CodeSonar Analysis Report

generated by Administrator on Wed Aug 23 15:57:35 2017

for analysis trickle-library analysis 1

Summary

Table 1: trickle-library analysis 1 Summary

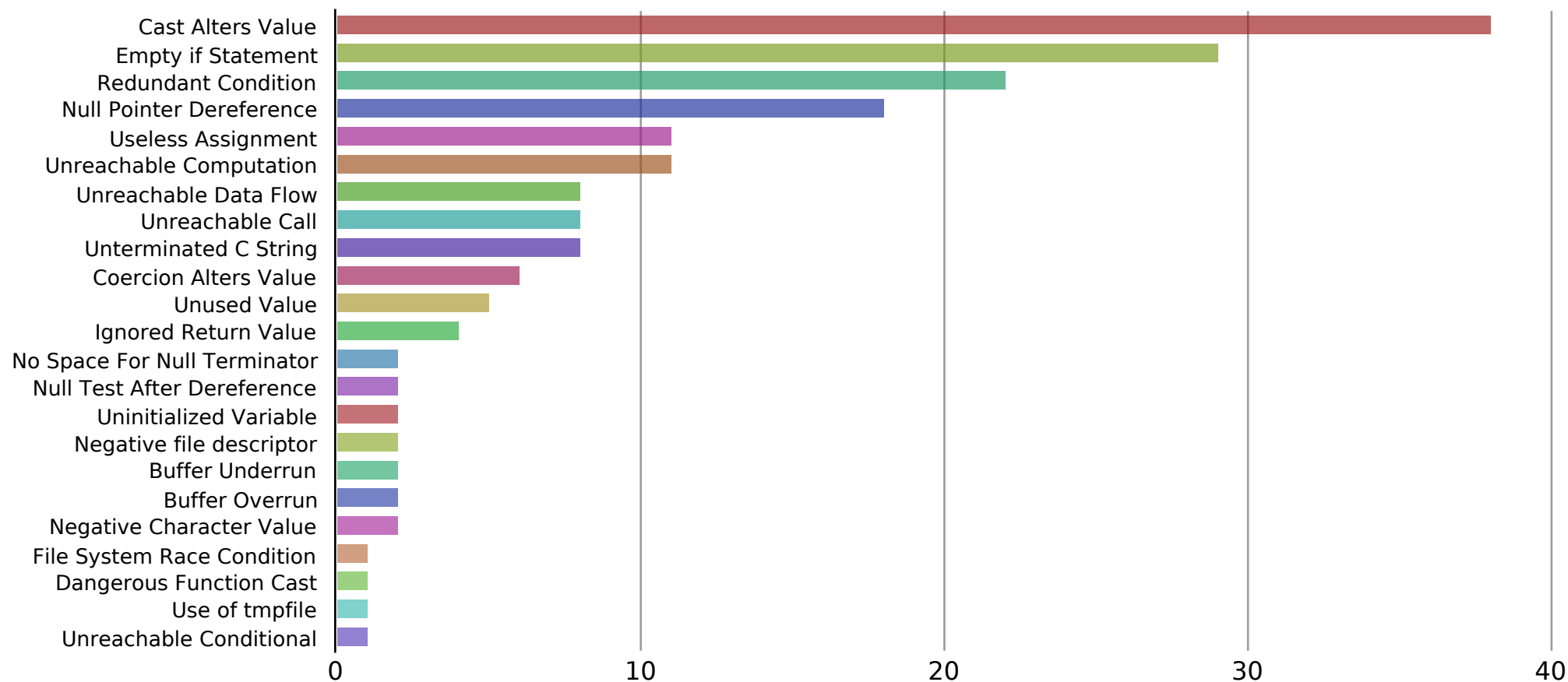| Active Warnings	File Count	Project Name	Time Started	Time Finished	Machine
186	282	trickle-library	Mon Mar 27 17:14:09 2017	Mon Mar 27 17:16:34 2017	Jacks-MBP

