



RESEARCH ARTICLE

Character Identification Using Graph Matching Algorithm

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Abstract— *In this paper we are going to present a new efficient technique to identify the faces of the characters automatically in movies that drawn a significant research that led to many interesting applications. It is a huge problem due to the variations of each character in it. The existing applications will provide a good result for clean environment, but for complex environments the performance is limited due to the external noises generated while face tracking and clustering processes. In this paper we present a scheme for Global face-name matching for robust character identification. This include: 1) A noise insensitive character relationship representation is incorporated.2) we introduce an edit operation based graph matching algorithm.3) Complex character changes are handled by simultaneously graph portioning and matching.4) Beyond existing character identification approach, we further perform an in-depth sensitivity analysis by in introducing two types of simulated noises. The above proposed schemes will demonstrate a state-of-art-performance on movie character identification in various complex movies.*

Key Terms: - *Character identification; graph matching and graph portioning algorithm; graph; edit; sensitivity analysis*

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