CONTENT-AWARE RETARGETING FOR
SOCCER VIDEO ADAPTATION

SHENGHONG HU*, YUFU JIA**, SHENGLONG TAN**
* School of Computer Science & Technology
Huazhong University of Science & Technology
Wuhan, China

**Computer School
Hubei University of Economics
Wuhan, China

ABSTRACT—A content-aware retargeting method is proposed for adapting soccer video to heterogeneous terminals. According to domain-specific knowledge, ball, player and player’s face are defined as user interested objects (UIOs) in different view-types. The UIOs are extracted by semantic analysis on soccer video, and then a region of interest (ROI) of each shot is determined jointly by three factors: terminal size, scaling factor and aspect ratio. The proposed method optimizes the retargeted region to contain more semantic content while adapting the constraint of terminal screen. The simulation results prove that the proposed CAR system wins better viewing experiences than the traditional methods such as resizing in a “Letter box” mechanism or cropping directly.

Key Words: video retargeting, user interested object, region of interest, video analysis, view-type