Univariate Analysis of Variance

Between-Subjects Factors

		N
Method	Flipping	648
	Home	648
	RuntimeBar	648
	TapNFlip	648
AppsNumber	1	864
	2	864
	3	864
Distance	0	607
	1	663
	2	690
	3	632
Participant	P1	216
	P10	216
	P11	216
	P12	216
	P2	216
	P3	216
	P4	216
	P5	216
	P6	216
	P7	216
	P8	216
	P9	216

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethod

Source		Type III Sum of Squares	df	Mean Square
Intercept	Hypothesis	3.044E9	1	3.044E9
	Error	1113199.310	11.058	100669.084 [a]
Method	Hypothesis	1.125E7	3	3749129.914
	Error	1857373.053	33.700	55114.400 [b]
AppsNumber	Hypothesis	1.884E7	2	9420526.177
	Error	467801.143	23.495	19910.465 [c]
Distance	Hypothesis	7.440E7	3	2.480E7
	Error	1240252.138	37.385	33174.907 [d]
Participant	Hypothesis	1108570.453	11	100779.132
	Error	833488.460	15.593	53452.841 [e]
Method * AppsNumber	Hypothesis	1.351E8	6	2.252E7
	Error	1458005.599	75.832	19226.910 [f]
Method * Distance	Hypothesis	1.889E8	9	2.098E7
	Error	4258832.022	121.316	35105.256 [g]
Method * Participant	Hypothesis	1826628.203	33	55352.370
	Error	925535.043	33.874	27322.546 [h]
AppsNumber * Distance	Hypothesis	4.725E7	6	7874393.753
	Error	2328555.034	83.240	27973.858 [i]

a. .996 MS(Participant) - 3.11E-006 MS(Method * Participant) - 4.84E-005 MS(AppsNumber * Participant) + 1.05E-005 MS(Distance * Participant) + 4.36E-005 MS(Method * AppsNumber * Participant) - 1.07E-005 MS(Method * Distance * Participant) + .000 MS(AppsNumber * Distance * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .009 MS(Error)
b. .985 MS(Method * Participant) - .001 MS(Method * AppsNumber * Participant) + .000 MS(Method * Distance * Participant) + .006 MS(Method * AppsNumber * Distance * Participant) + .010 MS(Error)
c. .987 MS(AppsNumber * Participant) - .000 MS(Method * AppsNumber * Participant) + .000 MS (AppsNumber * Distance * Participant) - .005 MS(Method * AppsNumber * Distance * Participant) + .017 MS(Error)
d. .949 MS(Distance * Participant) + .001 MS(Method * Distance * Participant) - .001 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
e. 1.017 MS(Method * Participant) + 1.032 MS(AppsNumber * Participant) + 1.021 MS(Distance * Participant) - 1.058 MS(Method * AppsNumber * Participant) - 1.003 MS(Method * Distance * Participant) - 1.041 MS(AppsNumber * Distance * Participant) + 1.032 MS(Method * AppsNumber * Distance * Participant) + .000 MS(Error)
f. .973 MS(Method * AppsNumber * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .033 MS(Error)
g. .909 MS(Method * Distance * Participant) + .033 MS(Method * AppsNumber * Distance * Participant) + .058 MS(Error)
h. 1.041 MS(Method * AppsNumber * Participant) + .987 MS(Method * Distance * Participant) - 1.008 MS (Method * AppsNumber * Distance * Participant) - .020 MS(Error)
i. .924 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .062 MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethod

Source		F	Sig.
Intercept	Hypothesis	30235.554	.000
Method	Hypothesis	68.025	.000
AppsNumber	Hypothesis	473.144	.000
Distance	Hypothesis	747.577	.000
Participant	Hypothesis	1.885	.123
Method * AppsNumber	Hypothesis	1171.034	.000
Method * Distance	Hypothesis	597.734	.000
Method * Participant	Hypothesis	2.026	.022
AppsNumber * Distance	Hypothesis	281.491	.000

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethod

Source		Type III Sum of Squares	df	Mean Square
AppsNumber * Participant	Hypothesis	429265.171	22	19512.053
	Error	355240.127	18.172	19549.150[j]
Distance * Participant	Hypothesis	1084300.224	33	32857.583
	Error	1738548.224	47.823	36353.465[k]
Method * AppsNumber * Distance	Hypothesis	3.810E8	18	2.117E7
	Error	5290494.870	196.775	26886.009[l]
Method * AppsNumber * Participant	Hypothesis	1216342.753	66	18429.436
	Error	4241460.805	163.735	25904.452[m]
Method * Distance * Participant	Hypothesis	3454256.730	99	34891.482
	Error	4288451.545	165.236	25953.416[n]
AppsNumber * Distance * Participant	Hypothesis	1777889.802	66	26937.724
	Error	4248265.004	163.952	25911.576[o]
Method * AppsNumber * Distance * Participant	Hypothesis	3630755.069	144	25213.577
	Error	9.121E7	2070	44063.990[p]

j. 1.024 MS(Method * AppsNumber * Participant) + 1.008 MS(AppsNumber * Distance * Participant) - 1.007 MS(Method * AppsNumber * Distance * Participant) - .024 MS(Error)
k. .982 MS(Method * Distance * Participant) + 1.019 MS(AppsNumber * Distance * Participant) - .994 MS (Method * AppsNumber * Distance * Participant) - .006 MS(Error)
l. .911 MS(Method * AppsNumber * Distance * Participant) + .089 MS(Error)
m. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
n. .961 MS(Method * AppsNumber * Distance * Participant) + .039 MS(Error)
o. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
p. MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethod

