NAME

aphysio – perform asynchronous physical I/O

SYNOPSIS

#include <sys/types.h>
#include <sys/buf.h>
#include <sys/uio.h>
#include <sys/aio_req.h>
#include <sys/ddi.h>
#include <sys/sunddi.h>

int aphysio(int *(*strat)* **(struct buf *), int** (*cancel)**(struct buf *), dev_t** *dev,* **int** *rw***,**
void *(*mincnt)* **(struct buf *), struct aio_req** **aio_reqp***);**

ARGUMENTS

strat	Pointer to device strategy routine.
cancel	Pointer to driver cancel routine. Used to cancel a submitted request. The driver must pass the address of the function **anocancel**(9F) because cancellation is not supported.
dev	The device number.
rw	Read/write flag. This is either **B_READ** when reading from the device, or **B_WRITE** when writing to the device.
mincnt	Routine which bounds the maximum transfer unit size.
aio_reqp	Pointer to the **aio_req**(9S) structure which describes the user I/O request.

INTERFACE LEVEL

Solaris DDI specific (Solaris DDI).

DESCRIPTION

aphysio( ) performs asynchronous I/O operations between the device and the address space described by *aio_reqp→aio_uio*.

Prior to the start of the transfer, **aphysio**( ) verifies the requested operation is valid. It then locks the pages involved in the I/O transfer so they can not be paged out. The device strategy routine, *strat*, is then called one or more times to perform the physical I/O operations. **aphysio**( ) does not wait for each transfer to complete, but returns as soon as the necessary requests have been made.

aphysio( ) calls *mincnt* to bound the maximum transfer unit size to a sensible default for the device and the system. Drivers which do not provide their own local *mincnt* routine should call **aphysio**( ) with **minphys**(9F). **minphys**(9F) is the system *mincnt* routine. **minphys**(9F) ensures the transfer size does not exceed any system limits.

If a driver supplies a local *mincnt* routine, this routine should perform the following actions:

- If *bp→b_bcount* exceeds a device limit, set *bp→b_bcount* to a value supported by the device.
- Call **minphys**(9F) to ensure that the driver does not circumvent additional system limits.

RETURN VALUES

aphysio( ) returns:

0	on success.
error number	on failure.

CONTEXT

aphysio( ) can be called from user context only.

SEE ALSO

aread(9E), **awrite**(9E), **strategy**(9E), **anocancel**(9F), **biodone**(9F), **biowait**(9F), **minphys**(9F), **physio**(9F), **aio_req**(9S), **buf**(9S), **uio**(9S)

Writing Device Drivers

WARNINGS

It is the driver's responsibility to call **biodone**(9F) when the transfer is complete.

BUGS

Cancellation is not supported in this release. The address of the function **anocancel**(9F) must be used as the *cancel* argument.