

POK

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Wed May 9 2012 14:25:22

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Chapter 1

Class Index

1.1 Class List

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| /home/matias/projet/stage-pok/pok/trunk/libpok/ arch.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-blackboards.-ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-buffers.-ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-events.-ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-health_-monitoring.ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-module_-schedules.ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-partitions.-ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-processes.-ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-queuing-_ports.ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-sampling-_ports.ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-semaphores.-ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex-timing.-ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/ada/arinc653/ apex.ads | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arch/ppc/ arch.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arch/sparc/ arch.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arch/x86/ arch.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arch/x86/ ioports.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arch/x86/ pci.c | ?? |

| | |
|--|----|
| /home/matias/projet/stage-pok/pok/trunk/libpok/arch/x86/ syscall.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ arincutils.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ blackboard.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ buffer.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ error.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ event.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ partition.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ process.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ queueing.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/ sampling.c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errno.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorconfirm.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorget.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorhandlercreate.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorhandlersetready.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorhandlerworker.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorignore.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorlog.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ errorraise.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ eventbroadcast.c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ eventlock.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ eventsignal.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ eventunlock.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ eventwait.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ main.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ mutexcreate.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ mutexlock.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ mutextrylock.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ mutexunlock.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ semcreate.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ semsignal.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ semstatus.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ semwait.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ threadattrinit.c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ threadid.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ threadperiod.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ threadsleep.c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ timecomputedeadline.- | |
| c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/core/ timeget.c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/include/ assert.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/ errno.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/ libm.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/ stdio.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/ stdlib.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/ string.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/ types.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arch/x86/ ioports.h . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arch/x86/ pci.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arch/x86/ types.h . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ arincutils.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ blackboard.- | |
| h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ buffer.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ error.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ event.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ partition.h . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ process.h . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ queueing.h . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ sampling.h . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ semaphore.- | |
| h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ time.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/ types.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ allocator.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ dependencies.- | |
| h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ error.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ event.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ lockobj.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ mutex.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ partition.h . . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ semaphore.h . . | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ syscall.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ thread.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/ time.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/libc/ stdio.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/libc/ stdlib.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/libc/ string.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/ blackboard.- | |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/ port.h . . | ?? |
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h . . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/include/protocols/ssl.h . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/misc/__udivdi3.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdio/printf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdlib/calloc.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdlib/free.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdlib/malloc.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdlib/rand.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/itoa.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/memcmp.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/memcpy.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/memset.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/strcmp.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/strcpy.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/strreq.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/strlen.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/x86/memcpy.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libc/string/x86/strlen.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/acos.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/acosf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/acosh.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/acoshf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/asin.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/asinf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/asinh.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/asinhf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/atan.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/atan2.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/atan2f.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/atanf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/atanh.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/atanhf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/cbrt.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/cbrtf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/ceil.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/ceilf.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/copysign.c . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/libm/copysignf.c . . . . ??
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/home/matias/projet/stage-pok/pok/trunk/libpok/libm/floor.c . . . . . ??

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/home/matias/projet/stage-pok/pok/trunk/libpok/libm/logf.c . . . . . ??

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| /home/matias/projet/stage-pok/pok/trunk/libpok/libm/modf.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/libm/modff.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/libm/namespace.h | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/libm/nextafter.c | ?? |
| /home/matias/projet/stage-pok/pok/trunk/libpok/libm/nextafterf.c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/libm/significandf.c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/middleware/blackboarddisplay.- c | ?? |
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| /home/matias/projet/stage-pok/pok/trunk/libpok/middleware/bufferreceive.c . | ?? |

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    c . . . . . ??
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    DES crypto protocol . . . . . 36
/home/matias/projet/stage-pok/pok/trunk/libpok/protocols/des/des.h . . . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/protocols/des/des_enc.c . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/protocols/des/des_locl.h . . ??
/home/matias/projet/stage-pok/pok/trunk/libpok/protocols/des/ncbc_enc.c . . ??
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/home/matias/projet/stage-pok/pok/trunk/libpok/protocols/des/spr.h . . . . ??

```


Chapter 3

Class Documentation

3.1 __attribute__ Struct Reference

Public Attributes

- char **dst** [ETH_MAC_LEN]
- char **src** [ETH_MAC_LEN]
- unsigned short **ethertype**
- unsigned short **src**
- unsigned short **dst**
- unsigned short **len**
- unsigned short **chk**
- eth_hdr_t **eth**
- udp_hdr_t **udp**
- char **data** [NET_DATA_MAXLEN]
- uint32_t **len**
- uint32_t **off**
- unsigned char **status**
- unsigned char **next**
- unsigned short **size**

3.1.1 Detailed Description

Definition at line 34 of file rtl8029.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/drivers/rtl8029.h

3.2 ARINC_ATTRIBUTE Struct Reference