Source		F	Sig.
AppsNumber * Participant	Hypothesis	.998	.507
Distance * Participant	Hypothesis	.904	.615
Method * AppsNumber * Distance	Hypothesis	787.279	.000
Method * AppsNumber * Participant	Hypothesis	.711	.943
Method * Distance * Participant	Hypothesis	1.344	.047
AppsNumber * Distance * Participant	Hypothesis	1.040	.414
Method * AppsNumber * Distance * Participant	Hypothesis	.572	1.000

Post Hoc Tests

Method

Multiple Comparisons

ARTNrErrorsforMethod
Bonferroni

(I) Method	(J) Method	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Flipping	Home	14.790	11.6619	1.000	-16.007	45.587
	RuntimeBar	-91.461*	11.6619	.000	-122.258	-60.665
	TapNFlip	145.110*	11.6619	.000	114.313	175.906
Home	Flipping	-14.790	11.6619	1.000	-45.587	16.007
	RuntimeBar	-106.252*	11.6619	.000	-137.048	-75.455
	TapNFlip	130.319*	11.6619	.000	99.523	161.116
RuntimeBar	Flipping	91.461*	11.6619	.000	60.665	122.258
	Home	106.252*	11.6619	.000	75.455	137.048
	TapNFlip	236.571*	11.6619	.000	205.774	267.368
TapNFlip	Flipping	-145.110*	11.6619	.000	-175.906	-114.313
	Home	-130.319*	11.6619	.000	-161.116	-99.523
	RuntimeBar	-236.571*	11.6619	.000	-267.368	-205.774

Based on observed means.
The error term is Mean Square(Error) = 44063.990.

*. The mean difference is significant at the 0.05 level.

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumber

Source		Type III Sum of Squares	df	Mean Square
Intercept	Hypothesis	3.059E9	1	3.059E9
	Error	1362744.033	11.046	123367.535 [a]
Method	Hypothesis	2.038E8	3	6.795E7
	Error	2600426.079	33.550	77509.705 [b]
AppsNumber	Hypothesis	3.572E7	2	1.786E7
	Error	468753.938	23.545	19909.121 [c]
Distance	Hypothesis	5.118E7	3	1.706E7
	Error	1659537.436	36.417	45570.735 [d]
Participant	Hypothesis	1359251.375	11	123568.307
	Error	1357936.761	17.772	76407.751 [e]
Method * AppsNumber	Hypothesis	1.109E8	6	1.849E7
	Error	1544472.263	75.623	20423.216 [f]
Method * Distance	Hypothesis	1.904E8	9	2.115E7
	Error	5372863.072	117.405	45763.555 [g]
Method * Participant	Hypothesis	2574626.122	33	78018.973
	Error	1142107.096	33.692	33898.858 [h]
AppsNumber * Distance	Hypothesis	3.509E7	6	5849140.657
	Error	2754388.301	81.001	34004.396 [i]

a. .996 MS(Participant) - 3.11E-006 MS(Method * Participant) - 4.84E-005 MS(AppsNumber * Participant) + 1.05E-005 MS(Distance * Participant) + 4.36E-005 MS(Method * AppsNumber * Participant) - 1.07E-005 MS(Method * Distance * Participant) + .000 MS(AppsNumber * Distance * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .009 MS(Error)
b. .985 MS(Method * Participant) - .001 MS(Method * AppsNumber * Participant) + .000 MS(Method * Distance * Participant) + .006 MS(Method * AppsNumber * Distance * Participant) + .010 MS(Error)
c. .987 MS(AppsNumber * Participant) - .000 MS(Method * AppsNumber * Participant) + .000 MS (AppsNumber * Distance * Participant) - .005 MS(Method * AppsNumber * Distance * Participant) + .017 MS(Error)
d. .949 MS(Distance * Participant) + .001 MS(Method * Distance * Participant) - .001 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
e. 1.017 MS(Method * Participant) + 1.032 MS(AppsNumber * Participant) + 1.021 MS(Distance * Participant) - 1.058 MS(Method * AppsNumber * Participant) - 1.003 MS(Method * Distance * Participant) - 1.041 MS(AppsNumber * Distance * Participant) + 1.032 MS(Method * AppsNumber * Distance * Participant) + .000 MS(Error)
f. .973 MS(Method * AppsNumber * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .033 MS(Error)
g. .909 MS(Method * Distance * Participant) + .033 MS(Method * AppsNumber * Distance * Participant) + .058 MS(Error)
h. 1.041 MS(Method * AppsNumber * Participant) + .987 MS(Method * Distance * Participant) - 1.008 MS (Method * AppsNumber * Distance * Participant) - .020 MS(Error)
i. .924 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .062 MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumber

Source		F	Sig.
Intercept	Hypothesis	24797.791	.000
Method	Hypothesis	876.661	.000
AppsNumber	Hypothesis	896.980	.000
Distance	Hypothesis	374.364	.000
Participant	Hypothesis	1.617	.177
Method * AppsNumber	Hypothesis	905.163	.000
Method * Distance	Hypothesis	462.167	.000
Method * Participant	Hypothesis	2.302	.009
AppsNumber * Distance	Hypothesis	172.011	.000