Warnings

Figure 1: trickle-library analysis 1, Warnings by Class

Table 2: trickle-library analysis 1, Warnings by Class

Warning Class	Active Warnings
Cast Alters Value	38
Empty if Statement	29
Redundant Condition	22
Null Pointer Dereference	18
Unreachable Computation	11
Useless Assignment	11
Unterminated C String	8
Unreachable Data Flow	8
Unreachable Call	8
Coercion Alters Value	6
Unused Value	5
Ignored Return Value	4
Uninitialized Variable	2
Null Test After Dereference	2
No Space For Null Terminator	2
Buffer Overrun	2

Warning Class	Active Warnings
Negative Character Value	2
Buffer Underrun	2
Negative file descriptor	2
Use of tmpfile	1
File System Race Condition	1
Dangerous Function Cast	1
Unreachable Conditional	1

Table 3: trickle-library analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
tapdev6.c	21	425	C
resolv.c	21	1521	C
rpl-dag.c	16	1631	C
rpl-icmp6.c	14	1367	C
rpl-ext-header.c	6	665	C
eeprom.c	6	166	C
framer-802154.c	6	274	C

File	Active Warnings	Total Lines	Language
websocket.c	5	724	C
psock.c	5	319	C
uip6.c	5	2362	C
uip-ds6.c	5	716	C
trickle-library.c	5	194	C
tcpip.c	4	849	C
csma.c	4	507	C
websocket-http-client.c	4	347	C
nbr-table.c	4	483	C
cfs-posix.c	3	108	C
phase.c	3	252	C
rpl.c	3	355	C
rpl-dag-root.c	3	268	C
ctk.c	3	1933	C
udp-socket.c	3	199	C
sicslowpan.c	2	1806	C
nullrdc-noframer.c	2	112	C

File	Active Warnings	Total Lines	Language
ip64-addr.c	2	123	C
rpl-nbr-policy.c	2	256	C
uip-icmp6.c	2	378	C
rpl-timers.c	2	497	C
rtimer.c	2	108	C
tcp-socket.c	2	409	C
contiki-main.c	2	314	C
rpl-of0.c	2	238	C
frame802154e-ie.c	2	585	C
dhcpc.c	2	431	C
slip.c	1	457	C
ifft.c	1	168	C
simple-udp.c	1	183	C
ctimer.c	1	175	C
tapdev-drv.c	1	111	C
ctk-filedialog.c	1	177	C
uip-ds6-nbr.c	1	361	C

File	Active Warnings	Total Lines	Language
frame802154.c	1	623	C
etimer.c	1	272	C
sensors.c	1	137	C
random.c	1	54	C
serial-line.c	1	137	C
uip-ds6-route.c	1	721	C
vib-sensor.c	0	73	C
vib-sensor.h	0	52	C
websocket.h	0	113	C
nullradio.h	0	8	C
ctk-conio.c	0	530	C
websocket-http-client.h	0	123	C
slipdev.h	0	87	C
slip.h	0	86	C
ifft.h	0	58	C
uip-split.h	0	95	C
nullradio.c	0	107	C

File	Active Warnings	Total Lines	Language
uip-split.c	0	158	C
pir-sensor.h	0	12	C
sensors.h	0	72	C
button-sensor.h	0	12	C
petsciiconv.c	0	119	C
irq.c	0	5	C
ccm-star.c	0	177	C
procinit.c	0	48	C
ccm-star-packetbuf.h	0	48	C
packetbuf.c	0	254	C
gcr.c	0	162	C
mt.c	0	109	C
linuxradio-drv.c	0	210	C
ctk-textentry-checkbox.c	0	62	C
watchdog.c	0	63	C
watchdog.h	0	42	C
arg.c	0	133	C

File	Active Warnings	Total Lines	Language
arg.h	0	42	C
uip-debug.c	0	94	C
linkaddr.c	0	80	C
nullrdc-noframer.h	0	48	C
rtimer-arch.c	0	92	C
leds-arch.c	0	60	C
trickle-timer.c	0	410	C
rpl-dag-root.h	0	41	C
leds.h	0	98	C
net-debug.c	0	65	C
ip64-addr.h	0	63	C
mtarch.c	0	185	C
trickle-timer.h	0	514	C
mt.h	0	263	C
ctk-filedialog.h	0	50	C
mtarch.h	0	42	C
timer.c	0	148	C

