

IC-CRIME Snapshots: Training Crime Scene Photographers Using Procedural Content Generation in Games

Julio César Bahamón, Maxim Litvinov, Phillip Wright, Roderick Gayle, Kurt Lippert, and R. Michael Young

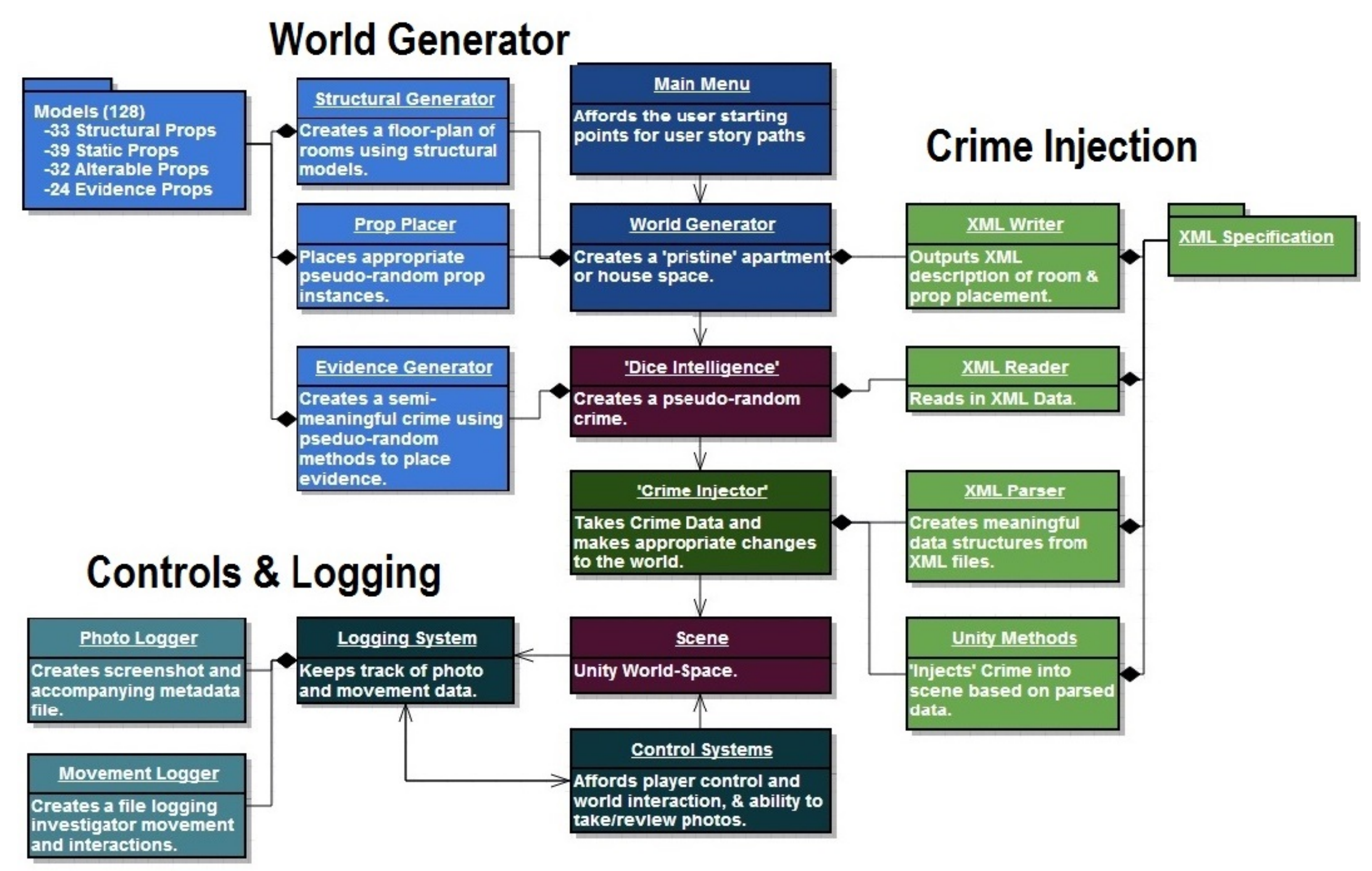
Approach

- Part of a game-based tool for crime scene investigators to model actual crime scenes.
- Investigators can link objects in the virtual scene to real world databases.
- Investigators and forensic specialists can collaborate with criminologists and detectives in a 3D virtual environment.



- Crime scene photographers will be able to use the game to practice skills needed to produce effective photographs while obeying rules regarding preservation of evidence.
- Focuses on the development of a novel game-based tool to help train crime scene photographers within the current IC-CRIME system.

