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20 November 2025

Suresh Yellayi
Entain Operations Limited
Suite 6, Atlantic Suites
Europort Avenue, Gibraltar

Re: Mathematical Analysis of *Poker*

File Number: MA-00-GSV-25-06

Dear Mr. Yellayi,

As per Entain Operations Limited's request, please find **Gaming Laboratories International, LLC's (GLI)** mathematical analysis of the following Poker:

1. *Poker*

This report only verifies the mathematical aspects of these games and DOES NOT offer an opinion as to whether or not these games are currently authorized for use in any jurisdiction.

Mathematical Analysis

Gaming Laboratories International, LLC (GLI) was requested by Entain Operations Limited to independently calculate the expected payback for the aforementioned games and confirm that the returns are within the requirements. On the following page, please find a table containing the summary of our results.

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1. Poker hand types statistics

These calculations were done for Royal Flush, Straight Flush, Four of a Kind, Full House, Flush, Straight, 3 of a Kind, 2 pairs, 1 Pair, High Card.

The Poker hand types analysis involved creating subsets of data and conducting Chi-square tests on each subset.

The null hypothesis for the chi-square test is that the observed frequencies of each type of hand matches the theoretical values for a deck that has been shuffled using a perfect random number generator. The p-values observed in these multiple tests are expected to follow a uniform distribution for the range 0.0 to 1.0.

The analysis performs a KS Test (Kolmogorov-Smirnov test) for uniform distribution on the observed p-values, and the combined p-value result of this test is taken as the final result of the Poker hand types statistics tests.

1.1 Poker hand types statistics for 52 cards deck:

Test No.	DOF	ChiSqr	P-Value
1	9	10.14	0.33933
2	9	12.23	0.20066
3	9	9.61	0.38299
4	9	11.53	0.24132
5	9	11.71	0.23024
6	9	4.16	0.90037
7	9	9.13	0.42535
8	9	4.38	0.88443
9	9	4.32	0.88891
10	9	10.37	0.32137
11	9	8.50	0.48490
12	9	11.36	0.25204

Test No.	DOF	ChiSqr	P-Value
13	9	17.42	0.04253
14	9	7.00	0.63679
15	9	9.00	0.43685
16	9	7.81	0.55368
17	9	3.72	0.92868
18	9	10.00	0.35028
19	9	5.13	0.82255
20	9	10.51	0.31071
21	9	2.11	0.98956
22	9	13.47	0.14253
23	9	7.83	0.55167
24	9	3.75	0.92721
25	9	8.66	0.46945
26	9	6.74	0.66458
27	9	10.22	0.33317
28	9	11.96	0.21571
29	9	6.34	0.70580
30	9	12.33	0.19551
31	9	4.33	0.88803
32	9	3.25	0.95377
33	9	19.48	0.02138
34	9	5.80	0.76024
35	9	4.51	0.87484

Test No.	DOF	ChiSqr	P-Value
36	9	25.26	0.00269
37	9	6.48	0.69118
38	9	5.30	0.80742
39	9	11.53	0.24092
40	9	8.70	0.46539
41	9	6.86	0.65122
42	9	7.59	0.57630
43	9	7.09	0.62782
44	9	7.71	0.56411
45	9	14.69	0.09995
46	9	7.28	0.60819
47	9	7.88	0.54654
48	9	12.12	0.20667
49	9	5.07	0.82811
50	9	1.72	0.99521
51	9	12.99	0.16327
52	9	13.31	0.14919
53	9	14.56	0.10389
54	9	7.79	0.55507
55	9	6.56	0.68284
56	9	6.65	0.67394
57	9	9.33	0.40695
58	9	8.44	0.49044

Test No.	DOF	ChiSqr	P-Value
59	9	5.66	0.77361
60	9	9.93	0.35643
61	9	6.13	0.72692
62	9	14.00	0.12222
63	9	9.96	0.35383
64	9	17.10	0.04712
65	9	13.43	0.14429
66	9	8.79	0.45734
67	9	7.64	0.57128
68	9	5.46	0.79240
69	9	7.27	0.60883
70	9	13.41	0.14484
71	9	9.20	0.41875
72	9	5.44	0.79396
73	9	8.23	0.51157
74	9	8.41	0.49377
75	9	9.10	0.42843
76	9	3.08	0.96088
77	9	23.60	0.00498
78	9	16.82	0.05164
79	9	6.02	0.73781
80	9	13.47	0.14253
81	9	5.91	0.74896