File	Active Warnings	Total Lines	Language
autostart.c	0	72	C
tapdev-drv.h	0	43	C
ctk-textentry-checkbox.h	0	40	C
ccm-star.h	0	82	C
netstack.c	0	51	C
ccm-star-packetbuf.c	0	82	C
clock.c	0	70	C
assert.c	0	41	C

(Showing 100 of 282 Files)

Table 4: trickle-library 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
68	Negative Character Value	resolv.c	dns_name_isequal	400	None	None
63	Uninitialized Variable	frame802154.c	frame802154_check_dest_panid	214	None	None
62	Uninitialized Variable	uip-ds6-route.c	uip_ds6_route_lookup	272	None	None
61	No Space For Null Terminator	resolv.c	remove_trailing_dots	1252	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
60	Unterminated C String	resolv.c	resolv_set_hostname	1095	None	None
60	Unterminated C String	resolv.c	resolv_set_hostname	1096	None	None
60	Unterminated C String	resolv.c	resolv_set_hostname	1097	None	None
60	Negative file descriptor	tapdev6.c	tapdev_init_darwin_routes	159	None	None
60	Negative file descriptor	tapdev6.c	tapdev_init_darwin_routes	188	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
58	No Space For Null Terminator	websocket.c	parse_url	143	None	None
58	Unterminated C String	resolv.c	resolv_lookup	1380	None	None
58	Unterminated C String	resolv.c	resolv_query	1287	None	None
58	Unterminated C String	resolv.c	resolv_query	1312	None	None
58	Unterminated C String	resolv.c	resolv_query	1319	None	None
54	Buffer Overrun	uip-icmp6.c	uip_icmp6_error_output	213	None	None
51	Null Test After Dereference	frame802154e-ie.c	frame80215e_create_ie_tsch_channel_hopping_sequence	303	None	None
50	Null Test After Dereference	rpl-dag.c	rpl_print_neighbor_list	110	None	None
49	Null Pointer Dereference	tcpip.c	tcpip_uipcall	792	None	None
48	Coercion Alters Value	contiki-main.c	stdin_handle_fd	135	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
48	Null Pointer Dereference	rpl-icmp6.c	dao_input_storing	667	None	None
48	Null Pointer Dereference	resolv.c	process_thread_resolv_process	1174	None	None
48	Null Pointer Dereference	trickle-library.c	process_thread_trickle_protocol_process	160	None	None
48	Null Pointer Dereference	rpl-dag-root.c	rpl_dag_root_init_dag_immediately	215	None	None
48	Null Pointer Dereference	rpl-dag.c	rpl_add_dag	1220	None	None
48	Null Pointer Dereference	rpl-dag.c	rpl_process_dio	1589	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	Null Pointer Dereference	rpl.c	rpl_remove_routes_by_nexthop	218	None	None
47	Coercion Alters Value	websocket.c	websocket_open	591	None	None
47	Null Pointer Dereference	rpl-dag.c	rpl_print_neighbor_list	106	None	None
46	Null Pointer Dereference	ctk.c	select_widget	983	None	None
46	Coercion Alters Value	uip6.c	uip_process	1546	None	None
46	Null Pointer Dereference	rpl-dag.c	rpl_print_neighbor_list	113	None	None
46	Coercion Alters Value	tapdev6.c	tapdev_poll	138	None	None
46	Null Pointer Dereference	rpl-icmp6.c	dao_input_storing	770	None	None
46	Null Pointer Dereference	rpl-dag.c	rpl_get_any_dag	1041	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
45	Coercion Alters Value	ifft.c	ifft	123	None	None
44	Cast Alters Value	random.c	random_rand	52	None	None
43	Null Pointer Dereference	uip-icmp6.c	uip_icmp6_send	281	None	None
43	Cast Alters Value	uip-ds6.c	uip_ds6_compute_reachable_time	712	None	None
42	Cast Alters Value	rpl-dag-root.c	set_global_address	153	None	None
42	Cast Alters Value	rpl.c	rpl_link_neighbor_callback	260	None	None
42	Cast Alters Value	tcpip.c	udp_broadcast_new	328	None	None
42	Cast Alters Value	rpl-icmp6.c	dis_output	268	None	None
42	Cast Alters Value	rpl.c	rpl_init	342	None	None
42	Cast Alters Value	trickle-library.c	process_thread_trickle_protocol_process	157	None	None
42	Cast Alters Value	dhcpc.c	create_msg	149	None	None
42	Cast Alters Value	tapdev6.c	tapdev_send	397	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	272	None	None
42	Cast Alters Value	trickle-library.c	process_thread_trickle_protocol_process	159	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	280	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	281	None	None
42	Cast Alters Value	resolv.c	process_thread_resolv_process	1174	None	None