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumber

Source		Type III Sum of Squares	df	Mean Square
AppsNumber * Participant	Hypothesis	428784.153	22	19490.189
	Error	319853.120	15.085	21203.105[j]
Distance * Participant	Hypothesis	1509145.139	33	45731.671
	Error	2493698.790	51.801	48139.722[k]
Method * AppsNumber * Distance	Hypothesis	1.985E8	18	1.103E7
	Error	6121939.603	189.168	32362.423[l]
Method * AppsNumber * Participant	Hypothesis	1293795.046	66	19602.955
	Error	5077446.005	160.983	31540.165[m]
Method * Distance * Participant	Hypothesis	4577807.768	99	46240.483
	Error	5124700.277	162.271	31581.182[n]
AppsNumber * Distance * Participant	Hypothesis	2190943.369	66	33196.112
	Error	5084291.422	161.170	31546.132[o]
Method * AppsNumber * Distance * Participant	Hypothesis	4458443.417	144	30961.413
	Error	9.678E7	2070	46752.564[p]

j. 1.024 MS(Method * AppsNumber * Participant) + 1.008 MS(AppsNumber * Distance * Participant) - 1.007 MS(Method * AppsNumber * Distance * Participant) - .024 MS(Error)
k. .982 MS(Method * Distance * Participant) + 1.019 MS(AppsNumber * Distance * Participant) - .994 MS (Method * AppsNumber * Distance * Participant) - .006 MS(Error)
l. .911 MS(Method * AppsNumber * Distance * Participant) + .089 MS(Error)
m. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
n. .961 MS(Method * AppsNumber * Distance * Participant) + .039 MS(Error)
o. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
p. MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumber

Source		F	Sig.
AppsNumber * Participant	Hypothesis	.919	.582
Distance * Participant	Hypothesis	.950	.555
Method * AppsNumber * Distance	Hypothesis	340.748	.000
Method * AppsNumber * Participant	Hypothesis	.622	.986
Method * Distance * Participant	Hypothesis	1.464	.016
AppsNumber * Distance * Participant	Hypothesis	1.052	.391
Method * AppsNumber * Distance * Participant	Hypothesis	.662	.999

Post Hoc Tests

AppsNumber

Multiple Comparisons

ARTNrErrorsforAppsNumber
Bonferroni

(I) AppsNumber	(J) AppsNumber	Mean Difference (I-J)	Std. Error	Sig.
1	2	286.262*	10.4031	.000
	3	13.381	10.4031	.596
2	1	-286.262*	10.4031	.000
	3	-272.881*	10.4031	.000
3	1	-13.381	10.4031	.596
	2	272.881*	10.4031	.000

Based on observed means.
The error term is Mean Square(Error) = 46752.564.

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

ARTNrErrorsforAppsNumber
Bonferroni

(I) AppsNumber	(J) AppsNumber	95% Confidence Interval	
		Lower Bound	Upper Bound
1	2	261.337	311.187
	3	-11.544	38.306
2	1	-311.187	-261.337
	3	-297.806	-247.956
3	1	-38.306	11.544
	2	247.956	297.806

Based on observed means.
The error term is Mean Square(Error) = 46752.564.

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforDistance

Source		Type III Sum of Squares	df	Mean Square
Intercept	Hypothesis	3.061E9	1	3.061E9
	Error	1290636.624	11.050	116797.553 [a]
Method	Hypothesis	2.991E8	3	9.969E7
	Error	2399427.469	33.592	71428.059 [b]
AppsNumber	Hypothesis	8882251.293	2	4441125.647
	Error	493052.603	23.479	20999.368 [c]
Distance	Hypothesis	2.380E7	3	7934284.067
	Error	1580486.455	36.607	43174.451 [d]
Participant	Hypothesis	1286631.609	11	116966.510
	Error	1268473.004	17.697	71675.283 [e]
Method * AppsNumber	Hypothesis	8.975E7	6	1.496E7
	Error	1558662.459	75.626	20610.171 [f]
Method * Distance	Hypothesis	2.097E8	9	2.330E7
	Error	5092176.377	118.666	42911.893 [g]
Method * Participant	Hypothesis	2371110.032	33	71851.819
	Error	1061039.755	33.102	32054.045 [h]
AppsNumber * Distance	Hypothesis	3.839E7	6	6399014.913
	Error	2691201.954	81.517	33013.992 [i]

a. .996 MS(Participant) - 3.11E-006 MS(Method * Participant) - 4.84E-005 MS(AppsNumber * Participant) + 1.05E-005 MS(Distance * Participant) + 4.36E-005 MS(Method * AppsNumber * Participant) - 1.07E-005 MS(Method * Distance * Participant) + .000 MS(AppsNumber * Distance * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .009 MS(Error)
b. .985 MS(Method * Participant) - .001 MS(Method * AppsNumber * Participant) + .000 MS(Method * Distance * Participant) + .006 MS(Method * AppsNumber * Distance * Participant) + .010 MS(Error)
c. .987 MS(AppsNumber * Participant) - .000 MS(Method * AppsNumber * Participant) + .000 MS (AppsNumber * Distance * Participant) - .005 MS(Method * AppsNumber * Distance * Participant) + .017 MS(Error)
d. .949 MS(Distance * Participant) + .001 MS(Method * Distance * Participant) - .001 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
e. 1.017 MS(Method * Participant) + 1.032 MS(AppsNumber * Participant) + 1.021 MS(Distance * Participant) - 1.058 MS(Method * AppsNumber * Participant) - 1.003 MS(Method * Distance * Participant) - 1.041 MS(AppsNumber * Distance * Participant) + 1.032 MS(Method * AppsNumber * Distance * Participant) + .000 MS(Error)
f. .973 MS(Method * AppsNumber * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .033 MS(Error)
g. .909 MS(Method * Distance * Participant) + .033 MS(Method * AppsNumber * Distance * Participant) + .058 MS(Error)
h. 1.041 MS(Method * AppsNumber * Participant) + .987 MS(Method * Distance * Participant) - 1.008 MS (Method * AppsNumber * Distance * Participant) - .020 MS(Error)
i. .924 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .062 MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforDistance

