

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>Games and versions: refer to the introduction</p>

22/01/2018

INTRODUCTION

The findings reported in this summary are the results of a broader set of documents and testing activities results archived in Quinel M'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>
The Falcon Huntress	1.0.0	1.0.1	96.10%	HTML5 (Desktop and Mobile)

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A) Audit ID

LV_THK005GAM_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 01.01.2018 (With amendments by the Law on 12/9/2013, 30/11/2015, 23/11/2016 and 22/11/2017)
- 2) Regulation No 853 (prot. No 54 13.§), 17 October 2006

“Procedure whereunder Information on Programs of Organizing Interactive Gambling and Lotteries, Measures of Security and of Physical Person Data Protection shall be submitted”, Issued pursuant to paragraph 2 of Section 47 of the Gambling and Lotteries Law

- 3) Regulation No 854 (prot. No 54 14.§), 17 October 2006

“Procedure for Registration and Identity Checking of Gamblers of the Interactive Gambling”, Issued pursuant Section 54 of the Gambling and Lotteries Law

- 4) Regulation No 786 (prot. No 54 14.§), 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

QIV1001

Software Source Inspection:

QISI001

Accounting and Financials:

QIAF001

E) Auditor / Test lab**Quinel M. LTD****Reference contact:**

Mr. Davide De Nobile

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Email: info@quinel.com.mt

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

31/03/2017 – submission for testing against current regulation as per Section (B) of all items

Inspection date:

08/01/2018 - 22/01/2018

NOTE: RNG tests described into report ID: "J16030078_RNG_Vers. 3.5.0_rev. 1", issued by Quinel on March 25th, 2016.

G) Requester

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

H) Owner of the system/software

Tabrake AB
EKBACKSVÄGEN 59 A, 184 32 Åkersberga
Stockholms län - 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 M LTD 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:

https://quinel.thunderkick.com/games/	(player's interface)
https://qa-int-backoffice.thunderkick.com	(Back office / Admin interface)
http://ext-qa-gameservice.thunderkick.com	(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.

Simulation environment for game testing used a virtualized server with the same Linux distribution "Ubuntu 12.04.5 LT; Precise Pangolin" with Oracle Java JDK 1.7.0_76 – no application server was required.

The difference between the Java JDK is negligible considered the change log and that the source code inspection couldn't find any specific binding to those releases nor dependencies on system APIs. Same considerations apply with regards to differences between QA and Live environment.

The simulation tool verified ('gp-game-s1-simulation-7.1.2-RELEASE.jar') extracts the configurations for the games for a repository synchronized with the live production environment and uses the same Java archives subject to deployment.

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 01.01.2018 (With amendments by the Law on 12/9/2013, 30/11/2015, 23/11/2016 and 22/11/2017)
- 2) Regulation No 853 (prot. No 54 13.§), 17 October 2006
- 3) Regulation No 854 (prot. No 54 14.§), 17 October 2006
- 4) Regulation No 786 (prot. No 54 14.§), 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:

SHA1:	Critical	Test Item	File name
16cf1a15b733c99c43172d05439c87d782e68a88	Yes	G001	gp-game-s1-g15.json
cd8107682915603c1e09cb8d189e1eda6e14b97a	Yes	G001	gp-game-s1-g15-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

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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: 22/01/2018 Total Number of Pages: 15

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

Licensee: N.A.

QUINEL M. LTD 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

Conditions: none

Extents set by the State Gambling Commission: none

Validity period: upon next changes to critical files listed in section P)

W) CONCLUSIONS

QUINEL M LTD 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. (*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*).

Date: 22/01/2018

Signed:



Davide De Nobile – Laboratory Technical Director
(QUINEL M)

DEFINITIONS:

<p>1) Gambling - 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) Automatic gambling slot machine – 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) Gambling organizer – 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) Bingo - 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) Bet - 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) Interactive gambling or lottery - 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) Lottery or raffle (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) Lottery organizer - 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) Dice game - 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) Game of cards - 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) Table for the game of cards and dice – 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) Winnings – 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) Roulette (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) Additional game of games of roulette, cards or dice – 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.