```
#include <arincutils.h>
```

Public Attributes

- PROCESS_NAME_TYPE **NAME**
- PRIORITY_TYPE **BASE_PRIORITY**
- STACK_SIZE_TYPE **STACK_SIZE**

3.2.1 Detailed Description

Struct for save data NAME => Not use by pok BASE_PRIORITY => This value, in pok, is modified. Here we save the base value

Definition at line 26 of file arincutils.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/arincutils.h

3.3 bf_key_st Struct Reference

Public Attributes

- BF_LONG **P** [BF_ROUNDS+2]
- BF_LONG **S** [4 *256]

3.3.1 Detailed Description

Definition at line 100 of file blowfish.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/protocols/blowfish/blowfish.h

3.4 BLACKBOARD_STATUS_TYPE Struct Reference

Public Attributes

- EMPTY_INDICATOR_TYPE **EMPTY_INDICATOR**
- MESSAGE_SIZE_TYPE **MAX_MESSAGE_SIZE**
- WAITING_RANGE_TYPE **WAITING_PROCESSES**

3.4.1 Detailed Description

Definition at line 44 of file blackboard.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/blackboard.h

3.5 BUFFER_STATUS_TYPE Struct Reference

Public Attributes

- MESSAGE_RANGE_TYPE **NB_MESSAGE**
- MESSAGE_RANGE_TYPE **MAX_NB_MESSAGE**
- MESSAGE_SIZE_TYPE **MAX_MESSAGE_SIZE**
- WAITING_RANGE_TYPE **WAITING_PROCESSES**

3.5.1 Detailed Description

Definition at line 43 of file buffer.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/buffer.h

3.6 DES_ks Struct Reference

Public Attributes

- union {
 DES_cblock **cblock**
 DES_LONG **deslong** [2]
} **ks** [16]

3.6.1 Detailed Description

Definition at line 97 of file des.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/protocols/des/des.h

3.7 ERROR_STATUS_TYPE Struct Reference

Public Attributes

- ERROR_CODE_TYPE **ERROR_CODE**
- MESSAGE_SIZE_TYPE **LENGTH**

- PROCESS_ID_TYPE **FAILED_PROCESS_ID**
- SYSTEM_ADDRESS_TYPE **FAILED_ADDRESS**
- ERROR_MESSAGE_TYPE **MESSAGE**

3.7.1 Detailed Description

Definition at line 51 of file error.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/error.h

3.8 EVENT_STATUS_TYPE Struct Reference

Public Attributes

- EVENT_STATE_TYPE **EVENT_STATE**
- WAITING_RANGE_TYPE **WAITING_PROCESSES**

3.8.1 Detailed Description

Definition at line 64 of file event.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/event.h

3.9 exception Struct Reference

Public Attributes

- int **type**
- char * **name**
- double **arg1**
- double **arg2**
- double **retval**

3.9.1 Detailed Description

Definition at line 26 of file libm.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/libm.h

3.10 ieee_double_shape_type Union Reference

Public Attributes

- double **value**
- struct {
 - uint32_t **lsw**
 - uint32_t **msw**
- } **parts**

3.10.1 Detailed Description

Definition at line 87 of file math_private.h.

The documentation for this union was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/libm/math_private.h

3.11 ieee_float_shape_type Union Reference

Public Attributes

- float **value**
- uint32_t **word**

3.11.1 Detailed Description

Definition at line 159 of file math_private.h.

The documentation for this union was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/libm/math_private.h

3.12 PARTITION_STATUS_TYPE Struct Reference

Public Attributes

- SYSTEM_TIME_TYPE **PERIOD**
- SYSTEM_TIME_TYPE **DURATION**
- PARTITION_ID_TYPE **IDENTIFIER**
- LOCK_LEVEL_TYPE **LOCK_LEVEL**
- OPERATING_MODE_TYPE **OPERATING_MODE**
- START_CONDITION_TYPE **START_CONDITION**

3.12.1 Detailed Description

Definition at line 43 of file partition.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/partition.h

3.13 pok_allocator_space_t Struct Reference

Public Attributes

- size_t **start**
- size_t **size**
- bool_t **allocated**

3.13.1 Detailed Description

Definition at line 60 of file allocator.c.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/core/allocator.c

3.14 pok_arinc653_event_layer_t Struct Reference

Public Attributes

- pok_event_id_t **core_id**
- pok_bool_t **ready**

3.14.1 Detailed Description

Definition at line 43 of file event.c.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/event.c

3.15 pok_arinc653_semaphore_layer_t Struct Reference

Public Attributes

- pok_bool_t **ready**
- pok_sem_id_t **core_id**

3.15.1 Detailed Description

Definition at line 42 of file semaphore.c.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/[semaphore.c](#)

3.16 pok_blackboard_status_t Struct Reference

Public Attributes

- pok_port_size_t **msg_size**
- pok_bool_t **empty**
- pok_range_t **waiting_processes**

3.16.1 Detailed Description

Definition at line 37 of file blackboard.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/blackboard.h

3.17 pok_blackboard_t Struct Reference

Public Attributes

- pok_size_t **size**
- pok_bool_t **empty**
- pok_range_t **waiting_processes**
- pok_size_t **index**
- pok_bool_t **ready**
- pok_event_id_t **lock**

3.17.1 Detailed Description

