

Socio-technical analysis result (GRUB)

	range.date	devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover
1	2013-05 – 2013-08	46	32	6	8	0.6957	0.1304	0.1739	3	0.0652	0	0.0000	9	17	16	2	2	0	10	0	2	0.0000	0.7857	0.0000	0.0000
2	2013-08 – 2013-11	86	54	17	15	0.6279	0.1977	0.1744	9	0.1047	3	0.0938	15	29	27	8	13	0	19	0	13	0.0000	0.5769	0.2424	0.1739
3	2013-11 – 2014-02	65	49	4	12	0.7538	0.0615	0.1846	2	0.0308	0	0.0000	12	27	26	5	2	0	25	0	11	0.5000	0.8011	0.7285	0.9583
4	2014-02 – 2014-04	32	25	2	5	0.7812	0.0625	0.1562	3	0.0938	0	0.0000	7	15	15	0	0	3	14	1	0	1.0000	1.0000	1.0928	1.1304
5	2014-04 – 2014-08	50	44	2	4	0.8800	0.0400	0.0800	0	0.0000	0	0.0000	5	20	20	0	0	0	22	0	0	1.0000	1.0000	0.5122	0.7692
6	2014-08 – 2014-11	34	27	0	7	0.7941	0.0000	0.2059	2	0.0588	0	0.0000	11	16	16	0	0	0	13	0	0	1.0000	1.0000	0.9286	0.6154
7	2014-11 – 2015-02	52	43	2	7	0.8269	0.0385	0.1346	1	0.0192	0	0.0000	7	26	26	2	0	0	0	0	1	0.6667	0.9259	0.4651	0.5000
8	2015-02 – 2015-05	50	34	3	13	0.6800	0.0600	0.2600	7	0.1400	0	0.0000	10	22	22	2	0	0	0	0	1	0.6667	0.9583	0.5686	0.4800
9	2015-05 – 2015-07	43	31	2	10	0.7209	0.0465	0.2326	5	0.1163	0	0.0000	18	20	20	2	0	0	16	0	1	0.8000	0.9500	0.7097	0.7857
10	2015-07 – 2015-10	64	53	2	9	0.8281	0.0312	0.1406	4	0.0625	0	0.0000	10	24	24	1	0	0	11	0	0	1.0000	1.0000	0.3738	0.6957
11	2015-10 – 2016-02	64	51	4	9	0.7969	0.0625	0.1406	3	0.0469	1	0.0769	15	28	28	5	2	0	21	0	4	0.5556	0.8291	0.6094	0.5000
12	2016-02 – 2016-05	62	47	3	12	0.7581	0.0484	0.1935	3	0.0484	0	0.0000	11	24	24	1	0	0	19	0	0	1.0000	1.0000	0.6190	0.6429

	core.global.turnover	core.mail.turnover	core.code.turnover	ratio.smelly.quitters	ratio.smelly.devs	global.truck	mail.truck	code.truck	closeness.centri	betweenness.centri	degree.centri	global.mod	mail.mod	code.mod	density	mail.only.core.devs	code.only.core.devs	ml.code.core.devs	ratio.mail.only.core	ratio.code.only.core	ratio.ml.code.core
1	0.0000	0.0000	0.0000	0.0000	0.2609	0.6304	0.6000	0.8571	0.0647	0.4472	0.6618	0.4777	0.1998	-0.4924	0.1159	15	1	1	0.8824	0.0588	0.0588
2	0.4783	0.4651	0.0000	0.1875	0.3605	0.6628	0.6087	0.7500	0.0293	0.4944	0.6897	0.3518	0.1565	-0.3024	0.0632	24	5	3	0.7500	0.1562	0.0938
3	0.5000	0.4906	0.6154	0.4000	0.4769	0.5846	0.5738	0.6875	0.1035	0.5274	0.7276	0.0076	0.1280	-0.3006	0.1005	21	0	5	0.8077	0.0000	0.1923
4	0.9524	0.9268	2.0000	0.3962	0.4688	0.5312	0.5000	1.0000	0.1414	0.4721	0.5101	0.0300	0.0300	0.0000	0.1028	15	0	0	1.0000	0.0000	0.0000
5	0.5714	0.5714	0.0000	0.3810	0.4400	0.6000	0.5833	1.0000	0.0510	0.3929	0.4882	0.1456	0.1456	0.0000	0.0833	20	0	0	1.0000	0.0000	0.0000
6	0.7778	0.7778	0.0000	0.4103	0.3824	0.5294	0.5294	1.0000	0.1657	0.6880	0.6881	0.1624	0.1624	0.0000	0.0998	16	0	0	1.0000	0.0000	0.0000
7	0.4762	0.4762	0.0000	0.4000	0.0385	0.5000	0.4800	0.7778	0.1477	0.5767	0.5377	0.5096	0.5311	-0.3815	0.0701	25	1	1	0.9259	0.0370	0.0370
8	0.6667	0.6667	0.0000	0.0345	0.0400	0.5600	0.5319	0.8750	0.1058	0.5483	0.7543	0.4613	0.4579	0.0680	0.1029	20	0	2	0.9091	0.0000	0.0909
9	0.6190	0.6190	0.0000	0.0303	0.3721	0.5349	0.5122	0.8333	0.1719	0.6916	0.8095	0.1769	0.1270	-0.4006	0.0952	18	0	2	0.9000	0.0000	0.1000
10	0.5909	0.5909	0.6667	0.4000	0.1719	0.6250	0.6129	0.9091	0.0777	0.6420	0.7163	0.3551	0.3540	-0.5000	0.0774	23	0	1	0.9583	0.0000	0.0417
11	0.5769	0.5769	0.0000	0.1795	0.3906	0.5625	0.5333	0.6154	0.0615	0.5885	0.7669	0.1601	0.1724	-0.2611	0.0744	23	0	5	0.8214	0.0000	0.1786
12	0.6923	0.6923	1.3333	0.3077	0.3065	0.6129	0.5932	0.9333	0.1089	0.7106	0.8091	0.2311	0.2311	-0.5000	0.0762	23	0	1	0.9583	0.0000	0.0417