Source		F	Sig.
Intercept	Hypothesis	26207.289	.000
Method	Hypothesis	1395.675	.000
AppsNumber	Hypothesis	211.489	.000
Distance	Hypothesis	183.773	.000
Participant	Hypothesis	1.632	.173
Method * AppsNumber	Hypothesis	725.784	.000
Method * Distance	Hypothesis	542.876	.000
Method * Participant	Hypothesis	2.242	.011
AppsNumber * Distance	Hypothesis	193.827	.000

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforDistance

Source		Type III Sum of Squares	df	Mean Square
AppsNumber * Participant	Hypothesis	452893.893	22	20586.086
	Error	342699.662	16.052	21349.307[j]
Distance * Participant	Hypothesis	1426065.159	33	43214.096
	Error	2253888.753	50.060	45024.018[k]
Method * AppsNumber * Distance	Hypothesis	2.074E8	18	1.152E7
	Error	6005435.286	191.047	31434.366[l]
Method * AppsNumber * Participant	Hypothesis	1305620.205	66	19782.124
	Error	4938498.197	161.665	30547.640[m]
Method * Distance * Participant	Hypothesis	4269549.359	99	43126.761
	Error	4986648.871	163.006	30591.873[n]
AppsNumber * Distance * Participant	Hypothesis	2120363.835	66	32126.725
	Error	4945472.697	161.860	30554.075[o]
Method * AppsNumber * Distance * Participant	Hypothesis	4308985.673	144	29923.512
	Error	9.719E7	2070	46952.745[p]

j. 1.024 MS(Method * AppsNumber * Participant) + 1.008 MS(AppsNumber * Distance * Participant) - 1.007 MS(Method * AppsNumber * Distance * Participant) - .024 MS(Error)
k. .982 MS(Method * Distance * Participant) + 1.019 MS(AppsNumber * Distance * Participant) - .994 MS (Method * AppsNumber * Distance * Participant) - .006 MS(Error)
l. .911 MS(Method * AppsNumber * Distance * Participant) + .089 MS(Error)
m. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
n. .961 MS(Method * AppsNumber * Distance * Participant) + .039 MS(Error)
o. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
p. MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforDistance

Source		F	Sig.
AppsNumber * Participant	Hypothesis	.964	.541
Distance * Participant	Hypothesis	.960	.542
Method * AppsNumber * Distance	Hypothesis	366.471	.000
Method * AppsNumber * Participant	Hypothesis	.648	.977
Method * Distance * Participant	Hypothesis	1.410	.026
AppsNumber * Distance * Participant	Hypothesis	1.051	.393
Method * AppsNumber * Distance * Participant	Hypothesis	.637	1.000

Post Hoc Tests

Distance

Multiple Comparisons

ARTNrErrorsforDistance
Bonferroni

(I) Distance	(J) Distance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0	1	68.336*	12.1725	.000	36.190	100.481
	2	150.600*	12.0582	.000	118.757	182.443
	3	257.101*	12.3144	.000	224.581	289.621
1	0	-68.336*	12.1725	.000	-100.481	-36.190
	2	82.264*	11.7841	.000	51.145	113.384
	3	188.766*	12.0462	.000	156.954	220.577
2	0	-150.600*	12.0582	.000	-182.443	-118.757
	1	-82.264*	11.7841	.000	-113.384	-51.145
	3	106.501*	11.9306	.000	74.995	138.008
3	0	-257.101*	12.3144	.000	-289.621	-224.581
	1	-188.766*	12.0462	.000	-220.577	-156.954
	2	-106.501*	11.9306	.000	-138.008	-74.995

Based on observed means.
The error term is Mean Square(Error) = 46952.745.

*. The mean difference is significant at the 0.05 level.

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumber

Source		Type III Sum of Squares	df	Mean Square
Intercept	Hypothesis	3.042E9	1	3.042E9
	Error	1330703.960	11.050	120429.889 [a]
Method	Hypothesis	3.046E8	3	1.015E8
	Error	2459013.778	33.564	73262.391 [b]
AppsNumber	Hypothesis	3.505E7	2	1.753E7
	Error	491438.534	23.484	20926.482 [c]
Distance	Hypothesis	5.913E7	3	1.971E7
	Error	1521338.303	36.689	41466.262 [d]
Participant	Hypothesis	1326680.375	11	120607.307
	Error	1195982.970	16.968	70483.707 [e]
Method * AppsNumber	Hypothesis	2.491E7	6	4152006.195
	Error	1522441.813	75.865	20067.793 [f]
Method * Distance	Hypothesis	1.433E8	9	1.593E7
	Error	5135537.793	117.805	43593.698 [g]
Method * Participant	Hypothesis	2433007.542	33	73727.501
	Error	1291512.282	37.878	34096.669 [h]
AppsNumber * Distance	Hypothesis	4.148E7	6	6912566.850
	Error	2629997.198	81.664	32205.112 [i]

