

## **RGS EVALUATION TESTING REPORT**

### **Reference regulation:**

Republic of Latvia

Gambling and Lotteries Law

**(With amendments by the Law on 12/9/2013, 30/11/2015, 23/11/2016 and 22/11/2017)**

<p><b>Games and versions: refer to the introduction</b></p>
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**20/09/2018**

## INTRODUCTION

The findings reported in this summary are the results of a broader set of documents and testing activities results archived in QUINEL Limited's facilities. It is intended that the requester declares that:

- Any Hardware provided or described for analysis and testing is configured identically to hardware in commercial use
- Game software/ function provided for the testing and code review is declared by the customer to have the same behavior to the software/code in commercial use
- Functionality made by the software in automatic test mode has a realistic behavior

and that

- all the files and modules,
- the database schemas and all the specific programming resources,
- all the parameters contained into any databases and/or configuration file

that have been subject to the audit process guarantee the same behavior of what is going to be published/deployed according to this audit results.

<i>Game Name</i>	<i>Server Vers.</i>	<i>Client Vers.</i>	<i>RTP</i>	<i>Interface</i>
Tiger Rush	1.0.0	1.0.3	96.3%	HTML5 (Desktop and Mobile)

The Recipient, by accepting and using this Report, declares to be aware and accept unconditionally all the terms and conditions set forth. If the Applicant and / or the Recipient does not agree on the terms and conditions set forth, QUINEL Limited reserves the right to cancel the certification provided with this Report, it follows therefore that the Recipient must immediately return all copies to QUINEL Limited of this Report and cannot use them nor refer to.

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**A) Audit ID**

LV\_THK010GAM\_REV.1

**B) Scope / Document type**

GAME evaluation testing report

**C) Reference regulation**

Technical and functional requirements for the game software and communication equipment for remote gambling:

- 1) Republic of Latvia - Gambling and Lotteries Law in force from 01.01.2006 (With amendments by the Law on 12/9/2013, 30/11/2015, 23/11/2016 and 22/11/2017)
- 2) Regulation No 189 (prot. Nr. 17 6. §), 27 March 2018  
“Regulations on Organization Systems for Acceptance of the Interactive Gambling, Interactive Lottery and Lottery Ticket Sales and Participation Fees”, Issued in accordance with Section 47, Paragraph Four and Section 80, Paragraph Six of Section 80, Paragraph Seven of the Law on Gambling and Lotteries.
- 3) Regulation No 715 (prot. No 60 25 §), 5 December 2017  
“Procedure for Registration and Identity Check of the Interactive Gambling and Interactive Lottery Players”, Issued in accordance with Section 54, Section 54.1, Paragraph Eight, Section 79.1, Paragraph Eight and Section 80, Paragraph One, Clause 1 of the Law on Gambling and Lotteries.
- 4) Regulation No 786 (prot. No 65 21.§), 20 November 2007(with the amendment adopted by Cabinet of Ministers on 24.01.2017)

**D) Test methods**

Ref. to Operative Instruction IO 02-02 for definitions

Randomness:

Refer to report ID: “J16030078\_RNG\_Vers. 3.5.0\_rev. 1”

Visual inspection

*QIVI001*

Software Source Inspection:

*QISI001*

Accounting and Financials:

*QIAF001*

**E) Auditor / Test lab****QUINEL Limited**Reference contact:

Mr. Davide De Nobile

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**F) Audit subject****Description:** compliance of the test items described in the introduction**Receipt date:**

11/07/2018 – submission for testing against current regulation as per Section (B) of all items

**Inspection date:**

11/09/2018 - 19/09/2018

NOTE: RNG tests described into report ID: "J16030078\_RNG\_Vers. 3.5.0\_rev. 1", issued by Quinel M LTD on March 25<sup>th</sup>, 2016.

**G) Requester**

Thunderkick Malta LTD  
Level 5, The Mall Complex,  
Floriana, Malta

**H) Owner of the system/software**

Thunderkick AB  
Vasagatan 11, 111 20 Stockholm,  
Sweden

**I) Companies and organizations involved in the process****Producer(s) / Integrator(s):** Ref. to Section H)**Requester:** Ref. to Section G)**Licensee/Operator:** N.A.

**J) Individuals involved in the process**

**On the Producer(s) / Integrator(s) side:** Mr. Sven Grip, Mr. Stéphane Redon, Mr. Johnny Aspelin, Mr. Daniel Gjørwell, Ms. Jeanette Karlsson

**On the Requester side:** Same as for Requester

**On the Licensee/Operator side:** N.A.

**On QUINEL Limited side:** Davide De Nobile (Laboratory Technical Director)

**K) Processes, rules and parameters of the games (if applicable)**

N.A.