Table 4: trickle-library analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	282	None	None
42	Cast Alters Value	uip-ds6.c	uip_ds6_init	118	None	None
42	Cast Alters Value	resolv.c	mdns_write_announce_records	522	None	None
42	Cast Alters Value	resolv.c	process_thread_resolv_process	1208	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	283	None	None
42	Cast Alters Value	trickle-library.c	process_thread_trickle_protocol_process	160	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	169	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	175	None	None
42	Cast Alters Value	resolv.c	newdata	907	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	177	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	179	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	181	None	None
42	Cast Alters Value	uip-ds6.c	uip_ds6_init	127	None	None
42	Cast Alters Value	uip-ds6.c	uip_ds6_init	130	None	None
42	Cast Alters Value	resolv.c	check_entries	756	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	230	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	238	None	None

Table 4: trickle-library analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	239	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	240	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	241	None	None
42	Cast Alters Value	rpl-icmp6.c	dio_output	613	None	None
42	Cast Alters Value	rpl-dag-root.c	rpl_dag_root_init_dag_immediately	224	None	None
42	Cast Alters Value	resolv.c	newdata	1070	None	None
41	Null Pointer Dereference	rpl-dag.c	rpl_select_dag	806	None	None
41	Null Pointer Dereference	rpl-dag.c	rpl_select_dag	773	None	None
39	Null Pointer Dereference	rpl-dag.c	rpl_select_dag	764	None	None
39	Buffer Underrun	nbr-table.c	remove_key	195	None	None
38	Dangerous Function Cast	uip-ds6-nbr.c	uip_ds6_neighbors_init	79	None	None
34	Buffer Overrun	sicslowpan.c	uncompress_addr	611	None	None
33	Buffer Underrun	resolv.c	remove_trailing_dots	1251	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

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
23	Unused Value	rpl-ext-header.c	rpl_remove_header	627	None	None
23	Unused Value	rpl-icmp6.c	dio_output	539	None	None
23	Unused Value	rpl-icmp6.c	set16	184	None	None
23	Unused Value	rpl-icmp6.c	set32	171	None	None
23	Unused Value	rpl-timers.c	schedule_dao	322	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
21	Useless Assignment	framer-802154.c	create_frame	88	None	None
21	Useless Assignment	framer-802154.c	create_frame	90	None	None

(Showing 100 of 186 Warnings)

Analysis Metrics

Table 5: trickle-library analysis 1 Metrics

Metric Name	Value
Blank Lines	6150
Code Lines	28360
Comment Lines	24926
Include file instances	118
Lines with Code	30081
Lines with Comments	26647
Mixed Lines	1721
Top-level file instances	118
Total Lines	61157
User-defined functions	916

File Metrics

Table 6: trickle-library analysis 1 File Metrics Summary

Metric Name	Max	Min	Avg
Blank Lines	236	0	21.81
Code Lines	1403	2	100.57
Comment Lines	1302	0	88.39
Cyclomatic Complexity	330	0	13.79
Lines with Code	1476	2	106.67
Lines with Comments	1422	0	94.49
Mixed Lines	120	0	6.10
Modified Cyclomatic Complexity	330	0	13.23
Taint Propagator Total	3	0	0.05
Taint Sink Total	11	0	0.55
Taint Source Total	2	0	0.02
Total Lines	2362	3	216.87

