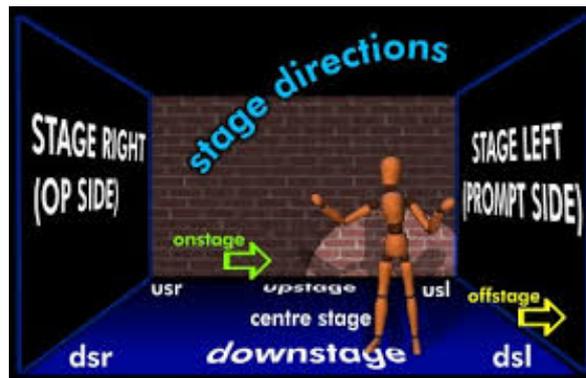


Annotating and Performing Play Scripts in Virtual Reality



Advisors

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Context

Performing theatre plays on a virtual stage is a valuable goal for virtual reality storytelling [1] and interactive drama [2], which raises difficult research questions.

In addition to dialogues, theatre play scripts often contain staging indications (didascalía) on how the stage should be organized, where actors should be placed, how they should be dressed, how they should move, etc. When staging a theatre play for a virtual stage using computer graphics and animation, it would be desirable to interpret those didascalía in the play script and automatically generate a 3D scene where the play can be performed.

This is challenging because the didascalía are written in natural language, and likely to be incomplete and ambiguous. Furthermore, spatial reasoning is required to resolve the many spatial constraints implied in the didascalía.

Objectives

The goal of this internship will be to design methods for (i) annotating and classifying the didascalía from natural language theatre play scripts and (ii) automatically generating 3D scenes where the play script can be performed.

As a first step, we will review previous work in text-to-scene generation [3,4,5,6] and propose suitable extensions for the case of theatre production, where dramatic principles and visibility of action can be used to resolve ambiguities.

Then we will illustrate the proposed methodology with carefully selected theatre play scripts and existing databases of 3D models and characters. The internship is expected to lead to a PhD thesis in the IMAGINE team on the same topic.

References

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