**L) Protocols and specifications of the gaming system (if applicable)**

Both games (server-side logic) and platform are developed entirely with the Java Language.

Game was provided through the following URLs on a QA environment:

<a href="https://quinel.thunderkick.com/games/">https://quinel.thunderkick.com/games/</a>	(player's interface)
<a href="https://qa-int-backoffice.thunderkick.com">https://qa-int-backoffice.thunderkick.com</a>	(Back office / Admin interface)
<a href="http://ext-qa-gameservice.thunderkick.com">http://ext-qa-gameservice.thunderkick.com</a>	(Runtime game configuration)

The QA environment used for RNG testing relies on a Linux environment hosted by Amazon's cloud services and runs on Oracle Java JDK 1.7.0\_09, Apache Tomcat application server 7.0.42

Live environment is reachable at the following IPs (primary site, secondary site omitted):

Game traffic:	37.114.73.113
API:	37.114.73.114
Back office	37.114.73.115
Firewall	37.114.73.120

Live environment servers are running Linux "Ubuntu 12.04.5 LT; Precise Pangolin", with Oracle Java JDK 1.7.0\_51, Apache Tomcat application server 7.0.50.

**M) Security of the system**

N.A.

**N) Evaluation performed**

The test evaluation, required by the Requested, was completed against the following requirements:

- 1) Republic of Latvia - Gambling and Lotteries Law in force from 01.01.2006 (With amendments by the Law on 12/9/2013, 30/11/2015, 23/11/2016 and 22/11/2017)
- 2) Regulation No 189 (prot. Nr. 17 6. §), 27 March 2018
- 3) Regulation No 715 (prot. No 60 25 §), 5 December 2017
- 4) Regulation No 786 (prot. No 65 21.§), 20 November 2007(with the amendment adopted by Cabinet of Ministers on 24.01.2017)

*Refer to the Annex report for a full detailed list of requirements tested.*

**O) Evaluation auxiliary informations**

N.A.

**P) Testing activities applied and product / test items references**

Internal procedure followed:  
Rif. "IO 02-02 TEST METHODS"

**Q) Critical modules affecting the behavior of the test items**

Tests were performed against the following files:

<i>SHA1:</i>	<i>Critical</i>	<i>Test Item</i>	<i>File name</i>
e0d59194f18c87e7c39a7a24e597279a7a2e8fce	Yes	G001	gp-game-s1-g18.json
1941f747b6a1e25517acf738dc623a3e34979ce0	Yes	G001	gp-game-s1-g18-core-1.0.0-RELEASE.jar
d5e01a5f41deae3b63b46b2ccb7125278e3ebc29	Yes	All (*)	MersenneTwister32.java
ea8940a1cd7d561eb944c42f101ddfd7cce2ec7	Yes	All (*)	RandomNumberGenerator.java
f2dcd4e8ed46eb5653d99ff54f60c4e4047ad4ec	Yes	All	gp-rng-3.5.0-RELEASE.jar
ea01386be069745202580bd50c3de32c33f3553f	Yes	All	gp-rng-api-3.5.0-RELEASE.jar

\*RNG tests described into report ID: "J16030078\_RNG\_Vers. 3.5.0\_rev. 1", issued by Quinel M LTD on March 25<sup>th</sup>, 2016.

**R) Additional information**

N.A.

**S) Setup and application/system architecture tested**

Refer to section L.

**T) Payout (if applicable)**

Refer to Introduction  
No specific conditions / strategy to obtain the declared payout are to be considered.

## U) CERTIFICATION

Date:	20/09/2018	Total Number of Pages: 13
Requester:	Thunderkick Malta LTD Level 5, The Mall Complex, Floriana, Malta	
Licensee:	N.A.	

QUINEL Limited certifies that the games examined and identified in the Introduction comply with the Gambling and Lotteries Law issued by the Republic of Latvia in force from 01.01.2018 (With amendments by the Law on 12/9/2013, 30/11/2015, 23/11/2016 and 22/11/2017) (ref. to Section C for full regulatory scope).

Refer to Annex I for the full list of requirements satisfied.

## V) CONDITIONS AND VALIDITY

<u>Conditions:</u> none
<u>Extents set by the State Gambling Commission:</u> none
<u>Validity period:</u> upon next changes to critical files listed in section P)

## W) CONCLUSIONS

QUINEL Limited certifies that the games tested complies with the Technical Standards requested and recommends for approval.
No non-compliances nor mismatch between declared and tested payouts were found during testing. ( <i>in case of non – compliances, as specified in Section 49, point 2.2 or Section 77, point 2.2 of the Law, the wrong payout is to be reported</i> ).

