Towards Understanding of Multimedia Documents: A Trial of Picture Book Analysis and Generation

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ABSTRACT

Computers are expected to be a tool for assisting people to enrich their everyday life. Computation performance was first augmented, followed by the improvement of communication capacity. It’s time to provide computer capabilities to help people cultivate their intellectual faculties. Media research has been carried out for years. Researchers focused on utilizing media. What we should do now is to carefully analyze media itself, resulting in development of well-formed media for further success in media research. We are going to investigate how media convey the information and affect people - the way of their thinking. As a first step towards this goal, we propose in this paper the analysis and generation of picture books. A scheme of generating a picture from a text script is presented extensively.

INDEX TERMS

CITATION

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Document Image Understanding combines image analysis and pattern recognition techniques to process and extract information from documents. Document images, in a wide meaning, include the output of paper documents after scanning or captured by a camera, including smart-phone camera, as well as video frames where superposed captions are present or, more generally, pictures of scenes where text is present. Research include therefore paper layout analysis, OCR/ICR and symbol recognition, graphics recognition, text extraction from scenes. In recent years, multimedia learning, or learning from words and images, has developed into a coherent discipline with a significant research base. The Cambridge Handbook of Multimedia Learning is unique in offering a comprehensive, up-to-date analysis of research and theory in the field, with a focus on computer-based learning. Since the first edition appeared in 2005, it has shaped the field and become the primary reference work for multimedia learning.