

# Test Report

Test report No.:  
T-J0005-I0158

Date of issue:  
2019-08-27

<b>Applicant:</b> Bee-Fee Ltd., 27 Old Gloucester Street, WC1N 3AX London, United Kingdom	<b>Manufacturer:</b> Bee-Fee Ltd., 27 Old Gloucester Street, WC1N 3AX London, United Kingdom
<b>Product:</b> Fibonacci	<b>Target device:</b> BF Games
<b>Product type:</b> Internet games (reels)	<b>Target device type:</b> Internet gaming system
<b>Jurisdiction:</b> United Kingdom	
<b>Test Criteria:</b> Remote gambling and software technical standards June 2017.	
<b>Pages (with annexes):</b> 12	
<b>Verdict (subject to conditions in Chapter 1):</b> Pass	
<b>Test report type:</b> Game	<b>Subject file No.:</b> 19000177005
<b>Test group(s):</b> Payback, Software	
<b>Remarks:</b> N.A.	

Project responsible person [signature]:

Reviewed by [signature]:

Gregor Zakrajšek

Franci Pikl



## 1 Conditions and settings for compliance with test criteria

Testing performed with English language setting.

Game supports various RTP variations. Only RTP variation listed in Test Report Annex: Payback ratio tests, Chapter 3 Payback ratio is approved herein. RTP variant shall be verified in settings in RGS database.

To comply with RTS 8 Auto-play functionality, server configuration (available in adminui) shall include the following setting:

```
"autoplaySpinCountLimits":[ 10, 20, 30, 40 ], //number of autospins
```

To comply with RTS 13B Reality checks functionality, server configuration (available in adminui) shall include the following setting:

```
"realityChecks":[{"caption":"RealityCheck", "interval":600, "isDefault":true}]
```

## 2 Protection against unauthorized access

See the corresponding platform test report(s).

## 3 Gaming device general properties

General device design:	Server, Linux, MongoDB
Cabinet(s):	N.A.
Available player denominations:	N.A.
Available tokenizations:	N.A.
Supported communication protocols:	N.A.
Supported progressives:	N.A.
Minimum bet (credits):	Settable; tested in currency: 0,01
Maximum bet (credits):	Settable; tested in currency: 50,00

## 4 Annexes

Annex / Test group	Attached [yes/no]	Remark
Functional tests	No	/
Randomness tests	No	/
Payback ratio tests	Yes	/
Software analysis	Yes	/
Device specific tests	No	/



Annex / Test group	Attached [yes/no]	Remark
Other annexes	No	/

## 5 Previous / transferred test reports results

N.A.

## 6 Additional information

Date of signed application received: 2019-06-27

The location of performance of the laboratory activities (if outside of SIQ premises): N.A.

The following RTS articles from Remote gambling and software technical standards, June 2017 were reviewed during testing and found compliant:

- RTS 1 Requirements 1A (before April 1, 2018), 1A (after April 1, 2018), 1B (before April 1, 2018), 1B (after April 1, 2018), 1C (after April 1, 2018): **Not applicable (IGS requirements)**
- RTS 2 Requirements 2A (before April 1, 2018), 2A (after April 1, 2018), 2B (before April 1, 2018), 2B (after April 1, 2018), 2C (after April 1, 2018), 2D: **Game compliant where applicable, see also IGS and RGS tests**
- RTS 3 Requirements 3A, 3C, 3D: **Game compliant where applicable (No virtual events)**
- RTS 4 Requirements 4A, 4B: **Game complies (No influence for time-critical events)**
- RTS 5 Requirement 5A: **Game complies**
- RTS 6 Requirement 6A: **Game complies**
- RTS 7 Requirements 7A, 7B, 7C, 7D, 7E: **Game compliant where applicable (see also RGS tests)**
- RTS 8 Requirement 8A: **Game complies**
- RTS 9 Requirements 9A, 9B: **Not applicable (No progressives configured during testing)**
- RTS 10 Requirements 10A, 10B, 10C: **Not applicable (No peer-to-peer betting; Stateless game)**
- RTS 11 Requirements 11A (before October 1, 2018), 11A (after October 1, 2018), 11B (before April 1, 2018), 11B (after April 1, 2018): **Not applicable (No peer-to-peer betting)**
- RTS 12 Requirements 12A (before April 1, 2018), 12A (after April 1, 2018), 12B: RTS 8 Requirement 8A: **Not applicable (not game related)**
- RTS 13 Requirements 13A, 13B: **Game complies**
- RTS 14 Requirement 14A: **Game complies**
- RTS 15 Requirement 15A: **Not applicable (classic internet reel game)**
- RTS 16 Requirements 16A, 16B (after October 1, 2018), 16C: **Not applicable (no peer-to-peer)**
- RTS 17 Requirement 17A: **Not applicable (no live dealer studios)**