a. .996 MS(Participant) - 3.11E-006 MS(Method * Participant) - 4.84E-005 MS(AppsNumber * Participant) + 1.05E-005 MS(Distance * Participant) + 4.36E-005 MS(Method * AppsNumber * Participant) - 1.07E-005 MS(Method * Distance * Participant) + .000 MS(AppsNumber * Distance * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .009 MS(Error)
b. .985 MS(Method * Participant) - .001 MS(Method * AppsNumber * Participant) + .000 MS(Method * Distance * Participant) + .006 MS(Method * AppsNumber * Distance * Participant) + .010 MS(Error)
c. .987 MS(AppsNumber * Participant) - .000 MS(Method * AppsNumber * Participant) + .000 MS (AppsNumber * Distance * Participant) - .005 MS(Method * AppsNumber * Distance * Participant) + .017 MS(Error)
d. .949 MS(Distance * Participant) + .001 MS(Method * Distance * Participant) - .001 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
e. 1.017 MS(Method * Participant) + 1.032 MS(AppsNumber * Participant) + 1.021 MS(Distance * Participant) - 1.058 MS(Method * AppsNumber * Participant) - 1.003 MS(Method * Distance * Participant) - 1.041 MS(AppsNumber * Distance * Participant) + 1.032 MS(Method * AppsNumber * Distance * Participant) + .000 MS(Error)
f. .973 MS(Method * AppsNumber * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .033 MS(Error)
g. .909 MS(Method * Distance * Participant) + .033 MS(Method * AppsNumber * Distance * Participant) + .058 MS(Error)
h. 1.041 MS(Method * AppsNumber * Participant) + .987 MS(Method * Distance * Participant) - 1.008 MS (Method * AppsNumber * Distance * Participant) - .020 MS(Error)
i. .924 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .062 MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumber

Source		F	Sig.
Intercept	Hypothesis	25263.401	.000
Method	Hypothesis	1385.665	.000
AppsNumber	Hypothesis	837.544	.000
Distance	Hypothesis	475.351	.000
Participant	Hypothesis	1.711	.155
Method * AppsNumber	Hypothesis	206.899	.000
Method * Distance	Hypothesis	365.325	.000
Method * Participant	Hypothesis	2.162	.011
AppsNumber * Distance	Hypothesis	214.642	.000

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumber

Source		Type III Sum of Squares	df	Mean Square
AppsNumber * Participant	Hypothesis	451277.560	22	20512.616
	Error	387420.977	17.817	21744.869[j]
Distance * Participant	Hypothesis	1368118.601	33	41458.139
	Error	2577863.442	55.112	46774.673[k]
Method * AppsNumber * Distance	Hypothesis	2.393E8	18	1.329E7
	Error	5767295.227	193.605	29788.915[l]
Method * AppsNumber * Participant	Hypothesis	1269253.873	66	19231.119
	Error	4688632.308	162.592	28836.865[m]
Method * Distance * Participant	Hypothesis	4353383.848	99	43973.574
	Error	4737149.521	164.004	28884.357[n]
AppsNumber * Distance * Participant	Hypothesis	2066547.092	66	31311.320
	Error	4695658.842	162.796	28843.775[o]
Method * AppsNumber * Distance * Participant	Hypothesis	4056013.176	144	28166.758
	Error	9.615E7	2070	46450.510[p]

j. 1.024 MS(Method * AppsNumber * Participant) + 1.008 MS(AppsNumber * Distance * Participant) - 1.007 MS(Method * AppsNumber * Distance * Participant) - .024 MS(Error)
k. .982 MS(Method * Distance * Participant) + 1.019 MS(AppsNumber * Distance * Participant) - .994 MS (Method * AppsNumber * Distance * Participant) - .006 MS(Error)
l. .911 MS(Method * AppsNumber * Distance * Participant) + .089 MS(Error)
m. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
n. .961 MS(Method * AppsNumber * Distance * Participant) + .039 MS(Error)
o. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
p. MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumber

Source		F	Sig.
AppsNumber * Participant	Hypothesis	.943	.557
Distance * Participant	Hypothesis	.886	.640
Method * AppsNumber * Distance	Hypothesis	446.207	.000
Method * AppsNumber * Participant	Hypothesis	.667	.969
Method * Distance * Participant	Hypothesis	1.522	.009
AppsNumber * Distance * Participant	Hypothesis	1.086	.334
Method * AppsNumber * Distance * Participant	Hypothesis	.606	1.000

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodDistance

Source		Type III Sum of Squares	df	Mean Square
Intercept	Hypothesis	2.995E9	1	2.995E9
	Error	1419635.772	11.041	128575.172 [a]
Method	Hypothesis	3.050E8	3	1.017E8
	Error	2644324.435	33.515	78899.689 [b]
AppsNumber	Hypothesis	4.335E7	2	2.167E7
	Error	484057.063	23.395	20690.404 [c]
Distance	Hypothesis	8.263E7	3	2.754E7
	Error	1623014.684	36.319	44687.819 [d]
Participant	Hypothesis	1416944.390	11	128813.126
	Error	1543454.624	19.291	80007.354 [e]
Method * AppsNumber	Hypothesis	1.107E8	6	1.845E7
	Error	1532808.152	75.046	20424.970 [f]
Method * Distance	Hypothesis	2.451E7	9	2722824.358
	Error	5116161.430	117.528	43531.549 [g]
Method * Participant	Hypothesis	2622152.263	33	79459.159
	Error	1077147.235	33.156	32486.915 [h]
AppsNumber * Distance	Hypothesis	4.701E7	6	7835550.935
	Error	2680136.741	80.544	33275.476 [i]