Date: 20/09/2018

**Signed:**



Davide De Nobile – Laboratory Technical Director  
(QUINEL Limited)

## DEFINITIONS:

<p>1) <b>Gambling</b> - a game where a natural person upon payment of deposit stake may get a gain fully or partially depending on the winning occurrence or circumstances being previously unknown. Such a game on the automatic slot machine where the only gain being free game on the said automatic slot machine, as well as a game on the automatic slot machine with a gain of property nature (save for gain in cash) value whereof being within 15 EUR shall be deemed not to be gambling;</p>
<p>2) <b>Automatic gambling slot machine</b> – electronic, mechanic or electromechanical device having special program or machinery for the purpose of determination of gain volume intended for gambling arrangements;</p>
<p>3) <b>Gambling organizer</b> – capital company incorporated in the Republic of Latvia having received licenses required for gambling arrangements pursuant to the procedure provided by this Law;</p>
<p>4) <b>Bingo</b> - gambling, where a player by guessing accidental combination of numbers from preset combinations of numbers has a possibility to get a gain and where the gain volume is conditional upon the drawn or the guessed combination of numbers and total amount of deposit stakes;</p>
<p>5) <b>Bet</b> - gambling, where interested person deposit stake and strike a bargain about the possibility or impossibility of any event, and amount of the gain depends on the accuracy of the player’s forecast, deposited stake, as well as on the index for calculation of the gain, which is fixed by the rules of game;</p>
<p>6) <b>Interactive gambling or lottery</b> - gambling, where the player may take part by using the electronic communication services: the Internet, telephone, television, radio or any other types of electronic communications;</p>
<p>7) <b>Lottery or raffle</b> (hereinafter referred to as the lottery) is a game having nature of an agreement of chance and where gains acquired by participant thereof are fully or partially occasional ones.</p>
<p>8) <b>Lottery organizer</b> - capital company incorporated in the Republic of Latvia or in special cases also an association or religious organization having received licenses required for lottery arrangement pursuant to the procedure provided by this Law;</p>
<p>9) <b>Dice game</b> - gambling, where the gain is depending on the shaken dice number and the gain factor provided by the rules of game and which is not equipped with special electronic program for the purpose of game control and determination of the gain volume;</p>
<p>10) <b>Game of cards</b> - gambling, where gain is depending on the cards laid (combination thereof) and the gain factor provided by the rules of game and which is not equipped with special electronic program for the purpose of game control and determination of the gain volume.</p>
<p>11) <b>Table for the game of cards and dice</b> – table manufactured in an industrial manner having an equipped place for the game manager, places for distribution of players’ stakes and layer.</p>
<p>12) <b>Winnings</b> – allowance paid out by the gambling organizer to the player under the gambling rules in event of winning, as well as allowance or property paid out by the lottery organizer to the player under the lottery rules in event of winning.</p>
<p>13) <b>Roulette</b> (cylindrical game) - gambling, where gain is depending on numbers, symbols or other signs or combination of signs, as well as on the deposit stake and the gain factor stipulated by the game rules and which is not equipped by special electronic program for the purpose of game control and determination of the gain volume;</p>
<p>14) <b>Additional game of games of roulette, cards or dice</b> – game derived directly from gambling rules, which upon compliance with certain conditions shall provide for additional winning possibilities, upon exclusion of the lottery elements.</p>



15) **Roulette gaming-table** – table manufactured in an industrial manner having an equipped place for the game manager, players' places, table layer divided into game fields and mechanically rotating cylinder with red and black numbered fields.

16) **Automatic slot machine game** - gambling, where participant's winning possibilities and gain volume is determined by the automatic gambling slot machine.

17) **Additional automatic slot machine game** – possibility upon occurrence of specific conditions to play a game for free but with winning opportunities on exclusion of lottery elements provided by the game rules of automatic gambling slot machines and automatic gambling slot machines connected in a system.

17) **Totalizator** - gambling, where participants are taking part upon depositing stake and forecasting occurrence, possible or impossible occurrence of one event or several events, or anything that may prove to be true or false and the gain depends on the total amount of the deposit stakes, factor and forecast results. Arrangement of totalizator shall be forbidden as concerns events having already occurred or events known to one or another betting party or to both parties.

18) **Game of chance by the telephone** - gambling, where results partly or absolutely depend on an accident and where participant thereof responding to a question or in other way participating in the game, using telephone and paying participation fee in accordance with the tariff for additional services being set up by the game organizer.

Republic of Latvia - Gambling and Lotteries Law in force from 01.01.2006 (With amendments by the Law on 12/9/2013, 30/11/2015, 23/11/2016 and 22/11/2017.)