## 7 Documentation references

The following documentation was used:

- User help,
- Screen capture images,
- Par sheets, Game description,
- Source code and configuration files.



## 8 Other test report references

Test group	Laboratory	Test report identification and date	Remarks
Functional tests	SIQ	T-J0005-I0098, 2017-12-01	BF Gameserver (with extensions)
Software analysis	SIQ	T-J0005-I0098, 2017-12-01	BF Gameserver (with extensions)
Randomness tests	SIQ	T-J0005-I0098, 2017-12-01	BF Gameserver (with extensions)

Test report replacements and extensions may apply.

## 9 Terms and conditions

SIQ has conducted a level of testing of the gaming product which has historically been adequate for a submission of this type. However, inherent in testing in a laboratory environment are the unavoidable limitations of it not being possible to verify the effects of all possible configurations and environments that occur in actual gaming venues. If any parties dispute our findings, or may present evidence or information contrary to our findings, SIQ would welcome the addition of this information for our consideration. In such an instance, SIQ reserves the right to amend or revise this document.

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## 1 Description of the game

Fibonacci is a 3-reel, 3 row video slot with one winning line. The objective is to land three cards on the payline.

## 2 Pay-glass / artwork illustrations or photos







### 3 Payback ratio

#### 3.1 Payback ratio determination method

The payback ratio value (return to player) was derived using simulation.

#### 3.2 Payback ratio results

Fibonacci	
Declared by manufacturer	Verified by test laboratory
96,75%	96,75%

### 4 Test summary

The following tests for the game were performed:

- Calculation of the payback ratio,
- Conditions and settings for compliance with test criteria,
- Verification of the information to the player.







# 1 Software identification

Software version(s): engin3, 1.4 and 1.3

Software components:

Manufacturer, product ID	Description, function	Media, type	Position, circuit	Size	ID code (SHA1)	ID code (MD5)
Bee-Fee, libfibonacci.so, 1.3	Game library	HDD / SSD	\	122,65 KB	a9c53dc5701a7825f6363c8db787a97923fe5bf3	fd02ff0bb9534f50709e825a4998380b
Bee-Fee, fib_skeleton_background.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\background\spine\	97,63 KB	cf2e0a6c5f8eb8f2ef3219044db6bcd567b90485	750302781cfa3dcc1d34ea9572caf272
Bee-Fee, fib_skeleton_logo.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\background\spine\	427 bytes	0baefba5d3bed2b163b8280d871cf9b0a6c3c130	d9c500f1141aa9670b86b821c0c664f2
Bee-Fee, fib_skeleton_bigwin.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\big_win\spine\	93,21 KB	adbf47da9e9e0913af284fa13fc5612eb052cca8	4e3c71d4719f61485e6faed33e79c73f
Bee-Fee, fib_dashboard.js, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\dashboard\animate\	23,86 KB	ee694581cdf592ecc8890e8592d43dc92abfa474	7ee158fedbce72d9bfea43a73657b149
Bee-Fee, fib_dashboard.shapes.txt, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\dashboard\animate\images\	8,9 KB	b1b3dab5becaf9fb71c2de01b0d7fa2cc7fa91c	42365e68907ee8d6db03faee88d2c80c
Bee-Fee, fib_skeleton_book.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\dashboard\spine\	24,84 KB	67a244cb321f1efb0be889abdbabfaf0d682903b	01ca0529c84853ec565ca2633fb4f5ec
Bee-Fee, en.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\localization\	195 bytes	873ac1eb9954f90128dfbd9bf9d92b53f1cdb059a	561224c1a44fb317aaf80534107d7f7e
Bee-Fee, fib_bigwin_emmitter.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\particles\	717 bytes	ab3cdf6859d81bf46ed2f03f20246db51853d59e	a83f3c4ff769c50cceb065e530b017b1
Bee-Fee, fib_book_particle.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\particles\	717 bytes	02db680749fdc8af8d84dfc11d1d76a81ac4af38c	54c665c8496c0f369832481c92bc1f4a
Bee-Fee, fib_cards_emitter.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\particles\	711 bytes	6cf240537d2f1ccd814bcb85e210d61403812f6d	9c865aba7b39ccb6b4d7204c486c104f
Bee-Fee, fib_skeleton_line.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\paylines\spine\	44,4 KB	1ef88cbfe1827c43fa3be259268ecb3b16f2fc00	58ce57fc3a96ac6a0274cc7a3a856405