Definition at line 27 of file blackboard.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/blackboard.h

3.18 pok_buffer_status_t Struct Reference

Public Attributes

- pok_range_t **nb_messages**
- pok_range_t **max_messages**
- pok_size_t **message_size**
- pok_range_t **waiting_processes**

3.18.1 Detailed Description

Definition at line 47 of file buffer.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/buffer.h

3.19 pok_buffer_t Struct Reference

Public Attributes

- pok_bool_t **ready**
- pok_bool_t **empty**
- pok_bool_t **full**
- pok_size_t **size**
- pok_size_t **index**
- pok_port_size_t **off_b**
- pok_port_size_t **off_e**
- pok_port_size_t **msgsize**
- pok_range_t **waiting_processes**
- pok_queueing_discipline_t **discipline**
- pok_event_id_t **lock**

3.19.1 Detailed Description

Definition at line 32 of file buffer.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/buffer.h

3.20 pok_error_report_t Struct Reference

Public Attributes

- uint32_t **thread**
- uint32_t **error**
- pok_time_t **when**

3.20.1 Detailed Description

Definition at line 37 of file error.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/error.h

3.21 pok_error_status_t Struct Reference

Public Attributes

- uint8_t **error_kind**
- uint32_t **failed_thread**
- uint32_t **failed_addr**
- char * **msg**
- uint32_t **msg_size**

3.21.1 Detailed Description

Definition at line 27 of file error.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/error.h

3.22 pok_lockobj_attr_t Struct Reference

Public Attributes

- pok_lockobj_kind_t **kind**
- pok_locking_policy_t **locking_policy**
- pok_queueing_discipline_t **queueing_policy**
- pok_sem_value_t **initial_value**
- pok_sem_value_t **max_value**

3.22.1 Detailed Description

Definition at line 38 of file lockobj.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/lockobj.h

3.23 pok_lockobj_lockattr_t Struct Reference

Public Attributes

- pok_lockobj_operation_t **operation**
- pok_lockobj_kind_t **obj_kind**
- pok_lockobj_lock_kind_t **lock_kind**
- uint64_t **time**

3.23.1 Detailed Description

Definition at line 62 of file lockobj.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/lockobj.h

3.24 pok_mutex_attr_t Struct Reference

Public Attributes

- pok_mutex_policy_t **policy**

3.24.1 Detailed Description

Definition at line 31 of file mutex.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/mutex.h

3.25 pok_port_queueing_status_t Struct Reference

Public Attributes

- pok_port_size_t **size**

- pok_port_direction_t **direction**
- uint8_t **nb_messages**
- uint8_t **waiting_processes**

3.25.1 Detailed Description

Definition at line 60 of file port.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/port.h

3.26 pok_port_sampling_status_t Struct Reference

Public Attributes

- pok_port_size_t **size**
- pok_port_direction_t **direction**
- uint64_t **refresh**
- bool_t **validity**

3.26.1 Detailed Description

Definition at line 107 of file port.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/port.h

3.27 pok_queue_t Struct Reference

Public Attributes

- char * **data**
- uint8_t **size**
- uint8_t **available_size**

3.27.1 Detailed Description

Definition at line 25 of file queue.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/middleware/queue.h

3.28 pok_syscall_args_t Struct Reference

Public Attributes

- uint32_t **nargs**
- uint32_t **arg1**
- uint32_t **arg2**
- uint32_t **arg3**
- uint32_t **arg4**
- uint32_t **arg5**

3.28.1 Detailed Description

Definition at line 89 of file syscall.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/syscall.h

3.29 pok_thread_attr_t Struct Reference

Public Attributes

- uint8_t **priority**
- void * **entry**
- uint64_t **period**
- uint64_t **deadline**
- uint64_t **time_capacity**
- uint32_t **stack_size**
- uint32_t **state**

3.29.1 Detailed Description

Definition at line 32 of file thread.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/core/thread.h

3.30 PROCESS_ATTRIBUTE_TYPE Struct Reference

Public Attributes

- SYSTEM_TIME_TYPE **PERIOD**

- SYSTEM_TIME_TYPE **TIME_CAPACITY**
- SYSTEM_ADDRESS_TYPE **ENTRY_POINT**
- STACK_SIZE_TYPE **STACK_SIZE**
- PRIORITY_TYPE **BASE_PRIORITY**
- DEADLINE_TYPE **DEADLINE**
- PROCESS_NAME_TYPE **NAME**

3.30.1 Detailed Description

Definition at line 55 of file process.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/process.h

3.31 PROCESS_STATUS_TYPE Struct Reference

Public Attributes

- SYSTEM_TIME_TYPE **DEADLINE_TIME**
- PRIORITY_TYPE **CURRENT_PRIORITY**
- PROCESS_STATE_TYPE **PROCESS_STATE**
- [PROCESS_ATTRIBUTE_TYPE](#) **ATTRIBUTES**

3.31.1 Detailed Description

Definition at line 65 of file process.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/process.h

3.32 QUEUING_PORT_STATUS_TYPE Struct Reference

Public Attributes

- MESSAGE_RANGE_TYPE **NB_MESSAGE**
- MESSAGE_RANGE_TYPE **MAX_NB_MESSAGE**
- MESSAGE_SIZE_TYPE **MAX_MESSAGE_SIZE**
