cocos2d for iPhone performance tests. V0.8.0

Particle Tests

A particle size = 4 pixels
B particle size = 8 pixels
C particle size = 32 pixels
D particle size = 64 pixels

Subtests	
1	PointParticleSystem using a 32-bit texture (PNG)
2	PointParticleSystem using a 16-bit texture (PNG)
3	PointParticleSystem using a 4-bit texture (PVRTC)
4	QuadParticle System using a 32-bit texture (PNG)
5	QuadParticle System using a 16-bit texture (PNG)
6	QuadParticle System using a 4-bit texture (PVRTC)

Fast Director

	1000 particles						1500 particles						2000 particles					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
A	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
B	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	~54		60
C	~27	~27	~45	~25	~27	~45	~20		~32	~18		~32	~15		~25	~15		~24
D	~10		15	~10		15	~7		~10	~7		~10	~5		~8	~5		~8

Fast Director

	2500 particles					
	1	2	3	4	5	6
A	60	60	60	~57		~59
B	~43		60	~44		~58
C	~12		~20	~12		~20
D	~4		~6	~4		~6

cocos2d for iPhone performance tests. V0.8.0

Sprites Tests

A set randomly the position of the sprites. All the positions are inside of the screen
B set randomly the position / scale of the sprites. All the positions are inside of the screen
C set randomly the position / scale / rotation of the sprites. All the positions are inside of the screen
D All sprites are rendered outside the screen
E 80% of the sprites are positioned outside the screen. The other 20% is inside the screen
F Perform transform Scale and Rotate actions to all sprites. 100% of the sprites inside the screen
G Perform transform Scale and Rotate actions to all sprites. 20% of the sprites inside the screen

Subtests	
1	1 PNG sprite of 52x139 pixels (32-bit texture)
2	A PNG atlas of 1 sprite of 52x139 pixels (32-bit texture)
3	A PNG atlas of 1 sprite of 52x139 pixels (16-bit texture)
4	A PVRTC atlas of 1 sprite of 52x139 pixels (4-bit texture)
5	14 PNG sprites of 85 x 121 each (32-bit texture)
6	1 PNG atlas of 14 sprites of 85 x 121 each (32-bit texture)
7	1 PNG atlas of 14 sprites of 85 x 121 each (16-bit texture)
8	1 PVRTC atlas of 14 sprites of 85x121 each (4-bit texture)
9	64 PNG sprites of 32x32 each (32-bit Texture)
10	1 PNG atlas of 64 sprites of 32x32 each (32-bit Texture)
11	1 PNG atlas of 64 sprites of 32x32 each (16-bit Texture)
12	1 PVRTC atlas of 64 sprites of 32x32 each (4-bit texture)

Last update: using r932 from trunk
All tests were done using firmware v3.0 beta5 using an iPod Touch 2nd generation

250 sprites

Fast Director	1	2	3	4	5	6	7	8	9	10	11	12
A	~16	~17	~20	~22	12	~12	~13	~16	~46	60	60	60
B	~16	~17	~20	~22	~12	~12	~15	~17	~45	60	60	60
C	~16	~17	~17	~22	~12	~12	~13	~15	~40	60	60	60
D	~53	60	60	60	~50	60	60	60	~49	60	60	60
E	~49	60	60	60	~45	~48	~51	60	~49	60	60	60
F	~22	~24	~25	~30	~17	~17	~20	~22	~35	60	60	60
G	~36	60	60	60	~34	60	60	60	~36	60	60	60

