NAME

dwarf_init, **dwarf_elf_init** - allocate a DWARF debug descriptor

LIBRARY

DWARF Access Library (libdwarf, -ldwarf)

SYNOPSIS

#include <libdwarf.h>

int
dwarf_init(*int fd, int mode, Dwarf_Handler errhand, Dwarf_Ptr errarg, Dwarf_Debug *ret, Dwarf_Error *err*);

in
dwarf_elf_init(*Elf *elf, int mode, Dwarf_Handler errhand, Dwarf_Ptr errarg, Dwarf_Debug *ret, Dwarf_Error *err*);

DESCRIPTION

These functions allocate and return a *Dwarf_Debug* instance for the object denoted by argument *fd* or *elf*. This instance would be used for subsequent access to debugging information in the object by other functions in the DWARF(3) library.

For function **dwarf_init**(), argument *fd* denotes an open file descriptor referencing a compilation object. Function **dwarf_init**() implicitly allocates an *Elf* descriptor for argument *fd*.

For function **dwarf_elf_init**(), argument *elf* denotes a descriptor returned by elf_begin(3) or elf_memory(3).

Argument *mode* specifies the access mode desired. It should be at least as permissive as the mode with which the file descriptor *fd* or the ELF descriptor *elf* was created with. Legal values for argument *mode* are:

DW_DLC_RDWR Permit reading and writing of DWARF information.
DW_DLC_READ Operate in read-only mode.
DW_DLC_WRITE Permit writing of DWARF information.

Argument *errhand* denotes a function to be called in case of an error. If this argument is NULL then a default error handling scheme is used. See dwarf(3) for a description of the error handling scheme used by the DWARF(3) library.

Argument *errarg* is passed to the error handler function denoted by argument *errhand* when it is invoked.

Argument *ret* points to the memory location that will hold a *Dwarf_Debug* reference on a successful call these functions.

Argument *err* references a memory location that would hold a *Dwarf_Error* descriptor in case of an error.

Memory Management

The *Dwarf_Debug* instance returned by these functions should be freed using **dwarf_finish**().

IMPLEMENTATION NOTES

The current implementation does not support access modes DW_DLC_RDWR and DW_DLC_WRITE.

RETURN VALUES

These functions return the following values:

[DW_DLV_OK] This return value indicates a successful return.

[DW_DLV_ERROR] The operation failed.

[DW_DLV_NO_ENTRY] The object specified by arguments *fd* or *elf* did not contain debug information.

EXAMPLES

To initialize a *Dwarf_Debug* instance from a open file descriptor referencing an ELF object, and with the default error handler, use:

```
Dwarf_Error err;
Dwarf_Debug dbg;

if (dwarf_init(fd, DW_DLC_READ, NULL, NULL, &dbg, &err) !=
   DW_DLV_OK)
        errx(EXIT_FAILURE, "dwarf_init: %s", dwarf_errmsg(err));
```

SEE ALSO

dwarf(3), dwarf_errmsg(3), dwarf_finish(3), dwarf_get_elf(3), elf_begin(3), elf_memory(3)