

Title: A Scene Structuring Algorithm for Temporal and Emotional Coherence in Fictional Narratives

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Abstract

This paper proposes a scene structuring algorithm designed to enhance the temporal and emotional coherence of fictional narratives, particularly when interpreted by Large Language Models (LLMs). By decomposing narrative timelines into structured scene codes—SCN (Scene), BIO (Character Backstory), and HIS (Historical/Worldbuilding Segments)—and attaching action-principle-based behavioral tags, this method enables more consistent multi-perspective storytelling. Tested within narrative development workflows using GPT-4, the approach significantly improved coherence in managing viewpoint transitions, flashbacks, and character-driven decision-making.

1. Introduction

Narrative generation by LLMs has rapidly advanced, yet issues remain in representing nonlinear timelines and multi-character perspectives. Fiction, particularly light novels and serialized character-driven stories, often relies on shifting viewpoints, memory fragments, and implicit emotional arcs. These features confuse conventional LLMs, leading to flattened or logically inconsistent outputs. This paper introduces a lightweight tagging and segmentation system designed to enhance narrative recognition within such contexts.

2. Structuring Algorithm Overview

2.1 Scene Units

- **SCN_xxx**: Linear story progression scenes
- **BIO_xxx**: Personal memory/flashback sequences with character introspection
- **HIS_xxx**: Contextual worldbuilding or background history

Each segment is coded and timestamped based on narrative chronology rather than appearance order.

2.2 Tagging System

Behavioral and emotional metadata are attached using structured tags based on "Action Principles." Examples:

- TAG_EMO_DISPLACED_GRIEF
- TAG_IDEAL_SELF_REBUILD
- TAG_SOC_SUPPRESS_SELF_FOR_PEACE

These tags allow LLMs to reference intent, emotion, and evolution even across nonlinear cuts.

3. Implementation in AI-Assisted Writing

3.1 Use Case: GPT-4 Narrative Coherence

By using the SCN/BIO/HIS format, GPT-4 was able to:

- Track shifting points of view without logical contradiction
- Maintain emotional memory across time-jumps
- Accurately mirror character behavior under emotional or moral stress

3.2 Example Prompt Pair

Without Structure: "The character remembers something painful."

With Structure: "[BIO_0023] Tag: TAG_EMO_DISPLACED_GRIEF She remembered the moment she said goodbye—not because she wanted to, but because she had to."

4. Discussion

The algorithm offers a creator-friendly format that enhances LLM output without major retraining. It allows small creative teams or solo authors to maintain high consistency in serialized narratives while giving AI tools the scaffolding they need to recognize narrative logic and emotional tension.

This approach is domain-agnostic and extensible beyond fiction—applicable in scenario design, games, and visual novel development.

5. Conclusion

The proposed scene structuring and tagging algorithm bridges a critical gap in LLMs' ability to handle complex fictional timelines. As narrative generation grows central to digital media, this method supports deeper alignment between human storytelling and machine understanding.

Appendix

A. Tag Glossary (excerpt)

- TAG_EMO_DISPLACED_GRIEF: Character expresses grief via substitute behavior
- TAG_IDEAL_SELF_REBUILD: Reconstructing one's identity post-crisis
- TAG_SOC_SUPPRESS_SELF_FOR_PEACE: Prioritizing group harmony over self-expression

B. Suggested Licensing

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C. Suggested Citation Format

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