Requirements		Test method	Notes	Result (PASS / FAIL / N.A.)
Article	Req.			
<b>Section 53</b>	<b>Requirements for organization of the interactive gambling</b>			
<b>1</b>	<b>1</b>			<b><u>Not applicable.</u></b> Certification of games only. Operator's responsibility
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
<b>2</b>	<b>1</b>			<b><u>Not applicable</u></b> Certification of games only. Operator's responsibility
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
	<b>6</b>			
<b>3</b>	-			<b><u>Not applicable</u></b> Certification of games only. Operator's responsibility
<b>4</b>	-			<b><u>Not applicable</u></b> Certification of games only. Operator's responsibility
<b>5</b>	-			<b><u>Not applicable</u></b>
<b>6</b>	-			<b><u>Not applicable</u></b> Certification of games only. Operator's responsibility

Regulation No 189 (prot. Nr. 17 6. §), 27 March 2018

“Regulations on Organization Systems for Acceptance of the Interactive Gambling, Interactive Lottery and Lottery Ticket Sales and Participation Fees”, Issued in accordance with Section 47, Paragraph Four and Section 80, Paragraph Six of Section 80, Paragraph Seven of the Law on Gambling and Lotteries.

Requirements		Test method	Notes	Result
Article	Req.			(PASS / FAIL / N.A.)
11	1	QIVI001		PASS
	2	QIVI001		PASS
12	1	QISI001 QIVI001  QIRT000 QIRT001 (UD01 / SI01 / RT01)  ERT001 ERT002  QIRT002 (SS01 / AC01 / CC01)		PASS* (ref. to RNG report)
	2	QISI001 QIVI001		PASS
13	1	QIVI001		PASS
	2	QIVI001		PASS
	3	QIVI001		PASS
	4	QIVI001		PASS
	5	QIVI001		PASS
	6	QIVI001		PASS
	7	QIVI001		PASS
	8	QIVI001		PASS
	9	QIVI001		PASS
	10	QIVI001		PASS
14	-	QIVI001	As a 3rd party gaming provided to Latvian Operators, the Requester does not store any personal/sensible data but receives and uses unique ID provided by Operators to uniquely identify the players.	N/A
15	-	QIVI001		PASS
16		QIVI001		N/A Operator's responsibility

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Regulation No 715 (prot. No 60 25 §), 5 December 2017

“Procedure for Registration and Identity Check of the Interactive Gambling and Interactive Lottery Players”, Issued in accordance with Section 54, Section 54.1, Paragraph Eight, Section 79.1, Paragraph Eight and Section 80, Paragraph One, Clause 1 of the Law on Gambling and Lotteries.

Requirements		Test method	Notes	Result
Article	Req.			(PASS / FAIL / N.A.)
5	-	QIVI001	Operator's responsibility	N.A.
6	-	QIVI001		N.A.
8	-	QIVI001		N.A.
9	-	QIVI001		N.A.
10	1	QIVI001		N.A.
	2	QIVI001		N.A.
11	-	QIVI001		N.A.
13	-	QIVI001		N.A.
14	1	QIVI001		N.A.
	2	QIVI001		N.A.
19	-	QIVI001		N.A.
20	-	QIVI001		N.A.
21	-	QIVI001		N.A.

Regulation No 786 (prot. No 65 21.§), 20 November 2007 (with the amendment adopted by Cabinet of Ministers on 24.01.2017)

"Information to be included on the compliance certificates of slot gaming machines, equipment and slot machine game programs", Issued pursuant to Article 4(7) of the Law on Gambling and Lotteries

Requirements		Test method	Notes	Result (PASS / FAIL / N.A.)
Article	Req.			
<i>III</i>	<i>Compliance certificates for slot machine game programs and the information they must include</i>			
<b>6</b>	-	QIMT001 QISI001 QIVI001		<i>PASS</i>
<b>7</b>	<b>1</b>	QIMT001		<i>PASS</i>
	<b>2</b>	QIMT001 QISI001		
	<b>3</b>	QISI001 QIVI001		<i>PASS*</i> <i>(ref. to RNG report)</i>
		QIRT000 QIRT001 (UD01 / SI01 / RT01)  ERT001 ERT002  QIRT002 (SS01 / AC01 / CC01)		
<b>4</b>	-		<i>PASS</i>	
<b>8</b>	-			-

\* RNG tests described into report ID: "J16030078\_RNG\_Vers. 3.5.0\_rev. 1", issued by Quinel M LTD on March 25<sup>th</sup>, 2016.

**END  
OF  
COMPLIANCE  
REPORT**