Manufacturer, product ID	Description, function	Media, type	Position, circuit	Size	ID code (SHA1)	ID code (MD5)
Bee-Fee, fib_skeleton_bluecard.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\reels\spine\	73,76 KB	61ecbc8b2e763e3f7b0b8bc0717ff54b430f7923	d6ecbeeb0a9d936582df36665662d4313
Bee-Fee, fib_skeleton_greenecard.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\reels\spine\	73,47 KB	4fa8b5dd6e52ef849fb34c6dd79698d3c2c0b318	2db4a0e099b58cac8e5548f1245923b5
Bee-Fee, fib_skeleton_redcard.json, engin3, 1.5	Game graphics file	HDD / SSD	media\games\fibonacci\reels\spine\	72,73 KB	b91a32cc000ac4cc5b5a99a81ca8768835eaab9c	e82c721d01d22c4b9eac067c72643ca8
Bee-Fee, media_games_fibonacci_fib_mobile_assets_default_atlas0-jpg.jpg, engin3, 1.5	Game graphics file	HDD / SSD	media\	181 KB	e7972ad4332c7adabfe3d3c571d6014bbc261aa6	88bb7562bf750c8ee56099dc557f735
Bee-Fee, media_games_fibonacci_fib_mobile_assets_default_atlas0-jpg.json, engin3, 1.5	Game graphics file	HDD / SSD	media\	3,25 KB	bdf61dee6eb89e8c6929f8d85837fb72da25f225	724851b15dc36d49201dec372db4c810
Bee-Fee, media_games_fibonacci_fib_mobile_assets_default_atlas0-png_alpha_only_with_png.json, engin3, 1.5	Game graphics file	HDD / SSD	media\	386 bytes	fe7e4f1ac2b2836bcb7553625cec9ce57796e5cf	2a79958279a3d3600fb9814af6b09f27
Bee-Fee, media_games_fibonacci_fib_mobile_assets_default_atlas0-png_alpha_only_with_png.png, engin3, 1.5	Game graphics file	HDD / SSD	media\	278,92 KB	a4b0b3a3db4d0409a3b76e3522e907b51dcf23ee	2b6f75175038fed5605783856e3ea55d
Bee-Fee, media_games_fibonacci_fib_mobile_assets_default_atlas0-png_rgb_only_with_png.jpg, engin3, 1.5	Game graphics file	HDD / SSD	media\	759,37 KB	ae3c84a6398c8c079a3f15b287195db9be1d0a19	6b082567288512b845cace48a0834efa
Bee-Fee, media_games_fibonacci_fib_mobile_assets_default_atlas0-png_rgb_only_with_png.json, engin3, 1.5	Game graphics file	HDD / SSD	media\	26,29 KB	1e05f4ad752c0f90800e2c66475f53fae8ccb20d	8fa41ac00598044722800cc356c69e6d
Bee-Fee, media_games_fibonacci_fib_mobile_assets_default_atlas1-png_alpha_only_with_png.json, engin3, 1.5	Game graphics file	HDD / SSD	media\	386 bytes	9d2bcedb4d5d28ee8fdbfb3c45944ad375329d11	8ed15806f829c68d338b43d6cee1eb8f



