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Portfolio Paper

Visual Imageries of Shakespeare's Plays

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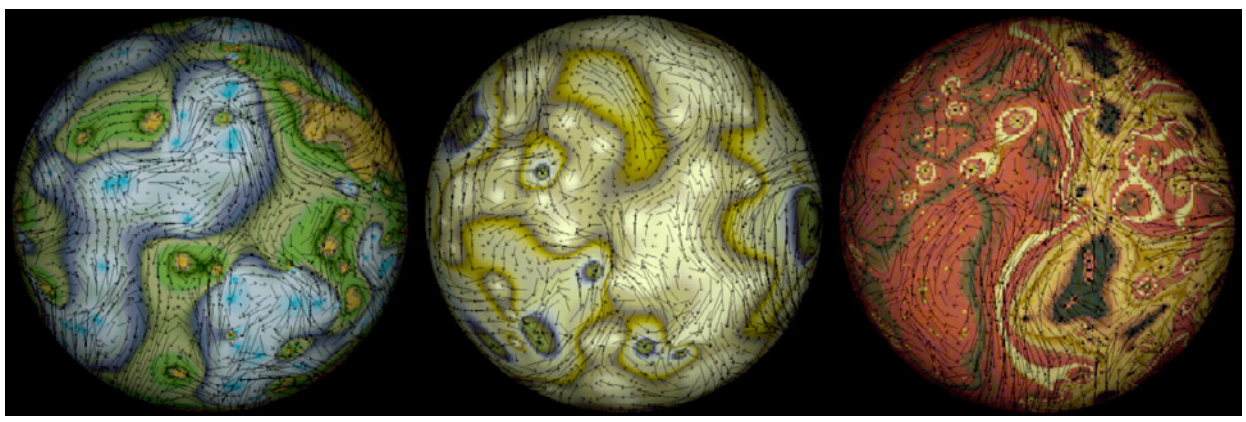

(a) Hamlet (b) Othello (c) Romeo and Juliet

Fig. 1. Visual Imageries of Shakespeare's Plays Analyzed by Ellipsoidal Differential Equations.

Stories in literary works are visualized with original schemes targeting Shakespeare's plays. The visualization is performed for original texts of the plays, starting from detection of plural keywords that form the scenario of individual plays. The spatial distribution of several keywords represents the structure and the progress of the story in the play[1], and thus we can visualize the story by drawing the keyword distributions on arbitrary coordinates. In order to convert the scattered distribution of keywords to continuous distribution, a technique employed in experimental fluid dynamics[2] is adopted. This approach not only interpolates the blank space of keywords in the play but also connects the data in global domain[3]. Thereby the story is successfully reconstructed with it.

Fig. 1 shows the pictorial stories of three famous Shakespeare plays. These are visualized on two-dimensional domain that is defined by a clock-type double temporal coordinate system. The hour hand axis is set to horizontal while the minute hand axis is the vertical in each picture. Furthermore, painting the computed result on the surface of a sphere allows us to represent the story like a telescope image of a planet. In the planet "Hamlet," blue regions indicate Hamlet's love for his dead father while yellow parts show his hatred for the king who killed his father. The planet "Othello" is a stage of Othello's jealousy toward his beautiful wife Desdemona. The boundary between his love and envy is well identified by dark yellow. In "Romeo and Juliet," their growing love and tragic turn due to competing households are visualized as primitive red and dark brown colors. The arrows in each picture indicate storyline vectors, which are obtained from the stream function derived from the keyword distribution.

References: (1) Foster, D., Shakespeare Studies XXV (1997). (2) Ido, T., Murai, Y., Flow Meas. Instr., 17 (2006),267-275. (3) Ido, T., Murai, Y., Yamamoto, F., Experiments in Fluids, 32 (2002), 326-336.