System Overview



- Procedurally-generated content provides standalone 3D virtual environment to train forensic photographers.
- Generates crime scenes that contain variations which allow for a unique environment on each play-through.
- Players can navigate the scene and photograph objects.
- Photographs are saved and tagged with metadata to enable their examination in-game through an inventory system.

User Interaction

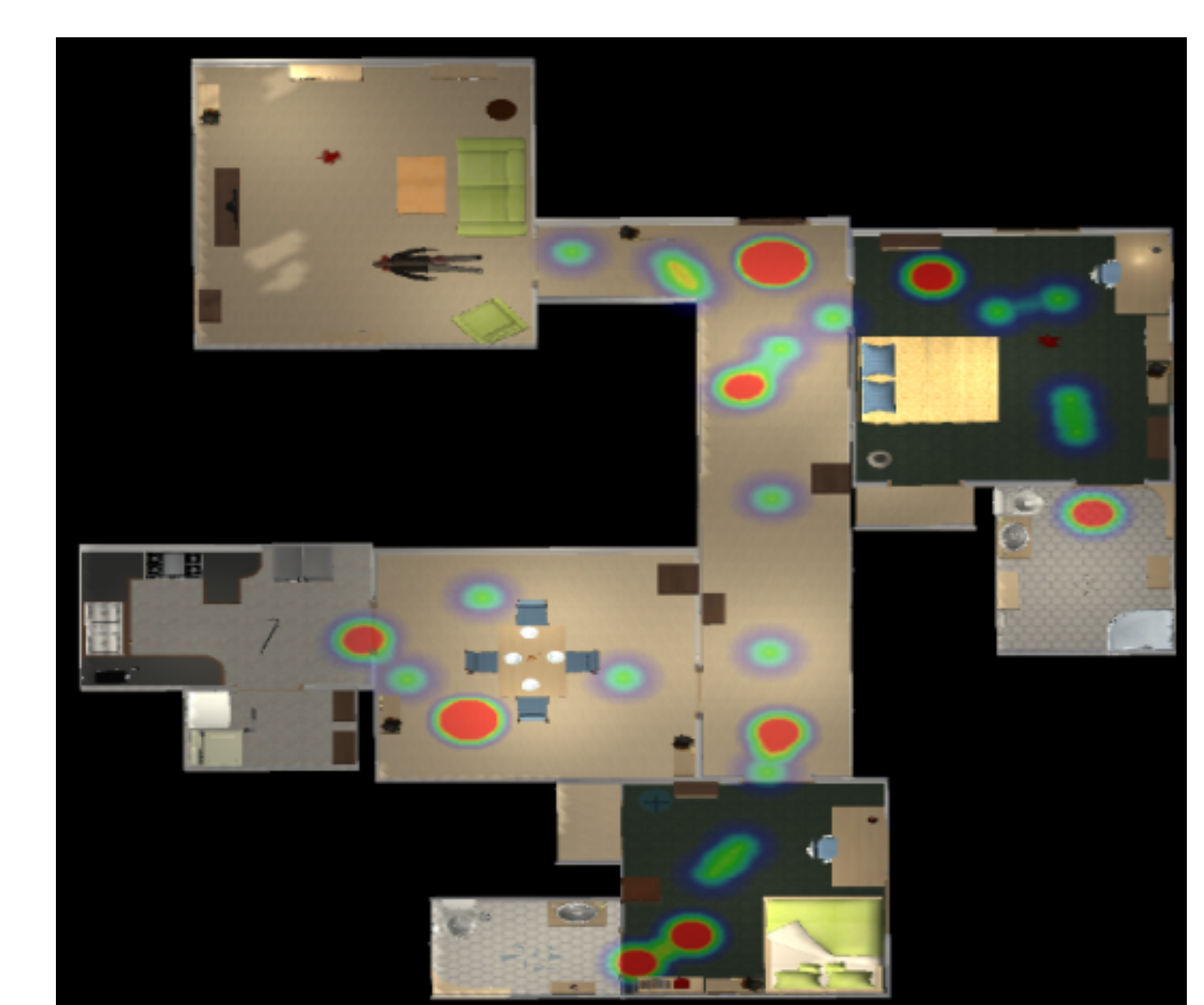
- Users play the game in the role of a forensic photographer.
- Players can switch between a navigation and photo capture mode.
- The game provides different difficulty levels.
- Instructors can replay game sessions to provide feedback.
- Replays include third person overview and heat maps.

Procedural Content Generation

- Creates a variety of training scenarios more efficiently than manual process.
- Ensures that the system always generates meaningful room layouts that can be correctly rendered and successfully navigated by a player.

Game Mechanics

- The system evaluates the quality of the photos taken by the player.
- At the end of the game session a score is computed based on the number of evidence items photographed and the quality of the photographs.
- Points are subtracted when player contaminates evidence.



Acknowledgements

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