

# 2nd Workshop on Games and NLP (GAMNLP-13)

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## 1 Overview

Natural language processing (NLP) investigates computational aspects of natural language which humans produce and understand. While applications of NLP range from information retrieval to machine translation, this workshop aims at promoting and exploring the possibilities for research and practical applications of NLP in games. With the advances in videogames in recent years, areas in which games and NLP can help each other have greatly expanded. For example, games could benefit from NLP's sophisticated human language technologies in designing and developing novel game experiences through natural and engaging dialogues, or studying games formally. On the other hand, NLP could benefit from games in obtaining language resources (e.g. construction of a thesaurus through a crowdsourcing game), or learning the linguistic characteristics of the game users (as compared to those of other domains). However, those two fields have been regarded distant, and there has not been much collaborative work which exploited the use of one in the other field.

To promote the cross-feeding between the two fields, the 1st workshop on games and NLP was organized and successfully held in 2012 (GAMNLP-12)<sup>1</sup>, as a special session at the 8th International Conference on Natural Language Processing (JapTAL 2012)<sup>2</sup>. To continue to explore the possibilities further, the 2nd installment will be held at ICIDS 2013 (as a half-day workshop), aiming to attract researchers both from NLP and Game communities. The workshop will welcome the participation of both academics and industry practitioners interested in the use of NLP in games or vice versa.

## 2 Objectives and Potential Topics

Main objectives of the workshop are to explore the possibilities for research and practical applications involving NLP and Games. The workshop will provide a forum for researchers and practitioners to discuss ideas on how to promote the collaboration between the two fields.

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<sup>1</sup> [http://lang.cs.tut.ac.jp/japtal2012/special\\_sessions/GAMNLP-12.html](http://lang.cs.tut.ac.jp/japtal2012/special_sessions/GAMNLP-12.html)

<sup>2</sup> <http://lang.cs.tut.ac.jp/japtal2012/>

Potential topics of interest for the workshop include, but are not limited to:

- Text-based Interactive Narrative Systems
  - Narrative Comprehension
  - Narrative Generation
  - Text realization
- Discourse planning and management in games
  - Dialogue generation and management
  - Question and Answering, Question Generation
- Information and content extraction, text mining
  - Analysis of large-scale game-related corpora (e.g. game reviews, gameplay logs)
  - Real-time sentiment analysis of player discourse/chat
  - Recommender systems for gamers
  - Real-time commentary for games
- Natural language interaction in games
  - Speech recognition and synthesis in games and in-game chat systems
  - Language-based real-time interaction with virtual characters
  - Chatterbots and conversational agents
  - Context-aware systems in virtual environment
- Automated construction of game ontologies
- Serious and educational games for learning languages
- Games for the purpose of constructing language resources (e.g. *Games With a Purpose*<sup>3</sup>)

### 3 Workshop Format

The workshop will include paper and poster presentations and systems demonstration sessions. In particular, we expect to gather potential answers and ideas to the following questions through round-table discussion activities.

1. How could games benefit from better NLP?
2. What are the overarching problems in NLP - How could games help?

The workshop may also include a panel discussion on how to generate and analyze affective dialogues and narratives. This topic (affective narratives) is chosen actually to follow up the round-table discussion from the 1st workshop (GAMNLP-12) --- many people in the audience raised the issue as a significant element in achieving more ‘natural’ interfaces (in addition to languages). We plan to solicit a panel consisting of people who have worked on this problem and ask them to share their experiences.

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<sup>3</sup> [http://aclweb.org/aclwiki/index.php?title=Games\\_with\\_a\\_Purpose](http://aclweb.org/aclwiki/index.php?title=Games_with_a_Purpose)