Test No.	DOF	ChiSqr	P-Value
82	9	6.16	0.72357
83	9	5.15	0.82145
84	9	6.43	0.69595
85	9	6.42	0.69714
86	9	10.49	0.31198
87	9	5.41	0.79677
88	9	6.88	0.64951
89	9	9.47	0.39512
90	9	5.72	0.76787
91	9	8.71	0.46492
92	9	23.52	0.00513
93	9	15.07	0.08891
94	9	6.40	0.69896
95	9	10.36	0.32224
96	9	6.33	0.70616
97	9	9.16	0.42264
98	9	7.37	0.59885
99	9	13.81	0.12934
100	9	4.24	0.89506
Combined P-value for all tests (Using KS method)			0.95444

Notes:

1) The P-values are observed probabilities from the Chi-Square tests. The last row shows the result of the KS Test performed on the p-values for all Chi-Square tests, where there are sufficient data.

2. Poker rank statistics

The Poker rank analysis aims to establish that the rank of the cards in each position was equally distributed in one of the 13 possible ranks (2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, K, A) for a 52 card deck.

The Poker rank analysis involved creating subsets of data and conducting Chi-square tests on each subset. The analysis performs a KS Test (Kolmogorov-Smirnov test) for uniform distribution on the observed p-values, and the combined p-value result of this test is taken as the final result of the Ranks statistics tests.

2.1 Poker rank statistics for 52 cards deck:

Test No.	DOF	ChiSqr	P-Value
1	84	69.11	0.87955
2	84	87.84	0.36578
3	84	68.55	0.88907
4	84	71.66	0.82928
5	84	76.63	0.70352
6	84	93.01	0.23500
7	84	88.64	0.34367
8	84	74.63	0.75788
9	84	72.41	0.81236
10	84	69.76	0.86769
11	84	77.96	0.66484
12	84	106.56	0.04892
13	84	74.07	0.77223
14	84	67.98	0.89829

Test No.	DOF	ChiSqr	P-Value
15	84	101.98	0.08854
16	84	93.81	0.21756
17	84	92.27	0.25176
18	84	92.37	0.24940
19	84	68.44	0.89086
20	84	98.89	0.12762
21	84	71.76	0.82701
22	84	88.31	0.35260
23	84	94.95	0.19444
24	84	70.42	0.85502
25	84	85.84	0.42378
26	84	84.71	0.45784
27	84	86.19	0.41339
28	84	58.05	0.98621
29	84	80.20	0.59723
30	84	62.09	0.96501
31	84	89.31	0.32538
32	84	74.35	0.76528
33	84	92.22	0.25290
34	84	67.76	0.90188
35	84	70.01	0.86289
36	84	100.16	0.11015

Test No.	DOF	ChiSqr	P-Value
37	84	104.98	0.06040
38	84	76.09	0.71859
39	84	64.12	0.94760
40	84	62.63	0.96093
41	84	78.27	0.65572
42	84	81.02	0.57178
43	84	90.77	0.28762
44	84	74.42	0.76343
45	84	94.88	0.19583
46	84	76.36	0.71106
47	84	77.22	0.68666
48	84	71.07	0.84169
49	84	63.82	0.95049
50	84	88.71	0.34172
51	84	90.58	0.29250
52	84	105.49	0.05650
53	84	92.82	0.23908
54	84	99.51	0.11883
55	84	77.77	0.67057
56	84	67.76	0.90180
57	84	88.97	0.33460
58	84	66.24	0.92345
59	84	80.20	0.59718

