

Jonathan Piatos  
Carlos Agudo  
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## Usability-metrics

This experiments aims to obtain some evidence of usability by measuring a set of tasks performed on Call of Duty Black Ops. and Modern Warfare 2 for Xbox 360

### Test Procedures for Users:

- User must start a new game from the title menu. If their is a previous save file, the user overwrite the file.
- User must pause the game prior to the start of the tutorial/ mission in order to change the brightness settings. Users can access these changes by going under "Options"
- User must complete Tutorial (In Modern Warfare 2)/ First Mission (In Black Ops).

		EFFICIENCY			LEARNABILITY	
	Sub	BLACK OPS.	M.W.2	Sub	BLACK OPS.	M.W.2
User must start a new game from the menu	#1	4.0	4.0	#4	14.5	11.7
	#2	5.4	5.1	#5	15.0	4.5
	#3	3.3	3.5	#6	15.3	11.6
		time in sec	time in sec		time in sec	time in sec
User must change the brightness settings	#1	6.0	3.4	#4	10.5	14.6
	#2	5.2	3.2	#5	9.0	7.5
	#3	4.2	3.5	#6	11.0	13.5
		time in sec	time in sec		time in sec	time in sec

		EFFICIENCY			LEARNABILITY	
User must complete either tutorial/ first mission	#1	2.32.7	2.40.0	#4	6.36.0	8.24.5
	#2	2.40.0	3.59.0	#5	4.10.0	9.50.0
	#3	2.16.3	4.15.1	#6	5.16.4	10.17.6
		time in min.sec	time in min.sec		time in min.sec	time in min.sec
		SATISFACTION				
User was asked to rate his satisfaction	#1	5	4	#4	4	7
	#2	7	7	#5	5	8
	#3	8	7	#6	5	6

### **AVERAGES**

	EFFICIENCY		LEARNABILITY	
	BLACK OPS.	M.W.2	BLACK OPS	M.W.2
Task 1	4.3 s	4.2 s	15.0 s	9.27 s
Task 2	5.1 s	3.4 s	10.2 s	11.7 s
Task 3	2 min 44.6 s	4 min 16.6 s	5 min 44.0 s	9 min 43.6 s
	time in min.sec	time in min.sec	time in min.sec	time in min.sec
	SATISFACTION			
	6.7	6	4.7	6

### **CONCLUSION**

-Efficient users showed very similar results when performing tasks 1 and 2 which are related to menu navigation. This means that there is no strong interface usability difference in between Black Ops and M.W.2 for experienced users.

-Beginner users took less time to learn how to perform basic menu navigation on M.W. 2 than in Black Ops. This can lead to the conclusion that M.W.2 provided a better learnability for menu navigation.

-There was a bigger difference on the timing between beginners and experienced users for the M.W.2 tutorial than for the Black Ops. tutorial. This leads us to the conclusion that Black Ops. provided a tutorial with higher learnability than M.W.2.

-Efficient users rated higher on Black Ops. for satisfaction than M.W.2. Contrary, beginners rated higher on M.W.2 for satisfaction than on Black Ops.

-Taking into account all the previous conclusions, and focusing on the fact that the primary metric for video-games is satisfaction, it can be inferred that M.W. 2 is better designed to satisfy beginner users, and Black Ops. is better designed to satisfy more experienced users.