CodeSonar Analysis Report

generated by Administrator on Wed Aug 23 15:52:54 2017

for analysis extended-rf analysis 1

Summary

Table 1: extended-rf analysis 1 Summary

Active Warnings	File Count	Project Name	Time Started	Time Finished	Machine
138	259	extended-rf	Tue Jul 11 16:34:27 2017	Tue Jul 11 16:37:03 2017	eduECFA.kent.ac.uk

Warnings

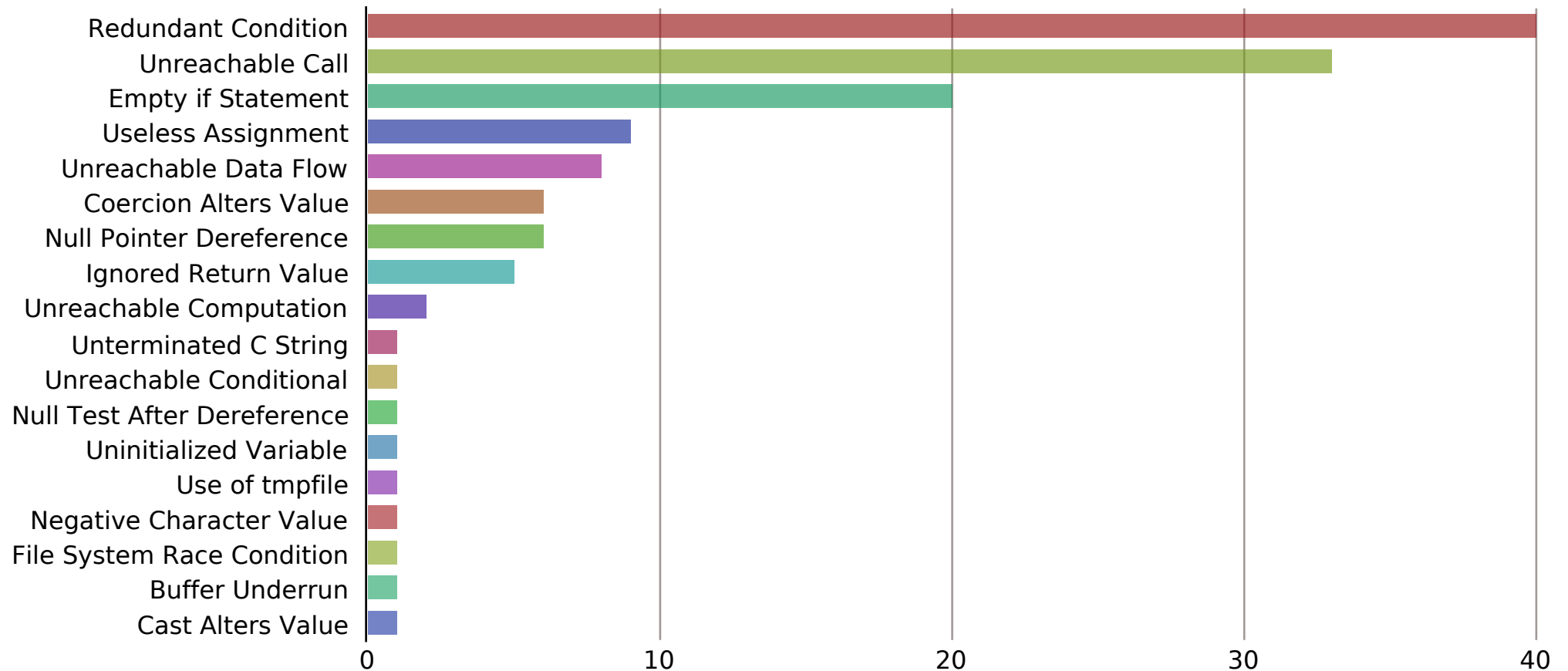## Figure 1: extended-rf analysis 1, Warnings by Class

Table 2: extended-rf analysis 1, Warnings by Class

Warning Class	Active Warnings
Redundant Condition	40
Unreachable Call	33
Empty if Statement	20
Useless Assignment	9
Unreachable Data Flow	8
Coercion Alters Value	6
Null Pointer Dereference	6
Ignored Return Value	5
Unreachable Computation	2
Cast Alters Value	1
Uninitialized Variable	1
Unreachable Conditional	1
Unterminated C String	1
Buffer Underrun	1
Use of tmpfile	1
File System Race Condition	1