Community smells: Pearson’s correlation (GRUB)

		devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover
org.silo		0.72	0.45	0.98	0.57	-0.63	0.88	-0.01	0.65	0.24	0.96	0.81	0.40	0.50	0.39	0.83	-	-0.13	0.28	-0.13	0.82	-0.72	-0.90	-0.51
prima.donnas		-0.46	-0.48	-0.14	-0.40	0.08	-0.01	-0.11	-0.06	0.22	-0.12	-0.13	-0.32	-0.48	-0.48	-0.30	-0.13	-	-0.01	1.00	-0.19	0.27	0.23	0.65
radio.silence		0.33	0.37	0.22	0.06	0.10	0.14	-0.29	-0.15	-0.33	0.27	0.33	0.32	0.20	0.17	0.31	0.28	-0.01	-	-0.02	0.44	-0.00	-0.25	0.09
black.cloud		-0.48	-0.52	-0.13	-0.42	0.06	0.02	-0.11	-0.07	0.22	-0.13	-0.15	-0.34	-0.55	-0.57	-0.30	-0.13	1.00	-0.02	-	-0.20	0.27	0.22	0.65
missing.links		0.73	0.52	0.79	0.63	-0.53	0.69	0.05	0.44	0.06	0.73	0.64	0.44	0.64	0.54	0.92	0.82	-0.19	0.44	-0.20	-	-0.69	-0.89	-0.35
		core.global.turnover	core.mail.turnover	core.code.turnover	ratio.smelly.quitters	ratio.smelly.devs	global.truck	mail.truck	code.truck	closeness.centr	betweenness.centr	degree.centr	global.mod	mail.mod	code.mod	density	mail.only.core.devs	code.only.core.devs	ml.code.core.devs	ratio.mail.only.core	ratio.code.only.core	ratio.ml.code.core		
org.silo		-0.42	-0.45	-0.22	-0.21	0.17	0.59	0.42	-0.42	-0.58	-0.28	0.08	0.14	-0.20	-0.13	-0.42	0.31	0.95	0.39	-0.75	0.92	0.29		
prima.donnas		0.76	0.73	0.77	0.25	0.33	-0.30	-0.38	0.37	0.26	-0.28	-0.48	-0.41	-0.42	0.37	0.28	-0.47	-0.13	-0.31	0.35	-0.14	-0.34		
radio.silence		-0.09	-0.11	0.16	0.15	0.89	0.39	0.42	-0.18	-0.34	-0.09	0.15	-0.77	-0.80	-0.08	-0.15	0.02	0.05	0.40	-0.27	-0.00	0.34		
black.cloud		0.76	0.73	0.77	0.25	0.32	-0.28	-0.37	0.37	0.25	-0.34	-0.49	-0.41	-0.42	0.36	0.38	-0.58	-0.12	-0.33	0.34	-0.12	-0.34		
missing.links		-0.55	-0.58	-0.19	-0.11	0.30	0.44	0.34	-0.67	-0.46	-0.26	0.19	-0.12	-0.24	-0.14	-0.24	0.34	0.68	0.72	-0.89	0.65	0.66		