a. .996 MS(Participant) - 3.11E-006 MS(Method * Participant) - 4.84E-005 MS(AppsNumber * Participant) + 1.05E-005 MS(Distance * Participant) + 4.36E-005 MS(Method * AppsNumber * Participant) - 1.07E-005 MS(Method * Distance * Participant) + .000 MS(AppsNumber * Distance * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .009 MS(Error)
b. .985 MS(Method * Participant) - .001 MS(Method * AppsNumber * Participant) + .000 MS(Method * Distance * Participant) + .006 MS(Method * AppsNumber * Distance * Participant) + .010 MS(Error)
c. .987 MS(AppsNumber * Participant) - .000 MS(Method * AppsNumber * Participant) + .000 MS (AppsNumber * Distance * Participant) - .005 MS(Method * AppsNumber * Distance * Participant) + .017 MS(Error)
d. .949 MS(Distance * Participant) + .001 MS(Method * Distance * Participant) - .001 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
e. 1.017 MS(Method * Participant) + 1.032 MS(AppsNumber * Participant) + 1.021 MS(Distance * Participant) - 1.058 MS(Method * AppsNumber * Participant) - 1.003 MS(Method * Distance * Participant) - 1.041 MS(AppsNumber * Distance * Participant) + 1.032 MS(Method * AppsNumber * Distance * Participant) + .000 MS(Error)
f. .973 MS(Method * AppsNumber * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .033 MS(Error)
g. .909 MS(Method * Distance * Participant) + .033 MS(Method * AppsNumber * Distance * Participant) + .058 MS(Error)
h. 1.041 MS(Method * AppsNumber * Participant) + .987 MS(Method * Distance * Participant) - 1.008 MS (Method * AppsNumber * Distance * Participant) - .020 MS(Error)
i. .924 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .062 MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodDistance

Source		F	Sig.
Intercept	Hypothesis	23291.805	.000
Method	Hypothesis	1288.742	.000
AppsNumber	Hypothesis	1047.573	.000
Distance	Hypothesis	616.336	.000
Participant	Hypothesis	1.610	.173
Method * AppsNumber	Hypothesis	903.426	.000
Method * Distance	Hypothesis	62.548	.000
Method * Participant	Hypothesis	2.446	.006
AppsNumber * Distance	Hypothesis	235.475	.000

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodDistance

Source		Type III Sum of Squares	df	Mean Square
AppsNumber * Participant	Hypothesis	447032.560	22	20319.662
	Error	340013.747	15.871	21424.022[j]
Distance * Participant	Hypothesis	1481898.395	33	44906.012
	Error	2326511.591	50.592	45985.909[k]
Method * AppsNumber * Distance	Hypothesis	2.463E8	18	1.368E7
	Error	5917596.933	187.795	31510.905[l]
Method * AppsNumber * Participant	Hypothesis	1298891.085	66	19680.168
	Error	4938992.309	160.484	30775.595[m]
Method * Distance * Participant	Hypothesis	4352210.985	99	43961.727
	Error	4983345.761	161.732	30812.275[n]
AppsNumber * Distance * Participant	Hypothesis	2150072.898	66	32576.862
	Error	4945418.023	160.665	30780.931[o]
Method * AppsNumber * Distance * Participant	Hypothesis	4357157.926	144	30258.041
	Error	9.187E7	2070	44379.395[p]

j. 1.024 MS(Method * AppsNumber * Participant) + 1.008 MS(AppsNumber * Distance * Participant) - 1.007 MS(Method * AppsNumber * Distance * Participant) - .024 MS(Error)
k. .982 MS(Method * Distance * Participant) + 1.019 MS(AppsNumber * Distance * Participant) - .994 MS (Method * AppsNumber * Distance * Participant) - .006 MS(Error)
l. .911 MS(Method * AppsNumber * Distance * Participant) + .089 MS(Error)
m. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
n. .961 MS(Method * AppsNumber * Distance * Participant) + .039 MS(Error)
o. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
p. MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodDistance

Source		F	Sig.
AppsNumber * Participant	Hypothesis	.948	.555
Distance * Participant	Hypothesis	.977	.521
Method * AppsNumber * Distance	Hypothesis	434.240	.000
Method * AppsNumber * Participant	Hypothesis	.639	.980
Method * Distance * Participant	Hypothesis	1.427	.023
AppsNumber * Distance * Participant	Hypothesis	1.058	.381
Method * AppsNumber * Distance * Participant	Hypothesis	.682	.998

