6401 Davis Industrial Parkway
Suite A
Solon, OH 44139
(440) 914-TEST (8378)
Fax: (440) 542-1413

www.eclipsetesting.com

eclipse
COMPLIANCE TESTING

A Division of:
NFA

Gaming System Report

Report issued to	Sean O'Hagan, Chief Executive Officer Tap50:50 Event Consultants Ltd. 808 King Street Saskatoon, Saskatchewan S7K0N7 CANADA
Date of issue	October 31, 2020
Gaming System Manufacturer Contact Details	Tap50:50 Event Consultants Ltd. 808 King Street Saskatoon, Saskatchewan S7K0N7 CANADA
Gaming System Details	Tap50:50 Raffle Manager with eCommerce Application
eclipse Compliance Testing Report Reference Information	Review and analysis of the *Tap50:50 Electronic Raffle Manager v3.04 with eCommerce Application v3.04*, which is a modification of the previously reviewed *Electronic Raffle Manager* with *eCommerce Application* submitted and developed by Tap50:50 Event Consultants Ltd.
Report Number	NA_TAP50E_5208-01_MO

1. INTRODUCTION

eclipse Compliance Testing has conducted a review and examination of the *Tap50:50 Electronic Raffle Manager v3.04 with eCommerce Application v3.04,* developed by Tap50:50 Event Consultants Ltd. Our evaluation of the *Tap50:50 Electronic Raffle Manager v3.04 with eCommerce Application v3.04,* to be utilized for online raffle ticket sales was conducted for compliance with the applicable sections of the following industry standards and jurisdictional requirements:

- AGLC Technical Gaming Standards for Electronic Raffle Systems, document titled **Electronic Raffle Standards Document (ERSD) Version1.0,** revised on July, 2018.

2. OVERVIEW OF TESTSCOPE

2.1 System Components

The following components of the submitted system and software, that aid in the online sale of raffle tickets, have been reviewed against the aforementioned technical standards:

Software Component	Location	Version
Electronic Raffle Manager	Remote Server	3.04
eCommerce Application	Remote Server	3.04

The *Tap50:50 Electronic Raffle Management System Electronic Raffle Manager* with *eCommerce Application* components are stored on a remote database server and served to users using a public facing web server, utilizing commercially available server hardware and networking equipment. The current architecture has a backup web server and a backup database server as well as RAID storage for the live database, the backup database, and the live Apache reverse proxy server. In addition, the main raffle data is stored on a RAID 10 Network Storage Device, to which the web server does not have direct access. All servers utilize Oracle's Red Hat Linux v6 operating system. All production servers utilize RAID 10 with hot swappable drives and feature redundant power supplies.

The Tap 50:50 servers are locked in their own rack and are housed at an Internet Data Center (IDC), which incorporates the following features to minimize disruption of service:

- Temperature controlled server room
- Independent backup generator power
- Fire retardant protection systems
- Two separate internet backbones

Please Note: The Tap 50:50 server hardware was not reviewed in the current lab environment, as the servers are installed within a secure Internet Data Center (IDC), and thus, were not provided for review.

Logical access controls are implemented to provide a secure networking environment. The *Tap 50:50 Raffle System* utilizes a firewall, which only allows secure TLS 1.2 connections, and enforces TLS 1.2 protocol to provide end-to-end confidentiality. The operating system on the TAP 50:50 servers incorporates disk encryption as a standard option.

2.2 System Software Information

The *Tap 50:50 Raffle Manager* software is housed on the hard disk drives of the Tap 50:50 servers.

The files pertaining to system operation, integrity, and outcome determination have been listed below:

Software Component	Version	Software Signatures
Electronic Raffle Manager	3.04	*D19C6252BAB9D9DFB1D6224AFE806C94
eCommerce Application	3.04	*B5CA7C9F97F53956721F5FAF05D7C360
Application Checksum Management	1.2	*B8138B3C15C507A2804A36B539956738

 * MD5 signature included above has been obtained using the *Tap 50:50 Application Checksum Management Program.*

To obtain the signature for the *Electronic Raffle Manager and eCommerce Application*, the following should be performed:

- Access the Tap 50:50 hashing program login page by opening a web browser and entering the URL for the hashing program (The URL for the hashing program can be obtained by contacting Tap50:50 Event Consultants Ltd);

- Gain access to the hashing program by using credentials obtained from the manufacturer, Tap50:50 Event Consultants Ltd;

- After gaining access to the hashing program, select a single component to verify ("*Electronic Raffle Manager*" or "*eCommerce Application*") from the available drop down box options;

- Upon the component being selected from the drop down box options, the signature for the selected component will be displayed under "Current APP Checksum".