- PORT_DIRECTION_TYPE **PORT_DIRECTION**
- WAITING_RANGE_TYPE **WAITING_PROCESSES**

3.32.1 Detailed Description

Definition at line 32 of file queueing.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/queueing.h

3.33 s_file Struct Reference

Public Attributes

- char **buff** [MY_BUF_SIZE]
- size_t **pos**

3.33.1 Detailed Description

Definition at line 38 of file printf.c.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdio/printf.c

3.34 s_format Struct Reference

Public Attributes

- char **ch**
- t_fmtfun **fun**
- int **flags**

3.34.1 Detailed Description

Definition at line 55 of file printf.c.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdio/printf.c

3.35 s_ne2000_dev Struct Reference

Public Attributes

- [s_pci_device](#) **pci**

- unsigned int **addr**
- char **mac** [6]
- [pok_queue_t](#) **recv_buf** [20]

3.35.1 Detailed Description

Definition at line 66 of file rtl8029.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/drivers/rtl8029.h

3.36 s_pci_device Struct Reference

Public Attributes

- uint16_t **bus**
- uint16_t **dev**
- uint16_t **fun**
- uint16_t **vendorid**
- uint16_t **deviceid**
- uint16_t **irq_line**
- uint16_t **io_range**
- uint32_t **bar** [6]
- uint32_t **addr**
- void * **irq_handler**

3.36.1 Detailed Description

Definition at line 28 of file pci.h.

The documentation for this struct was generated from the following file:

- /home/matias/projet/stage-pok/pok/trunk/libpok/include/arch/x86/pci.h

3.37 SAMPLING_PORT_STATUS_TYPE Struct Reference

Public Attributes

- SYSTEM_TIME_TYPE **REFRESH_PERIOD**
- MESSAGE_SIZE_TYPE **MAX_MESSAGE_SIZE**
- PORT_DIRECTION_TYPE **PORT_DIRECTION**
- VALIDITY_TYPE **LAST_MSG_VALIDITY**

3.37.1 Detailed Description

Definition at line 39 of file `sampling.h`.

The documentation for this struct was generated from the following file:

- `/home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/sampling.h`

3.38 SEMAPHORE_STATUS_TYPE Struct Reference

Public Attributes

- `SEMAPHORE_VALUE_TYPE` **CURRENT_VALUE**
- `SEMAPHORE_VALUE_TYPE` **MAXIMUM_VALUE**
- `WAITING_RANGE_TYPE` **WAITING_PROCESSES**

3.38.1 Detailed Description

Definition at line 64 of file `semaphore.h`.

The documentation for this struct was generated from the following file:

- `/home/matias/projet/stage-pok/pok/trunk/libpok/include/arinc653/semaphore.h`

3.39 u_arg Union Reference

Public Attributes

- `uint32_t` **value**
- `uint32_t` **uint**
- `int` **sint**
- `double` **vdouble**
- `void *` **ptr**

3.39.1 Detailed Description

Definition at line 44 of file `printf.c`.

The documentation for this union was generated from the following file:

- `/home/matias/projet/stage-pok/pok/trunk/libpok/libc/stdio/printf.c`

Chapter 4

File Documentation

4.1 /home/matias/projet/stage-pok/pok/trunk/libpok/arinc653/semaphore.c File Reference

Provides ARINC653 API fonctionnalities for semaphore management.

Classes

- struct [pok_arinc653_semaphore_layer_t](#)

Functions

- void **CREATE_SEMAPHORE** (SEMAPHORE_NAME_TYPE SEMAPHORE_NAME, SEMAPHORE_VALUE_TYPE CURRENT_VALUE, SEMAPHORE_VALUE_TYPE MAXIMUM_VALUE, QUEUING_DISCIPLINE_TYPE QUEUING_DISCIPLINE, SEMAPHORE_ID_TYPE *SEMAPHORE_ID, RETURN_CODE_TYPE *RETURN_CODE)
- void **WAIT_SEMAPHORE** (SEMAPHORE_ID_TYPE SEMAPHORE_ID, SYSTEM_TIME_TYPE TIME_OUT, RETURN_CODE_TYPE *RETURN_CODE)
- void **SIGNAL_SEMAPHORE** (SEMAPHORE_ID_TYPE SEMAPHORE_ID, RETURN_CODE_TYPE *RETURN_CODE)
- void **GET_SEMAPHORE_ID** (SEMAPHORE_NAME_TYPE SEMAPHORE_NAME, SEMAPHORE_ID_TYPE *SEMAPHORE_ID, RETURN_CODE_TYPE *RETURN_CODE)
- void **GET_SEMAPHORE_STATUS** (SEMAPHORE_ID_TYPE SEMAPHORE_ID, [SEMAPHORE_STATUS_TYPE](#) *SEMAPHORE_STATUS, RETURN_CODE_TYPE *RETURN_CODE)

Variables

- pok_bool_t **pok_arinc653_semaphores_initialized** = 0

- char * **pok_arinc653_semaphores_names** [POK_CONFIG_ARINC653_NB_SEMAPHORES]
- [pok_arinc653_semaphore_layer_t](#) **pok_arinc653_semaphores_layers** [POK_CONFIG_ARINC653_NB_SEMAPHORES]

4.1.1 Detailed Description

Provides ARINC653 API functionalities for semaphore management.

Definition in file [semaphore.c](#).

4.2 /home/matias/projet/stage-pok/pok/trunk/libpok/drivers/rtl8029.c File Reference

RTL8029 driver.

Functions

- void [rtl8029_read](#) (pok_port_id_t port_id, void *data, uint32_t len)
Reads data from the corresponding network stack.
- void [rtl8029_write](#) (pok_port_id_t port_id, const void *data, uint32_t len)
Send data to the interface.
- void [rtl8029_polling](#) ()
Polls rtl8029 device.
- void [rtl8029_init](#) ()
Initializes rtl8029 device.

4.2.1 Detailed Description

RTL8029 driver.

Author

Laurent

Date

PFE GISTR 2010

Definition in file [rtl8029.c](#).

4.2.2 Function Documentation

4.2.2.1 void rtl8029_init ()

Initializes rtl8029 device.

Seeks and registers PCI interface, set configuration and fills the dev structure.

Definition at line 382 of file rtl8029.c.