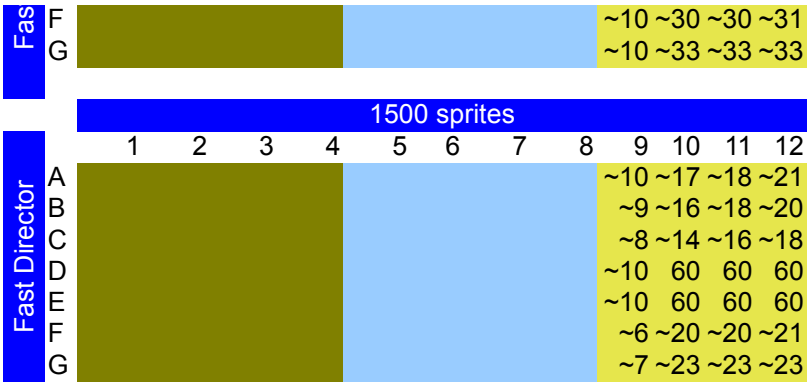
450 sprites

Fast Director	1	2	3	4	5	6	7	8	9	10	11	12
A												
B	~9	~9	~10	~13	~7	~7	~7	~8	~29	~45	~52	60
C	~9	~9	~10	~13	~6	~6	~7	~8	~28	~45	~51	~55
D	~9	~8	~9	11	~6	~6	~6	~8	~24	~42	~42	~51
E	~32	60	60	60	~31	60	60	60	~31	60	60	60
F	~30	~41	~45	~55	~25	~27	~32	~37	~30	60	60	60
G	~13	~14	~15	~17	~10	~10	~11	~13	~21	~57	60	60
	~21	~45	~51	~56	~19	~40	~40	~49	~22	60	60	60

1000 sprites

t Director	1	2	3	4	5	6	7	8	9	10	11	12
A									~14	~22	~26	~32
B									~14	~21	~25	~30
C									~12	~21	~21	~25
D									~15	60	60	60
E									~15	60	60	60

v0.8-sprites



Notes: Actions are much much faster than v0.7.x.
See: issue 301 for more info http://code.google.com/p/cocos2d-iphone/issues/detail?id=301

cocos2d for iPhone performance tests. V0.7.3

Tests

A set randomly the position of the sprites. All the positions are inside of the screen
B set randomly the position / scale of the sprites. All the positions are inside of the screen
C set randomly the position / scale / rotation of the sprites. All the positions are inside of the screen
D All sprites are rendered outside the screen
E 80% of the sprites are positioned outside the screen. The other 20% is inside the screen
F Perform transform Scale and Rotate actions to all sprites. 100% of the sprites inside the screen
G Perform transform Scale and Rotate actions to all sprites. 20% of the sprites inside the screen

Subtests

1 1 PNG sprite of 52x139 pixels (32-bit texture)
2 A PNG atlas of 1 sprite of 52x139 pixels (32-bit texture)
3 A PNG atlas of 1 sprite of 52x139 pixels (16-bit texture)
4 A PVRTC atlas of 1 sprite of 52x139 pixels (4-bit texture)
5 14 PNG sprites of 85 x 121 each (32-bit texture)
6 1 PNG atlas of 14 sprites of 85 x 121 each (32-bit texture)
7 1 PNG atlas of 14 sprites of 85 x 121 each (16-bit texture)
8 1 PVRTC atlas of 14 sprites of 85x121 each (4-bit texture)
9 64 PNG sprites of 32x32 each (32-bit Texture)
10 1 PNG atlas of 64 sprites of 32x32 each (32-bit Texture)
11 1 PNG atlas of 64 sprites of 32x32 each (16-bit Texture)
12 1 PVRTC atlas of 64 sprites of 32x32 each (4-bit texture)

All tests were done using firmware v3.0 beta 5, in an iPod Touch 2nd generation

250 sprites

Fast Director	1	2	3	4	5	6	7	8	9	10	11	12
A	~16	~17	~18	~22	12	~12	~14	~16	~46	60	60	60
B	~16	~17	~18	~22	~12	~12	~15	~17	~45	60	60	60
C	~16	~17	~18	~22	~12	~12	~13	~15	~40	60	60	60
D	~52	60	60	60	~50	60	60	60	~49	60	60	60
E	~48	60	60	60	~45	~48	~51	60	~48	60	60	60
F	~22	~24	~25	~32	~17	~17	~20	~22	~32	60	60	60
G	~33	60	60	60	~32	60	60	60	~33	60	60	60

