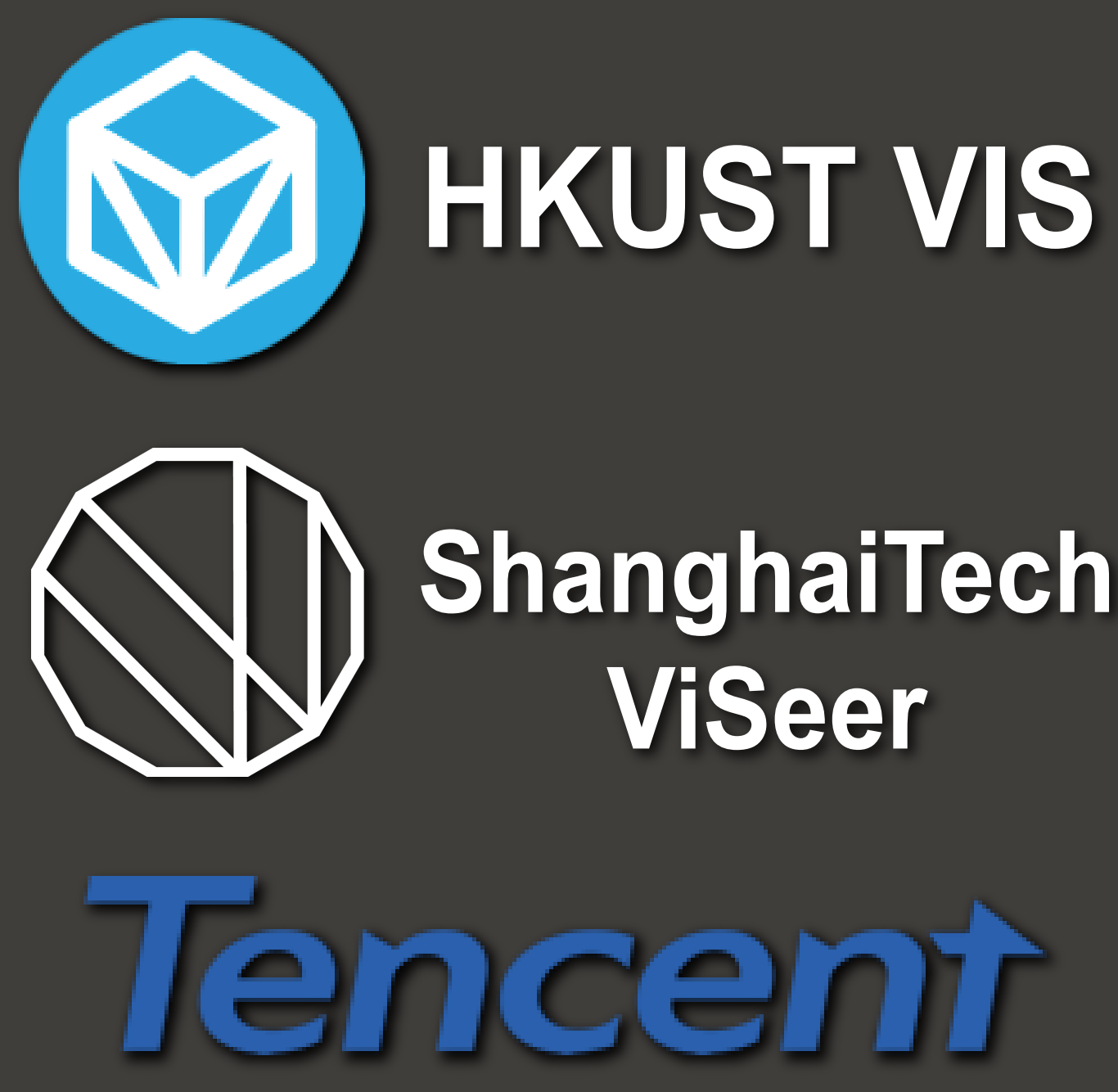# Towards an Exploratory Visual Analytics System for Griefer Identification in MOBA