```
{
    dev.pci.vendorid = 0x10ec;
    dev.pci.deviceid = 0x8029;
    dev.pci.io_range = 0x10;

    if (pci_register(&(dev.pci)) != 0)
    {
        printf("rtl8029: PCI init failed!\n");
        return;
    }

    dev.addr = dev.pci.bar[0] & (~0x1F);

    unsigned char i = 0;
    unsigned char buf[6 * 2]; // used for MAC address

    NE2000_SELECT_PAGE(&dev, 0);

    /* This bit is the STOP command. When it is set, no packets will be
       received or transmitted. POWER UP=1. */
    outb(NE2000_CR_STP, dev.addr + NE2000_CR);

    // Sets several options... Read the datasheet!
    outb(0x00, dev.addr + NE2000_TCR);
    outb(NE2000_RCR_AB, dev.addr + NE2000_RCR);
    outb(NE2000_DCR_LS | NE2000_DCR_FT1, dev.addr + NE2000_DCR);

    /* The Page Start register sets the start page address
       of the receive buffer ring. */
    outb(NE2000_RXBUF, dev.addr + NE2000_PSTART);
    /* The Page Stop register sets the stop page address
       of the receive buffer ring. */
    outb(NE2000_MEMSZ, dev.addr + NE2000_PSTOP);
    /* This register is used to prevent overwrite of the receive buffer ring.
       It is typically used as a pointer indicating the last receive buffer
       page the host has read. */
    outb(NE2000_RXBUF, dev.addr + NE2000_BNRY);

    /* These two registers set the data byte counts of remote DMA. */
    outb(0, dev.addr + NE2000_RBCR0);
    outb(0, dev.addr + NE2000_RBCR1);

    NE2000_SELECT_PAGE(&dev, 1);

    /* This register points to the page address of the first receive buffer
       page to be used for a packet reception. */
    outb(NE2000_RXBUF + 1, dev.addr + NE2000_CURR);

    // Init mac address
    /* Here's something I do not understand... Section 6.2.2 of the datasheet
       says bytes 00H-05H of the PROM corresponds to the Ethernet ID. But it
```