450 sprites

Fast Director	1	2	3	4	5	6	7	8	9	10	11	12
A	~9	~9	~11	~13	~7	~7	~8	~9	~28	~45	~52	60
B	~9	~9	~11	~13	~6	~6	~7	~9	~28	~45	~51	~55
C	~8	~8	~9	11	~6	~6	~6	~8	~24	~42	~45	~51
D	~32	60	60	60	~31	60	60	60	~31	60	60	60
E	~30	~41	~43	~55	~25	~27	~32	~37	~30	60	60	60
F	~13	~14	~15	~17	~10	~10	~10	~13	~19	~44	~44	~45
G	~20	~45	~45	~46	~19	~41	~43	~45	~20	~46	~46	~47

Notes: in v0.7.3 actions seems to run a little bit slower. It might be related to SDK 3.0 beta 5
Notes: Test with Normal Director were removed

cocos2d for iPhone performance tests. V0.7.2

Tests

A set randomly the position of the sprites. All the positions are inside of the screen
B set randomly the position / scale of the sprites. All the positions are inside of the screen
C set randomly the position / scale / rotation of the sprites. All the positions are inside of the screen
D All sprites are rendered outside the screen
E 80% of the sprites are positioned outside the screen. The other 20% is inside the screen
F Perform transform Scale and Rotate actions to all sprites. 100% of the sprites inside the screen
G Perform transform Scale and Rotate actions to all sprites. 20% of the sprites inside the screen

Subtests

1 1 PNG sprite of 52x139 pixels
2 A PNG atlas of 1 sprite of 52x139 pixels
3 A PVRTC (4bpp, linear) atlas of 1 sprite of 52x139 pixels
4 14 PNG sprites of 85 x 121 each
5 1 PNG atlas of 14 sprites of 85 x 121 each
6 1 PVRTC (4bpp, linear) atlas of 14 sprites of 85x121 each
7 64 PNG sprites of 32x32 each
8 1 PNG atlas of 64 sprites of 32x32 each
9 1 PVRTC (4bpp,linear) atlas of 64 sprites of 32x32 each

All tests were done using firmware v2.2.1, in an iPod Touch 2nd generation

Normal Director

	250 sprites									450 sprites								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
A	~16	~17	~22	12	~12	~16	30	60	60	~9	~9	~13	~7	~7	~9	~24	~45	60
B	~16	~17	~22	~12	~12	~17	30	60	60	~9	~9	~13	~6	~6	~9	~24	~45	~55
C	~16	~17	~22	~12	~12	~15	30	60	60	~8	~8	11	~6	~6	~8	20	~42	~51
D	40	60	60	30	60	60	30	60	60	30	60	60	30	60	60	~26	60	60
E	~37	60	60	30	~48	60	30	60	60	~27	~41	~55	~24	~27	~37	30	60	60
F	~22	~24	~32	~17	~17	~22	30	60	60	~13	~14	~17	~10	~10	~13	15	30	30
G	~30	~50	60	~27	~50	60	~30	60	60	15	30	30	15	30	30	15	30	30

Fast Director

	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
A	~16	~17	~22	12	~12	~16	~46	60	60	~9	~9	~13	~7	~7	~9	~28	~45	60
B	~16	~17	~22	~12	~12	~17	~45	60	60	~9	~9	~13	~6	~6	~9	~28	~45	~55
C	~16	~17	~22	~12	~12	~15	~40	60	60	~8	~8	11	~6	~6	~8	~24	~42	~51
D	~52	60	60	~50	60	60	~49	60	60	~32	60	60	~31	60	60	~31	60	60
E	~48	60	60	~45	~48	60	~48	60	60	~30	~41	~55	~25	~27	~37	~30	60	60
F	~22	~24	~32	~17	~17	~22	~32	60	60	~13	~14	~17	~10	~10	~13	~19	~45	~47
G	~33	60	60	~32	60	60	~33	60	60	~20	~45	~47	~19	~42	~47	~20	~48	~50