Table 7: trickle-library analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
uip6.c	2362	1476	723	1403	650	236
uip.h	2219	698	1422	578	1302	219
ctk.c	1933	1289	554	1198	463	181
sicslowpan.c	1806	1060	604	1012	556	190
rpl-dag.c	1631	1273	215	1256	198	160
resolv.c	1521	1039	313	986	260	222
rpl-icmp6.c	1367	1018	225	983	190	159
uip-nd6.c	1147	825	280	779	234	88
ctk.h	989	467	506	376	415	107
tcpip.c	849	629	184	582	137	83
websocket.c	724	489	173	488	172	63
uip-ds6-route.c	721	526	157	493	124	71
uip-ds6.c	716	528	158	495	125	63
uipopt.h	684	159	487	122	450	75
rpl-ext-header.c	665	440	154	431	145	80
frame802154.c	623	401	194	380	173	49

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
frame802154e-ie.c	585	458	119	434	95	32
uip-nd6.h	575	203	346	183	326	46
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
csma.c	507	369	99	364	94	44
rpl-timers.c	497	345	112	336	103	49
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
slip.c	457	343	90	327	74	40
dhcpc.c	431	337	55	336	54	40
tapdev6.c	425	287	80	277	70	68
trickle-timer.c	410	243	128	238	123	44
tcp-socket.c	409	307	66	307	66	36
rpl-private.h	408	258	127	224	93	57

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
psock.h	404	59	321	49	311	34
process.c	388	233	113	229	109	46
uip-ds6.h	385	208	152	179	123	54
uip-icmp6.c	378	247	89	245	87	44
tcpip.h	378	55	283	53	281	42
packetbuf.h	371	153	185	141	173	45
nullrdc.c	368	271	87	247	63	34
uip-ds6-nbr.c	361	261	93	251	83	17
rpl.c	355	243	77	240	74	38
settings.h	352	173	134	156	117	62
websocket-http-client.c	347	247	73	246	72	28
rpl-conf.h	341	146	183	127	164	31
rpl.h	340	182	155	164	137	21
ctk-draw.h	335	27	281	26	280	28
list.c	330	123	182	123	182	25
sicslowpan.h	327	111	188	97	174	42
pt.h	322	57	231	56	230	35

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
psock.c	319	200	87	200	87	32
rpl-mrhof.c	316	204	105	186	87	25
contiki-main.c	314	213	63	209	59	42
tcp-socket.h	299	63	212	62	211	25
radio.h	294	62	186	61	185	47
cfs.h	285	61	200	60	199	25
contiki-default-conf.h	285	95	185	63	153	37
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
rpl-dag-root.c	268	185	56	181	52	31
mt.h	263	29	208	28	207	27
rpl-nbr-policy.c	256	143	94	138	89	24
packetbuf.c	254	167	71	166	70	17
etimer.h	254	23	208	22	207	24
phase.c	252	159	71	156	68	25

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
roll-tm.h	244	92	143	84	135	17
uip-icmp6.h	242	69	171	38	140	33
rpl-of0.c	238	145	84	136	75	18
uip-nameserver.c	236	155	80	140	65	16
frame802154.h	230	101	138	65	102	27
rpl-ns.c	230	149	67	148	66	15
packetqueue.h	222	31	168	30	167	24
link-stats.c	211	120	77	117	74	17
linuxradio-drv.c	210	157	34	157	34	19
uip-ds6-route.h	207	116	70	112	66	25
slipdev.c	203	81	104	80	103	19
tsch-conf.h	201	97	85	90	78	26
udp-socket.c	199	124	55	124	55	20
ipolite.h	197	28	151	27	150	19
trickle-library.c	194	97	79	92	74	23
elfloader.h	194	40	143	34	137	17
udp-socket.h	193	33	147	32	146	14

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
polite.h	192	25	150	24	149	18
uip-mcast6.h	186	53	122	48	117	16
mtarch.c	185	92	66	84	58	35
simple-udp.c	183	100	64	100	64	19
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
ctimer.c	175	112	51	112	51	12
collect.h	171	86	71	74	59	26
rtimer.h	169	37	115	33	111	21
ifft.c	168	94	57	93	56	18
eeprom.c	166	87	51	87	51	28
ctimer.h	166	20	133	19	132	14
cc.h	165	64	96	47	79	22
mmem.c	164	49	98	49	98	17

(Showing 100 of 282 Files)