

Serial Shell, MSPSim, COOJA

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Serial Shell

Interact through text commands

UNIX-style shell

Pipe,

```
Starting 'Blink Process'
1.0: Contiki>
> ?
Available commands:
?: shows this help
binprint: print binary data in decimal format
bt: Report workload
echo <text>: print <text>
exit: exit shell
hd: print binary data in hexadecimal format
help: shows this help
kill <command>: stop a specific command
killall: stop all running commands
null: discard input
ps: list all running processes
quit: exit shell
size: print the size of the input
ut: Print network statistics
1.0: Contiki>
> ut
Data sink ETX: 3.4
Neighbor table---
Adrs 2.0, ETX 1.4, last seen 24s ago.
Adrs 5.0, ETX 1.9, last seen 67s ago.
1.0: Contiki>
> bt
Uptime: 3-19:23:11
Currently at 1.02% radio duty cycle.
CPU LPM: 0.5%
1.0: Contiki>
```

MSPSim

Main author: Joakim Eriksson, SICS

MSP430, MSP430x, ...

GUI and CLI

```
---- Interrupt vector 6 start execution ----  
[ 6] Call to $6cb0: rtimer_run_next (../../core/sys/rtimer.c)  
[ 6]   Call to $573e: powercycle (local in ../../core/net/mac/contikimac.c)  
[ 6]     Call to $5674: on (local in ../../core/net/mac/contikimac.c)  
[ 6]       Call to $8848: cc2420_on (../../core/dev/cc2420.c)  
[ 6]         Call to $8346: on (local in ../../core/dev/cc2420.c)  
[ 6]           return from on (local in ../../core/dev/cc2420.c) elapsed: 127 maxStackUsage: 0  
[ 6]         Call to $8554: RELEASE_LOCK (local in ../../core/dev/cc2420.c)  
[ 6]           return from RELEASE_LOCK (local in ../../core/dev/cc2420.c) elapsed: 27 maxStackUsage: 0  
[ 6]       return from cc2420_on (../../core/dev/cc2420.c) elapsed: 182 maxStackUsage: 0  
[ 6]     return from on (local in ../../core/net/mac/contikimac.c) elapsed: 206 maxStackUsage: 0  
[ 6]   Call to $8a1e: cc2420_cca (local in ../../core/dev/cc2420.c)  
[ 6]     Call to $8554: RELEASE_LOCK (local in ../../core/dev/cc2420.c)  
[ 6]       return from RELEASE_LOCK (local in ../../core/dev/cc2420.c) elapsed: 27 maxStackUsage: 0  
[ 6]     return from cc2420_cca (local in ../../core/dev/cc2420.c) elapsed: 1213 maxStackUsage: 0  
[ 6]   Call to $56b0: powercycle_turn_radio_off (local in ../../core/net/mac/contikimac.c)  
[ 6]     Call to $568a: off (local in ../../core/net/mac/contikimac.c)  
[ 6]       Call to $89d4: cc2420_off (../../core/dev/cc2420.c)  
[ 6]         Call to $84e4: off (local in ../../core/dev/cc2420.c)  
[ 6]           Call to $8476: flushrx (local in ../../core/dev/cc2420.c)  
[ 6]             Call to $8fbc: clock_delay (../../cpu/msp430/.clock.c)  
[ 6]               return from clock_delay (../../cpu/msp430/.clock.c) elapsed: 8 maxStackUsage: 0  
[ 6]             return from flushrx (local in ../../core/dev/cc2420.c) elapsed: 200 maxStackUsage: 0  
[ 6]           return from off (local in ../../core/dev/cc2420.c) elapsed: 350 maxStackUsage: 0  
[ 6]         Call to $8554: RELEASE_LOCK (local in ../../core/dev/cc2420.c)  
[ 6]           return from RELEASE_LOCK (local in ../../core/dev/cc2420.c) elapsed: 27 maxStackUsage: 0
```

COOJA

Main author: Fredrik Österlind, SICS

Network simulator

MSPSim