cocos2d for iPhone performance tests. V0.7.1

Tests

A set randomly the position of the sprites. All the positions are inside of the screen
B set randomly the position / scale of the sprites. All the positions are inside of the screen
C set randomly the position / scale / rotation of the sprites. All the positions are inside of the screen
D All sprites are rendered outside the screen
E 80% of the sprites are positioned outside the screen. The other 20% is inside the screen
F Perform transform Scale and Rotate actions to all sprites. 100% of the sprites inside the screen
G Perform transform Scale and Rotate actions to all sprites. 20% of the sprites inside the screen

Subtests

1 1 PNG sprite of 52x139 pixels
2 A PNG atlas of 1 sprite of 52x139 pixels
3 A PVRTC (4bpp, linear) atlas of 1 sprite of 52x139 pixels
4 14 PNG sprites of 85 x 121 each
5 1 PNG atlas of 14 sprites of 85 x 121 each
6 1 PVRTC (4bpp, linear) atlas of 14 sprites of 85x121 each
7 64 PNG sprites of 32x32 each
8 1 PNG atlas of 64 sprites of 32x32 each
9 1 PVRTC (4bpp,linear) atlas of 64 sprites of 32x32 each

All tests were done using firmware v2.2.1

iPod Touch 2nd gen	250 sprites									450 sprites								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
A	~16	~17	~22	12	~12	~16	30	60	60	~9	~9	~13	~7	~7	~9	~24	~45	60
B	~16	~17	~22	~12	~12	~17	30	60	60	~9	~9	~13	~6	~6	~9	~24	~45	~55
C	~16	~17	~22	~12	~12	~15	30	60	60	~8	~8	11	~6	~6	~8	20	~42	~51
D	40	60	60	40	60	60	34	60	60	30	60	60	30	60	60	~26	60	60
E	~37	60	60	30	~48	60	30	60	60	30	~41	~55	20	~27	~37	~26	60	60
F	20	~24	30	~17	~17	~22	20	30	30	~13	~14	~17	~10	~10	~13	15	30	30
G	~22	30	30	~22	30	30	~22	30	30	15	~25	~28	15	~23	~26	15	30	30

iPhone 1st gen	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
A	~14	~15	~21	~10	~10	~16	30	60	60	~8	~9	~13	~6	~6	~8	20	~40	~51
B	~14	~14	~21	~10	~10	~16	30	60	60	~8	~8	~11	~5	~6	~8	~18	~38	~50
C	~13	~14	~18	~9	~10	~13	~26	~55	60	~7	~7	~10	~5	~5	~7	~16	~36	~46
D	30	60	60	30	60	60	30	60	60	20	60	60	20	60	60	20	60	60
E	30	60	60	~30	~42	~55	30	60	60	20	~36	~50	~17	~24	~34	20	60	60
F	~16	~20	~23	~13	~15	~18	20	30	30	~10	~12	~15	~8	~9	~11	~12	20	20
G	20	~30	30	20	~30	30	20	30	30	12	20	20	~11	20	20	12	20	20

iPod Touch 1st gen	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
A	~14	~15	~21	~10	~10	~15	30	60	60	~8	~9	~12	~6	~6	~8	20	~40	~51
B	~13	~14	~20	~10	~10	~16	30	60	60	~7	~8	~11	~5	~6	~8	~18	~38	~50
C	~13	~14	~18	~9	~10	~13	~25	~55	60	~7	~7	~10	~5	~5	~7	15	~36	~46
D	30	60	60	30	60	60	30	60	60	20	60	60	20	60	60	20	60	60
E	30	60	60	~30	~40	~55	30	60	60	20	~36	~50	~17	~24	~34	20	60	60
F	~16	~20	~23	~13	~15	~18	20	30	30	~10	~12	~15	~8	~9	~11	~12	20	20
G	20	~30	30	20	~30	30	20	30	30	12	20	20	~11	20	20	12	20	20