Please Note: TAP 50:50 is willing to provide login information to regulators with their own login information for this HASHing application which they would be able to use at any time.

The Tap 50:50 hashing program calculates a MD5 checksum value of the *Electronic Raffle Manager* housed on the hard disk drives of the Tap 50:50 servers. This value is a unique "signature" for the software examined. Should any of the files which comprise the *Electronic Raffle Manager* be altered in any way, the MD5 checksum values displayed within the hashing program will change.

2.3 Hashing Software Verification Information

eclipse Compliance Testing has verified that the *Tap 50:50 Raffle Application Hashing Program* operates as intended, and the information obtained through this procedure has not been compromised.

To ensure that the version of the *Tap 50:50 Application Hashing Program* is identical to the one used during our testing, a signature of the **Hash** program should be obtained and verified using the **FileCheck** program. The **FileCheck** results of the critical files that comprise the *Tap 50:50 Raffle System* **Hash** program is as follows:

File Name	Size (bytes)	CRC-32 Checksum
TS_CHANGE_PREF.txt	3,396	AA75E53A
TS_CHANGE_PREF_UTIL.plb	20,658	B339949B
TS_CHANGE_PREF_UTIL.sql	7,226	1FFB3B2A
TS_CHANGE_STORE.txt	3,582	3B63CE3C
TS_CHANGE_UTIL.plb	31,708	CEE5CAB4
TS_CHANGE_UTIL.sql	7,252	ABED646C

2.4 Random Number Generator Details

eclipse Compliance Testing has evaluated the *Tap 50:50* Random Number Generator (RNG) using industry-accepted statistical analyses. We have found that the RNG being utilized with the *Tap50:50 Raffle System* satisfies industry-accepted standards for each of the following statistical tests for randomness: Chi-Squared, Runs Test, and Serial Correlation. Reports on our evaluation of the RNG have been provided to Tap50:50 Event Consultants Ltd. under separate cover (report number NA_TAP50E_4166-01_RN).

Please Note: The software source code which contains the Random Number Generator has changed since the initial evaluation of the RNG. Based upon our review and analysis of the associated source code, it has been determined that although some aspects of the code which contains the RNG has changed, the core RNG source code remained intact. Thus, the RNG and its functionality have not been altered since the evaluation of the RNG.

3. SYSTEM OPERATION

The *Tap 50:50 Raffle System* offers a method for patrons to make online purchases of raffle tickets. Raffle tickets may be purchased over the Internet through a web-interface using the *Tap 50:50 Raffle System eCommerce Application.*

The *Tap 50:50 Raffle Manager* utilizes the *eCommerce Application* to facilitate the online sale of raffle tickets through the Internet via charitable websites, which contain a means for accessing the *Tap 50:50 eCommerce Application*. Persons wishing to purchase raffle tickets must first select the quantity of raffle tickets to be purchased. Upon completing the selection of raffle tickets, the patron must accept the raffle terms and conditions before the purchase can be completed.

Upon accepting the raffle's terms and conditions, a first-time user has the option to register and activate a user account by validating their email address through a secure validation process. The patron will provide their payment method to complete the raffle ticket purchase.

The *eCommerce Application* will then display a confirmation page, which offers the patron the opportunity to review and confirm their raffle ticket purchase order. Raffle tickets that are purchased will be emailed to the patron's registered email address. In addition, at the time of ticket selection, the patron has the option to also have their raffle tickets mailed to their registered address for an additional charge.