Warning Class	Active Warnings
Null Test After Dereference	1
Negative Character Value	1

Table 3: extended-rf analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
extended-rf-api.c	57	510	C
collect.c	9	1558	C
framer-802154.c	6	274	C
eeprom.c	6	166	C
nbr-table.c	5	483	C
nullrdc.c	5	368	C
csma.c	4	507	C
cfs-posix.c	3	108	C
phase.c	3	252	C
contiki-main.c	3	314	C
ctk.c	3	1933	C
rtimer.c	2	108	C

File	Active Warnings	Total Lines	Language
frame802154e-ie.c	2	585	C
rudolph2.c	2	407	C
rudolph1.c	2	338	C
nullrdc-noframer.c	2	112	C
tapdev.c	2	213	C
ctimer.c	2	175	C
polite.c	1	144	C
collect-link-estimate.c	1	139	C
route.c	1	292	C
list.c	1	330	C
runicast.c	1	250	C
netflood.c	1	184	C
serial-line.c	1	137	C
tapdev-drv.c	1	111	C
trickle.c	1	210	C
linkaddr.c	1	80	C
collect-neighbor.c	1	436	C

File	Active Warnings	Total Lines	Language
neighbor-discovery.c	1	196	C
frame802154.c	1	623	C
rucb.c	1	170	C
ifft.c	1	168	C
etimer.c	1	272	C
sensors.c	1	137	C
slip.c	1	457	C
random.c	1	54	C
ctk-filedialog.c	1	177	C
mt.c	0	109	C
polite-announcement.c	0	197	C
tapdev.h	0	44	C
broadcast-announcement.c	0	235	C
announcement.c	0	153	C
petsciiconv.c	0	119	C
chameleon-bitopt.c	0	395	C
autostart.c	0	72	C

File	Active Warnings	Total Lines	Language
linuxradio-drv.c	0	210	C
ringbuf.c	0	123	C
ccm-star-packetbuf.c	0	82	C
assert.c	0	41	C
queuebuf.c	0	473	C
packetqueue.c	0	152	C
ccm-star-packetbuf.h	0	48	C
ipolite.c	0	183	C
uip-udp-packet.h	0	49	C
ccm-star.h	0	82	C
phase.h	0	66	C
broadcast.c	0	119	C
ctk-textentry-multiline.h	0	40	C
ctk-textentry-multiline.c	0	93	C
ctk-textentry-cmdline.h	0	42	C
ctk.h	0	989	C
ctk-textentry-checkbox.c	0	62	C

File	Active Warnings	Total Lines	Language
anti-replay.h	0	80	C
packetbuf.c	0	254	C
watchdog.c	0	63	C
stbroadcast.c	0	120	C
watchdog.h	0	42	C
symbols.h	0	44	C
stbroadcast.h	0	153	C
tapdev-drv.h	0	43	C
mac-sequence.h	0	66	C
process.c	0	388	C
unicast.c	0	123	C
link-stats.c	0	211	C
mac-sequence.c	0	124	C
link-stats.h	0	65	C
chameleon-raw.c	0	215	C
ctk-textentry-checkbox.h	0	40	C
frame802154e-ie.h	0	120	C

File	Active Warnings	Total Lines	Language
nullsec.h	0	63	C
nullsec.c	0	78	C
nordc.c	0	94	C
nullrdc.h	0	48	C
print-stats.c	0	87	C
tsch-private.h	0	126	C
tcp-socket.h	0	299	C
udp-socket.h	0	193	C
mmem.h	0	93	C
contiki-lib.h	0	43	C
psock.h	0	404	C
resolv.h	0	106	C
uip-nameserver.h	0	101	C
simple-udp.h	0	163	C
tsch-asn.h	0	97	C
uiplib.h	0	80	C
uip_arp.h	0	142	C

File	Active Warnings	Total Lines	Language
uip-fw-drv.h	0	42	C
print-stats.h	0	45	C
stunicast.c	0	176	C

(Showing 100 of 259 Files)