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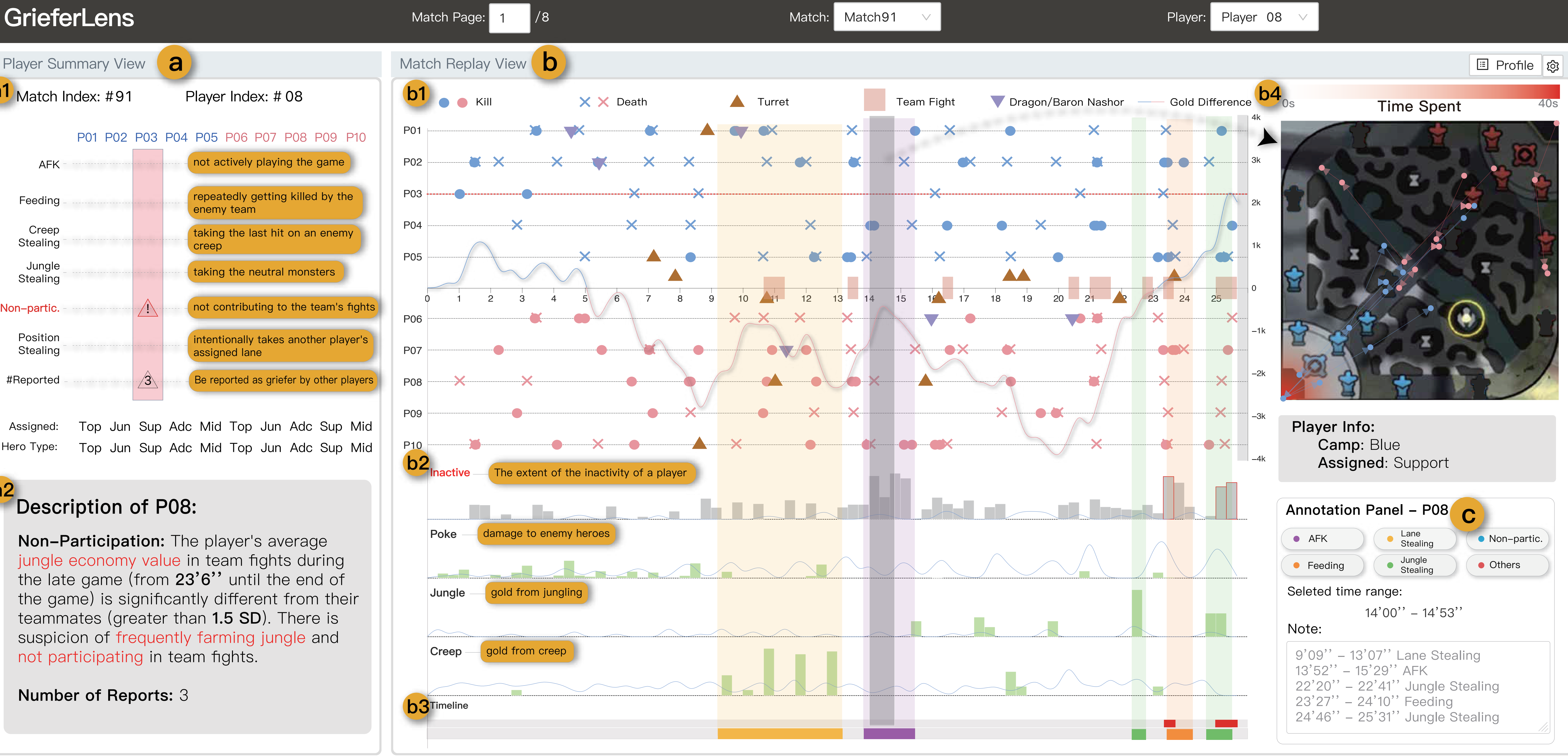HKUST

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GrieferLens

Match Page: 1 /8   Match: Match91   Player: Player 08

BACKGROUND

- MOBAs are popular esports games generating billions of dollars in revenue
- Griefing behavior disrupts the game and harms the player experience
- Detecting griefers is challenging due to complex and multi-variant game data and the absence of a standardized criterion for assessing player behavior

MOTIVATION

- Previous research has focused on maintaining balance in snowballing and comeback events
- Lack of comprehensive research on detecting players who intentionally disrupt the balance

GrieferLens focuses on identifying six types of griefers, as proposed and summarized by experts: AFK, feeding, lane stealing, jungle stealing, non-participation, and position stealing. The system contains two views and one annotation panel.

(a) The *player summary view* displays whether each of the ten players in a game match is suspicious of exhibiting any of the six types of griefers (a1), which were determined using rule-based algorithms collaboratively designed and evaluated by our experts. Given the indeterministic nature of griefer behavior's definition, experts agreed that the first step in identifying griefers should be to use our algorithm's filtered output, which has been proven to reach a reasonable false-negative rate less than 10%. Meanwhile, the number of times each player has been reported in this match}, their default hero types and assigned positions, and a detailed description (a2) of their suspicion level based on the algorithm are also presented.

(b) The *match replay view* compresses an entire game into a single view by embedding the key events of all ten players (b1) and some quantitative metrics (b2) of the selected player into a timeline (b3). Suspicious time periods will be highlighted to guide users in identifying potential instances of griefers and finding evidence to support their labeling and annotating. The spatial data of players will be encoded in the map sub-view (b4). Users can easily review the game scene through the combination of the two sub-views.

(c) Users can annotate problematic moments during the game using the *annotation panel*, which supports different types of annotations like tags and text notes.

CONTRIBUTION

- Developed to aid users in identifying, labeling, and annotating griefers in MOBA games.
- Integrates domain experts' knowledge and provides an overview analysis of players' behavior from both temporal and spatial perspectives.
- Trajectories of each player provided to help users understand match progress dynamics.
  Users can combine information from multiple perspectives to determine if a player is a griefer and provide a label.