

```

{void Op::Init(User_function* function, bool commute) (binding deprecated,
    see Section 15.2) }
{bool Op::Is_commutative() const (binding deprecated, see Section 15.2) }
{void Comm::Reduce(const void* sendbuf, void* recvbuf, int count,
    const Datatype& datatype, const Op& op, int root) const = 0
    (binding deprecated, see Section 15.2) }
{void Op::Reduce_local(const void* inbuf, void* inoutbuf, int count,
    const Datatype& datatype) const (binding deprecated, see
    Section 15.2) }
{void Comm::Reduce_scatter(const void* sendbuf, void* recvbuf,
    int recvcnt[], const Datatype& datatype, const Op& op)
    const = 0 (binding deprecated, see Section 15.2) }
{void Comm::Reduce_scatter_block(const void* sendbuf, void* recvbuf,
    int recvcnt, const Datatype& datatype, const Op& op)
    const = 0 (binding deprecated, see Section 15.2) }
{void Intracomm::Scan(const void* sendbuf, void* recvbuf, int count,
    const Datatype& datatype, const Op& op) const (binding
    deprecated, see Section 15.2) }
{void Comm::Scatter(const void* sendbuf, int sendcount, const
    Datatype& sendtype, void* recvbuf, int recvcnt,
    const Datatype& recvtype, int root) const = 0 (binding
    deprecated, see Section 15.2) }
{void Comm::Scatterv(const void* sendbuf, const int sendcounts[],
    const int displs[], const Datatype& sendtype, void* recvbuf,
    int recvcnt, const Datatype& recvtype, int root) const = 0
    (binding deprecated, see Section 15.2) }
};

```

A.4.4 Groups, Contexts, Communicators, and Caching C++ Bindings

```

namespace MPI {
    {Comm& Comm::Clone() const = 0 (binding deprecated, see Section 15.2) }
    {Cartcomm& Cartcomm::Clone() const (binding deprecated, see Section 15.2) }
    {Distgraphcomm& Distgraphcomm::Clone() const (binding deprecated, see
        Section 15.2) }
    {Graphcomm& Graphcomm::Clone() const (binding deprecated, see Section 15.2) }
    {Intercomm& Intercomm::Clone() const (binding deprecated, see Section 15.2) }
    {Intracomm& Intracomm::Clone() const (binding deprecated, see Section 15.2) }
    {static int Comm::Compare(const Comm& comm1, const Comm& comm2) (binding
        deprecated, see Section 15.2) }
}

```

```

1          deprecated, see Section 15.2) }
2
ticket150. 3      {static int Group::Compare(const Group& group1, const Group& group2)
ticket150. 4          (binding deprecated, see Section 15.2) }
5
ticket150. 6      {Intracomm Intracomm::Create(const Group& group) const (binding deprecated,
ticket150. 7          see Section 15.2) }
8
ticket150. 9      {Intercomm Intercomm::Create(const Group& group) const (binding deprecated,
ticket150. 10          see Section 15.2) }
11
ticket150. 12      {Intercomm Intracomm::Create_intercomm(int local_leader, const
ticket150. 13          Comm& peer_comm, int remote_leader, int tag) const (binding
14          deprecated, see Section 15.2) }
15
ticket150. 16      {static int Comm::Create_keyval(Comm::Copy_attr_function*
17          comm_copy_attr_fn,
18          Comm::Delete_attr_function* comm_delete_attr_fn,
19          void* extra_state) (binding deprecated, see Section 15.2) }
20
ticket150. 21      {static int Datatype::Create_keyval(Datatype::Copy_attr_function*
22          type_copy_attr_fn, Datatype::Delete_attr_function*
23          type_delete_attr_fn, void* extra_state) (binding deprecated, see
24          Section 15.2) }
25
ticket150. 26      {static int Win::Create_keyval(Win::Copy_attr_function* win_copy_attr_fn,
27          Win::Delete_attr_function* win_delete_attr_fn,
28          void* extra_state) (binding deprecated, see Section 15.2) }
29
ticket150. 30      {void Comm::Delete_attr(int comm_keyval) (binding deprecated, see Section 15.2) }
ticket150. 31
ticket150. 32      {void Datatype::Delete_attr(int type_keyval) (binding deprecated, see
33          Section 15.2) }
34
ticket150. 35      {void Win::Delete_attr(int win_keyval) (binding deprecated, see Section 15.2) }
ticket150. 36
ticket150. 37      {static Group Group::Difference(const Group& group1, const Group& group2)
38          (binding deprecated, see Section 15.2) }
39
ticket150. 40      {Cartcomm Cartcomm::Dup() const (binding deprecated, see Section 15.2) }
ticket150. 41
ticket150. 42      {Distgraphcomm Distgraphcomm::Dup() const (binding deprecated, see Section 15.2)
43          }
44
ticket150. 45      {Graphcomm Graphcomm::Dup() const (binding deprecated, see Section 15.2) }
ticket150. 46
ticket150. 47      {Intercomm Intercomm::Dup() const (binding deprecated, see Section 15.2) }
ticket150. 48
ticket150. 49      {Intracomm Intracomm::Dup() const (binding deprecated, see Section 15.2) }
50
ticket150. 51      {Group Group::Excl(int n, const int ranks[]) const (binding deprecated, see
52          Section 15.2) }
53
ticket150. 54      {void Comm::Free() (binding deprecated, see Section 15.2) }
55
ticket150. 56      {void Group::Free() (binding deprecated, see Section 15.2) }
57

```