Table 4: extended-rf analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
68	Negative Character Value	ctk.c	textentry_input	1255	None	None
63	Uninitialized Variable	frame802154.c	frame802154_check_dest_panid	214	None	None
59	File System Race Condition	eeprom.c	eeprom_init	82	None	None
59	Unterminated C String	ctk-filedialog.c	ctk_filedialog_eventhandler	148	None	None
51	Null Test After Dereference	frame802154e-ie.c	frame80215e_create_ie_tsch_channel_hopping_sequence	303	None	None
48	Coercion Alters Value	contiki-main.c	stdin_handle_fd	135	None	None
48	Null Pointer Dereference	polite.c	recv	60	None	None
48	Coercion Alters Value	csma.c	send_packet	385	None	None
48	Null Pointer Dereference	nbr-table.c	nbr_table_add_lladdr	368	None	None
47	Coercion Alters Value	route.c	route_lookup	174	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
47	Coercion Alters Value	rucb.c	rucb_open	150	None	None
46	Null Pointer Dereference	linkaddr.c	linkaddr_copy	65	None	None
46	Null Pointer Dereference	ctk.c	select_widget	983	None	None
46	Coercion Alters Value	tapdev.c	tapdev_poll	175	None	None
45	Coercion Alters Value	ifft.c	ifft	123	None	None
44	Cast Alters Value	random.c	random_rand	52	None	None
42	Null Pointer Dereference	ctimer.c	process_thread_ctimer_process	78	None	None
40	Null Pointer Dereference	list.c	list_remove	256	None	None
39	Buffer Underrun	nbr-table.c	remove_key	195	None	None
27	Ignored Return Value	eeprom.c	eeprom_fill	60	None	None
27	Ignored Return Value	eeprom.c	eeprom_init	105	None	None
27	Ignored Return Value	eeprom.c	eeprom_read	160	None	None
27	Ignored Return Value	eeprom.c	eeprom_write	136	None	None
27	Ignored Return Value	netflood.c	recv_from_ipolite	113	None	None
21	Useless Assignment	cfs-posix.c	cfs_seek	92	None	None
21	Useless Assignment	cfs-posix.c	cfs_seek	94	None	None
21	Useless Assignment	cfs-posix.c	cfs_seek	96	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
21	Useless Assignment	collect.c	rtmetric_compute	252	None	None
21	Useless Assignment	framer-802154.c	create_frame	88	None	None
21	Useless Assignment	framer-802154.c	create_frame	90	None	None
21	Useless Assignment	framer-802154.c	create_frame	93	None	None
21	Useless Assignment	framer-802154.c	create_frame	98	None	None
21	Useless Assignment	tapdev.c	tapdev_init	141	None	None
20	Redundant Condition	collect-link-estimate.c	collect_link_estimate_update_tx	83	None	None
20	Redundant Condition	contiki-main.c	set_rime_addr	153	None	None
20	Redundant Condition	csma.c	backoff_period	160	None	None
20	Redundant Condition	csma.c	channel_check_interval	484	None	None
20	Redundant Condition	extended-rf-api.c	get_object	74	None	None
20	Redundant Condition	extended-rf-api.c	get_param	128	None	None
20	Redundant Condition	extended-rf-api.c	get_rf_consts	181	None	None
20	Redundant Condition	extended-rf-api.c	get_rf_consts	186	None	None
20	Redundant Condition	extended-rf-api.c	get_rf_consts	191	None	None
20	Redundant Condition	extended-rf-api.c	get_rf_consts	196	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	422	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
20	Redundant Condition	extended-rf-api.c	print_rf_values	431	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	436	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	441	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	446	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	451	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	469	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	474	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	479	None	None
20	Redundant Condition	extended-rf-api.c	print_rf_values	484	None	None
20	Redundant Condition	extended-rf-api.c	set_object	101	None	None
20	Redundant Condition	extended-rf-api.c	set_param	155	None	None
20	Redundant Condition	extended-rf-api.c	test_16bit_addr	382	None	None
20	Redundant Condition	extended-rf-api.c	test_64bit_addr	397	None	None
20	Redundant Condition	extended-rf-api.c	test_cca_thresholds	322	None	None
20	Redundant Condition	extended-rf-api.c	test_channels	251	None	None
20	Redundant Condition	extended-rf-api.c	test_off_on	219	None	None
20	Redundant Condition	extended-rf-api.c	test_pan_id	344	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
20	Redundant Condition	extended-rf-api.c	test_rx_modes	269	None	None
20	Redundant Condition	extended-rf-api.c	test_tx_powers	300	None	None
20	Redundant Condition	frame802154e-ie.c	frame80215e_create_ie_tsch_channel_hopping_sequence	303	None	None
20	Redundant Condition	nbr-table.c	nbr_table_allocate	234	None	None
20	Redundant Condition	nullrdc-noframer.c	send_packet	51	None	None
20	Redundant Condition	nullrdc.c	packet_input	324	None	None
20	Redundant Condition	nullrdc.c	send_one_packet	213	None	None
20	Redundant Condition	phase.c	phase_update	124	None	None
20	Redundant Condition	phase.c	phase_wait	186	None	None
20	Redundant Condition	rtimer.c	rtimer_run_next	101	None	None
20	Redundant Condition	rudolph1.c	handle_data	189	None	None
20	Redundant Condition	rudolph2.c	recv	355	None	None
18	Unreachable Call	collect.c	update_parent	318	None	None
18	Unreachable Call	collect.c	update_parent	378	None	None
18	Unreachable Call	extended-rf-api.c	get_object	75	None	None
18	Unreachable Call	extended-rf-api.c	get_object	78	None	None
18	Unreachable Call	extended-rf-api.c	get_object	86	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
18	Unreachable Call	extended-rf-api.c	get_param	129	None	None
18	Unreachable Call	extended-rf-api.c	get_param	132	None	None
18	Unreachable Call	extended-rf-api.c	get_param	140	None	None
18	Unreachable Call	extended-rf-api.c	get_rf_consts	182	None	None
18	Unreachable Call	extended-rf-api.c	get_rf_consts	187	None	None
18	Unreachable Call	extended-rf-api.c	get_rf_consts	192	None	None
18	Unreachable Call	extended-rf-api.c	get_rf_consts	197	None	None
18	Unreachable Call	extended-rf-api.c	print_rf_values	423	None	None
18	Unreachable Call	extended-rf-api.c	print_rf_values	442	None	None
18	Unreachable Call	extended-rf-api.c	print_rf_values	447	None	None
18	Unreachable Call	extended-rf-api.c	print_rf_values	452	None	None
18	Unreachable Call	extended-rf-api.c	print_rf_values	470	None	None
18	Unreachable Call	extended-rf-api.c	print_rf_values	485	None	None
18	Unreachable Call	extended-rf-api.c	set_object	102	None	None
18	Unreachable Call	extended-rf-api.c	set_object	105	None	None
18	Unreachable Call	extended-rf-api.c	set_object	113	None	None
18	Unreachable Call	extended-rf-api.c	set_param	156	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
18	Unreachable Call	extended-rf-api.c	set_param	159	None	None
18	Unreachable Call	extended-rf-api.c	set_param	167	None	None
18	Unreachable Call	extended-rf-api.c	test_16bit_addr	383	None	None
18	Unreachable Call	extended-rf-api.c	test_64bit_addr	411	None	None
18	Unreachable Call	extended-rf-api.c	test_cca_thresholds	323	None	None