Test No.	DOF	ChiSqr	P-Value
60	84	49.79	0.99891
61	84	70.91	0.84510
62	84	103.46	0.07360
63	84	66.01	0.92629
64	84	76.70	0.70154
65	84	97.37	0.15099
66	84	75.55	0.73350
67	84	82.22	0.53461
68	84	94.35	0.20642
69	84	87.71	0.36945
70	84	92.54	0.24556
71	84	77.30	0.68418
72	84	76.12	0.71769
73	84	86.67	0.39933
74	84	100.52	0.10561
75	84	93.50	0.22412
76	84	62.97	0.95810
77	84	90.91	0.28421
78	84	84.09	0.47680
79	84	87.75	0.36822
80	84	76.10	0.71839
81	84	75.21	0.74273
82	84	104.91	0.06103

Test No.	DOF	ChiSqr	P-Value
83	84	82.09	0.53853
84	84	81.49	0.55718
85	84	75.12	0.74505
86	84	120.89	0.00521
87	84	65.97	0.92692
88	84	87.73	0.36880
89	84	96.36	0.16812
90	84	84.68	0.45882
91	84	79.21	0.62755
92	84	73.07	0.79690
93	84	75.71	0.72898
94	84	67.24	0.90967
95	84	82.46	0.52696
96	84	96.32	0.16890
97	84	71.01	0.84304
98	84	67.50	0.90575
99	84	90.29	0.29989
100	84	83.21	0.50378
Combined P-value for all tests (Using KS method)			0.07799

Notes:

1) The P-values are observed probabilities from the Chi-Square tests. The last row shows the result of the KS Test performed on the p-values for all Chi-Square tests, where there are sufficient data.

3. Poker suits statistics

The Poker suits analysis aims to verify that that the cards dealt exhibit an equal probability of all 4 suits (Clubs, Diamonds, Hearts and Spades) in all positions.

The Poker suits analysis involved creating subsets of data and conducting Chi-square tests on each subset. The analysis performs a KS Test (Kolmogorov-Smirnov test) for uniform distribution on the observed p-values, and the combined p-value result of this test is taken as the final result of the Suits statistics tests.

3.1 Poker suits statistics for 52 cards deck:

Test No.	Positions	DOF	ChiSqr	P-Value
1	7	21	19.11	0.57833
2	7	21	8.68	0.99149
3	7	21	27.45	0.15637
4	7	21	24.65	0.26248
5	7	21	19.79	0.53464
6	7	21	23.26	0.33048
7	7	21	32.83	0.04808
8	7	21	11.86	0.94327
9	7	21	25.21	0.23831
10	7	21	25.03	0.24606
11	7	21	24.98	0.24807
12	7	21	13.27	0.89898
13	7	21	18.50	0.61699
14	7	21	28.77	0.11951
15	7	21	28.95	0.11509
16	7	21	13.99	0.86999

Test No.	Positions	DOF	ChiSqr	P-Value
17	7	21	13.75	0.88025
18	7	21	27.08	0.16827
19	7	21	25.69	0.21844
20	7	21	21.12	0.45143
21	7	21	15.13	0.81647
22	7	21	26.19	0.19947
23	7	21	39.23	0.00920
24	7	21	35.19	0.02689
25	7	21	28.49	0.12692
26	7	21	15.39	0.80307
27	7	21	21.69	0.41768
28	7	21	10.88	0.96507
29	7	21	20.74	0.47516
30	7	21	11.83	0.94398
31	7	21	20.93	0.46350
32	7	21	17.58	0.67524
33	7	21	30.39	0.08447
34	7	21	12.87	0.91328
35	7	21	27.14	0.16628
36	7	21	27.03	0.16975
37	7	21	22.05	0.39679
38	7	21	18.75	0.60091

Test No.	Positions	DOF	ChiSqr	P-Value
39	7	21	20.96	0.46156
40	7	21	13.34	0.89629
41	7	21	22.58	0.36702
42	7	21	32.17	0.05630
43	7	21	23.89	0.29845
44	7	21	15.82	0.77946
45	7	21	19.38	0.56100
46	7	21	24.08	0.28936
47	7	21	18.44	0.62098
48	7	21	20.15	0.51164
49	7	21	20.04	0.51847
50	7	21	9.86	0.98067
51	7	21	27.07	0.16860
52	7	21	24.73	0.25909
53	7	21	22.32	0.38123
54	7	21	29.49	0.10279
55	7	21	21.60	0.42314
56	7	21	34.67	0.03072
57	7	21	29.19	0.10955
58	7	21	16.06	0.76610
59	7	21	14.26	0.85814
60	7	21	26.02	0.20558