After completing the raffle ticket confirmation, the *eCommerce Application* displays a message to the patron indicating that the raffle ticket purchase has been completed, and will display a summary of the total quantity and price of raffle tickets purchased. Following the purchase summary, a listing of all raffle tickets purchased, including bundle reference numbers and serial numbers for the tickets will be displayed to the patron.

The *Tap 50:50 Electronic Raffle Manager* is capable of generating various accounting and system reports which include:

- Production Reports
    - Sales by Terminal – Displays sales information for specific terminals and raffles.
    - Sales by Volunteer Report – Displays ticket sales for a specific raffle per volunteer.
    - Sales by Ticket Series – Displays Net Sales and Ticket Bundle sales per ticket series.
- Void Overview Report – Displays the voids that were made for all raffles per charity.
- Volunteer Safety Report – Graphically displays how close a volunteer is to reaching the maximum set dollar value before their terminal must be reset by a system administrator and money is collected.
- Daily Sales Report (Multi-Day Raffles) – Displays a graph and chart of sales per day over a date/time range for a selected raffle.

3.1 Outcome Determination

Winning raffle tickets are determined randomly by the charitable organization, by utilizing a random function on the *Tap 50:50 Raffle Management System*. The ticket selection process includes selecting a raffle ticket for each available prize(s), from all raffle tickets purchased from the applicable charity. Patrons can look up the outcome of the raffle via the charity's website. Any winning ticket holders will be awarded their prize upon ticket validation.

4. MODIFICATIONS

eclipse Compliance Testing has reviewed the following modifications made to the previously certified *Tap50:50 Raffle System v2.01, with eCommerce Application v2.0,* to render the current *Tap50:50 Electronic Raffle Manager v3.04 with eCommerce Application v3.04.*

- Updated ticket templates and added ticket customization options;
- Added support for new payment processor;
- Added support for time to draw, and landing page controls;
- Added enhancements for shopping cart customization controls;
- Improvements made to donation customization;
- Added reporting capability for group reporting;

- Added geo-location controls and mail controls;

- Added support for price level visibility;

- Made enhancements for improved error handling ; and

- Added additional parameters to provide support for adding a new game to the Raffle System in a future version of software.

5. NOTEWORTHY ITEMS FOR CONSIDERATION

The following items of note have been listed below for consideration by the regulatory body. These items of note were discovered during the review and analysis undertaken by **eclipse Compliance Testing** to determine compliance with the aforementioned technical standards:

- Section 3.2.8 Counterfoils, of the document titled **Electronic Raffle Standards Document (ERSD) Version1.0,** revised in July 2018 states: *"The ERS must generate a unique counterfoil for each ticket number. A counterfoil must be printed or entered electronically according to the type of draw to be conducted. Printed counterfoils must be the same size, shape, and weight. All counterfoils must have an equal chance of being selected. Counterfoils must include the following information, at a minimum:*

  a) *the name, address, and telephone number of the ticket purchaser provided during the online purchase;*
  b) *license number;*
  c) *ticket number;*
  d) *issued date and time in 24 hour format showing hours and minutes; and*
  e) *an optional barcode."*

  The system reviewed at the time of testing did not include the name, address, or telephone number of the ticket purchaser provided during the online purchase.

  However, the system does include a unique reference number which can be traced back to this information and a unique print confirmation number in order to prevent counterfeiting of counterfoils. Tap 50:50 believes that increasing the recognizability of individual counterfoils in this manner is potentially compromising to the integrity of a manual draw raffle as recognition of a counterfoil creates more opportunities for dishonest printing practices by a print manager, as the information is in digital form, which could be easily replicated outside the system.

  This should be taken under consideration by the AGLC to determine compliance with the aforementioned technical standards.

- Section 5.1.8 Virus Protection, of the document titled **Electronic Raffle Standards Document (ERSD) Version1.0,** revised on July, 2018 states: *"The ERS must have virus protection software".*

The system reviewed at the time of testing did not include virus protection software. The manufacturer, Tap50:50 Event Consultants Ltd., has indicated that virus scanners and/or detection programs will not be used due to the current system architecture and security technologies currently in place. It is their position that virus protection software on Linux servers introduces potential performance issues, and is unnecessary unless those servers are being used to check emails, visit websites from untrusted sources, or transferring and storing questionable files. The manufacturer, Tap50:50 Event Consultants Ltd., has stated that these type of activities are not being done on the system. This should be taken under consideration by the AGLC to determine compliance with the aforementioned technical standards.

