

```

1  typedef int MPI_Datarep_conversion_function(void *userbuf,
2      MPI_Datatype datatype, int count, void *filebuf,
3      MPI_Offset position, void *extra_state);
4

```

For Fortran, here are examples of how each of the user-defined subroutines should be declared.

The user-function argument to MPI_OP_CREATE should be declared like this:

```

8  SUBROUTINE USER_FUNCTION(INVEC, INOUTVEC, LEN, TYPE)
9      <type> INVEC(LEN), INOUTVEC(LEN)
10     INTEGER LEN, TYPE
11

```

The copy and delete function arguments to MPI_COMM_CREATE_KEYVAL should be declared like these:

```

15  SUBROUTINE COMM_COPY_ATTR_FN(OLDCOMM, COMM_KEYVAL, EXTRA_STATE,
16      ATTRIBUTE_VAL_IN, ATTRIBUTE_VAL_OUT, FLAG, IERROR)
17     INTEGER OLDCOMM, COMM_KEYVAL, IERROR
18     INTEGER(KIND=MPI_ADDRESS_KIND) EXTRA_STATE, ATTRIBUTE_VAL_IN,
19         ATTRIBUTE_VAL_OUT
20     LOGICAL FLAG
21
22  SUBROUTINE COMM_DELETE_ATTR_FN(COMM, COMM_KEYVAL, ATTRIBUTE_VAL,
23      EXTRA_STATE, IERROR)
24     INTEGER COMM, COMM_KEYVAL, IERROR
25     INTEGER(KIND=MPI_ADDRESS_KIND) ATTRIBUTE_VAL, EXTRA_STATE
26

```

The copy and delete function arguments to MPI_WIN_CREATE_KEYVAL should be declared like these:

```

30  SUBROUTINE WIN_COPY_ATTR_FN(OLDWIN, WIN_KEYVAL, EXTRA_STATE,
31      ATTRIBUTE_VAL_IN, ATTRIBUTE_VAL_OUT, FLAG, IERROR)
32     INTEGER OLDWIN, WIN_KEYVAL, IERROR
33     INTEGER(KIND=MPI_ADDRESS_KIND) EXTRA_STATE, ATTRIBUTE_VAL_IN,
34         ATTRIBUTE_VAL_OUT
35     LOGICAL FLAG
36
37  SUBROUTINE WIN_DELETE_ATTR_FN(WIN, WIN_KEYVAL, ATTRIBUTE_VAL,
38      EXTRA_STATE, IERROR)
39     INTEGER WIN, WIN_KEYVAL, IERROR
40     INTEGER(KIND=MPI_ADDRESS_KIND) ATTRIBUTE_VAL, EXTRA_STATE
41

```

The copy and delete function arguments to MPI_TYPE_CREATE_KEYVAL should be declared like these:

```

45  SUBROUTINE TYPE_COPY_ATTR_FN(OLDTYPE, TYPE_KEYVAL, EXTRA_STATE,
46      ATTRIBUTE_VAL_IN, ATTRIBUTE_VAL_OUT, FLAG, IERROR)
47     INTEGER OLDTYPE, TYPE_KEYVAL, IERROR
48     INTEGER(KIND=MPI_ADDRESS_KIND) EXTRA_STATE,

```