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9.9 `sctp_sendmsg` Function

An application can control various features of SCTP by using the `sendmsg` function along with ancillary data (described in [Chapter 14](#)). However, because the use of ancillary data may be inconvenient, many SCTP implementations provide an auxiliary library call (possibly implemented as a system call) that eases an application's use of SCTP's advanced features. The call takes the following form:

```
ssize_t sctp_sendmsg(int sockfd, const void *msg, size_t msgsz, const struct sockaddr *to, socklen_t tolen, uint32_t ppid,
uint32_t flags, uint16_t stream, uint32_t timetolive, uint32_t context);
```

Returns: the number of bytes written, -1 on error

The user of `sctp_sendmsg` has a greatly simplified sending method at the cost of more arguments. The `sockfd` field holds the socket descriptor returned from a `socket` system call. The `msg` field points to a buffer of `msgsz` bytes to be sent to the peer endpoint `to`. The `tolen` field holds the length of the address stored in `to`. The `ppid` field holds the pay-load protocol identifier that will be passed with the data chunk. The `flags` field will be passed to the SCTP stack to identify any SCTP options; valid values for this field may be found in [Figure 7.16](#).

A caller specifies an SCTP stream number by filling in the `stream`. The caller may specify the lifetime of the message in milliseconds in the `lifetime` field, where 0 represents an infinite lifetime. A user context, if any, may be specified in `context`. A user context associates a failed message transmission, received via a message notification, with some local application-specific context. For example, to send a message to stream number 1, with the send flags set to `MSG_PR_SCTP_TTL`, the lifetime set to 1000 milliseconds, a payload protocol identifier of 24, and a context of 52, a user would formulate the following call:

```
ret = sctp_sendmsg(sockfd,
    data, datasz, &dest, sizeof(dest),
    24, MSG_PR_SCTP_TTL, 1, 1000, 52);
```

This approach is much easier than allocating the necessary ancillary data and setting up the appropriate structures in the `msghdr` structure. Note that if an implementation maps the `sctp_sendmsg` to a `sendmsg` function call, the `flags` field of the `sendmsg` call is set to 0.

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