NAME

ddi_dma_nextcookie – retrieve subsequent DMA cookie

SYNOPSIS

#include <sys/ddi.h>
#include <sys/sunddi.h>

void ddi_dma_nextcookie(ddi_dma_handle_t *handle*, **ddi_dma_cookie_t** **cookiep***);**

ARGUMENTS

handle The handle previously allocated by a call to **ddi_dma_alloc_handle**(9F).

cookiep A pointer to a **ddi_dma_cookie**(9S) structure.

INTERFACE LEVEL

Solaris DDI specific (Solaris DDI).

DESCRIPTION

ddi_dma_nextcookie( ) retrieves subsequent DMA cookies for a DMA object. **ddi_dma_nextcookie( )** fills in the **ddi_dma_cookie**(9S) structure pointed to by *cookiep*. The **ddi_dma_cookie**(9S) structure must be allocated prior to calling **ddi_dma_nextcookie( )**.

The DMA cookie count returned by **ddi_dma_buf_bind_handle**(9F), **ddi_dma_addr_bind_handle**(9F), or **ddi_dma_getwin**(9F) indicates the number of DMA cookies a DMA object consists of. If the resulting cookie count, *N*, is larger than 1, **ddi_dma_nextcookie( )** must be called *N-1* times to retrieve all DMA cookies.

CONTEXT

ddi_dma_nextcookie( ) can be called from user, kernel, or interrupt context.

EXAMPLES

This example demonstrates the use of **ddi_dma_nextcookie( )** to process a scatter-gather list of I/O requests.

```
/* setup scatter-gather list with multiple DMA cookies */

ddi_dma_cookie_t    dmacookie;
uint_t              ccount;
. . .

status = ddi_dma_buf_bind_handle(handle, bp, DDI_DMA_READ,
        NULL, NULL, &dmacookie, &ccount);

if (status == DDI_DMA_MAPPED) {

        /* program DMA engine with first cookie */

        while (--ccount > 0) {
                ddi_dma_nextcookie(handle, &dmacookie);
                /* program DMA engine with next cookie */
        }
}
. . .
```

SEE ALSO

ddi_dma_addr_bind_handle(9F), **ddi_dma_alloc_handle**(9F), **ddi_dma_buf_bind_handle**(9F), **ddi_dma_unbind_handle**(9F), **ddi_dma_cookie**(9S)

Writing Device Drivers