ANNEX REPORT - I

Republic of Latvia - Gambling and Lotteries Law 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.)

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

Regulation No 853 (prot. No 54 13.§), 17 October 2006

“Procedure whereunder Information on Programs of Organizing Interactive Gambling and Lotteries, Measures of Security and of Physical Person Data Protection shall be submitted”, Issued pursuant to paragraph 2 of Section 47 of the Gambling and Lotteries Law

Requirements		Test method	Notes	Result
Article	Req.			(PASS / FAIL / N.A.)
III	Data protection of physical persons and security measures			
11	-	QIVI001	Evaluation limited to the gaming platform of the Requested only. Winnings are maintained regardless of the amount won. The requester is operating by less than 5 years, nevertheless all data from the beginning of operations are actually kept.	PASS
12	1	QISI001 QIVI001 QIRT000 QIRT001 (UD01 / SI01 / RT01) ERT001 ERT002 QIRT002 (SS01 / AC01 / CC01)		PASS* <i>(ref. to RNG report)</i>
	2	QISI001 QIVI001		PASS
13	1	QISI001 QIVI001		PASS
	2	QISI001 QIVI001		PASS
14	1	QISI001 QIVI001	14.1: as a 3 rd 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.	PASS
	2	QISI001 QIVI001		PASS
	3			N.A <i>(Operator’s responsibility)</i>
	4	QISI001 QIVI001		PASS
	5	QISI001 QIVI001		PASS
	6	QISI001 QIVI001		PASS
	7	QISI001 QIVI001		PASS
	8	QISI001 QIVI001		PASS

Requirements		Test method	Notes	Result
Article	Req.			(PASS / FAIL / N.A.)
	9			<i>N.A.</i> (Operator's responsibility)
15	-			<i>N.A.</i> (Operator's responsibility)
16	-	QISI001 QIVI001	14.1: as a 3 rd party gaming provided to Latvian Operators, the Requester does not store any personal/sensible data but performs regular backups of gaming data	PASS
17	1			<u>Not applicable</u> Certification of games only.
	2			
	3			
	4			
18				<u>Not applicable</u> Certification of games only. In charge to the Operator

* RNG tests described into report ID: "J16030078_RNG_Vers. 3.5.0_rev. 1", issued by Quinel on March 25th, 2016.

Regulation No 854 (prot. No 54 14.§), 17 October 2006

“Procedure for Registration and Identity Checking of Gamblers of the Interactive Gambling”, Issued pursuant Section 54 of the Gambling and Lotteries Law

Requirements		Test method	Notes	Result (PASS / FAIL / N.A.)
Article	Req.			
<i>II</i>		<i>Registration of gamblers of the interactive gambling</i>		
5	1			<u>Not applicable</u> Certification of games only. Operator's responsibility
	2			
	3			
6	-			
7	-			
8	1			
	2			
9	-			
10	-			
11	-			
12	-			
13	-			
<i>III</i>		<i>Registration of gamblers for lotteries and for games of chance by telephone</i>		
14	1			<u>Not applicable</u> Certification of games only. Operator's responsibility
	2			
15	-			
16	1			
	2			
16	-			
17	-			

Regulation No 786 (prot. No 54 14.§), 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>			
6	-	QIMT001 QISI001 QIVI001		<i>PASS</i>
7	1	QIMT001		<i>PASS</i>
	2	QIMT001 QISI001		
	3	QISI001 QIVI001		<i>PASS*</i> <i>(ref. to RNG report)</i>
		QIRT000 QIRT001 (UD01 / SI01 / RT01) ERT001 ERT002 QIRT002 (SS01 / AC01 / CC01)		
4	-		<i>PASS</i>	
8	-			-

* RNG tests described into report ID: "J16030078_RNG_Vers. 3.5.0_rev. 1", issued by Quinel on March 25th, 2016.

**END
OF
COMPLIANCE
REPORT**