6. FINDINGS AND CONCLUSION

Based upon our review of the *Tap50:50 Electronic Raffle Manager v3.04 with eCommerce Application v3.04* software and the associated source code, we have determined that the game outcome is based upon revealing the contents of raffle tickets.

Therefore, **eclipse Compliance Testing** has established the following findings of fact:

1. Raffle tickets can be purchased by patrons through the internet via an online charity raffle system.
2. The *Tap50:50 Electronic Raffle Manager with eCommerce Application* operate as described by the manufacturer, Tap50:50 Event Consultants Ltd.
3. System functionality has been found to be fair to the patron inasmuch that there were no "Reflexive Software" algorithms discovered during our source code review, and each patron has an equal opportunity of winning a prize.
4. The remote server system, which houses the *Tap50:50 Raffle Management System Electronic Raffle Manager*, maintains all data generated via the *eCommerce Application*. Several accounting and system reports can be generated via the *Tap50:50 Raffle Manager,* which is included within this evaluation.
5. Mechanisms for verifying the *Tap50:50 Electronic Raffle Manager* with *eCommerce Application* software exist. **eclipse Compliance Testing** has utilized the Tap 50:50 Hashing program, to obtain the software signatures listed within section 2.2 System Software Information for the *Raffle Management System* components. **eclipse Compliance Testing** has verified that the MD5 function, included within the Tap 50:50 hashing program, operates as described by the manufacturer, Tap50:50 Event Consultants Ltd.

Based upon our review and examination, with note to the item listed in section 5. NOTEWORTHY ITEMS FOR CONSIDERATION, which should be taken under consideration by the regulatory body for determination of compliance, **eclipse Compliance Testing** certifies that the *Tap50:50 Electronic Raffle Manager v3.04 with eCommerce Application v3.04* software, submitted by Tap50:50 Event Consultants Ltd., for the sale of online raffle tickets, is compliant with the previously listed technical standards.

7. TERMS AND CONDITIONS

It should be noted that all findings and conclusions of fact have been derived from actual game play, visual observations, and the review of the submitted source code. **eclipse** Compliance Testing has performed extensive research and analysis to determine the findings previously mentioned. However, we realize that not all information may have been disclosed or provided for our review. If any parties dispute our findings, or may present evidence or information contrary to our findings, we would welcome the addition of this information for our consideration. In such an instance, we reserve the right to amend or revise this document.

This document is NOT an approval letter, nor an expression of any opinion as to whether tested products should be approved. Approval of the *Tap50:50 Electronic Raffle Manager v3.04 with eCommerce Application v3.04* software can only be granted by the regulatory body, who may rely upon our findings in their determination.

This document has been prepared by **eclipse** Compliance Testing for Regulatory Authorities addressed hereto, for the benefit of Tap50:50 Event Consultants Ltd. Distribution of this document is limited exclusively to **eclipse** Compliance Testing, Tap50:50 Event Consultants Ltd. and the Regulatory Agency(ies) addressed herein. This report shall not be reproduced, except in full, without the written approval of **eclipse** Compliance Testing. Authorized parties may download an authentic electronic copy of this report from the *Reports* section of the **eclipse** Compliance Testing website (www.eclipsetesting.com). Only authorized copies of this report received from **eclipse** Compliance Testing are considered to be authentic. Upon request by an authorized party, **eclipse** Compliance Testing will send this report via email as directed. **eclipse** Compliance Testing takes precautionary measures to secure the PDF document, but **eclipse** Compliance Testing does not send the email via any encrypted methodology.

The submitting party has provided suitable information indicating that it is in good standing with the jurisdiction referenced herein. **eclipse** Compliance Testing makes no judgment on the submitting party's license status or suitability for licensure. The information contained herein pertains merely to the submitting party's product compliance.

Should you have any questions, or require any additional information, please feel free to contact our office at (440) 914-TEST (8378).

Sincerely,

Nick Farley
President

AP
NF/sc/jw