Manufacturer, product ID	Description, function	Media, type	Position, circuit	Size	ID code (SHA1)	ID code (MD5)
Bee-Fee, media_games_fibonacci_fib _mobile_assets_default_atl as1- png_alpha_only_with_png.p ng, engin3, 1.5	Game graphics file	HDD / SSD	media\	116,04 KB	575435c8eb5 84b4fca26a6 35392dd7d99 23df250	592b05fa 15111b8d bd7e6446 20cf97d6
Bee-Fee, media_games_fibonacci_fib _mobile_assets_default_atl as1- png_rgb_only_with_png.jpg , engin3, 1.5	Game graphics file	HDD / SSD	media\	329,04 KB	7a27c92d90b 2fe1feff55a b0a1fc20d21 a2f7e70	5a841b8e 0c2f9b35 f1d7afc7 23e77014
Bee-Fee, media_games_fibonacci_fib _mobile_assets_default_atl as1- png_rgb_only_with_png.js on, engin3, 1.5	Game graphics file	HDD / SSD	media\	15,12 KB	edc7e1567d0 7b65fafe3e7 13cea1ddf07 212fd08	61e37ea7 585b2010 4452296f 1efead7f
Bee-Fee, media_games_fibonacci_fib _web_assets_default_atlas 0-jpg.jpg, engin3, 1.5	Game graphics file	HDD / SSD	media\	191,66 KB	618f0d697c1 66bef37bb34 2dec4b1baff 7d69bd8	98daac4a d9f9f469 3d0986c5 73c3f387
Bee-Fee, media_games_fibonacci_fib _web_assets_default_atlas 0-jpg.json, engin3, 1.5	Game graphics file	HDD / SSD	media\	2,99 KB	e252f2b4f86 fa9ab094aee 49df85fa92c 5718195	ca5ce4a2 edaf97da 0b48811f 3ce2001b
Bee-Fee, media_games_fibonacci_fib _web_assets_default_atlas 0- png_alpha_only_with_png.j son, engin3, 1.5	Game graphics file	HDD / SSD	media\	382 bytes	3e9a1b4860c a9357a98629 e611ff866cc 909a79f	46262fb5 14bede42 688b70a6 e9b34d8d
Bee-Fee, media_games_fibonacci_fib _web_assets_default_atlas 0- png_alpha_only_with_png.p ng, engin3, 1.5	Game graphics file	HDD / SSD	media\	555,48 KB	b5e24823b67 f2f4dbe4ae6 80e3e1e6e47 3ffcb69	3510ea51 da55f713 64be2f14 88978b79
Bee-Fee, media_games_fibonacci_fib _web_assets_default_atlas 0- png_rgb_only_with_png.jpg , engin3, 1.5	Game graphics file	HDD / SSD	media\	1,44 MB	65fd2d1a2b5 ca6a22a1ca8 cfcfb75ee33 b3dce6d	ec7b6e56 6f67dee1 4f1bdb33 d9f458b9
Bee-Fee, media_games_fibonacci_fib _web_assets_default_atlas 0- png_rgb_only_with_png.js on, engin3, 1.5	Game graphics file	HDD / SSD	media\	39,78 KB	4c691ee763b 8dcf5e2b033 eb3c337d624 33b6566	da8ceafb 844958f6 268e413c 3cba87e2



Manufacturer, product ID	Description, function	Media, type	Position, circuit	Size	ID code (SHA1)	ID code (MD5)
Bee-Fee, media_games_fibonacci_fib _mobile.js, engin3, 1.5	Game graphics file	HDD / SSD	\	62,73 KB	fe3e1f31a8a 67a3f8d7e68 34e4f1a4f48 8b3b343	39819840 dde4cb85 885f239e ca804fd2
Bee-Fee, media_games_fibonacci_fib _mobile_assets.json, engin3, 1.5	Game graphics file	HDD / SSD	\	11,01 KB	ef0d90fb205 c49d978a0ab 9a66ccf20c6 4426686	cce7d21e d4ceba78 5d4253e8 ab663e6b
Bee-Fee, media_games_fibonacci_fib _web.js, engin3, 1.5	Game graphics file	HDD / SSD	\	71,27 KB	b5223ba755d ee5fdc8bc7c 8a5b58200b5 e78cfa5	160ad934 38627672 660424f5 438278ae
Bee-Fee, media_games_fibonacci_fib _web_assets.json, engin3, 1.5	Game graphics file	HDD / SSD	\	11,74 KB	3e071c30d24 4f004df3e1b a19900bcf14 2e289c5	8d892be1 b95d8ef1 88c6772b 525f8d8f

## 2 Test summary

Software analysis for the game was performed:

- Source code analysis:
  - Jurisdiction independent tests: software review.
  - Jurisdiction dependent tests.
- Binary code authentication.
- Archiving and depositing.