Test No.	Positions	DOF	ChiSqr	P-Value
61	7	21	20.58	0.48466
62	7	21	19.70	0.54021
63	7	21	31.70	0.06279
64	7	21	25.04	0.24552
65	7	21	17.14	0.70240
66	7	21	29.09	0.11188
67	7	21	10.86	0.96541
68	7	21	24.68	0.26127
69	7	21	11.94	0.94112
70	7	21	13.43	0.89295
71	7	21	20.33	0.50074
72	7	21	39.68	0.00812
73	7	21	9.04	0.98893
74	7	21	17.56	0.67672
75	7	21	15.40	0.80239
76	7	21	24.83	0.25445
77	7	21	19.19	0.57326
78	7	21	22.47	0.37269
79	7	21	21.42	0.43359
80	7	21	26.97	0.17198
81	7	21	27.87	0.14388
82	7	21	25.00	0.24697

Test No.	Positions	DOF	ChiSqr	P-Value
83	7	21	11.39	0.95455
84	7	21	25.22	0.23762
85	7	21	21.34	0.43822
86	7	21	28.61	0.12358
87	7	21	15.83	0.77938
88	7	21	25.26	0.23616
89	7	21	22.10	0.39385
90	7	21	21.56	0.42513
91	7	21	31.40	0.06720
92	7	21	23.66	0.31003
93	7	21	12.94	0.91076
94	7	21	16.44	0.74455
95	7	21	18.91	0.59122
96	7	21	14.11	0.86493
97	7	21	28.58	0.12454
98	7	21	26.85	0.17597
99	7	21	20.43	0.49395
100	7	21	17.42	0.68530
Combined P-value for all tests (Using KS method)				0.11741

*Note*s:

1) The P-values are observed probabilities from the Chi-Square tests. The last row shows the result of the KS Test performed on the p-values for all Chi-Square tests, where there are sufficient data.

4. Summary of the analysis

4.1 Summary of the analysis of 52 cards deck:

The analysis of 52 cards completes by combining the result of the KS Test performed in the 3 types of analysis (Hand Types, Ranks and Suits) for 52 card decks using the Holm's method and producing a single Combined P -value.

The combined p-value produced using the Holm's method is used as indication for statistical randomness.

Combination of p-values using Holm's Method		
Test	**P-Value**	**P-Adjusted**
Ranks Test	0.07799	0.23396
Suits Test	0.11741	0.23481
Hand Types Test	0.95444	0.95444
Combined P-Value using Holm's Method		0.23396

Notes:

1) The combined p-value of all statistical tests using Holm's Method conducted for 52 card decks is greater than the minimum value of 0.05 which indicates that the randomness of the observed data falls within 95% confidence limits.

The final outcome of the analysis of 52 cards deck indicates that the RNG is working correctly.

Conclusion

Analysis of actual data from game logs for ‘Hand Types, ‘Ranks’ and ‘Suits’ for 52-card decks indicated statistical randomness. Since there is no data in the case of 36 card deck, this report does not contain the details of 36 card deck.

GLI has done limited sanity checks to verify the integrity of the game logs. GLI also maintains a copy of the game logs for verification purposes. There were a large enough number of game records to give the calculations sufficient statistical power.

We conclude that the Random Number Generator (RNG) is working correctly.

Please note, the results contained herein are based on game design documentation provided to GLI by the manufacturer. It is the responsibility of the manufacturer to ensure that the gaming software performs in the same way as the documentation.

Please visit Gaminglabs.com to view the applicable Terms and Conditions and GLI Product Certification Scheme.

Should you have any questions or need any additional information, please feel free to contact our office.

Sincerely,
GAMING LABORATORIES INTERNATIONAL, LLC

Christine M. Gallo
Senior Vice President, Quality and Technical Compliance

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