```

        looks like each byte of the MAC address is written twice...
        Therefore I read 2 * sizeof(mac) and select one of the two bytes
        corresponding to the MAC... Weird... Really... */
ne2000_read(&dev, buf, 6 * 2, 0);
for (i = 0; i < 6; i++)
    dev.mac[i] = buf[i * 2];

/* These registers contain my Ethernet node address and are used to compare
   the destination address of incoming packets for acceptance or rejection.*/
outb(dev.mac[0], dev.addr + NE2000_PAR0);
outb(dev.mac[1], dev.addr + NE2000_PAR1);
outb(dev.mac[2], dev.addr + NE2000_PAR2);
outb(dev.mac[3], dev.addr + NE2000_PAR3);
outb(dev.mac[4], dev.addr + NE2000_PAR4);
outb(dev.mac[5], dev.addr + NE2000_PAR5);

NE2000_SELECT_PAGE(&dev, 0);

// Start command
outb(NE2000_CR_STA, dev.addr + NE2000_CR);

// Reactivating interrupts
/* ISR register must be cleared after power up. */
outb(0xFF, dev.addr + NE2000_ISR);
/* All bits correspond to the bits in the ISR register. POWER UP=all 0s.
   Setting individual bits will enable the corresponding interrupts. */
/* Since POK use polling, ALL interrupts are disabled */
outb(0x00, dev.addr + NE2000_IMR);

for (i = 0; i < 20; i++) /* TODO: random constant */
{
    dev.recv_buf[i].len = 0;
    dev.recv_buf[i].off = 0;
}

return;
}

```

4.2.2.2 void rtl8029_polling()

Polls rtl8029 device.

Watches for events, typically for receiving queued packets.

Definition at line 279 of file rtl8029.c.

```

{
    unsigned char state; // ISR state

    NE2000_SELECT_PAGE(&dev, 0);

    while (1)
    {
        // do we have an interrupt flag set?
        if ((state = pok_inb(dev.addr + NE2000_ISR)) == 0)
            continue;

        if (state & NE2000_ISR_PRX)
        {

```

```

if ((pok_inb(dev.addr + NE2000_RSR) & NE2000_RSR_PRX) == 0)
{
    // error
}

printf("[*]\n");

/* no errors */
s_ne2000_header    ne2000_hdr;      // ne2000 packet header
unsigned short     offset;          // dma offset
unsigned char      start, end;      // pointers for the ring buffer
pok_packet_t       recv_packet;

while (1)
{
    /* This register is used to prevent overwrite of the receive buffer
    ring.
    It is typically used as a pointer indicating the last receive buffer
    page the host has read.*/
    start = pok_inb(dev.addr + NE2000_BNRY) + 1;

    /* This register points to the page address of the first receive
    buffer page to be used for a packet reception. */
    NE2000_SELECT_PAGE(&dev, 1);
    end = pok_inb(dev.addr + NE2000_CURR);
    NE2000_SELECT_PAGE(&dev, 0);

    if ((end % NE2000_MEMSZ) == (start % NE2000_MEMSZ) + 1)
    {
        break;
    }

    /* et on decapsule! */
    offset = start << 8;
    // ne2000 header
    offset += ne2000_read(&dev, &ne2000_hdr, sizeof(s_ne2000_header),
                        offset);

    ne2000_read(&dev, &recv_packet,
                ne2000_hdr.size - sizeof(s_ne2000_header), offset);
    rtl8029_enqueue(&recv_packet);

    // update the BNRY register... almost forgot that
    outb(ne2000_hdr.next > NE2000_MEMSZ ?
        NE2000_RXBUF - 1 : ne2000_hdr.next - 1, dev.addr + NE2000_BNRY);

}

outb(NE2000_ISR_PRX, dev.addr + NE2000_ISR); // Clear PRX flag
}

if (state & NE2000_ISR_PTX)
{
    outb(NE2000_ISR_PTX, dev.addr + NE2000_ISR); // Clear PTX flag
}

if (state & NE2000_ISR_RXE)
{
    outb(NE2000_ISR_RXE, dev.addr + NE2000_ISR); // Clear RXE flag
}

```

```

    if (state & NE2000_ISR_TXE)
    {
        outb(NE2000_ISR_TXE, dev.addr + NE2000_ISR); // Clear TXE flag
    }

    if (state & NE2000_ISR_OVW)
    {
        outb(NE2000_ISR_OVW, dev.addr + NE2000_ISR); // Clear OVW flag
    }

    if (state & NE2000_ISR_CNT)
    {
        outb(NE2000_ISR_CNT, dev.addr + NE2000_ISR); // Clear CNT flag
    }

    if (state & NE2000_ISR_RST)
    {
        outb(NE2000_ISR_RST, dev.addr + NE2000_ISR); // Clear RST bit
    }
}
}

```

4.2.2.3 void rtl8029_read (pok_port_id_t port_id, void * data, uint32_t len)

Reads data from the corresponding network stack.

Reads enqueued data in the stack partition.

Definition at line 146 of file rtl8029.c.

