INTRODUCTION

We present a novel approach to the automatic generation of narrative variants within a fully integrated Video-Based Storytelling (VBS) [2] system that successfully integrates video processing techniques with narrative generation via AI planning.

We have introduced flexibility into the video construction process by sequencing video shots in a way that maintains local video consistency. This is combined with exploitation of shot polysemy to enable shot reuse in a range of valid semantic contexts.

At the core of the system is a video integration interface which acts as the nexus between the analysis of the input video acted by a Video Processing (VP) module on the one hand and the generation of narrative variants for output on the other performed by a Narrative Generation (NG) module.

SYSTEM OVERVIEW

Results of evaluations on output narratives using a shared set of video data show consistency in terms of local video sequences and global causality with no loss of generative power. The system uses M. Radford’s Merchant of Venice [1] as its baseline video. More details on the actual implementation can be found in the companion demo paper.

REFERENCES

[1] M. Radford. 'Merchant of Venice' [film adaptation].

NARRATIVE INTEGRATION

Every potential narrative action is not guaranteed to have a valid presentation when dealing with filmic content. The AI-based narrative generation (planner) must therefore be constrained by the available video material.

The system uses M. Radford’s Merchant of Venice [1] as its baseline video. More details on the actual implementation can be found in the companion demo paper.

EXPERIMENTAL RESULTS

Sample VBS system output: shown running downwards are excerpts of four narratives generated using our Merchant of Venice domain model; each narrative shows a number of actions alongside a selection of video shots chosen by the system for the visual presentation of that action.