(Showing 100 of 138 Warnings)

Analysis Metrics

Table 5: extended-rf analysis 1 Metrics

Metric Name	Value
Blank Lines	4495
Code Lines	19261
Comment Lines	20762
Include file instances	117
Lines with Code	20325
Lines with Comments	21826
Mixed Lines	1064
Top-level file instances	117
Total Lines	45582
User-defined functions	788

File Metrics

Table 6: extended-rf analysis 1 File Metrics Summary

Metric Name	Max	Min	Avg
Blank Lines	219	0	17.36
Code Lines	1198	2	74.37
Comment Lines	1302	0	80.16
Cyclomatic Complexity	132	0	8.57
Lines with Code	1289	2	78.47
Lines with Comments	1422	0	84.27
Mixed Lines	120	0	4.11
Modified Cyclomatic Complexity	123	0	8.23
Taint Propagator Total	3	0	0.05
Taint Sink Total	16	0	0.35
Taint Source Total	2	0	0.02
Total Lines	2219	3	175.99

Table 7: extended-rf analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
uip.h	2219	698	1422	578	1302	219
ctk.c	1933	1289	554	1198	463	181
collect.c	1558	983	436	956	409	166
ctk.h	989	467	506	376	415	107
uipopt.h	684	159	487	122	450	75
frame802154.c	623	401	194	380	173	49
frame802154e-ie.c	585	458	119	434	95	32
process.h	531	90	386	88	384	57
ctk-conio.c	530	419	71	403	55	56
ctk-curses.c	517	384	93	383	92	41
trickle-timer.h	514	76	418	65	407	31
extended-rf-api.c	510	399	52	399	52	59
csma.c	507	369	99	364	94	44
nbr-table.c	483	331	132	328	129	23
settings.c	475	284	104	281	101	90
queuebuf.c	473	365	103	345	83	25

