



GLI[®]

World Headquarters

600 Airport Road
Lakewood, NJ 08701

Phone (732) 942-3999
Fax (732) 942-0043
www.gaminglabs.com

Worldwide Locations

World Headquarters

Lakewood, New Jersey

U.S. Regional Offices

Colorado
Nevada

International Offices

GLI Africa
GLI Asia
GLI Australia Pty Ltd
GLI Austria GmbH
GLI Europe BV
GLI Italy
GLI South America

12 December 2022

Mr. John Lindner
Incognia US Inc
333 West San Carlos Street,
San Jose, CA, United States of America, 95110

RE: Functional Review of the Incognia Geolocation Service

GLI File Number: CS-00-IUI-22-01

Dear Mr. Lindner:

As per Incognia US Inc request, **Gaming Laboratories International, LLC (GLI)** has completed a functional review of the Incognia Geolocation Service via the Incognia Demo App on Android and iOS platforms.

Incognia Geolocation Service provides validation and location compliance for players and gaming operators. The software allows gaming operators to embed in-app checks that provide security and confidence in player location. The service returns multiple flags so that location can be deemed valid or invalid based on customer rulesets.

The evaluation of the Android and iOS applications by GLI included an analysis of the Geolocation methodologies implemented by the Incognia Geolocation Service. Routine location checks, VPNs, proxies, mobile-based geolocation spoofing applications, desktop-based geolocation spoofing applications, and other subversive techniques were utilized to confirm the service was able to detect any attempt to alter location data, and accurately respond to the valid location data it received.



Documentation Review:

As part of the overall evaluation, GLI performed a review of the test applications for Android and iOS, as well as documentation of internal procedures provided for this evaluation. The review of the service included verification that players could be correctly identified as inside or outside of an exclusion zone defined by Incognia US Inc, as well as verification that the service could identify when device integrity or location data had been tampered with.

Geolocation Verification:

Incognia uses the device's GPS location as well as WPS (Wi-Fi Positioning System) location to calculate the user's true geographic position. To ensure users are not falsely validated due to signal error or variations in data accuracy, the service uses a confidence radius that incorporates the data provider's degree of accuracy. For location to be verified, the entirety of this confidence radius must be outside of the exclusion zone.

All data validation is performed by Incognia's Risk API. In order to ensure the results of the location validation are legitimate, the Incognia test applications submit all of the gathered device data to the location service backend as a Risk Assessment. The client-side logic does not validate any of the location data itself. If the Incognia Risk API is unable to verify the validity of the reported location data, the request and associated data are logged, but no location is reported on the Incognia Dashboard.

A Risk assessment has three possible outcomes, High Risk, Low Risk, and Unknown Risk. High Risk is used to indicate that a user should not be allowed to access a location restricted product, either because they are in an excluded region or because their reported location cannot be trusted due to device integrity. Unknown Risk is used when a user's most recent reported location is too outdated to be trusted, and the expiration time for a reported location varies depending on the user's proximity to an exclusion zone. Low Risk is only used when the user's device integrity can be verified, the location is confidently within the permitted region, and the integrity of the application itself can be verified. It is only used when a user should be permitted to access a location restricted product.



The Risk API is capable of detecting many device environment variables to identify when any type of data tampering may have occurred. The communications between the application and the Incognia Back Office are even safe against Man In The Middle attacks, as any modification of data sent by the test applications is detected by the Risk API, and this data is disregarded for the purposes of verifying location integrity.

Devices Utilized for Evaluation

The table below details the devices utilized during testing.

Device Name	Model Number	OS Version	Type
Apple iPhone 11	MWHY2LL	iOS 15.4	Phone
Apple iPhone 13	ML9C3LL	iOS 15.2	Phone
Google Pixel 3XL	G013C	Android 12	Phone
Google Pixel 5	XT2063-2	Android 12	Phone

Conclusion

The assessment covered both physical border testing in the form of a simulated exclusion zone surrounding the Gaming Laboratories Colorado Office, and a series of known exploit techniques to attempt to spoof a user's location as outside of the GLI Colorado Office without leaving the building. The results of these tests demonstrated both physical enforcement of the simulated exclusion zone and detection of all exploits attempted by the test lab.



Risks and Conditions

First, it is imperative to understand that the evaluation performed by GLI was limited to the pre-production environment provided by Incognia US Inc for functional review. Incognia US Inc maintained access to the environment throughout the duration of the examination, and no source code or web modules were monitored in a controlled manner. Any differences with integration in the production environment or any future changes to these services themselves may cause the overall system to operate differently than what was evaluated. Finally, the scope of GLI's testing, as defined by Incognia US Inc., was focused on 1) Incognia's Geolocation Services on iOS and Android native mobile apps, 2) emulated border testing, 3) a thorough evaluation of the efficacy of the solution to detect subversion techniques used to alter location data.

This letter is a summary of the evaluation performed by GLI and does not provide any comment regarding the compliance status of the Incognia US Inc Risk API or any other part of the Incognia US Inc Geolocation system.

Gaming Laboratories International, LLC (GLI) is entering this testing agreement with Incognia and its affiliated companies. GLI shall not be liable to any other party with respect to the undertaking of this project. Incognia US Inc agrees that the limitation on damages arising from this testing arrangement with respect to GLI shall not exceed the total amount paid to GLI under this agreement. Incognia US Inc acknowledges that GLI is subject to various regulations imposed by Government Gaming Authorities in a number of jurisdictions around the world. This means that GLI is required to conduct its affairs in a manner which is ethical and in accordance with the regulations imposed by Gaming Authorities. Incognia US Inc must not do anything that may jeopardize the eligibility of GLI to hold any license in relation to gaming. GLI reserves the right to terminate this agreement at any time without liability if the continuation of the agreement will jeopardize its ability to be qualified for, hold, or maintain any gaming related licenses, permits, or approvals with a regulator.



This document is governed by the General Terms & Conditions executed by and between the Parties as of October 18, 2022.

If you should have any questions regarding this information, please feel free to contact our office.

Sincerely,

GAMING LABORATORIES INTERNATIONAL, LLC

A handwritten signature in black ink, appearing to read 'C. Gallo', written over a horizontal line.

Christine M. Gallo

Senior Vice President, Quality and Technical Compliance

ah