```

{
    pok_port_id_t global;
    pok_ret_t      ret;

    ret = pok_port_virtual_get_global (port_id, &global);

    if (ret == POK_ERRNO_OK)
    {
        char          *dest = data;
        pok_queue_t* queue = dev.recv_buf + global;
        uint32_t      size = len < queue->len ? len : queue->len;
        uint32_t      copied = 0;

        printf ("[RTL8029] READ DATA FROM LOCAL PORT %d "
                "GLOBAL_PORT=%d), size=%d\n", port_id, global, len);

        /* is there something to read ? */
        if (queue->len == 0)
        {
            printf("rtl8029_read: error: empty read ring buffer %d!\n", port_id);
            return;
        }

        /* copy from the queue to the buffer */
        for (copied = 0; copied < size; copied++)
        {
            dest[copied % RECV_BUF_SZ] = queue->data[queue->off];
            queue->off = (queue->off + 1) % RECV_BUF_SZ;
        }
    }
}

```

```
    /* updating data length in this queue */  
    queue->len -= size;  
}  
}
```

4.2.2.4 void rtl8029_write (pok_port_id_t port_id, const void * data, uint32_t len)

Send data to the interface.

Writes data to be sent to network.

Definition at line 187 of file rtl8029.c.

```
{  
    uint32_t      nbdest;  
    uint32_t      tmp;  
    uint32_t      dest;  
    pok_ret_t      ret;  
    char          node2[6] = { 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF };  
    pok_packet_t   packet;  
    const char*    d;  
    size_t         cpylen = 0;  
    size_t         sndlen = 0;  
    unsigned char  state; // ISR state  
  
    ret = pok_port_virtual_nb_destinations (port_id, &nbdest);  
    if (ret != POK_ERRNO_OK)  
    {  
        return;  
    }  
  
    for (tmp = 0 ; tmp < nbdest ; tmp++)  
    {  
        ret = pok_port_virtual_destination (port_id, tmp, &dest);  
        if (ret == POK_ERRNO_OK)  
        {  
            printf ("[RTL8029] SEND DATA THROUGH NETWORK FROM LOCAL PORT %d "  
                    "TO GLOBAL PORT %d, size=%d\n", port_id, dest, len);  
  
            memcpy(packet.eth.src, dev.mac, ETH_MAC_LEN);  
            memcpy(packet.eth.dst, node2, ETH_MAC_LEN);  
            packet.eth.ethertype = 0x4242;  
            packet.udp.src = port_id;  
            packet.udp.dst = dest;  
  
            for (d = data; len != 0; len -= cpylen, data += cpylen)  
            {  
                // too short; let's cut  
                if (len <= NET_DATA_MINLEN)  
                {  
                    cpylen = len;  
                    sndlen = ETH_DATA_MINLEN + sizeof(eth_hdr_t);  
                }  
                else  
                {  
                    // too big; let's pad  
                    if (len >= NET_DATA_MAXLEN)  
                    {  

```

```

        cpylen = NET_DATA_MAXLEN;
        sndlen = ETH_DATA_MAXLEN + sizeof(eth_hdr_t);
    }
    // normal
    else
    {
        cpylen = len;
        sndlen = sizeof(eth_hdr_t) + sizeof(udp_hdr_t) + cpylen;
    }
}

packet.udp.len = cpylen;
memcpy(&(packet.data), data, cpylen);

ne2000_write(&dev, &packet, sndlen, NE2000_TXBUF * 256);

do
{
    state = pok_inb(dev.addr + NE2000_ISR);
}
while ((state & NE2000_ISR_RDC) != NE2000_ISR_RDC);

/* This register sets the start page address of
   the packet to be transmitted. */
outb(NE2000_TXBUF, dev.addr + NE2000_TPSR); //?

