

## Chapter 15

# Deprecated Functions

### 15.1 Deprecated since MPI-2.0

The following function is deprecated and is superseded by `MPI_TYPE_CREATE_HVECTOR` in MPI-2.0. The language independent definition and the C binding of the deprecated function is the same as of the new function, except of the function name. Only the Fortran language binding is different.

`MPI_TYPE_HVECTOR( count, blocklength, stride, oldtype, newtype)`

IN	count	number of blocks (non-negative integer)
IN	blocklength	number of elements in each block (non-negative integer)
IN	stride	number of bytes between start of each block (integer)
IN	oldtype	old datatype (handle)
OUT	newtype	new datatype (handle)

```
int MPI_Type_hvector(int count, int blocklength, MPI_Aint stride,  
                    MPI_Datatype oldtype, MPI_Datatype *newtype)
```

```
MPI_TYPE_HVECTOR(COUNT, BLOCKLENGTH, STRIDE, OLDTYPE, NEWTYPE, IERROR)  
    INTEGER COUNT, BLOCKLENGTH, STRIDE, OLDTYPE, NEWTYPE, IERROR
```

The following function is deprecated and is superseded by `MPI_TYPE_CREATE_HINDEXED` in MPI-2.0. The language independent definition and the C binding of the deprecated function is the same as of the new function, except of the function name. Only the Fortran language binding is different.

```

1 MPI_TYPE_HINDEXED( count, array_of_blocklengths, array_of_displacements, oldtype, new-
2 type)

```

3	IN	count	number of blocks – also number of entries in
4			array_of_displacements and array_of_blocklengths (non-
5			negative integer)
6	IN	array_of_blocklengths	number of elements in each block (array of non-negative
7			integers)
8			
9	IN	array_of_displacements	byte displacement of each block (array of integer)
10	IN	oldtype	old datatype (handle)
11	OUT	newtype	new datatype (handle)
12			

```

13
14 int MPI_Type_hindexed(int count, int *array_of_blocklengths,
15                       MPI_Aint *array_of_displacements, MPI_Datatype oldtype,
16                       MPI_Datatype *newtype)
17
18 MPI_TYPE_HINDEXED(COUNT, ARRAY_OF_BLOCKLENGTHS, ARRAY_OF_DISPLACEMENTS,
19                   OLDTYPE, NEWTYPE, IERROR)
20
21 INTEGER COUNT, ARRAY_OF_BLOCKLENGTHS(*), ARRAY_OF_DISPLACEMENTS(*),
22 OLDTYPE, NEWTYPE, IERROR

```

The following function is deprecated and is superseded by MPI\_TYPE\_CREATE\_STRUCT in MPI-2.0. The language independent definition and the C binding of the deprecated function is the same as of the new function, except of the function name. Only the Fortran language binding is different.

```

26
27 MPI_TYPE_STRUCT(count, array_of_blocklengths, array_of_displacements, array_of_types,
28 newtype)

```

30	IN	count	number of blocks (integer) (non-negative integer) –
31			also number of entries in arrays array_of_types,
32			array_of_displacements and array_of_blocklengths
33	IN	array_of_blocklength	number of elements in each block (array of non-negative
34			integer)
35	IN	array_of_displacements	byte displacement of each block (array of integer)
36	IN	array_of_types	type of elements in each block (array of handles to
37			datatype objects)
38			
39	OUT	newtype	new datatype (handle)
40			

```

41 int MPI_Type_struct(int count, int *array_of_blocklengths,
42                   MPI_Aint *array_of_displacements,
43                   MPI_Datatype *array_of_types, MPI_Datatype *newtype)
44
45 MPI_TYPE_STRUCT(COUNT, ARRAY_OF_BLOCKLENGTHS, ARRAY_OF_DISPLACEMENTS,
46                 ARRAY_OF_TYPES, NEWTYPE, IERROR)
47
48 INTEGER COUNT, ARRAY_OF_BLOCKLENGTHS(*), ARRAY_OF_DISPLACEMENTS(*),
49 ARRAY_OF_TYPES(*), NEWTYPE, IERROR

```