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumberDistance

Source		Type III Sum of Squares	df	Mean Square
Intercept	Hypothesis	3.082E9	1	3.082E9
	Error	1342219.554	11.048	121488.012 [a]
Method	Hypothesis	2.538E8	3	8.461E7
	Error	2633065.387	33.544	78494.964 [b]
AppsNumber	Hypothesis	1.569E7	2	7844116.204
	Error	454307.961	23.628	19227.788 [c]
Distance	Hypothesis	5.312E7	3	1.771E7
	Error	1674536.399	36.398	46006.404 [d]
Participant	Hypothesis	1338424.730	11	121674.975
	Error	1356015.960	17.674	76722.594 [e]
Method * AppsNumber	Hypothesis	9.468E7	6	1.578E7
	Error	1537231.211	75.843	20268.485 [f]
Method * Distance	Hypothesis	1.565E8	9	1.739E7
	Error	5441407.917	117.138	46452.785 [g]
Method * Participant	Hypothesis	2607559.250	33	79016.947
	Error	1243681.373	35.543	34991.300 [h]
AppsNumber * Distance	Hypothesis	4.852E7	6	8087215.874
	Error	2720357.301	81.416	33413.168 [i]

a. .996 MS(Participant) - 3.11E-006 MS(Method * Participant) - 4.84E-005 MS(AppsNumber * Participant) + 1.05E-005 MS(Distance * Participant) + 4.36E-005 MS(Method * AppsNumber * Participant) - 1.07E-005 MS(Method * Distance * Participant) + .000 MS(AppsNumber * Distance * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .009 MS(Error)
b. .985 MS(Method * Participant) - .001 MS(Method * AppsNumber * Participant) + .000 MS(Method * Distance * Participant) + .006 MS(Method * AppsNumber * Distance * Participant) + .010 MS(Error)
c. .987 MS(AppsNumber * Participant) - .000 MS(Method * AppsNumber * Participant) + .000 MS (AppsNumber * Distance * Participant) - .005 MS(Method * AppsNumber * Distance * Participant) + .017 MS(Error)
d. .949 MS(Distance * Participant) + .001 MS(Method * Distance * Participant) - .001 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
e. 1.017 MS(Method * Participant) + 1.032 MS(AppsNumber * Participant) + 1.021 MS(Distance * Participant) - 1.058 MS(Method * AppsNumber * Participant) - 1.003 MS(Method * Distance * Participant) - 1.041 MS(AppsNumber * Distance * Participant) + 1.032 MS(Method * AppsNumber * Distance * Participant) + .000 MS(Error)
f. .973 MS(Method * AppsNumber * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .033 MS(Error)
g. .909 MS(Method * Distance * Participant) + .033 MS(Method * AppsNumber * Distance * Participant) + .058 MS(Error)
h. 1.041 MS(Method * AppsNumber * Participant) + .987 MS(Method * Distance * Participant) - 1.008 MS (Method * AppsNumber * Distance * Participant) - .020 MS(Error)
i. .924 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .062 MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumberDistance

Source		F	Sig.
Intercept	Hypothesis	25368.063	.000
Method	Hypothesis	1077.903	.000
AppsNumber	Hypothesis	407.957	.000
Distance	Hypothesis	384.906	.000
Participant	Hypothesis	1.586	.187
Method * AppsNumber	Hypothesis	778.551	.000
Method * Distance	Hypothesis	374.266	.000
Method * Participant	Hypothesis	2.258	.009
AppsNumber * Distance	Hypothesis	242.037	.000

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumberDistance

Source		Type III Sum of Squares	df	Mean Square
AppsNumber * Participant	Hypothesis	413381.836	22	18790.083
	Error	316640.851	15.157	20890.140[j]
Distance * Participant	Hypothesis	1523968.226	33	46180.855
	Error	2601204.519	53.371	48738.035[k]
Method * AppsNumber * Distance	Hypothesis	2.433E8	18	1.352E7
	Error	6077777.785	190.475	31908.480[l]
Method * AppsNumber * Participant	Hypothesis	1282124.407	66	19426.127
	Error	5010924.378	161.458	31035.432[m]
Method * Distance * Participant	Hypothesis	4652101.675	99	46990.926
	Error	5059107.395	162.782	31078.983[n]
AppsNumber * Distance * Participant	Hypothesis	2147340.072	66	32535.456
	Error	5017903.798	161.650	31041.768[o]
Method * AppsNumber * Distance * Participant	Hypothesis	4380614.157	144	30420.932
	Error	9.768E7	2070	47187.474[p]

j. 1.024 MS(Method * AppsNumber * Participant) + 1.008 MS(AppsNumber * Distance * Participant) - 1.007 MS(Method * AppsNumber * Distance * Participant) - .024 MS(Error)
k. .982 MS(Method * Distance * Participant) + 1.019 MS(AppsNumber * Distance * Participant) - .994 MS (Method * AppsNumber * Distance * Participant) - .006 MS(Error)
l. .911 MS(Method * AppsNumber * Distance * Participant) + .089 MS(Error)
m. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
n. .961 MS(Method * AppsNumber * Distance * Participant) + .039 MS(Error)
o. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
p. MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforAppsNumberDistance

Source		F	Sig.
AppsNumber * Participant	Hypothesis	.899	.599
Distance * Participant	Hypothesis	.948	.558
Method * AppsNumber * Distance	Hypothesis	423.601	.000
Method * AppsNumber * Participant	Hypothesis	.626	.984
Method * Distance * Participant	Hypothesis	1.512	.010
AppsNumber * Distance * Participant	Hypothesis	1.048	.399
Method * AppsNumber * Distance * Participant	Hypothesis	.645	1.000