Table 7: extended-rf analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
slip.c	457	343	90	327	74	40
collect-neighbor.c	436	312	86	310	84	40
trickle-timer.c	410	243	128	238	123	44
rudolph2.c	407	272	97	269	94	41
psock.h	404	59	321	49	311	34
chameleon-bitopt.c	395	265	104	258	97	33
process.c	388	233	113	229	109	46
tcpip.h	378	55	283	53	281	42
packetbuf.h	371	153	185	141	173	45
nullrdc.c	368	271	87	247	63	34
settings.h	352	173	134	156	117	62
rudolph1.c	338	244	69	241	66	28
ctk-draw.h	335	27	281	26	280	28
list.c	330	123	182	123	182	25
route-discovery.c	329	220	80	216	76	33
pt.h	322	57	231	56	230	35
contiki-main.c	314	213	63	209	59	42

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
tcp-socket.h	299	63	212	62	211	25
radio.h	294	62	186	61	185	47
route.c	292	191	76	185	70	31
contiki-default-conf.h	285	95	185	63	153	37
cfs.h	285	61	200	60	199	25
contiki-conf.h	275	183	57	165	39	53
framer-802154.c	274	172	80	165	73	29
announcement.h	274	35	213	34	212	27
etimer.c	272	171	74	171	74	27
mt.h	263	29	208	28	207	27
etimer.h	254	23	208	22	207	24
packetbuf.c	254	167	71	166	70	17
phase.c	252	159	71	156	68	25
runicast.c	250	168	63	166	61	21
broadcast-announcement.c	235	144	64	142	62	29
frame802154.h	230	101	138	65	102	27
packetqueue.h	222	31	168	30	167	24

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
chameleon-raw.c	215	141	64	135	58	16
tapdev.c	213	137	52	130	45	31
mesh.c	211	135	53	134	52	24
link-stats.c	211	120	77	117	74	17
linuxradio-drv.c	210	157	34	157	34	19
trickle.c	210	137	60	133	56	17
tsch-conf.h	201	97	85	90	78	26
timesynch.c	198	113	64	112	63	22
polite-announcement.c	197	119	57	117	55	23
ipolite.h	197	28	151	27	150	19
neighbor-discovery.c	196	116	57	116	57	23
elfloader.h	194	40	143	34	137	17
rime.c	194	115	66	107	58	21
udp-socket.h	193	33	147	32	146	14
polite.h	192	25	150	24	149	18
mtarch.c	185	92	66	84	58	35
netflood.c	184	116	54	116	54	14

Table 7: extended-rf analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
ipolite.c	183	118	55	118	55	10
aes-128.c	183	108	57	108	57	18
ctk-filedialog.c	177	125	39	125	39	13
ccm-star.c	177	111	50	111	50	16
uip-fw.h	176	34	127	30	123	19
stunicast.c	176	107	60	107	60	9
ctimer.c	175	112	51	112	51	12
collect.h	171	86	71	74	59	26
rucb.c	170	110	47	110	47	13
rtimer.h	169	37	115	33	111	21
ifft.c	168	94	57	93	56	18
ctimer.h	166	20	133	19	132	14
eeprom.c	166	87	51	87	51	28
cc.h	165	64	96	47	79	22
mmem.c	164	49	98	49	98	17
stimer.c	163	36	120	36	120	7
simple-udp.h	163	33	115	32	114	16

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
gcr.c	162	65	92	57	84	13
rmh.c	159	94	50	94	50	15
chameleon.c	157	100	49	94	43	14
list.h	157	30	111	29	110	17
multihop.c	156	92	52	92	52	12
energest.h	155	94	44	91	41	20
announcement.c	153	91	54	91	54	8
stbroadcast.h	153	23	113	22	112	18
packetqueue.c	152	80	58	80	58	14
timesynch.h	150	12	125	11	124	14
ringbufindex.c	149	67	78	67	78	4
timer.c	148	30	112	30	112	6
mesh.h	146	24	110	23	109	13
clock.h	146	18	115	17	114	14
polite.c	144	83	54	83	54	7
abc.h	144	21	108	20	107	16

(Showing 100 of 259 Files)