SUCCESS STORIES: FUNCTIONALITY QA SOLUTIONS

HOW KEYWORDS BUILT A TOOL IN UNREAL TO INCREASE TEST EFFICIENCY BY 20%

KEYWORDS QA ENGINEERING CREATED AN IN-GAME TOOL TO KEEP TESTERS TESTING. EASIER BUG LOGGING AT THE TOUCH OF A BUTTON!

The Challenge

The Keywords QA Engineering team received a client request to improve the quality of life for a manual test team, as well as to programmatically ensure that certain data points were always present in bug entries in Jira.

Testing was conducted in the Unreal Engine and the tool had a specific requirement to capture in-game data for bug reporting. It was essential that the bugs included the required data to help the development team find and reproduce them. That data included the name of the map where the bug was found, as well as the player character's location and point of view. Furthermore, game session log files and a short (~20 seconds) video clip of gameplay leading up to and including the bug were also requested.

The Solution

To address the challenge, integration with Jira was conducted through its published REST API. This was built as an Unreal plugin that handled creating a UI for the testers to complete with a bug title and description. Once the form was populated and the tester clicked the "submit" button, the plugin packaged and sent the data to the Jira endpoint. Following issue creation, the game session log files, video and screenshots were added to the issue as an attachment.

Video clips were created using Open Broadcaster Software (OBS), which maintained a rolling buffer of video until the plugin was activated, then it saved the buffer as a video file. That same video file was then sent to the Jira endpoint and added to the issue as an attachment, in the same manner as the session log file.

OVERVIEW

Client Profile

Manual testing team working on a first person shooter in Unreal Engine.

Industry

Games Industry

Business Challenge

Additional hours were being spent gathering data as part of the bug submission process.

Solution

The final solution was a single entry point for filing bugs from within the game being tested, with map and player data automatically added, as well as the game session logs, video clips and screen shots. All data required for bug submission was gathered and added to Jira as part of the bug or as an attachment.

Results

Testers saved up to 20% of their time by using the tool. Most of the time saving was in search or video editing activity.

The Result

The Keywords QA Engineering Bug Logging Tool created a single entry point for filing bugs from within the game during testing, with map and player data automatically added, as well as the game session logs, video clips and screen shots.

Prior to tool completion the bug filing process involved multiple steps. Creating the bug, finding the player location information and map name, adding that to the bug manually, as well as to the log file manually. Furthermore, editing a full gameplay video clip (not the desired ~20 seconds, but all of the gameplay for that session), reducing it down to a smaller clip that contained just the bug, then adding the resultant clip manually as another attachment completed the steps required.

The tool gathered all of that information at the touch of a button. The tester saw a bug, hit a key and a pop up opened with the requested information. At the same time a rolling 20 second video file was saved, a screenshot was captured and log files were gathered. The tester could then edit by adding the title, steps and description and hitting "submit". This information was then added to a Jira bug and the files were added as attachments.

This solution required Jira as an endpoint, the Unreal engine and plugin framework, C++ and OBS.

ONE BUTTON - GAME TO JIRA

Other Applications

Recurrent and time-intensive tasks can be automated to free up your teams to focus on other tasks. The Keywords QA Engineering Bug Logging Tool is just one of many tools and capabilities that Keywords can provide to help your team be more efficient.

These include:

• Use of Graphic APIs to verify the quality of art assets

• Automated in-game FPS testing

• Customised crash logging and reporting

• Verification that assets follow your conventions

• Overnight parsing of build log files to find errors and warnings

• Profiling and reporting on metrics that are important to you

ABOUT KEYWORDS STUDIOS

With studios around the world, Keywords Studios is a leading technical services provider for global video games and beyond. With locations in Asia, the Americas and Europe, Keywords Studios has a breadth and depth in multiple industry-leading service lines including Art, Engineering, Audio, Functionality QA, Localization, Localization QA and Player Support. Working across all major platforms, in over 50 different languages, Keywords Studios delivers support for its clients across the globe.

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