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumberDistance

Source		Type III Sum of Squares	df	Mean Square
Intercept	Hypothesis	3.049E9	1	3.049E9
	Error	1205469.596	11.054	109052.616 [a]
Method	Hypothesis	3.477E8	3	1.159E8
	Error	2343364.300	33.556	69833.741 [b]
AppsNumber	Hypothesis	4.318E7	2	2.159E7
	Error	414873.488	23.726	17485.769 [c]
Distance	Hypothesis	5.047E7	3	1.682E7
	Error	1416424.478	36.743	38549.385 [d]
Participant	Hypothesis	1201106.726	11	109191.521
	Error	1262495.139	18.465	68373.872 [e]
Method * AppsNumber	Hypothesis	1.239E8	6	2.065E7
	Error	1366263.561	76.786	17793.175 [f]
Method * Distance	Hypothesis	2.168E8	9	2.409E7
	Error	4725538.969	118.297	39946.354 [g]
Method * Participant	Hypothesis	2319425.313	33	70285.616
	Error	1204128.566	38.672	31136.705 [h]
AppsNumber * Distance	Hypothesis	6.418E7	6	1.070E7
	Error	2309880.119	83.565	27641.881 [i]

a. .996 MS(Participant) - 3.11E-006 MS(Method * Participant) - 4.84E-005 MS(AppsNumber * Participant) + 1.05E-005 MS(Distance * Participant) + 4.36E-005 MS(Method * AppsNumber * Participant) - 1.07E-005 MS(Method * Distance * Participant) + .000 MS(AppsNumber * Distance * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .009 MS(Error)
b. .985 MS(Method * Participant) - .001 MS(Method * AppsNumber * Participant) + .000 MS(Method * Distance * Participant) + .006 MS(Method * AppsNumber * Distance * Participant) + .010 MS(Error)
c. .987 MS(AppsNumber * Participant) - .000 MS(Method * AppsNumber * Participant) + .000 MS (AppsNumber * Distance * Participant) - .005 MS(Method * AppsNumber * Distance * Participant) + .017 MS(Error)
d. .949 MS(Distance * Participant) + .001 MS(Method * Distance * Participant) - .001 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
e. 1.017 MS(Method * Participant) + 1.032 MS(AppsNumber * Participant) + 1.021 MS(Distance * Participant) - 1.058 MS(Method * AppsNumber * Participant) - 1.003 MS(Method * Distance * Participant) - 1.041 MS(AppsNumber * Distance * Participant) + 1.032 MS(Method * AppsNumber * Distance * Participant) + .000 MS(Error)
f. .973 MS(Method * AppsNumber * Participant) - .006 MS(Method * AppsNumber * Distance * Participant) + .033 MS(Error)
g. .909 MS(Method * Distance * Participant) + .033 MS(Method * AppsNumber * Distance * Participant) + .058 MS(Error)
h. 1.041 MS(Method * AppsNumber * Participant) + .987 MS(Method * Distance * Participant) - 1.008 MS (Method * AppsNumber * Distance * Participant) - .020 MS(Error)
i. .924 MS(AppsNumber * Distance * Participant) + .014 MS(Method * AppsNumber * Distance * Participant) + .062 MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumberDistance

Source		F	Sig.
Intercept	Hypothesis	27956.184	.000
Method	Hypothesis	1659.510	.000
AppsNumber	Hypothesis	1234.700	.000
Distance	Hypothesis	436.370	.000
Participant	Hypothesis	1.597	.181
Method * AppsNumber	Hypothesis	1160.763	.000
Method * Distance	Hypothesis	603.088	.000
Method * Participant	Hypothesis	2.257	.008
AppsNumber * Distance	Hypothesis	386.985	.000

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumberDistance

Source		Type III Sum of Squares	df	Mean Square
AppsNumber * Participant	Hypothesis	375147.365	22	17052.153
	Error	282327.878	15.893	17763.923[j]
Distance * Participant	Hypothesis	1270936.458	33	38513.226
	Error	2260522.230	54.728	41304.341[k]
Method * AppsNumber * Distance	Hypothesis	2.432E7	18	1350875.301
	Error	5288398.286	197.292	26804.918[l]
Method * AppsNumber * Participant	Hypothesis	1118599.164	66	16948.472
	Error	4230257.944	163.921	25806.704[m]
Method * Distance * Participant	Hypothesis	3980836.726	99	40210.472
	Error	4277624.956	165.437	25856.498[n]
AppsNumber * Distance * Participant	Hypothesis	1753366.481	66	26566.159
	Error	4237116.420	164.141	25813.948[o]
Method * AppsNumber * Distance * Participant	Hypothesis	3614990.953	144	25104.104
	Error	9.165E7	2070	44274.421[p]

j. 1.024 MS(Method * AppsNumber * Participant) + 1.008 MS(AppsNumber * Distance * Participant) - 1.007 MS(Method * AppsNumber * Distance * Participant) - .024 MS(Error)
k. .982 MS(Method * Distance * Participant) + 1.019 MS(AppsNumber * Distance * Participant) - .994 MS (Method * AppsNumber * Distance * Participant) - .006 MS(Error)
l. .911 MS(Method * AppsNumber * Distance * Participant) + .089 MS(Error)
m. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
n. .961 MS(Method * AppsNumber * Distance * Participant) + .039 MS(Error)
o. .963 MS(Method * AppsNumber * Distance * Participant) + .037 MS(Error)
p. MS(Error)

Tests of Between-Subjects Effects

Dependent Variable:ARTNrErrorsforMethodAppsNumberDistance

Source		F	Sig.
AppsNumber * Participant	Hypothesis	.960	.545
Distance * Participant	Hypothesis	.932	.578
Method * AppsNumber * Distance	Hypothesis	50.397	.000
Method * AppsNumber * Participant	Hypothesis	.657	.974
Method * Distance * Participant	Hypothesis	1.555	.006
AppsNumber * Distance * Participant	Hypothesis	1.029	.433
Method * AppsNumber * Distance * Participant	Hypothesis	.567	1.000