – Needs-Based AI Model**
  + **Introduction**
    - Introduction and Overview
  + **Needs**
    - Introduction
    - Knowledge Representation
    - Types of Needs
  + **Implementation within AI system**
    - Happiness Score / how it's computed
    - Implementing Happiness score with our concept
    - Personality/Social Modelling -vs- OSC/CiF
    - Impact of Needs on Actions and Behaviors thereof
    - Impact of Personality attitudes on Objects
* **Section 6 - Conclusion**
  + Some sort of recap of aforementioned discussion
  + Introduce goal of realizing an implementation composed of all these (i.e. ‘novelty’)
  + Wrap up with discussion on ‘The Big Experiment’
  + Conclusion Grabber
* **Section 7 - Bibliography**

**Clay’s 5 Requirements (And Where I Realize Them)**

|  |  |
| --- | --- |
| Describe future directions. What are weaknesses and open challenges of approach? | I could definitely correlate this to ‘The Big Experiment’ as it’s pretty self-evident that future directions will naturally involve more advanced AI models for which I will demonstrate a ‘roadmap’ via the composition of several existing models of which each has overlap and mutually ‘fillable’ missing gaps as to possibly realize a convergence.  And Same thing WRT the weaknesses and open challenges. Foremost, they follow directly from those ongoing in KR, KB, and inference/reasoning systems just as with analog R&D with androids (humanoid robot, not the phone OS). Further, they directly follow from the main issue with AI as implemented in games let alone for NPCs: CPU budgets constraining how much processing power and even RAM/disk allowance is given to a particular NPC. These are are remain both very highly limited in games today.  The ‘Big Experiment’ would set up a demonstration of what could be a new i.e. novel paradigm for which I’ve seen no existing precedent: give each AI its own virtual RAM card(s), virtual disk (able to handle a possibly massive KB over long-term execution), and virtual core(s) as to provide standalone processing muscle. **IOW: “Give each NPC its own asynchronous and concurrent virtual brain, versus having all NPC’s share the same brain in the main game loop.”** |