/* These two registers set the byte counts of
   the packet to be transmitted. */
outb(sndlen, dev.addr + NE2000_TBCR0);
outb(sndlen >> 8, dev.addr + NE2000_TBCR1);

/* This bit must be set to transmit a packet. */
outb(pok_inb(dev.addr + NE2000_CR) | NE2000_CR_TXP,
     dev.addr + NE2000_CR);

outb(NE2000_ISR_RDC, dev.addr + NE2000_ISR); // Clear RDC bit
}
}
}
}
}
}
}

```

4.3 /home/matias/projet/stage-pok/pok/trunk/libpok/include/protocols/ceasar.h File Reference

Ceasar crypto protocol.

Functions

- void [pok_protocols_ceasar_unmarshall](#) (void *crypted_data, pok_size_t crypted_size, void *uncrypted_data, size_t *uncrypted_size)
- void [pok_protocols_ceasar_marshall](#) (void *uncrypted_data, pok_size_t uncrypted_size, void *crypted_data, size_t *crypted_size)

4.3.1 Detailed Description

Ceasar crypto protocol.

Author

Julien Delange

Date

2009 This is a very basic crypto protocol that just change the order of bytes in data. There is no public/private key, the algorithm is known by the attacker so that it's a very weak crypto protocol. Interested people can gather more information about this protocol on: http://en.wikipedia.org/wiki/Caesar_cipher

We don't provide an associated marshalling type for the Ceasar protocol since the crypted size is the same than the uncrypted size.

Definition in file [ceasar.h](#).

4.3.2 Function Documentation

4.3.2.1 void pok_protocols_ceasar_marshall (void * *uncrypted_data*, pok_size_t *uncrypted_size*, void * *crypted_data*, size_t * *crypted_size*)

Function that encrypts data

\file libpok/protocols/ceasar.c \brief Function to crypt/uncrypt data using the Ceasar cipher. \author Julien Delange \brief Marshall data, the crypted size has the same size than uncrypted data.

Definition at line 34 of file ceasar.c.

```
{
    uint8_t* uncrypted;
    uint8_t* crypted;
    size_t tmp;

    uncrypted = (uint8_t*) uncrypted_data;
    crypted = (uint8_t*) crypted_data;

    for (tmp = 0 ; tmp < uncrypted_size ; tmp++)
    {
        crypted[tmp] = (uncrypted[tmp] + 4) % 255;
    }

    *crypted_size = uncrypted_size;
}
```

4.3.2.2 void pok_protocols_ceasar_unmarshall (void * *crypted_data*, pok_size_t *crypted_size*, void * *uncrypted_data*, size_t * *uncrypted_size*)

Function that uncrypts data

\brief Unmarshall data, the crypted size has the same size than unencrypted data.

Definition at line 56 of file ceasar.c.

```
{
    uint8_t* unencrypted;
    uint8_t* crypted;
    size_t tmp;

    unencrypted = (uint8_t*) unencrypted_data;
    crypted = (uint8_t*) crypted_data;

    for (tmp = 0 ; tmp < crypted_size ; tmp++)
    {
        unencrypted[tmp] = (crypted[tmp] - 4) % 255;
    }

    *unencrypted_size = crypted_size;
}
```

4.4 /home/matias/projet/stage-pok/pok/trunk/libpok/protocols/des/des.c

File Reference

DES crypto protocol.

Functions

- void **pok_protocols_des_init** ()
- void **pok_protocols_des_marshall** (void *unencrypted_data, pok_size_t unencrypted_size, void *crypted_data, size_t *crypted_size)
- void **pok_protocols_des_unmarshall** (void *crypted_data, pok_size_t crypted_size, void *unencrypted_data, size_t *unencrypted_size)

Variables

- unsigned char **initVector** [8] = POK_PROTOCOLS_DES_INIT
- int **pok_protocols_des_is_init** = 0

4.4.1 Detailed Description

DES crypto protocol.

Author

Julien Delange

Date

2009 This file is a wrapper that interfaces with OpenSSL functions. It sets the crypto key, initialisation string and calls OpenSSL function to crypts data.

Definition in file [des.c](#).

4.4.2 Function Documentation

4.4.2.1 void pok_protocols_des_marshall (void * *unencrypted_data*, pok_size_t *unencrypted_size*, void * *crypted_data*, size_t * *crypted_size*)

Function that crypts data.

Definition at line 54 of file des.c.

```
{
    DES_cblock ivec;
    DES_key_schedule schedule;

    DES_set_key_checked (&cbc_key, &schedule);

    memcpy(ivec,initVector,sizeof(initVector));

    DES_ncbc_encrypt(unencrypted_data, crypted_data, unencrypted_size, &schedule, &
        ivec, DES_ENCRYPT);
    *crypted_size = 8;
}
```

4.4.2.2 void pok_protocols_des_unmarshall (void * *crypted_data*, pok_size_t *crypted_size*, void * *unencrypted_data*, size_t * *unencrypted_size*)

Function that uncrypts data.

Definition at line 68 of file des.c.

```
{
    DES_cblock ivec;
    DES_key_schedule schedule;

    DES_set_key_checked (&cbc_key, &schedule);

    memcpy(ivec,initVector,sizeof(initVector));
    DES_ncbc_encrypt(crypted_data, unencrypted_data, crypted_size, &schedule, &
        ivec, DES_DECRYPT);

    *unencrypted_size = 8;
}
```