

Table 1 – Measurements results for the affected aspects before and after applying AOR methods: Prevayler project

Aspect- Oriented Refactoring Method	Aspect Name	Inheritance		Coupling		Cohesion	Size and Complexity			
		DIT	NOC	CBC	RFC	LCOO	WOC	NOA	LOC	
Introduce Aspect Protection	Before	CensorPublisherAspect	1	0	3	3	1	3	2	14
	After	CensorPublisherAspect	1	0	3	3	1	3	3	18
Introduce Aspect Protection	Before	ClockPrevayler	1	0	3	8	7	8	12	47
	After	ClockPrevayler	1	0	3	8	7	8	13	50
Delete Unreferenced Named Pointcut	Before	ThreadClockPublisher	2	0	1	5	1	5	7	45
	After	ThreadClockPublisher	2	0	1	5	1	5	6	43
Delete Unreferenced Named Pointcut	Before	BrokenClockSynch	2	0	1	0	1	0	2	10
	After	BrokenClockSynch	2	0	1	0	0	0	1	7
Delete Unreachable Advice	Before	POBOXClock	1	0	2	3	0	3	2	18
	After	POBOXClock	1	0	2	2	0	2	2	15
Push Down Inter-Type Declaration	Before	SynchMethods	1	7	2	2	3	2	1	20
		ThreadTransientLogger	2	0	1	2	0	2	5	25
	After	SynchMethods	1	7	1	1	1	1	1	17
		ThreadTransientLogger	2	0	1	3	1	3	5	28

Table 1 – Continued

Aspect- Oriented Refactoring Method	Aspect Name	Inheritance		Coupling		Cohesion	Size and Complexity			
		DIT	NOC	CBC	RFC	LCOO	WOC	NOA	LOC	
Inline Method Into Advice	Before	ServerListenerThread	1	0	1	2	1	2	3	14
	After	ServerListenerThread	1	0	1	1	0	1	3	11
Introduce Aspect Protection	Before	SnapshotPrevaylerAspect	1	0	1	2	0	3	1	22
	After	SnapshotPrevaylerAspect	1	0	1	2	0	3	2	25
Introduce Aspect Protection	Before	ClockTransactionTimeStamp	1	0	1	2	1	2	1	14
	After	ClockTransactionTimeStamp	1	0	1	2	1	2	2	19
Extract Method form Advice	Before	BankFrameClock	1	0	1	2	0	2	3	15
	After	BankFrameClock	1	0	1	3	1	3	3	18
Generalize before or after advice to Around	Before	DemoWeave	1	0	1	4	2	4	2	20
	After	DemoWeave	1	0	1	3	1	3	2	19
Pull Up Inter-Type Declaration	Before	POBOXThread	2	0	2	6	4	6	10	46
		SynchMethods	1	7	2	1	1	1	2	11
	After	POBOXThread	2	0	1	5	3	5	10	41
		SynchMethods	1	7	3	2	3	2	2	15

Table 1 – Continued

Aspect- Oriented Refactoring Method	Aspect Name	Inheritance		Coupling		Cohesion	Size and Complexity			
		DIT	NOC	CBC	RFC	LCOO	WOC	NOA	LOC	
Move Static Introduction	Before	CensorPublisherAspect	1	0	3	3	1	3	3	21
		CensorPublisherThread	1	0	2	4	3	4	4	30
	After	CensorPublisherAspect	1	0	2	2	0	2	3	17
		CensorPublisherThread	1	0	2	5	3	5	4	34
Pull Up Declare Parents	Before	ThreadAbstractPublisher	2	0	2	0	0	0	2	8
		SynchMethods	1	7	2	1	1	1	1	17
	After	ThreadAbstractPublisher	2	0	1	0	0	0	1	7
		SynchMethods	1	7	2	1	1	1	2	18
Push Down PointCut	Before	SynchMethods	1	7	3	3	1	3	3	25
		BrokenClockSynch	2	0	1	0	0	0	1	7
	After	SynchMethods	1	7	3	3	1	3	2	23
		BrokenClockSynch	2	0	1	0	0	0	2	9
Push Down Advice	Before	SynchMethods	1	7	3	3	1	3	2	23
		BrokenClockSynch	2	0	1	0	0	0	2	8
	After	SynchMethods	1	7	3	2	0	2	2	19
		BrokenClockSynch	2	0	1	1	1	1	2	12