Community smells: Pearson's correlation - p-values (GRUB)

	devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover																	
org.silo	0.01	0.15	0.00	0.05	0.03	0.00	0.97	0.02	0.46	0.00	0.00	0.20	0.10	0.21	0.00	-	0.68	0.39	0.70	0.00	0.01	0.00	0.11	0.05																	
prima.donnas	0.13	0.12	0.67	0.19	0.79	0.96	0.73	0.85	0.50	0.71	0.68	0.31	0.11	0.11	0.35	0.68	-	0.98	0.00	0.55	0.39	0.46	0.03	0.05																	
radio.silence	0.29	0.24	0.50	0.85	0.77	0.67	0.36	0.65	0.29	0.39	0.29	0.31	0.53	0.59	0.33	0.39	0.98	-	0.95	0.15	1.00	0.43	0.79	0.45																	
black.cloud	0.13	0.10	0.71	0.20	0.86	0.95	0.75	0.84	0.52	0.70	0.66	0.31	0.08	0.07	0.36	0.70	0.00	0.95	-	0.56	0.42	0.52	0.03	0.05																	
missing.links	0.01	0.08	0.00	0.03	0.07	0.01	0.87	0.15	0.84	0.01	0.02	0.15	0.03	0.07	0.00	0.00	0.55	0.15	0.56	-	0.01	0.00	0.29	0.34																	
		core.global.turnover		core.mail.turnover		core.code.turnover	ratio.smelly.quitters		ratio.smelly.devs		global.truck		mail.truck		code.truck		closeness.cent		betweenness.cent		degree.cent		global.mod		mail.mod		code.mod		density		mail.only.core.devs		code.only.core.devs		ml.code.core.devs		ratio.mail.only.core		ratio.code.only.core		ratio.ml.code.core
org.silo		0.20	0.17	0.51	0.53	0.59	0.04	0.17	0.18	0.05	0.38	0.81	0.66	0.52	0.68	0.18	0.32	0.00	0.22	0.00	0.00	0.37																			
prima.donnas		0.01	0.01	0.01	0.46	0.30	0.35	0.23	0.24	0.41	0.37	0.11	0.18	0.18	0.23	0.39	0.13	0.69	0.32	0.27	0.66	0.28																			
radio.silence		0.78	0.75	0.64	0.66	0.00	0.21	0.17	0.57	0.28	0.78	0.64	0.00	0.00	0.80	0.65	0.94	0.89	0.20	0.40	0.99	0.28																			
black.cloud		0.01	0.01	0.01	0.46	0.33	0.40	0.26	0.26	0.46	0.31	0.13	0.21	0.20	0.27	0.25	0.06	0.73	0.32	0.30	0.72	0.30																			
missing.links		0.08	0.06	0.57	0.74	0.34	0.15	0.28	0.02	0.13	0.41	0.56	0.70	0.45	0.66	0.45	0.28	0.01	0.01	0.00	0.02	0.02																			

Community smells: Spearman’s correlation (GRUB)

		devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover																				
org.silo		0.58	0.51	0.87	0.42	-0.46	0.76	-0.06	0.21	0.01	0.71	0.71	0.44	0.56	0.50	0.78	-	-0.21	0.38	-0.19	0.87	-0.86	-0.86	-0.20																				
prima.donnas		-0.48	-0.48	-0.23	-0.40	0.04	0.26	-0.13	0.00	0.22	-0.13	-0.13	-0.35	-0.48	-0.48	-0.40	-0.21	-	-0.04	1.00	-0.32	0.32	0.32	0.50																				
radio.silence		0.40	0.40	0.26	0.10	0.11	0.24	-0.13	-0.22	-0.41	0.35	0.35	0.37	0.33	0.31	0.17	0.38	-0.04	-	-0.10	0.20	-0.02	-0.08	0.16																				
black.cloud		-0.50	-0.50	-0.21	-0.40	0.00	0.35	-0.10	0.00	0.20	-0.15	-0.15	-0.35	-0.50	-0.50	-0.41	-0.19	1.00	-0.10	-	-0.32	0.32	0.31	0.50																				
missing.links		0.55	0.42	0.80	0.56	-0.58	0.67	0.11	0.29	0.12	0.62	0.62	0.52	0.65	0.60	0.96	0.87	-0.32	0.20	-0.32	-	-0.96	-0.97	-0.26																				
			core.global.turnover		core.mail.turnover		core.code.turnover		ratio.smelly.quitters		ratio.smelly.devs		global.truck		mail.truck		code.truck		closeness.centr		betweenness.centr		degree.centr		global.mod		mail.mod		code.mod		density		mail.only.core.devs		code.only.core.devs		ml.code.core.devs		ratio.mail.only.core		ratio.code.only.core		ratio.ml.code.core	
org.silo		-0.53	-0.61	-0.17	-0.15	0.22	0.55	0.45	-0.71	-0.65	-0.37	0.08	-0.07	-0.16	-0.10	-0.14	0.19	0.52	0.66	-0.84	0.55	0.65																						
prima.donnas		0.50	0.50	0.58	0.10	0.39	-0.31	-0.39	0.40	0.22	-0.31	-0.39	-0.39	-0.48	0.31	0.31	-0.44	-0.17	-0.40	0.40	-0.17	-0.40																						
radio.silence		-0.25	-0.30	0.07	-0.13	0.80	0.29	0.25	-0.19	-0.39	-0.09	0.16	-0.80	-0.63	0.07	-0.25	0.12	-0.30	0.29	-0.21	-0.29	0.32																						
black.cloud		0.50	0.50	0.58	0.10	0.40	-0.30	-0.40	0.40	0.20	-0.40	-0.40	-0.40	-0.50	0.30	0.40	-0.51	-0.15	-0.41	0.40	-0.15	-0.40																						
missing.links		-0.65	-0.68	-0.42	-0.36	0.03	0.28	0.15	-0.91	-0.40	-0.24	0.26	0.09	-0.05	-0.04	-0.14	0.30	0.53	0.85	-0.97	0.54	0.82																						

Community smells: Spearman's correlation - p-values (GRUB)

	devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover																			
org.silo	0.05	0.09	0.00	0.18	0.13	0.00	0.85	0.51	0.97	0.01	0.01	0.15	0.06	0.10	0.00	-	0.51	0.22	0.57	0.00	0.00	0.00	0.55	0.39																			
prima.donnas	0.11	0.11	0.48	0.20	0.89	0.41	0.68	1.00	0.50	0.68	0.68	0.26	0.11	0.11	0.19	0.51	-	0.89	0.00	0.31	0.31	0.32	0.12	0.12																			
radio.silence	0.20	0.19	0.42	0.76	0.74	0.45	0.68	0.50	0.18	0.27	0.27	0.24	0.29	0.32	0.59	0.22	0.89	-	0.77	0.53	0.94	0.80	0.63	0.32																			
black.cloud	0.12	0.12	0.53	0.22	1.00	0.29	0.77	1.00	0.56	0.66	0.66	0.29	0.12	0.11	0.21	0.57	0.00	0.77	-	0.34	0.34	0.35	0.12	0.12																			
missing.links	0.06	0.18	0.00	0.06	0.05	0.02	0.74	0.35	0.70	0.03	0.03	0.08	0.02	0.04	0.00	0.00	0.31	0.53	0.34	-	0.00	0.00	0.44	0.23																			
		core.global.turnover		core.mail.turnover		core.code.turnover	ratio.smelly.quitters		ratio.smelly.devs		global.truck		mail.truck		code.truck		closeness.cent		betweenness.cent		degree.cent		global.mod		mail.mod		code.mod		density		mail.only.core.devs		code.only.core.devs		ml.code.core.devs		ratio.mail.only.core		ratio.code.only.core		ratio.ml.code.core		
org.silo		0.09	0.05	0.61	0.65	0.49	0.06	0.15	0.01	0.02	0.24	0.80	0.84	0.61	0.75	0.67	0.55	0.09	0.02	0.00	0.07	0.02																					
prima.donnas		0.12	0.12	0.06	0.77	0.21	0.33	0.21	0.20	0.50	0.33	0.21	0.21	0.11	0.33	0.33	0.15	0.59	0.19	0.20	0.59	0.20																					
radio.silence		0.46	0.37	0.83	0.71	0.00	0.36	0.44	0.55	0.21	0.77	0.61	0.00	0.03	0.84	0.43	0.72	0.34	0.35	0.51	0.35	0.31																					
black.cloud		0.12	0.12	0.06	0.77	0.22	0.37	0.22	0.22	0.56	0.22	0.22	0.22	0.12	0.36	0.22	0.11	0.66	0.21	0.22	0.66	0.22																					
missing.links		0.03	0.02	0.19	0.28	0.93	0.37	0.65	0.00	0.20	0.45	0.42	0.77	0.87	0.91	0.67	0.35	0.08	0.00	0.00	0.07	0.00																					